US 101 Improvement Project

VENTURA COUNTY, CALIFORNIA
DISTRICT 7 – VEN – 101 – 4.1/30.9
EA 07-298300/ID: 0713000249

Draft Environmental Impact Report/ Environmental Assessment and Draft Section 4(f) Evaluation



Prepared by the
Ventura County Transportation Commission, in coordination with the State of California, Department of Transportation

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 May 27, 2022, and executed by FHWA and Caltrans.

September 2026

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General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Environmental Impact Report/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Ventura County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and 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.

What you should do:

- Please read this document.
- Additional copies of this document and the related technical studies are available for review at:
  Ventura County Transportation Commission
  751 East Daily Drive, Suite 420
  Camarillo, CA 93010
- This document may be downloaded at the following website:
- http://www.ourfuture101.org/
- Attend the in-person and virtual public hearings on the following dates:
- In-person Public Hearing (Open Forum)

Thousand Oaks
Thousand Oaks Civic Arts Center
Founders Room
2100 Thousand Oaks Boulevard
Thousand Oaks, CA 91362
Wednesday, November 4, 2026
From 5:30 p.m. to 7:30 p.m.

Camarillo
Camarillo Library
Community Room
4101 Las Posas Road
Camarillo, CA 93010
Wednesday, November 18, 2026
From 5:30 p.m. to 7:30 p.m.

Oxnard
Oxnard Performing Arts Center
Ventura Room
800 Hobson Way
Oxnard, CA 93030
Thursday, November 12, 2026
From 5:30 p.m. to 7:30 p.m.

Ventura
Ventura City Hall
Community Room
501 Poli Street
Ventura, CA 93001
Thursday, November 19, 2026
From 5:30 p.m. to 7:30 p.m.

- Virtual Public Hearing (Open Forum)
    - **Link:** https://us02web.zoom.us/j/84664840634
    - **Phone:** 1 (669) 444-9171 **Meeting ID:** 846 6484 0634
    - **Date: Saturday, November 14, 2026, from 10:30 a.m. to 12:00 p.m.**
- We'd like to hear what you think. If you have any comments about the proposed project, please attend the open house and/or send your written comments by postal mail or email to Caltrans by the deadline.
- Send comments by postal mail to:
- California Department of Transportation, District 7
  Division of Environmental Planning
  100 South Main Street, Suite 100, MS 16A
  Los Angeles, CA 90012
  Attn: Susan Tse Koo, Senior Environmental Scientist
- Send comments by email, including "US 101 HOV EIR/EA" in the subject line, to: Susan.Tse@dot.ca.gov
- Be sure to send comments by the deadline: December 7, 2026.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by FHWA, may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

Alternative formats:

For individuals with sensory disabilities, this document can be made available in Braille, with large print, or on audiocassette or computer disk. To obtain a copy in one of these alternative formats, please write Caltrans, Attn: Susan Tse Koo, 100 South Main Street, Suite 100, MS 16A, Los Angeles, CA 90012; call (213) 269-1106 (voice); or use the California Relay Service: 1 (800) 735-2929 (TTY to voice), 1 (800) 735-2922 (voice to TTY), 1 (800) 855-3000 (Spanish TTY to voice and voice to TTY), 1-800-854-7784 (Spanish and English speech-to-speech), or 711.

State Clearinghouse # 2019039165
07 – VEN – 101 Postmiles 4.1/30.9
EA 07-298300
ID: 0713000249

Construct a high-occupancy vehicle/express bus lane in both directions along US 101 between Moorpark Road in Thousand Oaks and State Route 33 in Ventura (Post Mile 4.1 to 30.9)

Draft Environmental Impact Report/Environmental Assessment and Draft Section 4(f) Evaluation

Submitted Pursuant to:

(State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C), 49 USC 303, and 23 USC 138

THE STATE OF CALIFORNIA

Department of Transportation

Cooperating Agency: Ventura County Transportation Commission

Responsible Agencies: California Coastal Commission, California Department of Fish and Wildlife, California Public Utilities Commission, California Transportation Commission, City of Camarillo, City of Oxnard, City of Thousand Oaks, City of Ventura, County of Ventura, Los Angeles Regional Water Quality Control Board, Office of Historic Preservation, Pleasant Valley Recreation and Park District, Southern California Regional Rail Authority

Gloria Roberts (Sep 5, 2026 14:05:54 PDT)

09/05/2026

Gloria Roberts
District Director
District 7
California Department of Transportation
CEQA and NEPA Lead Agency

Date

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

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Summary

S.1 NEPA ASSIGNMENT

Since 2007, the California Department of Transportation (Caltrans) has performed federal responsibilities for environmental decisions and approvals under the National Environmental Policy Act (NEPA) for highway projects in California that are funded or otherwise approved by the Federal Highway Administration (FHWA). These responsibilities have been assigned to Caltrans by FHWA pursuant to Title 23 United States Code (USC) Sections 326 and 327 and two Memoranda of Understanding signed by FHWA. Please see Caltrans Standard Environmental Reference (SER) Volume 1, Chapter 38, *NEPA Assignment*, for additional information.

S.2 PROJECT OVERVIEW

S.2.1 Lead Agencies and CEQA/NEPA Documentation

The proposed project is a joint project by Caltrans and FHWA and 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 NEPA. Caltrans, in coordination with the Ventura County Transportation Commission (VCTC), is the lead agency under CEQA and NEPA. VCTC is the sponsoring agency for the project.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a “lower level” document is prepared for NEPA.

After receiving comments from the public and reviewing agencies, a final environmental document will be prepared. Caltrans and VCTC may prepare additional environmental and/or engineering studies to address comments. The final environmental document will include responses to comments received on the environmental impact report/ environmental assessment and identify the preferred alternative.

Upon completion of the final environmental document, Caltrans and VCTC will decide whether to approve the project and issue a Notice of Determination for compliance with CEQA and whether to issue a Finding of No Significant Impact or require an environmental impact statement for compliance with NEPA. If approved, a Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of the federal, state, and local government and the State Clearinghouse in compliance with Executive Order 12372.

S.2.2 Project Area

The project area is within Ventura County, traversing the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura along US 101. Multiple land use types surround the project area, including residential, commercial, industrial, public, and recreational uses.

S.2.3 Purpose and Need

S.2.3.1 Purpose

The purpose of the proposed project is to improve traffic conditions along the US 101 corridor within Ventura County. The primary objectives of the proposed project are as follows:

- Improve trip reliability and traffic operations,
- Achieve regional high-occupancy vehicle (HOV) connectivity along US 101,
- Support regional prosperity, and
- Improve the reliability and efficiency of the public transit system within Ventura County.

S.2.3.2 Need

The project is needed to address deficiencies on US 101 within the project limits. The deficiencies are summarized below.

- Residents and employees make more than 1.9 million automobile trips daily within the US 101 project area, representing 50 percent of the total number of trips within Ventura County (Iteris 2020). The existing high traffic volumes have resulted in operational deficiencies along US 101 where travel demand has surpassed freeway capacity, leading to travel delays. Operational deficiencies along US 101 are expected to continue to deteriorate as traffic volumes increase due to population and job growth within the region.
- US 101 has no HOV lanes within the project limits; however, there are HOV lanes north of the project limits in Santa Barbara County. Implementation of HOV lanes within the project limits would enhance HOV connectivity within the region.
- The Southern California Association of Governments (SCAG) estimates that Ventura County will add 3,000 residents, 40,000 households, and 13,000 jobs between 2019 and 2050, growing by 0.4, 14.4, and 3.6 percent, respectively, per the 2024–2050 SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2023). Trips in the project area will continue to represent approximately half of all trips in Ventura County because the county's primary residential and job centers in 2040 are expected to remain concentrated within the four incorporated cities (Thousand Oaks, Camarillo, Oxnard, and Ventura) along the US 101 corridor. US 101 also serves as a critical link for goods movement. The projected growth is

expected to place a high demand on existing transportation facilities and services and lead to increases in traffic congestion.

- US 101 within the project limits consists solely of general-purpose (GP) lanes in both directions. Because only GP lanes are available within the project limits, public transit users on US 101 are subject to traffic and delays associated with the use of single-occupancy vehicles, causing unreliable travel times and inefficiency for public transit users.

S.2.4 Proposed Action

The project seeks to construct an HOV/express bus lane in both directions along US 101 between Moorpark Road and State Route (SR) 33, with auxiliary lanes where determined to be operationally beneficial. The project corridor is in Ventura County, California. It traverses the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura. The project limits extend from post mile (PM) 4.1 near Moorpark Road in Thousand Oaks to PM 30.9 near SR 33 in Ventura, a total of 26.8 miles. After conceptual analysis and preliminary engineering studies, two Build Alternatives are proposed, in addition to a "No-Build" Alternative.

- Alternative 1: No-Build Alternative: The No-Build Alternative does not include any improvements to the existing configuration of US 101.
- Alternative 2: Add an HOV/Express Bus Lane in Each Direction: This alternative proposes to construct an HOV/express bus lane in each direction from Moorpark Road in Thousand Oaks to SR 33 in Ventura, with limited design exceptions and auxiliary lanes where operationally beneficial. This alternative proposes to maintain the existing number of GP lanes, with the exception of the segment from Vineyard Avenue to Johnson Drive where an existing GP lane is proposed to be converted to an HOV lane in lieu of adding a lane. This alternative would require outside widening, retaining walls, and right-of-way (ROW) acquisitions at some locations. In addition, this alternative would require two structures to be replaced, a new one to be constructed, and 21 to be widened.
- Alternative 3: Add an HOV/Express Bus Lane in Each Direction, with Design Variations: This alternative is identical to Alternative 2, except it provides the design variations listed below. In addition, Alternative 3 would require two structures to be replaced, a new one to be constructed, and 18 to be widened.
- Shift alignment on the Conejo Grade;
- Extend southbound auxiliary lane at Dawson Drive;
- Provide four GP lanes from Vineyard Avenue to Victoria Avenue, including additional lanes on the Santa Clara River Bridge as a result of restriping; and
- Lane drop at the California Street northbound off-ramp.

A full alternative description can be found in Section 1.4, *Project Alternatives*.

S.3 PROJECT IMPACTS

Table S-1 summarizes the effects of the Build Alternatives in comparison with the No-Build Alternative. The proposed avoidance, minimization, and/or mitigation measures to reduce the effects of the Build Alternatives are also presented. A complete description of potential effects and recommended measures is provided in specific sections in Chapter 2 and Chapter 3.

Table S-1. Proposed Project Impacts

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
Land Use and Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs	• No temporary or permanent impacts on existing or planned land uses or land use compatibility would occur. • Inconsistent with multiple goals and policies of most applicable federal, state, regional, and local plans and programs.	• Approximately 6.21 acres of TCE impacts. • Approximately 2.81 acres of permanent land use conversion to transportation use. • No full permanent parcel acquisitions. • Consistent with federal, state, regional, and local plans and policies.	• Approximately 6.81 acres of TCE impacts. • Approximately 3.47 acres of permanent land use conversion to transportation use. • No full permanent parcel acquisitions. • Consistent with federal, state, regional, and local plans and policies.	• Avoidance and Minimization Measures **LU-1** and **LU-2**.
Coastal Zone	• There would be no temporary or permanent impacts on coastal zone resources.	• Potential impacts on resources within the coastal zone that overlaps the City of Ventura LCP, including CCC ESHA areas associated with San Jon Creek, jurisdictional resources, views of San Buenaventura State Beach and the Pacific Ocean, historic properties, and geologic deposits that may contain important paleontological resources. • A Coastal Development Permit from the City of Ventura LCP would be required.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **UTIL-2**, **TR-1, VIA-1** through **VIA-6**, **CR-5**, **HYD-1** through **HYD-4**, **WQ-1** through **WQ-5**, **GEO-1** through **GEO-3**, **PAL-1**, **HW-1** through **HW-3**, **NC-1** through **NC-12**, **WET-1** and **WET-2**, **AS-5** through **AS-7**, and **SLR-1** through **SLR-3**. • Mitigation Measures **NC-13** and **WET-3**.
Parks and Recreational Facilities	• There would be no temporary or permanent impacts or adverse effects related to parks and recreational facilities or Section 4(f) or 6(f) resources.	• Approximately 5,180 square feet of TCE impacts on Los Robles Greens Golf Course. • Approximately 2,939 square feet of TCE impacts on Camarillo Grove Park. • Approximately 5,500 square feet of TCE impacts on Walnut Grove Park.	• Approximately 5,180 square feet of TCE impacts on Los Robles Greens Golf Course. • Approximately 6,723 square feet of TCE impacts and 5,049 square feet of permanent acquisition at Camarillo Grove Park. • Approximately 5,500 square feet of TCE impacts on Walnut Grove Park.	• Avoidance and Minimization Measures **AQ-1** through **AQ-4**, **N-1** through **N-3**, and **LU-1** and **LU-2**.
Farmlands	• There would be no temporary or permanent impacts on farmlands.	• TCE impacts on approximately 2.5 acres of FMMP-designated farmlands (consisting of Prime Farmland, Unique Farmland, and Farmland of Statewide and Local Importance) and 0.37 acre of land protected by the Williamson Act. • Permanent conversion to non-farmland use of approximately 2.85 acres of FMMP-designated farmlands (consisting of Prime Farmland, Unique Farmland, and Farmland of Statewide and Local Importance) and 0.28 acre of land protected by the Williamson Act.	• TCE impacts on approximately 2.5 acres of FMMP-designated farmlands (consisting of Prime Farmland, Unique Farmland, and Farmland of Statewide and Local Importance) and 0.99 acre of land protected by the Williamson Act. • Permanent conversion to non-farmland use of approximately 2.70 acres of FMMP--designated farmlands (consisting of Prime Farmland, Unique Farmland, and Farmland of Statewide and Local Importance) and 0.99 acre of land protected by the Williamson Act.	• Avoidance and Minimization Measure **RW-1**.
Growth	• There would be no influence on the rate, type, or amount of growth. • Unplanned growth in the study area would not result.	• Implementation or operation would not induce substantial unplanned population growth, either directly or indirectly.	• Same impacts as Alternative 2.	• None.
Community Character and Cohesion	• The continuance or worsening of congestion along US 101 could negatively affect the ability of the public to travel easily within Ventura County.	• Existing neighborhoods would not be divided. No barriers between existing communities would be created; rather, the project would expand the already existing freeway with the addition of an HOV/express bus lane in each direction of the existing US 101. • During construction, short-term air quality, noise, and traffic impacts may affect populations within the community impact study area.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **AQ-1** through **AQ-4**, **N-1** and **N-2**, and **TR-1**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
Relocations and Real Property Acquisition	• No TCEs would be required. • No property acquisitions or relocations would be required.	• TCE impacts on 143 parcels. • Permanent partial acquisition of 14 parcels. • No permanent full property acquisitions or relocations would be required.	• TCE impacts on 147 parcels. • Permanent partial acquisition of 19 parcels. • No permanent full property acquisitions or relocations would be required.	• Avoidance and Minimization Measures **RW-1**, **TR-1**, **COM-1**, and **COM-2**.
Utilities/Emergency Services	• There would be no temporary or permanent impacts associated with existing or future utilities or emergency services.	• No construction of new utility facilities or upgrading of existing facilities would be required; no substantial disruption of utility services would occur during construction. All utilities would be protected in place, restored, or relocated. • There are no anticipated permanent adverse effects on utility facilities and providers. • Construction is expected to result in temporary impacts on traffic circulation, including for emergency services.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **UTIL-1** and **UTIL-2** and **TR-1**.
Transportation	• The No-Build Alternative would maintain the existing lane configurations for US 101; the proposed improvements under the build alternatives would not occur. • No temporary impacts on access, circulation, and parking would result under Alternative 1. In addition, no temporary impacts on pedestrian or bicycle facilities would occur. However, traffic operations within the study area are expected to continue to deteriorate in the northbound and southbound direction during the AM and PM peak hours in 2040 and 2060 compared to existing (2018) conditions.	• Construction is expected to result in temporary impacts on traffic circulation, access, and parking. The project may periodically affect bicycle and pedestrian facilities during construction, which may require temporary detours and closures. • The project would provide additional capacity that would reduce traffic congestion, improve traffic operations, and accommodate future traffic volumes forecast in the project area. Implementation of HOV lanes within the project limits would also help achieve regional HOV connectivity along US 101 because there are HOV lanes north of the project limits in Santa Barbara County but currently none within the project limits. The HOV lanes would provide a travel choice and encourage more people to carpool. In addition, the project would improve travel time reliability because public transit operators would travel within HOV lanes instead of GP lanes.	• Same temporary impacts on traffic circulation, access, parking, and pedestrian and bicycle facilities as Alternative 2.	• Avoidance and Minimization Measures **TR-1** and **TR-2**.
Visual/Aesthetics	• The visual character and quality of the project site and vicinity would remain similar to existing conditions. • No temporary or permanent impacts associated with visual/aesthetic resources would result.	• The project is expected to result in minor temporary impacts on visual/aesthetic resources during construction. • Viewsheds containing identified visual resources are not expected to be affected. • The project would not substantially change the existing views of or from US 101; impacts on visual quality are projected to be low or neutral.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **VIA-1** through **VIA-6**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
Cultural Resources	• No temporary or permanent impacts associated with cultural resources would result.	• Within the project's Area of Potential Effect, one archaeological site is considered eligible for inclusion in the NRHP, two properties were previously determined NRHP eligible, eight properties were newly determined NRHP and CRHR eligible, and one property was determined a CEQA historical resource only. For the 11 eligible NRHP and CRHR resources, one would have an adverse effect, the Adolfo Camarillo Heritage Grove, due to the removal of eucalyptus trees, which would constitute physical destruction of part of the property. For the remaining 10 resources, there would be no effect, no adverse effect, or no adverse effect with standard conditions or non-standard conditions. • During the construction phase, it is possible previously undocumented cultural materials or previously undocumented human remains could be unearthed during soil disturbance.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **CR-1** through **CR-7**. • Mitigation Measure **CR-MM-1**.
Hydrology and Floodplain	• No construction activities would take place within any floodplain. Therefore, no impacts on hydrology or floodplain resources would occur.	• The project would widen five bridges and encroach upon 100-year floodplains at Conejo Creek, Calleguas Creek, Arroyo Conejo, South Branch Arroyo Conejo, and Beardsley Wash. In addition, bridge and/or roadway widening near four drainages would also encroach upon 100-year floodplains at Camarillo Hills Drain, Crestview Drain, El Rio Drain, and Moon Ditch. • The project would not result in an adverse change related to flood risks or damage, and there would be minimal floodplain encroachment. The project is considered a low-risk project for impacts on 100-year floodplains. • The project would not result in any potential risks to natural and beneficial floodplain values or beneficial uses, as defined by the Los Angeles RWQCB Basin Plan.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **WQ-1**, **TR-1**, and **HYD-1** through **HYD-4**.
Water Quality and Stormwater Runoff	• No temporary or permanent impacts associated with water quality resources would occur.	• The total disturbed surface area is estimated to be 174 acres. • The project has the potential to result in permanent impacts on water quality due to an increase in impervious surface area of approximately 78 acres. • The project is not expected to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality.	• Same impacts as Alternative 2, with the exception of the following: ○ Increase in impervious surface area of approximately 84 acres.	• Avoidance and Minimization Measures **WET-1**, **WET-2**, and **WQ-1** through **WQ-5**. • Mitigation Measure **WET-3**.
Geology/Soils/Seismic/Topography	• No project construction would occur; therefore, no impacts related to geology, soils, seismicity, or topography would occur. • The existing topography and soils would not be affected; however, sedimentation and	• The project area is within a seismically active region and subject to future moderate to strong seismic ground shaking from earthquakes occurring along regional and local faults. Multiple faults traverse the project alignment. In addition,	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **GEO-1** through **GEO-4**, **VIA-1** through **VIA-3**, **HYD-1** through **HYD-4**, **WQ-3**, and **NC-8**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
	erosion on existing embankment slopes and exposures to seismic activity and ground shaking could continue.	the project site is within the CGS Alquist-Priolo Earthquake Fault Zone. • Construction workers or the traveling public would not be exposed to new risks associated with seismic ground shaking as a result of construction or operation of the project. The potential risk would be similar to that under existing conditions. • Areas along the project alignment may be subjected to liquefaction, seismic settlement, lateral spreading, and corrosive soils. • Although unlikely, there is a potential for expansive and collapsible soils to be encountered in the project corridor. • The project alignment is within the CGS Landslide Zone, predominately along the steep grade of the Conejo Pass. This area has medium to high landslide susceptibility. • Construction activities would require the temporary disturbance of soil.		
Paleontology	• No temporary or permanent adverse impacts related to paleontological resources would result.	• Grading, excavation, drilling for piles, and other project-related earthmoving has the potential to result in impacts on paleontological resources during construction.	• Same impacts as Alternative 2.	• Mitigation Measure **PAL-1**.
Hazardous Waste/Materials	• No change to the existing physical environment would occur, and no temporary or permanent impacts related to hazardous waste and materials would result.	• During construction, the potential exists for the project to encounter the following: aerially deposited lead, asbestos-containing material and lead-based paint in buildings and bridges, soil and groundwater affected with petroleum hydrocarbons from historic oil wells, lead chromate from traffic striping and pavement markings, treated wood waste, pesticides and herbicides in soil from farming activities, construction-generated hazardous waste, and unexpected or unknown contaminants.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **HW-1** through **HW-10** and **WQ-3**.
Air Quality	• There would be no change to the existing physical environment, and no temporary or permanent impacts related to air quality would result.	• During construction, short-term degradation of air quality may occur due to particulate emissions (airborne dust), particulate matter, construction equipment emissions, and other construction-related activities. • The project is expected to increase regional PM_{10} emissions in all future years compared to existing (2018) conditions. The increase in total regional PM emissions would be due to the increase in re-entrained road dust, which would be directly proportional to the increase in VMT.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **AQ-1** through **AQ-4**, **HW-4**, and **HW-5**.
Noise and Vibration	• No project construction would occur; therefore, no impacts related to noise and vibration would occur.	• Temporary construction noise impacts would occur at areas immediately adjacent to project construction. • Temporary increases in vibration would most likely occur in some locations during construction.	• Same temporary noise and vibration impacts as Alternative 2. • Increases in operational noise at all receptors are considered minor with implementation of recommended soundwalls. In total, 46	• Avoidance and Minimization Measures **N-1** through **N-3**. • **N-1**: Noise Abatement. • If the walls outlined as part of the NEPA analysis are not included as abatement, then

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
		• Increases in operational noise at all receptors are considered minor with implementation of recommended soundwalls. In total, 48 soundwalls/ soundwall systems were found to be reasonable and feasible under Alternative 2.	soundwalls/soundwall systems were found to be reasonable and feasible under Alternative 3.	Mitigation Measure **N-MM-1** will be implemented under CEQA where existing barriers that would be demolished as part of the project would be replaced in kind at their existing locations.
Energy	• Existing and projected traffic congestion would continue to deteriorate. • Inefficient energy consumption from vehicles using extra fuel while idling in stop-and-go traffic or moving at slow speeds along congested roadways would occur. • Indirect energy use would be required for road maintenance along US 101. Increased maintenance would be required.	• Energy use is estimated to result in a short-term increase during construction; however, construction design features would help conserve energy. The energy conservation features would be consistent with state and local policies to reduce energy consumption. Construction is not expected to result in the inefficient, wasteful, or unnecessary consumption of energy. • Over the long term, when compared to existing conditions (2018), annual energy consumption is projected to decrease by 20.9 percent in 2040, 21.8 percent in 2045, and 20.2 percent in 2060. As such, operation is not expected to result in the wasteful, inefficient, or unnecessary consumption of energy.	• During construction, same energy consumption as under Alternative 2. • During operation, annual energy consumption would be comparable to Alternative 2. When compared to existing conditions (2018), annual energy consumption is projected to decrease by 20.6 percent in 2040, 21.5 percent in 2045, and 19.9 percent in 2060 under Alternative 3. • Construction and operation of the project is not expected to result in the inefficient, wasteful, or unnecessary consumption of energy.	• Avoidance and Minimization Measures **TR-1**, and **EN-1** and **EN-2**.
Natural Communities	• No new or additional impacts on natural vegetation communities would occur, beyond those expected from operation of the existing facility.	• Construction is expected to temporarily disturb 8.72 acres and permanently disturb 2.12 acres of vegetation communities (natural communities of concern). • Temporary and permanent impacts on existing wildlife movement corridors. The addition of an HOV/express bus lane would require expansion at Beardsley Wash Culvert, Calleguas Creek Bridge, Conejo Creek Bridge, and the Conejo Grade box culvert, resulting in the crossings being lengthened (i.e., reduced openness). In addition, the project would also cross the Santa Clara River Bridge and Arroyo Conejo culvert under US 101. No changes would be needed at these two structures, but temporary impacts (e.g., noise and light disturbances) may occur during the construction phase. A County of Ventura Planned Development Permit, per Ventura County Habitat Connectivity and Wildlife Corridor Ordinance 4537, would be required for encroachment and modifications to the Conejo Grade box culvert. • Construction is expected to temporarily affect 0.05 acre and permanently affect 0.001 acre of ESHA-designated by the CCC. Project impacts on ESHAs would be due to widening of the US 101 overpass at Sanjon Road. A Coastal Development Permit from the City of Ventura LCP would be required. • The potential exists for short-term, temporary indirect effects from construction activities, including dust, increased fire risks, the introduction of invasive plant species, erosion and sedimentation, the introduction of hazardous materials, and the introduction of trash	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **NC-1** through **NC-25**, **WQ-1**, and **WQ-5**. • Mitigation Measures **NC-13** and **TE-11**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
		in sensitive natural communities adjacent to the limits of disturbance. • Operation could have potential indirect effects on sensitive natural communities, including fire risks, litter, the introduction of invasive species, habitat fragmentation, erosion and sedimentation, and the introduction of hazardous materials due to normal operation or ROW maintenance. However, operation is not expected to differ appreciably from existing conditions. • Potential for temporary and permanent impacts on protected trees within the BSA. Temporary impacts may include pruning or trimming, damage to root systems, and temporary work within the canopy. Permanent impacts would include tree removal during vegetation clearing as well as grading or other construction activities.		
Wetlands and Other Waters	• No impacts on USACE/RWQCB/CCC wetlands, non-wetland WoUS, or CDFW streambed and associated riparian habitat would occur.	• Approximately 0.05 acre of temporary impacts on USACE, RWQCB, and CCC non-wetland waters; 0.51 acre of temporary impacts on jurisdictional wetlands; and 2.02 acres of temporary impacts on non-wetland WoUS. It is anticipated that there would be approximately 3.96 acres of temporary impacts on CDFW jurisdictional limits (1.5 acres of riparian habitat and 2.46 acres of unvegetated streambed/lake). • Approximately 0.05 acre of permanent impacts on jurisdictional wetlands and 0.43 acre of permanent impacts on non-wetland WoUS. It is anticipated that there would be approximately 1.27 acres of permanent impacts on CDFW jurisdictional limits (0.77 acre of riparian habitat and 0.5 acre of unvegetated streambed/lake).	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **NC-6** through **NC-8**, **AS-5** through **AS-7**, and **WET-1** and **WET-2**. • Mitigation Measure **WET-3**.
Plant Species	• No impacts on non-listed special-status plant species would occur.	• Potential temporary direct and indirect impacts on at least 12 individuals and two distinct populations of Catalina mariposa lily could occur within the limits of disturbance. • The project would permanently remove suitable habitat for non-listed special-status plant species as a result of construction. Direct effects on Catalina mariposa lily, Blochman's dudleya, and Conejo buckwheat could include direct mortality for individual plants or plant injury as a result of crushing by construction vehicles or personnel. Clearing and grading activities could disturb and compress soils, potentially destroying seed banks and preventing or reducing future utilization of the area by the species. In addition, construction could increase the potential for fire in the area if vegetation clearing work is conducted during the fire season, which could directly and indirectly affect special-status plant	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **PS-1** through **PS-5** and **NC-1** through **NC-12**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
		species through habitat destruction. These effects could be both short and long term in nature.		
Animal Species	• No new or additional impacts on non-listed special-status animals would occur, beyond those that would be expected to occur from operation of the existing facility.	• Twenty non-listed special-status animal species (one fish, six reptile, six bird, and seven mammal species) have suitable habitat within the BSA that could be affected both temporarily and/or permanently. • Potential for temporary and permanent impacts on three special-status bats (i.e., pallid bat, western mastiff bat, western red bat) due to suitable habitat (e.g., palm trees, concrete structures for roost habitat) that could be affected during construction.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **AS-1** through **AS-14**, **NC-1** through **NC-12**, and **TE-4**. • Mitigation Measure **NC-13**.
Threatened and Endangered Species	• No new or additional impacts on threatened, endangered, or candidate species would occur, beyond those that would be expected to occur from current operation of the existing facility.	• No temporary or permanent impacts on listed plant species. • The project may affect but is not likely to adversely affect monarch butterfly and least Bell's vireo with the direct removal of suitable habitat. The project would have no effect on any other federally and/or state-listed or candidate species and would not result in take. • Although no direct impacts on least Bell's vireo are anticipated, avoidance and minimization measures are included as part of the project to address potential indirect construction impacts on least Bell's vireo. These would include preconstruction surveys for least Bell's vireo prior to vegetation clearing in suitable habitat. • Direct effects on breeding, foraging, or migrating monarch butterfly individuals could occur as a result of project construction. In addition, the project may have potential indirect effects on potentially suitable foraging and/or breeding habitat for monarch butterfly individuals. Project construction activities could also result in direct and indirect effects on proposed critical habitat for monarch butterfly. Avoidance, minimization, and mitigation measures are included as part of the project to address the impacts. These would include preconstruction surveys to identify and demarcate milkweed areas and revegetate disturbed areas with milkweed species. • Measures are also included to avoid and minimize potential direct and indirect project impacts on the following listed species and their critical habitat during construction: burrowing owl, Crotch's bumble bee, southern California steelhead, southwestern pond turtle, western snowy plover, California least tern, southwestern willow flycatcher, and mountain lion.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **TE-1** through **TE-8**, **TE-10**, **NC-1** through **NC-24**, **WQ-1**, **WQ-5**, **AS-5** through **AS-9**, and **AS-11** through **AS-14**. • Mitigation Measures **TE-9**, **TE-11**, and **NC-13**.
Invasive Species	• There would be no new or additional impacts related to the introduction of invasive species within open spaces, beyond those that would be expected to occur from operation of the existing facility.	• There is a potential for the introduction of invasive species during construction (e.g., vehicles may transport invasive plant species to the BSA from past work sites or move them between current work sites within the project limits of disturbance;	• Same impacts as Alternative 2.	• Avoidance and Minimization Measure **NC-11**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
		post-construction bare ground could serve as a breading area for invasive plant species).		
Climate Change (CEQA Only)	• Compared to existing conditions (2018), there would be a reduction in GHG emissions in all future years.	• The proposed project would result in GHG emissions during construction; however, it is anticipated that the project would not result in any increase in operational GHG emissions in future years compared with existing conditions (2018). • Compared to the no-build condition, Build Alternative GHG emissions were modeled to be marginally higher than the GHG emissions of the No-Build Alternative. • The project, as listed in SCAG's 2024–2050 RTP/SCS, would reduce vehicle delay and congestion, thereby contributing to an overall GHG reduction effort involving mobile sources within the SCAG region. • The project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs.	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **GHG-1** through **GHG-12**.
Senate Bill 743/Induced Demand Analysis (CEQA Only)	• Daily and annual VMT is projected to increase in 2040 and 2060 compared to existing conditions (2018).	• Under opening-year (2040) conditions, total daily and annual VMT is projected to amount to approximately 16,000,000 and 5,000,000,000, respectively, under Alternative 2. Compared to the No-Build Alternative, total daily and annual VMT under Alternative 2 is projected to increase by approximately 106,000 and 37,000,000, respectively, a 0.7 percent increase. • Under design-year (2060) conditions for Alternative 2, total daily and annual VMT is projected to amount to approximately 16,000,000 and 6,000,000,000, respectively. Compared to the No-Build Alternative, total daily and annual VMT under Alternative 2 is projected to increase by approximately 109,000 and 38,000,000, respectively, a 0.7 percent increase. • VMT reduction strategies are proposed for the project. However, due to the uncertainty of funding and the actual reductions under these VMT reduction strategies, the potential exists for VMT impacts to remain significant and unavoidable.	• Same impacts as Alternative 2.	• Mitigation Measure **VMT-1**.
Wildfire (CEQA Only)	• No temporary or permanent impacts associated with wildfire would result.	• The alignment of US 101 would not be altered; the project is unlikely to exacerbate wildfire risks or post-fire flooding/landslides. • The project would not exacerbate wildfire risks in or near designated State Responsibility Areas, Local Responsibility Areas, or elsewhere due to slopes, prevailing winds, or other factors. • Construction of the project would widen US 101, contributing to a more effective firebreak by reducing the amount of vegetation adjacent to the	• Same impacts as Alternative 2.	• Avoidance and Minimization Measures **TR-1**, **UTIL-2**, **NC-8** and **NC-9**, **GEO-1** through **GEO-3**, **HYD-1** through **HYD-4**, and **WQ-1** through **WQ-5**.

Environmental Issue	No-Build Alternative Impacts	Build Alternative 2 Impacts	Build Alternative 3 Impacts	Avoidance, Minimization and/or Mitigation Measures
		roadside and providing additional areas for emergency vehicle staging, which is a benefit. • Wildfire risks, including an exposure to pollutants for personnel from a wildfire or the uncontrolled spread of a wildfire, are not expected to be exacerbated through proper site design and compliance with County of Ventura standard and emergency access requirements.		
Cumulative Impacts (CEQA Only)	• No cumulative impacts would result.	• Operation of the proposed project could result in a cumulatively considerable increase in regional PM_{10} emissions and PM_{10} concentrations at nearby sensitive receptors. The increase in PM emissions would be due to re-entrained road dust and directly proportional to the increase in VMT. The project is projected to result in additional VMT in future years. Because funding and the actual reductions from the proposed VMT reduction strategies (mitigation measure **VMT-1**) are uncertain, the project could contribute to cumulatively considerable impacts related to VMT and PM_{10} emissions. • The project would result in significant impacts on one historic resource, the Adolfo Camarillo Heritage Grove, due to the removal and relocation of eucalyptus trees. Although the project would include implementation of mitigation measure **CR-MM-1**, the project's impact on the Adolfo Camarillo Heritage Grove would be significant and, therefore, result in cumulatively considerable impacts related to cultural resources.	• Same impacts as Alternative 2.	• Mitigation Measures **VMT-1** and **CR-MM-1**.

BSA = biological study area; CCC = California Coastal Commission; CDFW = California Department of Fish and Wildlife; CEQA = California Environmental Quality Act; CGS = California Geological Survey; CRHR = California Register of Historical Resources; ESHA = environmentally sensitive habitat area; FMMP = Farmland Mapping and Monitoring Program; GHG = greenhouse gas; GP = general purpose; HOV = high-occupancy vehicle; LCP = Local Coastal Program; NEPA = National Environmental Policy Act; NRHP = National Register of Historic Places; PM = particulate matter; PM_{10} = particulate matter with a diameter of 10 micrometers or less; ROW = right of way; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; RWQCB = Regional Water Quality Control Board; SCAG = Southern California Association of Governments; TCE = temporary construction easement; USACE = U.S. Army Corps of Engineers; VMT = vehicle miles traveled; WoUS = waters of the United States

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S.4 COORDINATION WITH PUBLIC AND OTHER AGENCIES

Caltrans filed a Notice of Preparation (NOP) for the Draft Environmental Impact Report/Environmental Assessment (EIR/EA) with the State Clearinghouse on March 29, 2019. The filing of the NOP began a 38-day scoping period that extended through May 6, 2019. Four scoping meetings were held in April of 2019. Additional information about public scoping can be found in Chapter 4. The sections that follow discuss the coordination necessary for permits and approvals as well as any areas of controversy and unresolved issues.

S.4.1 Permits and Approvals

The following permits, agreements, and approvals would be required for project construction:

Table S-2. Permits and Approvals Needed

Agency	Permits, Licenses, Agreements, and Certifications	Status
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species	A Biological Assessment (BA) was prepared. Informal consultation with USFWS regarding monarch butterfly and least Bell's vireo concluded on July 15, 2021. USFWS concurred with Caltrans' "may affect, not likely to adversely affect" determination regarding least Bell's vireo; recommended avoidance and minimization measures for least Bell's vireo and monarch butterfly are included in the EIR/EA.
U.S. Army Corps of Engineers (USACE)	Section 404 and Section 408 Permits	Application for Section 404 and 408 permits are expected during the project design phase.
California Department of Fish and Wildlife (CDFW)	1602 Agreement for Streambed Alteration	Applications for 1602 agreement expected during the project design phase.
Los Angeles Regional Water Quality Control District	Section 401 Permit	Application for Section 401 permit expected during the project design phase.
Federal Highway Administration (FHWA)	Air Quality Conformity Determination	Request for determination to be submitted following selection of a preferred alternative.
State Historic Preservation Officer (SHPO)	Memorandum of Agreement (MOA)	MOA expected following circulation of the draft EIR/EA.
Southern California Regional Rail Authority (SCRRA)	Right of Entry and Maintenance Agreement	To be obtained prior to construction.

Agency	Permits, Licenses, Agreements, and Certifications	Status
Union Pacific Railroad (UPRR)	Right of Entry and Maintenance Agreement	To be obtained prior to construction.
California Coastal Commission (CCC)/ City of Ventura Local Coastal Program (LCP)	Coastal Development Permit (CDP)	Application for CDP from the City of Ventura LCP expected during the project design phase for portions of the project that fall within designated preservation areas of the California Coastal Zone.
County of Ventura	Planned Development Permit	To be obtained prior to construction.
State Water Resources Control Board (SWRCB)	National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit, Order No. 2022-0057-DWQ, NPDES No. CAS000002	To be obtained prior to construction.
SWRCB	Caltrans Statewide NPDES Storm Water Permit, Order No. 2022-0033-DWQ, NPDES No. CAS000003	Caltrans District 7 and VCTC will ensure compliance with the SWRCB-issued Caltrans NPDES permit.
Los Angeles Regional Water Quality Control Board	Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, Order No. R4-2023-0429, NPDES No. CAG994004.	To be obtained if dewatering activities are expected.
Ventura County Flood Control District	Encroachment Permit	Caltrans District 7 and VCTC to obtain permit jointly prior to construction.

S.4.2 Areas of Controversy and Unresolved Issues

There are no known areas of controversy related to the project. There is one unresolved issue related to Camarillo Grove Park, a Section 4(f) and 6(f) resource. Build Alternative 3 would require permanent acquisition of approximately 5,049 square feet from Camarillo Grove Park. Because land from Camarillo Grove Park would be permanently incorporated into the project under Build Alternative 3, Section 6(f) conversion provisions would be triggered. It is expected that the Section 6(f)(3) conversion process would take place subsequent to completion of Section 4(f) and the NEPA process. Coordination with the Pleasant Valley Recreation and Park District and the National Park Service would be ongoing to identify replacement property options with reasonably equivalent usefulness and location compared with the property being converted.

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Chapter 1 Proposed Project

1.1 INTRODUCTION

The Ventura County Transportation Commission (VCTC), in coordination with the California Department of Transportation (Caltrans), is proposing to add high-occupancy vehicle (HOV)/express bus lanes along US Highway 101 (US 101) from post mile (PM) 4.1 to 30.9, within Ventura County, California. The project area traverses the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura from approximately State Route (SR) 23 to SR 33. The existing US 101 within the proposed project corridor consists primarily of three 12-foot-wide general-purpose (GP) lanes in each direction, with 12-foot-wide auxiliary lanes at spot locations.

The US 101 project improvements include one HOV/express bus lane in each direction between Moorpark Road and SR 33, with auxiliary lanes where determined to be operationally beneficial. This draft environmental impact report/environmental assessment (EIR/EA) analyzes two build alternatives and the No-Build Alternative.

- Alternative 1 – No-Build Alternative: Existing Conditions
- Alternative 2 – Build Alternative: Add an HOV/Express Bus Lane in Each Direction
- Alternative 3 – Build Alternative: Add an HOV/Express Bus Lane in Each Direction, with Design Variations

The project is included in the Southern California Association of Governments (SCAG) 2024–2050 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) (SCAG 2024a). The project is also included in the SCAG financially constrained 2025 Federal Transportation Improvement Program (FTIP) (SCAG 2024b).

Funding is expected to be provided through a combination of sources. These have not yet been secured but will most likely include federal, state, and local sources, in addition to potential Solutions for Congested Corridor Program (SCCP) and Transportation Infrastructure Finance and Innovation Act (TIFIA) funding.

Caltrans, as assigned by the Federal Highway Administration (FHWA), is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is also the lead agency under the California Environmental Quality Act (CEQA).

1.1.1 Project Background

US 101 is the major coastal north–south route through the northern, central, and southern regions of the state. In the southern region, it connects Ventura County communities to communities in neighboring counties. US 101 is the main corridor for access to areas throughout Ventura County and critical to local mobility and the

economic well-being of the county. Overall, US 101 is the “main street” of the county, providing connections for all in the area.

The project corridor traverses four cities: Thousand Oaks, Camarillo, Oxnard, and Ventura. From Moorpark Road (PM 4.1), which is north of SR 23 in Thousand Oaks, to SR 33 (PM 30.9) in Ventura, US 101 consists of three 12-foot-wide GP lanes in each direction, with an additional GP lane at various locations. A few locations have 12-foot-wide auxiliary lanes, providing operational benefits for the freeway between select interchanges. For the segment of the freeway in Ventura at the SR 126 interchange (PM 26.4), US 101 consists of only two 12-foot-wide GP lanes in each direction. The section of US 101 between the western edge of Thousand Oaks and Conejo Creek in Camarillo is referred to as the “Conejo Grade.” This 2.5-mile-long section of US 101 has a maximum sustained grade of 7 percent. A truck climbing lane is provided along southbound US 101, and a Caltrans inspection station for trucks is provided at the upper terminus of the grade in both directions.

A standard 2-foot median barrier, with 10-foot shoulders in both directions, separates the northbound and southbound US 101 travel way; 22- to 54-foot median widths occur between Carmen Drive and a point approximately 2,000 feet south of Vineyard Avenue. At that point, the median widens to as much as 78 feet, some of which is paved. The median narrows to 30 feet approximately 1,300 feet north of Vineyard Avenue until a point south of the Montalvo Spur where the median widens to 46 feet to the northern terminus of the project. The section of US 101 crossing the Santa Clara River was constructed in 2007, per Caltrans as-built plans. It consists of six lanes in each direction.

Auxiliary lanes (12 feet wide) exist between the interchanges in Thousand Oaks, along with a few isolated locations in Camarillo and Oxnard. Currently, there are no HOV lanes along the project corridor. The US 101 Improvement Project, as initiated by VCTC and Caltrans, aims to relieve traffic congestion, enhance freeway capacity, and accommodate future traffic volumes, thereby improving safety and enriching the quality of life for local communities and motorists.

Currently, US 101 experiences congestion during peak travel periods because traffic volumes exceed freeway capacity. Due to the projected population growth in Ventura County, it is anticipated that forecast travel demand will adversely affect the level of service (LOS) along US 101. Hence, VCTC is seeking to address future demand within its region by improving the segment of US 101 in Ventura County between PM 4.1 and PM 30.9. The project’s capital cost is estimated to be between $1.3 and $2.3 billion, depending on the alternative chosen.

1.1.2 Project Location

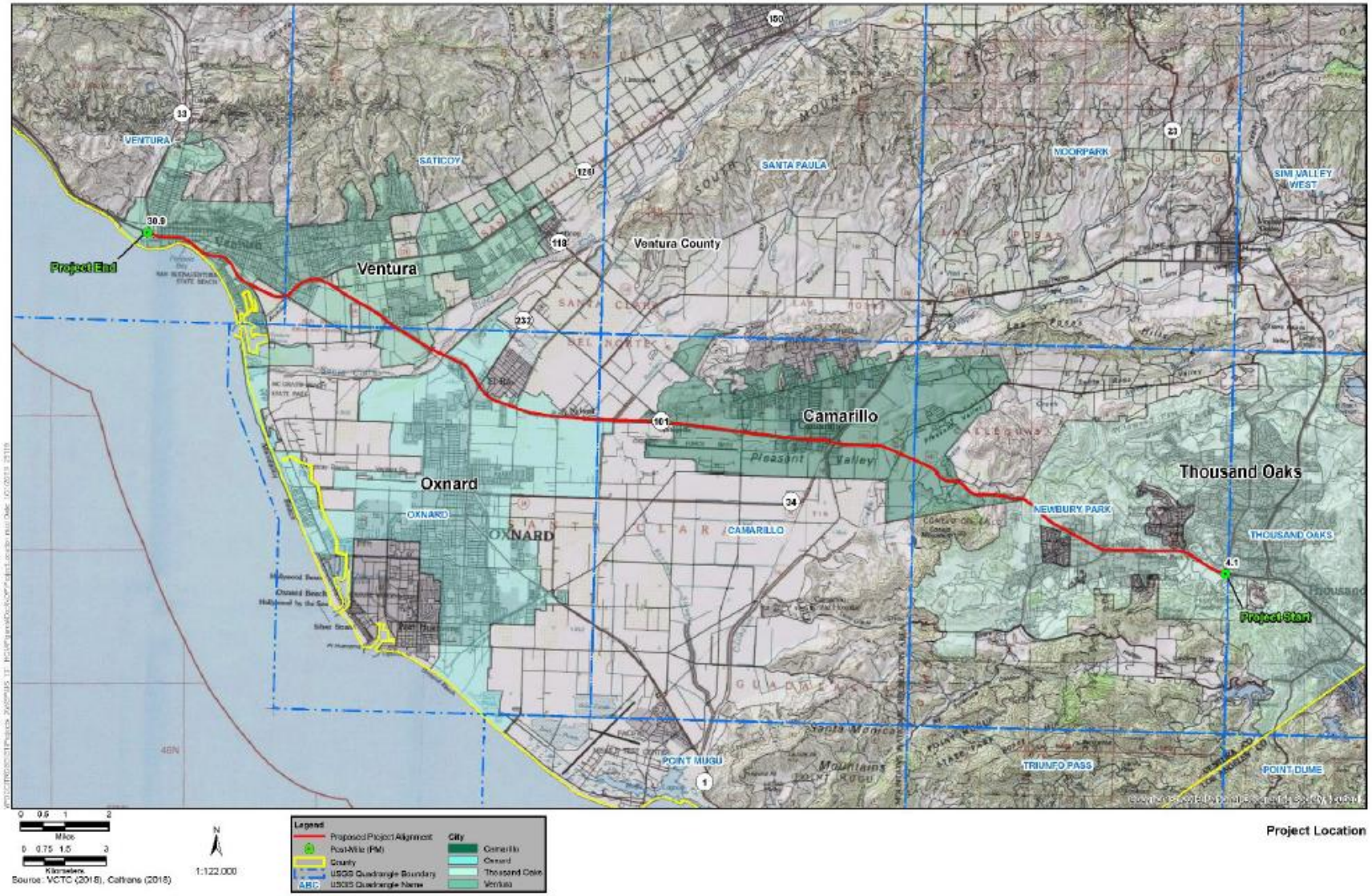
The project corridor is in Ventura County. It traverses the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura. The project limits extend from PM 4.1 near South Moorpark Road in Thousand Oaks to PM 30.9 near SR 33 in Ventura, a total of 26.8 miles. Figure 1-1 and Figure 1-2 show the regional vicinity and project location.

Figure 1-1. Regional Vicinity



Figure 1-1
Regional Vicinity
US 101 Improvement Project

Figure 1-2. Project Location



1.2 PURPOSE AND NEED

1.2.1 Purpose

The purpose of the proposed project is to improve traffic conditions along the US 101 corridor within Ventura County. The primary objectives of the proposed project are as follows:

- Improve trip reliability and traffic operations,
- Achieve regional HOV connectivity along US 101,
- Support regional prosperity, and
- Improve the reliability and efficiency of the public transit system within Ventura County.

1.2.2 Need

1.2.2.1 Improve Trip Reliability and Traffic Operations

Trip times on US 101 through the project corridor are not reliable due to delays. An HOV report was prepared for the proposed project in 2021 (Caltrans 2021a) to address vehicle hours of delay (VHD). *Delay* is defined as the difference in travel time between the congested speed and 35 mph. Recurrent congestion occurs when speeds are at 35 mph or less on incident-free weekdays during rush hours for a duration of 15 minutes or longer. Within the HOV report, delay from recurrent congestion was quantified using VHD. Currently, VHD in the project area during the AM peak hour is 2,720 in the northbound direction and 3,143 in the southbound direction. VHD during the PM peak hour is 3,266 in the northbound direction and 1,061 in the southbound direction (see Table 1-1).

Table 1-1. Vehicle Hours of Delay for the US 101 Corridor

Existing		US 101 Northbound		US 101 Southbound	
		AM Peak Period	**PM Peak Period**	**AM Peak Period**	**PM Peak Period**
VHD	Thousand Oaks	247	829	1,983	97
	Camarillo	349	1,901	113	93
	Oxnard	2,037	432	991	334
	Ventura	87	103	55	538
	Corridor	**2,720**	**3,266**	**3,143**	**1,061**

US 101 is a major interregional route, connecting the northern, central, and southern areas of the state, and important to the movement of people and goods. Regionally, US

101 connects Ventura County to other counties. It also connects communities within the county. Residents and employees make more than 1.9 million automobile trips daily within the US 101 project area, representing 50 percent of the total number of trips within Ventura County (Iteris 2020). The existing high traffic volumes have resulted in operational deficiencies along US 101 where travel demand has surpassed freeway capacity, leading to travel delays. Operational deficiencies along US 101 are expected to continue to deteriorate as traffic volumes increase due to population and job growth within the region.

A traffic operational analysis report (TOAR) was completed in November 2020 (Caltrans 2021a). The study provided Existing Year (2018) traffic volume data for the project, Opening Year (2040) predicted traffic volume data, and Design Year (2060) traffic volume data, representing the design year 20 years after completion of the proposed project.

The TOAR (Caltrans 2021a) showed that, under current conditions (Existing Year [2018]), LOS on US 101 within the project limits varies from LOS F (i.e., vehicle operating speed less than 29 mph) to LOS C (i.e., vehicle operating speed more than 54 mph) during peak travel periods. LOS is a measurement of traffic operations that corresponds to traffic speeds and density (i.e., passenger cars per lane per mile) as measures of traffic operations. LOS A represents the best operating conditions, and LOS F represents the worst. LOS E and F are generally considered unacceptable. The TOAR found 70 of 135 segments of northbound US 101 operate at an unacceptable LOS and 82 of 135 segments of southbound US 101 operate at an unacceptable LOS.

1.2.2.2 Achieve regional HOV Connectivity along us 101

US 101 has no HOV lanes within the project limits; however, there are HOV lanes north of the project limits in Santa Barbara County. Implementation of HOV lanes within the project limits would enhance HOV connectivity within the region, which would encourage more people to carpool. In addition, travel times would be more reliable for public transit because operators would travel within HOV lanes instead of GP lanes. Currently, transit operators traveling south from Santa Barbara County in HOV lanes must merge back into GP lanes within the project limits, thereby losing time and affecting their reliability.

1.2.2.3 Support Regional Prosperity

Population, Households, and Jobs

Travel demand within the region has grown by about 45 percent since 1990 and is expected to increase further. SCAG estimates that the region will add 2,055,000 residents, 1,605,000 households, and 1,272,000 jobs between 2019 and 2050, representing an increase in growth of 10.9, 25.9, and 14.2 percent, respectively (SCAG 2024a). SCAG estimates that Ventura County will add 3,000 residents, 40,000 households, and 13,000 jobs between 2019 and 2050, representing an increase in

growth by 0.4, 14.4, and 3.6 percent, respectively, per the 2024–2050 SCAG RTP/SCS (SCAG 2024a).

Higher population density is associated with increased travel demand and congestion. Due to forecast population and job growth, travel demand in the study area is expected to grow by approximately 11 percent by 2040 (Iteris 2020). Approximately 2.8 million daily auto trips will be made every day by residents and employees in the county (Iteris 2020). Trips in the project area will continue to represent approximately half of all trips in Ventura County because the county's primary residential and job centers in 2040 are expected to remain concentrated within the four incorporated cities (Thousand Oaks, Camarillo, Oxnard, and Ventura) along the US 101 corridor.

Goods Movement

US 101 serves as a critical link for goods movement. From Oxnard in Ventura County to downtown Los Angeles, US 101 is identified as part of the Southwest Passage Multi-Modal Corridor for goods movement between Los Angeles and Houston. It is also designated as part of the Surface Transportation Assistance Act (STAA) national network for goods movement (Caltrans 2021b). According to the Ventura County Freight Corridors Study (Iteris 2021), US 101 is a key component of the network that allows goods to travel to and from Port Hueneme, which is the fourth-largest California port and among the top 10 ports in the United States for autos and fresh produce. The port generates $2.2 billion in economic activity (an increase of 175 percent since 2013), creating 20,032 trade-related jobs, of which 2,909 are direct jobs, and generating $173 million in state and local tax revenues (Port Hueneme 2022).

The efficient movement of goods is critical to a strong economy. It improves the quality of life in the SCAG region by providing essential goods and supplies to residents and businesses, generating employment opportunities, and providing access to markets through trade. SCAG's goods movement system has experienced a consistent increase in freight demand, driven by factors such as population growth, e-commerce, and global trade. This growth has placed a strain on existing infrastructure and led to increases in traffic congestion. Annual vehicle hours of delay (AVHD) on US 101 for heavy-duty trucks in 2019 amounted to 140,880, representing 4 percent of regional congestion. Because highways and local roads facilitate goods movement through the SCAG region, improving the highway system is a primary need for improving goods movement in the SCAG region and beyond (SCAG 2024a).

Goods movement in Southern California is expected to continue to grow through 2045. Daily hours of delay experienced by heavy-duty trucks is forecast to nearly double between 2016 and 2045 without further investment in infrastructure, according to the 2020 SCAG Connect SoCal Plan (Iteris 2021).

1.2.2.4 improve the Reliability and Efficiency of the Public Transit system within ventura county

Several public and private transportation systems operate along US 101 within the project limits. Currently, six public agencies operate fixed-route bus services in the project area:

- VCTC Intercity: Six routes administered by VCTC.
- Gold Coast Transit District: The largest local operator, with five routes within the project area in the cities of Ventura and Oxnard.
- Camarillo Area Transit (CAT): Two routes, including a fixed route and the Camarillo Trolley.
- Thousand Oaks Transit (TOT): Five routes administered by the City of Thousand Oaks, with an additional seasonal route offered from June through August.
- Los Angeles–based operators:
    - Los Angeles County Metropolitan Transportation Authority (Metro): One route in the study area.
    - Los Angeles Department of Transportation (LADOT): Three weekday peak routes in the project area.

Together, these six agencies operate more than 20 distinct routes within the project area, with most of the systems operating exclusively within Ventura County, with a few exceptions.

Because only GP lanes are available within the project limits, public transit users on US 101 are subject traffic and delays associated with the use of single-occupancy vehicles. This is a major disincentive to the use of public transit within the corridor. Travel times would be more reliable for public transit because transit vehicles would travel within HOV lanes instead of GP lanes.

1.2.3 Independent Utility and Logical Termini

FHWA regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require the action evaluated to:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope,
2. Have independent utility or independent significance (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.

Logical termini should encompass an entire project. Cutting a larger project into smaller projects may be considered “improper segmentation.” A project must have independent utility; that is, a project must be able to function on its own, without further improvements.

This EIR/EA assesses operational conditions on US 101 between PM 4.1 and PM 30.9, the proposed limits for the roadway improvements. The 26.8-mile project begins near Moorpark Road in Thousand Oaks and extends to a point near SR 33 in Ventura. The southern end of the project would terminate at Moorpark Road in Thousand Oaks, which is a logical termination point because this local interchange provides connectivity to roadways as well as access to and from US 101 for local communities. It also provides connectivity to neighboring Los Angeles County communities, thereby establishing a logical southern terminus for the project.

The northern end of the project would terminate at SR 33 in Ventura. Currently, there are no HOV lanes within the project limits; however, there are HOV lanes north of the project limits in Santa Barbara County. Implementation of HOV lanes within the project limits would provide enhanced HOV connectivity within the region, thereby establishing a logical northern terminus for the project.

The project is of sufficient length, and the project termini, as described above, are logically placed to allow environmental issues to be addressed on a broad scope. The project would result in improvements to current traffic conditions along the US 101 corridor without any additional transportation improvements being made in the area. As such, the project is considered to have independent utility. Furthermore, the project would not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

1.3 PROJECT DESCRIPTION

This section describes project alternatives that have been developed to meet the identified purpose and need of the project while avoiding or minimizing environmental impacts. The two build alternatives and the No-Build Alternative are discussed in detail below.

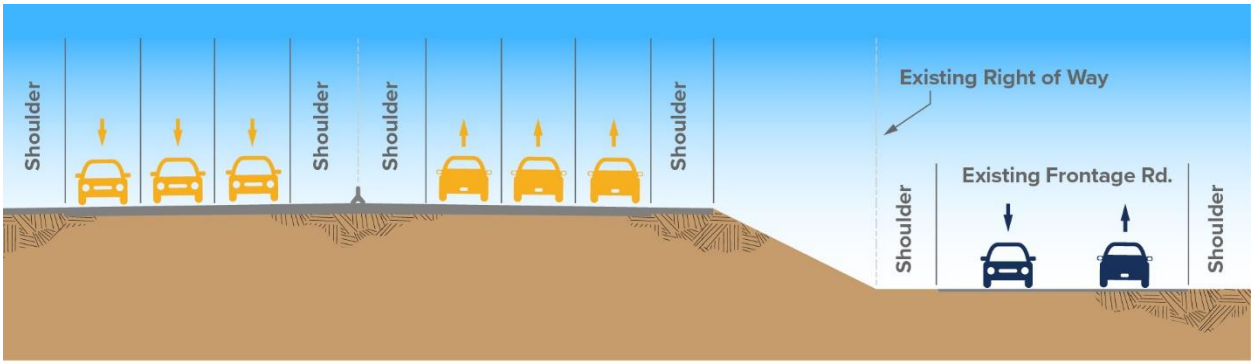
The project corridor on US 101 in Ventura County extends from Moorpark Road (PM 4.1) in Thousand Oaks to SR 33 (PM 30.9) in Ventura (see Figure 1-2). The total length of the project corridor is 26.8 miles. Within the limits of the proposed project, the US 101 corridor consists primarily of three 12-foot-wide GP lanes, with 10-foot-wide interior and exterior shoulders in each direction and 12-foot-wide auxiliary lanes at spot locations. The purpose of the project is to improve traffic conditions along the US 101 corridor within Ventura County.

1.4 PROJECT ALTERNATIVES

1.4.1 Alternative 1: No-Build Alternative

The No-Build Alternative proposes no further improvements to the existing segment of US 101. Figure 1-3 illustrates a typical cross-section for US 101 under existing conditions. Under the No-Build Alternative, all freeway facilities would remain in their existing condition, with two to four GP lanes in each direction and no HOV or additional auxiliary lanes. Operational deficiencies along US 101 would continue to deteriorate as traffic volumes increase. Existing and projected increases in traffic congestion would not be addressed with this alternative, and LOS would continue to decline. The No-Build Alternative does not address the purpose and need for the project.

Figure 1-3. Cross-Section for No-Build Alternative: Existing Conditions

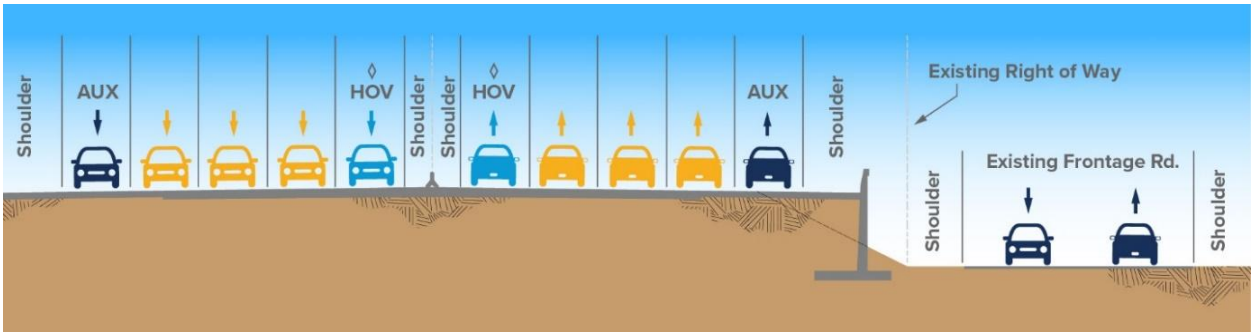


The No-Build Alternative represents a baseline condition. It is used to evaluate the effectiveness of proposed build alternatives. This alternative allows decision-makers to compare and evaluate the impacts of build alternatives with those of a no-build alternative.

1.4.2 Alternative 2: Add an HOV/Express Bus Lane in Each Direction

This alternative proposes to construct an HOV/express bus lane in each direction from Moorpark Road in Thousand Oaks to SR 33 in Ventura, with limited design exceptions and auxiliary lanes where operationally beneficial. This alternative proposes to maintain the existing number of GP lanes, with the exception of the segment from Vineyard Avenue to Johnson Drive where an existing GP lane is proposed to be converted to an HOV lane in lieu of adding a lane. This alternative would require outside widening, retaining walls, and right-of-way (ROW) acquisitions at some locations. Figure 1-4 illustrates a typical cross-section for Alternative 2.

Figure 1-4. Cross-Section for Alternative 2



Alternative 2 proposes the following engineering features:

- **Mainline Improvements**
  - 10-foot (minimum) left shoulder, with the exception of overcrossing column bents;
  - 2-foot left shoulder northbound from Arneill Road to north of Carmen Drive and 4-foot left shoulder southbound from Arneill Road to Carmen Drive to prevent significant ROW acquisitions and maintain frontage road;
  - 11- to 12-foot HOV lane;
  - 2-foot buffer between HOV and GP lanes at select locations;
  - 11- to 12-foot GP lanes;
  - 10-foot right shoulder; and
  - The southbound truck climbing lane would begin at the Santa Rosa Road/Pleasant Valley Road interchange, lengthening it by 5,060 feet.
- **Local Improvements**
  - Camarillo Springs Road would be realigned to accommodate realignment of the Camarillo Springs Road northbound off-ramp,
  - Calle Cuesta Road would be realigned to accommodate mainline widening and realignment of the Pleasant Valley Road southbound on-ramp,
  - Daily Drive would be realigned to accommodate mainline widening,
  - The sign structure at Station 1060+00 would be relocated to accommodate mainline widening, and
  - Ventura Boulevard would be realigned to accommodate mainline widening.

This alternative would require two structures to be replaced, a new one to be constructed, and 21 to be widened. The Borchard Road overcrossing and Pleasant Valley Road overcrossing would require a half-bridge replacement. The Camarillo Springs Road off-ramp undercrossing would be a new structure (refer to Table 1-2).

Table 1-2. Affected Structures

Post Mile	Bridge No.	Bridge Name	Potential Structure Impacts		
			Rebuild (R) New (N)	Outside Widening	Median Widening
4.1	52-0237	Moorpark Road UC		X	
4.5	52-0411L	Arroyo Conejo Sidehill Viaduct L1		X	
4.6	52-0411R	Arroyo Conejo Sidehill Viaduct R1		X	
4.7	52-0412R	Arroyo Conejo Sidehill Viaduct R2		X	
7.0	52-0014	South Branch Arroyo Conejo		X	
7.1	52-0247	Borchard Road OC	R		
10.2	52-0413*	Conejo Grade Sidehill Viaduct L1		X	
10.6	52-0414	Conejo Grade Sidehill Viaduct L2		X	
10.7	52-0203	Camarillo Springs Road UC		X	
10.7	52-XXXX	Camarillo Springs Road Off-Ramp UC	N		
11.4	52-0008	Arroyo Conejo		X	
12.3	52-0204	Pleasant Valley Road OC	R		
12.8	52-0009	Arroyo Calleguas		X	
18.8	52-0164	Revolon Slough		X	
R24.0	52-0021L/52-0021R	Montalvo Spur OH		X	X
R24.3	52-0017R/52-0017L	Montalvo OH		X	X
R24.7	52-0439R/52-0439L	Victoria Avenue UC			X
26.0	52-0214L/52-0214R	Telephone Road UC			X
26.7	52-0168L/52-0168R	Main Street UC			X
27.3	52-0020L/52-0020R	Lemon OH			X
29.5	52-0152L/52-0152R	Vista Del Mar UC			X
29.6	52-0163L/52-0163R	San Jon Creek			X
30.4	52-0231L*/52-0231R*	Figueroa Street UC			X
30.6	52-0232R*	Ventura Avenue Off-Ramp UC		X	

Notes: OC = overcrossing; OH = overhead; UC = undercrossing
*This location only applies to Alternative 2 only

Existing auxiliary lanes would be maintained, and new auxiliary lanes would be added where operationally beneficial (as detailed in Table 1-3).

Table 1-3. Proposed and Existing Auxiliary Lanes

From	To	Northbound (NB)/ Southbound (SB)/Both	Existing or Proposed
Moorpark Road	Lynn Road	Both	Existing
Lynn Road	Ventu Park Road	Both	Existing
Ventu Park Road	Ranch Conejo Boulevard/ Borchard Road	Both	Existing
Ranch Conejo Boulevard/Borchard Road	Wendy Drive	Both	Existing
Wendy Drive	Truck scales	NB	Existing
Santa Rosa Road/ Pleasant Valley Road	Village at the Park Drive	SB	Proposed
Village at the Park Drive	Lewis Road	SB	Existing
Lewis Road	Carmen Drive	Both	Proposed
Carmen Drive	Las Posas Road	Both	Proposed
Las Posas Road	Springville Drive	Both	Proposed
Springville Drive	Central Avenue	Both	Proposed
Central Avenue	Del Norte Boulevard	Both	Proposed
Del Norte Boulevard	Rice Avenue	Both	Existing
Rice Avenue	Rose Avenue	Both	SB existing, NB proposed
Rose Avenue	Vineyard Avenue	Both	Proposed
Vineyard Avenue	Oxnard Boulevard	Both	Existing
Oxnard Boulevard	Johnson Drive	Both (two way each)	Existing
Johnson Drive	Victoria Avenue	Both	Proposed

1.4.3 Alternative 3: Add an HOV/Express Bus Lane in Each Direction, with Design Variations

This alternative proposes to construct an HOV/express bus lane in each direction from Moorpark Road in Thousand Oaks to SR 33 in Ventura, with limited design exceptions and auxiliary lanes where operationally beneficial. This alternative would require outside widening, retaining walls, and ROW acquisitions at some locations. In addition,

Alternative 3 would require two structures to be replaced, a new one to be constructed, and 18 to be widened (refer to Table 1-2). The Borchard Road overcrossing and Pleasant Valley Road overcrossing would require a half-bridge replacement. The Camarillo Springs Road off-ramp undercrossing would be a new structure.

Alternative 3 is identical to Alternative 2, except it provides the design variations discussed below.

1.4.3.1 Shift Alignment on the Conejo Grade

The centerline of the US 101 mainline would be realigned 24 to 60 feet to the east between the inspection station and Camarillo Springs Road to minimize or prevent additional excavation into the southern hillside. An existing ROW that extends 2,200 feet north of the inspection station on the north side of US 101 was previously graded. This graded area varies from 26 feet at the ends to 61 feet near the middle, improving sight distance for stopping. Paving over the existing graded area would eliminate the impact and cost associated with cutting deeper into the southern slope and be safer for both motorists and construction workers.

1.4.3.2 Extended Southbound Auxiliary Lane at Dawson Drive

Existing conditions between the southbound on-ramp from Ventura Boulevard/Lewis Street and the off-ramp to Dawson Drive/Village at the Park Drive include a short weave lane, causing recurring congestion at this location. Alternative 3 proposes extending the auxiliary lane through the Dawson Drive/Village at the Park Drive off- and on-ramps and connecting it to the proposed auxiliary lane between Dawson Drive/Village at Park Drive and Pleasant Valley Road. This design variation, extending the existing auxiliary lane and connecting to a proposed auxiliary lane, would reduce peak-hour congestion at this location.

1.4.3.3 Four General-Purpose Lanes from Vineyard Avenue to Victoria Avenue, Including Additional Lanes on the Santa Clara River Bridge By Restriping

This design variation would maintain the existing fourth GP lane in both directions from Vineyard Avenue (beneath the SR 232/US 101 separation) to just south of the Victoria Avenue undercrossing. Under Alternative 2, the lane would be converted to an HOV lane.

Northbound, the Vineyard Avenue loop on-ramp would be the beginning of a new GP lane. The auxiliary lane between Vineyard Avenue and Oxnard Boulevard would be reconstructed to maintain operations. A new retaining wall would be built to support the northbound Oxnard Boulevard exit ramp. The northbound Victoria Avenue exit would be a single-lane optional exit, similar to the existing condition. The fourth GP lane would be dropped after the 23-foot point of this exit.

Southbound, the Victoria Avenue hook on-ramp would be the beginning of a new GP lane. The auxiliary lane between Victoria Avenue and Johnson Drive would be reconstructed to maintain operations. The southbound Vineyard Avenue exit would be a single-lane forced exit. The fourth GP lane would be dropped after the southbound Vineyard Avenue exit.

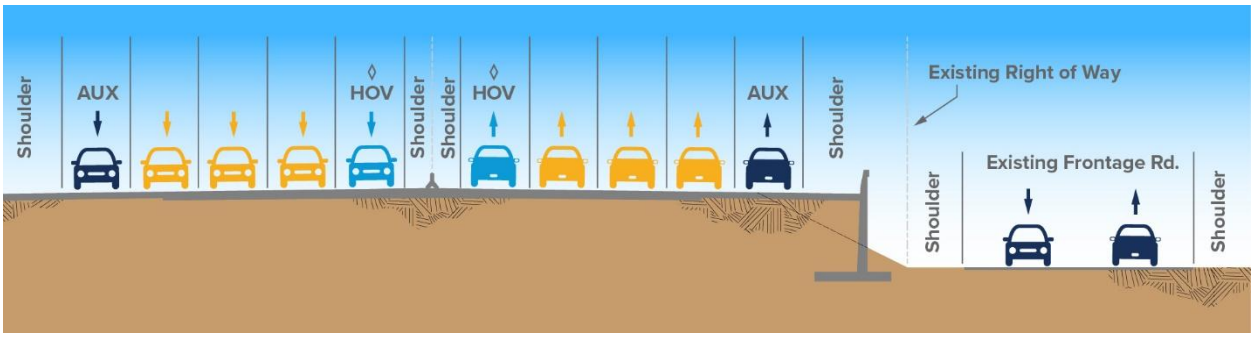
This design variation would maintain existing GP lane capacity within this segment of the project. The high-volume ramps at Vineyard Avenue, Oxnard Boulevard, Johnson Drive, and Victoria Avenue benefit from the proximity of existing lanes to accommodate weaving movements. In addition, existing pavement is available, extending about 4,200 feet north of Vineyard Avenue, for one additional northbound lane. Because only restriping would be needed in these areas, this design variation would save time and money during construction. Other areas, without additional pavement, would be widened and striped accordingly. In addition, this design variation would add a lane in each direction on the Santa Clara River Bridge. Currently, there are six lanes in each direction. Alternative 2 proposes converting one of the GP lanes to an HOV lane. The Alternative 3 design variation would restripe the Santa Clara River Bridge to provide seven lanes (the six existing GP lanes and a new HOV lane) in each direction. To accommodate the new HOV lane, the width of the left shoulder would be reduced to 4 feet. The lane width would be reduced to 11 feet for the HOV lane and #1 lane. The reductions in lane and shoulder widths would occur over a distance of 1,886 feet on a curve south of Oxnard Boulevard. The lane and shoulder width increases would occur over a distance of 339 feet on a curve near the Johnson Drive interchange. The reductions and increases in lane and shoulder widths around the curves would allow the smoothest transition for the motorist and meet *Highway Design Manual* (Caltrans 2019) standards. This design variation would maintain the four existing GP lanes and two auxiliary lanes on the Santa Clara River Bridge. Striping would be maintained for each lane right of the #1 GP lane.

1.4.3.4 Lane Drop at California Street Northbound Off-Ramp

This design variation would shift the proposed northbound project terminus from just south of SR 33 to a point about 0.5 mile to the south. The northbound HOV lane would be converted to a GP lane at San Jon Road. From there, four GP lanes would continue north until one would be dropped at a forced exit at the California Street northbound off-ramp. A proposed 2,900-foot radius curve would replace the former compound curves beneath the Ash Street pedestrian overcrossing, Ventura Avenue underpass, Chestnut Street on-ramp overhead, and California Street overcrossing. The Ventura Avenue off-ramp undercrossing would not have to be widened because the proposed striping would match the existing striping under the California Street overcrossing at Station 1560+40. No construction is proposed on the northbound mainline north of this station. This design variation would eliminate the non-standard shoulder design exceptions beneath the Ventura Avenue underpass, Chestnut Street on-ramp overhead, and California Street overcrossing.

Figure 1-5 illustrates a typical cross-section for Alternative 3.

Figure 1-5. Cross-Section for Alternative 3



1.4.4 Transportation System Management and Transportation Demand Management Alternatives

Transportation System Management (TSM) strategies increase the efficiency of existing facilities. Such actions increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of TSM strategies include ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. TSM also encourages automobile, public and private transit, and ridesharing programs, along with bicycle and pedestrian improvements, as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit modes.

Although TSM strategies alone would not satisfy the purpose and need of the project, the proposed project has features that would encourage transit use and ridesharing by allowing HOVs to have priority over single-occupancy vehicles. Increased use by HOVs would increase the efficiency of US 101 by maintaining the current number of GP lanes while allowing more people to travel through the transportation system. HOV lanes move more people in fewer cars and at higher speeds compared with GP lanes.

Transportation Demand Management (TDM) focuses on strategies that result in more efficient use of transportation resources. Such strategies include ridesharing, telecommuting, park-and-ride programs, pedestrian improvements, alternative work schedules, and congestion pricing in an effort to improve overall mobility. There are currently no HOV lanes within the project limits; however, there are HOV lanes north of the project limits in Santa Barbara County.

This project would add an HOV lane in both directions within the project limits along US 101. It would provide enhanced HOV connectivity within the region, which would contribute to regional efficiencies associated with reducing the number of vehicle trips and encouraging more people to carpool. Buses, including inter-city buses, are HOVs and therefore use HOV lanes, which removes them from GP lanes. It also provides them with a shorter and more reliable trip time compared to GP lanes, making transit service more attractive to commuters and travelers.

1.4.5 Access to Navigable Rivers

California Streets and Highways Code Section 84.5 states that, during the design hearing process related to state highway projects that include construction by Caltrans of a new bridge across a navigable river, there shall be included full consideration of, and a report on, the feasibility of providing a means of public access to a navigable river for public recreational purposes.

The project would not construct any new bridges across a navigable river.

1.5 COMPARISON OF ALTERNATIVES

As discussed in the previous section, two build alternatives are proposed for evaluation in this draft EIR/EA. The alternatives provide various design elements to improve traffic conditions within the project area. Each of the build alternatives would add one HOV/express bus lane along US 101 in each direction. However, Alternative 3 has design variations, as summarized below and discussed in detail in Section 1.4.3, *Alternative 3: Add an HOV/Express Bus Lane in Each Direction, with Design Variations*, above. The design variations consist of the following:

- Shift alignment on the Conejo Grade;
- Extended southbound auxiliary lane at Dawson Drive;
- Four GP lanes from Vineyard Avenue to Victoria Avenue, including additional lanes on the Santa Clara River Bridge as a result of restriping; and
- Lane drop at California Street northbound off-ramp.

1.6 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION

As part of development and design of the build alternatives, other alternatives and designs were considered but eliminated from further discussion, as summarized below.

1.6.1 Alternatives

Alternatives recommended by the general public through the public scoping process and suggested by Project Development Team (PDT) members were considered for further evaluation through a screening process conducted by the PDT. As a result of the screening process, which evaluated engineering, environmental, and traffic criteria, along with the established purpose of the project, the PDT determined that the alternatives discussed below would be rejected from further consideration.

1.6.1.1 PSR Alternative 2 – HOV Lane in Each Direction Using Non-Standard Section

Project Study Report (PSR) Alternative 2 involves inside rather than outside widening; construction impacts were anticipated to be minor, with low cost for operation and maintenance and minimal capital costs. A typical section under this alternative would have a narrow, 1-foot left shoulder in portions of the corridor, which would reduce the stopping sight distance to 290 feet (minimum) compared with the existing 440 feet. In addition, structure vertical clearances would be reduced at some locations because of the inside widening. Project-related noise would be anticipated to increase with the increased capacity, requiring height increases for some soundwalls and new soundwalls at other locations. Minor alterations to the visual environment would occur as a result of the height increases and new soundwalls. This alternative would also provide an additional travel option for the public through the addition of an HOV lane.

Screening Results

This alternative would require approval of a large number of design exceptions, many of which would have direct impacts on the safety of the facility because of narrow shoulders and lane widths. In addition, the team determined that an auxiliary lane should be considered for all alternatives, given the results of the Traffic Engineering Performance Assessment (TEPA) report per the Draft Project Report (Caltrans 2026). Therefore, PSR Alternative 2 was eliminated from further consideration because it required approval of too many design exceptions and because it did not include auxiliary lanes where operationally beneficial.

1.6.1.2 Alternative 2A – HOV Lane in Each Direction Using Non-Standard Section with Auxiliary Lanes

Although similar to PSR Alternative 2, Alternative 2A has impacts associated with a 4-foot left shoulder, added auxiliary lanes, and the resulting outside widening. Construction impacts would be moderate due to both inside and outside widening. Capital costs would also be moderate. The cost of operation and maintenance would be minimal. The stopping sight distance would be 347 feet (minimum) under this alternative compared with the existing 440 feet. In addition, structure vertical clearances would be reduced at some locations because of the inside widening. Project-related noise would be anticipated to increase with the increased capacity, requiring height increases for some soundwalls and new soundwalls at other locations. Minor alterations to the visual environment would occur as a result of the height increases and new soundwalls. This alternative would also provide an additional travel option for the public through the addition of an HOV lane.

Screening Results

Although slightly improved compared to PSR Alternative 2, this alternative would still require approval of too many design exceptions, which may affect the safety of the facility. As a result, Alternative 2A was eliminated from further consideration.

1.6.1.3 PSR Alternative 4 – Two HOV Lanes in Each Direction Using Full Standard Sections with Auxiliary Lanes

Because PSR Alternative 4 involves two HOV lanes in each direction using full standard sections, plus auxiliary lanes, capital costs are anticipated to be high. This is because of the widening needed, the relocation of adjacent frontage roads, and the replacement of structures. Construction impacts would also be high because of the amount of widening to the outside; however, the cost of operation and maintenance would be minimal. Project-related noise would be anticipated to increase with the increased capacity and associated widening, requiring height increases for some soundwalls and new soundwalls at other locations. Minor alterations to the visual environment would occur as a result of the height increases and new soundwalls. This alternative would also provide an additional travel option for the public through the addition of the two HOV lanes. Although forecast demand may exceed the capacity of a single HOV lane during the peak hour within a few segments, HOV demand in the corridor is generally anticipated to be accommodated by a single HOV lane in each direction in the future (both 2040 and 2060) outside the peak hour. Improvements in LOS would be isolated to a small number of segments.

Screening Results

Alternative 4 was eliminated from further consideration because it would result in significant environmental impacts, with minimal, if any, operation improvements over a single HOV lane.

1.6.1.4 Reversible Lane – HOV Lane Northbound or Southbound, depending on Peak Traffic Flow

The Reversible Lane Alternative was anticipated to be one of the most expensive options due to capital costs. This is because of the widening needed to accommodate additional lanes, the relocation of adjacent frontage roads, and the replacement of structures. High operating and maintenance costs would result from the change in access multiple times per day and the inspection of the equipment. Construction impacts would also be high due to the amount of widening. Project-related noise would be anticipated to increase with the increased capacity and associated widening, requiring height increases for some soundwalls and new soundwalls at other locations. Minor alterations to the visual environment would occur as a result of the height increases and new soundwalls. This alternative would provide an additional travel option for the public through the addition of the HOV lanes. However, this option would be destination oriented, resulting from the limited possibilities for access with such a configuration.

Screening Results

From initial traffic evaluations under existing conditions and the future outlook for the project through 2040, the traffic split within the majority of the corridor is not significant enough to warrant a reversible lane. In addition, the operational and maintenance impacts of this alternative, combined with the engineering challenges (i.e., access

points, grade differences, structure locations), would be significant. For these reasons, this alternative was dropped from consideration.

1.6.1.5 Transit Way – Dedicated Multi-Passenger Vehicle System (LRT or BRT) within an Elevated Dedicated Corridor

Similar to the Reversible Lane Alternative, the Transit Way Alternative is anticipated to be one of the most expensive with respect to capital costs. This is because of 28 miles of viaduct and the provision of intermediate access points through widening or flyover structures. Construction impacts would also be high because of the amount of widening and the construction of dedicated access points. The cost of operation and maintenance would be anticipated to be minimal for a bus rapid transit (BRT) system; however, a significant cost increase would be anticipated for a light rail transit (LRT) system because of power and servicing requirements.

Project-related noise would be anticipated to increase with the increased capacity and elevated facility, requiring height increases for some soundwalls and new soundwalls at other locations. Major alterations to the visual environment would occur. These would be associated with the corridor-long elevated transit way, including blocked views for residents living adjacent to the freeway. In addition, because of visual impacts, the Local Coastal Plan may preclude implementing an elevated structure through the Coastal Zone areas of the project. Although this alternative would provide an additional travel option for the public, it would be very destination oriented, resulting from the limited possibilities for access with this configuration.

Screening Results

Through an evaluation of anticipated traffic volumes in 2040, it was determined that the increase in transit ridership needed to meet the purpose of this project would be an unrealistic expectation. In addition, the Conejo Grade presents unique engineering challenges that have not been resolved with respect to LRT. For these reasons, this alternative was dropped from consideration.

1.6.1.6 General-Purpose Lane – One Additional General-Purpose Lane in Each Direction Using Full Standard Section

Widening to the outside and inside would be necessary. Anticipated capital costs would be moderate because portions of the corridor have the width needed to accommodate the proposed design. Construction impacts would be moderate, with minimal cost for operations and maintenance. Stopping sight distance with this alternative would be maintained at 440 feet. Project-related noise would be anticipated to increase with the increased capacity and associated widening, requiring height increases for some soundwalls and new soundwalls at other locations. Minor alterations to the visual environment would occur as a result of the height increases and new soundwalls. This alternative would provide no change to available travel options, with only negligible operational improvement.

Screening Results

The General-Purpose Lane Alternative was found to be less effective than the HOV lane alternatives. It would move fewer people and result in slower speeds on US 101 along the majority of the corridor. The physical impacts of the General-Purpose Lane Alternative would be very similar to those of the HOV lane alternatives. Because impacts would be similar and operations would not be as good, the General-Purpose Lane Alternative was eliminated from further consideration.

1.6.2 Design Options Evaluated under Alternatives 2 and 3

Design options were considered between Santa Rosa Road and Flynn Road to minimize harm to the southern row of trees at the Adolfo Camarillo Heritage Grove, which is considered a historic site under Section 4(f). Use of the resource that results in adverse impacts is considered adverse in terms of preservation purposes of Section 4(f). The design options that follow were developed and considered by the PDT but were rejected from further consideration as a result of a screening process that included evaluating engineering, environmental, and traffic criteria, along with the established purpose of the project. Further discussion of the Adolfo Camarillo Heritage Grove can be found in Section 2.2.12, *Cultural Resources,* and Appendix A, *Section 4(f)*.

1.6.2.1 Design Option A – No Widening at Adolfo Camarillo Heritage Grove

To avoid tree impacts at the Adolfo Camarillo Heritage Grove, Design Option A would implement non-standard shoulders on the northbound mainline by narrowing the left inside shoulder to 2 feet and the right outside shoulder to 1 foot. The limits of the non-standard shoulders, including the narrowing tapers, would be from Santa Rosa Road to North Lewis Road. Design Option A would reduce shoulder widths on both sides of the northbound mainline and reduce ramp merging lengths to keep northbound improvements within the limits of the existing northbound pavement section.

Screening Results

Although Design Option A would avoid adverse impacts on the Adolfo Camarillo Heritage Grove, it would not achieve the project objective to address operational deficiencies in this area and may, in fact, cause additional operational deficiencies due to the reduction in shoulder widths and ramp merging lengths. In addition, Caltrans did not approve this design option because it would significantly reduce shoulder widths, thereby affecting sight distance and safety, especially on curves, by limiting a driver's ability to see ahead and not providing the shoulder room needed to avoid potential collisions. For these reasons, Design Option A was eliminated from further consideration.

1.6.2.2 Design Option B – Shifting US 101 Centerline in the Vicinity of the Adolfo Camarillo Heritage Grove

Design Option B would avoid removal of a portion of the southern row of trees at the Adolfo Camarillo Heritage Grove by shifting the highway centerline between approximately

Santa Rosa Road and North Lewis Road. Design Option B would require removing the insider shoulder, relocating drainages along the freeway median, and closing the freeway to implement full reconstruction of the pavement section of the superelevated highway. Design Option B would still remove several trees in the grove to accommodate a northbound auxiliary lane at the Calleguas Creek overcrossing.

Screening Results

Design Option B would entail significant engineering and construction costs due to complete reconstruction of a portion of the freeway. In addition, Design Option B would still require removal of several trees at the Adolfo Camarillo Heritage Grove. Therefore, Design Option B would still result in adverse impacts on the Adolfo Camarillo Heritage Grove, in addition to the significant engineering and construction costs. For these reasons, Design Option B was eliminated from further consideration.

1.6.2.3 Design Option C – Widening on South side of US 101 in the Vicinity of Adolfo Camarillo Heritage Grove

Design Option C is similar to Design Option B, except Design Option C would not include a northbound auxiliary lane at the Calleguas Creek overcrossing.

To avoid tree impacts at the Adolfo Camarillo Heritage Grove, Design Option C would entail maintaining the existing edge of pavement on the northbound side of US 101 and shifting the highway centerline and all highway widening to the southbound side of US 101 between approximately Santa Rosa Road and North Lewis Road. Similar to Design Option B, Design Option C would require removing the insider shoulder, relocating drainages along the freeway median, and closing the freeway to implement full reconstruction of the pavement section of the superelevated highway.

Screening Results

Although Design Option C would avoid adverse impacts on the Adolfo Camarillo Heritage Grove (adjacent to the northbound side of US 101), it would require acquisition of the entire parking lot at the Kingdom Hall of Jehovah's Witnesses property, necessitating acquisition of the entire property (adjacent to the southbound side of US 101). Design Option C would also affect Section 4(f) resources, including the Calleguas Creek bike path and the Pleasant Valley Fields property. There would be both temporary and permanent impacts on the Calleguas Creek bike path. During construction, 3,000 feet of bike lane would need to be relocated to the Pleasant Valley Fields property and parking lot to construct the retaining walls needed for the freeway widening. Design Option C would also require permanent acquisition of approximately 14,500 square feet of landscaping that serves as a buffer between US 101 and the Pleasant Valley Fields property and Calleguas Creek bike path. The strip of landscaping includes trees and grass. Removal of the landscaping would have permanent air quality, noise, vibration, and visual impacts on the adjacent park and bike path due to the freeway mainline moving closer to Section 4(f) resources. In addition, Design Option C would entail significant engineering and construction costs due to complete

reconstruction of a portion of the freeway. For these reasons, Design Option C was eliminated from further consideration.

1.6.2.4 Design Option D – Auxiliary Lane from santa rosa road to Flynn Road

Design Option D would include a proposed auxiliary lane on northbound US 101 from Santa Rosa Road to Flynn Road. The proposed HOV/express bus lanes would be maintained in both the northbound and southbound directions along US 101.

Screening Results

Implementation of Design Option D would affect approximately 25 trees at the Adolfo Camarillo Heritage Grove. In comparison, removal of the auxiliary lane would reduce the number of trees affected in the southern row to approximately 10. Under Section 4(f), when two or more build alternatives remain and both alternatives result in a "use" and adverse impacts on a historic site under Section 106, then the alternative that causes the least overall harm in light of the statute's preservation goals may be approved. Because the harm caused by the auxiliary lane would be greater than it would be without it (25 trees affected versus 10), the proposed auxiliary lane on northbound US 101 from Santa Rosa Road to Flynn Road was eliminated from further consideration.

1.7 PERMITS AND APPROVALS NEEDED

The following permits, agreements, and approvals would be required for project construction:

Table 1-4. Permits and Approvals

Agency	Permits, Licenses, Agreements, and Certifications	Status
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation for Threatened and Endangered Species	A Biological Assessment (BA) was prepared. Informal consultation with USFWS regarding monarch butterfly and least Bell's vireo concluded on July 15, 2021. USFWS concurred with Caltrans' "may affect, not likely to adversely affect" determination regarding least Bell's vireo; recommended avoidance and minimization measures for least Bell's vireo and monarch butterfly are included in the EIR/EA.
U.S. Army Corps of Engineers (USACE)	Section 404 and Section 408 Permits	Application for Section 404 and 408 permits are expected during the project design phase.

Agency	Permits, Licenses, Agreements, and Certifications	Status
California Department of Fish and Wildlife (CDFW)	1602 Agreement for Streambed Alteration	Applications for 1602 agreement expected during the project design phase.
Los Angeles Regional Water Quality Control District	Section 401 Permit	Application for Section 401 permit expected during the project design phase.
Federal Highway Administration (FHWA)	Air Quality Conformity Determination	Request for determination to be submitted following selection of a preferred alternative.
State Historic Preservation Officer (SHPO)	Memorandum of Agreement (MOA)	MOA expected following circulation of the draft EIR/EA.
Southern California Regional Rail Authority (SCRRA)	Right of Entry and Maintenance Agreement	To be obtained prior to construction.
Union Pacific Railroad (UPRR)	Right of Entry and Maintenance Agreement	To be obtained prior to construction.
California Coastal Commission (CCC)/City of Ventura Local Coastal Program (LCP)	Coastal Development Permit (CDP)	Application for CDP from the City of Ventura LCP expected during the project design phase for portions of the project that fall within designated preservation areas of the California Coastal Zone.
County of Ventura	Planned Development Permit	To be obtained prior to construction.
State Water Resources Control Board (SWRCB)	National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit, Order No. 2022-0057-DWQ, NPDES No. CAS000002	To be obtained prior to construction.
SWRCB	Caltrans Statewide NPDES Storm Water Permit, Order No. 2022-0033-DWQ, NPDES No. CAS000003	Caltrans District 7 and VCTC will ensure compliance with the SWRCB-issued Caltrans NPDES permit.
Los Angeles Regional Water Quality Control Board	Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, Order No. R4-2023-0429, NPDES No. CAG994004.	To be obtained if dewatering activities are expected.

Agency	Permits, Licenses, Agreements, and Certifications	Status
Ventura County Flood Control District	Encroachment Permit	Caltrans District 7 and VCTC to obtain permit jointly prior to construction.

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

2.1 RESOURCE TOPICS DISMISSED FROM ANALYSIS

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.

2.1.1 Timberlands

The project is located approximately 9 miles southeast of the foothills of the Los Padres National Forest. Thus, there is no timberland within the project limits or area surrounding the project limits.

2.1.2 Wild and Scenic Rivers

There are no wild and scenic rivers within the project limits or the area surrounding the project limits. The project is located approximately 18 miles south of the Sespe Creek, which is the nearest wild and scenic river designated in the National Wild and Scenic Rivers System (2026).

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2.2 HUMAN ENVIRONMENT

2.2.1 Existing and Future Land Use

The project is within Ventura County and runs along US 101, traversing the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura. This section addresses potential impacts on existing and planned land uses within the community impact study area (referred to as the *resource study area* in this section), which is defined as the communities within 0.5 mile of the project limits. The following section is based on the Community Impact Assessment (Caltrans 2026) prepared for the project.

2.2.1.1 Existing Land Use

The project is within an existing transportation corridor in an urban setting surrounded by multiple land use types, including residential, commercial, industrial, public, and recreational uses. Existing land uses within the resource study area, as described in Table 2.2.1-1 and shown on Figure 2.2.1-1, are based on 2022 land use data from the Southern California Association of Governments (SCAG). SCAG's land use data may not directly correlate with individual cities' land use designations, as identified in their respective land use maps and general plans. However, the analysis in this section will defer to SCAG's land use designations because it is the only comprehensive land use data expansive enough to cover the entire community impact study area.

Table 2.2.1-1. Existing Land Use Definitions

Land Use	Definition
Agriculture	This designation includes land used primarily for the production of food, fiber, and livestock. Included in these classes are associated structures and facilities.
Commercial and Services	This designation includes areas used predominantly for business or the sale of products and their associated services, as well as non-commercial uses such as government and public service offices. This class does not include industrial activities.
Education	This designation includes all levels of public and private schools, colleges, universities, seminaries, and training centers. Includes buildings, open space, dormitories, and parking areas. Also included are all athletic facilities such as ball fields, stadiums, soccer fields, swimming pools, and tennis courts.
Facilities	This designation includes government offices and other public service facilities, major healthcare facilities, religious facilities, and public and private educational facilities. This category also includes associated facilities and parking areas.
General Office	This designation allows for office buildings usually used for financial, personnel, business, medical, and other professional services.
Industrial	This designation includes areas where manufacturing, assembly, processing, packaging, or storage of products takes place.

Land Use	Definition
Military Installations	This designation includes areas of military installations and associated facilities administered by the United States Armed Forces or the California National Guard.
Mixed Commercial and Industrial	This designation includes commercial and industrial land uses as combined uses or uses in close proximity. This land use contains a mixture of light-industrial use, offices, warehouse/distribution use, retailing, and personal services. These complexes usually contain one or more rectangular buildings with minimal landscaping.
Mixed Residential	This designation includes areas where there is a combination of single-family detached and multi-family dwellings of any type occurring together. Typically, these are in older neighborhoods where duplexes, triplexes, and apartment buildings occur among single-family houses.
Mixed Residential and Commercial	This designation includes built-up areas where there is a mixture of residential and commercial uses occurring within a specific area. This class typically occurs in smaller towns or villages where there are various uses in a small area. It may also occur in older areas where consistent zoning was not in force at the time of construction of structures. Also included are areas where a mixture of uses occur within the same building. For example, an older commercial strip may contain adjacent buildings where commercial use occurs on the first floor and, in all buildings, either residential or offices occur in the upper floors.
Mobile Homes and Trailer Parks	This designation includes residential units composed of mobile homes, trailers, and prefabricated housing that are either stationary with foundations or on wheels and capable of being moved. Included are vacant and occupied spaces and associated storage facilities for the complex. Mobile homes and trailer parks are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities, such as schools, parks, police, and fire stations.
Multi-Family Residential	This designation includes attached residences, apartments, condominiums, and townhouses. Multi-family residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, police, and fire stations. This designation also includes senior citizen apartment buildings and off-campus university housing.
Open Space and Recreation	This designation includes developed open areas within urban settings and urban and non-urban open areas developed for recreational activities.
Single-Family Residential	This designation is in an urban or suburban setting and is typically made up of detached dwellings where each structure houses a single family. These residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, police, and fire stations.
Transportation, Communications, and Utilities	This designation includes major structures and facilities associated with forms of transportation, communication, and utilities.
Under Construction	This designation includes facilities that were under construction at the time of field verification. Structure use and/or extent cannot be or is difficult to determine. Pad platforms or foundations may be visible. Partly constructed structures may also be visible.

Land Use	Definition
Undevelopable or Protected Land	This designation includes areas of slopes greater than 15 degrees, designated endangered species and plants, wetlands, flood ways, and natural habitat.
Vacant	Vacant areas include land that has not been built up with human-made structures, and contains no agriculture or water body. The area is open, containing natural or disturbed natural vegetation. Rangeland is included in this category. Areas containing abandoned structures are mapped as their previous use.
Water	This designation includes open water bodies that are greater than 2.5 acres in size.

Source: SCAG Land Use Code Descriptions

The existing land uses within the resource study area in each of the cities the project traverses are discussed in the following subsections.

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Figure 2.2.1-1. Existing Land Use (Sheet 1 of 6)

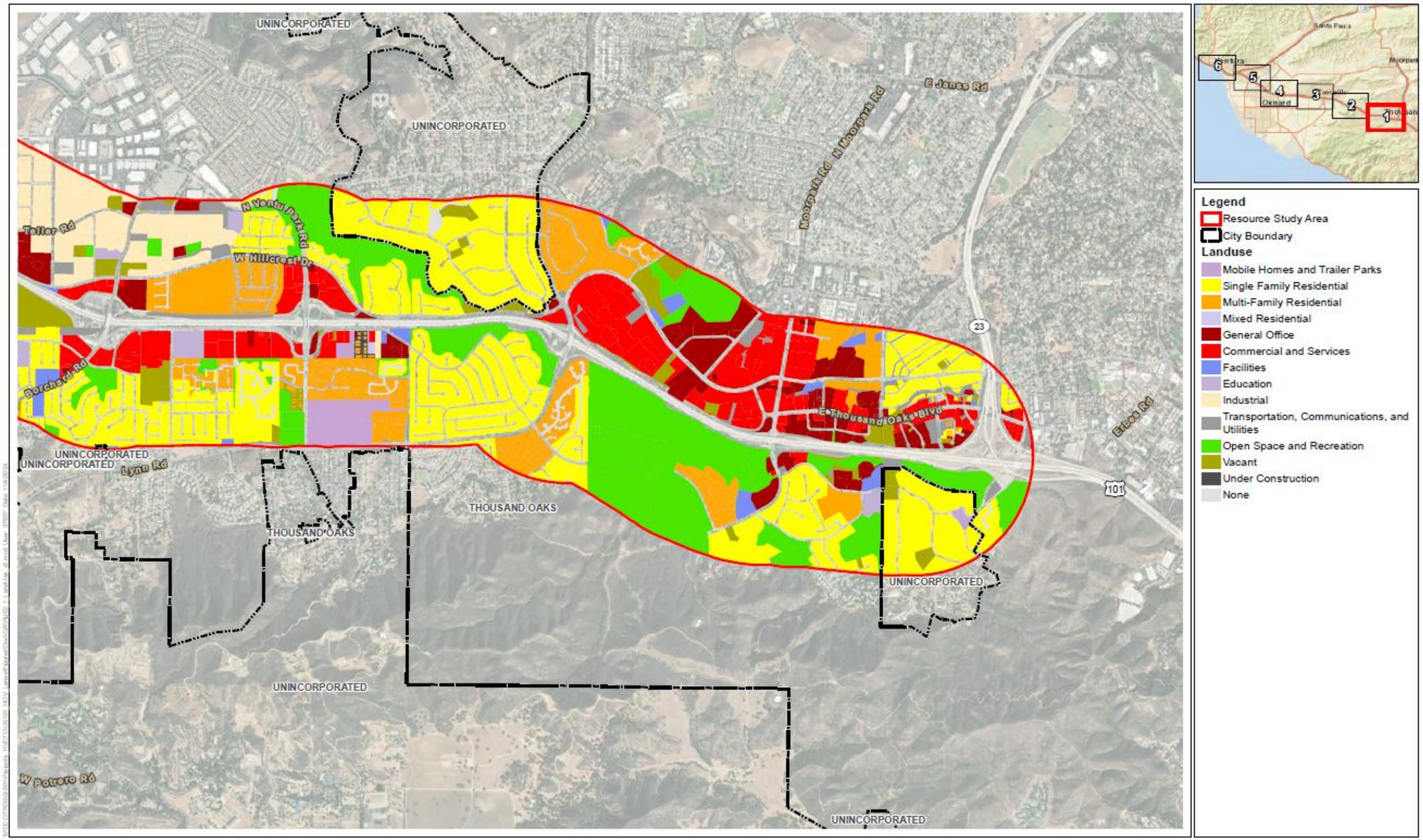


Figure 2.2.1-1, Sheet 1 of 6
Existing Land Use
US 101 Improvement Project

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Figure 2.2.1-1. Existing Land Use (Sheet 2 of 6)

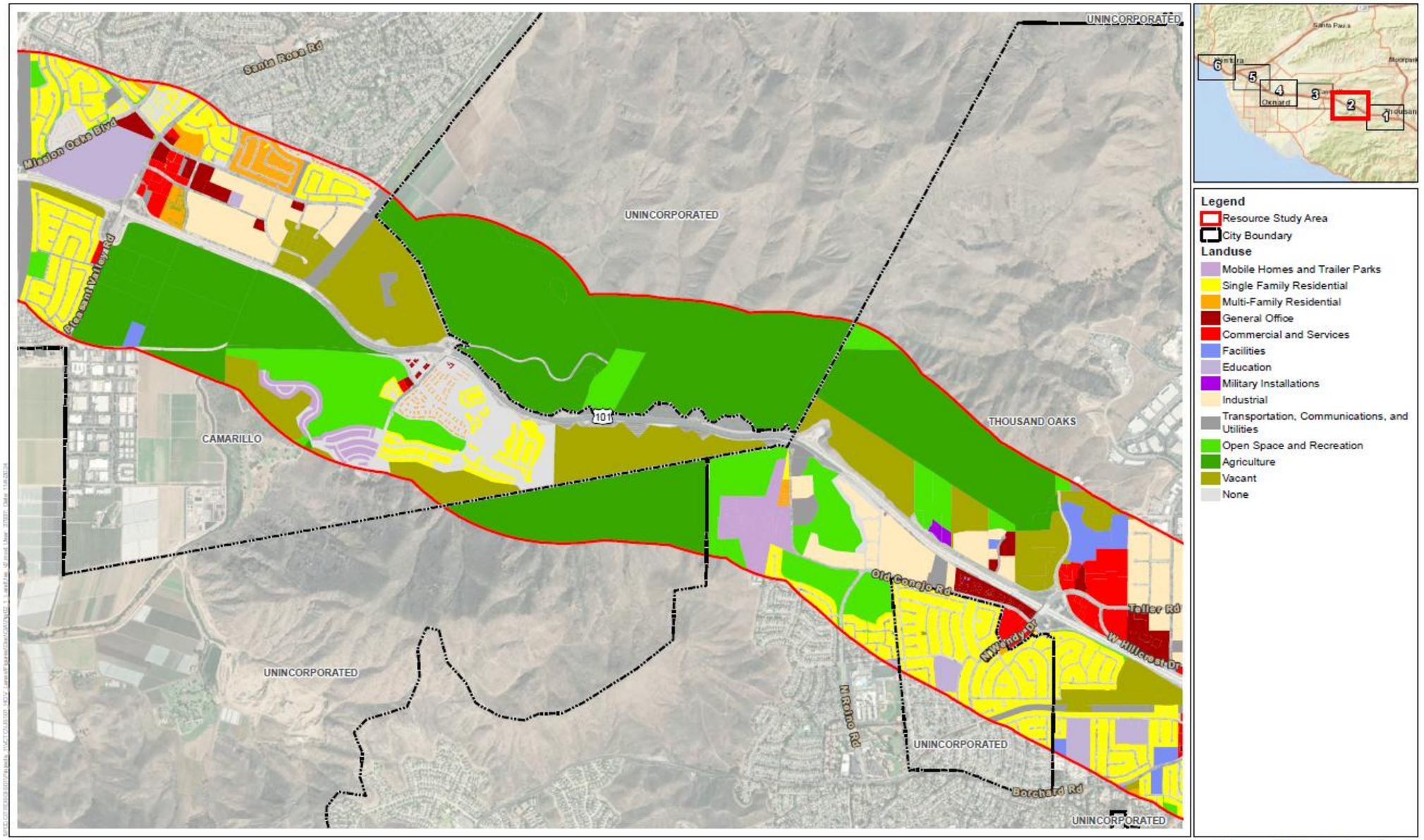


Figure 2.2.1-1, Sheet 2 of 6
Existing Land Use
US 101 Improvement Project

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Figure 2.2.1-1. Existing Land Use (Sheet 3 of 6)

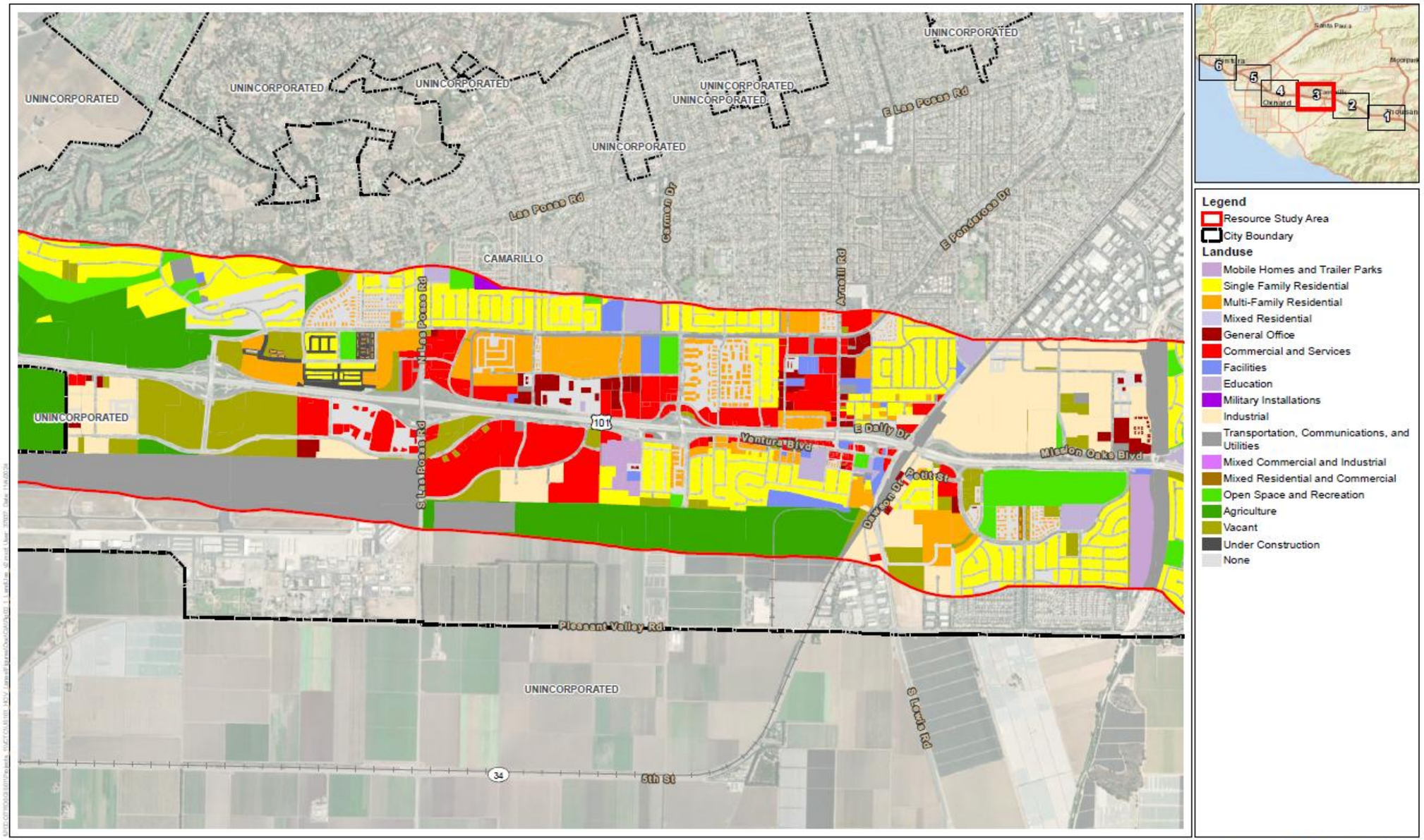


Figure 2.2.1-1, Sheet 3 of 6
Existing Land Use
US 101 Improvement Project

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Figure 2.2.1-1. Existing Land Use (Sheet 4 of 6)

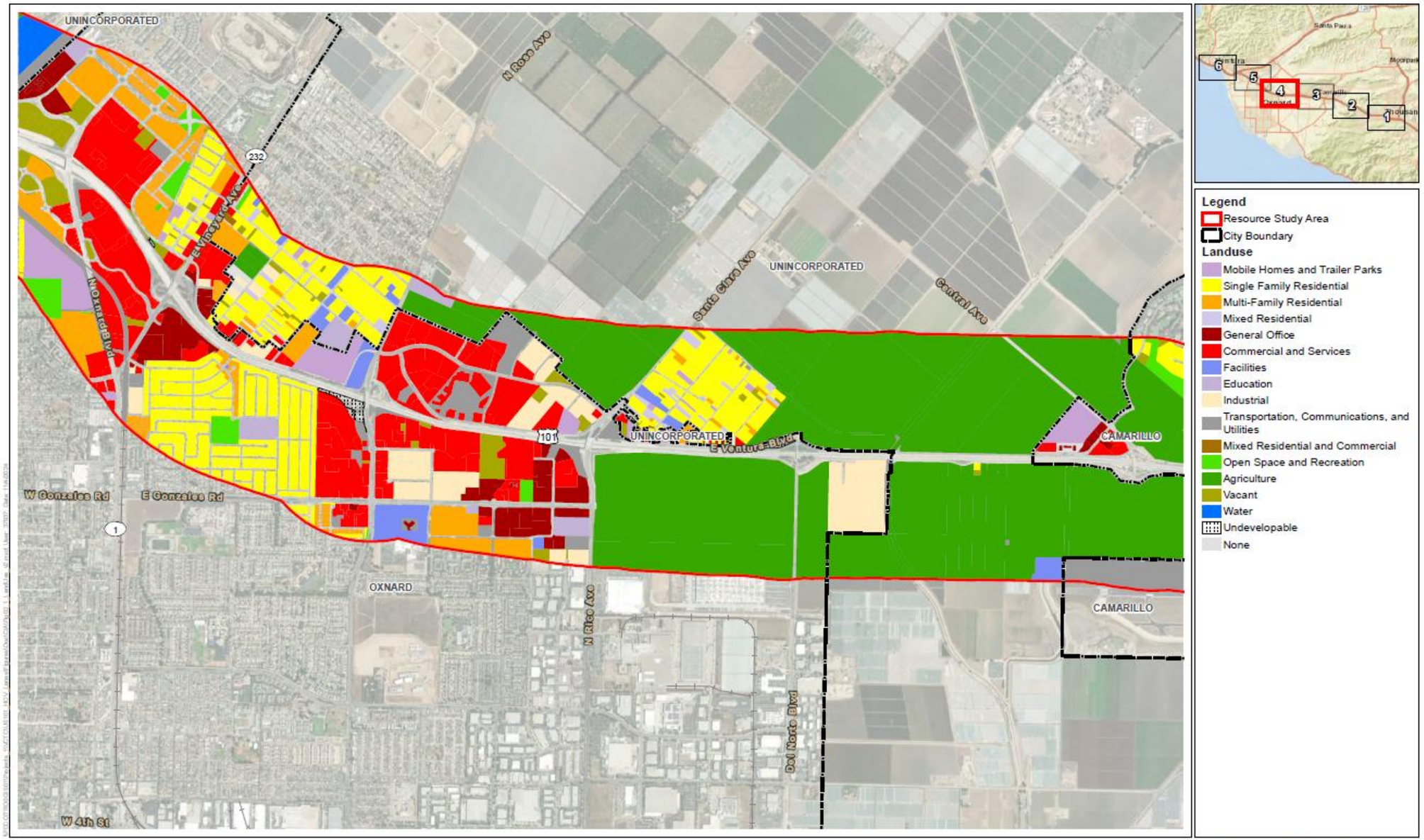


Figure 2.2.1-1, Sheet 4 of 6
Existing Land Use
US 101 Improvement Project

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Figure 2.2.1-1. Existing Land Use (Sheet 5 of 6)

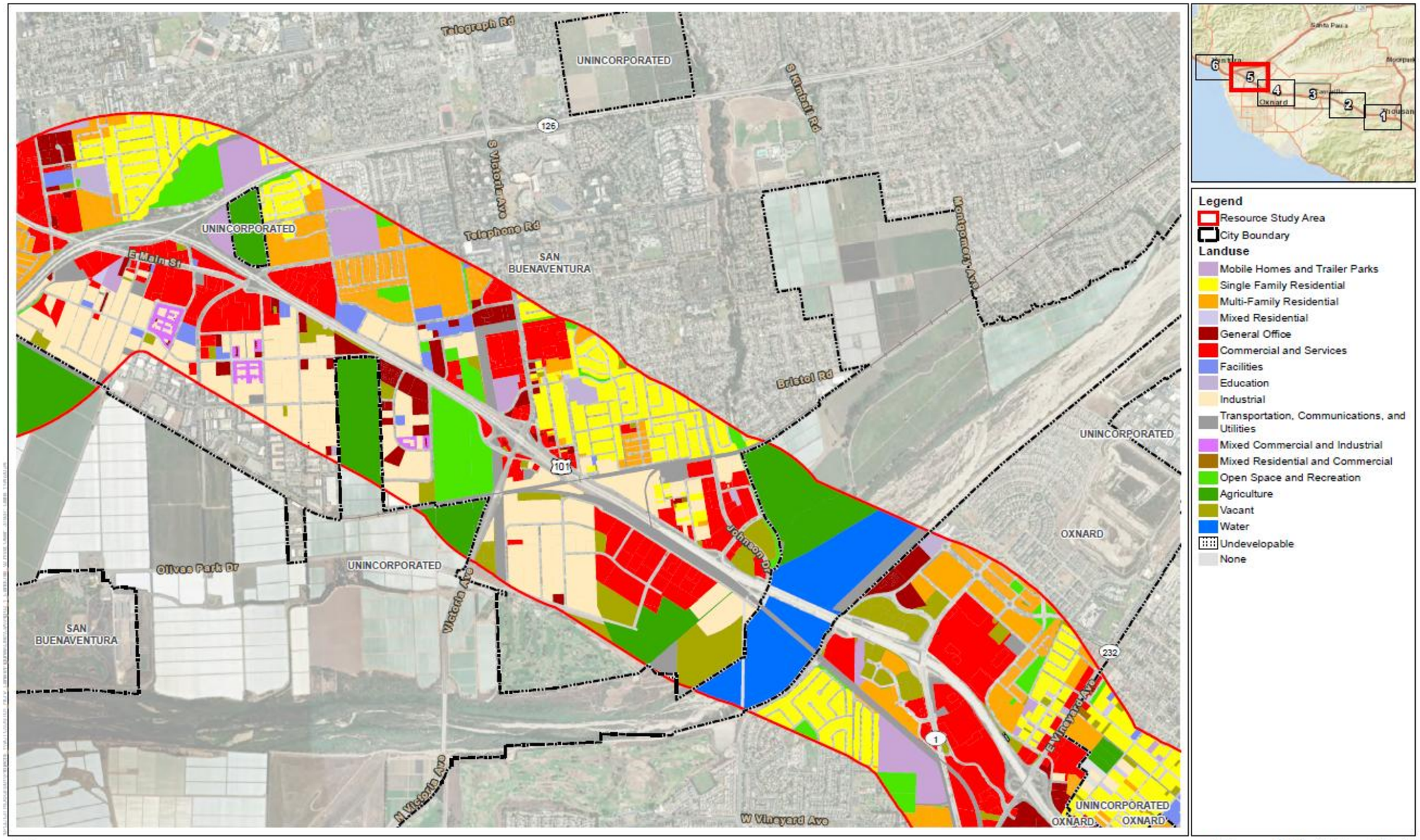


Figure 2.2.1-1, Sheet 5 of 6
Existing Land Use
US 101 Improvement Project

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Figure 2.2.1-1. Existing Land Use (Sheet 6 of 6)

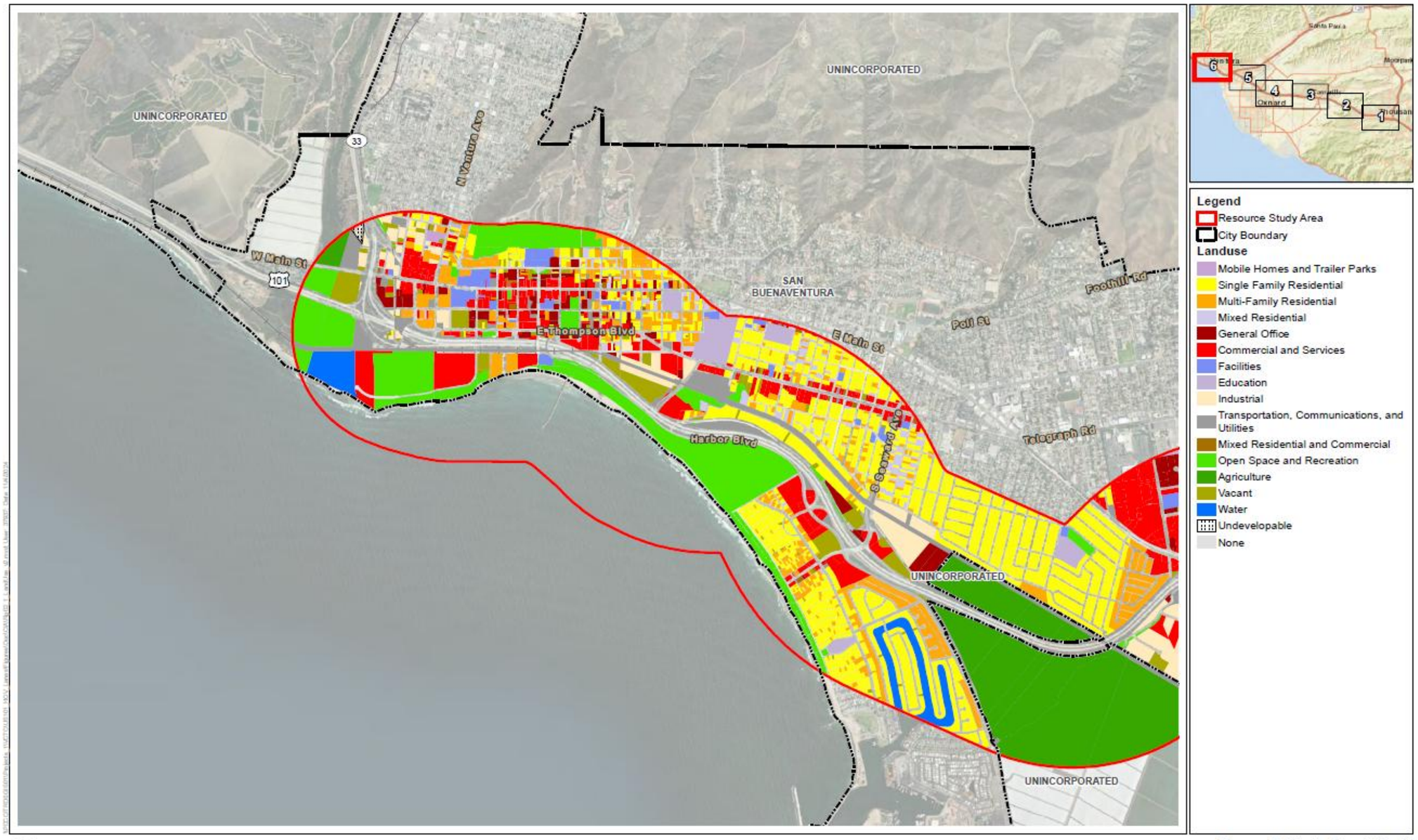


Figure 2.2.1-1, Sheet 6 of 6
Existing Land Use
US 101 Improvement Project

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Thousand Oaks

Thousand Oaks lies within the Conejo Valley, in the southern portion of Ventura County. The city is traversed by US 101 and State Route (SR) 23, which runs north–south through Thousand Oaks. The city is bordered by Moorpark to the north; Hidden Valley to the south; Westlake Village, Agoura Hills, and Oak Park to the east; and Camarillo to the west. Existing land uses directly adjacent to the project corridor in Thousand Oaks include commercial businesses and services, mixed residential and commercial, single-family residences, public facilities, and multi-family residences as well as open space and recreational facilities. Table 2.2.1-2 provides a breakdown of the different types of land uses and acreage within the resource study area in Thousand Oaks.

Table 2.2.1-2. Existing Land Use in Thousand Oaks

Existing Land Use	Acres	Total Land Use (Percent)
Agriculture	306	6.9
Commercial and Services	493	11.1
Education	63	1.4
Facilities	92	2.1
General Office	270	6.1
Industrial	340	7.7
Military Installations	5	0.1
Mixed Residential	2	0.0
Mobile Homes and Trailer Parks	133	3.0
Multi-Family Residential	444	10.0
None[a]	44	1.0
Open Space and Recreation	922	20.8
Single-Family Residential	852	19.3
Transportation, Communications, and Utilities	117	2.6
Under Construction	3	0.1
Vacant	338	7.6
Total	**4,424**	**100[b]**

Source: SCAG 2022.
[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Camarillo

Camarillo lies within Pleasant Valley, in the southern portion of Ventura County. The city is traversed by US 101 and SR 34, which runs north–south through Camarillo. The city is bordered by Somis, an unincorporated community in Ventura County, to the north; Santa Rosa Valley to the east; and Oxnard to the west. Existing land uses directly adjacent to the project corridor in Camarillo include residential, agriculture, general office use, public facilities, commercial and services, industrial uses, undevelopable or protected land, and open space and recreation. Table 2.2.1-3 provides a breakdown of the different types of land uses and acreage within the resource study area in Camarillo.

Table 2.2.1-3. Existing Land Use in Camarillo

Existing Land Use	Acres	Total Land Use (Percent)
Agriculture	919	15.4
Commercial and Services	437	7.3
Education	156	2.6
Facilities	75	1.3
General Office	134	2.2
Industrial	544	9.1
Military Installations	5	0.1
Mixed Commercial and Industrial	0	0.0
Mixed Residential	1	0.0
Mixed Residential and Commercial	3	0.1
Mobile Homes and Trailer Parks	127	2.1
Multi-Family Residential	403	6.7
None[a]	473	7.9
Open Space and Recreation	360	6.0
Single-Family Residential	955	16.0
Transportation, Communications, and Utilities	616	10.3
Under Construction	31	0.5
Vacant	742	12.4
Total	**5,981**	**100**[b]

Source: SCAG 2022.
[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Oxnard

Oxnard is the largest city in Ventura County. The city is bordered by the Pacific Ocean, a naval base, and Port Hueneme to the west; unincorporated areas of Ventura County to the east; the city of Ventura to the north; and Camarillo to the south. Existing land uses directly adjacent to the project corridor in Oxnard include agricultural, commercial and services, multi-family residences, water transfer facilities, mobile homes and trailer parks, mixed residential and commercial, and industrial uses as well as open space and recreation. Table 2.2.1-4 provides a breakdown of the different types of land uses and acreage within the resource study area in Oxnard.

Table 2.2.1-4. Existing Land Use in Oxnard

Existing Land Use	Acres	Total Land Use (Percent)
Agriculture	451	18.1
Commercial and Services	630	25.2
Education	34	1.4
Facilities	43	1.7

Existing Land Use	Acres	Total Land Use (Percent)
General Office	159	6.4
Industrial	183	7.3
Mixed Residential	1	0.0
Mobile Homes and Trailer Parks	102	4.1
Multi-Family Residential	253	10.1
Open Space and Recreation	57	2.3
Single-Family Residential	332	13.3
Transportation, Communications, and Utilities	136	5.4
Undevelopable	11	0.4
Vacant	106	4.2
Total	**2,498**	**100**[a]

Source: SCAG 2022.
[a] The percent total may not add up to 100 percent due to rounding.

Ventura

The city of Ventura is within the northern portion of Ventura County. Ventura is bordered by the Pacific Ocean to the west, Santa Paula to the east, unincorporated areas of Ventura County and open space to the north, and the city of Oxnard and the Santa Clara River to the south. Existing land uses directly adjacent to the project corridor in Ventura include multi-family residential, single-family residential, commercial and services, specific plan, industrial uses, agriculture, and open space and recreation. Table 2.2.1-5 provides a breakdown of the different types of land uses and acreage within the resource study area in the city of Ventura.

Table 2.2.1-5. Existing Land Use in Ventura

Existing Land Use	Acres	Total Land Use (Percent)
Agriculture	62	1.4
Commercial and Services	729	16.2
Education	84	1.9
Facilities	94	2.1
General Office	181	4.0
Industrial	688	15.3
Mixed Commercial and Industrial	22	0.5
Mixed Residential	45	1.0
Mixed Residential and Commercial	8	0.2
Mobile Homes and Trailer Parks	115	2.6
Multi-Family Residential	437	9.7
None[a]	7	0.2
Open Space and Recreation	526	11.7
Single-Family Residential	948	21.0

Existing Land Use	Acres	Total Land Use (Percent)
Transportation, Communications, and Utilities	253	5.6
Undevelopable	3	0.1
Vacant	240	5.3
Water	65	1.4
Agriculture	62	1.4
Total	**4,507**	**100.0**[b]

Source: SCAG 2022.
[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Ventura County

Existing land uses directly adjacent to the project corridor in unincorporated areas of Ventura County include single-family residences, open space and recreation, and agriculture. Table 2.2.1-6 provides a breakdown of the different types of land uses and acreage within the resource study area in Ventura County.

Table 2.2.1-6. Existing Land Use in Ventura County

Existing Land Use	Acres	Total Land Use (Percent)
Agriculture	3,305	70.7
Commercial and Services	13	0.3
Education	36	0.8
Facilities	37	0.8
General Office	1	0.0
Industrial	11	0.2
Mixed Residential	29	0.6
Mixed Residential and Commercial	4	0.1
Mobile Homes and Trailer Parks	13	0.3
Multi-Family Residential	27	0.6
None[a]	13	0.3
Open Space and Recreation	38	0.8
Single-Family Residential	818	17.5
Transportation, Communications, and Utilities	62	1.3
Undevelopable	1	0.0
Vacant	37	0.8
Water	232	5.0
Total	**4,677**	**100.0**[b]

Source: SCAG 2022.
[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Development Trends and Future Land Use in the Project Vicinity

Recent development trends in the resource study area reflect a longstanding trend in the county of accommodating growth primarily in the cities. Several new developments are planned, are currently under construction, or have been recently constructed in the resource study area. The recently built, under construction, and planned developments are summarized in Table 2.2.1-7 (see Section 2.2.6, *Growth,* for additional details). The timeframe includes any projects that may occur within 3 years of the Opening Year (2040) of the proposed project. Future land use within the resource study area is anticipated to be primarily commercial and residential projects. Business parks, mixed-use developments, high-density residential development including an apartment complex, and commercial corridors are planned. In addition to the projects listed in Table 2.2.1-7, there were a number of transportation projects used to develop the transportation model for the project, as shown in Exhibit 51, *2040 Forecast Year VCTM Baseline Projects (FTIP and RTP Projects)*, of the project's *Traffic Operations Analysis Report* (Caltrans 2021). However, not much information is known for these projects at this time but can be assumed to be implemented at some time before or after construction of the project.

Table 2.2.1-7. Current and Future Development Projects

Project Name	Location	Project Description	Status
Camino Real Business Park Specific Plan	Located within the city of Oxnard with frontage along US 101.	The Camino Real Business Park Specific Plan is a planned commercial and industrial development containing a mixture of industrial, research and development, office and commercial uses.	Plan approved May 2008. Some developments under this plan are approved; others are still undergoing review.
River Park Specific Plan	The northern edge of the city of Oxnard, in southern Ventura County, located north of US 101 between Vineyard Avenue (SR 232) and the Santa Clara River.	The River Park Specific Plan would regulate the use and development of land within an approximate 700-acre area. Various land uses are proposed within the Specific Plan Area, including residential, commercial, public facilities, and open space uses.	Plan approved in 2002. Some developments under this plan are approved or have already been constructed; others are still undergoing review. The Panorama River Park Apartments (2700 and 2750 North Ventura Road, Oxnard) were constructed in 2025.
Sakioka Farms Specific Plan	The northeastern area of the city of Oxnard immediately south of US 101 and immediately east of Rice Avenue.	The Sakioka Farms Specific Plan envisions the phased development of a master planned industrial/business park that may also include residential units and a park.	Approved June 2012. Some developments under this plan are approved and completed; others are still undergoing review.
Oxnard Village Specific Plan (previously the Wagon Wheel Specific Plan)	Near the northwestern edge of the city of Oxnard, bordered by US 101 to the north and Oxnard Boulevard to the east.	When completed the site would feature 1,500 residential dwelling units, 50,000 square feet of “Main Street” retail, and 7.4 acres of parks and open space.	Approved in 2008. Under construction.
Lockwood I Senior Apartments	2151 Lockwood Street, Oxnard.	When completed the site would feature 173 all-affordable senior living apartments.	Under construction; estimated completion in 2026.
Lockwood III Apartments	2151 Lockwood Street, Oxnard.	When completed the site would feature 234 apartments on a 5.17-acre site.	Approved in 2024.
Rio Urbana Project	2714 East Vineyard Avenue, Oxnard.	Project involves 167 residential units and a 15,000-square-foot office building.	Under construction.
City of Ventura Downtown Specific Plan	The Downtown Specific Plan area covers approximately 514 acres in the city of Ventura and is bounded by the Pacific Ocean to the south; the foothills	The Downtown Specific Plan lays out a strategy for the continued revitalization of the city of Ventura’s cultural and	Adopted March 2007. Some developments under this plan are approved and completed;

Project Name	Location	Project Description	Status
	to the north, the Ventura River and Hwy 33 to the west, and Sanjon Barranca to the east.	commercial core through implementation of planning goals.	others are still undergoing review.
Street Resurfacing	On North Bank Drive, from Ventura Boulevard to Johnson Drive, and on Valentine Road, from Telephone Road to Palma Drive.	The projects consisted of resurfacing various streets in the city of Ventura. The projects included cold milling, pavement repairs, manhole and valve cover adjustments to grade, traffic loop replacement, as well as sidewalk and curb repairs, and access ramps upgrades where needed. Landscape and beautification opportunities were also considered as part of these projects.	Completed in 2025.
Fire Station No. 7	Alessandro Drive and Seaward Avenue, Ventura.	A fire station is proposed for the city-owned lot at the corner of Alessandro Drive and Seaward Avenue. Phase I of the project would be the preparation of the site by the removal of four abandoned steel water storage tanks, associated piping, interfering sections of asphalt paving and berms, asbestos abatement, and lead containment.	Not yet under construction.
California Street Northbound Off-Ramp Relocation Project	US 101/California Street, Ventura.	This project would relocate the existing US 101 northbound off-ramp at California Street to Oak Street and replace/extend the California Street Overcrossing to relieve traffic congestion and improve traffic flow, improve bicycle and pedestrian access and circulation, address structural deficiencies of the overcrossing, and improve connection between the downtown business district and the oceanfront area. This project is identified in the Downtown Specific Plan.	Public circulation of the draft Initial Study with Proposed Negative Declaration/Environmental Assessment was completed on August 10, 2026.
Olivas Park Specific Plan	Located in the southeastern portion of the city of Ventura, adjacent to the Santa Clara River.	The Olivas Park Specific Plan provides the City of Ventura with a planning document to direct the orderly	Adopted December 2019. Development is in progress.

Project Name	Location	Project Description	Status
		development of the approximately 139-acre property known as the Olivas Park Drive Extension Area. The Specific Plan provides an infrastructure plan and a conceptual land use plan to ensure that this area of the city is developed in a manner consistent with the goals, objectives, principles, and policies of the City of Ventura General Plan.	
Victoria Avenue Corridor Plan & Development Code	The 286-acre Victoria Avenue corridor planning area extends for approximately 1.25 miles from US 101 on the south to State Route 126 on the north in the city of Ventura.	Actions in this plan, along with the new Development Code, would call for revitalizing this corridor by redesigning the current array of single-use shopping centers and retail parcels with a mix of building types, uses, and public and private frontages.	Adopted April 2009. Development is in progress.
Sewerline Replacement – US 101 at Northbank Drive	City of Ventura, under US 101 from Northbank Drive to Auto Center Drive.	This project would refurbish 550 linear feet of 15-inch sewerline under US 101 from Northbank Drive to Auto Center Drive. The project would also construct a 60-linear-foot segment of new 15-inch sewer between existing manholes to improve flow capacity from existing sewer on Northbank Drive. A spiral wound slip lining is considered to be the preferred method for refurbishing pipe under US 101. Rehabilitation or replacement of the manholes within the project limits would also be completed.	Funding not yet identified.
Anacapa Courts Mixed-Use Project	City of Ventura.	Project involves construction of a four-story, mixed-use building with approximately 3,850 square feet of street-level commercial space; a 41-space, street-level parking garage; and 24 residential condominium units.	Environmental document approved February 2020. Not yet under construction.

Project Name	Location	Project Description	Status
Thousand Oaks Boulevard Specific Plan	The specific plan covers an area of approximately 342 gross acres in the core of the city of Thousand Oaks; the plan generally follows the boundaries of the Thousand Oaks Boulevard Business Improvement District and extends along Thousand Oaks Boulevard roughly from Conejo Boulevard/Moorpark Road in the west to Duesenberg Drive in the east.	The purpose of the Thousand Oaks Boulevard Specific Plan is to create a unique and identifiable commercial corridor for Thousand Oaks that is an economically viable, self-sustainable, and pedestrian-friendly destination.	Adopted November 2011, amended August 2016. Timing is categorized generally into short-term (0 to 3 years) and mid-term (3 to 7 years).
Project CI5682	Hillcrest Drive and The Oaks Mall, Thousand Oaks.	The project would convert existing Travel Lane #3 (outside lane) to Class IV bike lanes on Hillcrest Drive between Lynn Road and Moorpark Road in both directions. The project would also install a new sidewalk and curb ramps on the north side of Hillcrest Drive between Lynn Road and McCloud Avenue.	Not yet under construction.
Project CI5390	Los Robles Greens Golf Course, Thousand Oaks.	Potential projects include tee box leveling, cart path refurbishment, netting repairs, equipment replacements, on-going irrigation system repairs/upgrades, and general building repairs and renovations throughout the coming 5 years.	Not yet under construction.
Downtown Thousand Oaks Project	Eastern portion of the city of Thousand Oaks, approximately 0.7 mile east of the State Route 23 and US 101 interchange.	Redevelopment of downtown Thousand Oaks to create a pedestrian-oriented downtown that would include constructing new mixed-use residential, a hotel, commercial, office, and entertainment uses; partial reconstruction of the existing City Hall; development of a park plaza, outdoor amphitheater, new roadways; and reconfiguration of utilities.	Not yet under construction.
Rancho Road Sidewalk and Bike Lanes	The west side of Rancho Road between Thousand Oaks Boulevard and Haaland Drive in Thousand Oaks.	The project provided a direct path between Thousand Oaks Boulevard and the Thousand Oaks Transportation Center.	Completed 2022.

Project Name	Location	Project Description	Status
Central Avenue Bike Lane Project (ST-5102)	Approximately 0.34-mile segment of Central Avenue between the city of Camarillo/Caltrans right of way to the south and the city of Camarillo/County of Ventura right of way to the north, located in Camarillo, CA.	Construct Class II bicycle lanes and a Class I bicycle and pedestrian path along approximately 0.34 mile of Central Avenue. The City of Camarillo received $5.3 million in grant funding for construction of the project.	Design/engineering to be completed in 2026. Construction anticipated from 2026 to 2028.
IPD-412M(1), CUP-442, and TT-6123 for Camarillo Investment, LLC	Southwest corner of US 101 and Springville Drive, Camarillo, CA.	Develop 665,775 square feet consisting of two automotive dealerships, five industrial buildings, and a 4,625 square-foot car wash.	The Notice of Determination was approved in 2026.
Adolfo Road from Eastern Terminus to Camarillo Springs Road/US 101	City of Camarillo.	Extend Adolfo Road easterly to Camarillo Springs Rd/US 101 (two-lane undivided road).	Not yet under construction.
Metrolink Undercrossing	City of Camarillo at North Lewis Road, adjacent to US 101.	Construct pedestrian tunnel at Metrolink station to improve access between two parking lots and improve train operations by utilizing both platforms. An SB 1 Transit Capital Grant was awarded to LOSSAN/VCTC for a large group of projects in the region, including both the Metrolink undercrossing and double-tracking west of Camarillo, which would increase the level of train service through the county.	Statutory Exemption (November 2023). Not yet under construction.
Springville Bike Path Phase 1	City of Camarillo, adjacent to northbound US 101, connecting bikeways on Ponderosa Drive to Camarillo city limit near Central Avenue.	Construct bike path from Central Avenue to Springville Drive, approximately 1 mile.	Completed in 2024.
Springville Bike Path Phase 2	City of Camarillo, adjacent to northbound US 101 between Las Posas Road and Springville Drive.	Construct bike path from Las Posas Road to Springville Drive, approximately 1 mile.	Design/engineering to be completed in 2027/2028. Construction anticipated from 2029 to 2030.

Project Name	Location	Project Description	Status
Daily Drive/101 Freeway Sewer Improvements	City of Camarillo, Daily Drive between Calle La Roda and Rosewood Avenue.	Implementation of 2009 SSMP recommendation (existing sewer reaching design capacity) to design/construct 1,800 feet of 18-inch sewer pipeline along Daily Drive between Calle La Roda and Rosewood Avenue and an additional 1,000 feet of 24-inch sewer pipeline under US 101.	Completed.
Lennar at Cortona (Residential: RPD-195/TT-5671M(3), Lennar Homes)	City of Camarillo, northwest corner of US 101 and Springville Drive.	Project involves 159 single family units on 22.87 acres (APN 157-0-020-220).	Under construction.
T-5671-1 Rancho	City of Camarillo, southeast corner of Ponderosa Drive and Springville Drive.	Project involves 386 condominium units, 50 units mixed use rental, 163 rental apartments, 104 senior affordable apartments, and 122 single-family homes.	Under construction.
Costco Wholesale (CPD-226M(5) and CUP-422)	431 W. Ventura Boulevard, Camarillo (northeast corner of Ventura Boulevard and Springville).	New 163,397-square-foot retail warehouse and free-standing fuel facility on about 20 acres. Construction of the 32-pump self-service gas station was completed in May 2026 and is currently in operation. Construction of the retail warehouse is projected to open in Fall 2026.	Gas station completed in May 2026. Retail warehouse under construction and projected to be completed in Fall 2026.
Camarillo Hotel and Conference Center (CPD-246/CUP-384 T.M. Mian)	City of Camarillo, southeast corner of Ventura Boulevard and Las Posas Road.	Hotel & conference center site consisting of 280 rooms; 18,783-square-foot conference center, pre-function and two boardrooms; 10,450 square feet of retail space; 15,500 square feet of restaurant and parking.	Under construction.
US 101 Improvements Early Action Project (ST-5058)	City of Camarillo, US 101.	Coordinate with VCTC's US 101 Improvements Project to investigate possible early action projects in the city of Camarillo that can help reduce congestion on the freeway.	Not yet under construction.

Project Name	Location	Project Description	Status
Camarillo Ruiz Apartment Community (Residential: RPD-201)	City of Camarillo, southeast corner of Verdugo Way and Camino Ruiz.	High-density residential apartment community at the southeast corner of Verdugo Way and Camino Ruiz.	Under construction.
IPD-391M(1) / CUP-423	City of Camarillo, southeastern Corner of Camino Carillo and Camino Ruiz.	Multi-tenant industrial warehouse building.	Not yet under construction.
State Route 23 Pavement Rehabilitation Project	In Ventura County, from US 101 to SR 118.	The SR 23 project replaced pavement from US 101 to SR 118, providing a service life of 40 years. The on- and off-ramps, connectors, and adjacent shoulders were also rehabilitated, and slabs were replaced along the inner lane in both directions where needed. Existing curbs ramps were upgraded where necessary (36 locations) to comply with the Americans with Disabilities Act, and approach slabs and bridge rails were replaced at select locations (five locations).	Completed in fall 2023.

Source: City of Camarillo 2025; City of Oxnard 2025; City of Thousand Oaks 2025; City of Ventura 2025; SCAG 2024.
APN = Assessor's Parcel Number; LOSSAN = Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency; SSMP = Sewer System Management Plan; VCTC = Ventura County Transportation Commission

2.2.2 Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs

2.2.2.1 Affected Environment

This section is based on the Community Impact Assessment (Caltrans 2026) that was prepared for the project. The section addresses the project's consistency with applicable adopted transportation and land use plans and programs. The resource study area, as shown on Figure 2.2.1-1 of Section 2.2.1, *Existing and Future Land Use*, was used to assess the project's consistency with applicable adopted transportation and land use plans and programs.

Federal

Federal Transportation Improvement Program

The Federal Transportation Improvement Program (FTIP) is a 4-year program that lists all transportation projects that will be receiving federal funding in the Southern California Association of Governments (SCAG) region (SCAG 2024). The FTIP is part of the region's strategy to improve the safety and efficiency of the transportation system. Projects listed in the FTIP are consistent with SCAG's 2024–2050 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), including, but not limited to, highway improvement, high-occupancy vehicle (HOV) lane, high-occupancy toll lane, and freeway ramp projects. The project is included in the SCAG financially constrained 2025 FTIP Amendment 25-24 (FTIP ID VEN131201). A copy of the project's FTIP listing is included in Appendix G of this EIR/EA.

State

California Transportation Plan 2050

California Transportation Plan 2050 provides a long-range policy framework for the state's transportation system, exploring trends that will influence travel behavior and transportation decisions in the next 25 years. California Transportation Plan 2050 outlines goals, policies, strategies, performance measures, and recommendations to meet future mobility needs and reduce greenhouse gas emissions[1] (Caltrans 2021). The California Transportation Plan is updated every 5 years.

Regional Plans

2024–2050 Regional Transportation Plan/Sustainable Communities Strategy

The 2024–2050 RTP/SCS is a long-range plan that provides a vision for meeting future transportation and housing needs while balancing economic, environmental, and public health goals (SCAG 2024). The 2024–2050 RTP/SCS was prepared to address transportation needs in the SCAG region, which includes Ventura, Imperial, Los Angeles, Orange, Riverside, and San Bernardino Counties. The project is listed in the

[1] Please note: This is a California Transportation Plan 2050 goal and is not related to the National Environmental Policy Act in any way or form.

Regional Transportation Plan Amendment 1 (RTP ID 5160001), which was adopted by SCAG on September 5, 2024. A copy of the project's RTP listing is included in Appendix G of this EIR/EA.

Local

Ventura County General Plan

The Ventura County 2040 General Plan was adopted on September 15, 2020. The Ventura County General Plan sets forth the goals, policies, and programs the County of Ventura will implement to manage future growth and land uses. The Ventura General Plan embodies the vision for the future of unincorporated Ventura County.

Ventura County Comprehensive Transportation Plan

The Ventura County Comprehensive Transportation Plan (CTP) is the first of its kind in Ventura County; the first iteration was adopted in 2013 and an update was adopted in 2023. The Ventura County CTP is a long-range policy document that was built from a community-based and community-expressed need to enhance the region's connectivity. The 2023 Ventura County CTP incorporates socioeconomic data, community priorities, and local transportation solutions. The overall goal is to ensure mobility and enhance the quality of life for all Ventura County residents. The Ventura County CTP examined various funding strategies and realization options from the federal, state, regional, and local levels. The Ventura County CTP is intended to provide a framework for future community-based planning and collaboration and guide Ventura County's long-range transportation decisions. The project is included in the Ventura County CTP program of improvements under Project ID 5160001 (County of Ventura 2023).

2009 Ventura County Congestion Management Program

The Ventura County Congestion Management Program (CMP) was adopted in July 2009. It was developed to provide local agencies and private developers within the Ventura County region with the procedures and tools necessary to manage and decrease traffic congestion within the county. The Ventura County CMP is updated every 2 years to meet voluntary state and federal congestion management regulations (County of Ventura 2009).

Ventura County Local Coastal Program

The primary goal of the Ventura County Local Coastal Program (LCP) is to ensure that a local government's land use plans, zoning ordinances, zoning maps, and implemented actions meet the requirements of the California Coastal Act (CCA) and implement the provisions and policies of the CCA at the local level. The LCP specifically applies to development undertaken in the unincorporated portions of the Coastal Zone of Ventura County. The Ventura County Coastal Area Plan (effective September 9, 2022) and the Coastal Zoning Ordinance together constitute the Ventura County LCP for the unincorporated portion of Ventura County's Coastal Zone. The Ventura County Coastal Area Plan is part of the Ventura County General Plan and addresses topics such as shoreline access and public trails, development in scenic areas, coastal hazards, environmentally sensitive habitat areas, archaeological and paleontological resources, transportation, and public works.

City of Ventura Local Coastal Program

The City of Ventura LCP, as part of the general plan, was adopted in August 2005, replacing the August 1989 *Comprehensive Plan – Update to the Year 2010* (City of San Buenaventura 1989). The general plan satisfies state requirements for the City of Ventura LCP, in accordance with the CCA (California Public Resources Code Section 30000 et seq.). Actions in the general plan that affect coastal resources are intended to become part of the LCP's Land Use Plan and accomplished through specific or community plans for the areas in question. Policies under the *Conservation and Open Space Element* of the general plan protect coastal resources, per the provisions and polices of the CCA, at the local level (Policy 1A, Action 1.1), protect and increase the area of open space in the Coastal Zone (Policy 1B, Actions 1.8–1.11), and improve protection for native coastal plant and animal species (Policy 1C, Actions 1.16–1.20).

City of Thousand Oaks General Plan

The City of Thousand Oaks General Plan 2045 was adopted in December 2023. It was written as a long-range comprehensive guide for physical development of the city's designated planning area. The City of Thousand Oaks General Plan contains a series of policies grouped by the following categories: land use, mobility, parks and open space, conservation, community facilities and services, arts and culture, safety, noise, and governance (City of Thousand Oaks 2023).

City of Camarillo General Plan

Adopted in 2004, the City of Camarillo General Plan undergoes an annual progress report, detailing the progress made with respect to implementation. The City of Camarillo General Plan is a comprehensive document that covers all aspects of the physical environment and takes into account the social and economic consequences associated with community development and change. The plan is intended to guide residents, developers, and decision-makers with a framework for growth and modernization in the community (City of Camarillo 2004). As part of the general plan, Camarillo's electorate has adopted an urban growth development line, known as the Camarillo Urban Restriction Boundary; the line has been extended through December 2050.

City of Oxnard General Plan

The City of Oxnard General Plan, adopted in October 2011 and including amendments through 2022, covers the timeframe through 2030. The City of Oxnard General Plan guides future development in the city, utilizing a visioning program that was completed in 2002. Goals and policies are assigned to various City of Oxnard departments and/or divisions to guide and manage implementation.

City of Ventura General Plan

The City of Ventura 2005 General Plan was adopted on August 8, 2005. The City of Ventura General Plan provides the community's vision for the future of Ventura. It provides the City of Ventura's comprehensive framework of guiding policies on land use, housing, roads, recreation, historical and natural resources, balance of adequate water supply infrastructure, public safety services, and noise, and serves as a basis for

decisions that affect all aspects of everyday lives within the city, from where people live and work, allocation of public resources, to the shaping of private development. The Draft City of Ventura 2050 General Plan was released for public review on April 16, 2025, with the comment period ending on August 14, 2025.

Table 2.2.2-1 provides a summary of the project's consistency with applicable plans and programs.

Table 2.2.2-1. Consistency with Federal, State, Regional, and Local Plans and Programs

Element or Chapter	Goal	Policy	Consistency
Federal Transportation Improvement Program (2025)			
The FTIP is a 4-year program that lists all transportation projects that will be receiving federal funding in the SCAG region. Projects listed in the FTIP are consistent with SCAG's 2024–2050 RTP/SCS.			**Consistent**: The project is listed in the 2025 FTIP Amendment 25-24 as FTIP ID VEN131201. Therefore, the project (Alternatives 2 and 3) is consistent with both the 2025 FTIP and 2024–2050 RTP/SCS. **Inconsistent**: Alternative 1 (No-Build Alternative) would not result in any changes to existing conditions and would not implement the project as reflected in the RTP/SCS.
California Transportation Plan 2050			
The California Transportation Plan 2050 Goals	Safety: Provide a safe and secure transportation system		**Consistent**: Alternatives 2 and 3. The build alternatives would improve and enhance safety while also improving travel times. Reducing congestion would improve safety by increasing capacity on US 101 to accommodate future traffic volumes. **Inconsistent:** Under Alternative 1 (No-Build Alternative), travel safety and reliability would continue to worsen as traffic operations worsen.
	Climate: Achieve statewide GHG emissions reduction targets and increase resilience to climate change. **Please note: This is a California Transportation Plan 2050 goal and is not related to NEPA in any way or form.*		**Consistent**: Alternatives 2 and 3. The project is included in the 2024–2050 RTP/SCS, which includes goals, strategies, programs, and projects that will help the SCAG region in reducing its GHG emissions. Implementation of the 2024–2050 RTP/SCS would result in a 19-percent reduction per capita from 2005 GHG emission levels by 2035. This would meet the state's mandated reductions for the SCAG region, which are 8 percent by 2020 and 19 percent by 2035. The project build alternatives directly support the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and congestion. This strategy

Element or Chapter	Goal	Policy	Consistency
			contributes to overall GHG reduction efforts regarding mobile sources within the SCAG region. **Inconsistent:** Under Alternative 1 (No-Build Alternative), additional HOV/express bus lanes would not be added to US 101 and mobility would continue to deteriorate as traffic operations worsen.
	Equity: Eliminate transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups. **Please note: This is a California Transportation Plan 2050 goal and is not related to NEPA in any way or form.*		**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region while benefiting all highway users. **Inconsistent**: Under Alternative 1 (No-Build Alternative), congestion would worsen, adversely affecting all highway users.
	Accessibility: Improve multimodal mobility and access to destinations for all users. **Please note: This is a California Transportation Plan 2050 goal and is not related to NEPA in any way or form.*		**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Quality of Life and Public Health: Enable vibrant, healthy communities.		**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region while benefiting all highway users. **Inconsistent**: Under Alternative 1 (No-Build Alternative), congestion would worsen, adversely affecting all highway users.
	Economy: Support a vibrant, resilient economy.		**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while

Element or Chapter	Goal	Policy	Consistency
			enhancing freeway operations, thereby maximizing mobility and accessibility in the region, because US 101 serves as a major transportation corridor for Ventura County. By maximizing mobility and accessibility, residents of the region and beyond would be able to traverse the region with ease and contribute to the region's economy. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen. These impacts could have indirect effects on goods movement and the economy.
	Environment: Enhance environmental health and reduce negative transportation impacts.		**Consistent**: Alternatives 2 and 3. The build alternatives have been designed to reduce environmental impacts to the greatest extent practicable. The build alternatives would add an additional HOV/express bus lane in each direction of US 101, thereby encouraging carpooling and transit use. The project would reduce traffic congestion, improve traffic operations, and accommodate future traffic volumes forecasted in the project area. **Inconsistent**: Under Alternative 1 (No-Build Alternative), air quality and energy consumption will continue to worsen with increasing traffic.
	Infrastructure: Maintain a high-quality, resilient transportation system.		**Consistent**: Alternatives 2 and 3. The build alternatives would add an additional HOV/express bus lane in each direction of US 101, thereby encouraging carpooling and transit use. The incorporation of an express bus lane would provide more transit trip reliability along the project corridor. In addition, the build alternatives would preserve or enhance nonmotorized transportation options in the project vicinity. **Inconsistent:** Under Alternative 1 (No-Build Alternative), additional HOV/express bus lanes

Element or Chapter	Goal	Policy	Consistency
			would not be added to US 101 and mobility would continue to deteriorate as traffic operations worsen.
SCAG 2024–2050 RTP/SCS			
Plan Goals	Mobility: Build and maintain an integrated multimodal transportation network.		**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region, because US 101 serves as a major transportation corridor for Ventura County. By maximizing mobility and accessibility, residents of the region and beyond would be able to traverse the region with ease and contribute to the region's economy. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen. These impacts could have indirect effects on goods movement and the economy.
	Communities: Develop, connect and sustain communities that are livable and thriving.		**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region, because US 101 serves as a major transportation corridor for Ventura County. As such, this project would support the goal to connect communities. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility, accessibility, travel safety, and reliability would continue to deteriorate as traffic operations worsen.
	Environment: Create a healthy region for the people of today and tomorrow.		**Consistent**: Alternatives 2 and 3. The build alternatives would add HOV/express bus lanes for both directions of US 101, thereby encouraging more HOVs and carpools to use the freeway, minimizing air quality impacts and increasing energy efficiency.

Element or Chapter	Goal	Policy	Consistency
			Inconsistent: Under Alternative 1 (No-Build Alternative), air quality and energy consumption would continue to worsen with traffic.
	Economy: Support a sustainable, efficient and productive regional economic environment that provides opportunities for all residents.		**Consistent**: Alternatives 2 and 3. The build alternatives would provide regional HOV connectivity along US 101 and support regional prosperity by providing an HOV/express bus lane in both directions of US 101 that currently does not exist. The project will support in the efficient movement of people and goods in the region. **Inconsistent**: Under Alternative 1 (No-Build Alternative), US 101 traffic conditions would continue to worsen.
Regional Planning Policies	System Preservation and Resilience	01. Prioritize repair, maintenance and preservation of the SCAG region's existing transportation assets, following a "Fix-It-First" principle. 02. Promote transportation investments that advance progress toward the achievement of asset management targets, including the condition of the National Highway System pavement and bridges and transit assets (rolling stock, equipment, facilities and infrastructure).	**Consistent:** Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region, because US 101 serves as a major transportation corridor for Ventura County. As such, this project would support the goal of system resilience and policies related to multimodal transportation. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility, accessibility, travel safety, and reliability would continue to deteriorate as traffic operations worsen.
	Transit and Multimodal Integration	07. Encourage and support the implementation of projects, both physical and digital, that facilitate multimodal connectivity, prioritize transit and shared mobility, and result in improved mobility, accessibility and safety. 08. Support connections across the public, private and nonprofit	**Consistent**: Alternatives 2 and 3. The build alternatives would add an additional HOV/express bus lane in each direction of US 101, thereby encouraging carpooling and transit use and improving HOV connectivity along US 101. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility, accessibility, travel safety, and reliability would continue to deteriorate as traffic operations worsen.

Element or Chapter	Goal	Policy	Consistency
		sectors to develop transportation projects and programs that result in improved connectivity. 09. Encourage residential and employment development in areas surrounding existing and planned transit/rail stations. 10. Support the implementation of transportation projects in Priority Equity Communities, particularly with respect to Transportation Equity Zones, as a way to enhance mobility, safety and access to opportunities. 11. Create a resilient transportation system by preparing for emergencies and the impacts of climate change. **Please note: This is an RTP/SCS goal and is not related to NEPA in any way or form.*	
	Transportation System Management	12. Pursue efficient use of the transportation system using a set of operational improvement strategies that maintain the performance of the existing transportation system instead of adding roadway capacity, where possible. 13. Prioritize transportation investments that increase travel time reliability, including build-out of the regional express lanes network.	**Consistent:** Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region, because US 101 serves as a major transportation corridor for Ventura County. As such, this project would support the policies to pursue efficient use of the transportation system and increase travel time reliability. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility, accessibility, travel safety, and reliability would continue to deteriorate as traffic operations worsen.

Element or Chapter	Goal	Policy	Consistency
	Transportation Demand Management	14. Encourage the development of transportation projects that provide convenient, cost-effective and safe alternatives to single-occupancy vehicle travel (e.g., trips made by foot, on bikes, via transit, etc.). 15. Encourage jurisdictions and TDM practitioners to develop and expand local plans and policies to promote alternatives to single-occupancy vehicle travel for residents, workers and visitors. 16. Encourage municipalities to update existing (legacy) TDM ordinances by incorporating new travel modes and new technology and by incorporating employment and residential sites of certain populations—for example, employers who have less than 250 employees (below the 250 or more employees threshold identified in AQMD's Rule 2202).	**Consistent:** Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region, because US 101 serves as a major transportation corridor for Ventura County. As such, this project would support the policies related to providing safe alternatives to single-occupancy vehicle travel. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility, accessibility, travel safety, and reliability would continue to deteriorate as traffic operations worsen.
Ventura County General Plan			
Circulation, Transportation, and Mobility	**CTM-2** To facilitate the safe, efficient, and cost-effective movement of all users, including bicyclists, pedestrians, public transportation riders, children, older people, and disabled people, as well as motorists through the provision of an integrated multimodal system.	**CTM-2.6, Regional Transportation Planning** The County shall work with Caltrans, Southern California Association of Governments (SCAG), Ventura County Transportation Commission (VCTC), and cities in the county to plan, develop, and maintain regional transportation facilities and services, and to identify	**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region. The County of Ventura would work with VCTC on project improvements to the US 101 transportation corridor. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.

Element or Chapter	Goal	Policy	Consistency
		existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved.	
		CTM-2.7 Congestion Management Program The County shall coordinate with Ventura County Transportation Commission (VCTC) to implement and update the Congestion Management Program (CMP). The County shall also encourage consideration of multimodal performance measures as part of future updates to the CMP.	**Consistent**: Alternatives 2 and 3. The build alternatives would implement the CMP by improving the US 101 transportation corridor. **Inconsistent**: Under Alternative 1 (No-Build Alternative), improvements to US 101, as detailed in the CMP, would not be implemented.
	CTM-4 To ensure that land use and transportation planning efforts in the county are cohesive, mutually supportive, and reduce Vehicle Miles Traveled (VMT) per capita within the unincorporated areas of the County.	**CTM-4.1 Reduce Vehicle Miles Traveled (VMT)** The County shall work with Caltrans and Ventura County Transportation Commission (VCTC) to reduce VMT by: facilitating the efficient use of existing transportation facilities; striving to provide viable modal choices that make driving alone an option rather than a necessity, supporting variable work schedules to reduce peak period VMT, and providing more direct routes for pedestrians and bicyclists.	**Consistent**: Alternatives 2 and 3. The addition of an HOV/express bus lane in both directions along US 101 under Alternatives 2 and 3 is projected to result in additional VMT. When compared to the No-Build Alternative, total annual VMT under Alternatives 2 and 3 Opening Year (2040) conditions is projected to increase by approximately 36,695,250, a 0.7-percent increase. Under Design Year (2060) conditions, when compared to the No-Build Alternative, total annual VMT under Alternatives 2 and 3 is projected to increase by approximately 37,795,934, a 0.7-percent increase. VCTC has identified 27 strategies to mitigate the forecasted VMT increase: bike/pedestrian projects, implementation of electric vehicle charging stations at train stations, development of affordable workforce housing in high-quality transit areas, transit/mobility hubs including park-and-ride lots and mobility-as-a-service, transit/vanpool programs, and bicycle marketing programs such as bike share and

Element or Chapter	Goal	Policy	Consistency
		CTM-4.2 Alternative Transportation The County shall encourage bicycling, walking, public transportation, and other forms of alternative transportation to reduce Vehicle Miles Traveled (VMT), traffic congestion, and greenhouse gas emissions. **Please note: This is a Ventura County General Plan goal and is not related to NEPA in any way or form.*	bike training programs. The US 101 Improvement Project would also serve as a VMT reduction strategy because the VCTC bus service would directly use the HOV lanes and result in improved travel times for users. Implementation of the proposed strategies is projected to reduce VMT by 36,811,495, which is more than the anticipated VMT that would be induced by the project in Opening Year (2040) conditions. Funding sources and additional strategies to reduce VMT will be further investigated during final design. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
Public Facilities, Services, and Infrastructure	**PFS-1** To equitably provide residents and businesses with quality, cost-effective, and accessible facilities and services.	**PFS-1.4 Collaboration on Infrastructure and Public Service Deficiencies** The County shall collaborate with the cities in Ventura County, neighboring jurisdictions, special districts, and regional agencies to address issues of mutual interest and concern, including infrastructure and public service deficiencies, particularly in Designated Disadvantaged Communities. **Please note: This is a Ventura County General Plan goal and is not related to NEPA in any way or form.*	**Consistent:** Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The County of Ventura would work with neighboring jurisdictions and regional agencies on project improvements to the US 101 transportation corridor. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
Hazards and Safety	**HAZ-9** To protect the health, safety, and general welfare of county residents by striving to	**HAZ-9.4 Acoustical Analysis Required** The County shall require an acoustical analysis by a qualified	**Consistent**: Alternatives 2 and 3. The build alternatives could expose freeway-adjacent properties to noise in excess of established standards. Acoustical analysis would be performed

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	eliminate or avoid the adverse noise impacts on existing and future noise sensitive uses.	acoustical engineer for discretionary development involving noise exposure or noise generation in excess of the established standards. The analysis shall provide documentation of existing and projected noise levels at on-site and off-site receptors and shall recommend noise control measures for mitigating adverse impacts.	as part of the environmental review process. This documentation would recommend noise control measures as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, no noise analysis would be required.
		HAZ-9.8 Implement Noise Control Measures for Traffic Noise The County shall require noise control measures to be implemented along roadways for new discretionary development generating traffic noise if either of the following circumstances would exist: the discretionary development would result in traffic noise levels above a County noise compatibility standard stated in Policy HAZ 9.2 in an area where traffic noise levels, under existing conditions, do not exceed the County noise compatibility standard; or, the discretionary development would result in an increase in traffic noise levels of 3 A-weighted decibels or greater in an area where traffic noise levels under existing conditions exceed	**Consistent**: Alternatives 2 and 3. The build alternatives could expose freeway-adjacent properties to noise in excess of established standards. Acoustical analysis would be performed as part of the environmental review process. This documentation would recommend noise control measures as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, no noise analysis would be required.

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		a County noise compatibility standard stated in Policy HAZ 9.2. Noise control measures may include increased vegetation, roadway pavement improvements and maintenance, and site and building design features. If such measures are not sufficient to reduce a new discretionary development's fair-share of traffic-generated noise at sensitive receptors, a sound wall barrier may be constructed. All feasible noise reduction measures shall be implemented to ensure the development's fair-share of traffic-generated noise is reduced, consistent with Policy HAZ 9.2.	
Ventura County Coastal Area Plan			
The Ventura County Coastal Area Plan is intended to serve as the County's land use plan and local coastal element applicable to the unincorporated portions of the Coastal Zone as required by the California Coastal Act of 1976. The following general goals are listed in the Ventura County Coastal Area Plan: Recognize archaeological resources in the County's coastal zone and protect such resources from human disturbance activities. Recognize and protect important paleontological resources and preserve significant paleontological resources to the fullest extent possible. Protect and maintain ESHAs. Protect and maintain coastal trail alignments and access. Protect trees within coastal areas. Maintain and enhance County's scenic and visual resources. Design, install, maintain and manage water efficient landscaping.			**Consistent:** The project (Alternatives 2 and 3) is located outside of the coastal jurisdiction of the Ventura County Coastal Area Plan. The project would have no impact on coastal access or on ESHAs designated by the CCC. Therefore, the project is consistent with Ventura County Coastal Area Plan. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.

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Ventura County Comprehensive Transportation Plan			
Scenario B Projects	Projects in Scenario B include projects previously contained in the 2020 SCAG RTP/SCS that are not yet fully funded, as well as new projects identified through recent regional planning efforts. Projects proposed as part of the CTP development process seek to respond to the input and needs identified through the community engagement effort completed in support of the plan.		**Consistent:** The project (Alternatives 2 and 3) is listed as Project ID 5160001 and therefore consistent with this plan. **Inconsistent**: Alternative 1 (No-Build Alternative) would not result in any changes to existing conditions and would not implement the project as reflected in the RTP/SCS.
2009 Ventura County Congestion Management Program			
VCTC Objectives for Development of the CMP	Streets and Roads	8. Minimize traffic congestion in Ventura County.	**Consistent:** Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
		14. Work with Caltrans to identify their specific roles and responsibilities in the CMP process, especially with respect to the preparation and implementation of deficiency plans involving the state highway system.	**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The County of Ventura would work with Caltrans on project improvements to the US 101 transportation corridor. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
		15. Provide appropriate technology infrastructure (e.g. conduits, pull boxes and fiber cable) in the design of all future highway construction projects.	**Consistent**: Alternatives 2 and 3. The build alternatives would provide appropriate technology infrastructure (e.g., conduits, pull boxes, fiber cable) where necessary to the US 101 transportation corridor. **Not Applicable**: Under Alternative 1 (No-Build Alternative), existing technology infrastructure would continue to operate.

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		16. Improve traffic management through the use of technology and regional cooperation.	**Consistent:** Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The County of Ventura would work with neighboring jurisdictions and regional agencies on project improvements to the US 101 transportation corridor. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Transit Service	17. Encouragement of public transit services that meet local and regional mobility needs.	**Consistent:** Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The County of Ventura would work with neighboring jurisdictions and regional agencies on project improvements to the US 101 transportation corridor. The build alternatives would add HOV/bus lanes along US 101, thereby encouraging carpooling and transit use. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
		18. Provide, where feasible, transit service along major commute corridors and to areas of high employment.	**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The build alternatives would add HOV/bus lanes along US 101, thereby encouraging carpooling and transit use. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.

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City of Thousand Oaks General Plan 2045			
Mobility Element	Goal M-1: Create and maintain a transportation system that is safe for travelers of all ages and abilities regardless of mode. **Please note: This is a City of Thousand Oaks General Plan goal and is not related to NEPA in any way or form.*		**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The City of Thousand Oaks would work with neighboring jurisdictions and regional agencies on project improvements to the US 101 transportation corridor. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Goal M-2: Create and maintain a public transit system that is safe, equitable, affordable, efficient, and accessible to all people in Thousand Oaks. **Please note: This is a City of Thousand Oaks General Plan goal and is not related to NEPA in any way or form.*		**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The build alternatives would add HOV/bus lanes along US 101, thereby encouraging carpooling and transit use. By adding HOV/bus lanes along US 101, thereby encouraging carpooling and transit use, the project would help support an efficient transit system. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Goal M-3: Create and maintain a transportation system that improves community health.		**Consistent:** Alternatives 2 and 3. The build alternatives would add HOV/express bus lanes for both directions of US 101, thereby encouraging more HOVs and carpools to use the freeway, minimizing air quality impacts, which could affect community health. **Inconsistent:** Under Alternative 1 (No-Build Alternative), air quality and energy consumption would continue to worsen with traffic.
	Goal M-4: Create a transportation system that will accommodate future growth that provides for all modes.		**Consistent:** Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The build alternatives would add HOV/express bus lanes

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			along US 101, which would maintain continuance of US 101 as a primary link within regional communities and within Ventura County. By reducing congestion and encouraging carpooling and transit, the project will support the policy to accommodate future growth. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Goal M-5: Create and maintain a transportation system that fosters vibrant commercial centers and economic resiliency.		**Consistent**: Alternatives 2 and 3. the build alternatives would improve productivity by providing an HOV/express bus lane for both directions of US 101. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen on US 101, which would not foster economic resiliency.
City of Camarillo General Plan			
Circulation	**GOAL 3** Provide a transportation system that is coordinated with regional agencies and encompasses a variety of transportation modes.	**Policy 3.1.2** The City shall coordinate with the California Department of Transportation (Caltrans) to achieve timely construction and beautification of programmed freeway and interchange improvements.	**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The City of Camarillo would work with Caltrans on project improvements to the US 101 transportation corridor. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
		Policy 3.1.4 The City shall encourage coordination with adjacent jurisdictions to ensure that roadway projects adjacent to the city limits do not negatively impact city transportation systems, as well as, preserve	**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The City of Camarillo would work with neighboring jurisdictions and regional agencies on project improvements to the US 101 transportation corridor. Through this coordination, the City of Camarillo would ensure that

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		and protect the character of Camarillo and open space protected by Save Our Agricultural Resources (SOAR).	the project would not adversely affect city transportation systems. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, there would be no project impacts on city transportation systems.
City of Oxnard General Plan			
Noise	**GOAL 2** Noise impacts affecting noise-sensitive land uses from transportation sources are minimized	The City should strive to reduce transportation system noise impacts through the design and coordination of transportation infrastructure and circulation.	**Consistent**: Alternatives 2 and 3. The build alternatives could expose freeway-adjacent properties to noise in excess of established standards. Acoustical analysis would be performed as part of the environmental review process. This documentation would recommend noise control measures to reduce noise conflicts as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, no noise analysis would be required.
Community Development	**Goal CD-16** Coordinated land use and infrastructure decisions with economic development.	**CD-16.2 Mobility Improvements** Encourage the improvement and enhancement of intermodal freight connections, railways, roadways, and airports to support existing and future economic development opportunities.	**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The build alternatives would add HOV/bus lanes along US 101, thereby improving roadways to support existing and future economic development opportunities. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
Infrastructure and Community Services	**Goal ICS-2** A transportation system that supports existing, approved, and planned land uses throughout the City while maintaining a level of service "C" at designated	**ICS-2.1 Coordinate with Regional Transportation Planning** Continue to work cooperatively with the various local, state, and federal transportation agencies and private operators in Ventura County to maintain a transportation system that is well-	**Consistent**: Alternatives 2 and 3. The build alternatives would address congestion issues and mobility deficiencies in the region. The City of Oxnard would work with neighboring jurisdictions and regional agencies on project improvements to the US 101 transportation corridor. Through this coordination, the City of Oxnard would work to maintain a transportation system that would be well integrated and interconnected.

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	intersections unless excepted.	integrated and interconnected in terms of service, scheduling, and capacity. Continue to participate in Congestion Management Program (CMP) led by the Ventura County Transportation Commission (VCTC).	**Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
		ICS-2.6 Reduction of Construction Impacts Minimize and monitor traffic and parking issues associated with construction activities, require additional traffic lanes and/or other traffic improvements for ingress and egress for new developments for traffic and safety reason, where appropriate.	**Consistent:** Alternatives 2 and 3. The build alternatives could create traffic and parking issues associated with construction activities. Analysis of these issues would be performed as part of the environmental review process. This documentation would recommend traffic control and safety measures as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, there would be no construction impacts.
		ICS-2.12 Gateway Enhancements Continue to enhance gateways (including but not limited to Ventura Road, Oxnard Boulevard, Vineyard Avenue, Rose Avenue, Rice Avenue, Del Norte Boulevard, Highway-101, Highway 1, Fifth Street, Channel Islands Boulevard, Pleasant Valley Road, Harbor Boulevard, Victoria Avenue, and Hueneme Road).	**Consistent**: Alternatives 2 and 3. The build alternatives would enhance US 101 through improvements. **Inconsistent:** Under Alternative 1 (No-Build Alternative), US 101 would not be improved.
	Goal ICS-3 Level of service “C” at designated intersections, unless otherwise reduced by City Council direction.	**ICS-3.4 Roadway Design/101 Freeway Capacity** Review the potential addition of auxiliary lanes or lane expansion to increase roadway width and number of lanes, where feasible,	**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region. The build alternatives would add HOV/bus lanes

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		in order to mitigate traffic congestion and improve level of service.	along US 101, thereby encouraging carpooling and transit use. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Goal ICS-7 Effective Transportation Demand Management (TDM) programs that help achieve air quality goals and minimize congestion.	**ICS-7.2 Reduce Single-Occupancy Automobile Dependency** Reduce single-occupancy automobile use and increase the use of alternative forms of transportation as a means of reducing energy consumption and vehicle emissions. **Please note: This is a City of Oxnard General Plan goal and is not related to NEPA in any way or form.*	**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region. The build alternatives would add HOV/bus lanes along US 101, thereby encouraging carpooling and transit use. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
Environmental Resources	**Goal ER-14** Improved air quality and minimized adverse effects of air pollution on human health and the economy.	**ER-14.9 Participate in Regional Partnerships** Participate with cities, surrounding counties, and regional agencies such as VCOG and VCTC and SCAG to address cross-jurisdictional and regional transportation and air quality issues.	**Consistent**: Alternatives 2 and 3. The build alternatives would ease congestion and improve overall throughput along the project corridor while enhancing freeway operations, thereby maximizing mobility and accessibility in the region. The City of Oxnard would work with VCTC on project improvements to the US 101 transportation corridor. The build alternatives would add HOV/bus lanes along US 101, thereby encouraging carpooling and transit use. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
Safety and Hazards	**Goal SH-5** A quiet and safe residential and working environment in	**SH-5.3 Sound Attenuation Measures** Promote, where feasible, alternative sound attenuation	**Consistent:** Alternatives 2 and 3. The build alternatives could expose freeway-adjacent properties to noise in excess of established standards. Acoustical analysis would be performed

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	terms of exposure to and/or generation of noise.	measures such as berms, heavy landscaping, resurfacing of noise walls to promote noise absorption as well as deflection, berms and landscaping, or location of buildings away from the roadway or other noise sources.	as part of the environmental review process. This documentation would recommend noise control measures as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, no noise analysis would be required.
	Goal SH-6 Consideration of noise levels and impacts in the land use planning and development process.	**SH-6.1 Construction Noise Control** Provide best practices guidelines to developers for reducing potential noise impacts on surrounding land uses.	**Consistent**: Alternatives 2 and 3. The build alternatives could expose freeway-adjacent properties to noise in excess of established standards. Acoustical analysis would be performed as part of the environmental review process. This documentation would recommend noise control measures as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, no noise analysis would be required.
		SH-6.2 Limiting Construction Activities Continue to limit construction activities to the hours of 7 am to 7 pm, Monday through Saturday. No construction shall occur after hours, on Sundays, or national holidays without permission from the City.	**Consistent**: Alternatives 2 and 3. The build alternatives would limit the hours of construction activities within Oxnard. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, there would be no construction activities.
	Goal SH-8 Acceptable safety and environmental health risks associated with vehicular transit.	**SH-8.3 New Roadways and Expanding Existing Streets** Ensure that construction of new roadways and expansion of existing streets mitigate impacts on air quality, noise, historic resources, sensitive biological areas, and other resources.	**Consistent**: Alternatives 2 and 3. The build alternatives could have impacts on air quality, noise, historic resources, sensitive biological areas, and other resources. Analysis of these resource areas would be performed as part of the environmental review process. This documentation would recommend construction mitigation measures as necessary.

Element or Chapter	Goal	Policy	Consistency
			Not Applicable: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, there would be no construction activities.
City of Ventura General Plan			
Our Accessible Community	**Policy 4C:** Increase transit efficiency and options.	**Action 4.32:** Coordinate with public transit systems for the provision of additional routes as demand and funding allow.	**Consistent**: Alternatives 2 and 3. The build alternatives would add HOV/bus lanes along US 101, thereby encouraging carpooling and transit use. **Inconsistent**: Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.
	Policy 4D: Protect views along scenic routes.	**Action 4.36:** Require development along the following roadways – including noise mitigation, landscaping, and advertising – to respect and preserve views of the community and its natural context. State Route 33 US 101 Anchors Way Brakey Road Fairgrounds Loop Ferro Drive Figueroa Street Harbor Boulevard Main Street Navigator Drive North Bank Drive Poli Street/Foothill Road Olivas Park Drive Schooner Drive Spinnaker Drive	**Consistent:** Alternatives 2 and 3. The build alternatives would be evaluated for aesthetic impacts during the environmental review process. Improvements would be designed to preserve views of the community and its natural context. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, there would be no development activities.

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		Summit Drive Telegraph Road – east of Victoria Avenue Victoria Avenue – south of US 101 Wells Road	
		Action 4.38: Continue to work with Caltrans to soften the barrier impact of U.S. HWY 101 by improving signage, aesthetics and undercrossings and overcrossings.	**Consistent:** Alternatives 2 and 3. The build alternatives would improve the project corridor, including undercrossings and overcrossings. The City of Ventura would work with Caltrans on project improvements to the US 101 transportation corridor. **Not Applicable**: Under Alternative 1 (No-Build Alternative), there would be no changes to the barrier impact of US 101.
Our Healthy and Safe Community	**Policy 7E:** Minimize the harmful effects of noise.	**Action 7.33:** As funding becomes available, construct sound walls along US 101, SR 126, and SR 33 in areas where existing residences are exposed to exterior noise exceeding 65 A-weighted decibels CNEL.	**Consistent**: Alternatives 2 and 3. The build alternatives could expose freeway-adjacent properties to noise in excess of established standards. Acoustical analysis has been performed as part of the environmental review process. The Noise Study Report recommended noise control measures, such as sound walls, to reduce noise conflicts as necessary. **Not Applicable**: Alternative 1 (No-Build Alternative) would not propose improvements; therefore, no sound walls would be constructed.
Our Natural Community Our Accessible Community	The City of Ventura LCP is intended to serve as the City's land use plan and local coastal element applicable to the coastal zones within the jurisdiction of the City of Ventura as required by the CCA of 1976. The following actions are listed in the City of Ventura General Plan that are also included in the City's LCP and are applicable to the project: Action 1.1: Adhere to the policies and directives of the California Coastal Act in reviewing and permitting any proposed development in the Coastal Zone.		**Consistent:** The project (Alternatives 2 and 3) is located within the coastal jurisdiction of the City of Ventura LCP. To accommodate the widening of the US 101 overpass over San Jon Road, the project would require temporary impacts of approximately 0.05 acre and permanent impacts of approximately 0.001 acre of San Jon Creek, which are considered ESHAs under the CCC. A Coastal Development Permit from the City of Ventura LCP would be required for impacts on ESHAs and a minimum ratio of 1:1 for permanent impacts on jurisdictional

Element or Chapter	Goal	Policy	Consistency
	Action 4.5: Utilize existing roadways to meet mobility needs, and only consider additional travel lanes when other alternatives are not feasible. Action 4.13: Require project proponents to analyze traffic impacts and provide adequate mitigation in the form of needed improvements, in-lieu fee, or a combination thereof.		resources would be required. Therefore, the project would be consistent with the City of Ventura LCP. **Inconsistent:** Under Alternative 1 (No-Build Alternative), mobility and accessibility would continue to deteriorate as traffic operations worsen.

AQMD = Air Quality Management District; Caltrans = California Department of Transportation; CCC = California Coastal Commission; CNEL = community noise equivalent level; ESHA =environmentally sensitive habitat area; GHG = greenhouse gas; NEPA = National Environmental Policy Act; TDM = Transportation Demand Management; VCOG = Ventura Council of Governments; VCTC = Ventura County Transportation Commission; VMT = vehicle miles traveled

2.2.2.2 Environmental Consequences

Alternative 1: No-Build Alternative

Under the No-Build Alternative, US 101 would remain in its current condition within the resource study area and the project would not be implemented. Therefore, no project-related temporary or permanent impacts on land use would occur. However, the No-Build Alternative would result in inconsistencies with federal, state, regional, and local plans and programs. These include the SCAG 2025 FTIP, SCAG 2024–2050 RTP/SCS, Ventura County General Plan, and the general plans for the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Alternatives 2 and 3 would be constructed mostly within Caltrans right of way (ROW). Alternatives 2 and 3 would not result in the permanent full acquisition of residential or business parcels or result in any residential or non-residential displacements within Thousand Oaks, Camarillo, Oxnard, or Ventura. However, to accommodate the proposed improvements, ROW from properties would be required, which would include temporary construction easement (TCE) acquisitions and partial permanent acquisitions. The ROW required for the project primarily includes sliver parcels from property adjacent to the US 101 corridor, including frontage slivers from commercial properties. The majority of the ROW acquisition will be related to TCEs to install new sound walls. Temporary and permanent ROW acquisition impacts on land uses within the project limits under Alternatives 2 and 3 are discussed further below.

Temporary Impacts

Under Alternative 2, the project would result in 6.21 acres of direct temporary impacts on existing land uses where TCEs would be required (Table 2.2.2-2). The greatest direct temporary impacts on existing land uses under Alternative 2 are transportation, communications, and utilities land uses, followed by agricultural, open space and recreation, and commercial and services land uses.

Under Alternative 3, the project would result in 6.81 acres of direct temporary impacts on existing land uses (Table 2.2.2-3). The greatest direct temporary impacts on existing land uses under Alternative 3 are transportation, communications, and utilities land uses, followed by open space and recreation, agriculture, and commercial and services land uses.

Activities within TCE areas would be temporary and may include the presence of construction workers, work trucks, material stockpiles, disturbed soil, scaffolding, and landscaping work. In addition, a commercial storage building operated by Traffic Technologies (Assessor’s Parcel Number [APN] 145022130) would be temporarily displaced during project construction under both Alternatives 2 and 3. The existing 1,000-square-foot storage building would need to be demolished and reconstructed, either in part or in whole, on the same parcel. A new storage building would be provided to the property owner.

Table 2.2.2-2. Alternative 2 Temporary Land Use Impacts

Land Use	Acres						
	Thousand Oaks	Camarillo	Oxnard	Ventura	Ventura County	Total Acres	Percent
Agriculture	0.00	1.32	0.00	0.00	0.24	1.56	25.1
Commercial and Services	0.00	0.00	0.75	0.00	0.00	0.75	12.1
Education	0.00	0.23	0.00	0.00	0.00	0.23	3.7
Facilities	0.00	0.04	0.00	0.00	0.00	0.04	0.6
General Office	0.05	0.02	0.00	0.00	0.00	0.07	1.1
Industrial	0.00	0.00	0.00	0.00	0.00	0	0.0
Military Installations	0.00	0.00	0.00	0.00	0.00	0	0.0
Mixed Residential	0.00	0.00	0.00	0.00	0.00	0	0.0
Mobile Homes and Trailer Parks	0.00	0.00	0.00	0.00	0.00	0	0.0
Multi-Family Residential	0.00	0.13	0.00	0.00	0.00	0.13	2.1
None[a]	0.00	0.00	0.00	0.00	0.00	0	0.0
Open Space and Recreation	0.03	0.46	0.00	0.00	0.40	0.89	14.3
Other Residential	0.00	0.33	0.00	0.00	0.00	0.33	5.3
Single-Family Residential	0.00	0.00	0.00	0.00	0.00	0	0.0
Transportation, Communications, and Utilities	0.00	0.01	0.58	1.01	0.30	1.9	30.6
Under Construction	0.00	0.16	0.00	0.00	0.00	0.16	2.6
Vacant	0.00	0.00	0.15	0.00	0.00	0.15	2.4
Total	**0.08**	**2.70**	**1.48**	**1.01**	**0.94**	**6.21**	**100[b]**

[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Table 2.2.2-3. Alternative 3 Temporary Land Use Impacts

Land Use	Acres						
	Thousand Oaks	Camarillo	Oxnard	Ventura	Ventura County	Total Acres	Percent
Agriculture	0.00	1.32	0.00	0.00	0.24	1.56	22.9
Commercial and Services	0.00	0.00	0.75	0.08	0.00	0.83	12.2
Education	0.00	0.00	0.00	0.00	0.00	0	0.0
Facilities	0.00	0.04	0.00	0.00	0.00	0.04	0.6
General Office	0.00	0.04	0.00	0.00	0.00	0.04	0.6
Industrial	0.05	0.00	0.00	0.00	0.00	0.05	0.7

Land Use	Acres						
	Thousand Oaks	Camarillo	Oxnard	Ventura	Ventura County	Total Acres	Percent
Military Installations	0.00	0.00	0.00	0.00	0.00	0	0.0
Mixed Residential	0.00	0.00	0.00	0.00	0.00	0	0.0
Mobile Homes and Trailer Parks	0.00	0.00	0.00	0.00	0.00	0	0.0
Multi-Family Residential	0.00	0.13	0.00	0.00	0.00	0.13	1.9
None[a]	0.00	0.00	0.00	0.00	0.00	0	0.0
Open Space and Recreation	0.03	0.44	0.00	0.00	1.16	1.63	23.9
Other Residential	0.00	0.33	0.00	0.00	0.00	0.33	4.8
Single-Family Residential	0.00	0.00	0.00	0.00	0.00	0	0.0
Transportation, Communications, and Utilities	0.00	0.23	0.58	0.78	0.30	1.89	27.8
Under Construction	0.00	0.16	0.00	0.00	0.00	0.16	2.3
Vacant	0.00	0.00	0.15	0.00	0.00	0.15	2.2
Total	**0.08**	**2.69**	**1.48**	**0.86**	**1.70**	**6.81**	**100[b]**

[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Construction activities under Alternatives 2 and 3 are not anticipated to require closure, alteration, or other uses of the existing and planned developments listed in Table 2.2.1-7. Following construction, parcels would no longer be occupied and would return to their current uses. Because parcels would continue to be used for their current uses, there would be no substantial temporary adverse impacts or changes to the existing land use in the resource study area. Therefore, these direct temporary impacts would not result in temporary adverse effects on existing or planned land use patterns and development within the resource study area.

Permanent Impacts

Under Alternative 2, the project would result in 2.81 acres of direct permanent impacts on existing land uses where partial acquisitions would be required (Table 2.2.2-4). The greatest direct permanent impacts on existing land uses under Alternative 2 are transportation, communications, and utilities land uses, followed by agricultural, open space and recreational, and commercial and services land uses.

Under Alternative 3, the project would result in 3.47 acres of direct permanent impacts on existing land uses where partial acquisitions would be required (Table 2.2.2-5). The greatest direct permanent impacts on existing land uses under Alternative 3 are open space and recreation land uses, followed by transportation, communications, and utilities, agriculture, and commercial and services land uses.

Table 2.2.2-4. Alternative 2 Permanent Land Use Impacts

Land Use	Acres						
	Thousand Oaks	Camarillo	Oxnard	Ventura	Ventura County	Total Acres	Percent
Agriculture	0.00	0.20	0.00	0.00	0.47	0.67	23.8
Commercial and Services	0.00	0.00	0.39	0.00	0.00	0.39	13.9
Education	0.00	0.00	0.00	0.00	0.00	0.00	0
Facilities	0.00	0.00	0.00	0.00	0.00	0.00	0
General Office	0.01	0.00	0.00	0.00	0.00	0.01	0.4
Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0
Military Installations	0.00	0.00	0.00	0.00	0.00	0.00	0
Mixed Residential	0.00	0.00	0.00	0.00	0.00	0.00	0
Mobile Homes and Trailer Parks	0.00	0.00	0.00	0.00	0.00	0.00	0
Multi-Family Residential	0.00	0.03	0.00	0.00	0.00	0.03	1.1
None[a]	0.00	0.00	0.00	0.00	0.00	0.00	0
Open Space and Recreation	0.00	0.27	0.00	0.00	0.26	0.53	18.9
Other Residential	0.00	0.05	0.00	0.00	0.00	0.05	1.8
Single-Family Residential	0.00	0.00	0.00	0.00	0.00	0.00	0
Transportation, Communications, and Utilities	0.00	0.01	0.05	0.98	0.02	1.06	37.7
Under Construction	0.00	0.07	0.00	0.00	0.00	0.07	2.5
Vacant	0.00	0.00	0.00	0.00	0.00	0.00	0
Total	**0.01**	**0.63**	**0.44**	**0.98**	**0.75**	**2.81**	**100[b]**

[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Table 2.2.2-5. Alternative 3 Permanent Land Use Impacts

Land Use	Acres						
	Thousand Oaks	Camarillo	Oxnard	Ventura	Ventura County	Total Acres	Percent
Agriculture	0.00	0.20	0.00	0.00	0.47	0.67	19.3
Commercial and Services	0.00	0.00	0.39	0.13	0.00	0.52	15.0
Education	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Facilities	0.00	0.00	0.00	0.00	0.00	0.00	0.0
General Office	0.01	0.00	0.00	0.00	0.00	0.01	0.3
Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.0

Land Use	Acres						
	Thousand Oaks	Camarillo	Oxnard	Ventura	Ventura County	Total Acres	Percent
Military Installations	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Mixed Residential	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Mobile Homes and Trailer Parks	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Multi-Family Residential	0.00	0.03	0.00	0.00	0.00	0.03	0.9
None[a]	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Open Space and Recreation	0.00	0.23	0.00	0.00	0.87	1.10	31.7
Other Residential	0.00	0.05	0.00	0.00	0.00	0.05	1.4
Single-Family Residential	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Transportation, Communications, and Utilities	0.00	0.02	0.05	0.93	0.02	1.02	29.4
Under Construction	0.00	0.07	0.00	0.00	0.00	0.07	2.0
Vacant	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Total	**0.01**	**0.60**	**0.44**	**1.06**	**1.36**	**3.47**	100.0

[a] Areas designated in SCAG's 2022 land use data as having no land use information.
[b] The percent total may not add up to 100 percent due to rounding.

Under Alternatives 2 and 3, the permanent ROW acquisition would include frontage slivers from commercial properties along the project corridor. Other permanent ROW acquisitions would generally be minor in nature, involving landscaping, parking spaces, and similar types of property features. In addition, in comparison to Alternative 2, Alternative 3 would include permanent impacts on a portion of the Camarillo Grove Park (APN 163-018-002, 6968 E. Camarillo Springs Road, Camarillo, California) adjacent to the freeway. Impacts on parks are discussed further in Section 2.2.4, *Parks and Recreation*.

Under Alternatives 2 and 3, there would be land use changes on small portions or slivers of some parcels (i.e., changing from industrial/commercial uses, agricultural operations, and open space to transportation-related land uses). However, the affected acreage on these parcels generally would be small compared to the overall size of the parcels and current land uses would continue to operate on the remainder of the parcels. Because parcels would continue to be used for their current uses, there would be no substantial permanent adverse impacts or changes to the existing land use in the resource study area. Therefore, these direct permanent impacts would not result in permanent adverse effects on existing or planned land use patterns and development within the resource study area.

As summarized in Table 2.2.2-1, the project (Alternatives 2 and 3) is consistent with adopted goals and policies of all applicable federal, state, regional, and local plans and programs.

2.2.2.3 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on land use would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

With implementation of measures **LU-1** and **LU-2**, no adverse impacts on land uses are anticipated under the build alternatives.

LU-1: Minimize Impacts on Land Uses. During final design, efforts will be undertaken to minimize construction and operational impacts on existing and planned land uses.

LU-2: Restore Temporary Construction Easements. The contractor will ensure that the areas acquired for temporary construction easements required for US 101 Improvement Project construction will be restored to their original conditions or similar conditions where feasible.

2.2.3 Coastal Zone

2.2.3.1 Regulatory Setting

This project has the potential to affect resources protected by the federal Coastal Zone Management Act of 1972. Under the Coastal Zone Management Act, coastal states are encouraged to develop coastal management programs.

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

Just as the federal Coastal Zone Management Act delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments to enact their own Local Coastal Programs. This project is subject to the City of Ventura Local Coastal Program (LCP). Local Coastal Programs contain the ground rules for development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A Federal Consistency Certification will not be needed for this project.

The project would require a coastal development permit from the City of Ventura LCP.

2.2.3.2 Affected Environment

Approximately 3.5 linear miles of the project corridor are located within the Coastal Zone, from the northern terminus of the project to the approximate location of the Arundell Avenue/Channel Drive overcrossing. Figure 2.2.3-1 shows the location of the project in relation to the Coastal Zone.

The City of Ventura and Ventura County LCPs overlap with the Coastal Zone boundary. However, the project limits are only within the boundaries of the City of Ventura LCP, as shown in Figure 2.2.3-2. Lands within the Coastal Zone under the jurisdiction of the Ventura County LCP occur outside of the project limits of disturbance.

The following resources are within the Coastal Zone boundary and have the potential to be affected by the project:

- **Visual Resources** – As discussed in Section 2.2.11, *Visual/Aesthetics*, views of the seascape can be seen from the highway along the approximate 3.5-mile length of US 101 that lies within the Coastal Zone. However, only about 1 mile of

this segment, from near the Ventura Pier parking lot to the southern boundary of San Buenaventura State Beach, offers direct shoreline views, including beaches, recreation areas, and ocean vistas.

- **Cultural Resources** – As discussed in Section 2.2.12, *Cultural Resources*, there are no archaeological resources within the Coastal Zone. However, three built environment resources are within the Coastal Zone and are considered to be historic properties under Section 106: the Pierpont Inn District, Main Building, and Mattie Gleichmann House. The three built environment resources (located at 550 Sanjon Road, Ventura) overlook the Pacific Ocean, where the ocean view is a character-defining feature of the properties.
- **Water Quality and Stormwater Runoff** – As discussed in Section 2.3.2, *Water Quality and Stormwater Runoff*, the project, at San Jon Creek, is located within a designated California Coastal Commission (CCC) Environmentally Sensitive Habitat Area (ESHA). San Jon Creek would receive direct discharges from the project that would traverse downstream into a segment of the creek that is listed as a 303(d) impaired waterbody for trash and E. coli pollutants.
- **Geology/Soils/Seismic/Topography** – As discussed in Section 2.3.3, *Geology/Soils/ Seismic/Topography*, the project includes four proposed bridge widenings and two proposed retaining wall structures within the Coastal Zone. The four proposed bridge widenings are between Post Mile (PM) 29.45 and PM 30.59; they are: Vista Del Mar Undercrossing Widening, San Jon Creek Widening, Figueroa Street Undercrossing Widening, and Ventura Avenue Off Ramp Undercrossing Widening. The two proposed retaining wall structures—RWs 1577R and 1582R—are between PM 30.48 and PM 30.66. Some of the project's proposed bridge widenings and retaining walls are also near tsunami inundation zones, or within dam failure inundation zones and flood hazard zones. These areas could be subjected to tsunami inundation, scour, and flood hazards.
- **Paleontology** – As discussed in Section 2.3.4, *Paleontology*, the following geologic units are within the project limits and also within the Coastal Zone boundary: Holocene-age artificial fill, active beach deposits, alluvial fan deposits, paralic deposits of the Sea Cliff marine terrace, and stream terrace deposits. Except for the paralic deposits of the Sea Cliff marine terrace, all of the other geologic units are classified as having no paleontological importance per the County's Coastal Zoning Ordinance (County of Ventura 2022). The paleontological importance of the paralic deposits of the Sea Cliff marine terrace is classified in the County's Coastal Zoning Ordinance as having moderate paleontological importance (County of Ventura 2022).
- **Natural Communities/Plant Species/Threatened and Endangered Species** – As discussed in Section 2.4, *Biological Environment*, lands within the Coastal Zone under the jurisdiction of the City of Ventura LCP occur within the project footprint, including areas containing sensitive coastal resources within ESHAs. ESHA resources, including sensitive coastal resources, and habitat categorizations are defined in the Ventura County LCP, to which the City of Ventura LCP defers. Sensitive coastal resources within the Biological Study Area

(BSA; 250 feet of the project limits of disturbance) can be considered to be riparian vegetation communities, beach areas, wintering grounds for monarch butterfly (*Danaus plexippus*), and U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Wildlife (CDFW), and CCC wetlands and waters. These resource areas contain sensitive natural communities, including wetlands and riparian habitats, and have the potential to support special-status species, such as San Diego marsh-elder (*Iva hayesiana*), western snowy plover (*Charadrius alexandrinus nivosus*), and monarch butterfly.

The project would require expanding the San Jon Creek Bridge (Bridge No. 52-0163L/R) to accommodate the widening of the US 101. The San Jon Creek Bridge is within the Coastal Zone. No riparian habitat is present within the project footprint for the bridge expansion area. The San Diego marsh-elder is a special-status plant species located within an ESHA, but the species is well outside of the project footprint. The western snowy plover is listed as a Federally Threatened and California State Species of Concern. Designated critical habitat is present for the western snowy plover within the BSA, but such habitat is not present within the project limits. The monarch butterfly is a federal candidate for listing. There are several known over-wintering roosts within the BSA in which the monarch butterfly may likely be present, including south of Sanjon Road. Suitable over-wintering habitat conditions for monarch butterfly are present in the eucalyptus tree groves within the western portion of the BSA.

- **Wetlands and Other Waters** – As stated above, there are sensitive coastal resources within the BSA, including USACE, RWQCB, CDFW, and CCC wetlands and waters. The project, at San Jon Creek, includes CCC ESHAs, as shown in Figure 2.2.3-2.

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Figure 2.2.3-1. Coastal Zone Boundary

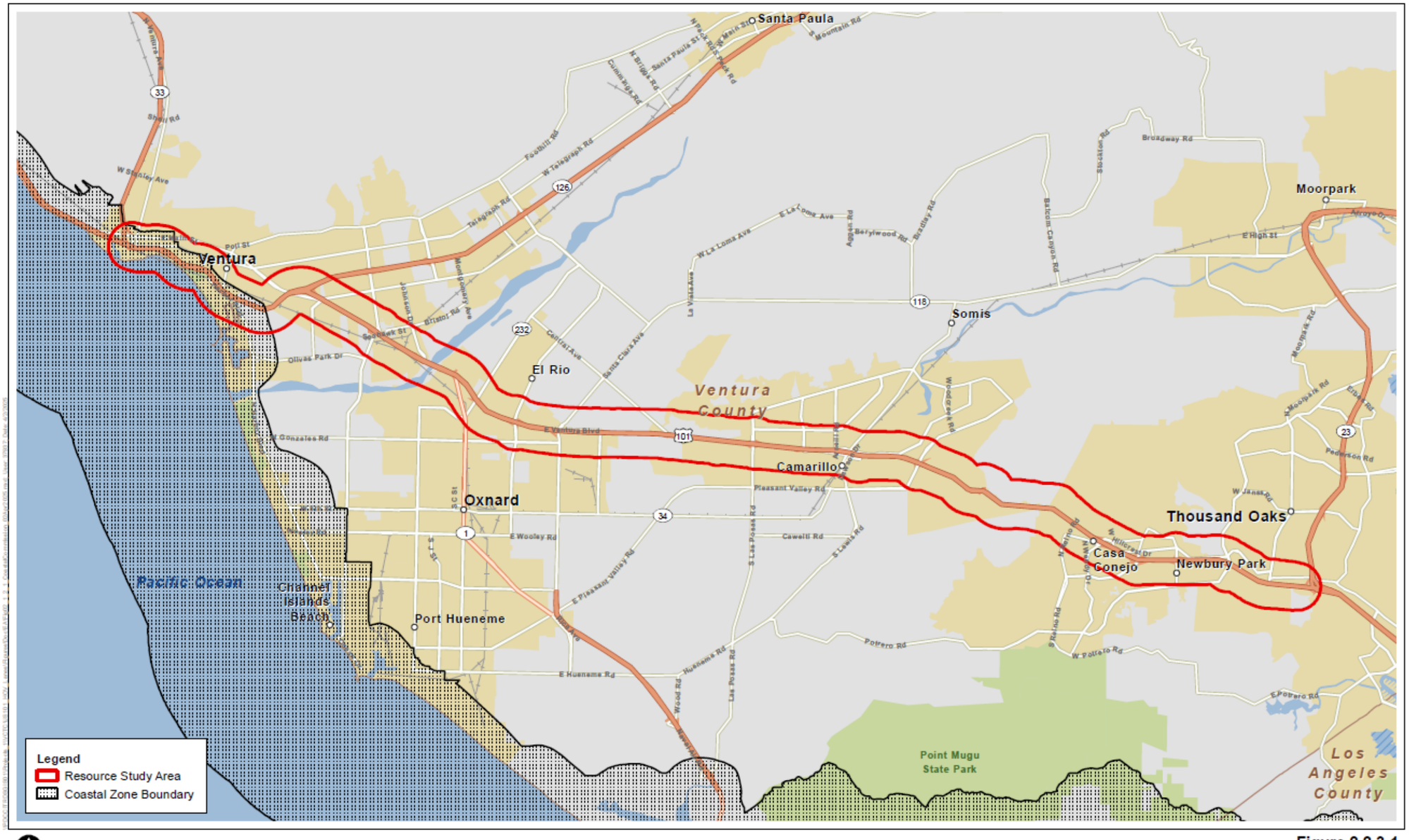


Figure 2.2.3-1
Coastal Zone Boundary
US 101 Improvement Project

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Figure 2.2.3-2. Ventura County and City of Ventura Local Coastal Programs



Figure 2.2.3-2
Ventura County and City of Ventura Local Coastal Programs
US 101 Improvement Project

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2.2.3.3 Environmental Consequences

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the current configuration of US 101 in the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on Coastal Zone resources would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

An analysis of the project's consistency with applicable policies of the California Coastal Act and the City of Ventura LCP is provided in Table 2.2.3-1.

Under both build alternatives, approximately 3.5 linear miles of the western portion of the project corridor are within the Coastal Zone, from the northern terminus of the project to the approximate location of the Arundell Avenue/Channel Drive overcrossing. Most of the construction work within this segment of the project would occur within the US 101 median as inside widening. Some of the construction work would require vegetation clearing and grubbing within the Coastal Zone boundary. In addition, four bridge widenings and two retaining walls are also proposed within the Coastal Zone. Impacts on coastal resources and measures that would be implemented to reduce project impacts on these resources are further discussed in Table 2.2.3-1.

Table 2.2.3-1. Coastal Act Chapter Three Policy Consistency Summary Table

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
Wetlands	
Coastal Act Section 30230. *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreation, scientific, and educational purposes.* Coastal Act Section 30231. *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation,*	There are USACE/RQWCB/CCC and CDFW jurisdictional features in the Coastal Zone within 100 feet of the project limits, as discussed in Section 2.4.2, *Wetlands and Other Waters*, and shown in Figure 2.4.2-1 (Sheets 23 to 26) and Figure 2.4.2-2 (Sheets 23 to 26). In the Coastal Zone, the presence of wetlands was determined based on how wetlands are defined in California Code of Regulations Title 14, Section 13577. Only one feature, San Jon Creek, intersects with the project limits of disturbance within the Coastal Zone (see Figure 2.4.2-1, Sheet 25 and Figure 2.3.2-2, Sheet 25). Within the project limits, San Jon Creek is a concrete flood control channel and is classified as USACE/RWQCB/CCC non-wetland waters and CDFW unvegetated streambed/lake. The project, under both Alternatives 2 and 3, would result in 0.05 acre of temporary impacts and <0.001 acre of permanent impacts on San Jon Creek to accommodate the widening of the US 101 overpass over Sanjon Road. The bridge widening at this location would entail widening the highway median.

Coastal Act Chapter Three Policy Area	Coastal Act Consistency Analysis
maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams. Coastal Act Section 30233 *(in relevant part).* *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities. (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps. (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities. (4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines. (5) Mineral extraction, including sand for beaches, except in environmentally sensitive areas. (6) Restoration purposes. (7) Nature study, aquaculture, or similar resource dependent activities.* California Code of Regulations Title 14 Section 13577 (b). Wetlands. *Measure 100 feet landward from the upland limit of the wetland. Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats.* *For purposes of this section, the upland limit of a wetland shall be defined as:*	New bridge columns and pile caps would be installed to support the superstructures. Temporary impacts on San Jon Creek would be for construction worker and equipment access and erecting the bridge. Permanent impacts on San Jon Creek would be for the new bridge columns and pile caps. Through implementation of avoidance and minimization measures **NC-6** through **NC-8** (Section 2.4.1, *Natural Communities*), **AS-5** through **AS-7** (Section 2.4.4, *Animal Species*), and **WET-1** and **WET-2**, and mitigation measure **WET-3** (Section 2.4.2, *Wetlands and Other Waters*), temporary impacts that may occur on adjacent habitat (e.g., dust, erosion, introduction of invasive species) would be minimized to the greatest extent possible. The same measures that would be implemented to address temporary impacts would also be used to address permanent impacts on San Jon Creek. The permanent impacts on San Jon Creek would be mitigated as part of permitting for impacts on jurisdictional aquatic resource features under USACE, RWQCB, CDFW, and CCC (measure **WET-3**). A compensatory mitigation plan would be developed during the permitting phase and would include a minimum ratio of 1:1 for permanent impacts on jurisdictional resources. Under both build alternatives, the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes within the Coastal Zone or City of Ventura LCP jurisdiction would not be required. Therefore, the project would be consistent with the wetlands policies of the Coastal Act.

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(A) the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover; *(B) the boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or* *(C) in the case of wetlands without vegetation or soils, the boundary between land that is flooded or saturated at some time during years of normal precipitation, and land that is not.*	
Agricultural Resources	
Coastal Act Section 30241 *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:* *By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.* *By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.* *By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.* *By developing available lands not suited for agriculture prior to the conversion of agricultural lands.* *By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.* *By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.* Coastal Act Section 30242: *All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (l)*	As discussed in Section 2.2.5, *Farmlands*, the project would have no impacts on coastal agricultural land uses, including Prime Farmlands, that are within the Coastal Zone. Therefore, the project would be consistent with the agricultural resources policies of the Coastal Act.

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continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands. Coastal Act Section 30113: *"Prime agricultural land" means those lands defined in paragraph (1), (2), (3), or (4) of subdivision (c) of Section 51201 of the Government Code.* Section 51201(c) of the California Government Code includes: *(1) a rating as class I or class II in the Natural Resource Conservation Service Land use capability classifications; (2) a rating 80 through 100 in the Storie Index Rating; or (3) the ability to support livestock used for the production of food and fiber with an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; or (4) the ability to normally yield in a commercial bearing period on an annual basis not less than two hundred dollars ($200) per acre of unprocessed agricultural plant production of fruit- or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years.* Coastal Act Section 30243: *The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.*	
Public Access and Recreation Resources	
Coastal Act Section 30210. *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.* Coastal Act Section 30211. *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*	The project would not restrict or alter existing coastal access areas. In addition, the project would not remove parking near the beach and is not anticipated to result in impacts on pedestrian and bicycle paths within the Coastal Zone. The project would improve US 101 to address existing operational and capacity deficiencies and to accommodate planned growth as projected by SCAG and local and regional general plans. The project would be consistent with the public access and recreation policies of the Coastal Act.

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Coastal Act Section 30212. *(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.* Coastal Act Section 30213. *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.* Coastal Act Section 30214. *(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following: (1) Topographic and geologic site characteristics. (2) The capacity of the site to sustain use and at what level of intensity. (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses. (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter. (b) It is the intent of the Legislature that the public access policies of this article be carried out in a reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access pursuant to Section 4 of Article X of the California Constitution.* Coastal Act Section 30220. *Protection of certain water-oriented activities Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.* Coastal Act Section 30221. *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that*	

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could be accommodated on the property is already adequately provided for in the area. Coastal Act Section 30223. *Upland areas Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.* Coastal Act Section 30224. *Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.* Coastal Act Section 30252. *The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.*	
Visual Resources and Community Character	
Coastal Act Section 30251. *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and*	As discussed in Section 2.2.11, *Visual/Aesthetics*, approximately 3.5 linear miles of the project corridor are within the Coastal Zone and have views of the seascape from the highway. Most of the planned modifications within this segment of the freeway would involve restriping and expanding the existing lanes toward the center median, leaving the shoulder areas outside the current roadway unchanged. Only about 1 mile of this segment, from near the Ventura Pier parking lot to the southern boundary of San Buenaventura State Beach, offers direct shoreline views, including beaches, recreation areas, and ocean vistas. While the addition of lanes

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Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.	would introduce more human-made elements, the primary scenic features of the coastal zone to the west would remain unaffected. Since most modifications occur within the existing roadway, views from beach areas east toward US 101 would experience few changes. Overall, the visual impact on travelers and nearby coastal areas would be minimal, resulting in a neutral effect on the Coastal Zone's visual environment. Avoidance and minimization measure **VIA-6** (Section 2.2.11, *Visual/Aesthetics*) would be implemented to minimize visual impacts during the construction phase. Measure **VIA-6** would require avoiding parking or staging of construction equipment or materials within Coastal Zone segments within view of beach areas or San Buenaventura State Beach. In addition, as discussed in Section 2.2.12, *Cultural Resources*, minimization measure **CR-5** would be implemented to protect views of the Pacific Ocean from being obstructed from a proposed soundwall near the Pierpont Inn District and Main Building. The proposed soundwall would be constructed with a partially transparent soundwall with an acrylic topper that would minimize obstruction of the Pierpont Inn District and Main Building's character-defining ocean views. Therefore, the project would be consistent with the visual resources and community character policies of the Coastal Act.
Environmentally Sensitive Habitat Area (ESHA)	
Coastal Act Section 30240.*(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas and shall be compatible with the continuance of those habitat and recreation areas.* Coastal Act Section 30107.5. *Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*	As shown on Figure 2.2.3-2, CCC ESHAs are present within the BSA. The project would avoid most CCC ESHA areas within the BSA, with the exception of temporary and permanent direct impacts on San Jon Creek. As shown on Figure 2.2.3-2, San Jon Creek intersects the project limits and is a CCC ESHA. The project would result in approximately 0.05 acre of temporary impacts and approximately less than 0.001 acre of permanent impacts on San Jon Creek as part of widening the US 101 overpass over Sanjon Road. The bridge widening at this location would entail widening the highway median. New bridge columns and pile caps would be installed to support the superstructures. Temporary impacts on San Jon Creek would be for construction worker and equipment access and erecting the bridge. Permanent impacts on San Jon Creek would be for the new bridge columns and pile caps. The project would avoid all other CCC ESHA areas. The proposed transportation improvement project is not a resource-dependent use and, therefore, is not allowed within ESHAs, consistent with Section 30240. Several alternatives have been

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	evaluated, and no other design or alternative is feasible that meets the purpose and objectives of the project without requiring ESHA impacts. However, measures **NC-1** through **NC-13** (see Section 2.4.1, *Natural Communities*) and **WET-1** through **WET-3** (Section 2.4.2, *Wetlands and Other Waters*) would be implemented to ensure direct or indirect impacts from construction are minimized and sensitive coastal resources and ESHAs are adequately protected. Measures **NC-1** through **NC-12** and **WET-1** through **WET-2** are avoidance and/or minimization measures. **NC-13** and **WET-3** are mitigation measures. Since the project would be performing actions that the CCC considers development activities (e.g., construction, grading, placement of fill or other materials) within designated preservation areas of the California Coastal Zone, a Coastal Development Permit from the City of Ventura LCP would be required for the project. Mitigation measures **NC-13** and **WET-3** have been provided to minimize adverse impacts on CCC ESHA areas and on San Jon Creek, including a minimum compensatory ratio of 1:1 for permanent impacts on jurisdictional resources under USACE, RWQCB, CDFW, and CCC. Therefore, the project would be consistent with the ESHA policies of the Coastal Act.
Water Quality	
Coastal Act Section 30230. *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreation, scientific, and educational purposes.* Coastal Act Section 30231.*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that*	The project would result in a net new increase in impervious surface area of approximately 78 acres under Alternative 2 and 84 acres under Alternative 3, which would increase the volume and velocity of stormwater discharges as well as the amount of pollutants into receiving waterways from highway runoff. As previously discussed, the project, at San Jon Creek, is within a designated CCC ESHA. San Jon Creek would receive direct discharges from the project that would traverse downstream into a segment of the creek that is listed as a 303(d) impaired waterbody for trash and E. coli pollutants. The project would implement measures **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*), which would include compliance with NPDES permits, preparation and implementation of a Stormwater Pollution Prevention Plan, and implementation of temporary construction site Best Management Practices (BMPs), treatment BMPs, and design pollution prevention BMPs to avoid and/or minimize project impacts on water quality. Treatment BMPs may include infiltration devices, biofiltration swales, biofiltration strips, gross-solids removal devices, and

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protect riparian habitats, and minimizing alteration of natural streams. Coastal Act Section 30232. *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*	Austin Vault sand filters. Design pollution prevention BMPs would prevent erosion and promote infiltration. In addition to preparation of a Stormwater Pollution Prevention Plan (measure **WQ-3**), during construction, the project would also implement avoidance and minimization measures HW-1 through HW-3 (Section 2.3.5, *Hazardous Waste/Materials*), which would include preparing and implementing a Health and Safety Plan (measure **HW-1**), a Contaminated Media Management Plan (**HW-2**), and a Construction Contingency Plan (**HW-3**). These plans would provide requirements and procedures for responding to accidental spills and release events and for encountering expected and unexpected contaminants during construction. Therefore, the project would be consistent with the water quality protection policies of the Coastal Act.
Coastal Hazards/Shoreline Development	
Coastal Act Section 30253 *(in part) New development shall: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.* Coastal Act Section 30235. *Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.* Coastal Act Section 30236. *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the*	As discussed in Section 2.3.3, *Geology/Soils/Seismic/ Topography*, the project includes four proposed bridge widenings between PM 29.45 and PM 30.59 (Vista Del Mar Undercrossing Widening, San Jon Creek Widening, Figueroa Street Undercrossing Widening, and Ventura Avenue Off Ramp Widening) and two proposed retaining wall structures between PM 30.48 and PM 30.66 (RWs 1577R and 1582R) within the Coastal Zone. Some of the project's proposed bridge widenings and retaining walls within the Coastal Zone are also located near tsunami inundation zones, or within dam failure inundation zones and flood hazard zones. These areas could be subjected to tsunami inundation, scour, and flood hazards. The potential for tsunami inundation, scour, and flood hazards would be further investigated during the final design phase with the preparation of a geotechnical design report and foundation reports (measure **GEO-3**, Section 2.3.3, *Geology/Soils/Seismic/Topography*). The project would be designed and constructed based on the recommendations from the geotechnical report and foundation reports. In addition, during the final design phase, potential landslides, slope stability, cut and fill slopes, and retaining walls would be further investigated (measures **GEO-1** and **GEO-2**, Section 2.3.3, *Geology/Soils/Seismic/Topography*). The project would not propose shoreline protective structures or alterations to rivers that would conflict with Coastal Act Sections 30235 and 30236.

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primary function is the improvement of fish and wildlife habitat. Coastal Act Section 30270. *The commission shall take into account the effects of sea level rise in coastal resources planning and management policies and activities in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise.* *Coastal Act Section 30001.5. The basic goals of the state for the coastal zone are to […] Anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone.* *(Added by Stats. 2021, Ch. 236, Sec. 2. (SB 1) Effective January 1, 2022.)*	Measures **HYD-1** through **HYD-4** (Section 2.3.1, *Hydrology and Floodplain*) would be implemented to avoid or minimize impacts on floodplains and hydrology, which would include scheduling construction work during the dry season to the maximum extent possible (measure **HYD-1**), remapping floodplains (measure **HYD-2**), regrading floodplain infields to restore storage volume (measure **HYD-3**), and remodeling drainages to evaluate design alternatives to minimize floodplain encroachment (measure **HYD-4**). Overall, implementation of the project would not increase the risk of flooding because it would not increase the base flood elevation. There would be no substantial flood-related risks to life or property associated with implementation of the project. A portion of the project within the Coastal Zone is near a very high fire hazard severity zone at the westernmost portion of the project corridor, as discussed in Section 3.5, *Wildfire*, and shown in Figure 3.5-1. However, the project would improve an existing facility along US 101. The project is not expected to introduce any new structures or operations that would worsen the risk of wildfire. The project would also comply with Caltrans Standard Specifications Section 7-1.02M(2) and would implement the following measures to avoid or minimize the risk of wildfires: **TR-1** (Section 2.2.10, *Transportation*), **UTIL-2** (Section 2.2.9, *Utilities/Emergency Services*), **NC-8** and **NC-9** (Section 2.4.1, *Natural Communities*), **GEO-1** through **GEO-3** (Section 2.3.3, *Geology/Soils/Seismic/Topography*), **HYD-1** through **HYD-4** (Section 2.3.1, *Hydrology and Floodplain*), and **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*). While a majority of the project corridor is outside the Coastal Zone and not in an area subject to sea-level rise (SLR), a portion of the project, located close to PM 30.9 near the City of Ventura, is subject to SLR, as discussed in Section 3.3.5, *Adaptation*. The project would implement measures **SLR-1** through **SLR-3** (Section 3.3.5, *Adaptation*) to address potential SLR impacts. Measures **SLR-1** through **SLR-3** would include compliance with Ventura County General Plan, Policy Haz-3.2, County Infrastructure Projects and Sea Level Rise for the bridge widenings (**SLR-1**), further drainage investigations (**SLR-2**), and further investigation regarding bridge foundations and retaining and bridge joints (**SLR-3**). Therefore, the project is consistent with the coastal hazards policies of the Coastal Act.

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Archaeological and Paleontological Resources	
Coastal Act Section 30244. *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*	As discussed in Section 2.2.12, *Cultural Resources*, no archaeological resources are located within the Coastal Zone. As discussed in Section 2.3.4, *Paleontology*, and shown in Figure 2.3.4-2, most geologic formations within the project alignment that overlap with the Coastal Zone were identified as areas that have no importance per the County's Coastal Zoning Ordinance (County of Ventura 2022). However, the western end of project alignment within the Coastal Zone boundary does contain paralic deposits of the Sea Cliff marine terrace, which is classified as having moderate paleontological importance. Project excavation activities within areas with paralic deposits of the Sea Cliff marine terrace may result in impacts on scientifically important paleontological resources. A Paleontological Mitigation Plan (measure **PAL-1**, Section 2.3.4, *Paleontology*) would be prepared during final design. The plan would follow Caltrans and Society of Vertebrate Paleontology guidelines and would contain training, monitoring, fossil recovery, sampling, and notification protocols should a fossil be discovered during construction activities. Therefore, the project is consistent with the archaeological and paleontological resources policies of the Coastal Act.

2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the study area. Under the No-Build Alternative, the project would not be constructed, and no impacts within the Coastal Zone would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add and HOV/Express Bus Lane in Each Direction with Design Variations

Because the project would be performing actions that the CCC considers development activities (e.g., construction, grading, placement of fill or other materials) within designated preservation areas of the Coastal Zone, a Coastal Development Permit from the City of Ventura LCP would be required for the project. The project would implement mitigation measures **NC-13** (Section 2.4.1, *Natural Communities*) and **WET-3** (Section 2.4.2, *Wetlands and Other Waters*) to address impacts on CCC ESHA areas and on San Jon Creek, including a minimum compensatory ratio of 1:1 for permanent impacts on jurisdictional resources under USACE, RWQCB, CDFW, and CCC. In addition, the following measures would be implemented to avoid and/or minimize project impacts on

coastal resources: **UTIL-2** (Section 2.2.9, *Utilities/Emergency Services*), **TR-1** (Section 2.2.10, *Transportation*), **VIA-1** through **VIA-6** (Section 2.2.11, *Visual/Aesthetics*), **CR-5** (Section 2.2.12, *Cultural Resources*), **HYD-1** through **HYD-4** (Section 2.3.1, *Hydrology and Floodplain*), **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*), **GEO-1** through **GEO-3** (Section 2.3.3, *Geology/Soils/Seismic/ Topography*), **PAL-1** (Section 2.3.4, *Paleontology*), **HW-1** through **HW-10** (Section 2.3.5, *Hazardous Waste/Materials*), **NC-1** through **NC-12**, (Section 2.4.1, *Natural Communities*), **WET-1** through **WET-2** (Section 2.4.2, *Wetlands and Other Waters*), **AS-5** through **AS-7** (Section 2.4.4, *Animal Species*), and **SLR-1** through **SLR-3** (Section 3.3.5, *Adaptation*).

2.2.4 Parks and Recreational Facilities

2.2.4.1 Regulatory Setting

The Park Preservation Act (Public Resources Code Sections 5400-5409) 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.

2.2.4.2 Affected Environment

The following discussion is from the Community Impact Assessment (Caltrans 2026) prepared for the project and from Appendix A, *Section 4(f)* (Caltrans 2026), in this environmental document.

A park qualifies for protection under Section 4(f) if (1) the property is publicly owned, (2) the park is open to the general public, (3) it is being used for outdoor recreation, and (4) it is considered significant by the authority with jurisdiction. For planned and programmed projects, according to the Section 4(f) Policy Paper (FHWA 2012), for a project to be considered a Section 4(f) property, the public agency that owns the property must have formally designated the property and determined it to be significant for park, recreational, or wildlife and waterfowl refuge purposes.

The study area is defined as the project limits plus a 0.25-mile buffer. As shown in Table 2.2.4-1 and on Figure 2.2.4-1, there are 25 existing public parks and recreational resources within the resource study area, including 23 public parks and two public trails and bike paths. All 25 properties qualify as Section 4(f) resources and are protected under the Park Preservation Act.

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Table 2.2.4-1. Parks and Recreational Facilities within the Resource Study Area

Resource Name	Location	Official with Jurisdiction/ Owner/Operator	Amenities	Location Relative to the Project	Trigger Section 4(f) Protection?	Protected Under Park Preservation Act?
Ventura Waterfront Promenade, Surfer's Point, and Promenade Park	Ventura	City of Ventura	Beach and park facilities, including a trail, walkway, restrooms, showers, a spacious lawn, and picnic tables.	500 feet	Yes	Yes
San Buenaventura State Beach	901 San Pedro St, Ventura	California Department of Parks and Recreation	Two-mile-long beach with a sandy expanse and 6 acres of turf.	Adjacent	Yes	Yes
San Buenaventura State Beach Trail	Ventura	California Department of Parks and Recreation	A 4.1-mile paved trail following the shoreline from San Buenaventura State Beach and connecting to the Ojai Valley Bike Trail.	Adjacent	Yes	Yes
Ocean Avenue Park	Ocean Ave & Hurst Ave; 1501 E Ocean Ave, Ventura, CA 93001	City of Ventura	Park with children's play structure, basketball hoops, restrooms, picnic areas, and open grass.	More than 700 feet from the project limits	Yes	Yes
Camino Real Park	Dean Dr & Varsity St, Ventura	City of Ventura	A 38-acre publicly owned complex, including eight tennis courts (lighted), two softball fields (lighted), a regulation softball/baseball diamond (lighted), two youth baseball fields, basketball and sand volleyball courts, snack bar/concession buildings, and three children's play areas.	Adjacent	Yes	Yes
Marion Cannon Park	Saratoga Ave & Shenandoah St	City of Ventura	A 5-acre park with restrooms, picnic tables, BBQ grills, playground, basketball court, and open grass areas.	More than 900 feet from the project limits	Yes	Yes
Mission Park	Main St & Figueroa St, Ventura	City of Ventura	Open grass area with benches and restrooms.	More than 800 feet from the project limits	Yes	Yes
Downtown Mini Park	300 block E Main St, Ventura	City of Ventura	Open lawn with paved pathway.	More than 800 feet from the project limits	Yes	Yes
Plaza Park	Santa Clara St and Chestnut St, Ventura	City of Ventura	A 3.7-acre park with restrooms, picnic tables, playground, and gazebo.	More than 250 feet from the project limits	Yes	Yes
Vineyards Park	2790 Smokey Mountain Dr, Oxnard	City of Oxnard	A 7-acre park with picnic tables, grills, basketball courts, restrooms, and open grass areas.	More than 1,000 feet from the project limits	Yes	Yes
Mel Vincent Park	668 Calistoga Rd, Camarillo	Pleasant Valley Recreation and Park District	A 5-acre park with two playgrounds, fitness equipment, restrooms, basketball and sand volleyball courts, picnic areas, and open grass areas.	More than 650 feet from the project limits	Yes	Yes
Dizdar Park	Ventura Blvd and S Glenn Dr, Camarillo	City of Camarillo	Picnic table and swings. Planned improvements at the park include a plaza, garden entry gateway, band shell with stage, seating, restrooms, and a fire station–themed playground.	More than 250 feet from the project limits	Yes	Yes
Pleasant Valley Fields	152 Westpark Ct, Camarillo	Pleasant Valley Recreation and Park District	A 55-acre publicly owned park with 23 acres of turf for sports such as softball and soccer plus a playground and picnic areas.	Adjacent	Yes	Yes
Camarillo Grove Park	6968 E Camarillo Springs Rd, Camarillo	Pleasant Valley Recreation and Park District	A 24.6-acre park on rugged foothills featuring hiking trails, a nature center, a dog park, and picnic areas with grills.	Adjacent	Yes	Yes
Walnut Grove Park	400 Windtree Ave, Thousand Oaks	Conejo Recreation and Park District	A 6.5-acre community park with backstops, an outdoor handball court, children's playground, dog park, barbeque grills, outdoor basketball courts, and a 0.21-mile walking path.	Adjacent	Yes	Yes

Resource Name	Location	Official with Jurisdiction/ Owner/Operator	Amenities	Location Relative to the Project	Trigger Section 4(f) Protection?	Protected Under Park Preservation Act?
Walnut Open Space	Near Lynn Rd and US 101	Conejo Open Space Conservation Agency	Open space with trail.	Adjacent	Yes	Yes
Los Padres Open Space	Southern end of Moorpark Rd, Thousand Oaks	Conejo Open Space Conservation Agency	Open space with trails.	Adjacent	Yes	Yes
Vallecito Open Space	West of Old Conejo Rd, Thousand Oaks	Conejo Open Space Conservation Agency	A 67-acre open space area with hiking trails.	Adjacent	Yes	Yes
Old Conejo Open Space/Conejo Vista Trail	West of Old Conejo Rd, Thousand Oaks	Conejo Open Space Conservation Agency	A 38-acre open space with a short hiking trail that provides panoramic views of Boney Mountain.	Adjacent	Yes	Yes
Conejo Canyons Open Space	North of Grande Vista Dr, Thousand Oaks	Conejo Open Space Conservation Agency	A 1,673-acre open space area with hiking trails.	Adjacent	Yes	Yes
Knoll Park (Rabbit Hill)	3350 Old Conejo Rd, Newbury Park	Conejo Open Space Conservation Agency	A 21-acre open space area with a trail leading to panoramic views toward Boney Mountain, Thousand Oaks, and Conejo Mountain.	More than 700 feet from project limits	Yes	Yes
Calleguas Creek Bike Path	675 Avenida Valencia, Camarillo	Pleasant Valley Recreation and Park District	A 2-mile bike path with gentle slopes and picturesque mountains and hillsides.	Adjacent	Yes	Yes
Newbury Gateway Park	2250 Michael Dr, Newbury Park	Conejo Recreation and Park District	A 4-acre park with playground, picnic table, open turf area, and benches.	More than 700 feet from project limits	Yes	Yes
Arroyo Conejo Open Space (including trails)	Hillcrest Dr & Ventu Park Rd, Thousand Oaks	Conejo Open Space Conservation Agency	Open space area with hiking trails.	Within 200 feet of the project limits	Yes	Yes
Los Robles Greens Golf Course	299 S Moorpark Rd, Thousand Oaks, CA 91361	Owned by City of Thousand Oaks, operated by private operator	A publicly owned championship golf course with a 32-station driving range and on-site pro shop and clubhouse. The golf course has a user fee, which is discounted for residents of Thousand Oaks.	Adjacent	Yes	Yes

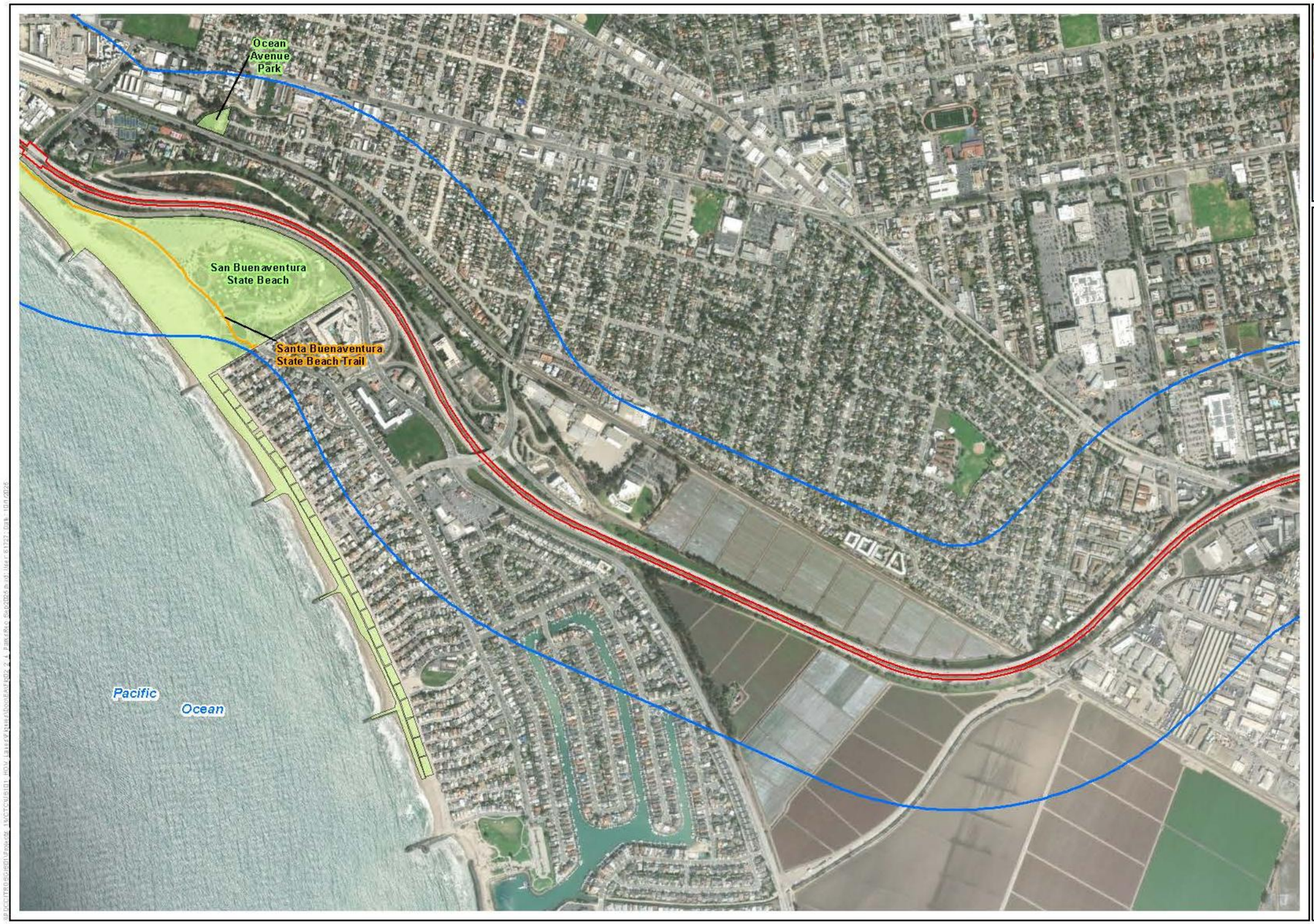
Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 1 of 11)



Figure 2.2.4-1, Sheet 1 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 2 of 11)





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- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

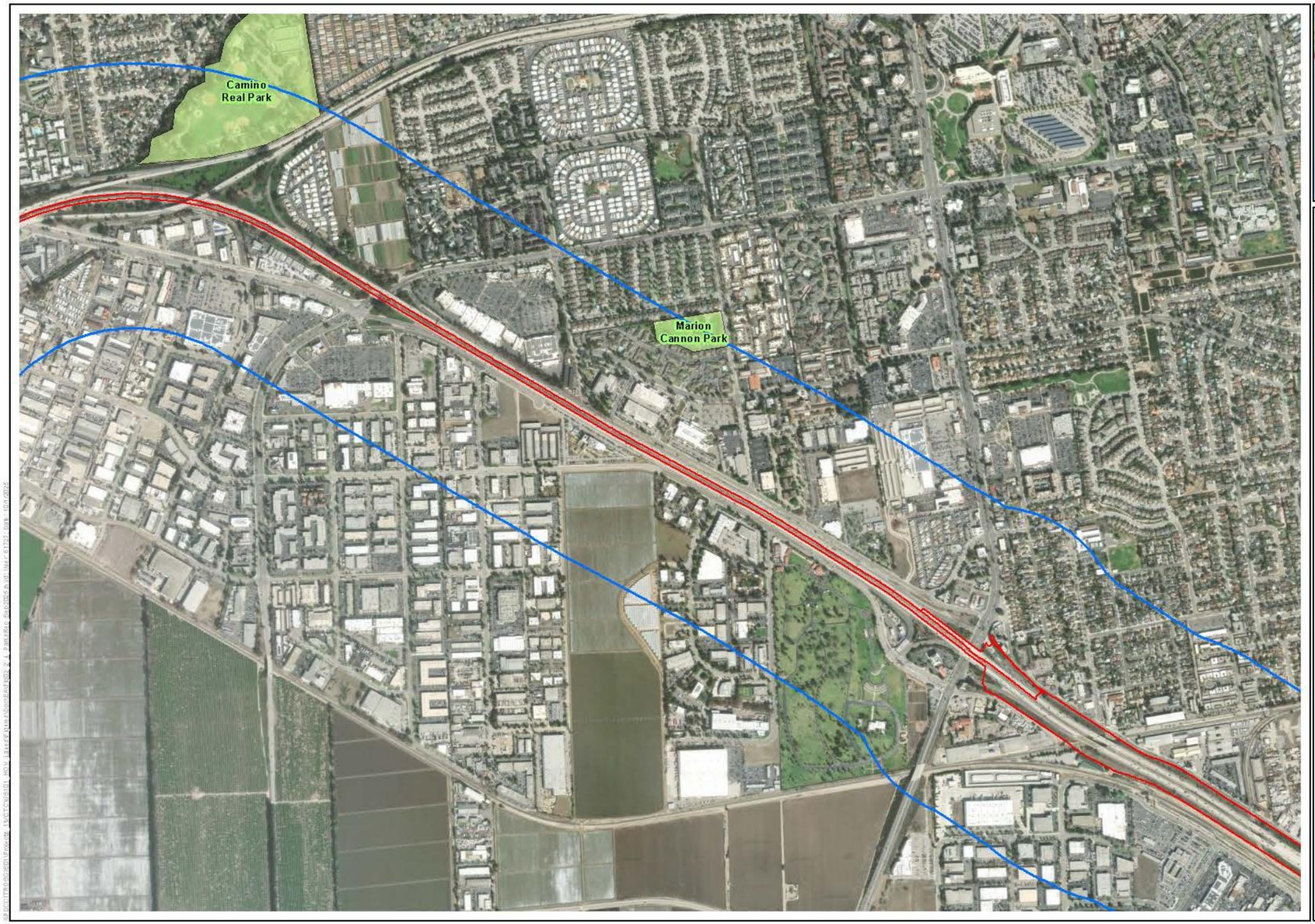
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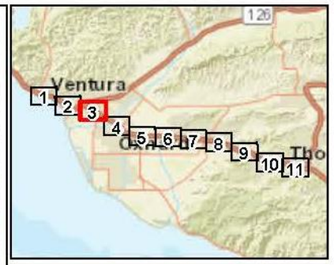
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Figure 2.2.4-1, Sheet 2 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 3 of 11)





Legend

- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

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Figure 2.2.4-1, Sheet 3 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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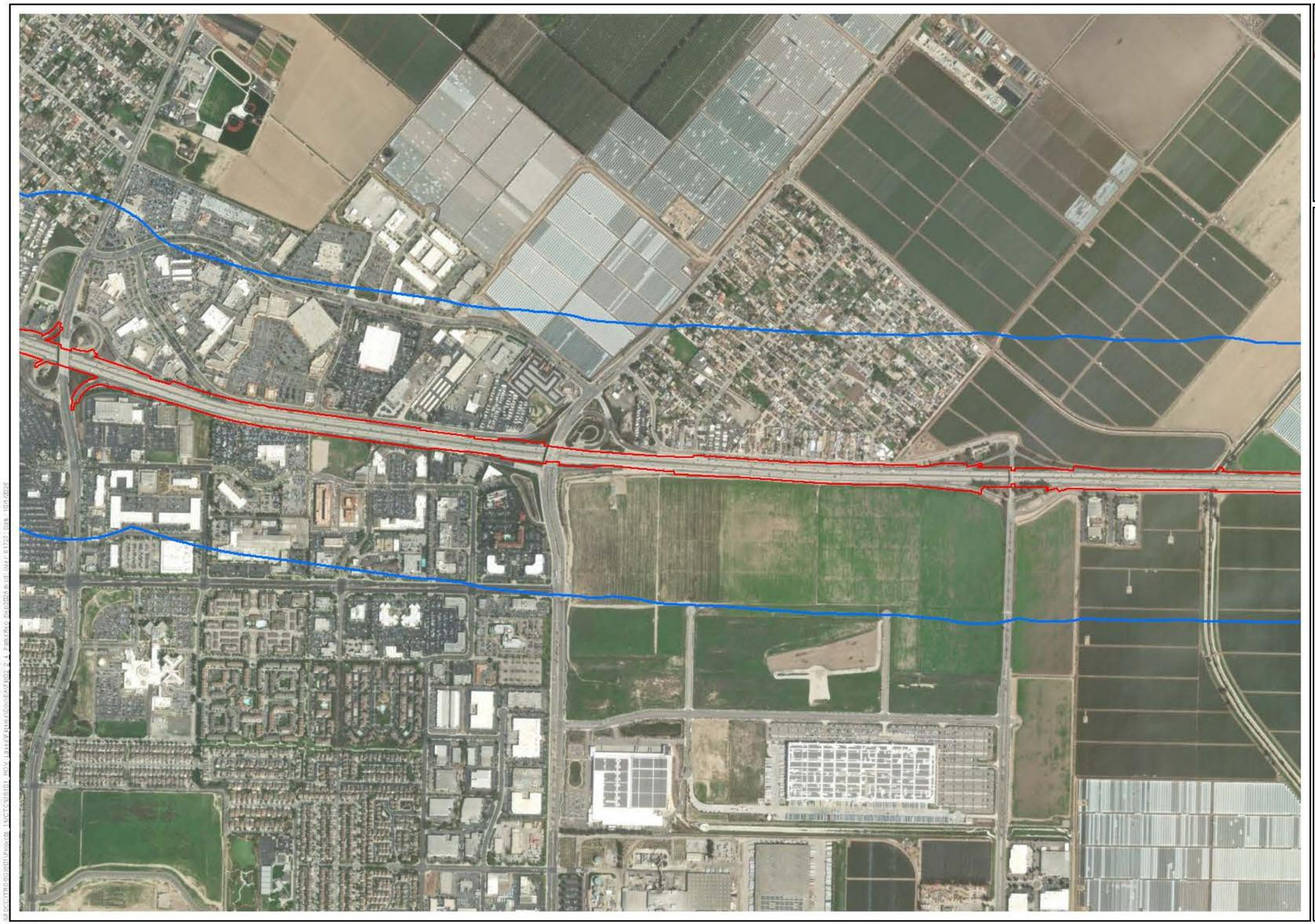
Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 4 of 11)



Figure 2.2.4-1, Sheet 4 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 5 of 11)





Legend

- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

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Figure 2.2.4-1, Sheet 5 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 6 of 11)





Legend

- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

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Figure 2.2.4-1, Sheet 6 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 7 of 11)

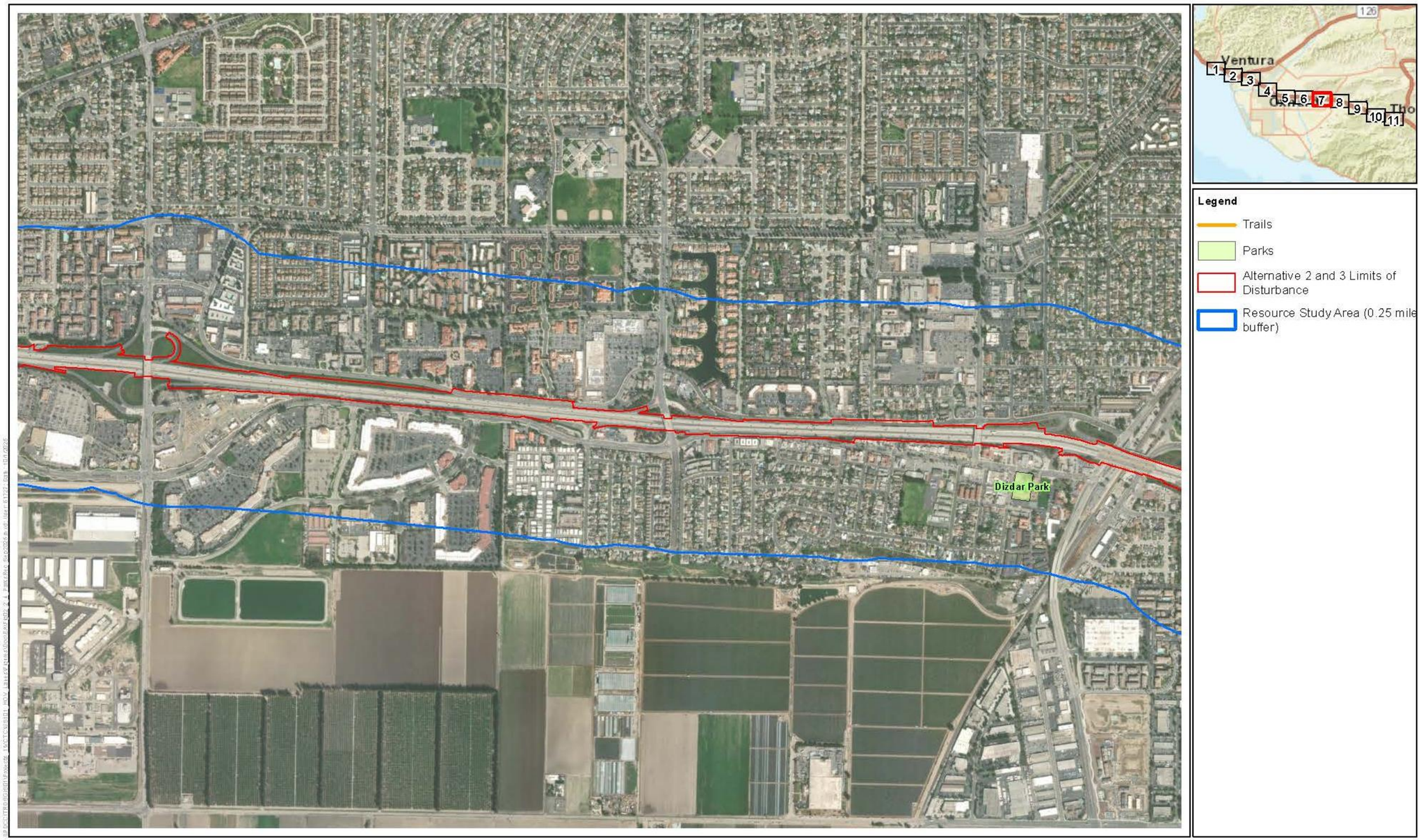
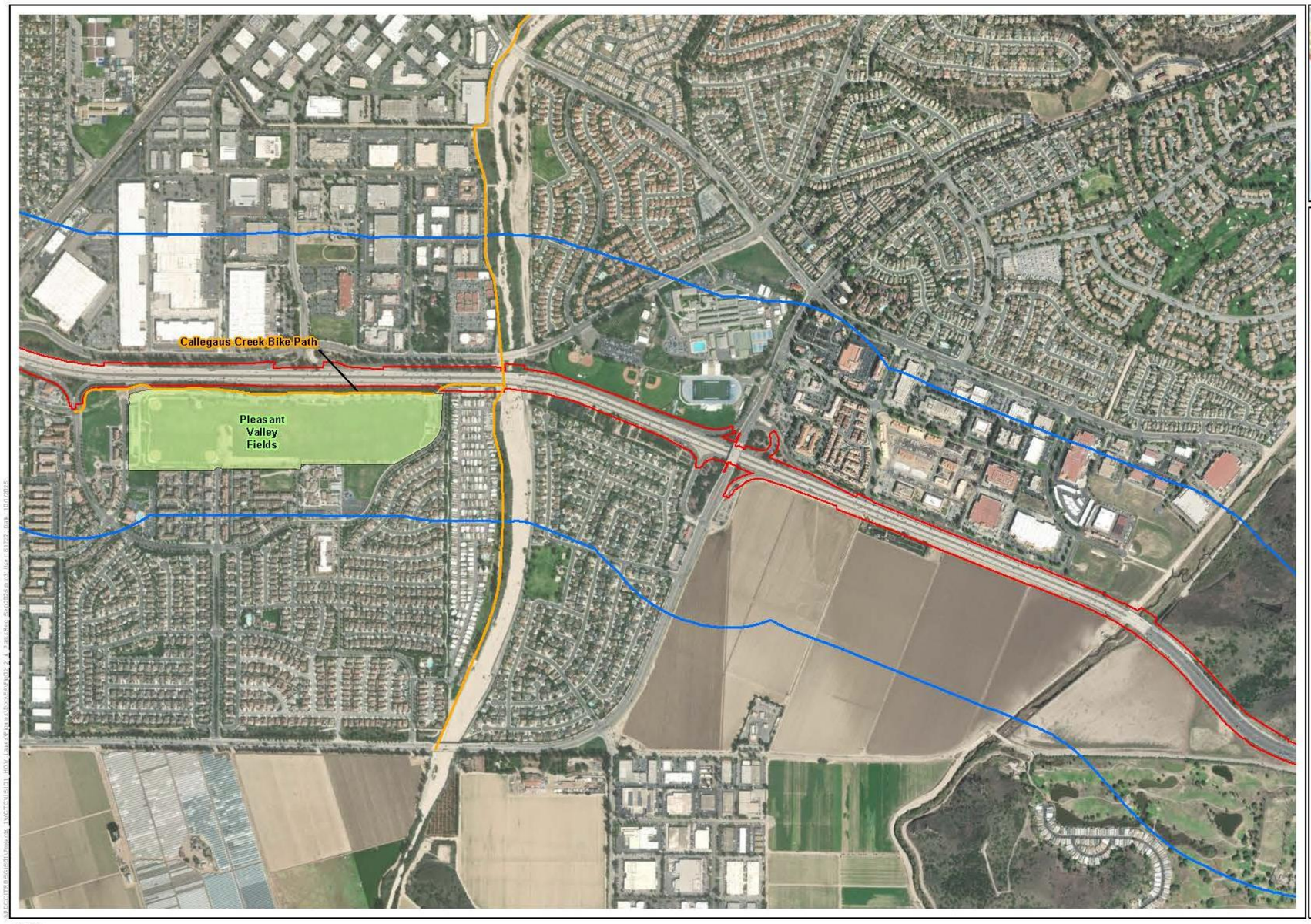


Figure 2.2.4-1, Sheet 7 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 8 of 11)





Legend

- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

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Figure 2.2.4-1, Sheet 8 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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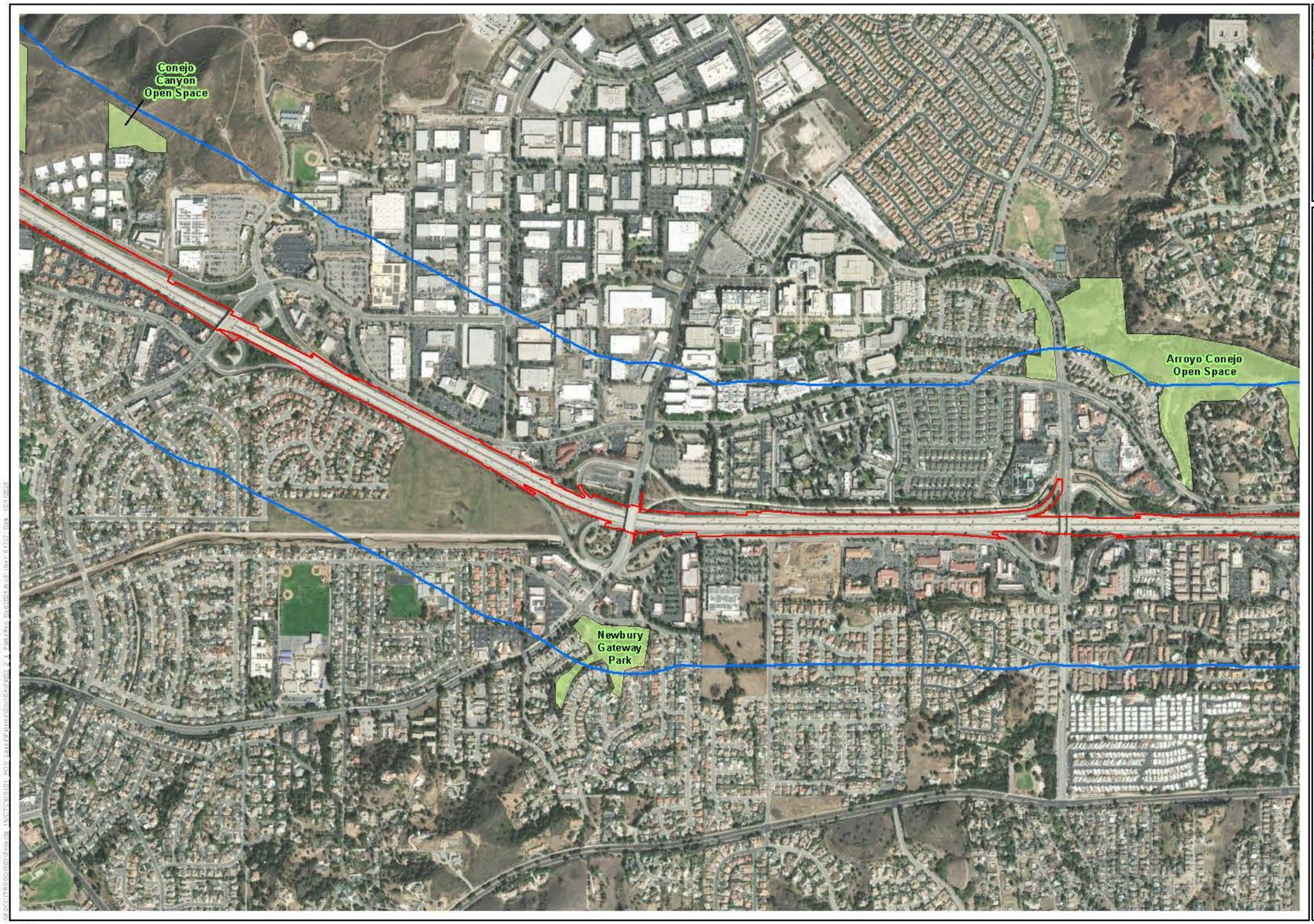
Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 9 of 11)

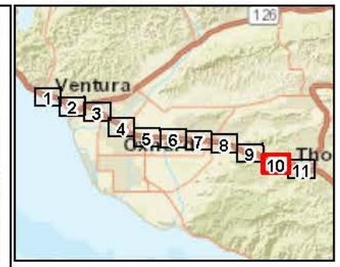


Figure 2.2.4-1, Sheet 9 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 10 of 11)





Legend

- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

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Figure 2.2.4-1, Sheet 10 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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Figure 2.2.4-1. Public Parks and Recreational Facilities (Sheet 11 of 11)





Legend

- Trails
- Parks
- Alternative 2 and 3 Limits of Disturbance
- Resource Study Area (0.25 mile buffer)

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Figure 2.2.4-1, Sheet 11 of 11
Public Parks and Recreational Facilities
US 101 Improvement Project

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2.2.4.3 Environmental Consequences

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the project limits. Under the No-Build Alternative, the project would not be constructed, and no impacts on parks and recreational facilities would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction

Alternative 2 would affect the Los Robles Greens Golf Course, Camarillo Grove Park, and Walnut Grove Park, which are Section 4(f) properties and are further discussed below.

Temporary Impacts

Los Robles Greens Golf Course

Under Alternative 2, a temporary construction easement (TCE) of 5,180 square feet of the Los Robles Greens Golf Course in Thousand Oaks would be required for construction personnel access. The TCE area is near the southern area of the golf course, adjacent to the freeway and away from the park's facilities and amenities, which are concentrated on the northern side of the park. The area of the golf course where the TCE is proposed is not used for golfing; the area includes a buffer zone between the golf course and US 101. The area does have mature trees, but they would not be removed by construction activities. All parking and site access would remain.

Visual impacts during construction would be typical of roadway construction projects, including visual impacts from construction fencing, construction equipment, and material stockpiles that may be partially visible from some parts of the golf course. However, temporarily disturbed areas would be returned to pre-project conditions once construction is completed. Therefore, the minor visual changes associated with Alternative 2 would occur only during construction and only for a short period. Any increase in noise or vibration, or fugitive dust during construction would be temporary and intermittent (as discussed in Section 2.3.6, *Air Quality*, and Section 2.3.7, *Noise and Vibration*). Noise levels during construction are not anticipated to be high enough that they would interfere with golfers' ability to play and communicate.

Temporary impacts during the construction phase related to exhaust and dust and intermittent increase in noise and vibration would be addressed with implementation of measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*) and **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*). Measures **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*) would also be implemented to minimize impacts on land uses, including restoring any removed fencing and replanting vegetation that is disturbed by construction activities. With implementation of these measures, the project would not result in substantial temporary adverse effects on the Los Robles Greens Golf Course.

Camarillo Grove Park

Under Alternative 2, a TCE of 2,939 square feet of the Camarillo Grove Park in Camarillo would be required. The TCE area is near the southern end of the park, adjacent to the freeway and away from the park's facilities and amenities, which are concentrated on the northern side of the park. Although hiking trails extend toward the southern side of the park, project activities would be approximately 150 feet south of the southernmost trail. All access to the trails would remain, and no closures would occur. The TCE area would be used for a short duration and the area would be restored to its existing condition.

Temporary impacts during the construction phase related to exhaust and dust and intermittent increase in noise and vibration would be addressed with implementation of measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*) and **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*). Measures **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*) would also be implemented to minimize impacts on land uses, including restoring any removed fencing and replanting vegetation that is disturbed by construction activities. With implementation of these measures, the project would not result in substantial temporary adverse effects on the Camarillo Grove Park.

Walnut Grove Park

Under Alternative 2, a TCE of 5,500 square feet on two parcels of the Walnut Grove Park (212 square feet from APN 682-022-101 and 5,288 square feet from APN 682-025-002), located in Thousand Oaks, would be required for construction personnel access. The TCE area is in the northern portions of the park, adjacent to the freeway and away from the park's amenities, which are concentrated to the south of the TCE area. Although a recreational walking path is adjacent to the TCE area, all access to the walking path would remain, and no closure would occur. Other amenities at the park in addition to the recreational walking path, such as the backstops, an outdoor handball court, children's playground, dog park, barbeque grills, and outdoor basketball courts, would remain unaffected by construction. The TCE area would be used for a short duration, and the area would be restored to its existing condition.

Temporary impacts during the construction phase related to exhaust and dust and intermittent increase in noise and vibration would be addressed with implementation of measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*) and **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*). Measures **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*) would also be implemented to minimize impacts on land uses, including restoring any removed fencing and replanting vegetation that is disturbed by construction activities. With implementation of these measures, the project would not result in substantial temporary adverse effects on Walnut Grove Park.

Permanent Impacts

No land from the Los Robles Greens Golf Course, Camarillo Grove Park, or Walnut Grove Park would be permanently incorporated into the project under Alternative 2.

Therefore, the project would not result in substantial permanent adverse effects on the golf course or parks.

Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Alternative 3 would affect the Los Robles Greens Golf Course, Camarillo Grove Park, and Walnut Grove Park, which are Section 4(f) properties and are further discussed below.

Temporary Impacts

Los Robles Greens Golf Course

Alternative 3 would have the same impact on the Los Robles Greens Golf Course as Alternative 2 where a TCE of 5,180 square feet would be required in the southern area of the golf course, adjacent to the freeway. The TCE is needed for construction personnel access.

Similar to Alternative 2, Alternative 3 would also implement the same measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*), **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*), and **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*). With implementation of these measures, the project would not result in substantial temporary adverse effects on the Los Robles Greens Golf Course.

Camarillo Grove Park

The impacts under Alternative 3 would be the same as the impacts under Alternative 2 except Alternative 3 would require a TCE of 6,723 square feet near the southern end of the park, whereas Alternative 2 would require a TCE of 2,939 square feet. Alternative 3 would require a larger TCE area because the median shoulder width in this section of the project alignment is designed to be 20 feet to provide sight distance. In comparison, under Alternative 2, the median shoulder width is designed to be 10 feet with nonstandard sight distance, resulting in a smaller TCE area. Similar to Alternative 2, the TCE area under Alternative 3 would be adjacent to the freeway and away from the park's facilities and amenities, which are concentrated on the northern side of the park. Although hiking trails extend toward the southern side of the park, project activities would be approximately 150 feet south of the southernmost trail. All access to the trails would remain, and no closures would occur. The TCE area would be used for a short duration and the area would be restored to its existing condition.

Similar to Alternative 2, Alternative 3 would implement the same measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*), **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*), and **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*). With implementation of these measures, the project would not result in substantial temporary adverse effects on the Camarillo Grove Park.

Walnut Grove Park

Alternative 3 would have the same impact on Walnut Grove Park as Alternative 2 where a TCE of 5,500 square feet on two parcels (212 square feet from APN 682-022-101 and 5,288 square feet from APN 682-025-002), would be required in the northern portions of the park, adjacent to the freeway and away from the park's amenities. The TCE is needed for construction personnel access.

Similar to Alternative 2, Alternative 3 would implement the same measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*), **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*), and **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*). With implementation of these measures, the project would not result in substantial temporary adverse effects on Walnut Grove Park.

Permanent Impacts

Los Robles Greens Golf Course

Similar to Alternative 2, no land from the Los Robles Greens Golf Course would be incorporated into the project under Alternative 3. Therefore, the project would not result in substantial permanent adverse effects on the golf course.

Camarillo Grove Park

Alternative 3 would require permanent acquisition of approximately 5,049 square feet of Camarillo Grove Park, which would be approximately 0.47 percent of the total 24.6 acres of the park. The area of the park to be acquired is natural open space located at the southern end of the park, adjacent to US 101. The area to be acquired is undeveloped, with hilly and rugged terrain, and has no active or passive recreational features. Recreational features of the park, such as the nature center, playground equipment, and picnic areas, and the entrance and parking are all north of the park where the terrain is flatter. Acquisition of the land would have no effect on the recreational features and value of the rest of the park and, therefore, the project would not result in substantial permanent adverse effects on the park.

In addition to being a Section 4(f) resource, Camarillo Grove Park is also a Section 6(f) resource because it received funding from the Land and Water Conservation Fund (LWCF). As stated above, Alternative 3 would require permanent acquisition of approximately 5,049 square feet of land from Camarillo Grove Park. The encroachments into LWCF-assisted property at Camarillo Grove Park would be subject to the conversion requirements of Section 6(f)(3). Please refer to Appendix A for more information.

There are parks and recreational facilities in the project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966. This project would result in a "use" of those facilities as defined by Section 4(f) (e.g., parks and recreational facilities) and is evaluated in Appendix A of the environmental document (*Section 4(f)*; Caltrans 2026).

Walnut Grove Park

Similar to Alternative 2, no land from Walnut Grove Park would be incorporated into the project under Alternative 3. Therefore, the project would not result in substantial permanent adverse effects on the park.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on parks and recreational resources would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

With the implementation of measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*), **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*), and **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*), no substantial adverse effects on parks and recreational resources are anticipated under the build alternatives.

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2.2.5 Farmlands

2.2.5.1 Regulatory Setting

The Farmland Protection Policy Act (FPPA) (7 United States Code [USC] 4201-4209) requires federal agencies, such as Federal Highway Administration (FHWA) and California Department of Transportation (Caltrans), as assigned, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland 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.

2.2.5.2 Affected Environment

This section is based on the Community Impact Assessment (CIA) (Caltrans 2026) and the Farmland Conversion Impact Rating for Corridor-Type Projects (Form NRCS-CPA-106) (Caltrans 2022) that were completed for the project.

The California Land Conservation Act of 1965, commonly known as the Williamson Act, provides incentives, through reduced property taxes, to deter the early conversion of agricultural and open space lands. The Williamson Act is implemented and regulated by the County of Ventura through its entry into three contract types at the request of property owners: Land Conservation Act Contract, Farmland Security Zone Area Contract, and Open Space Contract. These contracts require preservation of agricultural and open space land and discourage its premature conversion to non-agricultural uses.

Agriculture is an activity of economic and cultural significance for Ventura County. Approximately 16.9 million acres of California's 29 million acres of farmland and ranch land are currently protected under the Williamson Act (California Department of Conservation 2025). Ventura County produces crops year-round. Farmers involved in vegetable and berry production typically plant and harvest multiple crops each year. Orchard crops ripen and are harvested for many months at a time (Farm Bureau of Ventura County 2025). In 2022, the value of crops for the county for the year was valued at $2,127,682,000—an increase of 2 percent from 2021 (County of Ventura Public Information Office 2023). Top crops include strawberries ($575M), lemons ($216M), nursery stock ($193M), avocados ($179M), and raspberries ($141M). Ventura County is currently experiencing a decrease in acreage of agricultural land. Between 2004 and 2016, land designated as Prime Farmland decreased by 6,216 acres, or 13.17 percent, and land designated as Farmland of Statewide Importance decreased by 1,987 acres, or 5.68 percent (County of Ventura 2020). In the project area, 87,148 acres

of land are irrigated, with an average farm size of 131 acres. Major crops in the project area are strawberries, celery, and lemons (Caltrans 2022). Approximately 2,305 acres of farmland within the project area are currently in Williamson Act contracts.

Data from the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation 2016) were used to identify Important Farmlands within the farmland resource study area and to prepare Form NRCS-CPA-106 (Caltrans 2022). The resource study area for farmlands, as identified within the CIA, is 1 mile wide on each side of US 101 for the length of the project limits (Figure 2.2.5-1).

The FMMP designations within the resource study area are:

- **Prime Farmland**: Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production.
- **Farmland of Statewide Importance:** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture.
- **Farmland of Local Importance:** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Unique Farmland:** Farmland of lesser-quality soils used for the production of the state's leading agricultural crops.
- **Grazing Land:** Land on which the existing vegetation is suited to the grazing of livestock.
- **Urban and Built-up Land:** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. The land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land:** Land not included in any other mapping category.
- **Water:** Perennial water bodies with an extent of at least 40 acres.

Table 2.2.5-1 provides the total acreages of FMMP designated lands and land protected by the Williamson Act within the resource study area. Figure 2.2.5-1 shows the location of the FMMP designated lands, including Prime and Unique Farmlands, and Williamson Act land within the resource study area. The northern portion of the resource study area also contains agricultural land uses within the coastal zone, as shown on Figure 2.2.5-1.

Table 2.2.5-1. Farmland within the Resource Study Area

Land Mapping Category	Total Acres	% of Total
Prime Farmland	2,725.20	6.82
Farmland of Statewide Importance	3,705.10	9.28
Farmland of Local Importance	304.28	0.76
Unique Farmland	274.33	0.68
Grazing Land	371.75	0.93
Urban and Built-up Land	23,100.24	57.89
Other Land*	5,515.88	13.82
Water	1,601.09	4.01
Williamson Act Land	2,305	5.77
Grand Total	**39,902.87**	**100**

Source: Caltrans 2026.

* Other Land, per the California Department of Conservation's FMMP, refers to land not included in any other mapping category, including low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

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Figure 2.2.5-1. Farmland Resource Study Area

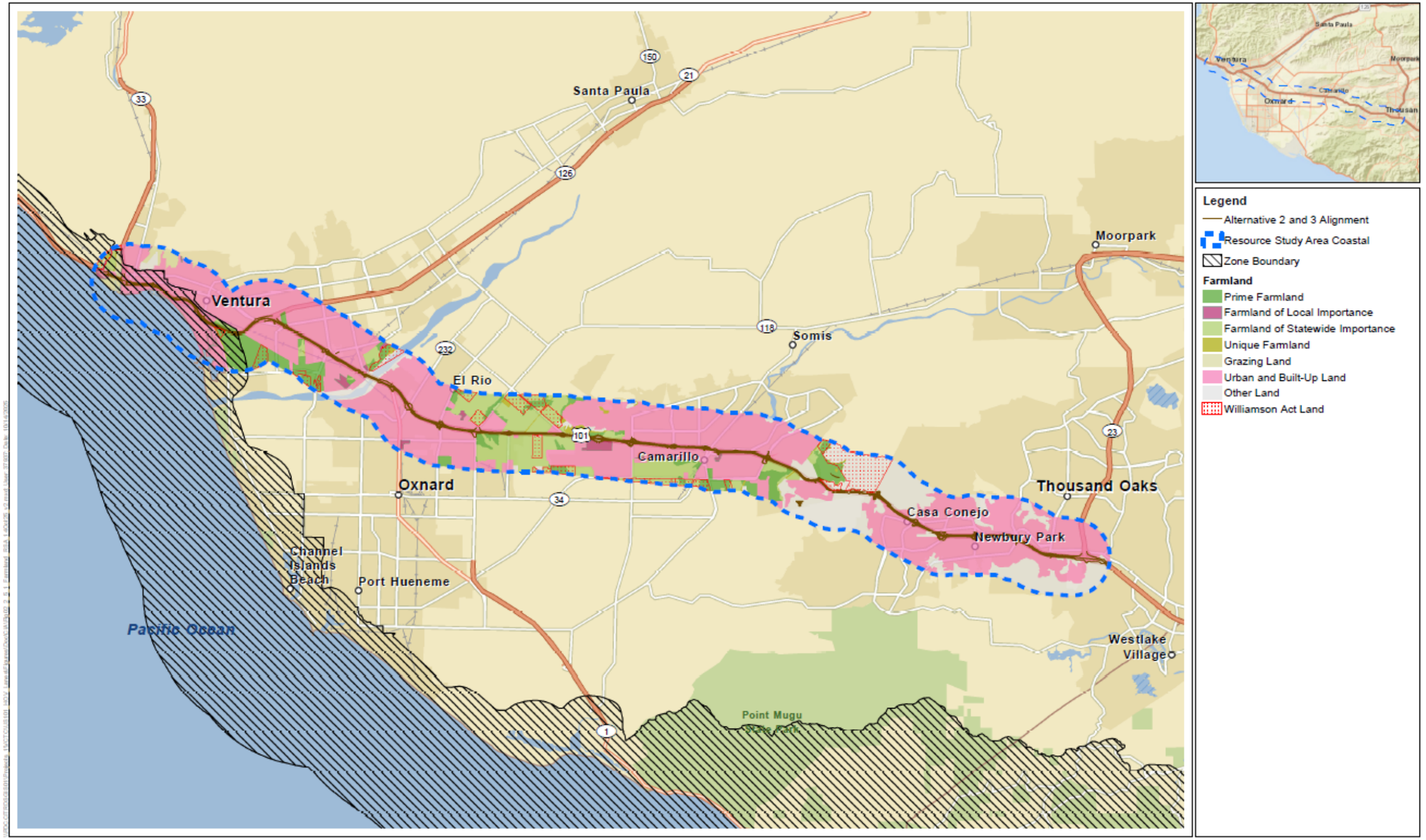


Figure 2.2.5-1
Farmland Resource Study Area
US 101 Improvement Project

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2.2.5.3 Environmental Consequences

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the current configuration of US 101 in the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on farmland would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction

Temporary Impacts

Under Alternative 2, temporary impacts would occur on approximately 0.21 acre of Prime Farmland, 2.28 acres of Farmland of Statewide Importance, and 0.01 acre of Farmland of Local Importance. In addition, there would be temporary impacts on two parcels protected by the Williamson Act: Assessor's Parcel Numbers (APNs) 163018005 and 163018009. Alternative 2 would result in temporary impacts of approximately 0.36 acre on APN 163018005, and 0.01 acre on APN 163018009. The temporary impacts on farmlands would be as a result of temporary construction easements (TCEs) needed along the edge of the affected properties for construction activities and roadway widening improvements associated with the project. TCE impacts on farmlands under Alternative 2 are shown on Figure 2.2.5-2.

The temporary use of parcels required for Alternative 2 would not inhibit use of the remaining portion of the parcels for agricultural purposes during construction or in the future. Any areas disturbed by TCEs would be restored to pre-project conditions. The need for TCEs under Alternative 2 would not result in temporary adverse impacts on Important Farmlands or lands protected by the Williamson Act. No agricultural parcels would be bisected by Alternative 2 during the construction phase. In addition, there would be no TCEs or temporary impacts on coastal agricultural lands under Alternative 2.

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Figure 2.2.5-2. Farmland Impacts (Sheet 1 of 6)

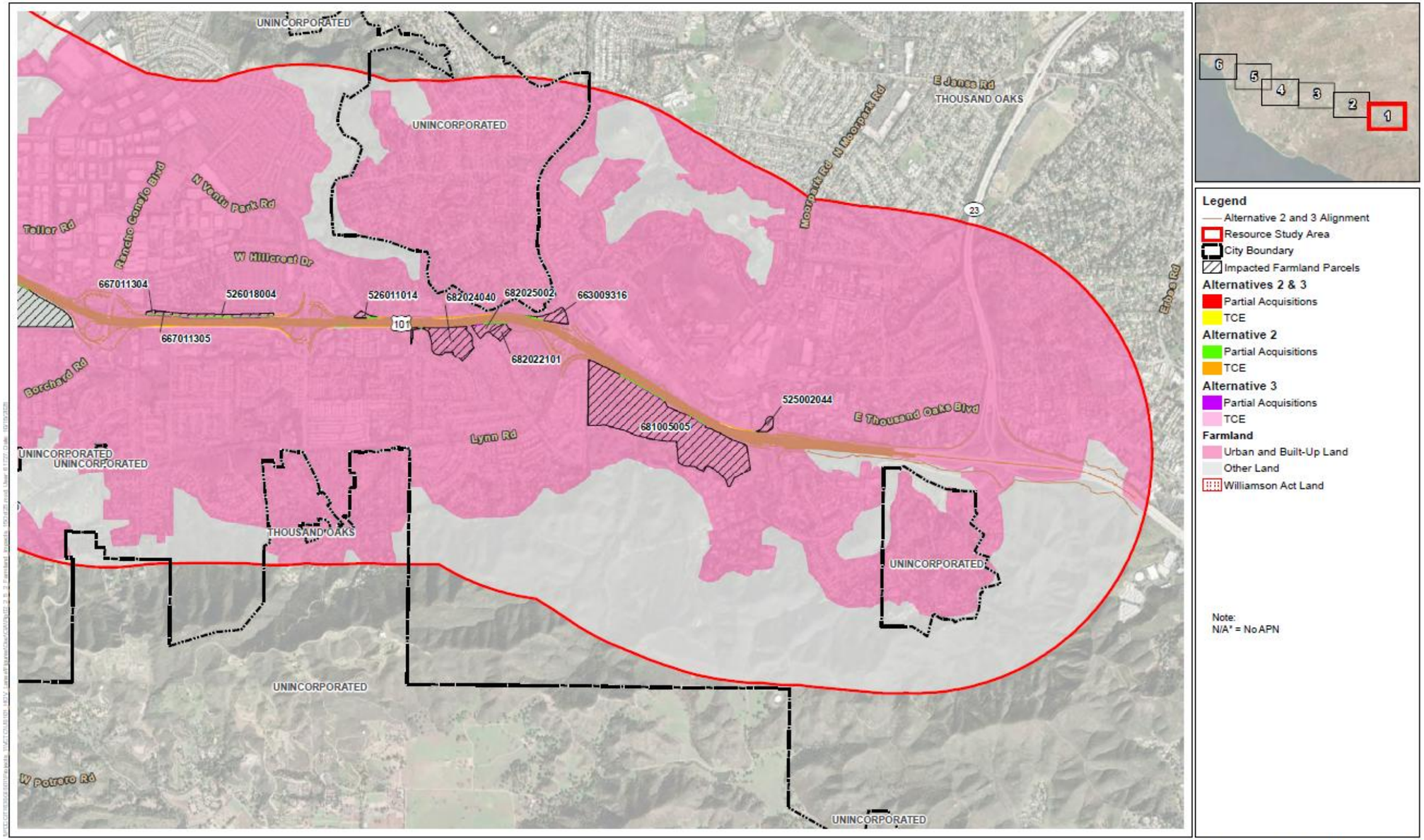


Figure 2.2.5-2, Sheet 1 of 6
Farmland Impacts
US 101 Improvement Project

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Figure 2.2.5-2. Farmland Impacts (Sheet 2 of 6)

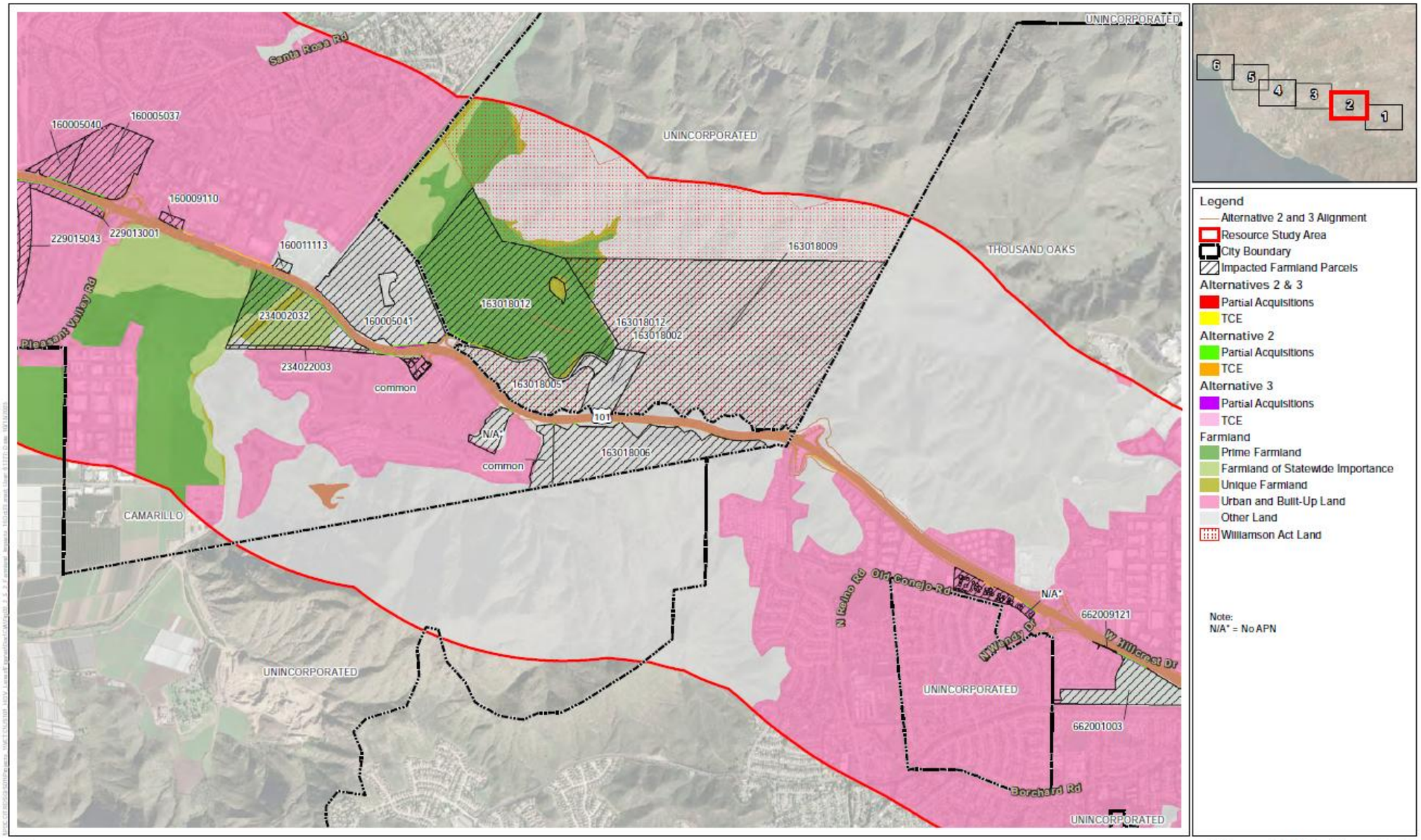


Figure 2.2.5-2, Sheet 2 of 6
Farmland Impacts
US 101 Improvement Project

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Figure 2.2.5-2. Farmland Impacts (Sheet 3 of 6)

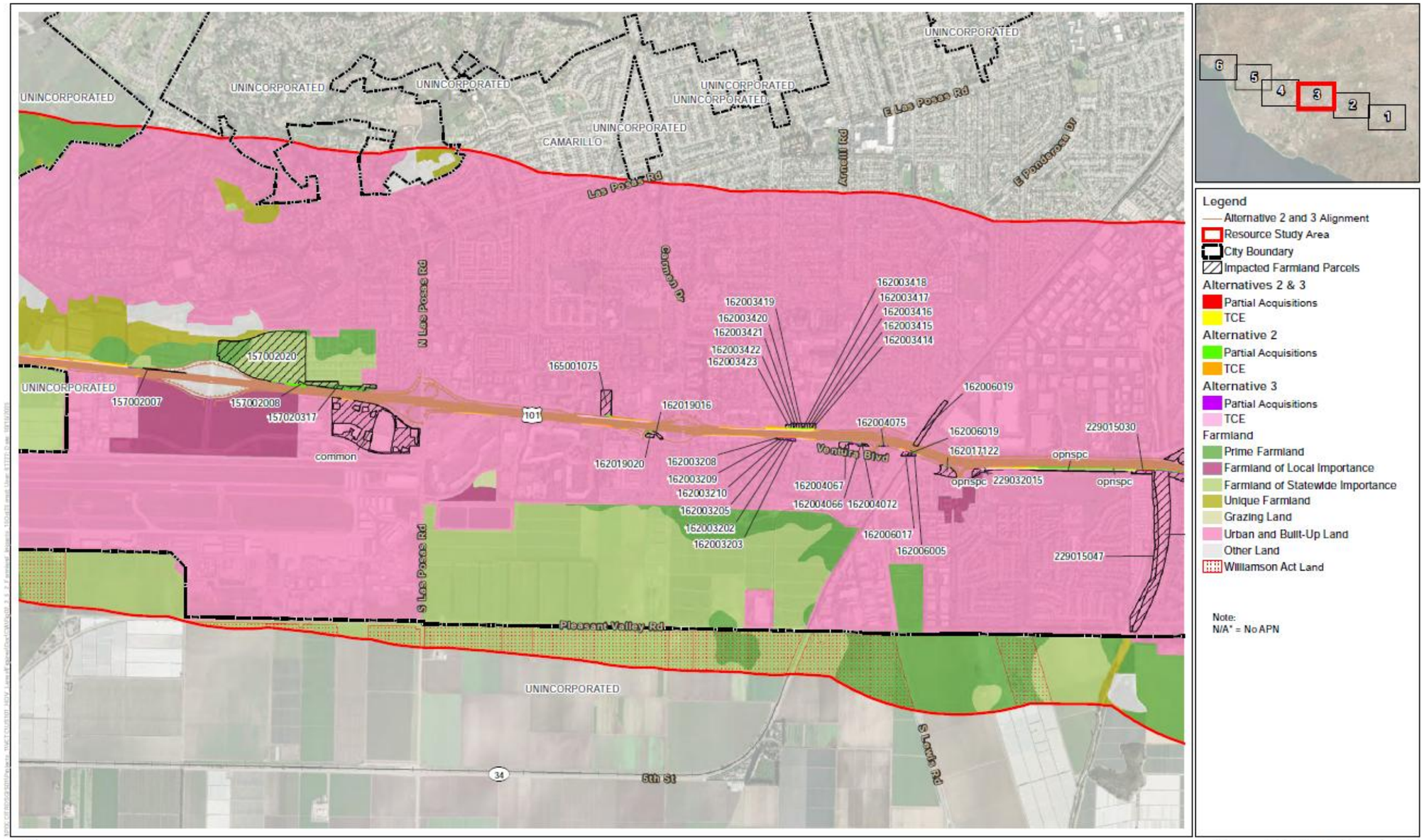


Figure 2.2.5-2, Sheet 3 of 6
Farmland Impacts
US 101 Improvement Project

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Figure 2.2.5-2. Farmland Impacts (Sheet 4 of 6)

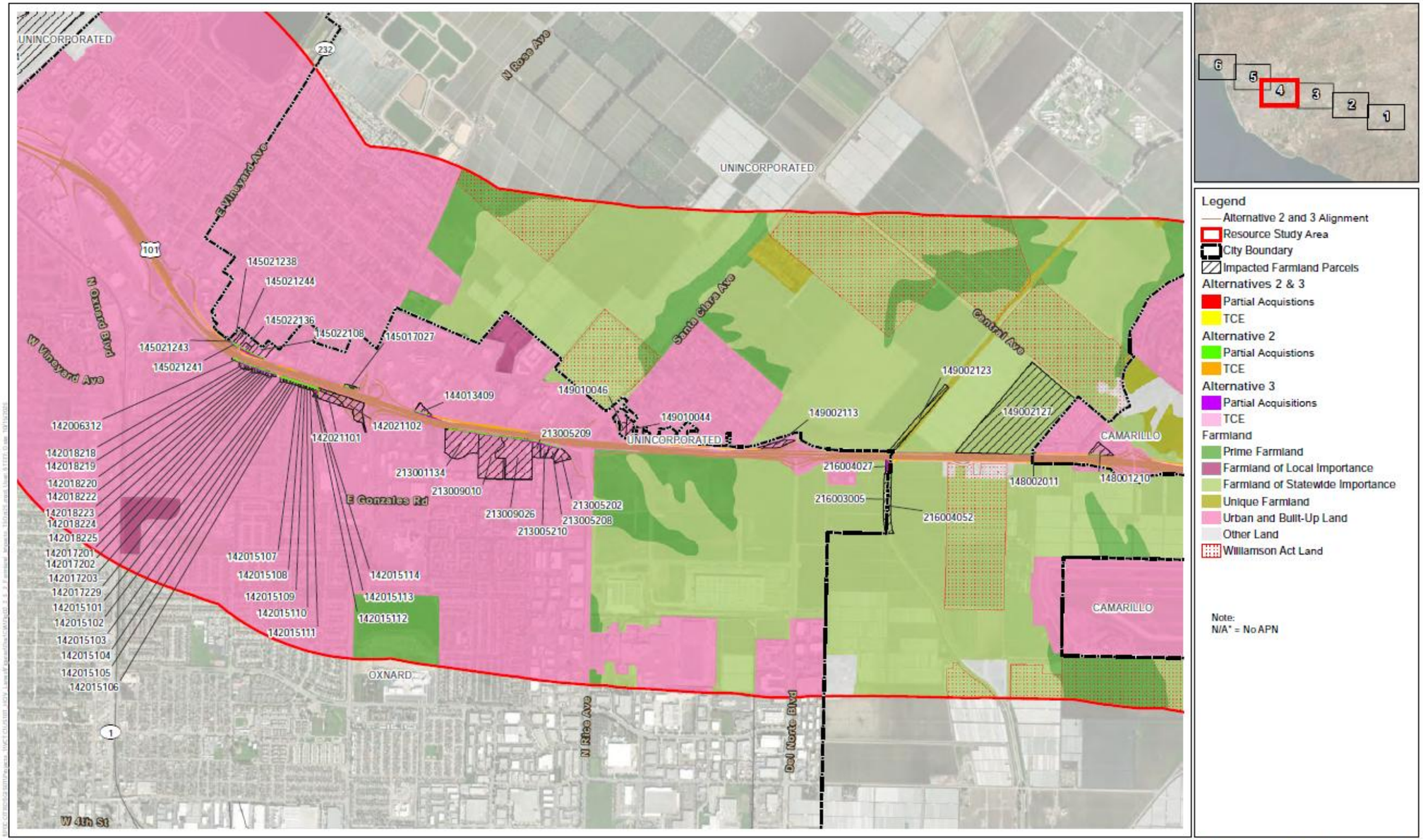


Figure 2.2.5-2, Sheet 4 of 6
Farmland Impacts
US 101 Improvement Project

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Figure 2.2.5-2. Farmland Impacts (Sheet 5 of 6)

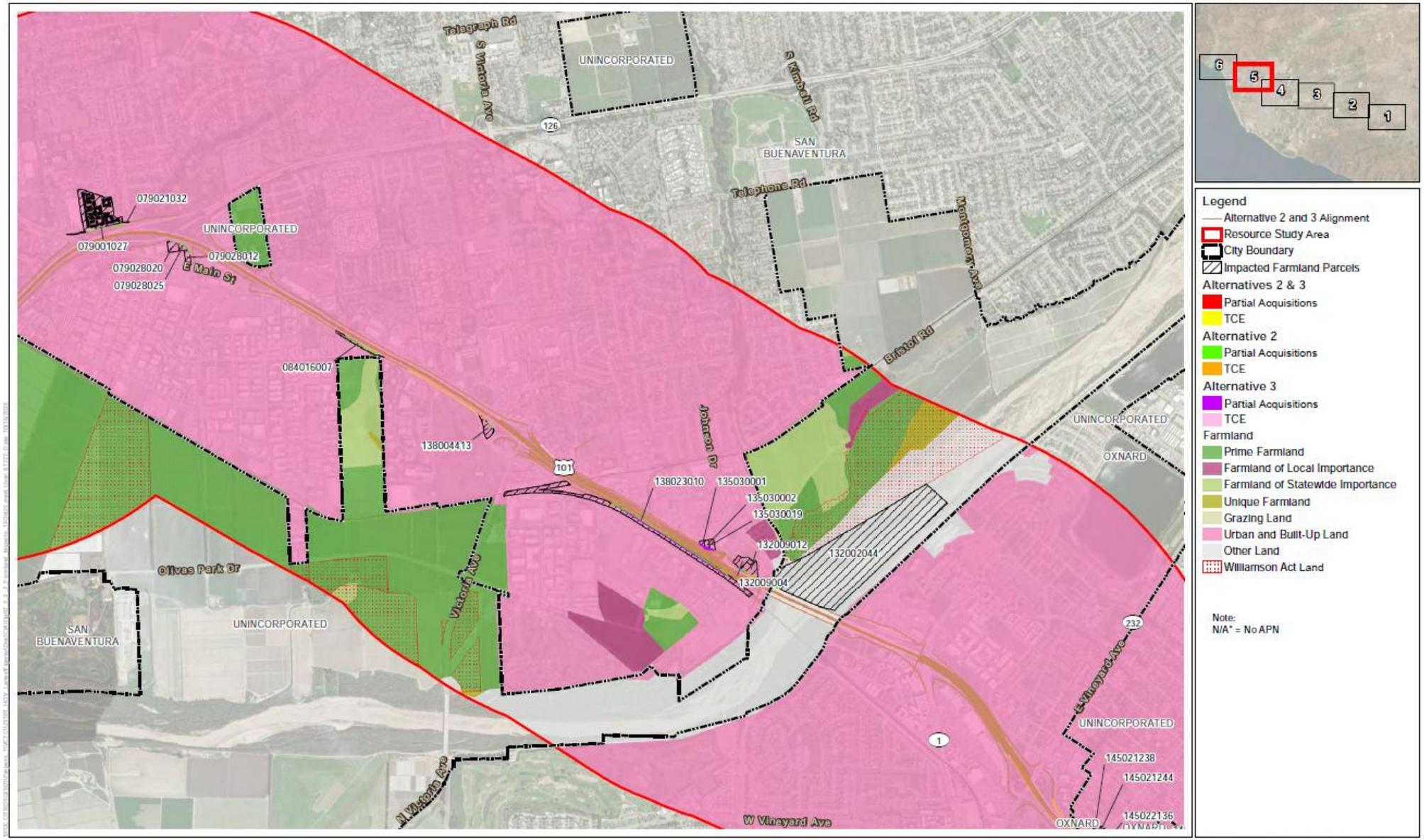


Figure 2.2.5-2, Sheet 5 of 6
Farmland Impacts
US 101 Improvement Project

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Figure 2.2.5-2. Farmland Impacts (Sheet 6 of 6)

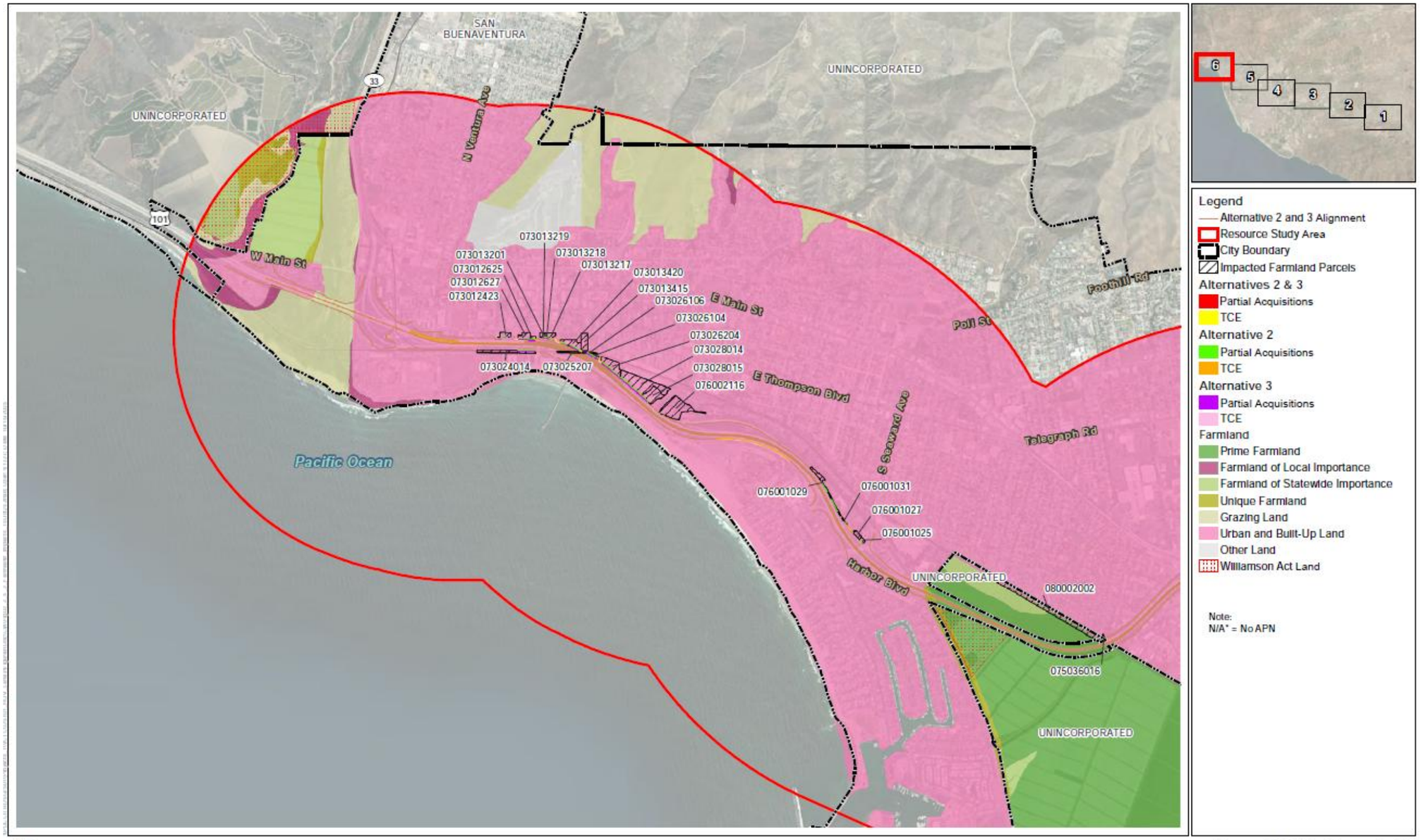


Figure 2.2.5-2, Sheet 6 of 6
Farmland Impacts
US 101 Improvement Project

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Permanent Impacts

NEPA and the FPPA require the lead federal agency (Caltrans) to coordinate with the Natural Resources Conservation Service (NRCS) to examine the effects of farmland conversion before approving any federal action if their activities may irreversibly convert farmland (directly or indirectly) to non-agricultural use. For purposes of the FPPA, farmland includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. A request to begin coordination with NRCS was submitted on November 17, 2021, and a Farmland Conversion Impact Rating for Corridor-Type Projects Form NRCS-CPA-106 was completed on January 7, 2022, by NRCS to assess the extent to which the affected Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland is conducive to further agricultural use, and the level of direct impact sustained by the project under the Build Alternatives. The completed Form NRCS-CPA-106 was approved on January 10, 2022, and is included in Appendix H of this EIR/EA.

Table 2.2.5-2 summarizes the impacts resulting in a conversion of Important Farmlands under Alternative 2, and Figure 2.2.5-2 shows the location of affected farmland parcels.

Table 2.2.5-2. Farmland Conversion by Alternative 2

Alternative	Land Converted (acres)	Prime and Unique Farmland (acres)	Statewide and Local Important Farmland (acres)	Percent of Farmland in County (316,666 acres[a])	Percent of Farmland in State (24.2M acres[b])	Farmland Conversion Impact Rating[c]
Alternative 2	2.85	1.04	1.81	0.001	0.00001	108

Source: Caltrans 2022.

[a] California Department of Conservation 2018.

[b] USDA/NASS 2023.

[c] The Farmland Conversion Impact Rating is calculated 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. The rating goes from 0 (no impact) to 260 (maximum impact) based on the evaluation of a number of criteria, including Area in Nonurban Use, Perimeter in Nonurban Use, Percent of Corridor Being Farmed, Protection Provided by State and Local Government, Size of Present Farm Unit Compared to Average, Creation of Nonfarmable Farmland, Availability of Farm Support Services, On-Farm Investments, Effects of Conversion on Farm Support Services, and Compatibility with Existing Agricultural Use.

As shown in Table 2.2.5-2, Alternative 2 would convert approximately 2.85 acres of Important Farmlands to non-farmland uses, consisting of 1.04 acres of Prime and Unique Farmland and 1.81 acres of Statewide and Local Important Farmland. In addition, approximately 0.28 acre of open space from APN 163018005, protected under the Williamson Act, would be converted to non-farmland uses under Alternative 2. The areas of farmlands with direct conversions by Alternative 2 are mostly along the edge of roadways or surrounded by existing urban uses (e.g., commercial or residential).

According to the Ventura County Initial Study Assessment Guidelines (ISAG) (County of Ventura 2025), a project may have a significant impact if it would result in exceeding ISAG's Important Farmland acreage loss thresholds. ISAG's Important Farmland impact thresholds range between the loss of 5 acres and 40 acres, depending on the general plan land use designation and the Important Farmland category. The project's impact on approximately 2.85 acres of Important Farmland, under Alternative 2, is below ISAG's impact thresholds.

In addition, per the completed Form NRCS-CPA-106, Alternative 2 would have a total farmland conversion impact rating score of 108 out of 260 points. A farmland score of 160 or higher on Form NRCS-CPA-106 indicates that additional alternatives must be considered by Caltrans to lessen the adverse effects on farmland. Because the total score for Alternative 2 is below this threshold, impacts on farmlands are not considered to be adverse.

The affected acreage on parcels zoned for agricultural use would be small compared to the overall size of the parcels. The farmland conversion would not conflict with existing zoning for agricultural use because Alternative 2 would not inhibit use of the remaining portion of the parcels for agricultural purposes. In addition, the affected acreage of Important Farmlands under Alternative 2 is under ISAG's impact threshold, and the total points from Form NRCS-CPA-106 are under 160. No agricultural parcels would be bisected by Alternative 2 during the operation phase. In addition, there would be no farmland conversion of coastal agricultural lands under Alternative 2. Therefore, Alternative 2 would not result in substantial permanent adverse impacts on farmlands.

Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Alternative 3 would have the same temporary impact on Important Farmlands as Alternative 2 where TCEs would be required. Under Alternative 3, temporary impacts would occur on approximately 0.19 acre of Prime Farmland, 2.26 acres of Farmland of Statewide Importance, and 0.01 acre of Farmland of Local Importance. In addition, Alternative 3 would result in temporary impacts of approximately 0.81 acre on APN 163018005 and 0.18 acre on APN 163018009. Both parcels are protected by the Williamson Act. The temporary impacts on farmlands would be as a result of TCEs needed along the edge of the affected properties for construction activities and roadway widening improvements associated with the project. TCE impacts on farmlands under Alternative 3 are shown on Figure 2.2.5-2.

Similar to Alternative 2, the TCE impacts under Alternative 3 would be temporary. Any areas disturbed by TCEs would be restored to pre-project conditions. Alternative 3 would not result in temporary adverse impacts on Important Farmlands or lands protected by the Williamson Act. No agricultural parcels would be bisected by Alternative 3, and there would be no TCEs or temporary impacts on coastal agricultural lands under Alternative 3.

Permanent Impacts

Alternative 3 would have the same permanent impact on Important Farmlands as Alternative 2 where farmland conversion would be required. Table 2.2.5-3 summarizes the impacts resulting in a conversion of Important Farmlands under Alternative 3, and Figure 2.2.5-2 shows the location of affected farmland parcels.

Table 2.2.5-3. Farmland Conversion by Alternative 3

Alternatives	Land Converted (acres)	Prime and Unique Farmland (acres)	Statewide and Local Important Farmland (acres)	Percent of Farmland in County (316,666 acres[a])	Percent of Farmland in State (24.2M acres[b])	Farmland Conversion Impact Rating[c]
Alternative 3	2.70	0.89	1.28	0.001	0.00001	108

Source: Caltrans 2022.

[a] California Department of Conservation 2018.

[b] USDA/NASS 2023.

[c] The Farmland Conversion Impact Rating is calculated 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. The rating goes from 0 (no impact) to 260 (maximum impact) based on the evaluation of a number of criteria, including Area in Nonurban Use, Perimeter in Nonurban Use, Percent of Corridor Being Farmed, Protection Provided by State and Local Government, Size of Present Farm Unit Compared to Average, Creation of Nonfarmable Farmland, Availability of Farm Support Services, On-Farm Investments, Effects of Conversion on Farm Support Services, and Compatibility with Existing Agricultural Use.

As shown in Table 2.2.5-3, Alternative 3 would convert approximately 2.70 acres of Important Farmlands to non-farmland uses, consisting of 0.89 acre of Prime and Unique Farmland and 1.28 acres of Statewide and Local Important Farmland. In addition, approximately 0.84 acre of open space from APN 163018005 and 0.08 acre of open space from APN 163018009 would be converted to non-farmland uses under Alternative 3. Both parcels are protected by the Williamson Act. Similar to Alternative 2, the areas of farmlands with direct conversions by Alternative 3 are mostly along the edge of roadways or surrounded by existing urban uses (e.g., commercial or residential).

The affected acreage on parcels zoned for agricultural use would be small compared to the overall size of the parcels. The farmland conversion would not conflict with existing zoning for agricultural use because Alternative 3 would not inhibit use of the remaining portion of the parcels for agricultural purposes. In addition, the affected acreage of 2.70 acres of Important Farmlands under Alternative 3 is below ISAG's minimum impact threshold of 5 acres, and the total points from Form NRCS-CPA-106 are 108, which is below the impact threshold of 160. No agricultural parcels would be bisected by Alternative 3 during the operation phase. In addition, there would be no farmland

conversion of coastal agricultural lands under Alternative 3. Therefore, Alternative 3 would not result in substantial permanent adverse impacts on farmlands.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on farmland would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Measure **RW-1** (see Section 2.2.8, *Relocations and Real Property Acquisition*) will be implemented to minimize potential farmland impacts under the Build Alternatives.

2.2.6 Growth

2.2.6.1 Regulatory Setting

The Federal Highway Administration (FHWA) Technical Advisory T 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, states that the "…social, economic, and environmental impacts of any substantial, foreseeable, induced development should be presented for each alternative, including adverse effects on existing communities. Where possible, the distinction between planned and unplanned growth should be identified."

The California Environmental Quality Act (CEQA) requires the analysis of a project's potential to induce growth. The CEQA Guidelines (Section 15126.2[e]) 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…"

The CEQA Guidelines (Section 15358[a][2]) also states in its definition of indirect impacts that "…Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems."

2.2.6.2 Affected Environment

The analysis of growth-related, indirect impacts was based on the *Guidance for Preparers of Growth-Related, Indirect Impact Analyses* (Caltrans 2006), which was developed by an interagency work group that included representatives from the California Department of Transportation, FHWA, and the U.S. Environmental Protection Agency. The guidance presents a first-cut screening analysis to examine a variety of interrelated factors and address the following issues:

- 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?
- If there is project-related growth, how, if at all, could it affect resources of concern?

A discussion regarding each of the above questions/considerations is provided below.

<u>How, if at all, does the project potentially change accessibility?</u>

The project proposes improvements to existing roads and freeways that would result in capacity enhancements in response to expected demand; it would not create or

eliminate any new freeways or roadways. These improvements would benefit the traveling public by reducing travel times due to decreased congestion. The build alternatives would expand the existing high-occupancy vehicle system and add auxiliary lanes where operationally beneficial. These system improvements are intended to reduce congestion, increase vehicle throughput, and enhance trip reliability by accommodating expected demand. As regional traffic is predicted to increase, a more effective use of freeway capacity is warranted to address congestion from past development and future growth. Future growth, as approved in the context of adopted regional and local plans, requires these types of system management approaches to maintain acceptable levels of service on the transportation system. As such, the improvements do not remove an impediment to growth because they do not provide an entirely new public facility, nor do they induce growth, as the system improvements would only accommodate future growth as planned for in local land use plans. Table 2.2.1-7, Current and Future Development Projects, in Section 2.2.1, *Existing and Future Land Use,* represents recent development trends in the resource study area and reflects a longstanding trend in the county of accommodating growth primarily in the cities. Access to the project corridor would remain unchanged because the build alternatives would not remove or limit access.

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

Alternatives 2 and 3 would address existing operational and capacity deficiencies and accommodate planned growth as projected by the Southern California Association of Governments (SCAG) and local and regional general plans. The build alternatives would not influence the amount, location, and/or distribution of growth in the cities and unincorporated areas of Ventura County within the resource study area because no new facilities are proposed and there are limited opportunities for growth in the region. Future growth is limited by the lack of available undeveloped, privately held land within the resource study area. The build alternatives would not create new housing or opportunities for capital investment by the public or private sectors and the growth projected by SCAG and local and regional general plans would occur regardless of whether the project is constructed. Because the proposed transportation improvements would only accommodate existing and planned development, the project would have no influence with respect to stimulating the location, rate, timing, or amount of local or regional growth.

Is project-related growth reasonably foreseeable?

The project would create short-term jobs in the surrounding area and may help decrease the current rates of unemployment during the construction phase. However, because these jobs are temporary, it is not expected that workers would permanently relocate for work during the construction phase. As such, substantial population growth associated with project construction is not anticipated.

As discussed in more detail in Section 2.2.10, *Transportation*, the U.S. 101 Improvement Project responds to existing and forecasted traffic congestion attributable

to growth, both locally and regionally, that has already occurred or is planned to occur. The region and surrounding area are projected to continue to experience growth in population and jobs. The build alternatives are not expected to influence the amount, timing, or location of growth in the project area because they propose improvements to an existing transportation corridor that would accommodate existing and planned development. As such, there is no reasonably foreseeable project-related growth expected to result from Alternatives 2 and 3. The projected growth as documented by SCAG and local and regional plans will occur regardless of the improvements made from the project.

This “first-cut screening” analysis demonstrates that the build alternatives would facilitate improved mobility through reduced congestion and trip reliability, resulting in improved commute times for project corridor users. However, this would not induce regional growth because growth is limited, as the region is developed and all projected growth has already been accounted for in the SCAG and local and regional general plans. Based on the analysis above, the “first-cut screening” is complete and the build alternatives do not require further analysis of growth-related impacts.

2.2.6.3 Avoidance, Minimization, and/or Mitigation Measures

For all alternatives considered, none would induce growth, and no further analysis of growth-related impacts is required. The potential for unplanned development is limited, given the built-out nature of the resource study area and entitlement status of existing vacant land. Therefore, no avoidance, minimization, and/or mitigation measures are required.

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2.2.7 Community Character and Cohesion

2.2.7.1 Regulatory Setting

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

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

2.2.7.2 Affected Environment

This section is based on the Community Impact Assessment (Caltrans 2026) prepared for the project and addresses potential impacts on community character and cohesion within the project limits and community impact study area.

Study Area Communities

The community impact study area is defined as the project limits plus a 0.50-mile buffer, which overlaps with 57 census tracts as listed in Table 2.2.7-1 and shown on Figure 2.2.7-1. American Community Survey (ACS) 5-year Estimates (U.S. Census Bureau 2022) and 2019 local profile reports prepared by the Southern California Association of Governments (SCAG) were utilized to evaluate demographic characteristics. Census tracts overlap with the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura and unincorporated areas of Ventura County. Data derived from each of these census tracts were used to determine the demographics and characteristics of each city within the resource study area. Please refer to the Community Impact Assessment for details on the census tracts below (Caltrans 2026).

Table 2.2.7-1. Resource Study Area Census Tracts

Geographic Area	Census Tract
City of Thousand Oaks	58.03, 59.06, 59.08, 59.09, 59.10, 59.11, 60, 61.01, 61.02, 67, 69, 70, 71, and 72.01
City of Camarillo	52.05, 53.04, 53.07, 53.08, 54.01, 54.03, 54.04, 55.02, 55.03, 55.04, 56.01, and 56.02
City of Oxnard	25, 29.01, 30.10, 30.13, 31.02, 49.01, 49.02, 50.02, 50.04, and 50.05
City of Ventura	14.02, 15.06, 15.07, 15.08, 15.09, 15.11, 16.02, 20, 21.02, 22, 23.01, 23.02, 24, 26, 27, and 28
Ventura County (unincorporated)	53.05, 62, 92, 95, and 9901[a]

Source: Community Impact Assessment (Caltrans 2026)

[a] Census Tract 9901 covers an area of water and, therefore, has no census data associated with it. For this reason, it is not included in any of the demographic tables or analyses and is only included in Table 2.2.7-1 because it intersects with the resource study area.

Figure 2.2.7-1. Community Impact Study Area Census Tracts (Sheet 1 of 6)

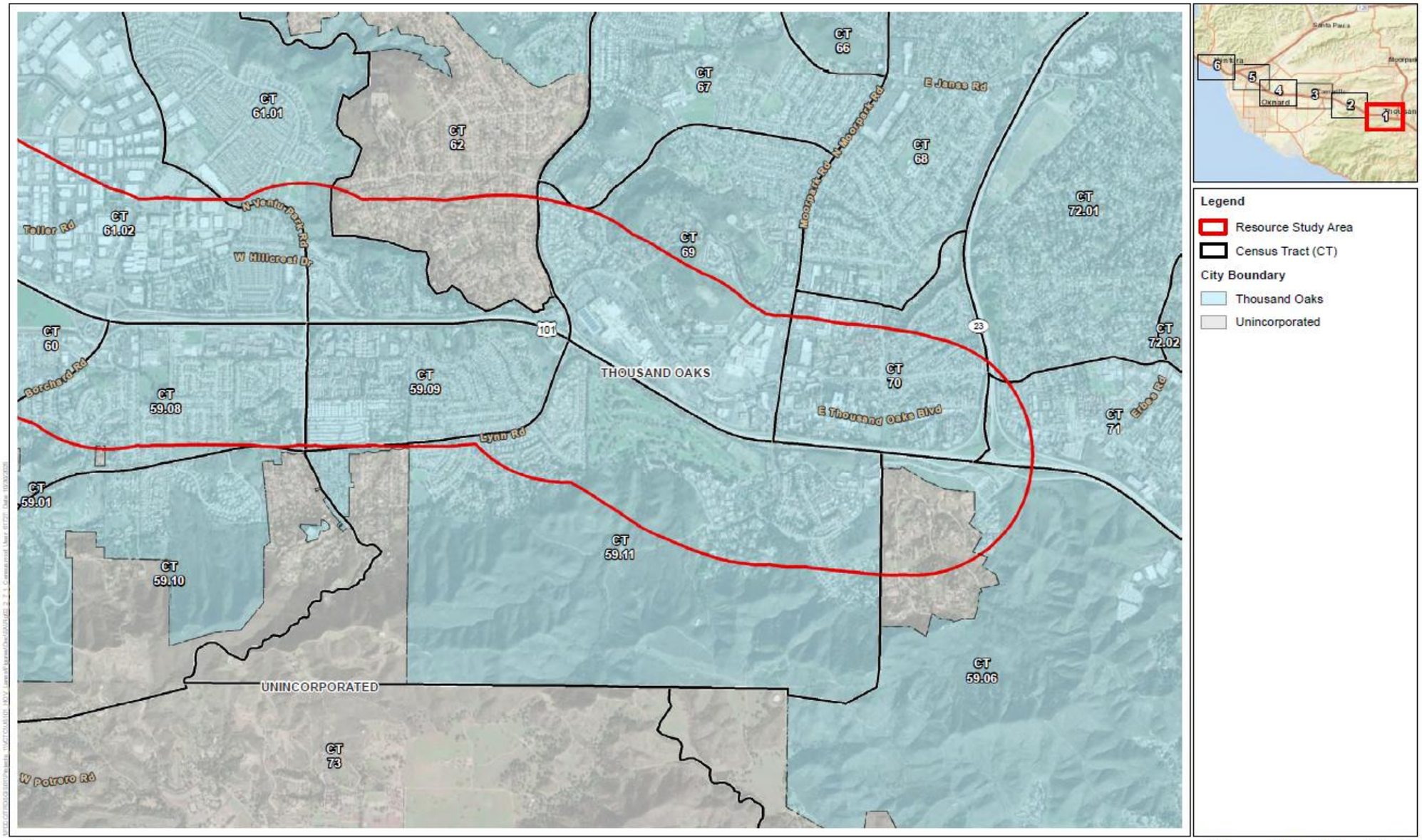


Figure 2.2.7-1, Sheet 1 of 6
Community Impact Study Area Census Tracts
US 101 Improvement Project

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Figure 2.2.7-1. Community Impact Study Area Census Tracts (Sheet 2 of 6)

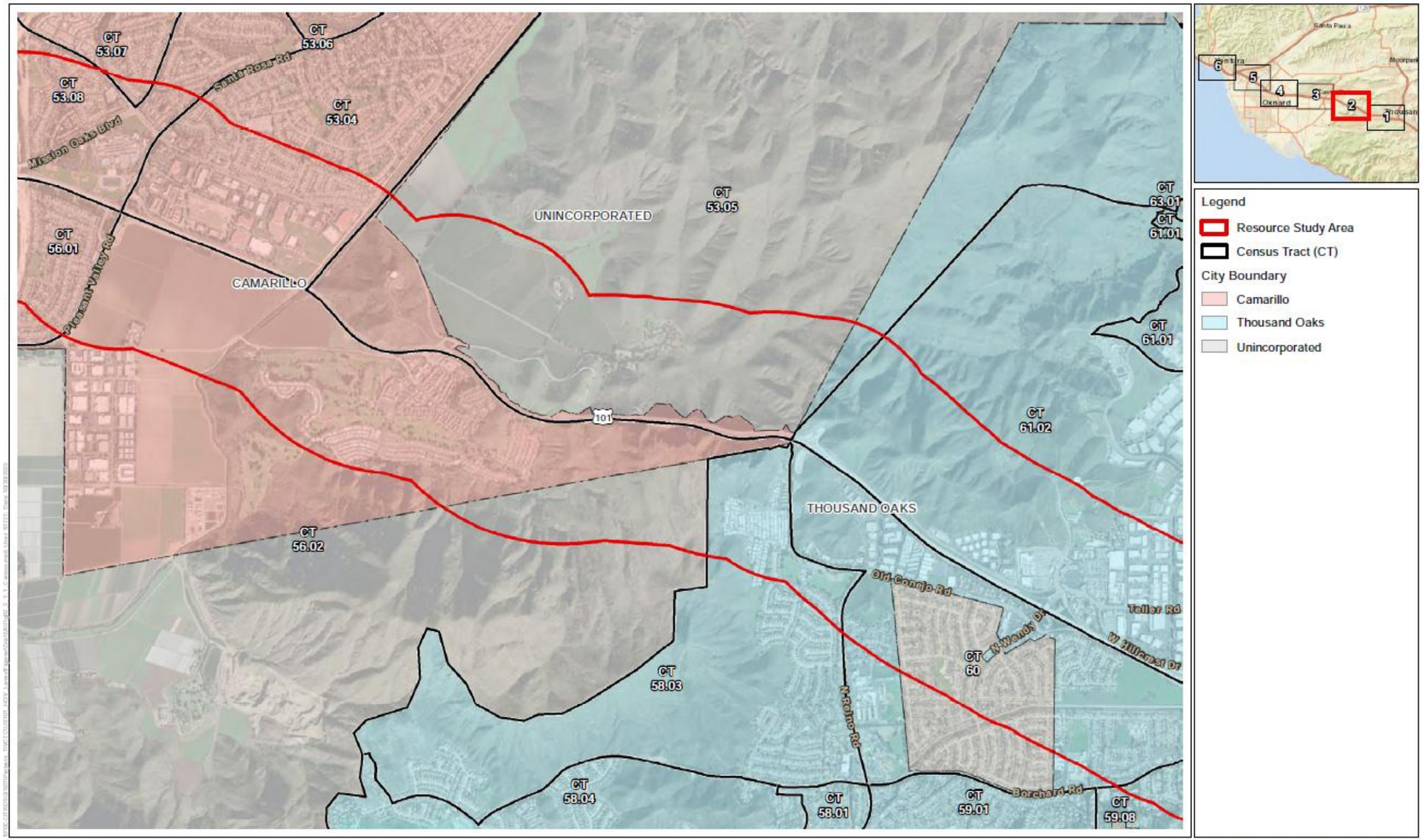


Figure 2.2.7-1, Sheet 2 of 6
Community Impact Study Area Census Tracts
US 101 Improvement Project

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Figure 2.2.7-1. Community Impact Study Area Census Tracts (Sheet 3 of 6)

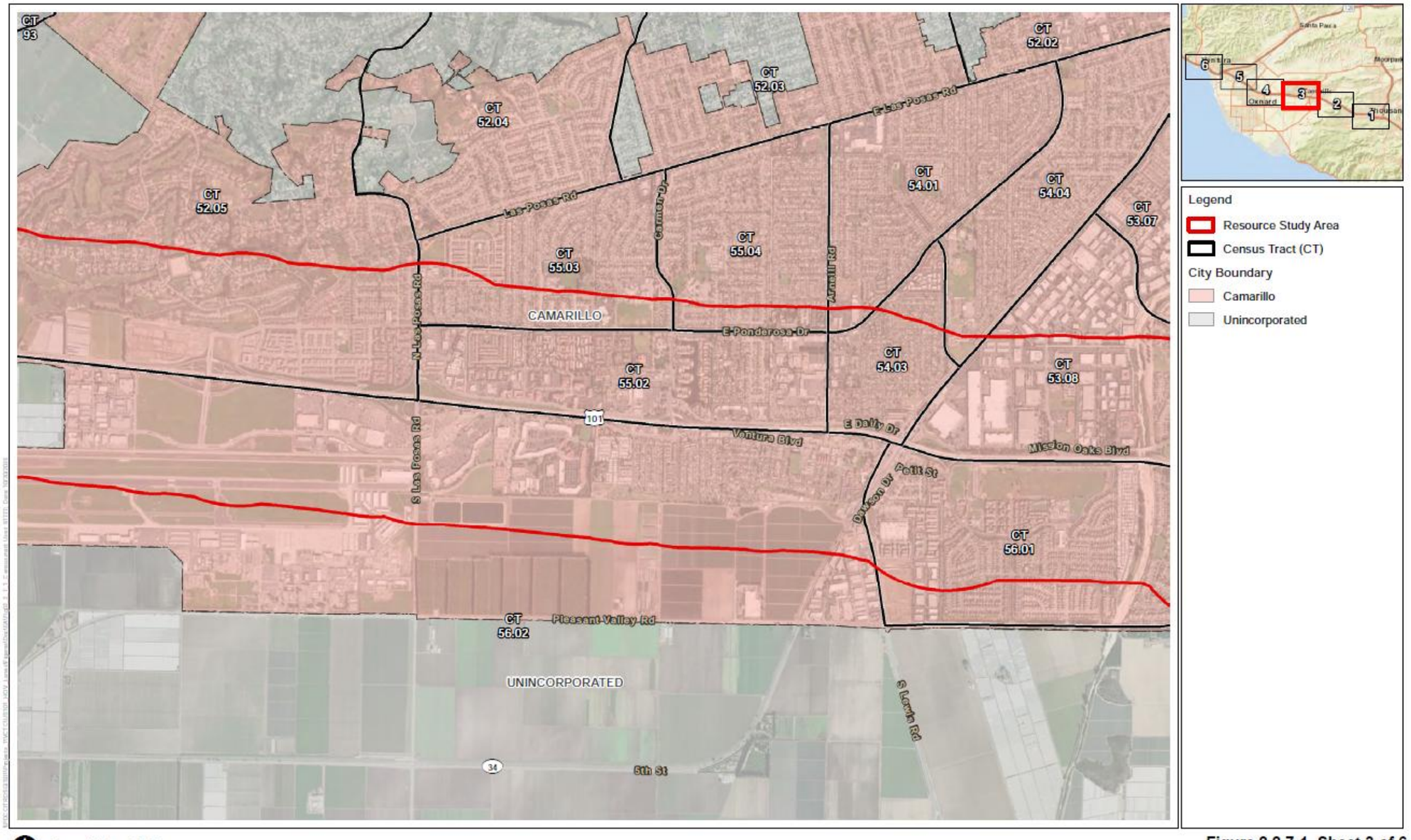


Figure 2.2.7-1, Sheet 3 of 6
Community Impact Study Area Census Tracts
US 101 Improvement Project

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Figure 2.2.7-1. Community Impact Study Area Census Tracts (Sheet 4 of 6)

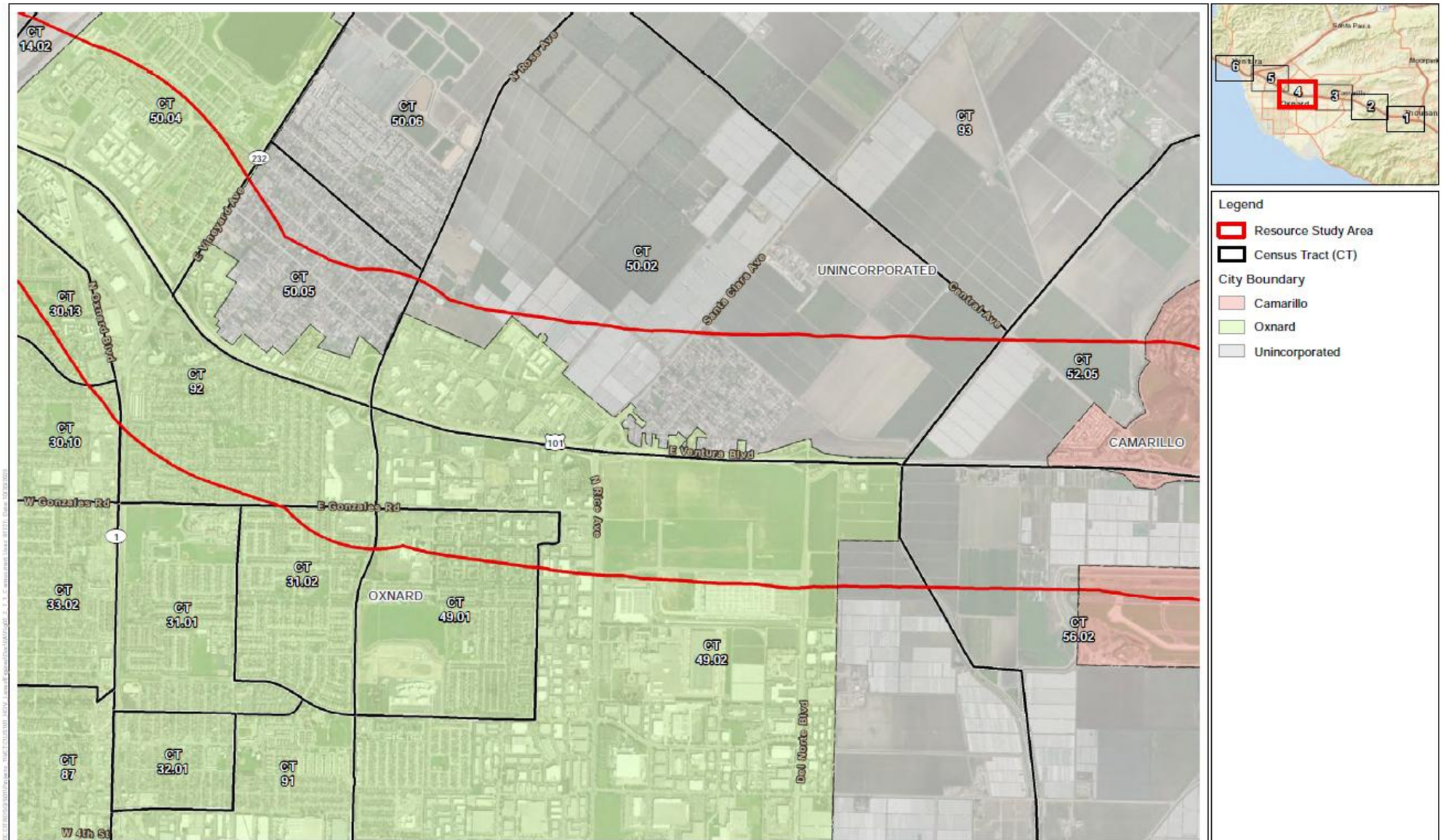


Figure 2.2.7-1, Sheet 4 of 6
Community Impact Study Area Census Tracts
US 101 Improvement Project

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Figure 2.2.7-1. Community Impact Study Area Census Tracts (Sheet 5 of 6)

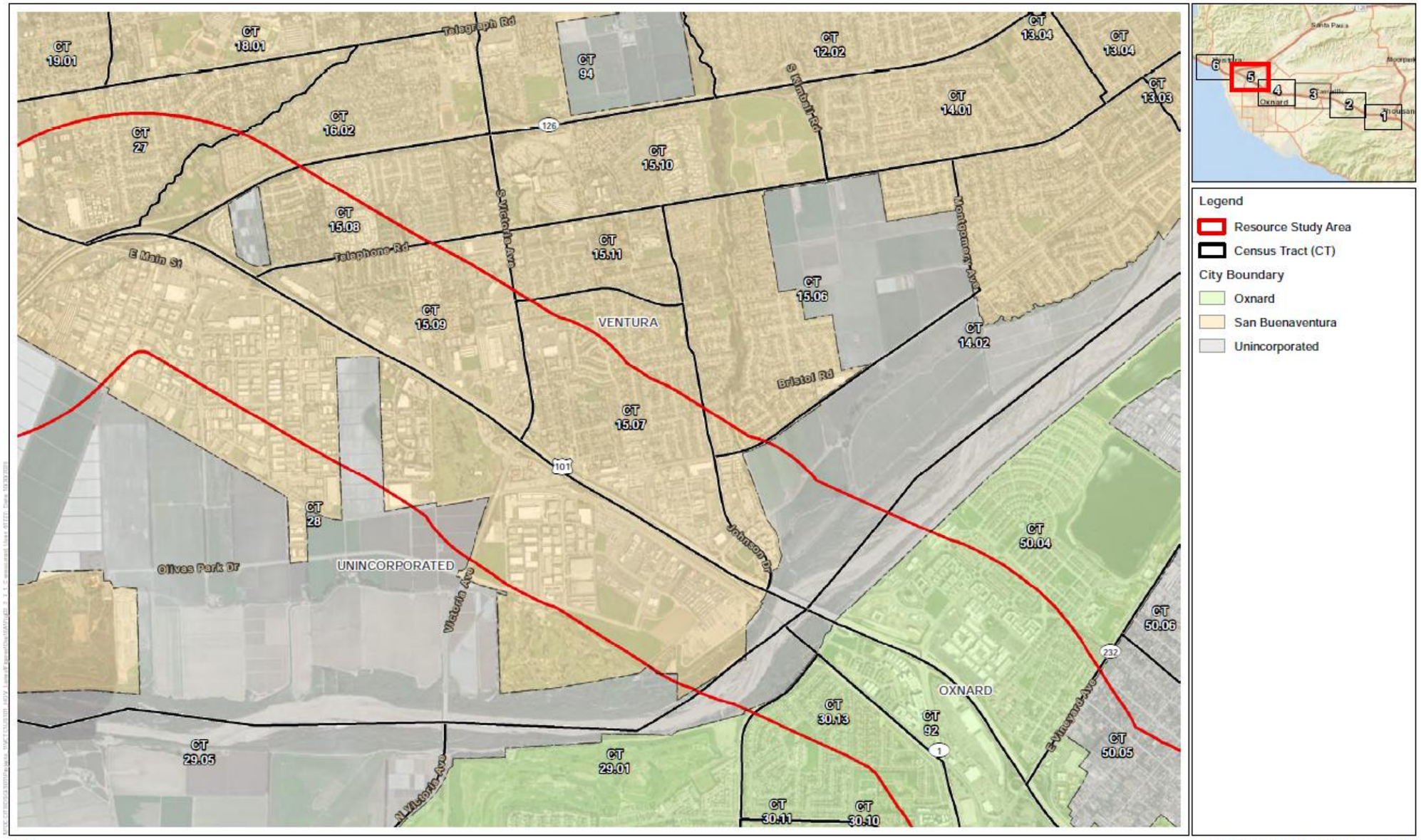


Figure 2.2.7-1, Sheet 5 of 6
Community Impact Study Area Census Tracts
US 101 Improvement Project

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Figure 2.2.7-1. Community Impact Study Area Census Tracts (Sheet 6 of 6)

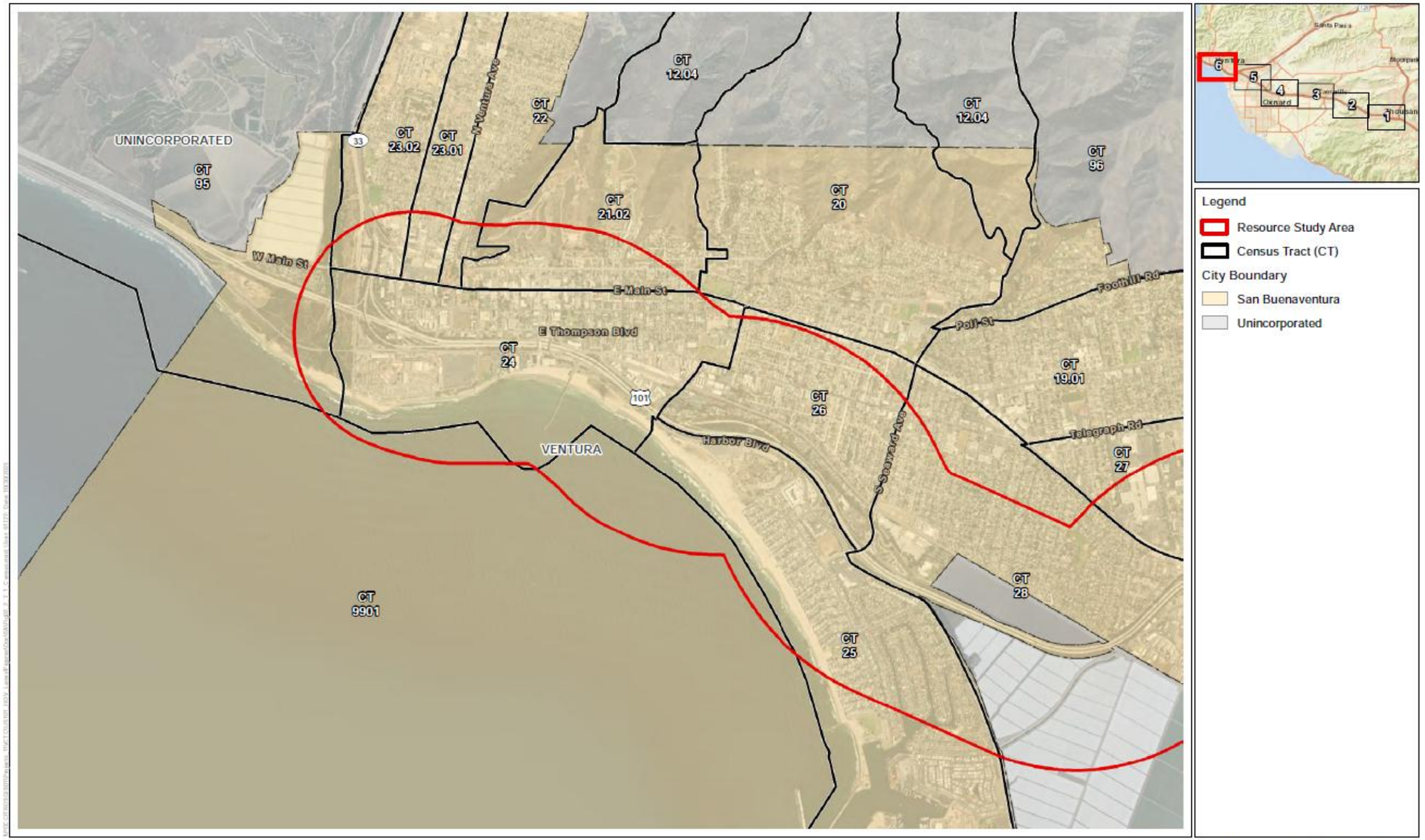


Figure 2.2.7-1, Sheet 6 of 6
Community Impact Study Area Census Tracts
US 101 Improvement Project

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Community Character

Population

Table 2.2.7-2 summarizes the population in Ventura County, as well as the cities and census tracts in the resource study area.

Table 2.2.7-2. Population

Geographic Area	Total Population
City of Thousand Oaks	126,532
City of Camarillo	70,622
City of Oxnard	202,279
City of Ventura	110,358
Ventura County	842,009
Census Tracts within Resource Study Area	
Thousand Oaks	
Total	57,569
Camarillo	
Total	58,897
Oxnard	
Total	50,897
Ventura (City)	
Total	64,246
Ventura County (Unincorporated)	
Total	17,234
Resource Study Area Total	248,843

Source: U.S. Census Bureau 2022 (Tables S0101 and B01003)

Overall Resource Study Area

The total population within the resource study area is 248,843, which accounts for 29.6 percent of Ventura County's overall population.

Income and Poverty Status

Certain characteristics of a neighborhood could help indicate populations sensitive to disruption of community. Such characteristics include elevated elderly populations and high poverty status percentages. Table 2.2.7-3 provides information regarding median household income and poverty status in the resource study area.

Table 2.2.7-3. Income Characteristics

Geography	Median Household Income	Population Below Poverty Level	Population Below Poverty Level (%)
Thousand Oaks	$125,399	9805	7.9
Camarillo	$105,141	5184	7.4
Oxnard	$90,409	21315	10.7
Ventura (City)	$96,036	10439	9.6
Ventura County	$102,141	74,315	9.0
Census Tracts within Resource Study Area			
Thousand Oaks			
Summary	$121,525[a]	6,291[b]	10.9[c]
Camarillo			
Summary	$102,153[a]	4,783[b]	8.1[c]
Oxnard			
Summary	$96,560[a]	4,739[b]	9.3[c]
Ventura (City)			
Summary	$88,242[a]	6,860[b]	10.7[c]
Ventura County (Unincorporated)			
Summary	$130,857[a]	1,163[b]	6.7[c]
Overall Resource Study Area	$104,073[a]	23,836[b]	9.6[c]

Source: U.S. Census Bureau 2022 (Tables S1901 and B17001)
[a] Average median household income for resource study area census tracts.
[b] Total population below poverty level.
[c] The percentage of the total population within the resource study area that is below the poverty level.

Overall Resource Study Area

The overall resource study area has an average median household income of $104,073 and 9.6 percent poverty rate. The median household income in the overall resource study area is higher compared to the county ($102,141) as a whole. The poverty rate in the overall resource study area is higher compared to the county (9 percent) as a whole.

Community Facilities

Community facilities and services are an important aspect of neighborhood identity. Schools, hospitals, and emergency services are critical resources for the community. Occasionally, transportation projects may affect (both adversely and beneficially) community services, thereby affecting the character and cohesion of a community, either temporarily or permanently. Community facilities and services typically include fire and police protection, public or publicly funded schools, childcare centers, health care facilities, libraries, places of worship, and parks and recreation centers.

There are 117 community facilities within the resource study area, as listed in Table 2.2.7-4 and shown on Figure 2.2.7-2, and organized into the following categories, with corresponding map identification labels: Cemeteries (C), Libraries (L) Museums/

Theaters/Arts Facilities (M), Post Offices/Government Facilities (G), Religious Institutions (R), and Schools (S). The map identification labels also include the figure sheet where the resource is located and the resource number. Resource numbers were determined according to where the resource fell within the design sections; they are generally ordered from south to north and from east to west.

There are 13 community attractions within the resource study area, which include gathering places where community members might congregate, such as libraries, museums, theaters, art galleries, and cemeteries. The resource study area contains 32 educational facilities of various types, including public and private facilities. These facilities service students in elementary, middle, and high school as well as pre-school classes. In addition, there are 17 government facilities (e.g., city, county, state, and federal services; postal services; school district offices) and 55 religious facilities (or places of worship) within the resource study area.

Please refer to Section 2.2.4, *Parks and Recreational Facilities*, for specific discussions on parks and recreational facilities, and Section 2.2.9, *Utilities and Emergency Services*, for specific discussions on emergency services within the resource study area.

Table 2.2.7-4. Community Facilities

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
Community Attractions					
C-1	Ivy Lawn Cemetery	5400 Valentine Rd	Ventura	Cemetery	10
L-1	Thousand Oaks Library (Newbury Park Branch Library)	2331 Borchard Rd	Newbury Park	Library	2
L-2	Soliz-El Rio Branch Ventura County Library	2820 Jourdan St	Oxnard	Library	9
L-3	E.P. Foster Library	651 E Main St	Ventura	Library	12
M-1	Case Study House No. 28	91 Inverness Rd	Thousand Oaks	Museums/ Theater/Arts	1
M-2	Conejo Players Theatre	351 S Moorpark Rd	Thousand Oaks	Museums/ Theater/Arts	1
M-3	Conejo Valley Art Museum	197 N Moorpark Rd	Thousand Oaks	Museums/ Theater/Arts	1
M-4	Stage Coach Inn Museum	51 S Ventu Park Rd	Newbury Park	Museums/ Theater/Arts	2
M-5	A.J. Comstock Fire Museum	Figueroa Street Mall, E Santa Clara St and Figueroa St	Ventura	Museums/ Theater/Arts	12
M-6	Museum of Ventura County	100 E Main St	Ventura	Museums/ Theater/Arts	12
M-7	The Majestic Ventura Theater	26 S Chestnut St	Ventura	Museums/ Theater/Arts	12

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
M-8	Albinger Archeological Museum	113 E Main St	Ventura	Museums/ Theater/Arts	12
M-9	Ortega Adobe	215 W Main St	Ventura	Museums/ Theater/Arts	12
Educational Facilities					
S-1	Conejo Valley High School	1402 E Janss Road	Thousand Oaks	Public, 9–12	2
S-2	Environmental Academy of Research Technology and Earth Sciences	2626 Michael Dr	Newbury Park	Public, K–5	2
S-3	Passageway	1153 Lawrence Dr	Newbury Park	Private, K–12	2
S-4	Conejo Adventist Elementary School	1250 Academy Dr	Newbury Park	Private, K–8	2, 3
S-5	Newbury Park Adventist Academy	180 Academy Dr	Newbury Park	Private, 9–12	2, 3
S-6	Living Oaks Middle School Academic Alliance	1077 Business Center Cir	Newbury Park	Private, 6–8	3
S-7	Walnut Elementary	581 Dena Dr	Newbury Park	Public, K–5	3
S-8	Ventura County Special Education	5189 Verdugo Way	Camarillo	Public, P–12	4
S-9	Adolfo Camarillo High	4660 Mission Oaks Blvd	Camarillo	Public, 9–12	4
S-10	Rancho Rosal Elementary	3535 Village at the Park Dr	Camarillo	Public, K–5	5
S-11	Preschool Early Education Program (PEEP)	550 Temple Dr	Camarillo	Public, P	5
S-12	St. Mary Magdalene	2534 Ventura Blvd	Camarillo	Private, K–8	5
S-13	Monte Vista Middle	888 N Lantana St	Camarillo	Public, 6–8	5, 6
S-14	Pleasant Valley Christian	1101 E Ponderosa Dr	Camarillo	Private, K–8	6
S-15	Las Posas Elementary	75 Calle La Guerra	Camarillo	Public, P–5	6
S-16	Peppermint Junction	2150 E Gonzales	Oxnard	Private, K–5	8
S-17	Rio Del Valle Junior High School	3100 N Rose Ave	Oxnard	Public, 6–8	8
S-18	Rio Real Elementary	1140 Kenney St	Oxnard	Public, K–8	8
S-19	Rio Lindo Elementary	2131 Snow Ave	Oxnard	Public, K–5	8
S-20	Rio del Sol	3001 N Ventura Rd	Oxnard	Public, K–8	9
S-21	Montalvo Elementary	2050 Grand Ave	Ventura	Public, K–5	10
S-22	Pacific High	501 College Dr	Ventura	Public Continuation, 9–12	11

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
S-23	Golden Valley Charter	3585 Maple St, Suite 101	Ventura	Public Charter, K–12	11
S-24	Homestead (Alternative)	450 Valmore Ave	Ventura	Public Alternative, K–8	11
S-25	Blanche Reynolds Elementary	450 Valmore Ave	Ventura	Public Homeschool, K–8	11
S-26	Pierpont Elementary	1254 Marthas Vineyard Ct	Ventura	Public, K–5	11
S-27	Ventura County Christian School	96 MacMillan Ave	Ventura	Private, K–12	12
S-28	Cabrillo Middle	1426 E Santa Clara St	Ventura	Public, 6–8	12
S-29	Goldenwest Montessori Schools, Inc.	1239 E Main St	Ventura	Private, K–3	12
S-30	Lincoln Elementary	1107 East Santa Clara St	Ventura	Public, K–5	12
S-31	Solimar Academy	1147 E Main St	Ventura	Private, 1–12	12
S-32	Holy Cross School	211 E Main St	Ventura	Private, K–8	12
Public Facilities					
G-1	Social Security Administration	322 Thousand Oaks Blvd	Thousand Oaks	Government Services	1
G-2	Conejo Valley Post Office	235 N Moorpark Rd	Thousand Oaks	Post Office	1
G-3	Newbury Park Post Office	3401 Grande Vista Dr	Newbury Park	Post Office	3
G-4	Ventura County Office of Education	5189 Verdugo Way	Camarillo	Government Services	4
G-5	Camarillo Chamber of Commerce	4001 Mission Oaks Blvd, Suite B	Camarillo	Government Services	5
G-6	Camarillo Post Office	2150 Pickwick Dr	Camarillo	Post Office	5
G-7	Camarillo City Hall	601 Carmen Dr #6034	Camarillo	City Hall	5
G-8	Saint John's Regional Medical Center Health Sciences Library	1600 N Rose Ave	Oxnard	Medical Library	8
G-9	Oxnard Chamber of Commerce	400 E Esplanade Dr, #302	Oxnard	Government Services	9
G-10	Montalvo Post Office	2481 Grand Ave	Ventura	Post Office	10
G-11	California Department of Tax and Fee Administration	4820 McGrath St, Suite 26	Ventura	Government Services	10
G-12	Ventura DMV	4260 Market St	Ventura	Government Services	10

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
G-13	U.S. Veterans Affairs Department	790 E Santa Clara St	Ventura	Government Services	12
G-14	Ventura Visitors Bureau	101 S California St	Ventura	Government Services	12
G-15	Ventura Post Office	675 E Santa Clara St	Ventura	Post Office	12
G-16	Ventura City Hall	501 Poli St	Ventura	City Hall	12
G-17	Ventura Chamber of Commerce	505 Poli St	Ventura	Government Services	12
Religious Facilities					
R-1	Kingdom Hall of Jehovah's Witnesses	1750 Rivendell Cir	Newbury Park	Religious Facility	2
R-2	King of Glory Lutheran Church	2500 Borchard Rd	Newbury Park	Religious Facility	2
R-3	St Julie Billiart Church	2475 Borchard Rd	Newbury Park	Religious Facility	2
R-4	Living Oaks Community Church	1033 Business Center Cir	Thousand Oaks	Religious Facility	3
R-5	Chalice Unitarian Universalist Fellowship of the Conejo Valley	3327 Old Conejo Rd	Newbury Park	Religious Facility	3
R-6	Lighthouse Church	3353 Old Conejo Rd	Newbury Park	Religious Facility	3
R-7	Kingdom Hall of Jehovah's Witnesses	3900 Petit St	Camarillo	Religious Facility	5
R-8	Church of Christ	515 Temple Ave	Camarillo	Religious Facility	5
R-9	RISE Church	2572 Barry St	Camarillo	Religious Facility	5
R-10	Good Shepherd Lutheran Church	380 Arneill Rd	Camarillo	Religious Facility	5
R-11	Chapel City Church	2315 Ventura Blvd	Camarillo	Religious Facility	5
R-12	Saint Mary Magdalene Roman Catholic Church	2532 Ventura Blvd	Camarillo	Religious Facility	5
R-13	Calvary Nexus	380 Mobil Ave	Camarillo	Religious Facility	5
R-14	The Church of Jesus Christ of Latter-day Saints	1201 Paseo Camarillo	Camarillo	Religious Facility	5, 6
R-15	Pleasant Valley Bible Church	1101 E Ponderosa Dr	Camarillo	Religious Facility	6
R-16	Crossroads Community Church	161 Plaza La Vista	Camarillo	Religious Facility	6

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
R-17	Center for Spiritual Living Pleasant Valley	221 E Daily Dr, #1	Camarillo	Religious Facility	6
R-18	Christian Church of Ventura County	1377 Del Norte Rd	Camarillo	Religious Facility	7
R-19	Gold Coast Christian Church	3500 Camino Ave	Oxnard	Religious Facility	7
R-20	Nyeland Community Church	3326 Nyeland Ave	Oxnard	Religious Facility	8
R-21	Capilla Evangelica	3326 Nyeland Ave	Oxnard	Religious Facility	8
R-22	SGI-USA Oxnard Buddhist Center	2340 Wankel Way	Oxnard	Religious Facility	8
R-23	Santa Clara Parish Chapel	1333 Ventura Blvd	Oxnard	Religious Facility	8
R-24	Iglesia Ni Cristo	1277 E Collins St	Oxnard	Religious Facility	8
R-25	Bethany Chapel – Assembly of God	1076 E Stroube St	Oxnard	Religious Facility	8
R-26	Northside Church of Christ	880 E Collins St	Oxnard	Religious Facility	8
R-27	Bethany Chapel of El Rio	1076 E Stroube St	Oxnard	Religious Facility	8
R-28	Holy Trinity Eastern Orthodox Church	2784 Alvarado St	Oxnard	Religious Facility	8
R-29	Revive Community Church	2640 Alvarado St	Oxnard	Religious Facility	8
R-30	El Rio Spanish Seventh Day Adventist Church	2670 Alvarado St	Oxnard	Religious Facility	8
R-31	Reality Ventura	1954 Goodyear Ave	Ventura	Religious Facility	8
R-32	Nueva Jerusalem	144 Princeton Ave	Ventura	Religious Facility	8, 9
R-33	Victory Outreach	2875 Elba St	Ventura	Religious Facility	9
R-34	Lighthouse 805 Foursquare Church	6200 Montalvo Dr	Ventura	Religious Facility	10
R-35	Unitarian Universalist Church of Ventura	5654 Ralston St	Ventura	Religious Facility	10
R-36	Crosspointe Church Ventura	5415 Ralston St, #6001	Ventura	Religious Facility	10
R-37	Mission Church	5353 Walker St	Ventura	Religious Facility	10
R-38	Ventura Vineyard Christian Church	1956 Palma Dr	Ventura	Religious Facility	10

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
R-39	Calvary Ventura	4221 E Main St	Ventura	Religious Facility	11
R-40	Journey Church Ventura	4050 Market St	Ventura	Religious Facility	11
R-41	Coastline Bible Church	426 S Mills Rd, #3440	Ventura	Religious Facility	11
R-42	The Power House Church	365 S Seaward Dr	Ventura	Religious Facility	11
R-43	Faith Calvary Church	405 Jordan Ave	Ventura	Religious Facility	11
R-44	Midtown Community Church	396 San Clemente St	Ventura	Religious Facility	11
R-45	Olivet Baptist Church	174 Anacapa St	Ventura	Religious Facility	12
R-46	Grace Baptist Church	65 South MacMillan Ave	Ventura	Religious Facility	12
R-47	First Lutheran Church	78 Chrisman Ave	Ventura	Religious Facility	12
R-48	First United Methodist Church	1338 E Santa Clara St	Ventura	Religious Facility	12
R-49	Landmark Missionary Baptist Church	1113 E. Main St	Ventura	Religious Facility	12
R-50	Ventura Center-Spiritual Living	101 S Laurel St	Ventura	Religious Facility	12
R-51	Apostolic House of Worship	902 E Main St	Ventura	Religious Facility	12
R-52	The River Community Church	859 E Santa Clara St	Ventura	Religious Facility	12
R-53	The Universal Church	700 E Main St	Ventura	Religious Facility	12
R-54	San Miguel Arcangel Chapel	164 E Thompson Blvd	Ventura	Religious Facility	12
R-55	Mission San Buenaventura	211 E Main St	Ventura	Religious Facility	12

[1] Refer to Figure 2.2.7-2 for a map showing the location of each site.

Figure 2.2.7-2. Community Facilities and Services (Sheet 1 of 6)

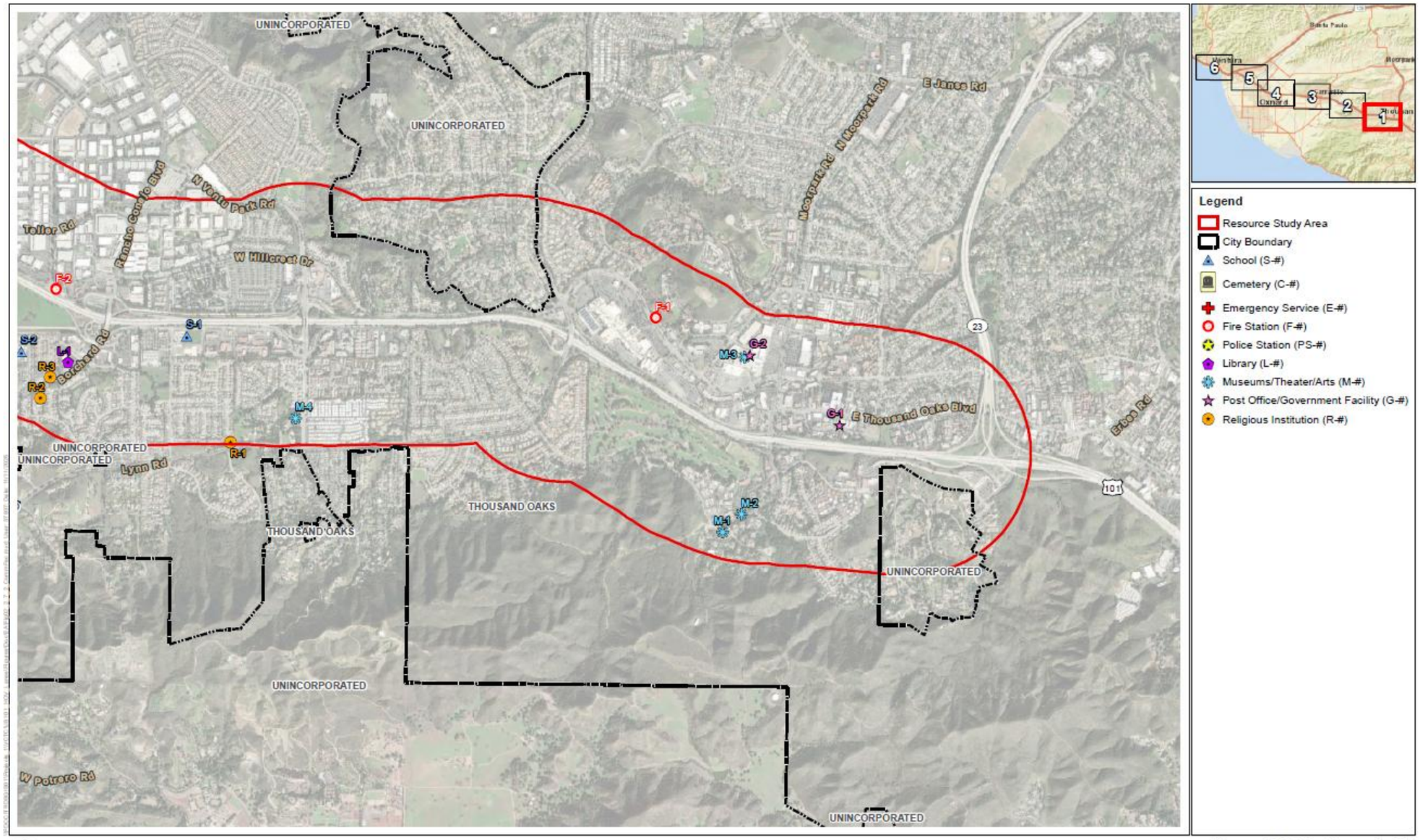


Figure 2.2.7-2, Sheet 1 of 6
Community Facilities and Services
US 101 Improvement Project

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Figure 2.2.7-2. Community Facilities and Services (Sheet 2 of 6)

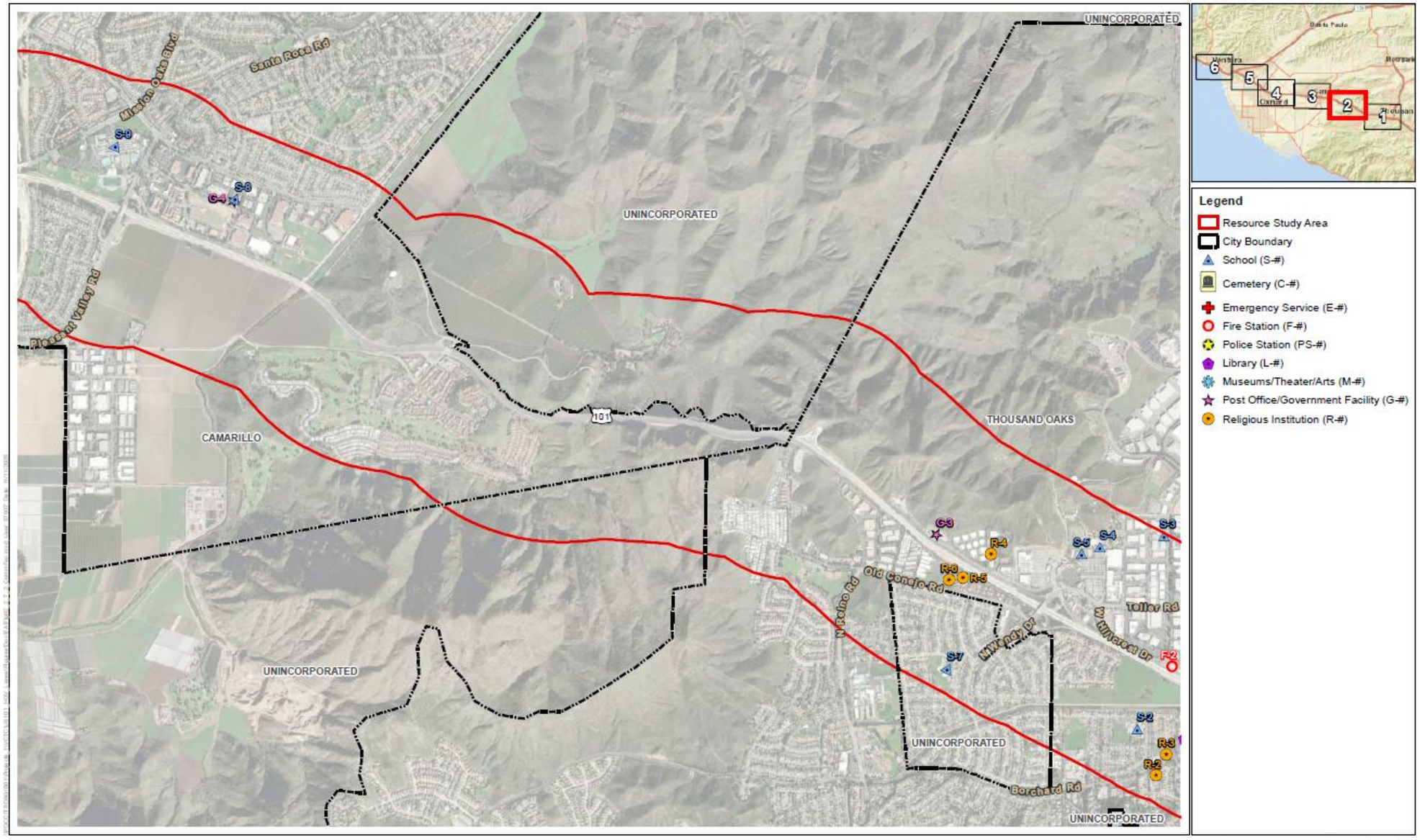


Figure 2.2.7-2, Sheet 2 of 6
Community Facilities and Services
US 101 Improvement Project

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Figure 2.2.7-2. Community Facilities and Services (Sheet 3 of 6)

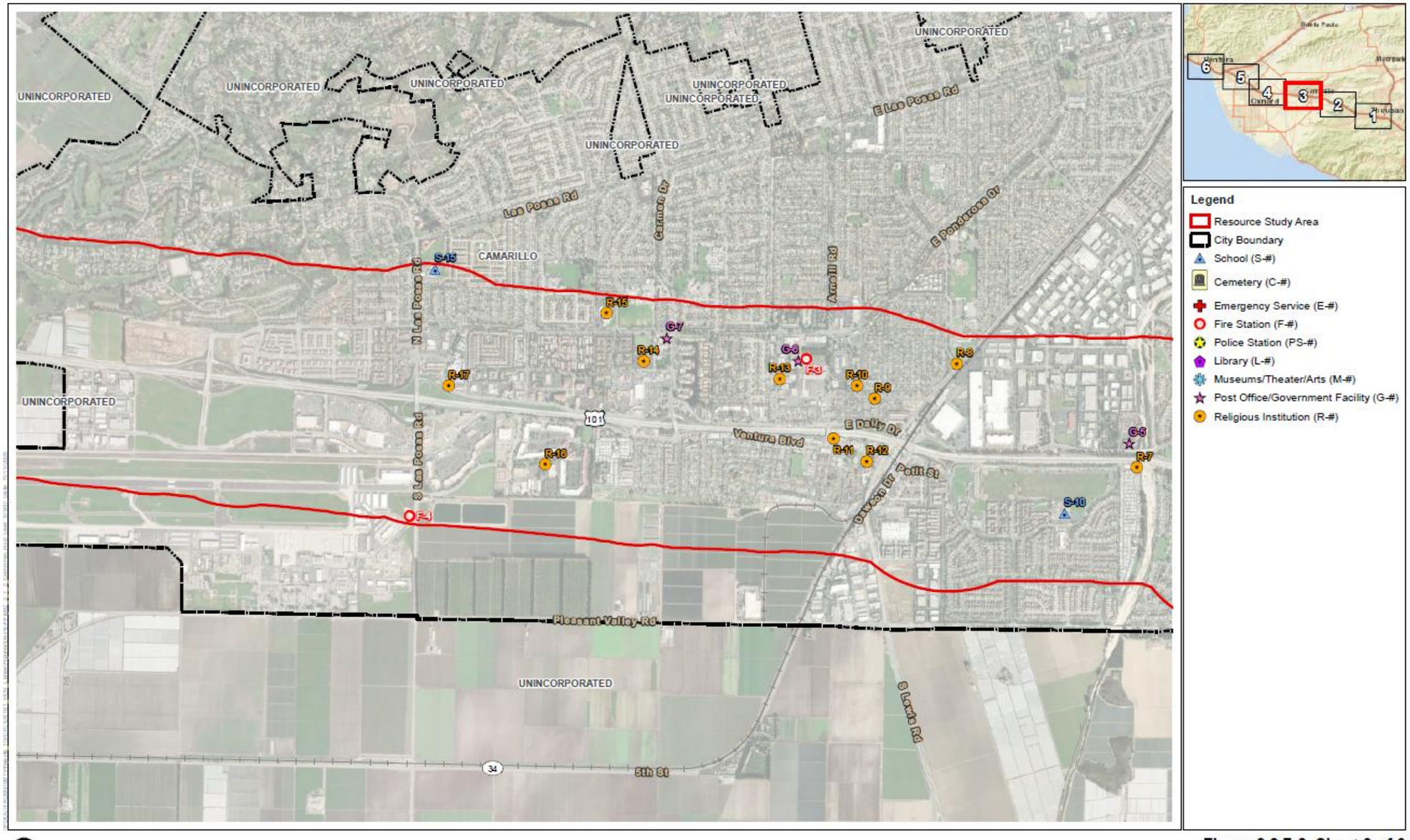


Figure 2.2.7-2, Sheet 3 of 6
Community Facilities and Services
US 101 Improvement Project

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Figure 2.2.7-2. Community Facilities and Services (Sheet 4 of 6)

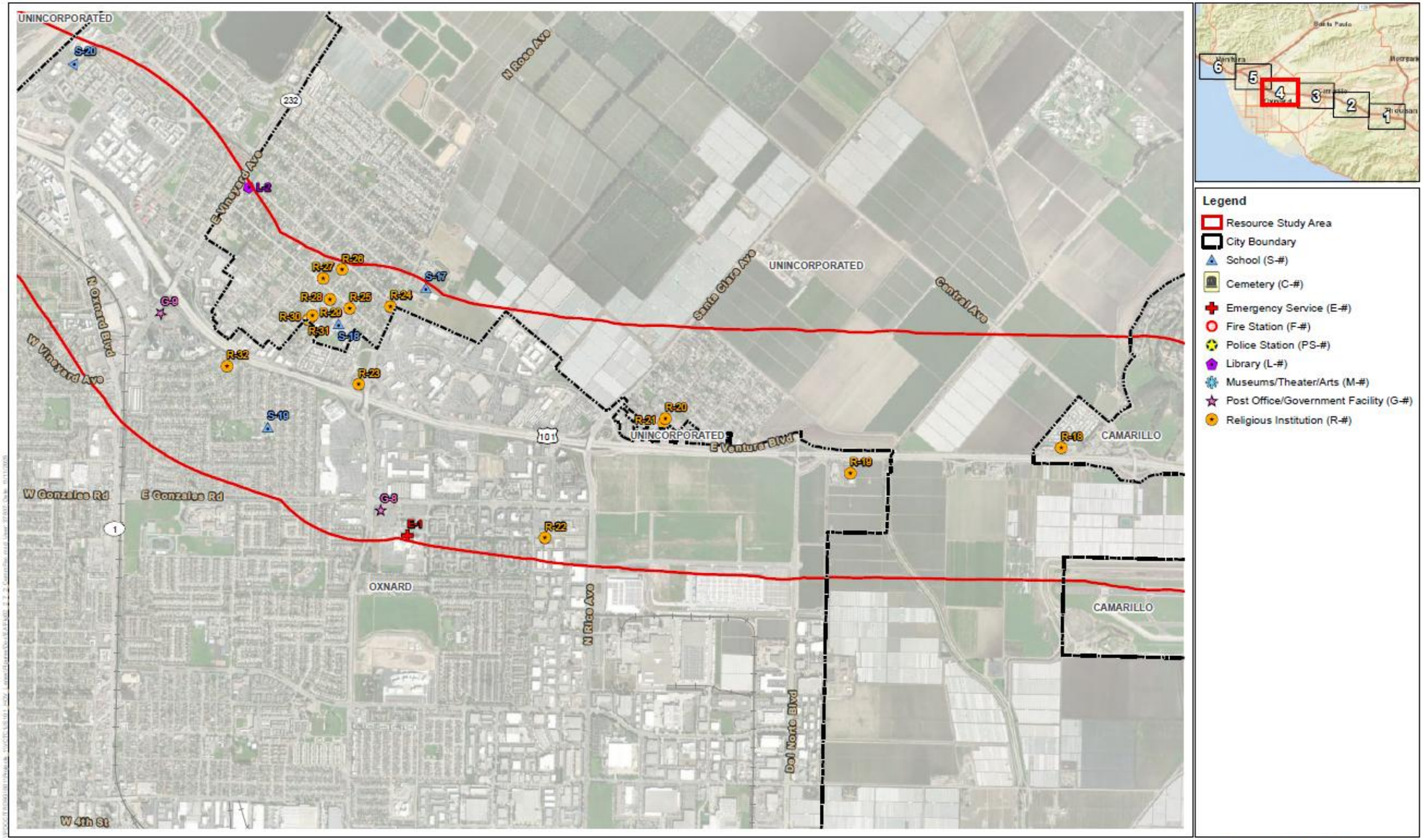


Figure 2.2.7-2, Sheet 4 of 6
Community Facilities and Services
US 101 Improvement Project

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Figure 2.2.7-2. Community Facilities and Services (Sheet 5 of 6)

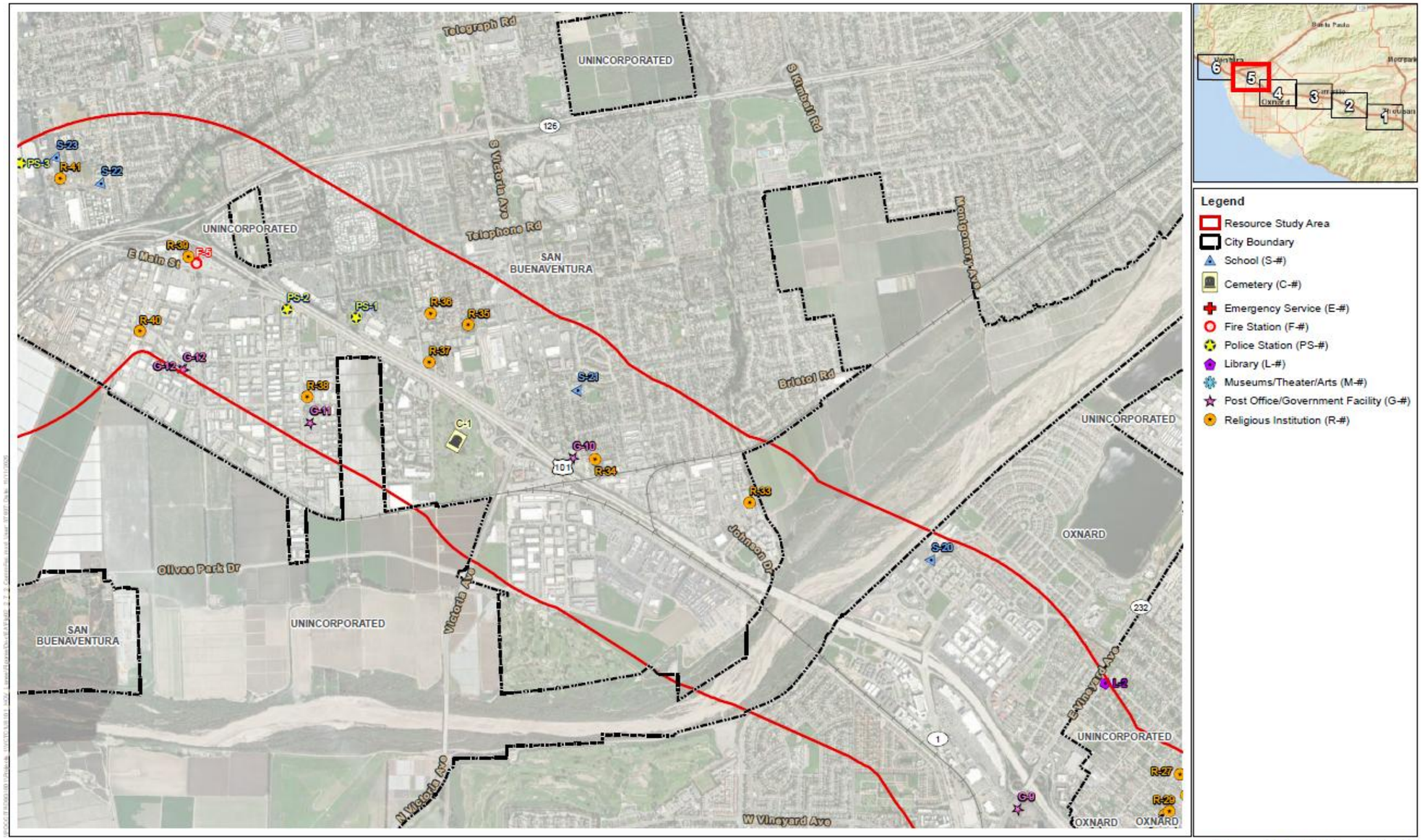


Figure 2.2.7-2, Sheet 5 of 6
Community Facilities and Services
US 101 Improvement Project

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Figure 2.2.7-2. Community Facilities and Services (Sheet 6 of 6)

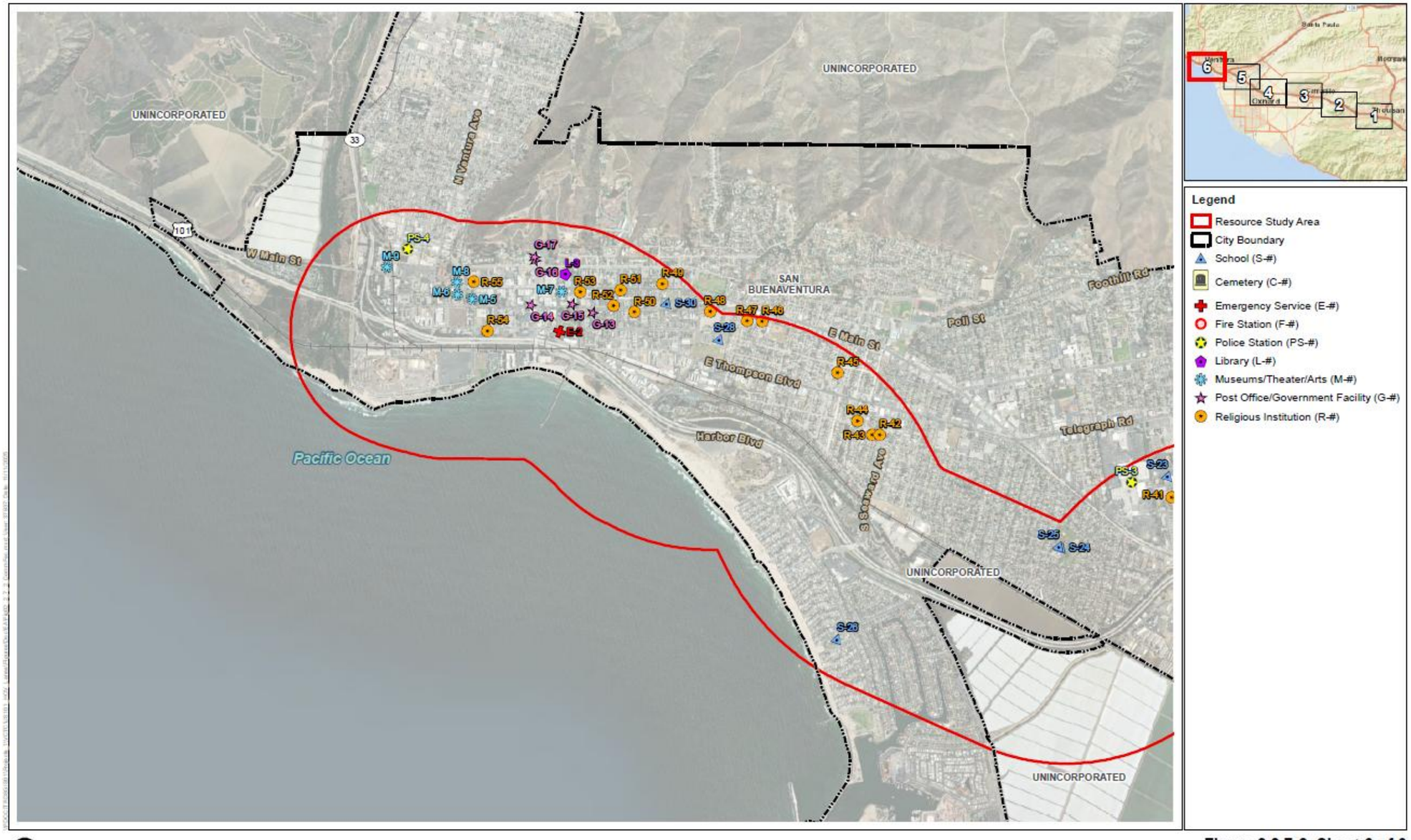


Figure 2.2.7-2, Sheet 6 of 6
Community Facilities and Services
US 101 Improvement Project

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Community Cohesion

Housing

In general, communities with high percentage of families with children are more cohesive than communities largely comprising single people because children tend to establish friendships with other children in their communities. In addition, housing occupancy and tenure can also be indicators of community cohesion. A higher percentage of owner-occupied residences indicate a household's financial stake in their communities, while housing tenure allows households to establish greater social networks and develop an identity with the community. Table 2.2.7-5 summarizes some key housing statistics for the resource study area.

Overall Resource Study Area

The overall resource study area contains 94,556 housing units. The median home value within the overall resource study area ($747,409) is more than in Ventura County as a whole ($719,100). The average household size in the overall resource study area (2.9 persons) is similar to Ventura County as a whole (3.0 persons). Vacancy in the overall resource study area (5.8 percent) is less than in Ventura County as a whole (6.1 percent).

Table 2.2.7-5. Housing Characteristics

Geography	Total Housing Units	Housing Units, Occupied	Housing Units, Vacant	Owner-Occupied Units	Renter-Occupied Units	Average Household Size	Median Home Value ($)
Thousand Oaks	47,950	46,143	1,807	31,952	14,191	2.9	$900,600
		96.2%	3.8%	69.2%	30.8%		
Camarillo	27,130	25,939	1,191	16,790	9,149	2.7	$713,900
		95.6%	4.4%	64.7%	35.3%		
Oxnard	55,184	51,099	4,085	27,886	23,213	3.9	$587,200
		92.6%	7.4%	54.6%	45.4%		
Ventura (City)	44,787	41,954	2,833	23,714	18,240	2.6	$714,000
		93.7%	6.3%	56.5%	43.5%		
Ventura County	293,491	275,653	17,838	176,575	99,078	3.0	$719,100
		93.9%	6.1%	64.1%	35.9%		
Census Tracts within Resource Study Area							
Thousand Oaks							
Summary	22,237	21,317	920	12,373	8,944	3	$838,964
		95.9%	4.1%	58.0%	42.0%		
Camarillo							
Summary	22,958	21,845	1,113	13,344	8,501	2.8	$698,800
		95.2%	4.8%	61.1%	38.9%		
Oxnard							
Summary	16,884	15,584	1,300	8,146	7,438	3.7	$649,050
		92.3%	7.7%	52.3%	47.7%		
Ventura (City)							
Summary	26,174	24,603	1,571	12,359	12,244	2.6	$705,331
		94.0%	6.0%	50.2%	49.8%		
Ventura County (Unincorporated)							
Summary	6,303	5,722	581	4,592	1,130	2.8	$987,000

Geography	Total Housing Units	Housing Units, Occupied	Housing Units, Vacant	Owner-Occupied Units	Renter-Occupied Units	Average Household Size	Median Home Value ($)
		90.8%	9.2%	80.3%	19.7%		
Resource Study Area	94,556	89,071	5,485	50,814	38,257	2.9	$747,409
		94.2%	5.8%	57.0%	43.0%		

Source: U.S. Census Bureau 2022 (Table DP04 and Table B25077)

Age Distribution

In general, communities with a high percentage of elderly residents (65 years or older) tend to demonstrate a greater social commitment to their communities, because they tend to be more active in the community due to having more time available for community activities. Table 2.2.7-6 summarizes age indicators within the census tracts that overlap with the project limits.

Table 2.2.7-6. Age Distribution Indicators

Geography	Median Age	18 Years and Younger (%)	19 to 64 Years (%)	65 Years and Over (%)
City of Thousand Oaks	44.4	20.3	59.8	19.9
City of Camarillo	40.3	20.7	58.1	21.2
City of Oxnard	33.5	26.2	63.0	10.8
City of Ventura	41.3	20.2	61.7	18.1
Ventura County	39.0	22.3	61.4	16.3
Census Tracts within Resource Study Area				
Thousand Oaks				
Average	43.5	21.3	60.1	18.6
Camarillo				
Average	40.3	21.4	58.2	20.4
Oxnard				
Average	36.6	24.1	63.3	12.6
Ventura (City)				
Average	40.6	19.5	63.9	16.5
Ventura County (Unincorporated)				
Average	47.6	18.6	61.1	20.3
Resource Study Area Average	**41.0**	**21.1**	**61.4**	**17.5**

Source: U.S. Census Bureau 2022 (Table S0101)

Overall Resource Study Area

The average median age within the overall resource study area is 41, which is higher than Ventura County's median age of 39. The proportion of the elderly population within the overall resource study area accounts for 17.5 percent of the population, which is higher than the county (16.3 percent).

Race and Ethnicity

In general, homogeneity of the population contributes to higher levels of cohesion. Communities that are ethnically homogenous often speak the same language, hold similar beliefs, and are more likely to engage in social interaction on a routine basis. Table 2.2.7-7 summarizes the race and ethnicity of the resource study area.

Table 2.2.7-7. Race and Ethnicity Characteristics

Geography	Total Population	White (alone)	Black (alone)[a]	American Indian/Native Alaskan (alone)[a]	Asian (alone)[a]	Hawaiian/ Pacific Islanders (alone)[a]	Some Other Race (alone)[b]	Two or More Races (alone)	Hispanic or Latino (alone)[a]	Total Minority Population
Thousand Oaks	126,532	81,051	2,462	87	11,595	114	1,282	4,975	24,966	39,224
		73.4%	2.2%	0.1%	10.5%	0.1%	1.2%	4.5%	22.6%	31.0%
Camarillo	70,622	35,774	2,274	173	7,019	145	158	2,983	22,096	31,707
		50.7%	3.2%	0.2%	9.9%	0.2%	0.2%	4.2%	31.3%	44.9%
Oxnard	202,279	26,982	3,678	506	13,194	531	387	3,676	153,325	171,234
		13.3%	1.8%	0.3%	6.5%	0.3%	0.2%	1.8%	75.8%	84.7%
Ventura (City)	110,358	58,890	1,439	149	4,835	102	348	5,265	39,330	45,855
		53.4%	1.3%	0.1%	4.4%	0.1%	0.3%	4.8%	35.6%	41.6%
Ventura County	842,009	366,252	13,991	1,408	59,860	1,396	3,284	28,779	367,039	443,694
		43.5%	1.7%	0.2%	7.1%	0.2%	0.4%	3.4%	43.6%	52.7%
Census Tracts within the Resource Study Area										
Thousand Oaks										
Total	57,569	33,912	1,467	5	5,394	62	634	2,289	13,806	20,734
		58.9%	2.5%	0.0%	9.4%	0.1%	1.1%	4.0%	24.0%	36.0%
Camarillo										
Total	58,897	28,724	1,882	173	5,759	135	119	2,322	19,783	27,732
		48.8%	3.2%	0.3%	9.8%	0.2%	0.2%	3.9%	33.6%	47.1%
Oxnard										
Total	50,897	12,093	1,097	174	3,870	272	30	1,761	31,600	37,013
		23.8%	2.2%	0.3%	7.6%	0.5%	0.1%	3.5%	62.1%	72.7%
Ventura (City)										
Total	64,246	32,017	765	123	2,463	41	201	2,760	25,876	29,268
		49.8%	1.2%	0.2%	3.8%	0.1%	0.3%	4.3%	40.3%	45.6%

Geography	Total Population	White (alone)	Black (alone)[a]	American Indian/Native Alaskan (alone)[a]	Asian (alone)[a]	Hawaiian/ Pacific Islanders (alone)[a]	Some Other Race (alone)[b]	Two or More Races (alone)	Hispanic or Latino (alone)[a]	Total Minority Population
Ventura County (Unincorporated)										
Total	17,234	8,801	634	29	1,612	0	0	598	5,560	7,835
		51.1%	3.7%	0.2%	9.4%	0.0%	0.0%	3.5%	32.3%	45.5%
Resource Study Area	248,843	115,547	5,845	504	19,098	510	984	9,730	96,625	122,582
		46.4%	2.3%	0.2%	7.7%	0.2%	0.4%	3.9%	38.8%	49.3%

Source: U.S. Census Bureau 2018, 2022 (Table B03002)

[a] These populations have been incorporated into the "Total Minority Population" calculations.

[b] "Some Other Race" is defined as all other responses not included in the "White," "Black or African American," "American Indian and Alaska Native," "Asian," or "Native Hawaiian and Other Pacific Islander" race categories.

Overall Resource Study Area

The White population is the majority within the overall resource study area and accounts for 46.4 percent. This is higher than the White population of the county as whole, which accounts for 43.5 percent. The minority population within the resource study area accounts for 49.3 percent, which is slightly lower than the minority population of the county (52.7 percent).

The resource study area show moderate potential for community cohesion. Based on indicators of community cohesion discussed above, the population characteristics within the resource study area do not exhibit a substantial difference than these same characteristics for the county. The resource study area exhibit the following in comparison to the county:

- A similar median age of 41 compared to 39 (county)
- A similar median household income of $104,073 compared to $102,141 (county)
- A similar minority population of 49.3 percent compared to 52.7 percent (county)
- A similar rate of owner-occupied units (94.2 percent compared to 93.9 percent in the county)
- A similar average household size of 2.9 persons compared to 3.0 persons (county)

Given the information above and the amount of existing community facilities, parks and recreational facilities, and limited vacant land within the resource study area (see Section 2.2.1, *Existing and Future Land Use*, and Section 2.2.4, *Parks and Recreational Facilities*), a moderate level of community cohesion has been assessed for the existing conditions within the resource study area.

2.2.7.3 Environmental Consequences

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the project limits. Under the No-Build Alternative, the project would not be constructed, and there would be no impacts related to community character or cohesion.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction activities associated with the build alternatives (Alternatives 2 and 3) are expected to result in temporary indirect impacts on air quality, noise, and traffic in the resource study area, due to temporary lane closures and access restrictions during construction. Indirect impacts on air quality would occur as a result of temporary increases in emissions due to traffic congestion and use of construction equipment, and indirect impacts on noise would occur as a result of construction activities.

However, temporary indirect impacts on noise and air quality related to construction activities that may affect residential communities that are close to the project limits would be reduced by complying with measures **N-1** and **N-2** (see Section 2.3.7, *Noise and Vibration*), which require noise-reduction measures in compliance with Section 14-8.02, Noise Control, of the California Department of Transportation (Caltrans) Standard Specifications (2023), and measures **AQ-1** through **AQ-4** (see Section 2.3.6, *Air Quality*), which require use of dust control procedures, maintenance of equipment, and implementation of other standard best management practices and regulations during construction. These short-term impacts would not result in a substantial adverse effect on quality of life within the resource study area.

Measure **TR-1** (Section 2.10, *Transportation*) would require a Transportation Management Plan (TMP) to be prepared, which would identify strategies to reduce potential impacts on access and traffic delays during construction.

Construction activities would be temporary and would cease after construction is complete. The build alternatives would not result in temporary adverse impacts related to public access that would create a barrier or disruption in connectivity within the resource study area's neighborhoods and communities.

Permanent Impacts

The project would improve traffic operations within the resource study area, which would benefit the surrounding neighborhoods and communities and support planned growth in the region. The project would also contribute to the region's ability to create a stronger sense of community character and cohesion by improving trip reliability, providing regional connectivity along US 101, and improving reliability and efficiency of the public transit system within Ventura County. Construction of the project would not create new physical or geographic barriers between existing communities and would not require any full residential or business acquisitions or displacements. Additionally, community facilities that contribute to community character and cohesion would not be adversely affected by the project.

As discussed in Section 2.2.6, *Growth*, the project would improve existing transportation infrastructure and would not result in the construction and operation of residential, commercial, or industrial development. The project improvements would primarily occur within existing Caltrans right of way. Therefore, the project would not result in adverse indirect or direct temporary or permanent impacts on housing characteristics such as rent, housing prices, occupancy, housing type, or population projections, requiring additional residential units.

2.2.7.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on community character and cohesion would occur.

Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add and HOV/Express Bus Lane in Each Direction with Design Variations

Refer to Section 2.3.6, *Air Quality*, Section 2.3.7, *Noise and Vibration*, and Section 2.2.10, *Transportation*, for detailed measures related to noise, air quality emissions, and traffic, respectively. A TMP (measure **TR-1**) would be prepared to address short-term traffic circulation and access effects during project construction. Additionally, the inclusion of measures **N-1**, **N-2**, and **AQ-1** through **AQ-4** will minimize and/or avoid impacts related to noise and air quality during construction. No additional avoidance, minimization, and/or mitigation measures are recommended.

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2.2.8 Relocations and Real Property Acquisition

2.2.8.1 Regulatory Setting

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

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of Caltrans' Title VI/Non-Discrimination Policy Statement and Appendix C for a summary of the Relocation Assistance Program.

2.2.8.2 Affected Environment

This section was prepared using the Relocation Impact Memorandum (Caltrans 2021) prepared for the project. As discussed in Section 2.2.1, *Existing and Future Land Uses*, the project is located within an existing transportation corridor in an urban setting surrounded by multiple land use types, including residential, commercial, industrial, public, and recreational uses.

US 101 traverses several cities, each with their own community characteristics. In general, the study area comprises the project limits, which includes right of way (ROW) acquisition areas that would be necessary to implement the project. No permanent full acquisitions or relocations of residents or businesses would be required by the project. However, temporary construction easements (TCEs) and partial ROW acquisition would be required, comprising residential, commercial, industrial, agricultural, education, general office, open space and recreation, vacant, and other miscellaneous type properties.

In considering the population characteristics, economic conditions, and community facilities within the community impact study area for the project, the community impact study area (see Figure 2.2.7-1 in Section 2.2.7, *Community Character and Cohesion*) shows moderate potential for community cohesion. The community impact study area exhibits a moderate level of community cohesion based on indicators of community cohesion (e.g., household size, occupied housing characteristics, ethnic homogeneity) where the population characteristics within the community impact study area do not exhibit a significant difference than county averages (see Section 2.2.7, *Community Character and Cohesion*, for further discussion).

2.2.8.3 Environmental Consequences

Alternative 1: No-Build Alternative

Under the No-Build Alternative, US 101 would remain in its current condition within the resource study area and the project would not be implemented. Therefore, no property acquisition or relocation would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Table 2.2.8-1 summarizes the ROW impacts on residential and non-residential properties; Table 2.2.8-2 summarizes parking, access, and circulation impacts; and Figure 2.2.8-1 shows the location of the affected parcels.

Temporary Impacts

The project would require TCEs from 143 parcels under Alternative 2 and 147 parcels under Alternative 3 (see Table 2.2.8-1). TCEs would be required on residential, commercial, industrial, agricultural, education, general office, open space and recreation, vacant, and other miscellaneous type properties. Activities within TCE areas would be temporary and may include the presence of construction workers, work trucks, material stockpiles, disturbed soil, scaffolding, and landscaping work.

A commercial storage building operated by Traffic Technologies (Assessor's Parcel Number [APN] 145022136) would be temporarily displaced during project construction under both Alternatives 2 and 3. The existing 1,000-square-foot storage building would need to be demolished and reconstructed, either in part or in whole, on the same parcel. A new storage building would be provided to the property owner in accordance with the Uniform Act (measure **RW-1**).

During construction, parking, access, and circulation on non-residential properties could be affected under both Alternatives 2 and 3 (see Table 2.2.8-2). The project would be required to minimize parking impacts to the extent feasible. Construction staging and phasing would be designed to limit the duration and extent of parking space closures. Other parking impact minimization measures could include reducing the work zone area and implementing temporary parking by restriping or shifting to parallel parking (measure **COM-1**). A parking study would be prepared during final design to evaluate the extent of parking impacts and to identify feasible strategies to minimize such impacts (measure **COM-2**). Within the implementation of measures **COM-1** and **COM-2**, no adverse temporary loss of parking that could affect business operations is anticipated.

All areas affected by a TCE would be returned to original conditions once construction is complete. A Transportation Management Plan (measure **TR-1,** Section 2.2.10, *Transportation*) will be implemented to minimize disruptions to businesses and residents during construction. Businesses located on affected properties would continue to operate and be accessible to patrons during construction. No substantial temporary adverse impacts on relocations and real property acquisition resources would occur under Alternatives 2 and 3.

Permanent Impacts

The project would result in permanent partial acquisition of 14 parcels and 19 parcels under Alternatives 2 and 3, respectively (see Table 2.2.8-1), and permanent loss of parking spaces on three parcels (see Table 2.2.8-2). No permanent full acquisitions would be required. Permanent partial acquisitions would be required on commercial, industrial, agricultural, open space and recreation, vacant, and other miscellaneous type properties. The project is not anticipated to result in the displacement of residences or businesses. All acquisition activities, including the permanent loss of parking, would be conducted in accordance with the Uniform Act (measure **RW-1**). Because the project would not require any permanent full acquisitions, there would be no substantial adverse impacts related to relocations and real property acquisitions under Alternatives 2 and 3.

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Table 2.2.8-1. List of Affected Properties

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
Permanent Partial Acquisitions						
135030001	6619 Ventura Blvd, Ventura	None (Vacant lot)	None (Vacant lot)	No	Yes	Would permanently affect 2,738 sf of the southern portion of the parcel under Alternative 3.
135030002	6635 Ventura Blvd, Ventura	Sunshine Manufactured Homes	Manufactured Home Dealer	No	Yes	Would permanently affect 2,745 sf of the southern portion of the parcel under Alternative 3. May temporarily modify access to site.
135030019	6663 Ventura Blvd, Ventura	Dave Wilkes Transmissions and Fisher/Martin Automotive	Auto Repair Shops	No	Yes	Would permanently affect 666 sf of the southern portion of the parcel under Alternative 3. Would affect 1 out of 27 parking spaces and may temporarily modify access to site.
138023010	Ventura	Railway land	Railway land	Yes	Yes	Would permanently affect railway land adjacent to US 101; approximately 42,519 sf under both alternatives.
144013409	1740 Ventura Blvd, Oxnard	Red Lobster (Parking Lot)	Restaurant	Yes	Yes	Would permanently affect approximately 9,851 sf of parking lot under both build alternatives. Would permanently remove 21 spaces in a shared parking lot that contains approximately 150–200 spaces.
145021241	Oxnard	Roadway	Roadway	Yes	Yes	Would permanently affect approximately 2,431 sf of roadway under both build alternatives.
145022108	811 Ventura Blvd, Oxnard	Crain Graphics, Comfort Zone Sleep Gallery, Re-Bath Pacific Coast, Aramsco & Empire Cleaning Supply, Vinyl Craft	Industrial/commercial buildings	Yes	Yes	Would permanently affect approximately 4,696 sf of parking lot under both build alternatives. Would affect 14 out of 47 parking spaces in a shared parking lot and would affect unmarked street parking along East Ventura Boulevard.
145022136	701 Ventura Blvd, Oxnard	Traffic Technologies, Total Barricade Services	Industrial/commercial building	Yes	Yes	Would permanently affect approximately 4,368 sf of the parking lot and storage building. No impacts on marked parking stalls.
149002123	Oxnard	Flood control basins and channels	Channel	Yes	Yes	Would permanently affect approximately 1,053 sf of channel adjacent to US 101 under both build alternatives.
157002007	Camarillo	Vacant Land/Ditch	Vacant Land/Ditch	Yes	Yes	Would permanently affect approximately 1,407 sf of roadway on West Daily Drive, adjacent to US 101 under both build alternatives.
157002008	Camarillo	City Property	Roadway	Yes	Yes	Would permanently affect approximately 1,827 sf of roadway on West Daily Drive, adjacent to US 101 under both build alternatives.
157002020	Camarillo	Roadway	Roadway	Yes	Yes	Would permanently affect approximately 2,447 sf of roadway on West Daily Drive under both build alternatives.
160005041	Camarillo	Unknown	Undeveloped and unused land	Yes	Yes	Would permanently affect approximately 11,799 sf of vacant land adjacent to US 101 under both alternatives.
163018002	6968 E Camarillo Springs Rd, Camarillo	Camarillo Grove Park	Park	No	Yes	Would permanently affect approximately 2,774 sf of open space adjacent to freeway under Alternative 3.
163018005	Camarillo	Open Space	LCA Pasture and Range Land	Yes	Yes	Would permanently affect approximately 12,137 sf of open space adjacent to US 101 under Alternative 2 and 36,500 sf of open space adjacent to US 101 under Alternative 3.
163018009	202 Camarillo Grove Rd, Camarillo	Camarillo Springs Ranch	Open Space near horse boarding facility	No	Yes	Would permanently affect approximately 3,646 sf of open space adjacent to freeway under Alternative 3.
163018012	6881 Camarillo Springs Rd, Camarillo	Unknown	Orchards (mixed) and vineyards	Yes	Yes	Would permanently affect approximately 21,504 sf of orchard adjacent to Camarillo Springs Road under both build alternatives.
229015030	3900 Petit St, Camarillo	Kingdom Hall of Jehovah's Witnesses	Religious facility	Yes	Yes	Would permanently affect approximately 2,298 sf of parking lot under both build alternatives. No parking spaces would be permanently affected.
234002032	Camarillo	Agricultural Land	Agricultural Land	Yes	Yes	Would permanently affect approximately 10,643 sf of agricultural land adjacent to US 101 under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
N/A	Westpark Ct, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 600 sf under both build alternatives.
N/A	Flynn Rd/Carmen Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 680 sf under both build alternatives.
N/A	Las Posas Rd, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 748 sf under both build alternatives.
N/A	Petit St, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 2,509 sf under both build alternatives.
N/A	Flynn Rd/Carmen Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 2,525 sf under both build alternatives.
N/A	Arneill Rd, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 4,084 sf under both build alternatives.
N/A	Daily Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 7,384 sf under both build alternatives.
N/A	Calleguas Creek, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 11,502 sf under both build alternatives.
N/A	Springville Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 15,179 sf under both alternatives.
N/A	Revolon Slough, Ventura County	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 7,362 sf under both build alternatives.
N/A	Ventura Blvd, Oxnard	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 6,815 sf under both build alternatives.
N/A	Ventura Blvd, Oxnard	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 8,764 sf under both build alternatives.
N/A	Ventura Blvd between Del Norte Blvd and Rice Ave, Oxnard	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 15,625 sf under both build alternatives.
N/A	Newbury Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 36 sf under both build alternatives.
N/A	Old Conejo Rd	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 36 sf under both build alternatives.
N/A	Ventu Park Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 739 sf under both build alternatives.
N/A	Borchard Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would permanently affect approximately 14,387 sf under both build alternatives.
Temporary Construction Easements						
073012423	350 E Thompson Blvd, Ventura	Motel 6 Ventura	Motel	Yes	Yes	Would temporarily affect approximately 2,096 sf of the southern portion of the parcel under both build alternatives.
073012625	227 S California St, Ventura	Rip Curl	Retail	Yes	Yes	Would temporarily affect approximately 7,182 sf of the southern portion of the parcel under both build alternatives. Would temporarily affect 10 out of 20 parking spaces.
073012627	470 E Thompson Blvd, Ventura	Lu Ross Academy	Beauty School	Yes	Yes	Would temporarily affect approximately 2,882 sf of the southern portion of the parcel under both build alternatives. Would temporarily affect 29 parking spaces.
073013201	500 E Thompson Blvd, Ventura	Firestone Complete Auto Care	Auto Repair Shop	Yes	Yes	Would temporarily affect approximately 117 sf of the southern portion of the parcel under both build alternatives.
073013217	558 E Thompson Blvd, Ventura	Unknown	Commercial	Yes	Yes	Would temporarily affect approximately 1,531 sf of the southern portion of the parcel under both build alternatives.
073013218	536 E Thompson Blvd, Ventura	Turning Point Foundation	Commercial	Yes	Yes	Would temporarily affect approximately 2,153 sf of the southern portion of the parcel under both build alternatives.
073013219	Ventura	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 621 sf of the eastern portion of the parcel under both build alternatives.
073013415	708 E Thompson Blvd, Ventura	Best Western Plus Inn of Ventura	Hotel	Yes	Yes	Would temporarily affect approximately 62 sf of the south western portion of the parcel under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
073013420	298 S Chestnut St, Ventura	Amanzi Hotel	Hotel	Yes	Yes	Would temporarily affect approximately 8,293 sf of the south western and south eastern portions of the parcel under both build alternatives. Would temporarily affect 9 out of 19 parking spaces. Would temporarily restrict use of the on-site pool and spa.
073024014	Ventura	Railway land	Railway land	Yes	Yes	Would temporarily affect approximately 9,530 sf of railway land adjacent to US 101 under both build alternatives.
073026104	351 S Ash St, Ventura	Secret Parking Lot	Parking lot	Yes	Yes	Would temporarily affect approximately 7,005 sf of the southwestern portion of the parcel under both build alternatives. Would temporarily affect 14 parking spaces.
073026106	Ventura	Railway land	Railway land	Yes	Yes	Would temporarily affect approximately 1,180 sf of railway land adjacent to US 101 under both build alternatives.
073026204	851 Vista Del Mar Pl, Ventura	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 13,690 sf of the southern portion of the parcel under both build alternatives.
073028014	Ventura	Multi-residential (currently under construction)	Multi-residential	Yes	Yes	Would temporarily affect approximately 14,836 sf of the south western portion of the parcel under both build alternatives.
073028015	Ventura	Multi-residential (currently under construction)	Multi-residential	Yes	Yes	Would temporarily affect approximately 5,260 sf of the south western portion of the parcel under both build alternatives.
075036016	3300 Channel Dr, Ventura	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 375 sf of the eastern portion of the parcel under both build alternatives.
076001025	785 S Seaward Ave, Ventura	Commercial	Commercial	Yes	Yes	Would temporarily affect approximately 31 sf of the southern portion of the parcel under both build alternatives.
076001027	2300 Alessandro Dr, Ventura	Commercial	Commercial	Yes	Yes	Would temporarily affect approximately 83 sf of the western portion of the parcel under both build alternatives.
076001029	Ventura	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 555 sf of the southwestern portion of the parcel under both build alternatives.
076001031	Ventura	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 99 sf of the southeastern portion of the parcel under both build alternatives.
076002116	550 Sanjon Rd, Ventura	The Pierpont Inn	Hotel	Yes	Yes	Would temporarily affect approximately 53 sf of the southern portion of the parcel under both build alternatives.
079001027	Ventura	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 11,436 sf of the parcel under both build alternatives.
079021032	Ventura	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 155 sf of the eastern portion of the parcel under both build alternatives.
079028012	4221 E Main St, Ventura	Commercial	Commercial	Yes	Yes	Would temporarily affect approximately 673 sf of the northeastern portion of the parcel under both build alternatives.
079028020	4071 E Main St, Ventura	Lassens Natural Food & Vitamins	Commercial	Yes	Yes	Would temporarily affect approximately 2,919 sf of the northeastern portion of the parcel under both build alternatives. Would temporarily affect 5 out of 17 parking spaces.
079028025	4107 E Main St, Ventura	None (Vacant lot)	Commercial	Yes	Yes	Would temporarily affect approximately 2,329 sf of the northern portion of the parcel under both build alternatives.
080002002	Ventura	Railway land	Railway land	Yes	Yes	Would temporarily affect approximately 1,817 sf of railway land adjacent to US 101 under both build alternatives.
084016007	Ventura	Parking Lot	Parking Lot	Yes	Yes	Would temporarily affect approximately 2,131 sf of the eastern portion of the parcel under both build alternatives. Would temporarily affect 29 parking spaces.
132002044	Ventura	Nature Conservancy	Open Space	Yes	Yes	Would temporarily affect approximately 420 sf of the southwestern portion of the parcel under both build alternatives.
132009004	Ventura	Vacant	Vacant	Yes	Yes	Would temporarily affect approximately 373 sf of the southeastern portion of the parcel under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
132009012	Ventura	Vacant	Vacant	Yes	Yes	Would temporarily affect approximately 4,592 sf of the southern portion of the parcel under both build alternatives.
135030001	6619 Ventura Blvd, Ventura	None (Vacant lot)	None (Vacant lot)	No	Yes	Would temporarily affect approximately 1,373 sf of the southern portion of the parcel under Alternative 3.
135030002	6635 Ventura Blvd, Ventura	Sunshine Manufactured Homes	Manufactured Home Dealer	No	Yes	Would temporarily affect approximately 1,177 sf of the southern portion of the site under Alternative 3. May temporarily modify access to site.
135030019	6663 Ventura Blvd, Ventura	Dave Wilkes Transmissions and Fisher/Martin Automotive	Auto Repair Shops	No	Yes	Would temporarily affect approximately 1,117 sf of the southern portion of the site under Alternative 3. Would affect 4 out of 27 parking spaces and may temporarily modify access to site.
138004413	5663–5669 Valentine Rd, Ventura	Original Tommy's Hamburgers and Arco	Commercial	Yes	Yes	Would temporarily affect approximately 1,802 sf of the northern portion of the parcel under both build alternatives.
138023010	Ventura	Railway land	Railway land	Yes	Yes	Would temporarily affect approximately 43,961 sf of railway land adjacent to US 101 under both alternatives.
142006312	440 Occidental Dr, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 2,259 sf of the northern portion of the parcel under both build alternatives.
142015101	1301 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 717 sf of the northern portion of the parcel under both build alternatives.
142015102	1311 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 838 sf of the northern portion of the parcel under both build alternatives.
142015103	1321 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 857 sf of the northern portion of the parcel under both build alternatives.
142015104	1331 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 667 sf of the northern portion of the parcel under both build alternatives.
142015105	1341 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 666 sf of the northern portion of the parcel under both build alternatives.
142015106	1351 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 667 sf of the northern portion of the parcel under both build alternatives.
142015107	1361 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 670 sf of the northern portion of the parcel under both build alternatives.
142015108	1371 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 685 sf of the northern portion of the parcel under both build alternatives.
142015109	1401 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 697 sf of the northern portion of the parcel under both build alternatives.
142015110	1411 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 692 sf of the northern portion of the parcel under both build alternatives.
142015111	1421 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 738 sf of the northern portion of the parcel under both build alternatives.
142015112	1431 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,321 sf of the northern portion of the parcel under both build alternatives.
142015113	2310 Almanor St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 2,952 sf of the northern portion of the parcel under both build alternatives.
142015114	2300 Almanor St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 165 sf of the eastern portion of the parcel under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
142017201	1151 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,304 sf of the northern portion of the parcel under both build alternatives.
142017202	1155 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,652 sf of the northern portion of the parcel under both build alternatives.
142017203	2350 Miramonte Dr, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 865 sf of the northern portion of the parcel under both build alternatives.
142017229	2351 Snow Ave, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 3,231 sf of the northern portion of the parcel under both build alternatives. May temporarily modify access.
142018218	2367 Jardin Dr, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 2,394 sf of the northern portion of the parcel under both build alternatives.
142018219	2370 Jardin Dr, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 2,590 sf of the northern portion of the parcel under both build alternatives.
142018220	2364 Jardin Dr, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,582 sf of the northern portion of the parcel under both build alternatives.
142018222	1051 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,340 sf of the northern portion of the parcel under both build alternatives.
142018223	1111 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,350 sf of the northern portion of the parcel under both build alternatives.
142018224	1125 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,757 sf of the northern portion of the parcel under both build alternatives.
142018225	1135 Echo St, Oxnard	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,293 sf of the northern portion of the parcel under both build alternatives.
142021101	2401 N Rose Ave, Oxnard	Sam's Club	Commercial	Yes	Yes	Would temporarily affect approximately 2,066 sf of the western portion of the parcel under both build alternatives.
144013409	1740 Ventura Blvd, Oxnard	Red Lobster (Parking Lot)	Restaurant	Yes	Yes	Would temporarily affect approximately 6,908 sf of parking lot under both build alternatives. Would temporarily affect 29 spaces in a shared parking lot that contains approximately 150-200 spaces.
145017027	Oxnard	Santa Clara Parish Chapel (Parking Lot)	Place of Worship	Yes	Yes	Would temporarily affect approximately 1,269 sf of parking lot under both build alternatives. Would temporarily affect 2 spaces that contain 13 spaces.
145021238	633 Ventura Blvd, Oxnard	Dioji	Dog Boarding	Yes	Yes	Would temporarily affect 606 sf of the southwestern portion of the parcel under both build alternatives. May temporarily modify access.
145021243	633 Ventura Blvd, Oxnard	Vacant	Vacant	Yes	Yes	Would temporarily affect 1,334 sf under both build alternatives.
145021244	685 Ventura Blvd, Oxnard	Dunn-Edwards Paints - Oxnard	Paint Store	Yes	Yes	Would temporarily affect 1,517 sf under both build alternatives. May temporarily modify access to site.
145022108	811 Ventura Blvd, Oxnard	Re-Bath, Bathroom Remodeler (building), Crain Graphics, Comfort Zone Sleep Gallery, Re-Bath Pacific Coast, Aramsco & Empire Cleaning Supply, Vinyl Craft	Industrial/commercial buildings and parking spaces for property containing industrial/commercial buildings	Yes	Yes	Would temporarily affect approximately 5,902 sf of parking lot under both build alternatives. Would affect 14 out of 47 parking spaces in a shared parking lot and would affect illegal unmarked street parking along East Ventura Boulevard.
145022136	701 Ventura Blvd, Oxnard	Traffic Technologies	Industrial/commercial building	Yes	Yes	Would temporarily affect approximately 2,620 sf of parking lot and a storage building under both build alternatives. The storage building would need to be demolished and be reconstructed, either in part or in whole, on the same parcel.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
148001210	1326 Del Norte Rd, Camarillo, CA 93010	Ventura Harley Davidson	Motorcycle Dealership	Yes	Yes	Would temporarily affect 2,511 sf under both build alternatives.
148002011	Camarillo	Vacant	Vacant	Yes	Yes	Would temporarily affect 591 sf under both build alternatives.
149002113	4110 Ventura Blvd, Camarillo	Vacant	Vacant	Yes	Yes	Would temporarily affect 253 sf under both build alternatives.
149002123	Oxnard	Flood control basins and channels	Channel	Yes	Yes	Would temporarily affect approximately 3,211 sf of channel adjacent to US 101 under both build alternatives.
149002127	4040 Central Ave, Camarillo	Vacant	Vacant	Yes	Yes	Would temporarily affect 5,769 sf of the southeastern portion of the parcel under both build alternatives.
149010044	2631 Ventura Blvd, Oxnard	Country Squire Mobile Home Park	Residence	Yes	Yes	Would temporarily affect 3,530 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access to site.
149010046	2601 Ventura Blvd, Oxnard	Vacant	Vacant	Yes	Yes	Would temporarily affect 273 sf of the southeastern portion of the parcel under both build alternatives.
149010052	Oxnard	Country Squire Mobile Home Park	Vacant Lot	Yes	Yes	Would temporarily affect 456 sf of the southern portion of the parcel under both build alternatives.
157002007	Camarillo	Vacant Land/Ditch	Vacant Land/Ditch	No	Yes	Would temporarily affect approximately 2,741 sf along W Daily Drive and US 101 under Alternative 3.
157002008	Camarillo	City Property	Roadway	Yes	Yes	Would temporarily affect approximately 3,977 sf of roadway on W Daily Drive, adjacent to US 101 under both build alternatives.
157002020	Camarillo	Roadway	Roadway	Yes	Yes	Would temporarily affect approximately 10,440 sf of roadway on West Daily Drive under both build alternatives.
157020317	Camarillo	Vacant	Vacant	Yes	Yes	Would temporarily affect 1,964 sf of the southeastern portion of the parcel under both build alternatives.
160005037	4660 Mission Oaks Blvd, Camarillo	Adolfo Camarillo High School	School	Yes	Yes	Would temporarily affect approximately 6,902 sf of sports fields adjacent to US 101 under both build alternatives.
160005040	4660 Mission Oaks Blvd, Camarillo	Adolfo Camarillo High School	School	Yes	Yes	Would temporarily affect approximately 3,197 sf of sports fields adjacent to US 101 under both build alternatives.
160005041	Camarillo	Unknown	Undeveloped and unused land	Yes	Yes	Would temporarily affect approximately 12,811 sf of vacant land adjacent to US 101 under both alternatives. May temporarily modify access to site.
160009110	445 Pecana St, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 528 sf of the southeastern portion of the parcel under both build alternatives.
160011113	Camarillo	Unknown	Undeveloped land	Yes	Yes	Would temporarily affect approximately 741 sf of the southwestern portion of the parcel under both build alternatives.
162003202	2071 Ventura Blvd, Camarillo	Quik & Ezy	Commercial	Yes	Yes	Would temporarily affect approximately 970 sf of the northern portion of the parcel under both build alternatives.
162003203	2083 Ventura Blvd, Camarillo	Commercial	Commercial	Yes	Yes	Would temporarily affect approximately 1,945 sf of the northern portion of the parcel under both build alternatives.
162003205	2011 Ventura Blvd, Camarillo	Ventura Professional	Commercial	Yes	Yes	Would temporarily affect approximately 1,941 sf of the northern portion of the parcel under both build alternatives. Would temporarily affect 2 parking spaces.
162003208	Camarillo	Sushi Planet Camarillo (parking lot)	Commercial	Yes	Yes	Would temporarily affect approximately 947 sf of the northern portion of the parcel under both build alternatives. Would temporarily affect 8 parking spaces.
162003209	2001 Ventura Blvd, Camarillo	Sushi Planet Camarillo	Commercial	Yes	Yes	Would temporarily affect approximately 1,684 sf of the northern portion of the parcel under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
162003210	Camarillo	Commercial	Commercial	Yes	Yes	Would temporarily affect approximately 16 sf of the northern portion of the parcel under both build alternatives.
162003414	2193 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 324 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access to site.
162003415	2179 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 596 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access to site.
162003416	2165 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 670 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access to site.
162003417	2151 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 735 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access.
162003418	2135 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 795 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access.
162003419	2121 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 802 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access.
162003420	2107 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 787 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access.
162003421	2087 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 773 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access.
162003422	2073 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 758 sf of the southern portion of the parcel under both build alternatives. May temporarily modify access.
162003423	2047 Daily Dr, Camarillo	Residential Property	Residence	Yes	Yes	Would temporarily affect approximately 1,271 sf of the southern portion of the parcel under both build alternatives.
162004066	2435 Ventura Blvd, Camarillo	Twisted Oak Tavern	Commercial	Yes	Yes	Would temporarily affect approximately 24 sf of the northern portion of the parcel under both build alternatives.
162004067	2315 Ventura Blvd, Camarillo	Chapel City Church	Religious facility	Yes	Yes	Would temporarily affect 7,511 sf along the northern boundary of the property under both build alternatives. Would temporarily affect the outdoor playground of the church.
162004072	Camarillo	Commercial	Commercial	Yes	Yes	Would temporarily affect 2,595 sf along the northern boundary of the property under both build alternatives.
162004075	Camarillo	Parking lot	Parking lot	Yes	Yes	Would temporarily affect 117 sf along the northern boundary of the property under Build Alternative 2 and 443 sf under Build Alternative 3. Both alternatives would temporarily affect 14 parking spaces out of 22 parking spaces.
162006005	Camarillo	Railway land	Railway land	Yes	Yes	Would temporarily affect 2,813 sf along the northern boundary of the property under both build alternatives.
162006017	Camarillo	Railway land	Railway land	Yes	Yes	Would temporarily affect 1,408 sf along the northern boundary of the property under both build alternatives.
162006019	Camarillo	Railway land	Railway land	Yes	Yes	Would temporarily affect 1,932 sf of railway land adjacent to US 101 under both build alternatives.
162017122	2911 Petit St, Camarillo	Commercial	Commercial	Yes	Yes	Would temporarily affect approximately 1,027 sf commercial space adjacent to US 101 under Alternative 2 and approximately 1,625 sf of space adjacent to US 101 under Alternative 3.
162019016	Camarillo	In N Out (drive-thru)	Commercial	Yes	Yes	Would temporarily affect 1,068 sf along the northwestern boundary of the property under both build alternatives. May temporarily affect the drive-thru of the site.
162019020	1316 Ventura Blvd, Camarillo	In N Out	Commercial	Yes	Yes	Would temporarily affect approximately 57 sf of under Alternative 2 and approximately 7,384 sf under Alternative 3.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
163018002	6968 E Camarillo Springs Rd, Camarillo	Camarillo Grove Park	Park	Yes	Yes	Would temporarily affect approximately 2,043 sf of open space adjacent to US 101 under Alternative 2 and approximately 8,856 sf of open space adjacent to US 101 under Alternative 3.
163018005	Camarillo	Open Space	LCA Pasture and Range Land	Yes	Yes	Would temporarily affect approximately 15,555 sf of open space adjacent to US 101 under Alternative 2 and 35,345 of open space adjacent to US 101 under Alternative 3.
163018006	Camarillo	Open Space	Open Space	Yes	Yes	Would temporarily affect approximately 463 sf of open space adjacent to US 101 under Alternative 2.
163018009	202 Camarillo Grove Rd, Camarillo	Camarillo Springs Ranch	Open Space near horse boarding facility	Yes	Yes	Would temporarily affect approximately 336 sf of open space adjacent to US 101 under Alternative 2 and 8,013 sf of open space adjacent to US 101 under Alternative 3.
163018012	6881 Camarillo Springs Rd, Camarillo	Unknown	Orchards (mixed) and vineyards	Yes	Yes	Would temporarily affect approximately 11,006 sf of orchard adjacent to Camarillo Springs Road under both build alternatives.
165001075	1075 E Daily Dr, Camarillo	Griffin Family Funeral Chapels	Funeral home	Yes	Yes	Would temporarily affect approximately 2,172 sf along southern portion of the site under both build alternatives. May temporarily modify access.
213001134	2001 Lockwood St, Oxnard	CarMax Auctions	Auto Auction	Yes	Yes	Would temporarily affect approximately 7,046 sf of a drainage ditch in the northern portion of the property along US 101 under both build alternatives.
213005202	2100 Solar Dr, Oxnard	Medical Office	Medical Office	Yes	Yes	Would temporarily affect approximately 275 sf along northwestern portion of the site under both build alternatives.
213005208	Oxnard	Parking lot	Parking lot	Yes	Yes	Would temporarily affect approximately 3,964 sf along the northern portion of the site under both build alternatives. Both alternatives would temporarily affect 18 parking spaces out of 123 parking spaces.
213005209	2341 Lockwood St, Oxnard	Outback Steakhouse	Restaurant	Yes	Yes	Would temporarily affect approximately 4,091 sf along the northern portion of the site under both build alternatives.
213005210	2351 Lockwood St, Oxnard	Laurus College – Oxnard	School	Yes	Yes	Would temporarily affect approximately 4.990 sf along the northern portion of the site under both build alternatives. Both alternatives would temporarily affect 15 parking spaces out of 73 parking spaces.
213009010	Outlet Center Dr, Oxnard	None (Vacant lot)	None (Vacant lot)	Yes	Yes	Would temporarily affect approximately 6,568 sf of vacant land in the northern portion of the property along US 101 under both build alternatives.
213009026	2000 Outlet Center Dr, Oxnard	The Palms Market Place	Business Park	Yes	Yes	Would temporarily affect approximately 11,890 sf of vacant land in the northern portion of the property along US 101 under both build alternatives.
216003005	Oxnard	Flood control basins and channels	Channel	Yes	Yes	Would temporarily affect approximately 4,970 sf of a channel along US 101 under both build alternatives.
216004027	Oxnard	Flood control basins and channels	Channel	Yes	Yes	Would temporarily affect approximately 19,688 sf of a channel along US 101 under both build alternatives.
216004052	Oxnard	Flood control basins and channels	Channel	Yes	Yes	Would temporarily affect approximately 9,180 sf of a channel along US 101 under both build alternatives.
229013001	Camarillo	Unknown	Nursery	Yes	Yes	Would temporarily affect approximately 23,188 sf of land in the northern portion of the property along US 101 under both build alternatives. May displace some nursery operations.
229015030	3900 Petit St, Camarillo	Kingdom Hall of Jehovah's Witnesses	Religious facility	Yes	Yes	Would temporarily affect approximately 14,631 sf of building and parking lot under both build alternatives. Would temporarily affect 16 out of 55 spaces. May temporarily modify access. All spaces would be restored after construction.
229015043	Camarillo	Flood control basins and channels	Channel	Yes	Yes	Would temporarily affect approximately 5,293 sf of channel under both build alternatives.
229015047	Camarillo	Flood control basins and channels	Channel	Yes	Yes	Would temporarily affect approximately 3,194 sf of land containing a walkway along the western bank of the channel under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
234002032	Camarillo	Agricultural Land	Agricultural Land	Yes	Yes	Would temporarily affect approximately 37,663 sf of agricultural land adjacent to US 101 under both build alternatives.
234022003	Camarillo	Roadway	Roadway	Yes	Yes	Would temporarily affect approximately 2,919 sf along Ridge View Street under both alternatives.
525002044	18 W Thousand Oaks, Thousand Oaks	Ventura County Credit Union	Bank	Yes	Yes	Would temporarily affect approximately 168 sf of land in the western portion of the property along US 101 under both build alternatives.
526011014	1200 W Hillcrest Dr, Thousand Oaks	Planned Parenthood	Medical Facility	Yes	Yes	Would temporarily affect approximately 363 sf of land in the southeastern portion of the property along US 101 under both build alternatives.
526018004	Thousand Oaks	Flood control basins and channel	Channel	Yes	Yes	Would temporarily affect approximately 17,462 sf of channel adjacent to US 101 under both build alternatives.
662001003	Thousand Oaks	Unknown/ Undeveloped	Unknown	Yes	Yes	Would temporarily affect approximately 6,142 sf of land in the northern portion of the property along US 101 under both build alternatives.
662009121	Thousand Oaks	City Property	Unknown	Yes	Yes	Would temporarily affect approximately 1,847 sf of land in the eastern portion of the property along US 101 under both build alternatives.
663009316	600 W Hillcrest Dr, Thousand Oaks	Sprouts Farmers Market	Commercial	Yes	Yes	Would temporarily affect approximately 669 sf of land in the southwestern portion of the property along US 101 under both build alternatives.
667011304	Thousand Oaks	Flood control basins and channel	Channel	Yes	Yes	Would temporarily affect approximately 4,316 sf of channel adjacent to US 101 under both build alternatives.
667011305	Thousand Oaks	Flood control basins and channel	Channel	Yes	Yes	Would temporarily affect approximately 3,955 sf of channel adjacent to US 101 under both build alternatives.
681005005	299 S Moorpark Rd, Thousand Oaks	Los Robles Greens	City Property - Public Golf Course	Yes	Yes	Would temporarily affect approximately 17,360 sf of land in the northern portions of the property along US 101 under both build alternatives.
682022101	400 Windtree Ave, Thousand Oaks	Walnut Grove Park	Park	Yes	Yes	Would temporarily affect approximately 212 sf of land in the northern portions of the property along US 101 under both build alternatives.
682024040	401 Ronel Ct, Newbury Park	Ride on Therapeutic Horsemanship	Park	Yes	No	Would temporarily affect approximately 353 sf of land in the northern portions of the property along US 101 under Build Alternative 2.
682025002	400 Windtree Ave, Thousand Oaks	Walnut Grove Park	Park	Yes	Yes	Would temporarily affect approximately 5,288 sf of land in the northern portions of the property along US 101 under both build alternatives.
N/A	Thousand Oaks Blvd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 9,022 sf under both build alternatives.
N/A	Lynn Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 9,707 sf under both build alternatives.
N/A	W Hillcrest Dr, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 827 sf under both build alternatives.
N/A	Ventu Park Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 23,293 sf under both build alternatives.
N/A	Ventu Park Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 4,125 sf under both build alternatives.
N/A	Borchard Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 66,701 sf under both build alternatives.
N/A	Borchard Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 148 sf under both build alternatives.
N/A	W Wendy Dr, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,108 sf under both build alternatives.
N/A	W Wendy Dr, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 9,525 sf under both build alternatives.
N/A	Old Conejo Rd, Thousand Oaks	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 4,995 sf under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
N/A	Adjacent to 234-024-120, Camarillo	Unknown	Unknown	Yes	No	Would temporarily affect approximately 111 sf under Alternative 2.
N/A	Paquita St, Camarillo	Unknown	Unknown	Yes	No	Would temporarily affect approximately 557 sf under Alternative 2.
N/A	Camarillo Springs Rd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 7,818 sf under both build alternatives.
N/A	Adjacent to 234-022-003, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 434 sf under both alternatives.
N/A	Camino Ruiz, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 22,239 sf under both build alternatives.
N/A	Calleguas Creek, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 49,706 sf under Build Alternative 2 and 56,132 sf under Build Alternative 3.
N/A	Petit St, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 14,542 sf under both build alternatives.
N/A	Westpark Ct, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 680 sf under both build alternatives.
N/A	N Dawson Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,504 sf under both build alternatives.
N/A	Lewis Rd/LE3, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 4,463 sf under both build alternatives.
N/A	Lewis Rd/LE3, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,277 sf under both build alternatives.
N/A	Flynn Rd/Carmen Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 12,536 sf under Alternative 2 and 10,097 sf under Alternative 3.
N/A	Fir St, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 7,266 sf under both build alternatives.
N/A	Arneill Rd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 82,226 sf under both build alternatives.
N/A	Flynn Rd/Carmen Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 27,444 sf under both build alternatives.
N/A	Carmen Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 21,243 sf under both build alternatives.
N/A	E Ventura Blvd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,531 sf under both build alternatives.
N/A	E Ventura Blvd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 5,304 sf under both build alternatives.
N/A	Las Posas Rd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 7,450 sf under both build alternatives.
N/A	Overland Rd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,903 sf under both build alternatives.
N/A	Ventura Blvd	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 487 sf under both build alternatives.
N/A	Springville Dr, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 82,592 sf under both alternatives.
N/A	Ventura Blvd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 15,034 sf under both build alternatives.
N/A	Ventura Blvd, Camarillo	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 47,955 sf under both build alternatives.
N/A	Revolon Slough, Ventura County	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 24,407 sf under both build alternatives.
N/A	Camino Ave, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 67 sf under both build alternatives.
N/A	Ventura Blvd between Del Norte Blvd and Rice Ave, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 54,221 sf under both build alternatives.
N/A	Ventura Blvd, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 11,704 sf under both build alternatives.
N/A	Ventura Blvd, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 36,242 sf under both build alternatives.
N/A	N Rose Ave, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 105 sf under both build alternatives.
N/A	Echo St, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 2,149 sf under both build alternatives.

APN	Address	Name	Type	Impact from Build Alternative 2?	Impact from Build Alternative 3?	Anticipated Project Impact
N/A	Echo St, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,585 sf under both build alternatives.
N/A	Balboa St, Oxnard	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 6,638 sf under both build alternatives.
N/A	S Victoria Ave, San Buenaventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 5,819 sf under both build alternatives.
N/A	Johnson Dr, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 282 sf under both build alternatives.
N/A	Valentine Rd, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 17,975 sf under both build alternatives.
N/A	College Dr, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 464 sf under both build alternatives.
N/A	Harbor Blvd, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 19,515 sf under both build alternatives.
N/A	Ash St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 2,593 sf under both build alternatives.
N/A	S Fir St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 884 sf under both build alternatives.
N/A	S Chestnut St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 3,222 sf under both build alternatives.
N/A	S California St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 388 sf under both build alternatives.
N/A	S California St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 552 sf under both build alternatives.
N/A	S Oat St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 1,625 sf under both build alternatives.
N/A	S Palm St, Ventura	Unknown	Unknown	Yes	Yes	Would temporarily affect approximately 348 sf under both build alternatives.

Source: Caltrans 2021.
LCA = Land Conservation Act; N/A = not applicable; sf = square feet

Table 2.2.8-2. Parking, Access, and Circulation Impacts

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	Build Alternative 3	Build Alternative 2	Build Alternative 3	Build Alternative 2	Build Alternative 3
Permanent Impacts								
135030019	Dave Wilkes Transmissions and Fisher/Martin Automotive 6663 Ventura Blvd, Ventura	Auto repair shops	No impacts.	Potential for permanent impact on one parking space. Per the City of Ventura Municipal code, an auto repair shop requires one space per 300 sq ft of gross floor area. This equates to 24 spaces. There are 27 existing parking spaces; therefore, there is sufficient parking for the property in accordance with the municipal code even with the loss of one parking spot.	No impacts.	Parcel has one in and one out driveway. Both driveways would be affected. Site access would need to be modified.	No impacts.	Once site access is modified, circulation will need to be evaluated.
144013409	Red Lobster (Parking Lot) 1740 Ventura Blvd, Oxnard	Restaurant	Potential for permanent impacts on 21 parking spaces in a shared parking lot that contains 150–200 spaces. The City of Oxnard Municipal Zoning Code Chapter 16 requires 51 permanent parking spaces or the upper limit of one space per 180 sf of gross floor area. There are 56 existing parking spaces available for the restaurant. To minimize parking space impacts, nine parallel parking spaces could be implemented. In addition, the restaurant is in mixed-use plaza and shared parking may be suitable to accommodate the additional seven parking spaces required.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
145022108	Crain Graphics, Comfort Zone Sleep Gallery, Re-Bath Pacific Coast, Aramsco & Empire Cleaning Supply, Vinyl Craft	Industrial/commercial buildings	Potential for permanent impacts on 13 parking spaces at the Comfort Zone Sleep Gallery and one parking space at the	Same as Build Alternative 2.	All three driveway access points would be permanently affected. New access points would be constructed.	Same as Build Alternative 2.	The project would affect the existing access points, which would alter vehicle entry and exit patterns. New access	Same as Build Alternative 2.

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**
	811 Ventura Blvd, Oxnard		Re-Bath Pacific Coast/Vinyl Craft. The City of Oxnard Municipal Zoning Code Chapter 16 requires 16 permanent parking spaces or one space per 300 feet of gross floor area for retail not located in a shopping center. There are 23 existing parking spaces for Comfort Zone Sleep Gallery. It is anticipated that 12 parking spaces affected by the project could be re-established with enough drive aisle width for turnaround in the final condition. At Re-Bath Pacific Coast/Vinyl Craft, the one affected parking space could be minimized by allowing parallel parking at the property wall, east of the building.				points would need to be constructed to provide site circulation.	
145022136	Traffic Technologies, Total Barricade Services 701 Ventura Blvd, Oxnard	Industrial/commercial building	No impacts.	Same as Build Alternative 2.	One of two driveways would be affected and would be reconstructed.	Same as Build Alternative 2.	Changes to vehicle circulation would be needed to maintain full site access.	Same as Build Alternative 2.
Temporary Impacts								
135030002	Sunshine Manufactured Homes 6635 Ventura Blvd, Ventura	Manufactured home dealer	No impacts.	Same as Build Alternative 2.	No impacts.	All two driveway access points would have temporary impacts. Site access would need to be modified. To minimize access impacts, construction work could be phased to build the driveway in separate stages by maintaining one existing driveway for both ingress/egress.	No impacts.	Same as Build Alternative 2.
073012625	Rip Curl 227 S California St, Ventura	Retail	Potential for temporary impacts on 10 out of 20 parking spaces. To minimize parking space impacts, the work zone	Same as Build Alternative 2.	One primary driveway on the east side of the parcel would be partially affected temporarily. In addition, a second	Same as Build Alternative 2.	There would be temporary impacts on on-site circulation. One-way access could be provided with the remaining 16-	Same as Build Alternative 2.

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**
			could be reduced for the standalone soundwall construction to permit pile driving. In addition, off-site parking could be implemented, per City of Ventura Code in Section 800, given legal agreements are confirmed.		access point and access road would be temporarily affected. Temporary driveway impacts may be minimized by coordinated phasing to allow on-site parking, i.e., pile driving and masonry construction overnight.		foot width of eastern driveway.	
073012627	Lu Ross Academy 470 E Thompson Blvd, Ventura	Beauty school	Potential for temporary impacts on 29 parking spaces. To minimize parking space impacts, the work zone could be reduced for the standalone soundwall construction to permit pile driving. In addition, off-site parking could potentially be implemented, per City of Ventura Code in Section 800, given legal agreements are confirmed.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
073013420	Amanzi Hotel 298 S Chestnut St, Ventura	Hotel	Potential for temporary impacts on seven parking spaces. In addition, two additional stalls outside of the parcel in the same lot would also have impacts. To minimize parking space impacts, the work zone could be reduced for the standalone soundwall construction to permit pile driving. In addition, off-site parking could be implemented, per City of Ventura Code in Section 800, given legal agreements are confirmed.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Potential for limited temporary impact on on-site circulation. Access and circulation will remain largely the same.
073026104	Secret Parking Lot 351 S Ash St, Ventura	Parking lot	Potential for temporary impacts on 14 unstriped gravel parking spaces. To minimize parking space impacts, the work	Same as Build Alternative 2.	There is no formal driveway to the gravel lot; the eastern portion of the lot is used for entry. There would be	Same as Build Alternative 2.	There would be temporary impacts on the southern half of the parking lot. Circulation could be modified to	Same as Build Alternative 2.

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**
			zone could be reduced for the standalone soundwall construction to permit pile driving. In addition, off-site parking could be implemented, per City of Ventura Code in Section 800, given legal agreements are confirmed.		temporary impacts on the southern half of the entry side but access to the northern half of the lot would be unaffected.		retain access to the northern portion of the parking area.	
079028020	Lassens Natural Food & Vitamins 4071 E Main St, Ventura	Commercial	Potential for temporary impacts on five parking spaces. To minimize parking space impacts, the work zone could be reduced for the standalone soundwall construction to permit pile driving. In addition, off-site parking could be implemented, per City of Ventura Code in Section 800, given legal agreements are confirmed.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
084016007	Parking Lot Ventura	Parking lot	Potential for temporary impacts on 29 parking spaces. To minimize parking space impacts, compact spaces could be provided because the TCE area for soundwall construction would be minimal.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
135030019	Dave Wilkes Transmissions and Fisher/Martin Automotive 6663 Ventura Blvd, Ventura	Auto repair shops	No impacts.	Potential for temporary impacts on four parking spaces. Per the City of Ventura Municipal code, an auto repair shop requires one space per 300 sq ft of gross floor area. This equates to 24 spaces. There are 27 existing parking spaces. Impacts on parking could be minimized for at least one parking space by allowing parallel parking or temporarily restriping	No impacts.	Parcel has one in and one out driveway. Both driveways would be temporarily affected. Site access would need to be modified. Construction phasing could allow one driveway ramp to be constructed at a time for both ingress/egress in the temporary condition.	No impacts	Once site access is modified, circulation will need to be evaluated.

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**
				to fit an additional parking space.				
144013409	Red Lobster (Parking Lot) 1740 Ventura Blvd, Oxnard	Restaurant	Potential for temporary impacts on 29 parking spaces in a shared parking lot that contains 150–200 spaces. The City of Oxnard Municipal Zoning Code Chapter 16 requires 51 permanent parking spaces or the upper limit of one space per 180 sf of gross floor area. There are 56 existing parking spaces available for the restaurant. To minimize parking space impacts, nine parallel parking spaces could be implemented. In addition, the restaurant is in mixed-use plaza and shared parking may be suitable to accommodate the additional seven parking spaces required.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
145017027	Santa Clara Parish Chapel (Parking Lot) Oxnard	Place of worship	Potential for temporary impacts on two parking spaces. To minimize parking impacts, the two temporary parking impacts could be converted to parallel parking or compact parking since the TCE area is minimal.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
145022108	Re-Bath, Bathroom Remodeler (building), Crain Graphics, Comfort Zone Sleep Gallery, Re-Bath Pacific Coast, Aramsco & Empire Cleaning Supply, Vinyl Craft 811 Ventura Blvd, Oxnard	Industrial/commercial buildings and parking spaces for property containing industrial/commercial buildings	Potential for temporary impacts on 14 parking spaces. Impacts on parking may be minimized through implementation of parallel parking, such as along the property wall, east of the Re-Bath Pacific Coast/Vinyl Craft building.	Same as Build Alternative 2.	All three driveway access points would be temporarily affected. New access points would be constructed.	Same as Build Alternative 2.	The project would impact the existing access points, which would alter vehicle entry and exit patterns. New access points would need to be constructed to provide site circulation.	Same as Build Alternative 2.

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**
145022136	Traffic Technologies 701 Ventura Blvd, Oxnard	Industrial/commercial building	There would be no temporary impacts on parking stalls. However, there would be temporary impacts on the parking lot.	Same as Build Alternative 2.	One of two driveways would be temporarily affected.	Same as Build Alternative 2.	Changes to vehicle circulation would be needed to maintain full site access.	Same as Build Alternative 2.
162003205	Ventura Professional 2011 Ventura Blvd, Camarillo	Commercial	Temporary impacts on two parking spaces and the northern portion of the parking lot. To minimize parking space impacts, the work zone could be reduced.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
162003208	Sushi Planet Camarillo (parking lot) Camarillo	Commercial	The northern portion of the parking lot would be temporarily affected. In addition, all eight parking stalls would be temporarily affected and would consist of seven parking stalls on the parcel and one adjacent to the parcel. To minimize parking space impacts, the work zone could be reduced. There are also public parking stalls located directly adjacent to the property that could be used during construction.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
162004075	Parking lot Camarillo	Parking lot	Temporary impacts on 14 parking spaces and the northern portion of the parking lot. The TCE area is minimal, and the parking lot has sufficient drive aisle width for temporary compact parking stalls to be installed to minimize parking impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
213005208	Parking lot Oxnard	Parking lot	Temporary impacts on 18 parking spaces and the northern portion of the parking lot. To minimize parking space impacts, construction of the soundwall could be phased to allow off-site parking in the adjacent	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.

APN	Name/Address	Type	Parking Impacts		Access Impacts		Circulation Impacts	
			Build Alternative 2	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**	**Build Alternative 2**	**Build Alternative 3**
			parcel by using different hours of operation or different peak hours of operation. This would require a parking study per City of Oxnard Code Section 16-651.					
213005210	Laurus College – Oxnard 2351 Lockwood St, Oxnard	School	Temporary impact on 15 parking spaces and the northern portion of the site. To minimize parking space impacts, construction of the soundwall could be phased to allow off-site parking in the adjacent parcel by using different hours of operation or different peak hours of operation. This would require a parking study per City of Oxnard Code Section 16-651.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.
229015030	Kingdom Hall of Jehovah's Witnesses 3900 Petit St, Camarillo	Religious facility	Temporary impacts on 16 parking spaces. To minimize parking space impacts, eight to nine parallel parking spaces could be implemented during construction.	Same as Build Alternative 2.	Potential impact on single in/out driveway access point. The temporary impact on the driveway could be minimized by reducing the work zone and phasing of the construction to allow ingress/egress.	Same as Build Alternative 2.	No impacts.	Same as Build Alternative 2.

Figure 2.2.8-1. Build Alternatives – Right of Way Impacts (Sheet 1 of 6)

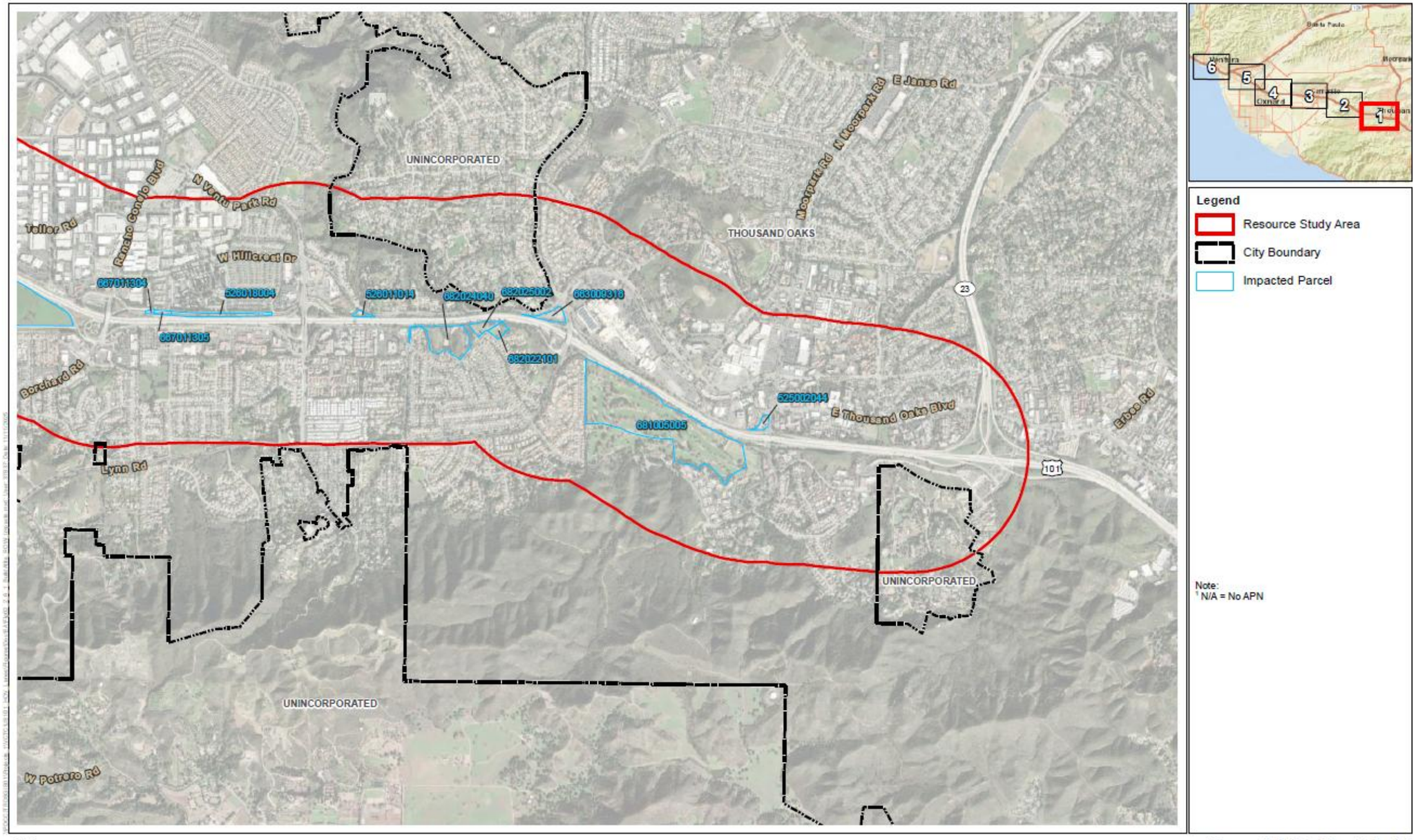
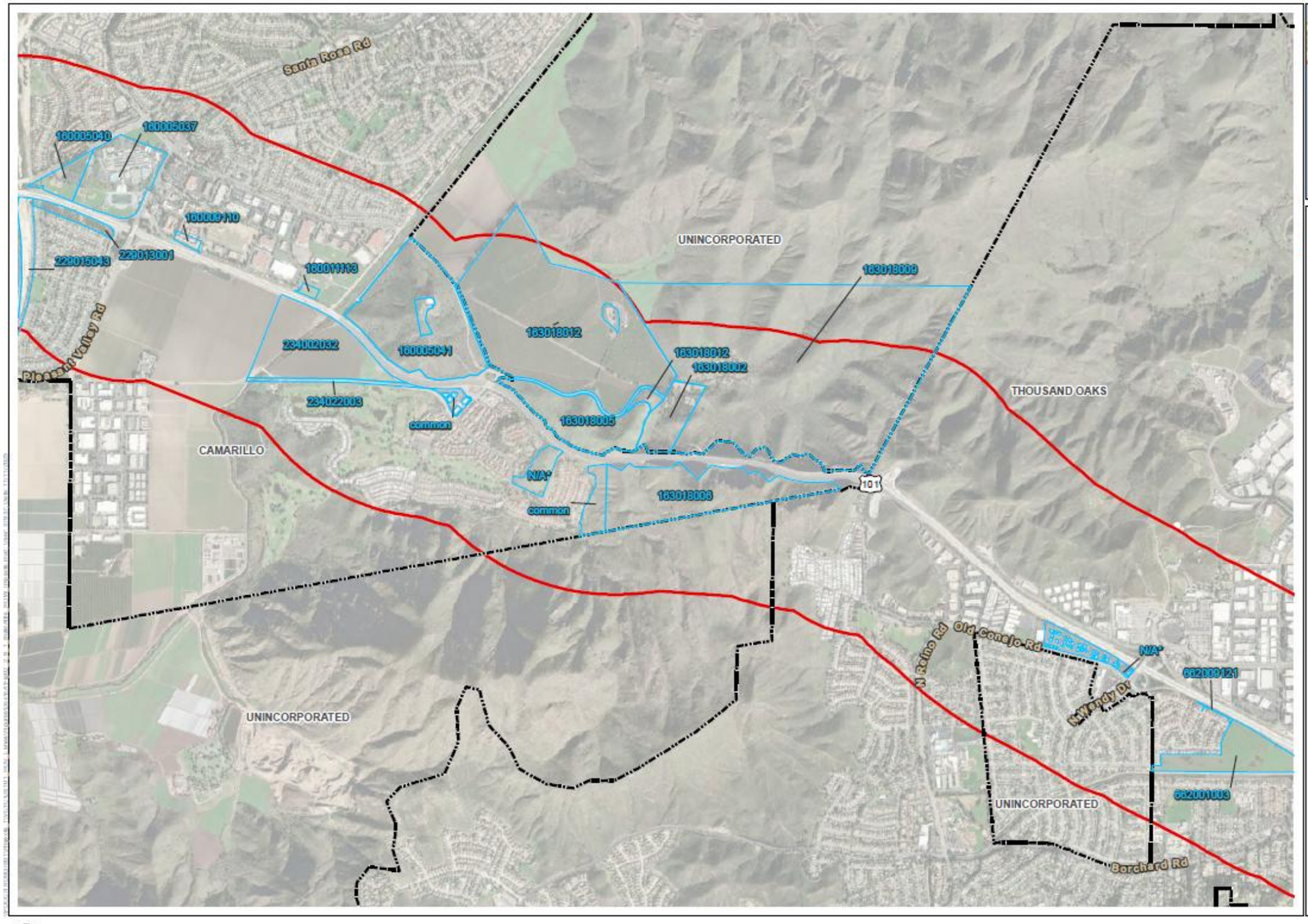
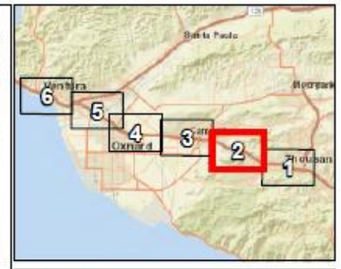


Figure 2.2.8-1, Sheet 1 of 6
Build Alternatives - ROW Impacts
US 101 Improvement Project

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Figure 2.2.8-1. Build Alternatives – Right of Way Impacts (Sheet 2 of 6)





Legend

- Resource Study Area
- City Boundary
- Impacted Parcel

Note:
¹ N/A = No APN

0 1,000 2,000 Feet
1:24,000

N

Source: County of Ventura (2020); ESRI

Figure 2.2.8-1, Sheet 2 of 6
Build Alternatives - ROW Impacts
US 101 Improvement Project

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Figure 2.2.8-1. Build Alternatives – Right of Way Impacts (Sheet 3 of 6)

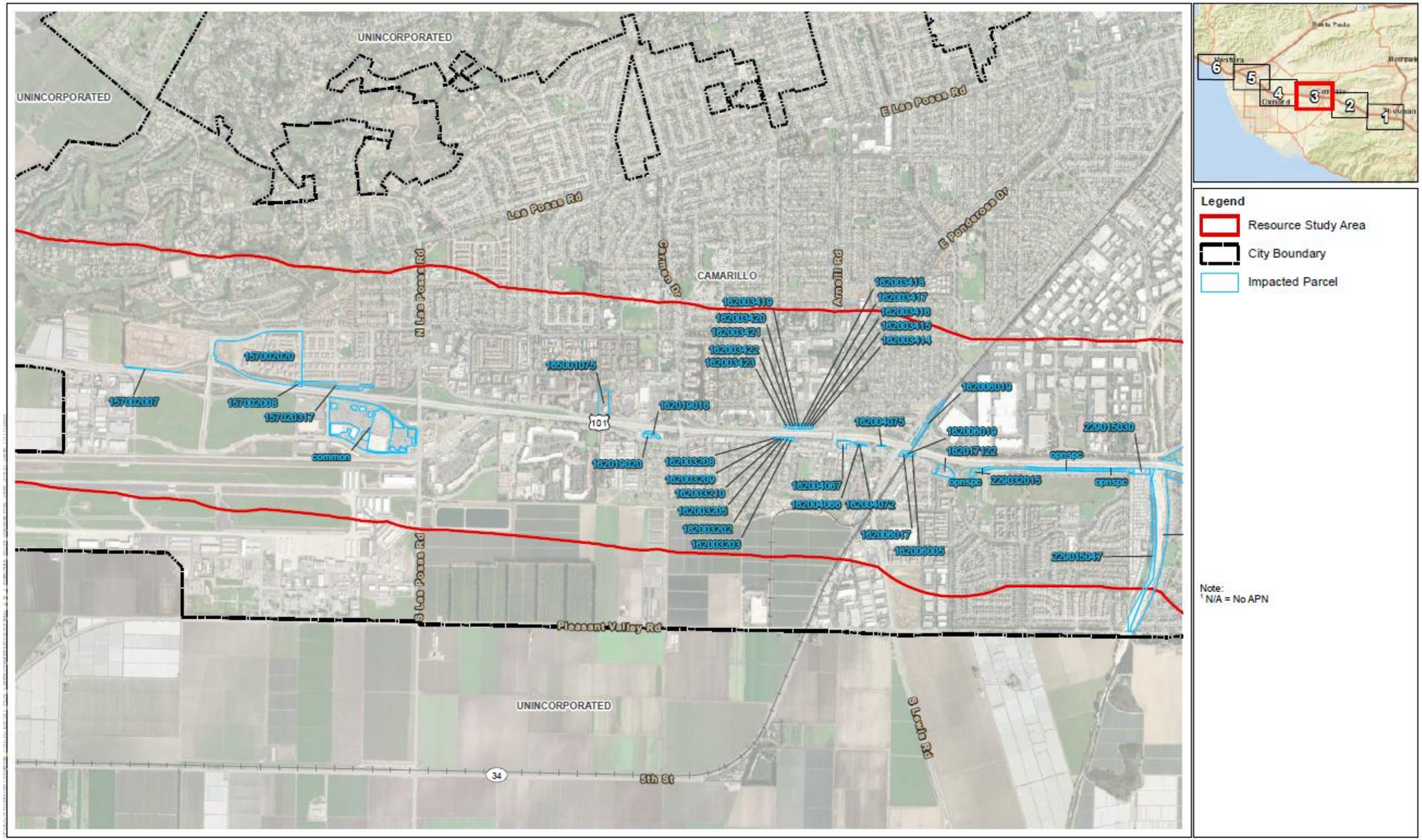


Figure 2.2.8-1, Sheet 3 of 6
Build Alternatives - ROW Impacts
US 101 Improvement Project

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Figure 2.2.8-1. Build Alternatives – Right of Way Impacts (Sheet 4 of 6)

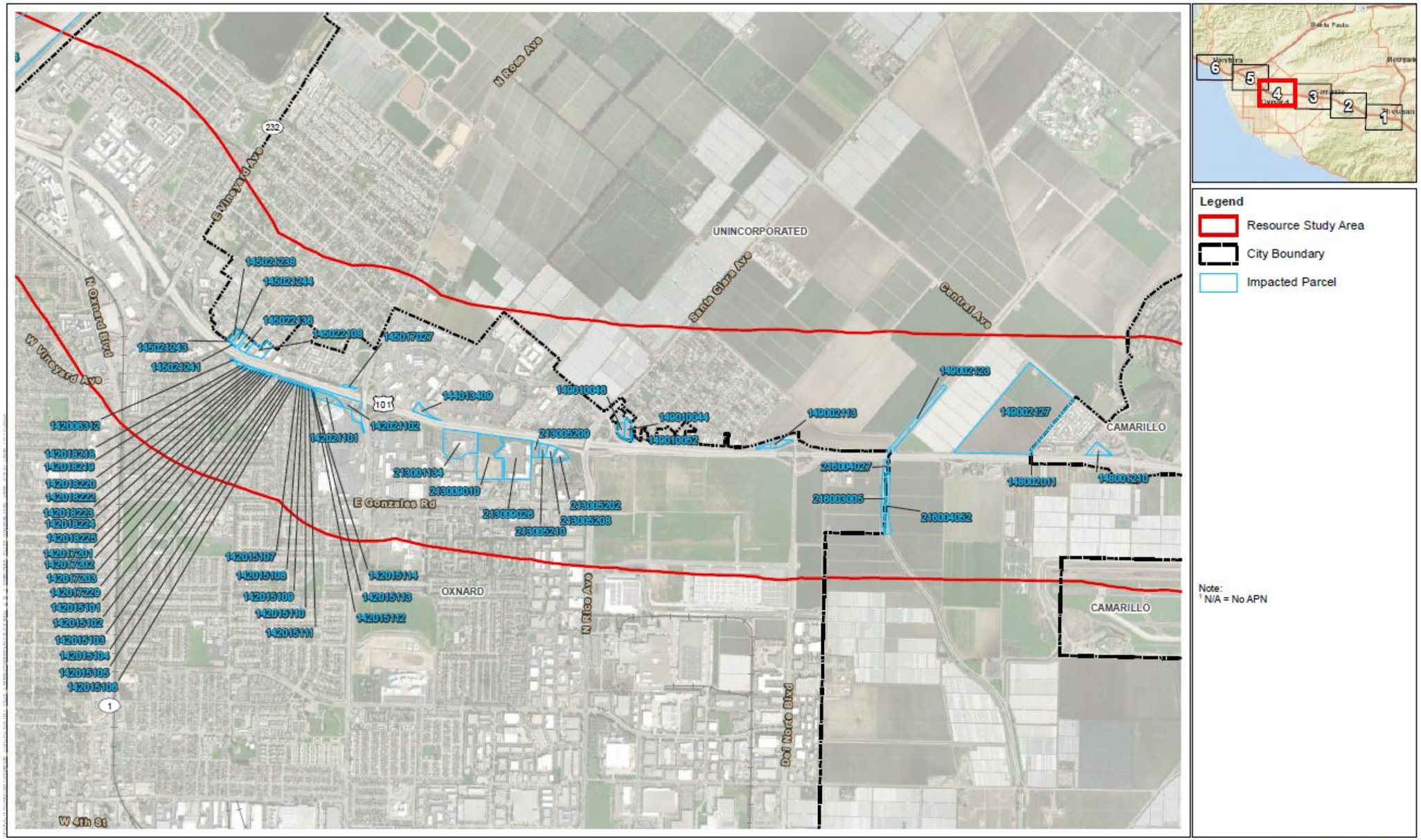


Figure 2.2.8-1, Sheet 4 of 6
Build Alternatives - ROW Impacts
US 101 Improvement Project

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Figure 2.2.8-1. Build Alternatives – Right of Way Impacts (Sheet 5 of 6)

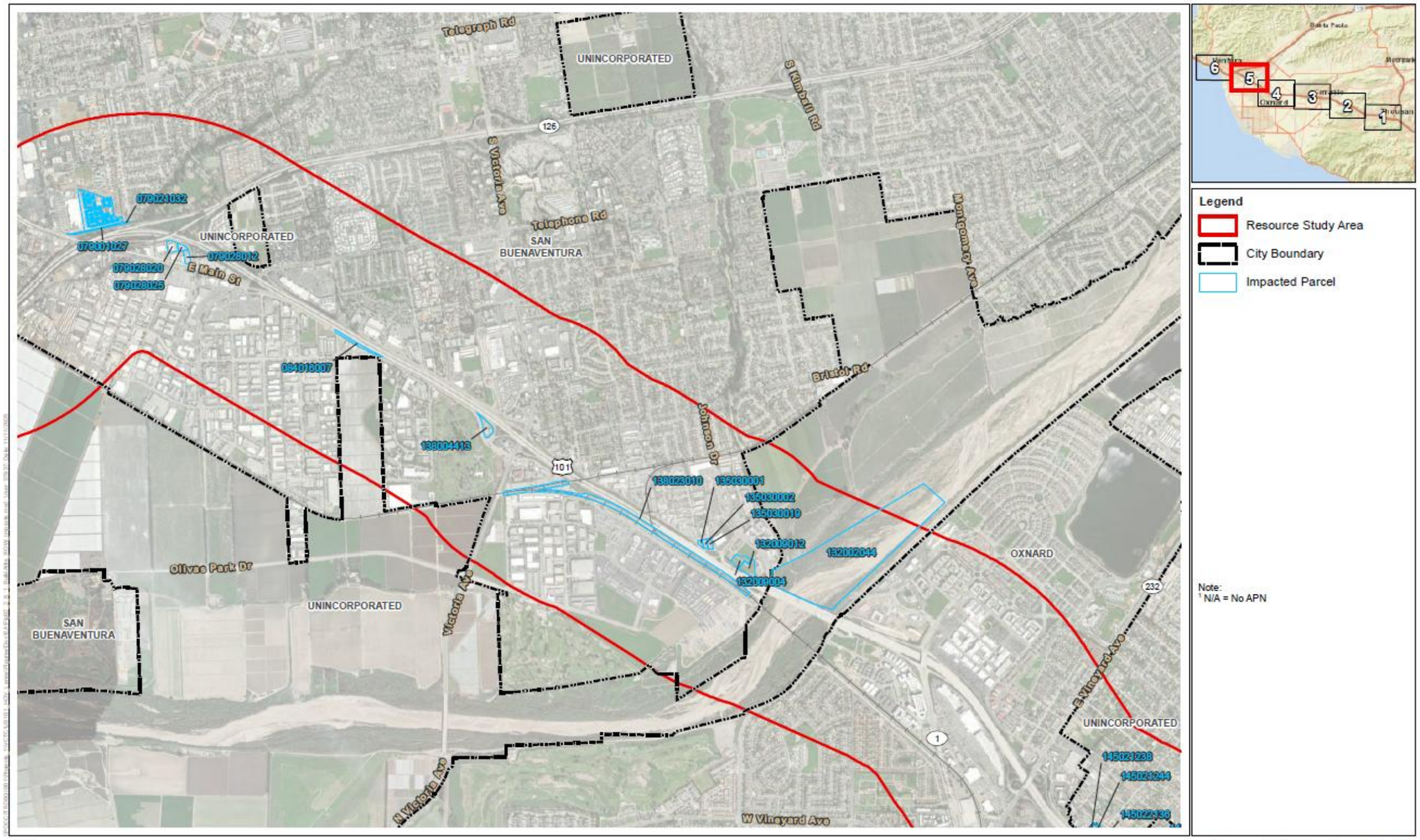


Figure 2.2.8-1, Sheet 5 of 6
Build Alternatives - ROW Impacts
US 101 Improvement Project

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Figure 2.2.8-1. Build Alternatives – Right of Way Impacts (Sheet 6 of 6)

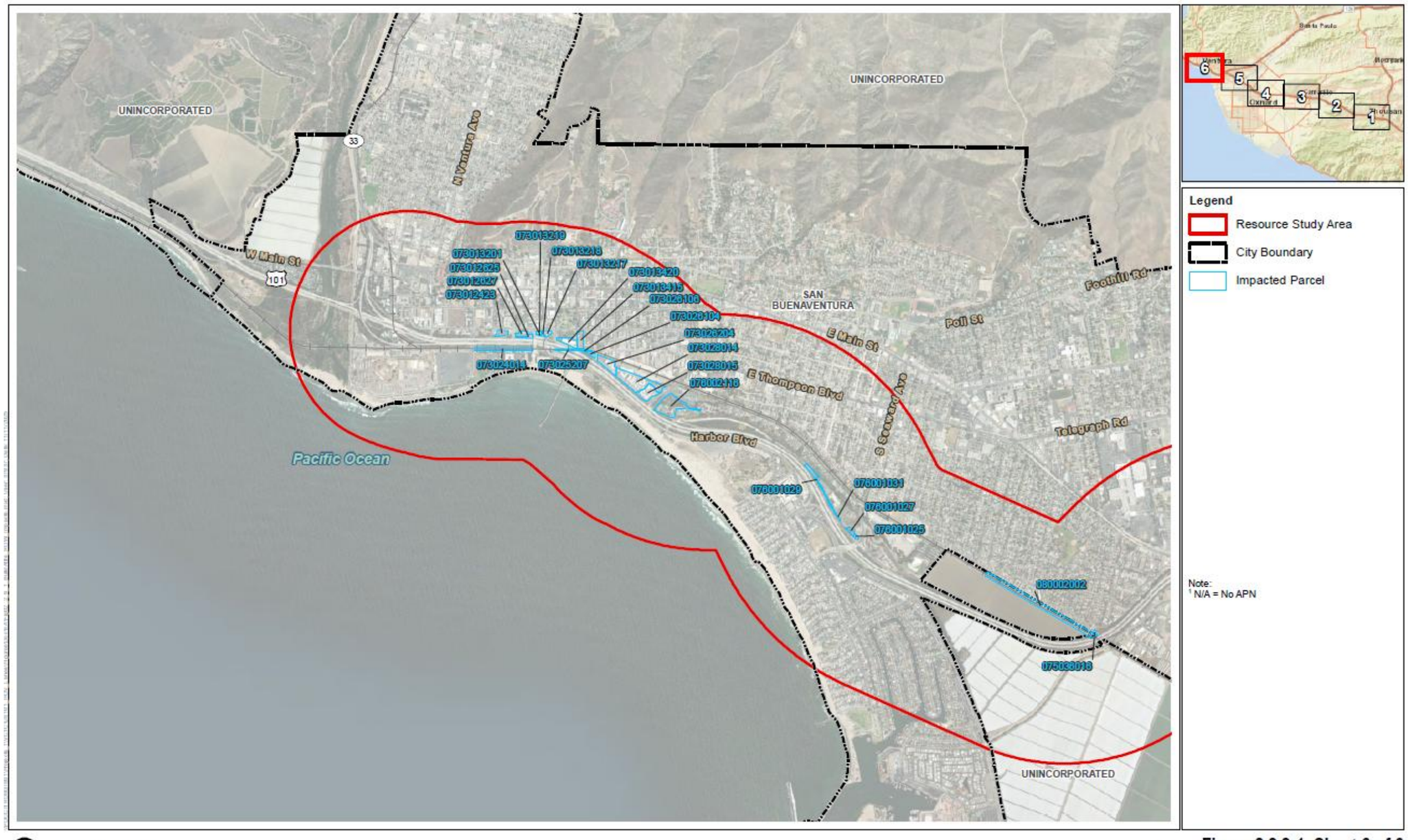


Figure 2.2.8-1, Sheet 6 of 6
Build Alternatives - ROW Impacts
US 101 Improvement Project

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2.2.8.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on land use would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

In addition to **TR-1** (see Section 2.2.10, *Transportation*), the following minimization measures are proposed to address impacts associated with the temporary displacement of a storage building operated by Traffic Technologies (APN 145022130) and the partial ROW acquisitions and parking spaces required by the project:

RW-1: Where acquisition and displacement of real property are unavoidable, or if any relocation become necessary, VCTC will ensure that the provisions of the Uniform Act (49 CFR Part 24), as amended, and the Caltrans ROW Manual will be followed.

COM-1: During construction, temporary impacts on parking will be minimized to the extent feasible. Construction staging and phasing will be designed to limit the duration and extent of parking space closures. Other parking impact minimization measures could include reducing the work zone area and implementing temporary parking by restriping or shifting to parallel parking.

COM-2: During final design, a parking study will be prepared to evaluate the extent of parking impacts and to identify feasible strategies to minimize such impacts.

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2.2.9 Utilities/Emergency Services

2.2.9.1 Affected Environment

This section is based on the *Community Impact Assessment* prepared for the project (Caltrans 2026) and discusses utilities and emergency services (including police, fire, and emergency medical services).

Emergency Services

Emergency services include law enforcement, crime prevention, preservation of public order, judicial court security, fire suppression, fire prevention, paramedic response, swift-water rescue, hazardous materials response, and other types of emergency services. Resources were organized into three categories with the following map identification labels: Emergency Services (E), Fire Stations (F), and Police Stations (PS). There are 11 emergency service facilities within the resource study area, including 4 law enforcement agencies, 5 fire stations, 1 hospital, and 1 medical transport facility. These facilities are listed in Table 2.2.9-1 and shown on Figure 2.2.7-2 in Section 2.2.7, *Community Character and Cohesion*.

Table 2.2.9-1. Emergency Services

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
Law Enforcement Services					
PS-1	Ventura Police Department	1425 Dowell Dr	Ventura	Police Station	10
PS-2	California Highway Patrol – Ventura	4656 Valentine Rd	Ventura	California Highway Patrol Station	10
PS-3	Ventura Police Department – Pacific View Mall Storefront	245 S Mills Rd	Ventura	Storefront	11
PS-4	Ventura Police Department – Westside Storefront Substation	110 North Olive St, Suite K	Ventura	Storefront Substation	12
Fire Protection Services					
F-1	Ventura County Fire Protection, District Station 30, Civic Center	325 W Hillcrest Dr	Thousand Oaks	Fire Station	1
F-2	Ventura County Fire Protection, District Station 35, Newbury Park	751 Mitchell Rd	Thousand Oaks	Fire Station	2
F-3	Ventura County Fire Protection, District Station 54, Camarillo	2160 Pickwick Dr	Camarillo	Fire Station	5
F-4	Ventura County Fire Protection, District Station 50	189 S. Las Posas Rd	Camarillo	Fire Station	6

Map ID[1]	Facility Name	Address	Jurisdiction	Description	Sheet
F-5	Ventura City Fire Department, Station 5	4225 E Main St	Ventura	Fire Station	11
Medical Facilities					
E-1	Saint John's Regional Medical Center	1600 N Rose Ave	Oxnard	Hospital	8
E-2	Lifeline Medical Transport Main Station	608 E Thompson Blvd	Ventura	Medical Transport	12

[1] Refer to Figure 2.2.7-2 for a map showing the location of each site.

Utilities

This subsection summarizes the major utilities found in the project area. There are approximately 139 utilities, including overhead and underground electrical lines; natural gas, oil, and gasoline pipelines; liquid oxygen, hydrogen, and nitrogen lines; telephone and other communication lines; television cable; water mains; and sewer lines. Most of the utilities run perpendicular to US 101 or along local streets; approximately 13 run parallel to US 101. Utilities in the project area are shown in Table 2.2.9-2.

Table 2.2.9-2. Utilities in the Project Area

Utility Owner	Utility Type(s)	Number of Affected Utilities
AT&T Distribution and Transmission	Telecom	2
California American Water	Water	5
Calleguas	Water	4
Camrosa Water District	Water, Sewer	4
Century Link	Telecom	5
Charter Communications	Telecom	20
City of Camarillo	Water, Sewer	13
City of Oxnard	Water	1
City of Thousand Oaks	Sewer	5
City of Ventura	Sewer	2
Cloverdale	Water	1
Crimson Pipeline	Crude Oil	1
Crown Castle	Telecom	2
Frontier	Telecom	24
Southern California Edison (SCE)	Electrical	22
Southern California Gas Company	Gas	22

Utility Owner	Utility Type(s)	Number of Affected Utilities
Sprint	Telecom	1
United Water	Water	3
Unknown	Water	1
Ventura County Water and Sanitation	Sewer	1

In the project area, water is supplied by various water districts, depending on location. The Ventura River watershed relies entirely on local water; no imported water is used in the watershed. Both the Casitas Municipal Water District and the City of Ventura hold entitlements to State Water Project water (5,000 and 10,000 acre-feet per year, respectively). Table 2.2.9-3, which is organized by jurisdiction, identifies the water districts in the project area.

Table 2.2.9-3. Water Districts

Jurisdiction	Districts
Thousand Oaks	Calleguas Municipal Water District from Metropolitan Water District of Southern California, Thousand Oaks Area Groundwater Basin District
Camarillo	Calleguas Municipal Water District from Metropolitan Water District of Southern California, Camrosa Water District, Crestview Mutual Water Company, and Pleasant Valley Mutual Water Company
Oxnard	Calleguas Municipal Water District and United Water Conservation District
Ventura	Casitas Municipal Water District, Ventura River/Foster Park, Mound District, Groundwater Basin District, Oxnard Plain Groundwater Basin District, and Santa Paula Groundwater Basin District

Solid Waste Disposal

The Integrated Waste Management Act of 1989 (Assembly Bill 939) requires jurisdictions to comply with waste reduction goals. The current (2016) County Integrated Waste Management Plan (CIWMP) calculated that landfills in the county have a capacity greater than the targeted 15 years. According to the CIWMP, during the fourth quarter of 2014 and the first three quarters of 2015, 101,506 tons of solid waste were disposed of and 65,047 tons were recycled, for a diversion rate of 39 percent. According to the 2014 annual report on the CIWMP, the unincorporated area in Ventura County had a diversion rate of 58 percent. Cities and counties within California are currently required to divert 50 percent of all solid waste through source reduction, recycling, and composting activities.

The Ventura County Integrated Waste Management Division operates several solid waste management systems, which comprise sanitary landfills, recycling centers, material recovery/transfer facilities, and energy recovery facilities. The two closest active landfills operated by the Ventura County Integrated Waste Management Division

are the Toland Road Landfill and Simi Valley Landfill and Recycling Center. In addition, two landfills outside Ventura County accept waste from the county.

2.2.9.2 Environmental Consequences

The direct and indirect effects of each alternative on emergency services and utilities are described in this section. The direct effects include those that could require the relocation of buildings or infrastructure as a result of the build alternatives. Direct short-term effects, such as loss of access, could also occur as a result of construction of the project. Indirect effects are those reasonably foreseeable effects that are caused by the build alternatives, such as increased solid waste disposal resulting from future highway maintenance activities. The discussion of effects is separated by temporary impacts (construction-related effects) and permanent impacts (operational effects).

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the project limits. Under the No-Build Alternative, the project would not be constructed, and there would be no impacts related to utilities or emergency services.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction-related effects are temporary impacts that would occur only during the construction phase of the project. Temporary impacts would be expected at any community facility within 500 feet of the project limits; typically, this is where staging areas and the majority of construction noise, air pollution, and dust would occur.

Emergency Services

Alternatives 2 and 3 would not result in partial acquisition or require a temporary construction easement (TCE) from any emergency service facility within 500 feet of the project limits. However, both build alternatives would involve construction activities that would require nearby temporary lane closures, ramp closures, rerouting of traffic, and other activities. Construction activities could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response-time goals. However, the affected emergency service response times associated with construction would be temporary, and detour routes would be provided. Alternate and detour route strategies would be further investigated during the final design phase (measure **UTIL-1**). In addition, measure **TR-1** (Section 2.2.10, *Transportation*) would require a Transportation Management Plan to be prepared, which would identify strategies to reduce potential impacts on access and traffic delays during construction. With incorporation of measures **UTIL-1** and **TR-1**, traffic-related impacts would be minimized by providing alternative routes and access points. No substantial temporary adverse impacts on emergency services would occur under Alternatives 2 and 3.

Utilities

Alternatives 2 and 3 would not involve the construction of new utility facilities for the purpose of the project or require existing facilities to be upgraded. Both build alternatives would protect in place, restore, or relocate any utilities that conflict with the construction of these alternatives. Measure **UTIL-2** would require close coordination with utility service providers to minimize impacts on utilities, and measure **TR-1** would require for a Transportation Management Plan to include a public outreach plan to inform surrounding communities of temporary service disruptions. As summarized in Table 2.2.9-2, there are several utilities in the project area and the greatest impact on utilities would be to telecommunications, electrical, natural gas, water, and sewer lines. During final design, a final determination would be made as to which of the identified utilities would be protected in place or would need to be relocated in consultation with the utility owner/provider and plans for the relocations would be incorporated in the final project design. Depending on the utility work to be conducted, protection in place, restoration, or relocation of utilities would generally be conducted prior to construction of Alternatives 2 or 3 to the maximum extent feasible and as conditions allow, to eliminate potential conflicts in advance. However, this utility work may extend over several years, due to locations of utilities and other site conditions. The utility work would be conducted in close coordination with the utility providers by the construction contractor. Implementation of measure **UTIL-2** would keep the community informed of potential utility disruptions in advance, which would allow the community time to plan for any disruptions that could result from temporary impacts on utilities. No substantial temporary adverse impacts on utilities would occur under Alternatives 2 and 3.

Because the California Integrated Waste Management Act of 1989 requires jurisdictions to divert waste, Alternatives 2 and 3 would be required to direct waste away from the landfills during the construction phase. However, remnant construction waste that is not redirected from the waste stream would be disposed of in one of the three nearby landfills or at the materials recovery facility.

Construction of either build alternative would result in the generation of debris, primarily concrete, steel, and asphalt. Some of this material is appropriate for landfill disposal; however, a high fraction of construction debris is typically recycled or reused because of its economic advantage over new materials. The fraction of debris deemed not suitable for recycling or reuse, consisting mostly of inert materials (e.g., metal, wood, brick, other building construction materials), could be disposed of in an inert landfill, thereby saving valuable sanitary landfill capacity in municipal landfills. Based on California Waste Management Board data, the two landfills, Toland Road Landfill and Simi Valley Landfill and Recycling Center, would have sufficient permitted capacity to accommodate the solid waste disposal needs of the build alternatives. No solid waste disposal impacts are expected. However, if the daily capacity is exceeded, other disposal options may be utilized, including transfer and export of the solid waste to another facility or transportation by truck or rail to an out-of-county landfill facility. Once construction is complete, the build alternatives would not generate solid waste. The disposal of solid waste material generated by Alternatives 2 or 3 would comply with all federal, state, and local statutes and regulations. No substantial temporary adverse impacts on landfills would under Alternatives 2 and 3.

Permanent Impacts

Emergency Services

Alternatives 2 and 3 would increase the overall traffic capacity of the corridor, allowing for greater vehicular throughput during peak travel periods and, as a result, would provide operational benefits for emergency vehicles. Once operational, emergency service providers would be able to use the HOV/Express Bus Lanes to serve communities, which may result in enhanced response times during emergencies. Alternatives 2 and 3 are not expected to increase crime rates and, therefore, are not expected to require additional law enforcement or fire protection services in the resource study area. This is because the project involves an improvement of an existing transportation facility and does not propose new land use types. In addition, Alternatives 2 and 3 would not require partial or full acquisition of police stations, fire stations, hospitals, or medical facilities. Access to police stations, fire stations, hospitals, and medical facilities in the resource study area is not anticipated to be affected after completion of construction. No substantial permanent adverse impacts on emergency services would occur under Alternatives 2 and 3.

Utilities

Alternatives 2 and 3 would not result in permanent impacts on utilities.

2.2.9.3 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on utilities or emergency services would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

In addition to **TR-1** (see Section 2.2.10, *Transportation*), the following avoidance and minimization measures are proposed to address temporary impacts on access, traffic delays, and utility disruptions.

UTIL-1: Alternate and Detour Route Strategies. During the final design phase, VCTC will develop alternate and detour route strategies for the contractor to implement during construction. These strategies include street/intersection improvements (e.g., widening, pavement rehabilitation, removal of median) to provide added capacity for detour traffic; signal improvements; adjustments to signal timing and/or signal coordination to increase vehicle throughput, improve traffic flow, and optimize intersection capacity; turn restrictions at intersections and roadways to reduce congestion and improve safety; and parking restrictions on alternate and detour routes during work hours to increase capacity, reduce traffic conflicts, and improve access.

UTIL-2: Coordinate with Utility Service Providers. During final design, VCTC will coordinate with utility service providers to ensure that potential utility disruptions would not adversely affect customer service or utility operations.

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2.2.10 Transportation

2.2.10.1 Regulatory Setting

This section discusses effects on transportation and circulation resulting from the project, including single-occupancy vehicle traffic, high-occupancy vehicle traffic, mass transit, and active transportation opportunities, both during construction (construction impacts) and after completion of the project (long-term or operational impacts).

Effects on transportation are analyzed differently under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). This section of the document focuses on the travel forecasting required by federal laws related to the general design of federal-aid highways and interstate facilities (23 United States Code [USC] 109) as well as regulations related to air quality conformity (40 Code of Federal Regulations [CFR] 93). The method of forecasting included in this section relies on travel demand models to predict future traffic data, including vehicle speed, volume, and mix (i.e., passenger cars vs. light and heavy-duty trucks, etc.), which are then used as inputs to the air quality conformity modeling required by the federal Clean Air Act and the Federal Highway Administration's (FHWA's) Traffic Noise Model for the noise analysis performed under 23 CFR 772. The California Department of Transportation (Caltrans) CEQA analysis, however, may use a travel demand model and/or the induced travel calculator from the National Center for Sustainable Transportation, depending upon the specifics of the project. For more information on the CEQA analysis, please see the *CEQA Evaluation* chapter of this document. Please note that recreational trails, such as equestrian trails, are covered in the *Parks and Recreational Facilities* section of the document.

Caltrans, as assigned by FHWA, feels that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 USC 217). It further believes 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.

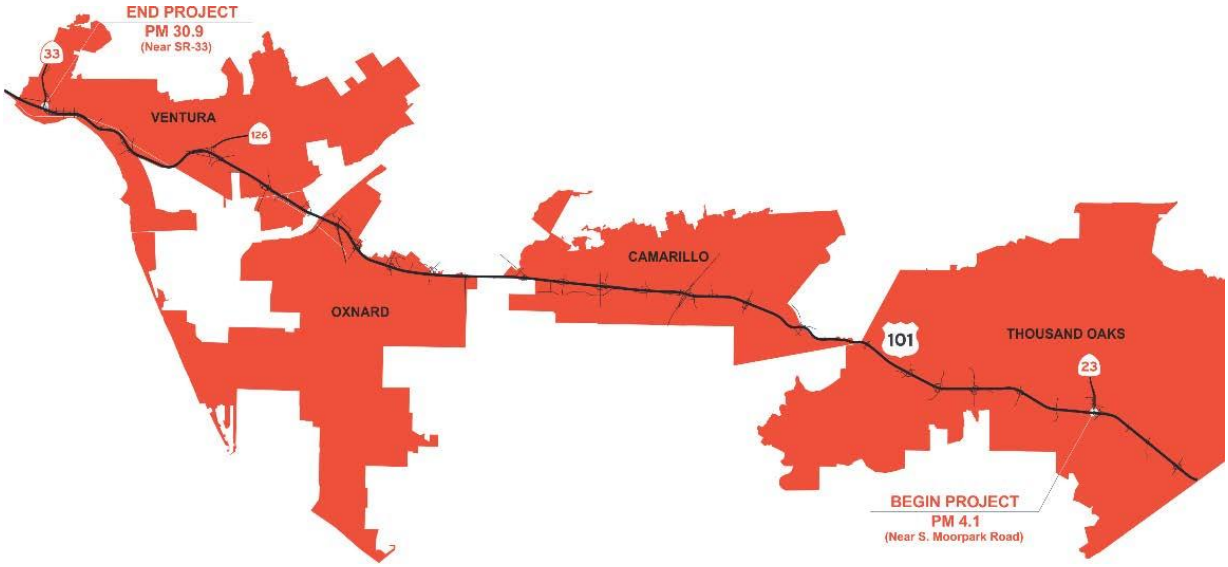
Accessibility in federally assisted programs is governed by the U.S. Department of Transportation regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 USC 794). FHWA has enacted regulations for implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of ADA requirements to federal-aid projects, including transportation enhancement activities.

2.2.10.2 Affected Environment

The information in this section is based on the traffic operations analysis report (TOAR) (Caltrans 2021), draft project report (Caltrans 2026), and Ventura County Transportation Commission (VCTC) *US 101 Communities Connected Study Report* (Iteris 2020). The TOAR analyzed project impacts on traffic operations under both opening-year (2040) and design-year (2060) conditions.

The limits of the traffic study along US 101 extended from Moorpark Road (PM 4.1) to State Route (SR) 33 (post mile [PM] 30.9) in Ventura County, California, a distance of approximately 26.8 miles (Figure 2.2.10-1).

Figure 2.2.10-1. Limits of Traffic Study along US 101



Source: TOAR (Caltrans 2021)

Existing-Year (2018) Traffic Conditions

To evaluate traffic operations, the level of service (LOS) for each study facility was calculated. LOS is a quantitative measure of traffic operating conditions whereby a letter grade, from A (free-flowing traffic) to F (traffic demand exceeds the available roadway capacity), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving.

Table 2.2.10-1 describes the LOS threshold for freeway segments identified in the Highway Capacity Manual (HCM). The acceptable LOS standard for Caltrans facilities is LOS D or better.

Table 2.2.10-1. LOS Thresholds for Freeway

Level of Service	Basic Freeway Segment Density (pc/hr/ln)	Freeway Weaving Segment Density (pc/hr/ln)	Freeway Ramp Density (pc/hr/ln)
A	0–11.0	0–10.0	0–10.0
B	11.0–18.0	10.0–20.0	10.0–20.0
C	18.0–26.0	20.0–28.0	20.0–28.0
D	26.0–35.0	28.0–35.0	28.0–35.0
E	35.0–45.0	35.0–43.0	> 35.0
F	> 45.0 or Demand Exceeds Capacity	> 43.0 or Demand Exceeds Capacity	Demand Exceeds Capacity

Source: TOAR (Caltrans 2021)
LOS = level of service; pc/hr/ln = passenger cars per hour per lane

Freeway Segments

As stated in Chapter 1, *Proposed Project*, the TOAR (Caltrans 2021) showed that, under current conditions (existing year, 2018), the LOS on US 101 within the proposed project limits varied from F (vehicle operating speed < 29 miles per hour [mph]) to C (vehicle operating speed > 54 mph) during peak travel periods. The TOAR found that 70 of 135 segments on northbound US 101 operated at an unacceptable LOS; 82 of 135 segments on southbound US 101 operated at an unacceptable LOS during AM and/or PM peak hours under existing conditions.

Intersection Operations

Of the 142 intersections studied, 32 intersections failed to meet LOS standards under existing conditions during AM and/or PM peak hours.

Public Transportation

Ventura County's transportation system provides for the safe and efficient movement of people and goods in and around the county using a variety of transportation modes. US 101 plays a key role in the study area's connectivity. Several modes of transportation travel along or parallel to US 101; others intersect with it at certain points. These include:

- Two rail operations;
- Six fixed-route bus operations, including two based in Los Angeles;
- Three paratransit services, restricted to disabled or senior riders; and
- Two private bus carriers.

Rail Transit

Amtrak and Metrolink are the two rail operators that serve the traffic study area. Amtrak operates Pacific Surfliner service between San Luis Obispo and San Diego. In addition to the Pacific Surfliner, Amtrak operates the Coast Starlight, an overnight train between Seattle and Los Angeles Union Station.

Metrolink commuter rail service is operated by the Southern California Regional Rail Authority (SCRRA). This service operates into and out of Los Angeles Union Station, serving East Ventura, Oxnard, and Camarillo in the traffic study area.

Bus Transit

Several public and private transportation systems operate along US 101 within the traffic study area. Currently, six main public agencies operate fixed-route bus services in the study area:

- VCTC Intercity: Six routes administered by VCTC.
- Gold Coast Transit District: The largest local operator, with five routes within the traffic study area in the Cities of Ventura and Oxnard.
- Camarillo Area Transit (CAT): Two routes, including a fixed route and the Camarillo Trolley.
- Thousand Oaks Transit (TOT): Five routes administered by the City of Thousand Oaks, with an additional seasonal route offered from June through August.
- Los Angeles–based operators:
    - Los Angeles County Metropolitan Transportation Authority (Metro): One route operates in the traffic study area.
    - Los Angeles Department of Transportation (LADOT): Three weekday peak routes in the study area.

In addition to these six public operators, various private bus carriers serve parts of the county. These carriers include Greyhound Bus Lines, an intercity carrier with stops in Oxnard, and a new company called FlixBus, which operates out of downtown Ventura.

Bicycle Facilities

Existing Bicycle Facilities

The study area has 33 miles of Class I multi-use bike paths, 217 miles of Class II bike lanes, 48 miles of Class III bike routes, and 1 mile of a Class IV separated bikeway (Table 2.2.10-2). The existing bikeway network in the study area, as presented in the VCTC *US 101 Communities Connected Study Report* (Iteris 2020), is shown in Figure 2.2.10-2. Please refer to the TOAR for definitions of bicycle facility types.

Table 2.2.10-2. Bikeway Mileage in the Study Area and Ventura County

Bicycle Facility Type	Study Area[a]	Ventura County
Class I	33	80
Class II	217	361
Class III	48	70
Class IV	1	1
Total Miles	**299**	**512**

Source: VCTC *US 101 Communities Connected Study Report* (Iteris 2020)
Notes:
[a.] The study area used in the VCTC *US 101 Communities Connected Study Report* generally includes an area 3 miles wide on either side of US 101 from SR 23 to SR 33 within all or parts of the Cities of Ventura, Oxnard, Camarillo, and Thousand Oaks, along with parts of unincorporated communities in Ventura County.

Notable existing intercity bike paths are listed below.

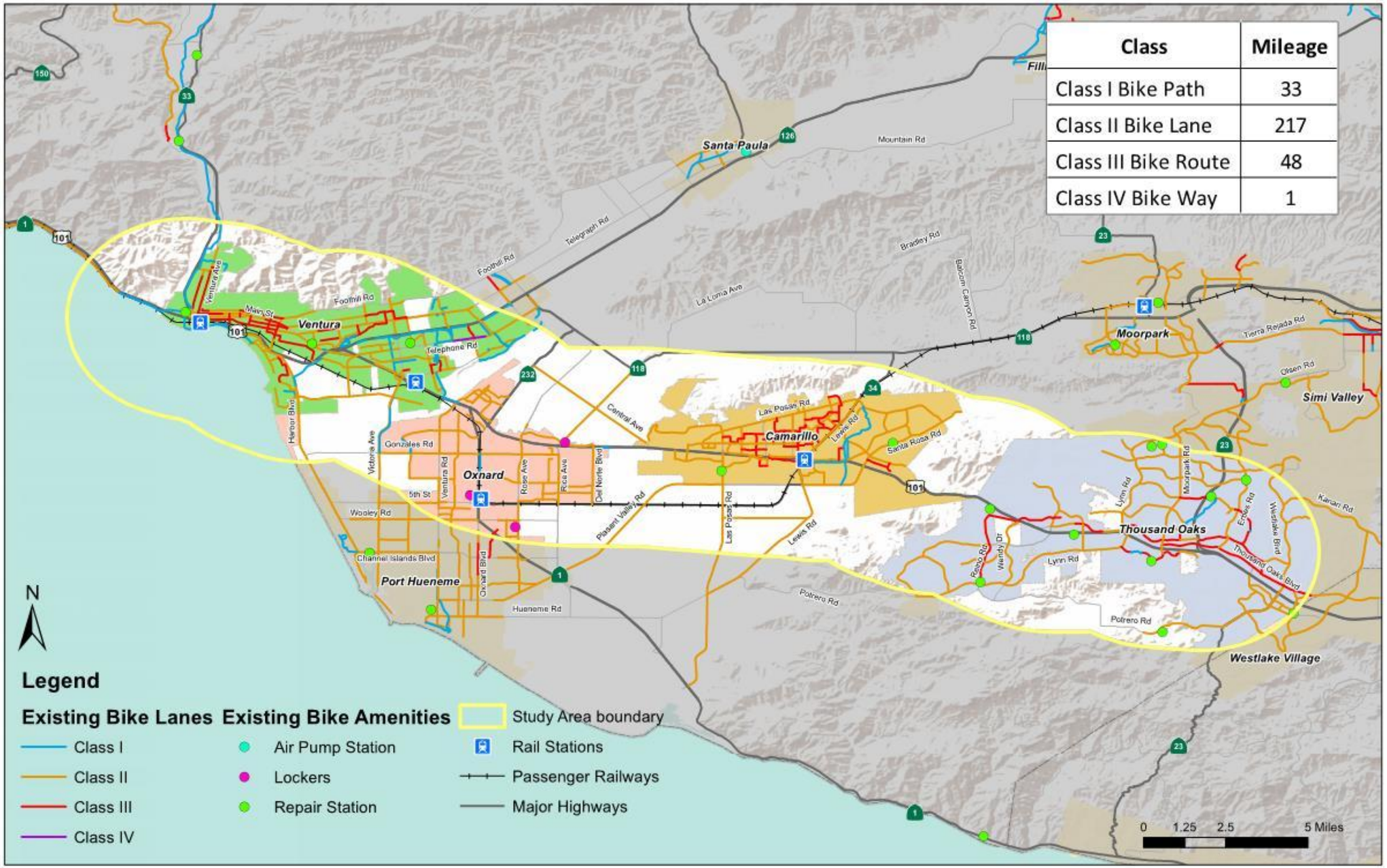
Victoria Bikeway: This Class II bikeway was constructed in the mid-1970s from Olivas Park Drive to the beginning of the bridge over the Santa Clara River (0.48 mile). It transitions to a Class I bikeway from the north end of the bridge to Gonzales Road (1.29 miles).

Harbor Boulevard Bike Lane: This Class II coastal facility was striped along Harbor Boulevard as local funding became available. To provide a link for safe travel between Oxnard and Ventura, a bicycle bridge was constructed over the Santa Clara River.

Ojai Valley/Ventura River Trail: The trail incorporates the Ojai Valley Trail and the Ventura River Trail. This 10-foot-wide, 14.9-mile-long Class I multi-purpose trail uses the abandoned Southern Pacific Railroad right of way from Ojai to downtown Ventura. A split-rail fence separates horses from pedestrians and bicyclists. One side of the trail is paved with asphalt for bicyclists; the other has wood chips and gravel, providing a more suitable roadbed for horses.

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Figure 2.2.10-2. Existing Bicycle Facilities



Source: VCTC US 101 Communities Connected Study Report (Iteris 2020)

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Santa Paula Branch Line Bike Trail: VCTC owns and manages the Santa Paula Branch Line right of way. The trail is a combination of Class I and Class II trails. The Santa Paula Branch Line Bike Trail is not yet completed; however, a 4.3-mile segment was built in Santa Paula from South Peck Road to 12th Street in 2012. Other sections of the bike trail have also been completed in Ventura, Fillmore, and Piru.

Parking

There are 10 park-and-ride facilities within the project limits (Table 2.2.10-3). No new park-and-ride facilities or improvements to existing ones are proposed as part of the project. The Camarillo Metrolink station park-and-ride facility may experience a temporary reduction in parking capacity during construction of a soundwall.

Table 2.2.10-3. Existing Park-and-Ride Facilities within the Project Limits

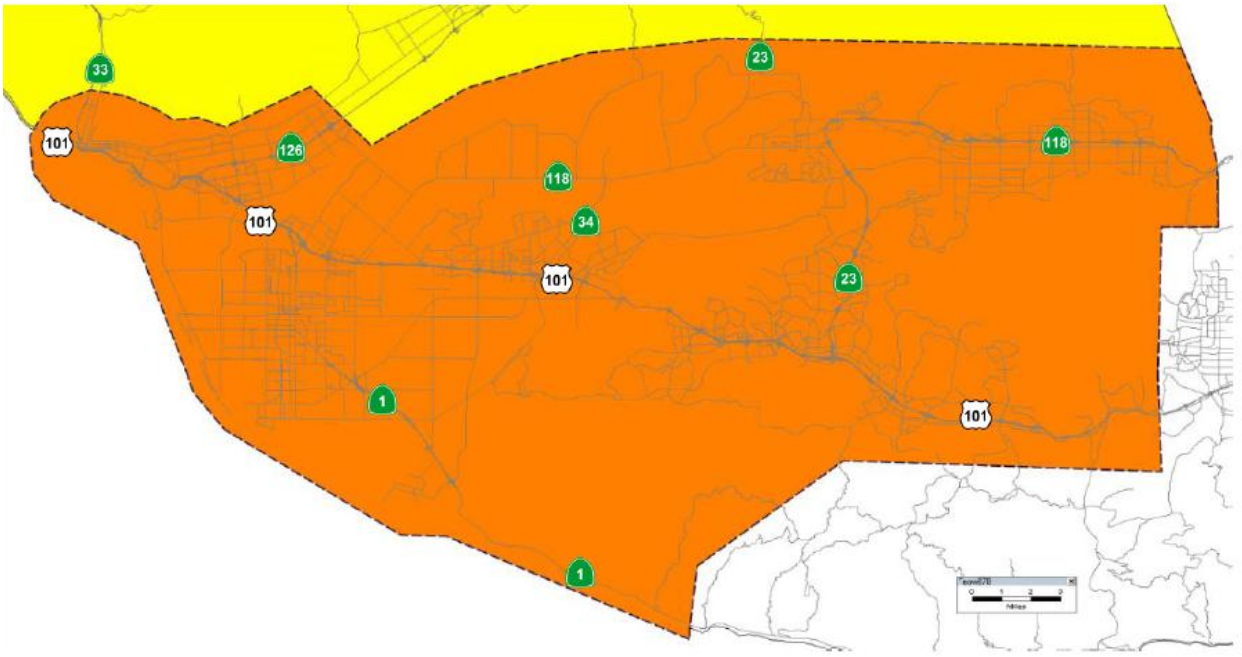
No.	Park & Ride Lot	Location	City
1	Janss Road	Janss Road and SR 23	Thousand Oaks
2	Thousand Oaks Transportation Center, Lower	265 South Rancho Road	Thousand Oaks
3	Thousand Oaks Transportation Center, Upper	265 South Rancho Road	Thousand Oaks
4	Borchard Road/Rancho Conejo	475 Rancho Conejo Boulevard	Thousand Oaks
5	Pleasant Valley Road	Pleasant Valley Road/US 101	Camarillo
6	Camarillo Metrolink Station	30 North Lewis Road	Camarillo
7	Las Posas Road	690 Ventura Boulevard at Las Posas Road	Camarillo
8	Rice/Santa Clara	2621 East Ventura Boulevard	Oxnard
9	East Ventura Metrolink Station	6175 Ventura Boulevard	Ventura
10	West Main Street at Peking Street	West Main Street and Peking Street	Ventura

Source: Draft project report (Caltrans 2026)

Vehicle Miles Traveled

An analysis of vehicle miles traveled (VMT) needs to take into account the effect of a project over a defined area. Therefore, a sub-region was defined for the analysis of VMT. To define the sub-region, a larger region was analyzed to locate plausible alternative routes that run parallel to the study corridor. It was determined that SR 1 and SR 118 are plausible alternative routes; this helps define the northern and southern ends of the sub-region. Due to geography, the county line acts as a natural eastern and southeastern boundary for the VMT analysis. East/west travel between the two counties (Ventura and Los Angeles) is captured with the analysis of US 101 and US 118. The sub-regional boundary extends well beyond the construction limits of the project, particularly to the east and southeast, to capture projected changes in VMT on parallel routes. As shown in Figure 2.2.10-3, the sub-region for VMT analysis (in orange) includes most of southern Ventura County and the jurisdictions of Thousand Oaks, Camarillo, Oxnard, Ventura, Moorpark, Simi Valley, and Port Hueneme.

Figure 2.2.10-3. VMT Study Area



Source: TOAR (Caltrans 2021)

For this project, the travel demand model developed for Ventura County (i.e., the Ventura County Traffic Model [VCTM]) was used to estimate the daily VMT in the sub-region for different vehicle classes. The analysis shows that daily VMT within the sub-region under existing conditions totals approximately 14 million, with the majority of VMT on freeways (see Table 2.2.10-4).

Table 2.2.10-4. Existing Year (2018) Daily Vehicle Miles Traveled

	Sub-Region (VMT Study Area)			County		
Functional Classification	**Lane Miles**	**Model VMT**	**Percent of Travel**	**Lane Miles**	**Model VMT**	**Percent of Travel**
Freeway	409	6,667,642	48.3%	518	7,892,671	48.1%
High-Occupancy Vehicle (HOV)	0	1,780	0.0%	9	10,797	0.1%
Expressway/Parkway	0	0	0.0%	0	0	0.0%
Principal Arterial	702	3,200,276	23.2%	845	4,019,627	24.5%
Minor Arterial	735	2,272,455	16.5%	973	2,556,181	15.6%
Major Collector	547	968,558	7.0%	728	1,107,320	6.7%
Minor Collector	230	210,752	1.5%	321	318,803	1.9%
Ramp	124	491,862	3.6%	135	506,469	3.1%
Trucks Only	0	0	0.0%	0	0	0.0%
Total	**2,748**	**13,813,325**	**100.0%**	**3,528**	**16,411,869**	**100.0%**

Source: TOAR (Caltrans 2021)

2.2.10.3 Environmental Consequences

Temporary Impacts

Alternative 1: No-Build Alternative

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

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Construction of the project will occur in phases over approximately 12 years. Construction-related delays are anticipated along US 101, with possible delays occurring on surrounding arterials.

No long-term closures of the freeway mainline are expected to be required. All mainline lanes would be maintained throughout all construction stages.

The Borchard Road overcrossing and Pleasant Valley Road overcrossing would require a half-bridge replacement over US 101. These two arterial overcrossings were widened by the Cities of Thousand Oaks and Camarillo the past with longer spans over the freeway. The project would remove the older half of the overcrossing and reconstruct it with longer spans to match the newer half of the existing overcrossings. The entire overcrossings would not be demolished and reconstructed. During construction, two-way traffic would be maintained at all times, with reduced lanes and staged construction on one side of the overcrossing to allow traffic to continue to pass through the construction zone. Overnight closures of US 101 would be required for the partial removal of the Borchard Road overcrossing as well as the Pleasant Valley Road overcrossing, along with installation and removal of the required falsework. Temporary detour plans for the overnight closures would be required and would be included as part of the project's TMP (measure **TR-1**).

Two major stages are anticipated for construction of the proposed project improvements. The proposed construction sequencing is intended to provide continuous, uninterrupted access to US 101 and local interchanges throughout the duration of construction.

Stage 1

Stage 1 construction would involve widening to the outside along US 101 throughout the project limits. Structures within the project limits would be widened/reconstructed. Traffic would be shifted toward the median to allow mainline freeway widening to the outside.

Stage 1 would also involve the construction of retaining walls throughout the length of the project limits. Ramp construction would also occur during this stage, with staging used to minimize ramp closures where feasible. No two consecutive ramps servicing two local streets would be closed at the same time in the same direction of travel.

However, intermittent closures would occur at all ramp locations to construct ramp-to-freeway connections as well as the remaining portions of the ramps.

Traffic would be shifted to the right along Pleasant Valley Road and Santa Rosa Road to remove the raised median. Reconstruction of a portion of Daily Drive and Camarillo Springs Road where realignment would be required due to freeway widening would also occur at this stage.

Stage 2

Stage 2 construction would continue with the construction of a concrete median barrier and widening to the inside of US 101, along with the completion of outside widening near Pleasant Valley Road and Victoria Avenue.

Ramp construction would continue, with traffic shifted to the right for inside widening. Construction of the retaining walls near Victoria Avenue would occur during this stage.

The project may periodically affect bicycle and pedestrian facilities during construction; therefore, they may require temporary detours and closures. Sidewalks, ramps, and bikeway connections (as applicable) would be replaced as required, in accordance with local city or Caltrans standards (as applicable). In addition, the replacement of sidewalks and ramps would be done in compliance with the ADA.

Potential construction-related traffic and circulation impacts, as well as impacts on pedestrian and bicycle facilities, would be minimized through implementation of a comprehensive transportation management plan (TMP). As identified in standard project measure **TR-1**, a project TMP would be prepared to minimize motorist delays as well as impacts on pedestrians and bicyclists.

Emergency and transit service routes would be maintained during construction or alternate routes would be provided. Emergency service providers would be notified prior to lane closures, interruptions along emergency service routes, or changes to traffic controls. Transit agencies would be informed about temporary lane and street closures. A TMP would be implemented, as identified in standard project measure **TR-1**, to ensure that impacts on emergency and transit service routes would be minimized.

Permanent Impacts

The year 2040 has been identified as the opening year for the project; 2060 has been identified as the design year. Projected traffic impacts as well as operations under the No-Build Alternative and Build Alternative in 2040 and 2060 are discussed below.

Alternative 1: No-Build Alternative

Opening Year (2040) and Design Year (2060): Freeway Operations Analysis

Under opening-year (2040) conditions for the No-Build Alternative, out of 135 segments, 96 northbound segments and 97 southbound segments would operate at LOS E or worse during AM and/or PM peak hours.

Under design-year (2060) conditions, it is expected that conditions will deteriorate further, with the No-Build Alternative projected to result in 103 of the northbound segments and 119 of the southbound segments operating at LOS E or worse during AM and/or PM peak hours.

Table 2.2.10-5 summarizes the mainline freeway segments operating at LOS E or F along both northbound and southbound US 101 under existing conditions as well as future years under Alternatives 2 and 3.

Table 2.2.10-5. Mainline Freeway Segments Operating at LOS E or F during AM and/or PM Peak Hours along Northbound and Southbound US 101

	Existing Year 2018		Opening Year 2040		Design Year 2060	
Scenario	**NB**	**SB**	**NB**	**SB**	**NB**	**SB**
No-Build Alternative	70 of 135 (52%)	82 of 135 (61%)	96 of 135 (71%)	97 of 135 (72%)	103 of 135 (76%)	119 of 135 (88%)
Alternative 2	—	—	65 of 135 (48%)	75 of 135 (56%)	76 of 135 (56%)	81 of 135 (60%)
Alternative 3	—	—	65 of 135 (48%)	72 of 135 (53%)	76 of 135 (56%)	73 of 135 (54%)

Table 2.2.10-6 and Table 2.2.10-7 outline average travel time and travel speed, respectively, for Alternatives 2 and 3 under future conditions.

Table 2.2.10-6. Average Travel Time for AM and/or PM Peak Hours along Northbound and Southbound US 101 (in minutes)

	Opening Year 2040				Design Year 2060			
	NB		SB		NB		SB	
Scenario	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
No-Build Alternative	52	54	53	49	55	56	59	48
Alternative 2	43	44	40	45	46	47	41	46
Alternative 3	41	43	40	45	44	46	40	46

Note: Values include vehicle delay and running time for the full corridor.

Table 2.2.10-7. Average Travel Speeds during AM and/or PM Peak Hours along Northbound and Southbound US 101 (in miles per hour)

	Opening Year 2040				Design Year 2060			
	NB		SB		NB		SB	
Scenario	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
No-Build Alternative	35	34	35	38	33	33	31	38
Alternative 2	42	41	46	41	39	39	45	39
Alternative 3	44	42	46	41	41	39	46	39

Note: Values represent average speeds throughout the corridor during AM and/or PM peak hours.

Opening Year (2040) and Design Year (2060): Intersection Analysis

Of the 142 intersections analyzed, 41 are projected to operate at an unacceptable LOS in the opening year (2040); 43 are projected to operate at an unacceptable LOS in the design year (2060) under the No-Build Alternative during AM and/or PM peak hours. Table 2.2.10-8 summarizes the intersections operating at an unacceptable LOS during AM and/or PM peak hours under existing conditions as well as future conditions under Alternatives 2 and 3.

Table 2.2.10-8. Number of Intersections Operating at an Unacceptable LOS (AM and/or PM Peak Hours)

Scenario	Existing Year 2018	Opening Year 2040	Design Year 2060
No-Build Alternative	32 of 142 (23%)	41 of 142 (29%)	43 of 142 (30%)
Alternative 2	—	41 of 142 (29%)	41 of 142 (29%)
Alternative 3	—	41 of 142 (29%)	41 of 142 (29%)

Note: For arterial intersections, the acceptable and unacceptable LOS standard varies, depending on jurisdictional requirements and the classification or designation, based on city and county general plans. Refer to the TOAR for further details.

Opening Year (2040) and Design Year (2060): Vehicle Miles Traveled

Under the opening-year (2040) No-Build Alternative, estimated daily VMT within the sub-region is approximately 15.5 million. This represents approximately 12 percent growth over existing conditions (2018).

Under the design-year (2060) No-Build Alternative, estimated daily VMT within the sub-region is approximately 16 million. This represents approximately 16 percent growth over existing conditions (2018).

Table 2.2.10-9 summarizes daily VMT under existing and future conditions.

Table 2.2.10-10 summarizes vehicle hours delayed (VHD) under future conditions for the No-Build Alternative and Alternatives 2 and 3.

Table 2.2.10-9. Vehicle Miles Traveled on US 101

	Existing Year 2018	Opening Year 2040		Design Year 2060	
Scenario	VMT	VMT	Growth	VMT	Growth
No-Build Alternative	13,813,325	15,518,383	+12%	15,983,935	+16%
Alternative 2	—	15,624,133	+13%	16,092,857	+17%
Alternative 3	—	15,624,133	+13%	16,092,857	+17%

Note: VMT is the total number of miles traveled by all vehicles in the study area during the day. A higher VMT indicates that more driving is occurring on the road, representing more trips, longer trips, or more vehicles on the road.

Table 2.2.10-10. Vehicle Hours Delayed on US 101

	Opening Year 2040				Design Year 2060			
	NB		SB		NB		SB	
Scenario	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
No-Build Alternative	11,162.54	18,286.78	12,598.19	8,766.34	15,043.87	23,404.23	25,732.85	4,991.28
Alternative 2	7,970.05	7,406.15	3,023.57	3,848.42	10,305.05	10,906.37	3,448.20	3,014.73
Alternative 3	6,038.93	6,820.97	3,010.97	3,839.66	8,469.70	10,368.07	3,165.14	2,959.83

Note: VHD is the number of hours that vehicles are delayed due to congestion compared to free-flow (uncongested) conditions. A higher VHD indicates more time is spent in traffic and/or congestion.

Pedestrian and Bicycle Facilities

The No-Build Alternative would maintain the current configuration of US 101 in the traffic study area. The No-Build Alternative would not result in permanent impacts related to pedestrian or bicycle facilities, including ADA-compliant facilities.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Opening Year (2040) and Design Year (2060): Freeway Operations Analysis

Alternative 2 – Freeway Segments

Under opening-year (2040) conditions, out of 135 segments, Alternative 2 is projected to operate with an unacceptable LOS along 65 northbound segments and 75 southbound segments during AM and/or PM peak hours. In comparison, the No-Build Alternative is projected to operate with an unacceptable LOS along 96 northbound segments and 97 southbound segments during the same time period.

Under design-year (2060) conditions, out of 135 segments, Alternative 2 is projected to operate with an unacceptable LOS along 76 northbound segments and 81 southbound segments during AM and/or PM peak hours. In comparison, the No-Build Alternative is projected to operate with an unacceptable LOS along 103 northbound segments and 119 southbound segments during the same time period.

As shown in Table 2.2.10-5, under opening-year (2040) and design-year (2060) conditions, it is expected that Alternative 2 would have fewer traffic segments operating at LOS E or worse during AM and/or PM peak hours compared to the No-Build Alternative. Refer to Table 2.2.10-5 for a summary of segments operating at LOS E or F under existing conditions as well as future conditions under Alternatives 2 and 3.

The projected aggregated benefits for opening-year (2040) and design-year (2060) Alternative 2 over the No-Build Alternative are summarized in Table 2.2.10-11, Table 2.2.10-12, Table 2.2.10-13, and Table 2.2.10-14. For specific values, please refer to Table 2.2.10-6 and Table 2.2.10-7 for a comparison between the alternatives. The table provides a side-by-side comparison of average travel times and travel speeds for No-Build Alternative, Alternative 2, and Alternative 3 scenarios under future conditions.

Alternative 3 – Freeway Segments

Under opening-year (2040) conditions, out of 135 segments, Alternative 3 is projected to operate at LOS E or F along 65 northbound segments and 72 southbound segments during AM and/or PM peak hours. In comparison, the No-Build Alternative is projected to have 96 northbound segments and 97 southbound segments operating at LOS E or worse during the same time period.

Under design-year (2060) conditions, out of 135 segments, Alternative 3 is projected to operate with an unacceptable LOS along 76 northbound segments and 73 southbound segments during AM and/or PM peak hours. In comparison, the No-Build Alternative is projected to operate with an unacceptable LOS along 103 northbound segments and southbound 119 segments during the same time period.

Similar to Alternative 2, it is anticipated that Alternative 3 would have fewer traffic segments operating at LOS E or worse during AM and/or PM peak hours under opening-year (2040) and design-year (2060) conditions compared to the No-Build Alternative. Table 2.2.10-5 summarizes the number of mainline segments operating at LOS E or F under existing conditions as well as future conditions under the No-Build Alternative and Alternatives 2 and 3. Please refer to Table 2.2.10-5 to compare the alternatives.

The projected aggregated benefits for opening-year (2040) and design-year (2060) Alternative 3 are summarized in Table 2.2.10-11, Table 2.2.10-12, Table 2.2.10-13, and Table 2.2.10-14. For specific values, please refer to Table 2.2.10-6 and Table 2.2.10-7. The tables provide a side-by-side comparison of average travel times and travel speeds for No-Build Alternative, Alternative 2, and Alternative 3 scenarios under future conditions.

Table 2.2.10-11. Opening-Year (2040) Peak-Period Performance between No-Build Alternative and Build Alternative: Northbound US 101

2040		Northbound US 101							
		AM Peak Period				PM Peak Period			
		Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3	Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3
Corridor	Average Travel Time	52.45	-17.1%	-21.4%	-5.1%	53.96	-18.4%	-19.6%	-1.4%
	Travel Time Index	1.86	-16.1%	-20.4%	-5.1%	1.95	-19.1%	-20.3%	-1.4%
	VHD	11,162.54	-28.6%	-45.9%	-24.2%	18,286.78	-59.5%	-62.7%	-7.8%
	Average Speed	34.97	19.1%	25.6%	5.4%	33.89	21.4%	23.2%	1.4%
	Average Density	41.74	-36.8%	-39.5%	-4.3%	45.23	-30.3%	-31.8%	-2.2%

Source: TOAR (Caltrans 2021)

Table 2.2.10-12. Opening-Year (2040) Peak-Period Performance between No-Build Alternative and Build Alternative: Southbound US 101

2040		Southbound US 101							
		AM Peak Period				PM Peak Period			
		Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3	Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3
Corridor	Average Travel Time	52.79	-24.3%	-24.5%	-0.2%	48.68	-8.2%	-8.4%	-0.2%
	Travel Time Index	1.86	-23.4%	-23.6%	-0.2%	1.72	-7.2%	-7.3%	-0.2%
	VHD	12,598.19	-76.0%	-76.1%	-0.5%	8,766.34	-56.1%	-56.2%	-0.3%
	Average Speed	34.89	30.6%	30.8%	0.2%	37.84	7.7%	7.9%	0.2%
	Average Density	43.80	-31.6%	-32.1%	-0.8%	39.99	-17.1%	-17.7%	-0.7%

Source: TOAR (Caltrans 2021)

Table 2.2.10-13. Design-Year (2060) Peak-Period Performance between No-Build Alternative and Build Alternative: Northbound US 101

2060		Northbound US 101							
		AM Peak Period				PM Peak Period			
		Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3	Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3
Corridor	Average Travel Time	55.22	-16.8%	-19.6%	-3.4%	56.04	-16.1%	-17.1%	-1.1%
	Travel Time Index	1.96	-16.0%	-18.8%	-3.4%	2.03	-16.8%	-17.7%	-1.1%
	VHD	15,043.87	-31.5%	-43.7%	-17.7%	23,404.23	-53.4%	-55.7%	-5.0%
	Average Speed	33.11	19.0%	23.2%	3.5%	32.63	18.1%	19.4%	1.1%
	Average Density	43.44	-36.7%	-37.8%	-1.7%	46.66	-27.4%	-28.4%	-1.4%

Source: TOAR (Caltrans 2021)

Table 2.2.10-14. Design-Year (2060) Peak-Period Performance between No-Build Alternative and Build Alternative: Southbound US 101

2060		Southbound US 101							
		AM Peak Period				PM Peak Period			
		Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3	Alt 1 (No Build)	% Change Alt 1 to Alt 2	% Change Alt 1 to Alt 3	% Change Alt 2 to Alt 3
Corridor	Average Travel Time	58.75	-30.8%	-32.1%	-1.8%	48.38	-4.6%	-5.1%	-0.5%
	Travel Time Index	2.07	-30.0%	-31.3%	-1.8%	1.73	-3.5%	-3.9%	-0.5%
	VHD	25,732.85	-86.6%	-87.7%	-7.6%	4,991.28	-39.6%	-40.7%	-1.8%
	Average Speed	31.35	42.9%	45.5%	1.8%	37.63	3.6%	4.1%	0.5%
	Average Density	48.29	-34.2%	-36.8%	-4.0%	35.19	-13.5%	-15.5%	-2.3%

Source: TOAR (Caltrans 2021)

Opening Year (2040) and Design Year (2060): Intersection Analysis

Table 2.2.10-8 summarizes the number of intersections projected to operate with an unacceptable LOS during the AM and/or PM peak hours under Alternatives 2 and 3; this covers both opening-year (2040) and design-year (2060) conditions. Of the 142 intersections analyzed, 41 are expected to operate with an unacceptable LOS in the opening year (2040) and design year (2060) under Alternatives 2 and 3 during AM and/or PM peak hours. In comparison, 41 and 43 intersections are expected to operate with an unacceptable LOS under the No-Build Alternative in the opening year (2040) and design year (2060), respectively.

The LOS and delay results for the intersection analysis were compared to results for the No-Build Alternative and Alternatives 2 and 3 in the opening year (2040) and design year (2060). Sixteen intersections are projected to operate with an unacceptable LOS during AM and/or PM peak hours in both the opening year (2040) and design year (2060). Alternative 2 conditions are projected to worsen compared to the No-Build Alternative. Alternative 3 conditions would remain similar to those under Alternative 2, with sixteen intersections projected to operate with an unacceptable LOS during AM and/or PM peak hours in both the opening year (2040) and design year (2060).

Intersection improvement measures proposed for Alternatives 2 and 3 were analyzed and found to be feasible with respect to reducing the project-related impact at 14 out of 16 intersections in both the opening year (2040) and design year (2060) (refer to the TOAR for further details). The improvement measures pertain mostly to retiming signals to optimize operation or providing signals at intersections. Both would be considered for incorporation into the project (measure **TR-2**).

Opening Year (2040) and Design Year (2060): Vehicle Miles Traveled

Compared to the No-Build Alternative, new lane miles are projected to increase by approximately 2 percent under opening-year (2040) conditions. According to the model, the projected VMT change with the proposed Alternative 2 and 3 improvements is approximately 36,000 within the sub-region under opening-year (2040) conditions and 37,000 under design-year (2060) conditions compared to the No-Build Alternative. The additional VMT change, when accounting for elasticity due to land use changes, is projected to be approximately 70,000 under opening-year (2040) conditions and 72,000 under design-year (2060) conditions. The total VMT increase is projected to be approximately 106,000 under opening-year (2040) conditions (0.7 percent) and 109,000 (0.7 percent) under design-year (2060) conditions when comparing Alternatives 2 and 3 against the No-Build Alternative (Table 2.2.10-15 and Table 2.2.10-16). The elasticity factor accounts for induced travel demand due to land use changes; it is used in the model to project VMT changes. Refer to Chapter 3, *CEQA Evaluation*, for further discussion of VMT and proposed strategies to address the projected increase in VMT.

Table 2.2.10-15. Opening-Year (2040) Daily Vehicle Miles Traveled for Build Alternatives (Alternatives 2 and 3)

Type	Model Daily VMT Alt 1 (No Build) (A)	Lane Miles Alt 1 (No Build) (B)	Model Daily VMT Alt 2/3 (C)	Lane Miles Alt 2/3 (D)	% Change in Lane Miles (from No Build) (E) = [(D)-(B)]/(B)	Additional VMT for Changes in Land Use Elasticity = 0.21[a] (F) = Elasticity*(A)*(E)	Total Daily VMT Alt 2/3 (G) = (C)+(F)	Total Increase in VMT from Alt 1 (No Build) (H) = (G)-(A)
Sub-Region	15,518,383	2,857	15,554,379	2,919	2.14%	69,754	15,624,133	105,750
County	18,705,739	3,640	18,752,428	3,701	1.68%	66,010	18,818,438	112,698

Source: TOAR (Caltrans 2021)
Note:
[a] The elasticity factor accounts for induced travel demand due to land use changes; it is used in the model to project VMT change. Refer to the TOAR (Caltrans 2021) for details on how a elasticity factor of 0.21 was determined for use in this project.

Table 2.2.10-16. Design-Year (2060) Vehicle Miles Traveled for Build Alternatives (Alternatives 2 and 3)

Type	Model Daily VMT Alt 1 (No Build) (A)	Lane Miles Alt 1(No Build) (B)	Model Daily VMT Alt 2/3 (C)	Lane Miles Alt 2/3 (D)	% Change in Lane Miles (from No Build) (E) = [(D)-(B)]/(B)	Additional VMT for Changes in Land Use Elasticity = 0.21[a] (F) = Elasticity*(A)*(E)	Total Daily VMT Alt 2/3 (G) = (C)+(F)	Total Increase in VMT from Alt 1 (No Build) (H) = (G)-(A)
Sub-Region	15,983,935	2,857	16,021,010	2,919	2.14%	71,847	16,092,857	108,922
County	19,266,912	3,640	19,315,001	3,701	1.68%	67,990	19,382,991	116,079

Source: TOAR (Caltrans 2021)
Note:
[a] The elasticity factor accounts for induced travel demand due to land use changes; it is used in the model to project VMT change. Refer to the TOAR (Caltrans 2021) for details on how a elasticity factor of 0.21 was determined for use in this project.

Pedestrian and Bicycle Facilities

Under Alternatives 2 and 3, the project would include replacing existing pedestrian and bicycle facilities to accommodate freeway widening. The locations of the existing pedestrian and bicycle facilities that would be replaced are listed below. Sidewalks, ramps, and bikeway connections (as applicable) would be replaced as required, in accordance with local city or Caltrans standards (as applicable). In addition, the replacement of sidewalks and ramps would be done in compliance with ADA requirements.

Pedestrian and bicycle facilities to be replaced:

- 7-foot sidewalk and 4-foot bike lane relocation at Daily Drive between Arneill Road and Mobil Avenue in the westbound direction
- 5-foot bike lane relocation between Carmen Drive and Rosewood Avenue in both the eastbound and westbound direction
- 8-foot sidewalk relocation at Ventura Boulevard between Northbank Drive and Sherwin Avenue in the westbound direction

The public scoping period was between March 29 and May 6, 2019. The purpose of the scoping period was to inform the public about the project and provide an opportunity for public engagement and input through questions and written comments about the project. During the scoping period, members of the public provided comments on improving pedestrian and bicycle facilities as well as connectivity to the existing pedestrian and bicycle network. Bicycle and pedestrian improvements would be incorporated into separate projects as part of proposed strategies to address the projected increase in VMT. Refer to Chapter 3, *CEQA Evaluation*, for further discussion of VMT and proposed strategies, including pedestrian and bicycle improvements, to address the projected increase in VMT.

2.2.10.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to traffic, transportation, or bicycle and/or pedestrian facilities would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

TR-1: Transportation Management Plan. During the plans, specifications, and estimates phase, a detailed TMP will be developed for implementation prior to and during construction.

Some of the key elements recommended in the TMP include the following:

- Public information/public awareness campaign
- Motorist information strategies
- Incident management
- Construction strategies
- Demand management
- Alternate route strategies
- Coordination elements

The TMP will contain elements to reduce traveler delay and enhance traveler safety. These elements will be developed during final design and incorporated in the TMP for implementation during project construction.

TR-2: Intersection Improvement Measures. The project will incorporate intersection improvement measures, including retiming signals to optimize operation or providing signals at intersections, where feasible. Potential intersection improvement measures would be further considered for implementation during the final design phase.

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2.2.11 Visual/Aesthetics

2.2.11.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [U.S.C.] 4331[b][2]). To further emphasize this point, the Federal Highway administration (FHWA), in its implementation of NEPA (23 U.S.C. 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]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

2.2.11.2 Affected Environment

The information in this section is based on the Visual Impact Assessment (VIA) prepared for the project (Caltrans 2021).

The project would be on US 101 in Ventura County, California, between State Route (SR) 33 in Ventura and Moorpark Road in Thousand Oaks. Land uses within the proposed project corridor consist primarily of urban residential, commercial, and industrial uses, but they also include agricultural land and areas of natural open spaces associated with the Santa Clara River and the Conejo Grade. Views of the highway from adjacent land uses are generally blocked or obscured by existing vegetation and land cover (buildings, fences, signs, walls, etc.). There are no officially designated State Scenic Highways within any portion of the project area or vicinity.

The project corridor was divided into four outdoor rooms, or visual assessment units (VAU), based on similar visual characteristics and qualities. Key views (KV) representing each VAU were selected to represent views that people would have of the project corridor either by using the highway (highway users) or by seeing the highway (highway neighbors). The following describes each VAU and the existing visual environment as seen from each KV.

Urban Development VAU

The Urban Development VAU encompasses the urban/suburban areas of the cities of Ventura, Oxnard, Camarillo, and Thousand Oaks. Development includes small and large box retail, commercial, residential, industrial, religious, and other urban land uses (fuel station, hotel, school, park, etc.). The visual character is generally defined by one- to three-story buildings but does include several taller buildings, ornamental landscapes, and surface parking lots. Visual elements include fencing, electrical and non-electrical signage, lighting, utilities, and other associated human-made elements.

Approximately 3.5 linear miles of the project corridor within the Urban Development VAU are located within the Coastal Zone, with views of the seascape from the highway. The Coastal Zone begins at the northern terminus of the project extending approximately to the Arundell Avenue/Channel Drive overcrossing (refer to Section 2.1.3, *Coastal Zone*).

KV #1 (Urban Development VAU) – From US 101 in Thousand Oaks approaching Borchard Road Bridge looking west



Source: Google, February 2021.

The existing highway corridor is dominated by travel lanes, on- and off-ramps, signage, guard rails, noise walls, and other transportation-related elements. Ornamental trees and other vegetation visible in medians and adjacent to the highway define the natural character of this VAU. Utilities and infrastructure (signage, advertising, power lines, overpasses, railroad lines, stormwater features, etc.) are prevalent throughout this VAU, as is lighting from vehicles, streetlights, adjacent site lighting, and electric advertising. Views of roadways, parking lots, and land cover, such as buildings, noise walls, signage, fencing and other human-made elements, are common in the foreground outside the highway right of way (ROW) from KV #1. Vegetation and land cover obscure most middle ground views. Distant views of the mountains surrounding Thousand Oaks frame the background views from KV #1.

KV #2 (Urban Development VAU) – From US 101 Ventura looking west toward Seaward Drive and East Harbor Boulevard



Source: Google, February 2021.

From KV #2, East Harbor Boulevard and residential areas are located west and slightly lower in elevation than the highway. On the east of the highway, most views are obscured by topography and vegetation. Natural elements, such as ornamental palm trees, oleander, and other vegetation, are visible on the sides of the highway and in the medians and define the character of the foreground views. Vegetation, land cover, and topography combine to block most of the middle ground views. Views of San Buenaventura State Beach, Ventura Beach, the Ventura Pier, and the ocean may be visible from points along the highway to the north and may be considered scenic. Mountains to the east form background views and frame the visible environment from KV #2.

Santa Clara River VAU

The Santa Clara River VAU encompasses the river, floodplain, and banks. The floodplain width varies but is about 1,800 feet wide at the US 101 highway bridge. The visual character is defined by natural elements such as water, sand, riparian vegetation, and small trees.

KV #3 (Santa Clara River VAU) – From US 101 on the Santa Clara River Bridge looking north



Source: Google, February 2021.

From KV #3, natural elements such as small trees, riparian vegetation, water, and sand are visible outside of the highway corridor and may be considered scenic. Views of these natural elements would be more prominent for pedestrians using the bridge access along the north side of the highway than for motorists on the highway. Urban development and light sources can be seen in the middle ground zone; potential sources of glare confined to the highway corridor.

Agricultural Open Space VAU

The Agricultural Open Space VAU encompasses large tracts of cultivated land. The visual character is defined by tilled land, crops, and greenhouses.

KV #4 (Agricultural Open Space VAU) – From the Del Norte Bridge overpass looking east along US 101



Source: Google, February 2021.

Natural elements, such as agricultural fields, mature trees, and roadside vegetation, define the visual character from KV #4. The grade difference between northbound and southbound lanes makes views from the southbound lanes slightly more prominent. Mountains east of KV #4 form the background limits of views, except when atmospheric conditions (e.g., clouds) limit those views. Lights and sources of glare would generally be confined to the highway corridor.

Conejo Grade VAU

The Conejo Grade VAU is a 2.5-mile section of US 101 that rises between Camarillo and Thousand Oaks. The grade inclines at up to 7 percent to the Conejo Truck Inspection Facility near the summit (approximately 841 feet). The topography slopes steeply uphill or downhill from the road, and road cut and fill slopes are prevalent in most locations. Human-made elements are common in the US 101 ROW, but the visual elements outside of the ROW are primarily natural (vegetation, rocks, mountains, etc.).

KV #5 (Conejo Grade VAU) – Looking west on US 101 adjacent to the Conejo truck scales northbound on-ramp



Source: Bing, February 2021.

Natural elements, such as adjacent hillsides and distant mountains, are visible outside of the highway corridor from KV #5 and may be considered scenic. However, in some areas, high-capacity overhead power lines periodically interrupt these natural views, and a few hillsides have exposed bedrock cut slopes with no vegetation. The grade elevation allows some views of the adjacent urban areas when atmospheric conditions permit. Lights may be visible from the urban areas, but sources of glare would generally be confined to the highway corridor.

2.2.11.3 Environmental Consequences

Alternative 1: No-Build Alternative

The No-Build Alternative would not propose changes to the existing visual environment; however, operational sufficiency and level of service are projected to decline and increasing levels of traffic and congestion would likely result in progressively negative visual impacts.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Alternatives 2 and 3 would add visual elements to the existing highway corridor including new pavement, lane striping, median dividers, and roadway shoulders. Alternative 2 would add 19.3 miles of noise walls with heights varying between 14 to 18 feet. Alternative 3 would add 21.4 miles of noise walls with similar heights. In addition, Alternative 2 would modify 23 bridges (including 2 structures to be partially replaced and 21 structures to be widened), Alternative 3 would modify 20 bridges (including 2 structures to be partially replaced and 18 structures to be widened), and both alternatives would add 1 new bridge to accommodate the new HOV/Express Bus Lane in each direction. These highway elements are all present in the existing highway environment and would generally be compatible with the existing visual quality and character of the highway. New or modified noise barriers, retaining walls, and bridges would be confined to localized areas and may cause moderately adverse visual impacts.

Project Effects on VAUs and KVs

Urban Development VAU (Resource Change, Viewer Response, Visual Impact)

The scale and visual dominance of the roadway would be increased with proposed widening and the addition of noise barriers. In areas where the new HOV lane relies on restriping, the overall visual character of the project would be compatible and coherent with the existing highway corridor.

Travelers along the highway corridor may observe the loss of roadside vegetation with the installation of new noise barriers, depending on the barrier's location and potential for vegetative softening. Neighbors adjacent to new project elements, including retaining walls, noise barriers, and bridges, may experience moderately adverse visual impacts; otherwise, visual impacts would be neutral.

Approximately 3.5 miles of US 101 lie within the Coastal Zone. Most of the planned modifications within this segment of the freeway would involve restriping and expanding the existing lanes towards the center median, leaving the shoulder areas outside the current roadway unchanged. Only about 1 mile of this segment, from near the Ventura Pier parking lot to the southern boundary of San Buenaventura State Beach, offers direct shoreline views, including beaches, recreation areas, and ocean vistas. While the addition of lanes would introduce more human-made elements, the primary scenic features of the coastal zone to the west would remain unaffected. Since most modifications occur within the existing roadway, views from beach areas east toward US 101 would experience few changes. Overall, the visual impact on travelers and nearby coastal areas would be minimal, resulting in a neutral effect on the Coastal Zone's visual environment.

Santa Clara River VAU (Resource Change, Viewer Response, Visual Impact)

No additional widening is proposed across the Santa Clara River Bridge, and project elements would be limited to new lane striping. The Santa Clara VAU has few highway neighbors. Viewers at commercial/retail centers on either side of the river generally have a vantage point lower than the bridge and, therefore, limited visual access. Visual impacts would be neutral.

Agricultural Open Space VAU (Resource Change, Viewer Response, Visual Impact)

Project elements through the Agricultural Open Space VAU include pavement widening, lane striping, and a short vertical retaining wall or median divider between the northbound and southbound lanes to allow median expansion. The retaining wall would replace the existing slope but would not be a dominant feature. Few highway neighbors exist in this VAU and agricultural workers' focus and attention are generally directed towards work-related activities. Changes to the center median are unlikely to be noticeable to this viewer group. Overall, visual impacts would be neutral.

Conejo Grade VAU (Resource Change, Viewer Response, Visual Impact)

Project elements in the Conejo Grade VAU include pavement widening, lane striping, and new cut slopes. New cut slopes would be located where existing cut slopes already exist; cut slopes are a common feature in this VAU. The new cut slopes would be no

steeper than existing slopes or would be flatter with a maximum gradient of 2:1 until they blend with the surrounding terrain.

In this area, the predominant method to address grade changes would be to extend existing retaining walls to accommodate additional grade changes. Therefore, new cut slopes would constitute a small percentage of existing cut slopes and generally be at the upper end of existing slopes. While new cut slopes would expand the extent of cut slopes, such features are already a familiar part of the visual landscape in this VAU. Similarly, vegetation removal would expose bare earth in these areas; however, the existing vegetation is sparse, consisting mainly of erosion control grasses and small shrubs. To stabilize all cut slopes, the project would implement erosion control measures and replant any exposed soil with a similar mix of plantings. Seeding grasses and native shrubs onto the slopes would establish quickly and help to stabilize slopes. Revegetation would also help to soften the appearance of straight lines and reduce the visual impact of uniform coloring from the cuts.

Travelers along the highway corridor may notice the removal of roadside vegetation due to the installation of new walls and cut slopes, depending on factors such as location, finish design, and the potential for vegetative softening. While these changes would introduce additional human-made elements and expose more cut slopes along the Conejo Grade, the overall scale and extent of visual modifications would be consistent with the existing highway environment.

Passengers and other viewers near the new project elements may perceive increased exposure to these changes. However, because such features are already common in the visual landscape, the overall impact on travelers' views would remain neutral.

Among the limited number of people in the area, only a small group of workers at the Conejo Grade Truck Scales would be considered highway neighbors. Other nearby communities, such as Camarillo and Thousand Oaks, are outside the VAU, and their lower elevation relative to the freeway grade makes it unlikely that they would be affected by the proposed visual changes. Overall, the visual impact of the project would be neutral.

Temporary Impacts

Project construction would occur in phases over about 12 years but would not be happening along the entire length of the proposed project at any given time. Heavy equipment (bulldozers, loaders, scrapers, concrete trucks, asphalt paving machines, compactors, cranes, etc.) would be used for the construction of additional roadway lanes, sound walls, retaining walls, and other project elements. Fresh-cut slopes may be more visible to viewers until revegetation visually softens the slopes. Brightly colored construction equipment, construction signage, traffic control devices, flaggers, and other temporary impacts, such as dust and freshly graded shoulders and slopes, may be visible during active construction. Night lighting may also be used to avoid construction activities during periods of heaviest traffic congestion. Construction or modifications to bridge structures may involve crane, scaffolding, and other temporary construction equipment and materials.

Under both build alternatives, active construction would result in short-term, minor visual impacts for both highway users and highway neighbors. Implementation of measures **VIA-1** through **VIA-6** are expected to reduce or avoid temporary visual impacts. Measure **VIA-1** would require development of a Project Corridor Aesthetics Master Plan to identify aesthetic treatments to be utilized for proposed wall structures, including noise barriers and retaining walls, to be constructed, and landscaping design elements, including type of replacement plantings, that will be implemented. Measure **VIA-2** would require the design of noise barriers, retaining walls, and other wall structures to comply with Caltrans standards for noise attenuation, safety requirements, and other features and aesthetic recommendation guidelines from local jurisdictions. Measure **VIA-3** would require avoiding the removal of trees and shrubs where feasible. Measure **VIA-4** would require replacement landscaping design to follow Caltrans standards for aesthetic treatments. Measure **VIA-5** would require avoiding nighttime work when possible. Measure **VIA-6** would require avoiding parking or staging of construction equipment or materials within Coastal Zone segments within view of beach areas or San Buenaventura State Beach. With the implementation of measures **VIA-1** through **VIA-6**, no adverse impacts on visual or aesthetic resources are anticipated during construction of the project.

Permanent Impacts

Alternatives 2 and 3 would add visual elements to the existing highway corridor but in most cases would cause little change in viewer exposure, quantity, or duration. Proposed pavement, lane striping, median dividers, roadway shoulders, noise walls, and other highway elements are all present in the existing highway environment and would generally be compatible with the existing visual quality and character of the highway. The scale and visual dominance of the roadway would increase slightly but would form an intact and unified visual element, and no impacts on scenic views are expected. Visual changes would not substantially change viewer activities or awareness, and view duration for highway users would decrease as congestion eases. A few highway neighbors directly adjacent to US 101 may be exposed to closer and more visual project elements, such as where frontage road improvements are proposed. However, existing vegetation, land cover, and topography would continue to block or obscure views of the project for most highway neighbors. Anticipated visual impacts are described above for each VAU and are generally consistent across both build alternatives.

The magnitude of visual change associated with Alternatives 2 and 3 would not expose most viewers to new visual elements or for longer durations. The visual character and quality associated with project elements would be consistent with those already present in the existing highway visual context, and, in most cases, the activity and awareness of viewers would not change. Highway user viewer response would be low, and a less congested highway system may have an overall beneficial impact. The scale of proposed visual elements would increase with the project but in most cases would not present new visual elements for highway neighbors. Small areas of localized visual changes, such as new retaining walls or noise barriers, steeper roadside grading, or frontage street improvements, may cause adverse visual effects, particularly in areas with higher viewer sensitivity including coastal areas; however, the number of affected

viewers would be low, and the focus of those viewers would generally remain away from the highway. Overall, highway neighbor viewer response would be low and would result in neutral visual impacts.

Context-Sensitive Solutions

The project includes improvements designed to support the implementation of the new HOV/Express Bus Lane and reduce impacts on visual resources. The potential construction of noise barriers are proposed to minimize noise impacts but will also be designed to comply visually with the existing visual character within the VAUs along the project corridor. As required by measure **VIA-1**, a Project Corridor Aesthetics Master Plan will be developed in the project's final design phase to identify the aesthetic treatments to be used for each noise barrier to be constructed. Additionally, measure **VIA-2** requires noise barriers and retaining walls to be designed and implemented based on the design guidelines designated by each community as applicable.

2.2.11.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no visual impacts would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Under Alternatives 2 and 3, avoidance and minimization measures are recommended, as follows. No mitigation is required.

VIA-1: Project Corridor Aesthetics Master Plan. During final design, a decision regarding construction of noise barriers will be determined. A Project Corridor Aesthetics Master Plan (CAMP) will be developed to identify the aesthetic treatments to be utilized for each wall structure, including noise barriers and retaining walls, to be constructed. Project landscaping design elements, including type of replacement plantings, will also be included in the CAMP.

VIA-2: Noise Barriers and Retaining Walls. The design of noise barriers, retaining walls, and other wall structures must comply with Caltrans standards for noise attenuation, safety requirements, and other features. Aesthetic features must be reviewed by the Caltrans District Landscape Architect. Architectural details, such as texture and color, must be carefully considered in effort to minimize the appearance of the noise barrier and retaining wall surfaces. The noise barriers and retaining walls must also be designed to comply visually with the surrounding community character, following the guidelines of the Ventura County and the Cities of Ventura, Oxnard, Camarillo, and Thousand Oaks aesthetic recommendations, consistent with the Project Corridor Aesthetics Master Plan developed in the final design phase.

VIA-3: Avoid Removing Trees and Shrubs. Demolition of existing trees and shrubs will be avoided where feasible. Project Landscape Architects will work with the District Landscape Architect on identifying specific trees that will be impacted by the project or preserved in place during the Plans, Specifications, and Estimates phase.

VIA-4: Landscaping. Landscaping design for replacement planting where established landscaping occurs must follow Caltrans standards for aesthetic treatments and must be designed and implemented under the direction of the Caltrans District Landscape Architect. Where feasible and in accordance with Chapter 900, *Landscape Architecture – Roadsides*, of the *Caltrans Highway Design Manual*, selection and location of replacement freeway planting will be done to enhance the project's overall appearance and ensure its compatibility with the surrounding environment. The project will include plant establishment period and provide supplemental water, as needed. The Caltrans District Landscape Architect will review and approve freeway planting and irrigation plans prior to their implementation.

VIA-5: Avoid Nighttime Work When Possible. Nighttime work near residential, open space, or other sensitive areas will be minimized whenever possible. Construction lighting will be directed toward work areas and will utilize full box cutoff light shields to minimize light spill to adjacent areas.

VIA-6: Parking and Staging. Avoid parking or staging of construction equipment or materials within Coastal Zone segments within view of beach areas or San Buenaventura State Beach.

2.2.12 Cultural Resources

2.2.12.1 Regulatory Setting

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

Federal

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties that are included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the National Historic Preservation Act 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 Advisory Council on Historic Preservation (36 Code of Federal Regulations [CFR] 800). The California Department of Transportation (Caltrans) has entered into a Programmatic Agreement (PA) with the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), and the U.S. Army Corps of Engineers’ Sacramento District, San Francisco District, and Los Angeles District which streamlines and delegates certain responsibilities for Section 106 compliance to Caltrans for projects with FHWA involvement. FHWA’s responsibilities under the Programmatic Agreement have been further delegated to Caltrans under the National Environmental Policy Act (NEPA) Assignment Program.

State

The Archaeological Resources Protection Act applies when a project may involve archaeological resources located on federal or tribal land. The Archaeological Resources Protection Act 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. 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. In 2014, Assembly Bill 52 added the term “tribal cultural resources” to CEQA, and Assembly Bill 52 is commonly referenced instead of CEQA

when discussing the process to identify tribal cultural resources. 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.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires Caltrans to inventory state-owned structures in its rights of way (ROWs). Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Caltrans has entered into a Memorandum of Understanding with the California SHPO which streamlines and delegates certain responsibilities for PRC 5024 compliance to Caltrans for projects involving state-owned resources.

Local

Ventura County's Cultural Heritage Ordinance (Ordinance No. 4604, previously Ordinance Code § 1360-1379, re-enacted in July 2022) established criteria for designation of county Landmarks, Sites of Merit, Points of Interest, and Districts, and created the County Cultural Heritage Board to oversee such designation proceedings. The ordinance also outlines procedures for the removal or downgrading of designations, a Certificate of Appropriateness process for specific projects at designated or potential historic sites, as well as incentives for historic preservation like the Mills Act or use of the California Historical Building Code.

2.2.12.2 Affected Environment

This section is based on the cultural resources studies that have been completed for the project, which include a Historic Property Survey Report (HPSR) (Caltrans 2024a), Historical Resources Evaluation Report (HRER) (Caltrans 2024b), Archaeological Survey Report (ASR) (Caltrans 2024c), and Draft Finding of Adverse Effect (FAE) (Caltrans 2025). Consultation with the SHPO under Section 106 is ongoing. SHPO concurred with the findings of the HPSR, HRER, and ASR on July 18, 2024 (see Chapter 4, *Comments and Coordination*, for concurrence documentation). The FAE is pending SHPO concurrence. For further details regarding any of the sections below, please refer to the cultural documents for additional information.

Methods

Area of Potential Effects

The Area of Potential Effects (APE) was established as the area of study for cultural resources and comprises both the archaeological APE and the architectural APE.

The APE for the project totals approximately 803 acres. The vertical extent of the APE ranges from a maximum of 130 feet above grade to a depth of 120 feet below grade.

The range is anticipated to capture all anticipated effects from the proposed work activities.

Records Search

The South Central Coastal Information Center performed a records search (1-mile radius from the APE) for the project on October 26, 2018. The NRHP, CRHR, California Inventory of Historic Resources, California Historical Landmarks, archaeological base maps, and historical maps were also reviewed as part of the records search.

Research

Review of the Built Environment Resources Directory, Caltrans files, and SHPO files identified additional properties that were previously evaluated for the purposes of Section 106 but not identified in the records search. Building permits were also reviewed for the cities of Ventura, Oxnard, Camarillo, and Thousand Oaks. Additional sources include online repositories such as the California Digital Library; Calisphere Online Archive; Nationwide Environmental Title Research, LLC Historic Aerials database; ParcelQuest; the University of California, Santa Barbara Aerial Photograph Database (FrameFinder); U.S. Geological Survey quadrangles; *Ventura County Historical Landmarks and Points of Interest* (Ventura County Cultural Heritage Board Staff 2016); Ventura County Tax Assessor records; and online archives of local area newspapers for Ventura County and the cities of Ventura, Oxnard, and Camarillo. Other sources consulted include the *Historic Context Statement and Reconnaissance Survey for the Eastern Oxnard Plain of Ventura County* (San Buenaventura Research Associates 2014), the Pleasant Valley Historical Society archives, and Sanborn maps for the city of Ventura (not available for other jurisdictions).

Native American Group, Government Agency, and Other Interested Party Consultation

Consultation conducted with the Native American parties, government agencies, and local historical or preservation groups is detailed in Chapter 4, *Comments and Coordination*.

Field Survey

Archaeological Field Survey

Archaeologists conducted an intensive-level pedestrian survey of the archaeological survey area on May 21, 2019; June 16 and 17, 2021; and January 26, 27, and 31, February 1, and September 8, 2022. Caltrans and ICF archaeologists and Mr. Patrick Tumamait of the Ventureño/Barbareño Band of Chumash Indians participated in the initial survey on May 21, 2019, which consisted of visits to previously recorded sites in the study area. Archaeologists walked parallel transects spaced no more than 5 meters apart on portions of the study area amenable to a pedestrian survey. Areas with ground exposure were more intensively surveyed. The survey team visited each previously identified site within the APE during the survey. During the survey, the archaeologists used the ArcGIS Collector application on an iPad to document the survey and used spatial points and polygons to document all survey relevant data. The locations of previously recorded sites were used as part of the ArcGIS Collector application's

basemap to assist with relocation during the field survey. Digital photography was used to document the appearance of specific site areas as well as the appearance of the general vicinity of the study area. No artifacts were collected during the survey.

Built Environment Field Survey

Architectural historians conducted an intensive-level architectural field survey of the properties within the APE on June 22 and 23, 2021; October 22, 2021; and February 13 and 15, 2023. The architectural historians completed the surveys in accordance with the guidelines presented in the Caltrans Standard Environmental Reference, Volume 2, Section 4.7.2. The survey teams observed and recorded each parcel with built-environment resources on it from the public ROW. Each property was recorded using iPads with the Collector application/ArcGIS Field Maps application. Digital photographs were taken and field observations were documented regarding alterations and integrity of the properties.

Historic Properties in the APE

Archaeological Resources

The following archaeological site within the APE is considered eligible for inclusion in the NRHP for the purposes of this project only because it will be protected in its entirety from any potential effects through the establishment of an Environmentally Sensitive Area (ESA), in accordance with Section 106 PA Stipulation VIII.C.4.

P-56-000223 (CA-VEN-223)

CA-VEN-223 is a precontact habitation site, originally recorded as spanning both sides (north and south) of US 101. Site CA-VEN-223 is considered eligible for listing in the NRHP under Stipulation VIII.C.4. The Caltrans Cultural Studies Office approved this consideration of eligibility on August 21, 2025. The intact portions of the site will be protected from disturbance through implementation of an ESA Action Plan and Post-Review Monitoring and Discovery Plan (FAE Attachment C).

Built-Environment Resources

The results of the records search, consultation, and field surveys resulted in the identification of two properties previously determined NRHP eligible, eight properties newly determined NRHP and CRHR eligible, and one property as a CEQA historical resource only. The NRHP-listed and -eligible properties are historic properties for the purposes of Section 106 and historical resources for the purposes of CEQA. The eligible historic properties are described below.

Firestone Tire and Service Station

Firestone Tire and Service Station at 500 E. Thompson Boulevard, Ventura (Figure 2.2.12-1) is a one-and-a-half-story building with an L-plan from 1929, designed in the Art Deco/Public Works Administration (PWA) (Works Progress Administration [WPA]) Moderne architectural style by local Ventura County master architect Harold E. Burket. It is NRHP/CRHR eligible under Criteria C/3 as an excellent example of Art Deco/PWA (WPA) Moderne architecture and as an excellent example of Burket's work. It is

significant at the local level, with a 1929 period of significance. The historic property boundary is the parcel.

Figure 2.2.12-1. Firestone Tire and Service Station, North and Façades, View Southeast



Source: ICF 2021.

Pierpont Inn District

The Pierpont Inn District at 550 Sanjon Road, Ventura (Figure 2.2.12-2) contains seven buildings (West Wing, Main Building, East Wing, Mattie Gleichmann House, Bluff House, and two cottages). It is NRHP/CRHR eligible under Criteria A/1 as a historic district and is significant at the local level for its longtime presence in Ventura and its gradual transition from a seaside tourist resort hotel to a roadside hotel as it adapted to cater to the expanding automobile tourism industry in the mid-twentieth century. The period of significance is 1910–1966. All seven buildings on the property contribute to the historic district. The historic property boundary is the parcel boundary for Assessor's Parcel Number 076-0-021-160 (550 Sanjon Road).

Figure 2.2.12-2. Pierpont Inn District Map Indicating Property Boundary and Contributors



Source: Google (2019)

Pierpont Inn, Main Building

The Pierpont Inn, Main Building at 550 Sanjon Road, Ventura (Figure 2.2.12-3) is NRHP/CRHR eligible under Criteria A/1. The hotel building is significant at the local level for its association with early-twentieth-century tourism and development in Ventura. It has a period of significance of 1910–1938, dating from the property's construction through the year of Gus Gleichmann's death. The historic property boundary is the building footprint.

Figure 2.2.12-3. Pierpont Inn Main Building, North Elevation, View South



Source: ICF 2021.

Pierpont Inn, Mattie Gleichmann House

The Pierpont Inn, Mattie Gleichmann House at 550 Sanjon Road, Ventura (Figure 2.2.12-4) consists of a two-story, Mid-Century Modern residence. It is a contributor to the Pierpont Inn District, and it is individually NRHP/CRHR eligible under Criteria C/3 as an excellent example of Mid-Century Modern architecture. It is significant at the local level, with a 1953 period of significance. The historic property boundary is the building footprint.

Figure 2.2.12-4. Mattie Gleichmann House, North Elevation, View Southeast



Source: ICF 2021.

Griffin Brothers Funeral Chapel

The Griffin Brothers Funeral Chapel at 1075 E. Daily Drive, Camarillo (Figure 2.2.12-5) is a 1968 Neo-Spanish Revival mortuary. The Griffin Brothers Funeral Chapel is NRHP/CRHR eligible under Criteria C/3 as an excellent example of Neo-Spanish Eclectic architecture. It is significant at the local level, with a 1968 period of significance. The historic property boundary extends north of its fronting sidewalk, to the northern limits of its surfacing parking lots, and the width of its parcel. It excludes the fronting sidewalk because it dates to circa 1989, and the northern portion of the parcel, which contains the non-related Spanish-Colonial Revival Wendel P. Daily Residence from 1930.

Figure 2.2.12-5. Griffin Brothers Funeral Chapel, View Northeast



Source: ICF 2022.

Pleasant Valley Baptist Church

The Pleasant Valley Baptist Church at 2315 Ventura Boulevard, Camarillo (Figure 2.2.12-6) was previously evaluated and determined NRHP eligible under Criterion C and was CRHR listed under Criterion 3 at a local level of significance in 1994. It features a Spanish Colonial Revival church building designed by Ventura County master architect Harold E. Burket, a one-story rectory, and a two-story building. The church and rectory were determined NRHP eligible under Criterion C and were CRHR listed under Criterion 3 at the local level of significance in 1994. It is also a work by Ventura County master architect Harold E. Burket. It has a period of significance of 1930–1938. The historic property boundary is the parcel.

Figure 2.2.12-6. Pleasant Valley Baptist Church, Southwest Elevation, View Northeast



Source: ICF 2021.

Cawelti Building

The Cawelti Building at 2633 Ventura Boulevard, Camarillo (Figure 2.2.12-7) was previously determined NRHP ineligible because of a loss of integrity. However, it has since undergone rehabilitation and warranted a re-evaluation. The building is NRHP/CRHR eligible under Criteria A/1 and is significant at the local level for its association with the early-twentieth-century development of Camarillo. It has a period of significance of 1917 to 1947. The period of significance begins with the property's construction and extends through the year that the post office moved out of the building. The historic property boundary is the parcel boundary.

Figure 2.2.12-7. Cawelti Building, South Elevation, View North



Source: ICF 2021.

Adolfo Camarillo Heritage Grove

The Adolfo Camarillo Heritage Grove (Figure 2.2.12-8), north of US 101 and east of Lewis Road in Camarillo, was previously evaluated and determined NRHP eligible under Criterion B and was CRHR listed under Criterion 2 at a local level of significance in 1994. It has a period of significance of 1892 (the year of its planting) to 1958 (the year of Camarillo's passing). The historic property boundary is the area bounded by US 101 to the south, Mission Oaks Boulevard/Dawson Drive to the west, Mission Oaks Boulevard to the north, and Arroyo Las Posas (Calleguas Creek) to the east. This is a state-owned resource.

Figure 2.2.12-8. Adolfo Camarillo Heritage Grove, View Facing Southwest



Source: ICF 2024.

Timber School House and Auditorium

The Timber Schoolhouse and Auditorium at 1872 Newbury Road, Thousand Oaks (Figure 2.2.12-9) features a one-story 1924 schoolhouse attached to a one-story 1948 Auditorium by a covered walkway. Designed by Roy C. Wilson, Ventura County's first licensed architect, the Timber Schoolhouse is in the American Colonial Revival style. The Auditorium constructed to the south and southwest of the schoolhouse exhibits elements of the Late Moderne style. The property is NRHP/CRHR eligible under Criteria A/1. The schoolhouse is the oldest educational building remaining in the Conejo Valley; the Auditorium appears to be the second oldest. The property is significant at the local level, with a 1924–1948 period of significance. The historic property boundary is the buildings' footprints and the approximately 18,000-square-foot rectangular area containing the buildings at the northwestern corner of the school property.

Figure 2.2.12-9. Timber Schoolhouse and Auditorium, North Elevations, View Southeast



Source: ICF 2021.

Leibole & Kaufman Building

The Leibole & Kaufman Building at 584 Thousand Oaks Boulevard, Thousand Oaks (Figure 2.2.12-10) consists of a one-story, Mid-Century Modern building with space for three stores. This rectangular commercial structure was designed by Harris & Rice. It is NRHP/CRHR eligible under Criteria C/3 as an excellent example of Mid-Century Modern architecture. It is significant at the local level, with a 1963 period of significance. The historic property boundary is the parcel boundary, including the associated parking and landscaping.

Figure 2.2.12-10. Leibole & Kaufman Building, North Elevation, View South



Source: ICF 2021.

CEQA-Only Historical Resource

In addition to the above historic properties, one property, the Hunt Olive Tree (Figure 2.2.12-11), is not NRHP/CRHR eligible, but is a CEQA historical resource because it is locally designated. The Hunt Olive Tree, at the northwestern corner of the parcel at 600 W. Hillcrest Drive, Thousand Oaks, consists of one olive tree that dates to circa 1880. It was formerly on a nearby ranch and moved to its current location. The tree is locally designated as Ventura County Landmark No. 64.

Figure 2.2.12-11. Hunt Olive Tree, View Southwest



Source: ICF 2022.

2.2.12.3 Environmental Consequences

Alternative 1: No-Build Alternative

Under the No-Build Alternative, US 101 would remain in its current condition within the resource study area and the project would not be implemented. Therefore, no project-related impacts on cultural resources would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Within the project APE, there are 11 cultural resources that have been evaluated for effects. One is an archaeological site and ten are historic built-environment properties. Table 2.2.12-1 provides a summary of all impact conclusions discussed herein. The section following the table summarizes the effect findings for each cultural resource and alternatives.

Table 2.2.12-1. Effects Finding under Alternative 1 (No-Build) and Build Alternatives 2 and 3

Property	NRHP/CRHR Eligibility	Effect Finding	Avoidance, Minimization, and/or Mitigation Measures (Conditions)
CA-VEN-223	Considered eligible for inclusion in the NRHP	Alternative 1: No effect Alternative 2: Not Adverse with Standard Conditions Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: Establish an ESA (**CR-3**) and conduct archaeological monitoring of ground disturbance within 200 feet of the ESA (**CR-4**). Alternative 3: Same as Alternative 2
Firestone Tire and Service Station	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: N/A Alternative 3: Same as Alternative 2
Pierpont Inn District	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse with Non-Standard Conditions Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: Partially transparent soundwall (**CR-5**), revised piles (**CR-6**), ASMP (**CR-7**) Alternative 3: Same as Alternative 2
Pierpont Inn, Main Building	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse with Non-Standard Conditions Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: Partially transparent soundwall (**CR-5**) Alternative 3: Same as Alternative 2
Pierpont Inn, Mattie Gleichmann House	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse with Non-Standard Conditions Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: Revised piles (**CR-6**), ASMP (**CR-7**) Alternative 3: Same as Alternative 2
Griffin Brothers Funeral Chapel	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: N/A Alternative 3: Same as Alternative 2
Pleasant Valley Baptist Church	Previously determined NRHP eligible	Alternative 1: No effect Alternative 2: Not Adverse Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: N/A Alternative 3: Same as Alternative 2
Cawelti Building	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: N/A Alternative 3: Same as Alternative 2

Property	NRHP/CRHR Eligibility	Effect Finding	Avoidance, Minimization, and/or Mitigation Measures (Conditions)
Adolfo Camarillo Heritage Grove	Previously determined NRHP eligible	Alternative 1: No effect Alternative 2: Adverse (partial destruction) Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: Mitigation measures to be outlined in Memorandum of Agreement (**CR-MM-1**) Alternative 3: Same as Alternative 2
Timber Schoolhouse and Auditorium	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: Not Adverse Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: N/A Alternative 3: Same as Alternative 2
Leibole & Kaufman Building	Newly determined NRHP/CRHR eligible	Alternative 1: No effect Alternative 2: No effect Alternative 3: Same as Alternative 2	Alternative 1: N/A Alternative 2: N/A Alternative 3: Same as Alternative 2

ASMP = Adjacent Structure Monitoring Plan; CRHR: California Register of Historical Resources; N/A = not applicable; NRHP = National Register of Historic Places

Archaeological Resources

It is possible previously undocumented cultural materials or previously undocumented human remains could be unearthed during site preparation, grading, or excavation activities for the project (Alternatives 2 and 3). Those potential effects would be avoided or minimized through standard project measures **CR-1** and **CR-2**.

Caltrans concluded the project would have "no adverse effect with standard conditions" on the archaeological site (CA-VEN-223) because the site will be avoided and protected in place using an ESA (measure **CR-3**). In addition, archaeological monitoring of ground disturbance within 200 feet of the ESA will be conducted to minimize impacts as much as feasible (measure **CR-4**).

Built Environment Resources

Firestone Tire and Service Station

The project would have "no adverse effect" on the Firestone Tire and Service Station. because while construction of the project would not directly alter the historic property, it would temporarily and permanently alter the already altered setting through soundwall construction adjacent to the historic property's rear elevation. The affect would be minor and not adverse because the building faces away from the proposed soundwall construction and the setting has already been substantially altered.

Pierpont Inn District

Soundwall construction would affect the historic property by blocking contributive views from the property to the Pacific Ocean and its contributors. In addition, bridge widening adjacent to the Pierpont Inn District has the potential to affect the historic property and its contributors by damaging the contributive Mattie Gleichmann House through vibrations. The project would have "no adverse effect with non-standard conditions" on this historic property because three conditions would be applied: installation of partially transparent soundwall at this location, thereby ensuring that the view remains visible (measure **CR-5**); use of cast-in-drilled-hole (CIDH) piles and a slurry displacement method or implementation of pile cushioning to lessen vibrational effects (measure **CR-6**); and preparation of an Adjacent Structure Monitoring Plan (ASMP) to conduct vibration monitoring at the Mattie Gleichmann House (measure **CR-7**).

Pierpont Inn, Main Building

Soundwall construction would affect the historic property by blocking contributive views from the property to the Pacific Ocean. The project would have "no adverse effect with non-standard conditions" on this historic property because a condition would be applied to install a partially transparent soundwall at this location, thereby ensuring that the view remains visible (measure **CR-5**).

Pierpont Inn, Mattie Gleichmann House

Bridge widening adjacent to the Pierpont Inn District has the potential to affect the historic property by causing vibrational damage. The project would have "no adverse effect with non-standard conditions" on this historic property because two conditions would be applied: the use of CIDH piles and a slurry displacement method or

implementation of pile cushioning to lessen vibrational effects (measure **CR-6**) and preparation of an ASMP to conduct vibration monitoring (measure **CR-7**).

Griffin Brothers Funeral Chapel

The project would have "no adverse effect" on the Griffin Brothers Funeral Chapel because while construction of the project would not directly alter the historic property, a temporary construction easement in front of the property would temporarily and permanently alter the setting through alterations to the non-original sidewalk. The affect would be minor and not adverse because the sidewalk has already been replaced and the setting has already been altered since the property's construction.

Pleasant Valley Baptist Church

The project would have "no adverse effect" on the Pleasant Valley Baptist Church because while construction of the project would not directly alter the historic property, it would temporarily and permanently alter the setting through grading in the vicinity. The affect would be minor and not adverse because the building faces away from the proposed grading and the setting has already been substantially altered since the property's construction.

Cawelti Building

The project would have "no adverse effect" on the Cawelti Building because while construction of the project would not directly alter the historic property, it would temporarily and permanently alter the setting through grading activities in the vicinity. The affect would be minor and not adverse because the building faces away from the proposed grading and the setting has already been substantially altered since the property's construction.

Adolfo Camarillo Heritage Grove

Removal of eight eucalyptus trees and relocation of two eucalyptus trees at the eastern end of the southern row of eucalyptus trees would alter all character-defining features of the Adolfo Camarillo Heritage Grove, including its double row of eucalyptus trees, traversable pathway between the rows, and proximity to and relationship with the Camarillo Ranch property to the north, which qualify the property as a historic property for the purposes of Section 106, in a manner that would diminish its integrity of location, design, materials, workmanship, feeling, or association. Therefore the project results in an "adverse effect" on the Adolfo Camarillo Heritage Grove. A Memorandum of Agreement (MOA) will be prepared, outlining the mitigation agreed to by Caltrans and SHPO. Mitigation measures will be forthcoming, but measure **CR-MM-1** provides suggested measures.

Timber School House and Auditorium

The project would have "no adverse effect" on the Timber School House and Auditorium because while construction of the project would not directly alter the historic property, it would temporarily and permanently alter the setting through the construction of a retaining wall. The affect would be minor and not adverse because the setting has already been substantially altered since the property's construction.

Leibole & Kaufman Building

The project would have "no effect" on the Leibole & Kauffman Building because the historic property is over 500 feet from construction activities. At that distance, there is no potential for an effect for a property significant for its architecture that faces away from the construction activities. Moreover, the property is obscured from the retaining wall construction, grading, and striping by topography and foliage.

The project as a whole would have an **adverse effect** on historic properties. The FAE is pending SHPO concurrence.

SHPO Consultation Under Section 106

SHPO consultation under Section 106 is ongoing. SHPO consultation to resolve adverse effects is pending the selection of a preferred alternative. If Alternative 1 (No Build) is selected as the preferred alternative, the project would have a Section 106 finding of no adverse effect and an MOA to resolve adverse effects would not be needed. If Alternative 2 or 3 is selected as the preferred alternative, the project would require a Section 106 FAE and an MOA between SHPO, Caltrans, and any consulting parties.

Section 4(f) Resources

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 in the project vicinity. The proposed project would result in a "use" of those properties as defined by Section 4(f). Please see additional details in Appendix A, *Section 4(f)*.

Coastal Zone

For this project, no archaeological resources are within the coastal zone. However, three built-environment resources (the Pierpont Inn District, Main Building, and Mattie Gleichmann House) are within the coastal zone in Ventura. See Section 2.2.3, *Coastal Zone*, for discussion of the project's compliance with coastal policies and ordinances. As it pertains to historic properties in the coastal zone, the proposed soundwall with acrylic topper complies with Coastal Act Section 30251. It will retain the character-defining Pacific Ocean views of the Pierpont Inn, thereby protecting views to and along the ocean in this area.

2.2.12.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to cultural resources would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The following avoidance and minimization measures, **CR-1** through **CR-4**, apply to archaeological resources and would be implemented during construction.

CR-1: Unanticipated Discovery Protocol. If cultural materials are discovered during construction, all earthmoving activity within 60 feet of the discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. All unanticipated discoveries will follow the identification and communication protocols outlined in the ESA Action Plan and Post-Review Monitoring and Discovery Plan (FAE Attachment C) and be conducted in accordance with Caltrans policy and the Caltrans 2023 Standard Specifications. As part of the notification process, District 7 shall notify the Cultural Studies Office, the SHPO, and notified parties within 48 hours of the discovery, where appropriate per resource type and NRHP eligibility status. Caltrans will then invite the notified parties to be involved in resolving the discovery in accordance with 36 CFR 800.13(b), 800.13(b)(3), and 800.13(c). Further provisions of Caltrans 2023 Standard Specifications 14-2.03 are to be followed as appropriate.

CR-2: Human Remains. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the Caltrans District 7 Native American Coordinator, Kip Harper, at (213) 332-0316 so that she may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

CR-3: Establish and Implement an Environmentally Sensitive Area Action Plan and Post-Review Monitoring and Discovery Plan. The ESA boundary will identify the protected portion of site CA-VEN-223 where archaeological monitoring will be conducted during construction. No construction activity is allowed within 200 feet of the ESA boundaries established for CA-VEN-223 without the Professionally Qualified Staff (PQS) Principal Investigator or Co-Principal Investigator (or consultant equivalent) or PQS Lead Archaeological Surveyor (or consultant equivalent) present. The ESA boundary will be identified and demarcated by ESA fencing, which is described in detail in the ESA Action Plan (FAE Attachment C). The ESA fencing will be installed and checked/confirmed as accurate prior to construction. The fencing will meet the standards identified in Caltrans Standard Specifications Section 14-2 (Caltrans 2024). No construction excavation or ground disturbance will occur outside of the proposed area of direct impact for the project. The area within the ESA proposed for the construction of the retaining wall will be delineated and demarcated prior to construction. This area will be fenced or demarcated as appropriate per the proposed location of the retaining wall. The area proposed for construction of the retaining wall is the only area where excavation or ground disturbance will occur within the ESA. The

Archaeological Monitoring Area (AMA) will include the entire ESA and a 200-foot buffer around the entire site boundary to ensure that the ESA is enforced, and that monitoring occurs within the AMA. An ESA Action Plan and Post-Review Monitoring and Discovery Plan will be prepared to describe the discovery methods and communication protocol, which will be implemented in the AMA established for the project and all project-related construction activities (FAE Attachment C). All construction personnel will be informed of historic preservation laws that protect archaeological sites from any disturbance or removal of artifacts. The Project Engineer will notify the Lead Environmental Manager, the Caltrans PQS Principal Investigator, or Co-Principal Investigator (or consultant equivalent) at least 2 weeks in advance of construction activities planned to occur within the ESA to ensure that required personnel will be available to monitor and review the ESA boundary protection and identification.

CR-4: Archaeological and Native American Monitoring. Caltrans PQS Principal Investigator or Co-Principal Investigator (Prehistoric and Historical Archaeology) or consultant equivalent (Lead Archaeological Monitor) and PQS Lead Archaeological Surveyor (or consultant equivalent) (Archaeological Monitor) will be responsible for all archaeological monitoring. The PQS Principal Investigator or Co-Principal Investigator (or consultant equivalent) will be notified when construction begins and will coordinate to monitor the ESA and AMA during excavation work within 200 feet of the ESA and the subsurface work within the ESA. The Project Engineer, Project Construction Lead, PQS Principal Investigator or Co-Principal Investigator (or consultant equivalent), and identified Native American monitor(s) will conduct a field review at least 10 days before the start of job-site activities. The PQS Lead Archaeological Surveyor (or consultant equivalent) and Native American monitor(s) will monitor ground-disturbing activities within the AMA. If the ESA is breached for any non-authorized reason, the PQS Lead Archaeological Surveyor (or consultant equivalent) will have the authority to immediately:

- Stop all work within 50 feet of the ESA boundary, that has not already been approved. Driving through the site will be allowed only on paved surfaces. The only allowable work within the ESA will be for construction of the retaining wall.
- Secure the area.
- Notify the Project Engineer, the Lead Environmental Manager, and Caltrans PQS Principal Investigator or Co-Principal Investigator (or consultant equivalent) (Lead Archaeological Monitor).

Upon completion of construction, the PQS Lead Archaeological Surveyor (or consultant equivalent) (Archaeological Monitor) will monitor the removal of the fencing and observe the backfilling of any post holes with soil removed during the installation with approved clean fill sediments. An archaeological monitoring report will be completed detailing the results of the monitoring efforts when the monitoring effort has been terminated. The Post-Review Monitoring and Discovery Plan can be found in FAE Attachment C.

The following avoidance and minimization measures, **CR-5** through **CR-7**, apply to built-environment resources and would be implemented during construction.

CR-5: Partially Transparent Soundwall. Ventura County Transportation Commission (VCTC) shall construct a partially transparent soundwall at the location of Soundwall S1522, near the Pierpont Inn District and Main Building, consisting of 4 feet of a transparent acrylic sound-dampening material atop a concrete block wall 14 feet in height.

CR-6: Cast-in-Drilled-Hole Piles. CIDH piles and a slurry displacement method shall be used at the San Jon Creek Bridge (Bridge No. 52-0163R) and at the Vista Del Mar undercrossing (Bridge No. 52-0152R) to reduce the possibility for vibrational damage at the Pierpont Inn District and the Mattie Gleichmann House. If CIDH piles and a slurry displacement method are not feasible because of geologic conditions, including groundwater tables, at either bridge, the contractor shall notify the Caltrans PQS Principal Architectural Historian and introduce pile cushioning when implementing traditional pile-driving techniques.

CR-7: Adjacent Structure Monitoring Plan. VCTC shall prepare and implement an ASMP to protect adjacent resources, including the contributors to Pierpont Inn District within 200 feet of construction and the Mattie Gleichmann House, from damage due to construction activities. The ASMP shall be prepared by a qualified and California-licensed professional engineer who is approved by VCTC. The ASMP shall include performance standards that specify:

- A qualified and California-licensed professional engineer, in consultation with a qualified historic preservation architect, shall develop monitoring recommendations, based on preconstruction surveys of existing conditions. Monitoring may include the use of vibration monitors, elevation and lateral monitoring points, crack monitors, or other instrumentation determined necessary to protect adjacent buildings from construction-related damage.
- Vertical and horizontal movement shall be determined by a California-licensed land surveyor, and vibration thresholds shall be below levels that could damage adjacent buildings.
- If thresholds are met, or if noticeable structural damage becomes evident to the project contractor, work shall stop until feasible steps to reduce vibratory levels have been undertaken and minimization measures have been implemented to stabilize adjacent buildings and prevent construction-related damage. Any damage to historic finish materials at nearby buildings shall be repaired in consultation with the property owner and a qualified historic preservation consultant and, if warranted, in a manner that meets the Secretary of the Interior's Standards.
- If necessary, as determined by a California-licensed professional engineer, a shoring plan shall be developed to protect adjacent historic resources from excavation or general construction procedures. The shoring plan shall be developed by the contractor and submitted to VCTC and the Caltrans PQS Principal Architectural Historian for review.

- The Caltrans PQS Principal Architectural Historian shall be notified of the project's 50 percent and 100 percent points of completion. The Caltrans PQS Principal Architectural Historian (or consultant equivalent) shall conduct walk-through inspections of the Pierpont Inn District and Mattie Gleichman House to determine compliance with this condition of the FAE.

If Alternative 2 or 3 is selected as the preferred alternative, the project would have a Section 106 finding of adverse effect on the Adolfo Camarillo Heritage Grove and an MOA between SHPO, Caltrans, and any consulting parties would be required. The MOA must be approved and signed by the involved parties prior to circulation of the final Environmental Impact Report/Environmental Assessment for the project. The MOA will stipulate the responsibilities of SHPO, Caltrans, and any consulting parties for implementing the specified avoidance, minimization, and/or mitigation measures for the Adolfo Camarillo Heritage Grove. The following are proposed mitigation measures that may be included in the MOA under the *Treatment of Historic Properties* stipulation. Consultation under Section 106 regarding the resolution of adverse effects shall continue with participating government agencies and other interested parties through development and execution of the MOA.

CR-MM-1: Proposed Mitigation Measures for the Adolfo Camarillo Heritage Grove

- In-kind replacement of every tree removed for construction of the project, on axis with the existing trees.
- Preparation of an arborist report of the Adolfo Camarillo Heritage Grove, to include a framework for long-term treatment, maintenance, and protection; a feasibility assessment for deep-root irrigation; and a maintenance plan including a historic preservation component to guide the City of Camarillo and Caltrans to ensure the historic property's continued integrity. All reports of this nature should be completed prior to the start of construction.
- Completion of an update to the existing NRHP nomination for the Camarillo Ranch property to include the Adolfo Camarillo Heritage Grove, to be completed prior to construction.
- Development of a print-on-demand booklet, including historical information about Adolfo Camarillo and photographs of the Adolfo Camarillo Heritage Grove.
- Development of an interpretive program focused on Adolfo Camarillo, the Adolfo Camarillo Heritage Grove, and the history of Camarillo during the period of significance, including, but not limited to the following:
    - An ArcGIS Story Map or educational website to cover the history of Camarillo, Camarillo Ranch, the Adolfo Camarillo Heritage Grove, and its change over time.
- Interpretive panel(s) along the bike path through the Adolfo Camarillo Heritage Grove, to include information regarding Adolfo Camarillo, the Adolfo Camarillo Heritage Grove, and its connection to Camarillo Ranch.

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2.3 PHYSICAL ENVIRONMENT

2.3.1 Hydrology and Floodplain

2.3.1.1 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 1 percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

2.3.1.2 Affected Environment

This section is based on the Location Hydraulic Study, Volumes 1–7 (California Department of Transportation [Caltrans] 2020a, 2020b, 2020c, 2020d, 2020e, 2020f, 2020g), the Summary Floodplain Encroachment Reports (Caltrans 2021a), and the Water Quality Assessment Report (Caltrans 2021b) that were prepared for the project. All build alternatives have the same general setting because the project would be developed within an existing facility, with only minor changes between alternatives.

Hydrology

The project area is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB), which includes Ventura and Los Angeles Counties. The project corridor traverses five hydrologic units (Calleguas, Oxnard, Santa Clara-Calleguas, Buenaventura, and Ventura River (Caltrans 2021b) (see Figure 2.3.1-1).

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Figure 2.3.1-1. Hydrologic Units

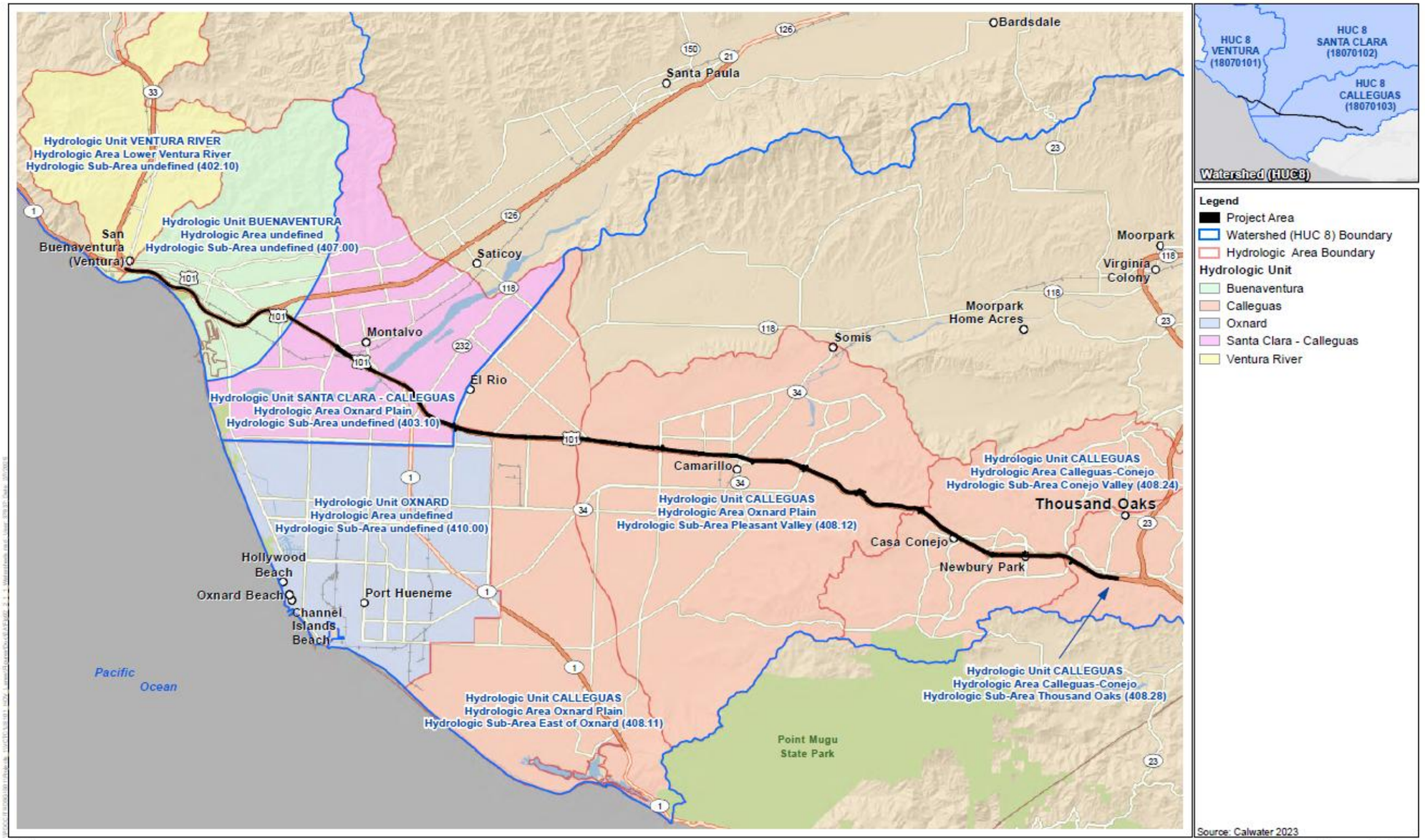


Figure 2.3.1-1
Hydrologic Units
US 101 Improvement Project

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Floodplains

The Federal Emergency Management Agency (FEMA) has prepared Flood Insurance Rate Maps that delineate flood zones, based on estimated flood risk. The FEMA National Flood Hazard Layer dataset (FEMA 2023), which includes a collection of digital data from the Flood Insurance Rate Maps for Ventura County, indicates that the project area is in the following flood zones, as shown in Figure 2.3.1-2:

- Zone A – Special Flood Hazard Areas (SFHAs) subject to inundation from a flood event with a 1 percent annual chance. No base flood elevations determined.
- Zone AE – SFHAs subject to inundation from a flood event with a 1 percent annual chance. Base flood elevations determined.
- Zone AO – SFHAs subject to inundation from a flood event with a 1 percent annual chance. Shallow flooding where average depths are between 1 and 3 feet.

Other Areas:

- Zone X (Shaded) – Areas with a 0.2 percent annual chance of a flood event; areas with a 1 percent annual chance of a flood event, with average depths of less than 1 foot or drainage areas of less than 1 square mile; and areas protected by levees from a flood event with a 1 percent annual chance.
- Zone X (Unshaded) – Areas determined to be outside the floodplain of a flood event with a 0.2 percent annual chance.

The project area crosses 16 floodplains. Table 2.3.1-1 shows the flood zone designation of each floodplain crossing within the project area.

Table 2.3.1-1. Floodplain Crossings within the US 101 Project Area

Floodplain Crossings	Flood Zone Designation
Conejo Creek	AE, AO, X
Calleguas Creek	AE, AO, X
Lewis Road Drain	AO, X
Arroyo Conejo	A
South Branch Arroyo Conejo	A, AE, X
Camarillo Hills Drain	AE, AO, X
Crestview Drain	AE, AO, X
Wood Creek (Las Posas Estates Drain)	A, X
Beardsley Wash (Revolon Slough)	AO, X
El Rio Drain	AO, X
Santa Clara River	A, AE, X
Moon Ditch	AE, X
Arundell Barranca	X
Barlow Barranca	A, X

Floodplain Crossings	Flood Zone Designation
Telephone Drain	A, X
Mills Road Drain	A, X

Source: Caltrans 2020a.

Figure 2.3.1-2. Federal Emergency Management Agency Flood Zones (Sheet 1 of 6)

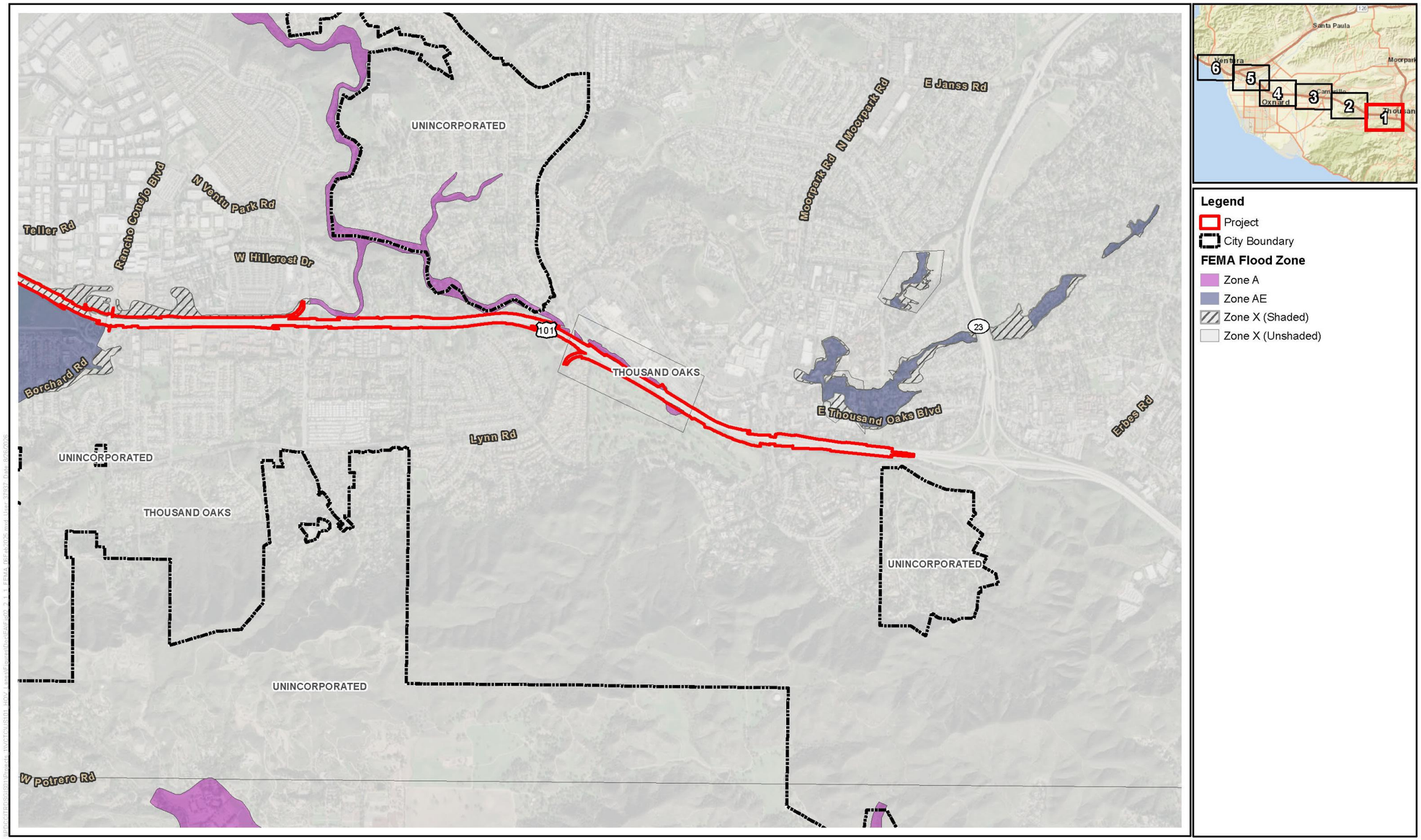


Figure 2.3.1-2 Sheet 1 of 6
Federal Emergency Management Agency Flood Zones
US 101 Improvement Project

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Figure 2.3.1-2. Federal Emergency Management Agency Flood Zones (Sheet 2 of 6)

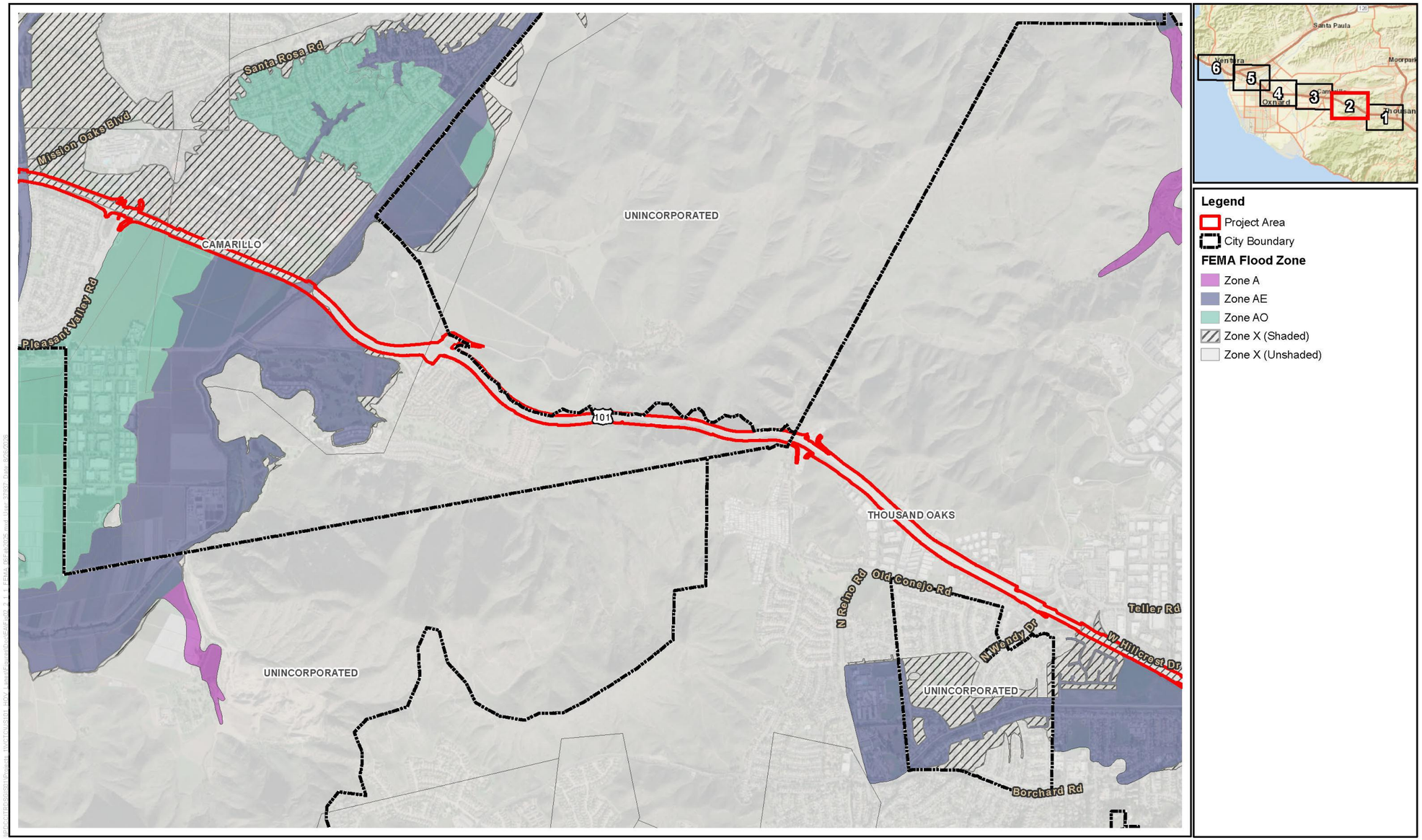


Figure 2.3.1-2 Sheet 2 of 6
Federal Emergency Management Agency Flood Zones
US 101 Improvement Project

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Figure 2.3.1-2. Federal Emergency Management Agency Flood Zones (Sheet 3 of 6)

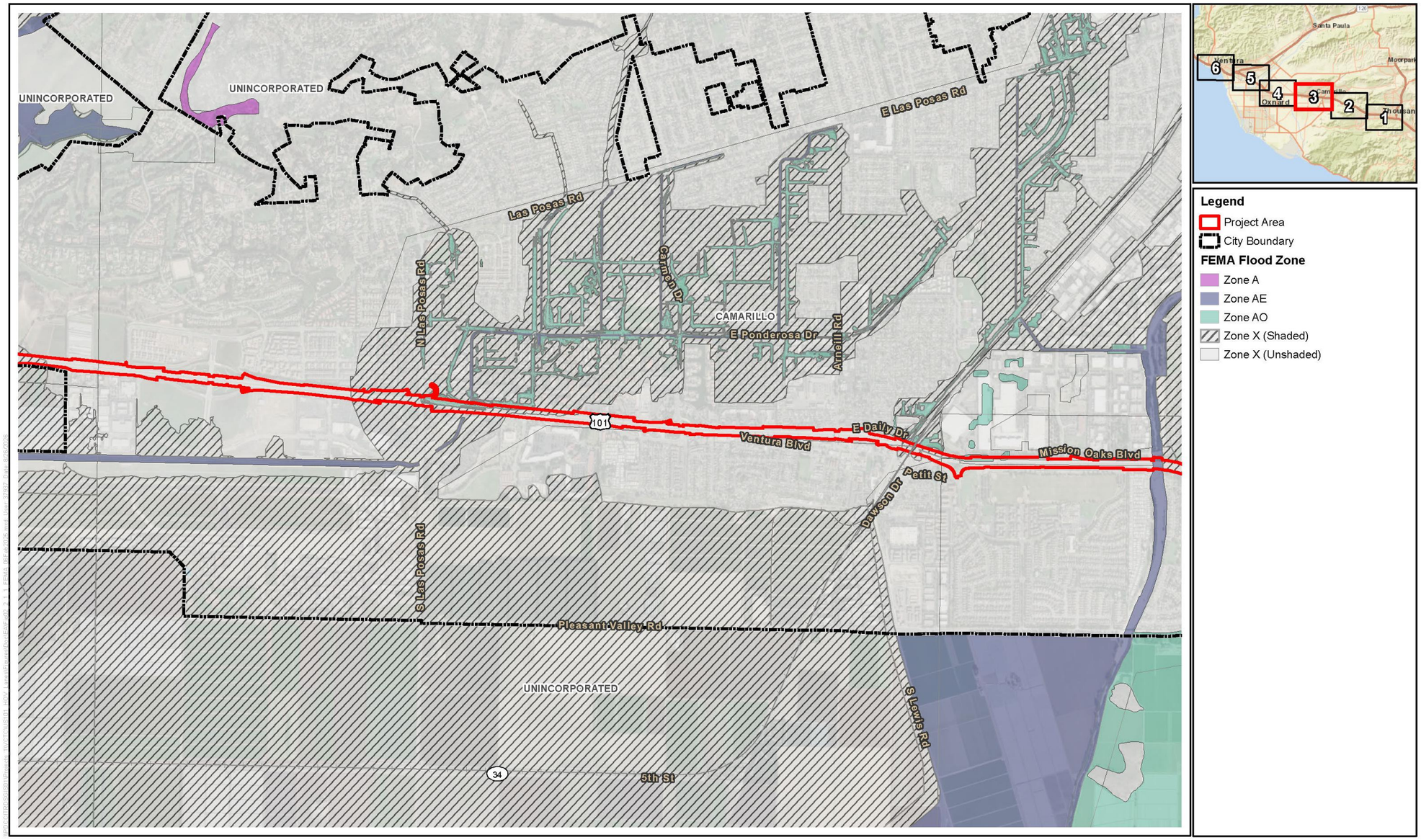


Figure 2.3.1-2 Sheet 3 of 6
Federal Emergency Management Agency Flood Zones
US 101 Improvement Project

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Figure 2.3.1-2. Federal Emergency Management Agency Flood Zones (Sheet 4 of 6)

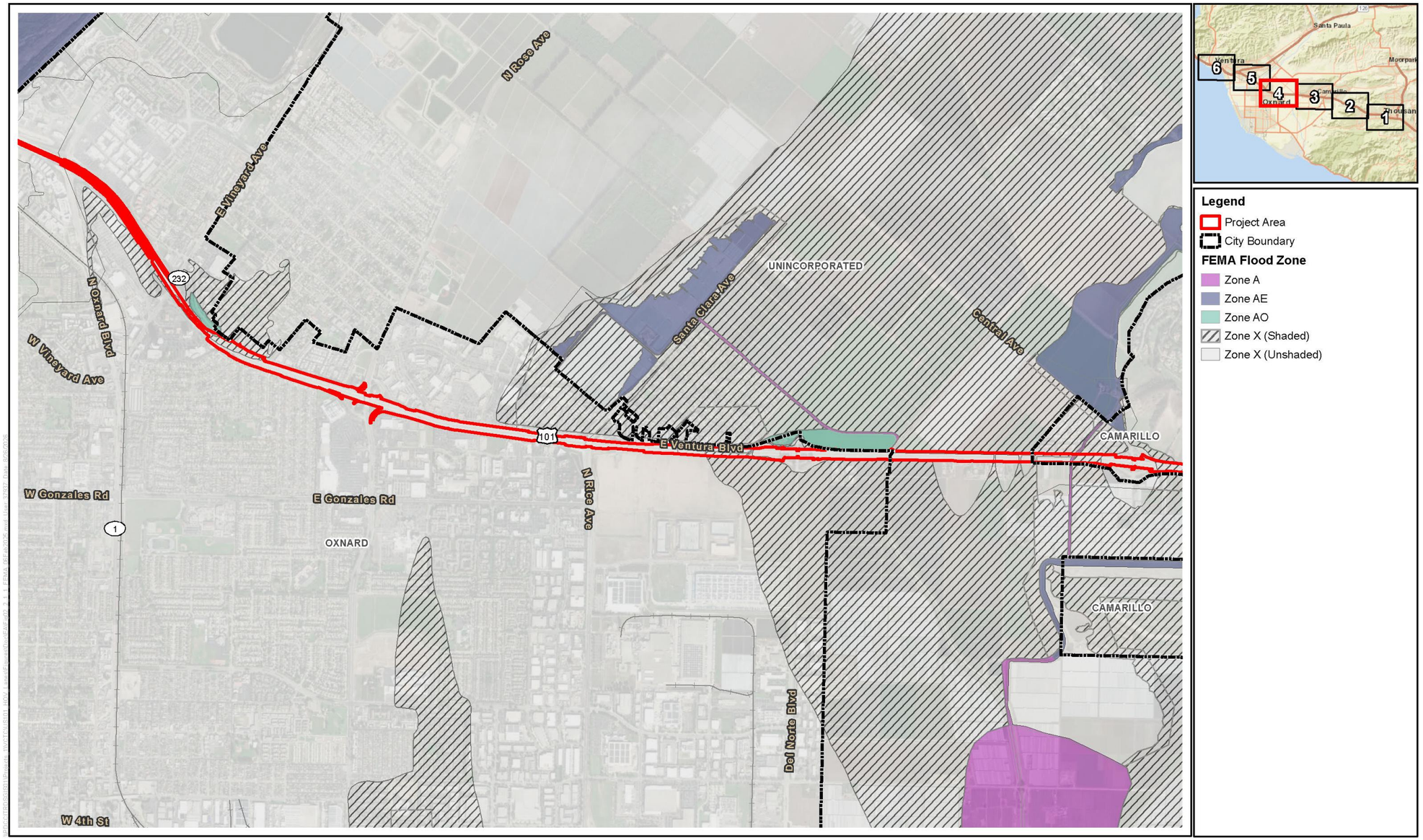


Figure 2.3.1-2 Sheet 4 of 6
Federal Emergency Management Agency Flood Zones
US 101 Improvement Project

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Figure 2.3.1-2. Federal Emergency Management Agency Flood Zones (Sheet 5 of 6)

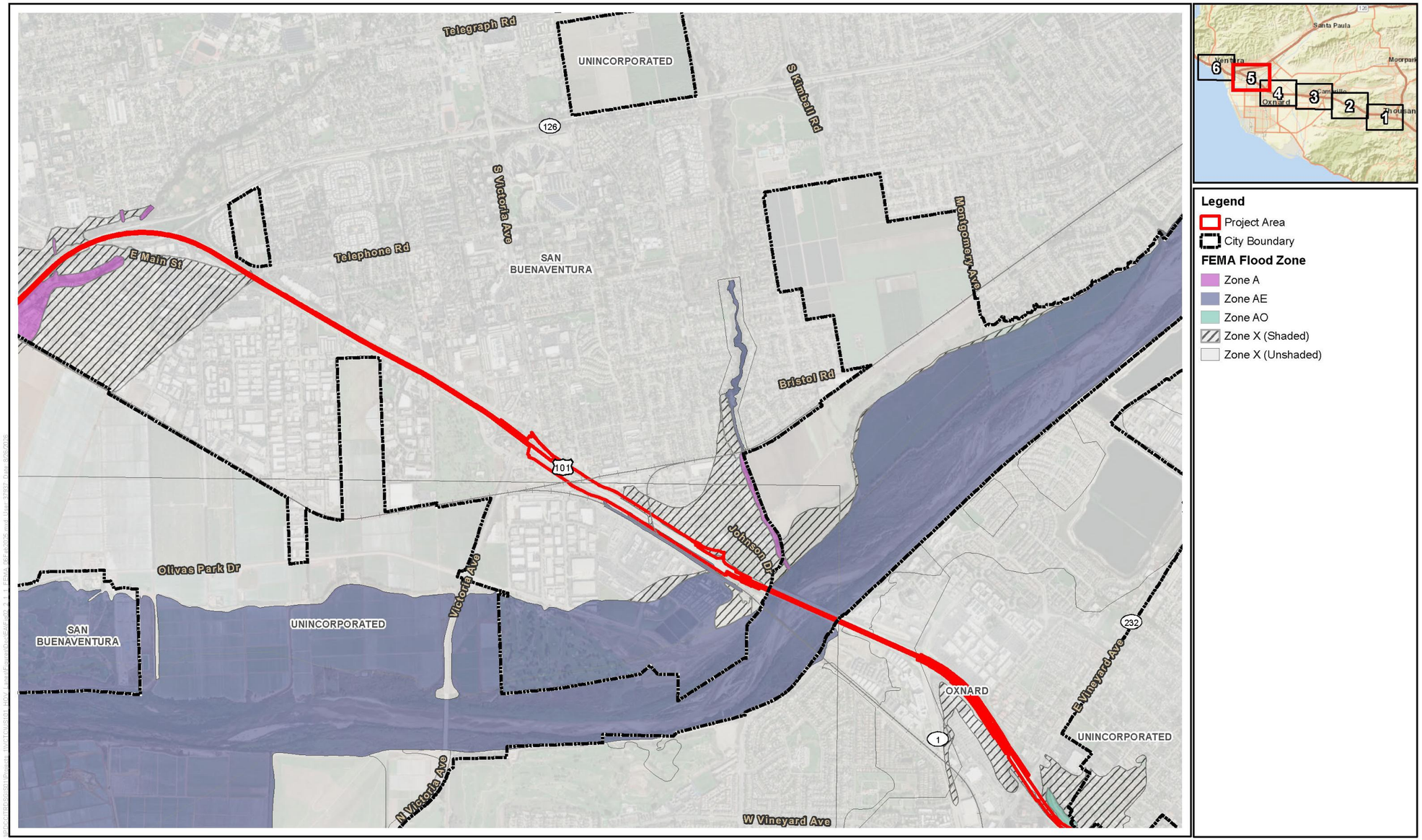


Figure 2.3.1-2 Sheet 5 of 6
Federal Emergency Management Agency Flood Zones
US 101 Improvement Project

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Figure 2.3.1-2. Federal Emergency Management Agency Flood Zones (Sheet 6 of 6)

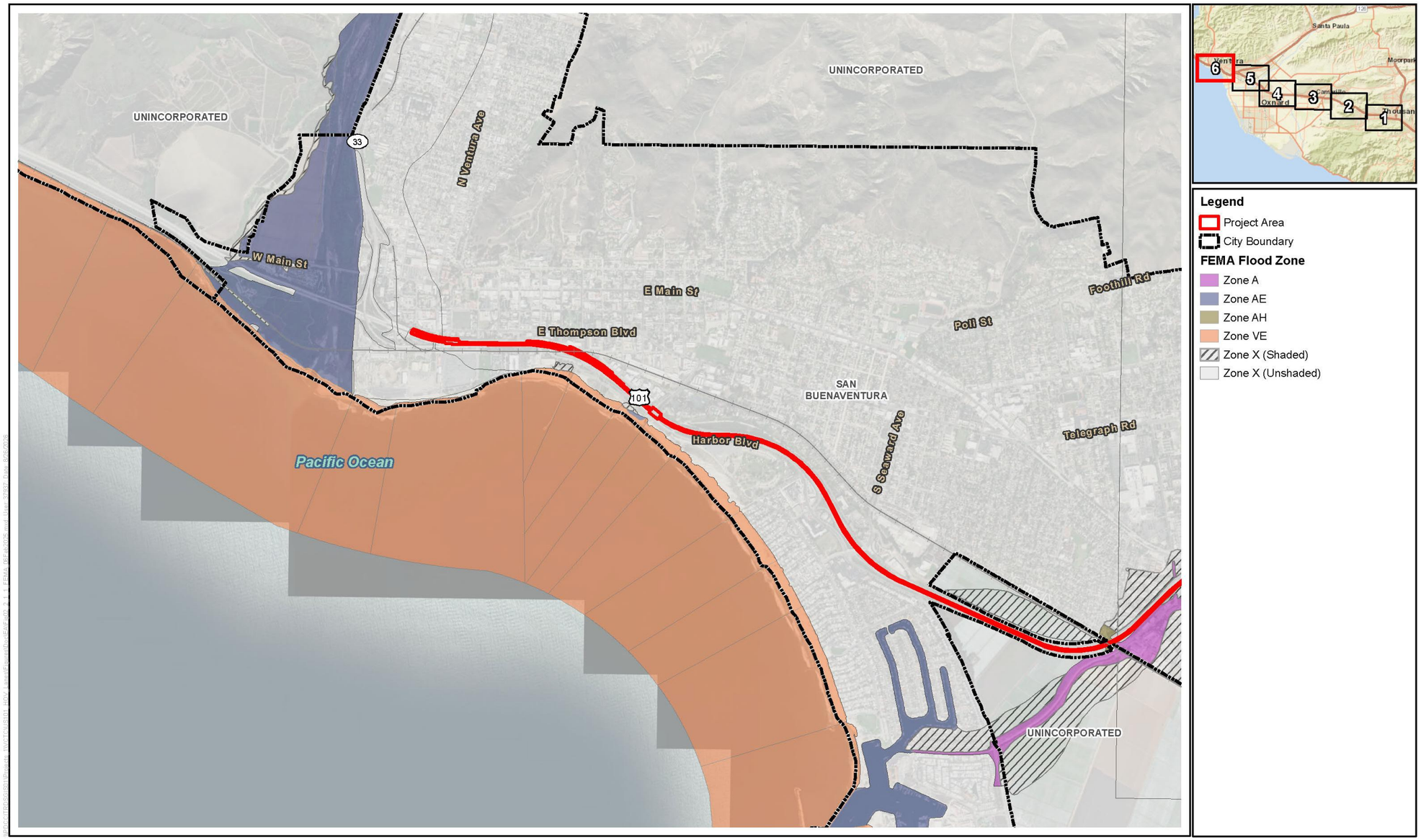


Figure 2.3.1-2 Sheet 6 of 6
Federal Emergency Management Agency Flood Zones
US 101 Improvement Project

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Natural and Beneficial Floodplain Values

Natural and beneficial floodplain values may include, but are not limited to, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge. The project would have no impacts on scientific study, forestry, or groundwater recharge. For more information on fish and wildlife, refer to Section 2.4.4, *Animal Species*, and Section 2.4.5, *Threatened and Endangered Species*. For more information on plants, refer to Section 2.4.3, *Plant Species*. For more information on natural beauty, refer to Section 2.2.11, *Visual/Aesthetics*. For more information on outdoor recreation, refer to Section 2.2.4, *Parks and Recreational Facilities*. For more information on agriculture, refer to Section 2.2.5, *Farmlands*. For more information on water quality maintenance, refer to Section 2.3.2, *Water Quality and Stormwater Runoff*.

Beneficial uses of surface waters are identified in the Los Angeles RWQCB's Water Quality Control Plan (Los Angeles RWQCB 2014). Beneficial uses include the various ways that water can be used for the benefit of people and wildlife. Beneficial use definitions for water bodies in the project area associated with the floodplain crossings are:

Agricultural Supply (AGR): Includes uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

Cold Freshwater Habitat (COLD): Uses of water that support coldwater ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

Freshwater Replenishment (FRSH): Includes uses of water for natural or artificial maintenance of surface water quantity or quality.

Groundwater Recharge (GWR): Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

Industrial Service Supply (IND): Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

Migration of Aquatic Organisms (MIGR): Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.

Municipal and Domestic Supply (MUN): Uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.

Industrial Process Supply (PROC): Uses of water for industrial activities that depend primarily on water quality.

Rare, Threatened, or Endangered Species (RARE): Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

Contact Water Recreation (REC1): Includes uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

Non-Contact Water Recreation (REC2): Includes uses of water for recreational activities involving proximity to water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Warm Freshwater Habitat (WARM): Uses of water that support warmwater ecosystems, including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

Wetland Habitat (WET): Uses of water that support wetland ecosystems, including, but not limited to, preservation or enhancement of wetland habitats, vegetation, fish, shellfish, or wildlife and other unique wetland functions that enhance water quality, such as providing flood and erosion control, streambank stabilization, and filtration and purification of naturally occurring contaminants.

Wildlife Habitat (WILD): Uses of water that support terrestrial ecosystems, including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Table 2.3.1-2 provides the potential and existing beneficial uses identified in the Water Quality Control Plan (Los Angeles RWQCB 2014) for surface water bodies associated with the floodplain crossings in the project area.

Table 2.3.1-2. Beneficial Uses of Floodplains within the US 101 Project Area

Floodplain Crossings	Potential Beneficial Uses	Existing Beneficial Uses
Conejo Creek	MUN	AGR, GWR, IND, PROC, REC1, REC2, WARM, WILD
Calleguas Creek	AGR, COLD, IND, MUN, PROC	GWR, REC1, REC2, WARM, WILD
Lewis Road Drain	No beneficial uses listed.	No beneficial uses listed.
Arroyo Conejo	No beneficial uses listed.	No beneficial uses listed.

Floodplain Crossings	Potential Beneficial Uses	Existing Beneficial Uses
South Branch Arroyo Conejo	No beneficial uses listed.	No beneficial uses listed.
Camarillo Hills Drain	No beneficial uses listed.	No beneficial uses listed.
Crestview Drain	No beneficial uses listed.	No beneficial uses listed.
Wood Creek (Las Posas Estates Drain)	No beneficial uses listed.	No beneficial uses listed.
Beardsley Wash (Revolon Slough)	No beneficial uses listed.	AGR, GWR, IND, MUN, REC1, REC2, WARM, WET, WILD
El Rio Drain	No beneficial uses listed.	No beneficial uses listed.
Santa Clara River	No beneficial uses listed.	AGR, COLD, FRSH, GWR, IND, MIGR, MUN, PROC, RARE, REC1, REC2, WARM, WET, WILD
Moon Ditch	No beneficial uses listed.	No beneficial uses listed.
Arundell Barranca	No beneficial uses listed.	No beneficial uses listed.
Barlow Barranca	No beneficial uses listed.	No beneficial uses listed.
Telephone Drain	No beneficial uses listed.	No beneficial uses listed.
Mills Road Drain	No beneficial uses listed.	No beneficial uses listed.

Source: Los Angeles RWQCB 2014.
AGR = Agricultural Supply; COLD = Cold Freshwater Habitat; FRSH = Freshwater Replenishment; GWR = Groundwater Recharge; IND = Industrial Service Supply; MIGR = Migration of Aquatic Organisms; MUN = Municipal and Domestic Supply; PROC = Industrial Process Supply; RARE = Rare, Threatened, or Endangered Species; REC1 = Contact Water Recreation; REC2 = Non-Contact Water Recreation; WARM = Warm Freshwater Habitat; WET = Wetland Habitat; WILD = Wildlife Habitat

2.3.1.3 Environmental Consequences

This section describes potential impacts on hydrology and flooding that could result from project construction or operation. The analysis identifies the impacts of the project to the extent that is reasonably foreseeable, given the general level of project detail available at this time.

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the existing configuration of US 101 and would not result in improvements. The base floodplain elevation would remain unchanged. Therefore, Alternative 1 would not result in permanent or temporary impacts on hydrology and floodplains in the project area.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Alternative 2 and Alternative 3 were evaluated for potential hydraulic and floodplain impacts from the proposed bridge widening and drainage improvements at each of the US 101 floodplain crossings. Construction activities would require construction equipment to temporarily work within the flood hazard zones with a 1 percent (100-year

floodplain) and 0.2 percent (500-year floodplain) annual chance of a flood event. During construction, there would be some temporary impacts on the floodplain crossings due to construction activities. As specified in Standard Project Measure **HYD-1**, to the maximum extent possible, construction activities would occur during the dry season. In the event of heavy rain, the construction site manager would move all construction equipment outside of the SFHAs with a 1 percent annual chance of a flood event within the project area. Temporary disruption of emergency services should be anticipated during construction of the project involving improvements over existing channels. These temporary interruptions would be addressed prior to initiating construction through preparation of a traffic management plan specific to each location. Neither Alternative 2 nor Alternative 3 would remove or terminate any transportation facilities that are used for emergency services or as evacuation routes. Therefore, no substantial changes to flood control functions would occur during construction.

Permanent Impacts

Floodplain Encroachment and Hydraulic Analysis

As summarized in Table 2.3.1-3, of the 16 floodplain crossings within the project area, nine of the crossings would have floodplain encroachments under Alternative 2 and Alternative 3 but would not increase the base floodplain elevations. An encroachment permit from the Ventura County Flood Control District will be required.

Table 2.3.1-3. Floodplain Encroachment Summary for Alternative 2 and Alternative 3

Floodplain Crossings	Flood Zone Designation	Proposed Project Improvement	Hydraulic Modeling Conducted	Existing 100-Year Water Surface Elevation (upstream/downstream of bridge)	Proposed 100-Year Water Surface Elevation (upstream/downstream of bridge)	Change in Water Surface Elevation (upstream/downstream of bridge)	Floodplain Encroachment	Proposed Measures	Level of Risk
Conejo Creek	AE, AO, X	Widening of Arroyo Conejo Bridge that crosses Conejo Creek to accommodate a new shoulder in each direction and a new lane on the northbound side of US 101.	Yes, for the Arroyo Conejo Bridge.	118.63 feet/116.91 feet	118.89 feet/116.84 feet	0.26 feet/-0.07 feet	Minimal. Transverse encroachment. Widening the bridge and mainline would place fill within the regulatory floodway. The rise in water surface elevation would exceed the 0.0-foot rise allowed within a regulatory floodway. However, a review of the topography revealed the floodplain and floodway may not be mapped properly.	Prepare a CLOMR with a hydraulic analysis and floodplain remapping.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Calleguas Creek	AE, AO, X	Widening of Arroyo Calleguas Bridge that crosses Calleguas Creek to accommodate a new lane and shoulder in each direction.	Yes, for the Arroyo Calleguas Bridge.	145.11 feet/142.25 feet	145.60 feet/142.31 feet	0.49 feet/0.06 feet	Minimal. Transverse encroachment. Widening the bridge would require columns in the channel, which would result in fill being placed within the regulatory floodway. The rise in water surface elevation would exceed the 0.0-foot rise allowed within a regulatory floodway. However, a review of the topography revealed the floodplain and floodway may not be mapped properly.	Prepare a CLOMR with a hydraulic analysis and floodplain remapping.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Lewis Road Drain	AO, X	None.	No. The project would not affect the RCB culvert, and no changes to the channel would be made.	N/A	N/A	N/A	None. The Lewis Road Drain follows Lewis Road and crosses underneath US 101; it would not be affected by the project.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Arroyo Conejo	A	The northbound side of the Arroyo Conejo Sidehill Viaduct will be widened to accommodate a new shoulder in each direction. An existing A 150-inch CMP that crosses the US 101 via the viaduct and drains to Arroyo Conejo will be extended to accommodate the viaduct widening.	Yes, for the Arroyo Conejo Sidehill Viaduct.	694.01 feet/691.30 feet	693.79 feet/691.10 feet	-0.22 feet/-0.20 feet	Minimal. The roadway limits include longitudinal encroachment onto the Zone A floodplain in the vicinity of the Arroyo Conejo Sidehill Viaduct. Widening of the viaduct would continue to allow conveyance beneath the freeway. No impact on	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.

Floodplain Crossings	Flood Zone Designation	Proposed Project Improvement	Hydraulic Modeling Conducted	Existing 100-Year Water Surface Elevation (upstream/downstream of bridge)	Proposed 100-Year Water Surface Elevation (upstream/downstream of bridge)	Change in Water Surface Elevation (upstream/downstream of bridge)	Floodplain Encroachment	Proposed Measures	Level of Risk
							longitudinal encroachment.		
South Branch Arroyo Conejo	A, AE, X	Widening of South Branch Arroyo Conejo Bridge to accommodate a 10-foot shoulder on US 101 northbound.	Yes, for the South Branch Arroyo Conejo Bridge.	647.74 feet/647.74 feet	647.74 feet/647.74 feet	0 feet/0 feet	Minimal. Transverse encroachment onto Zone AE floodplain due to roadway and bridge widening would reduce floodplain storage capacity.	Regrade the infields to restore the storage volume lost due to roadway widening. Remap the floodplain with the CLOMR/ LOMR process.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Camarillo Hills Drain	AE, AO, X	None.	No. The project would not impact the RCB culvert and no changes to the channel are being made.	N/A	N/A	N/A	Minimal. Longitudinal encroachment onto Zone AO floodplain due to roadway widening would reduce floodplain storage capacity.	Regrade the infields to restore the storage volume lost due to roadway widening. Remap the floodplain through the CLOMR/ LOMR process.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Crestview Drain	AE, AO, X	None.	No. The project would not impact the RCB culvert and no changes to the channel are being made.	N/A	N/A	N/A	Minimal. Longitudinal encroachment onto Zone AO floodplain due to roadway widening would reduce floodplain storage capacity.	Regrade the infields to restore the storage volume lost due to roadway widening. Remap the floodplain through the CLOMR/ LOMR process.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Wood Creek (Las Posas Estates Drain)	A, X	None.	No. The project would not impact the RCB and no changes to the channel are being made.	N/A	N/A	N/A	None. Zone A floodplain is contained within the culvert/channel and would not be affected by the project.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Beardsley Wash (Revolon Slough)	AO, X	Widening of Beardsley Wash Bridge to accommodate a new shoulder in each direction and a new lane on northbound US 101.	Yes, for Beardsley Wash Bridge.	66.98 feet/66.89 feet	66.55 feet/66.47 feet	-0.43 feet/-0.42 feet	Minimal. Transverse encroachment onto Zone AO floodplain due to roadway widening. Zone AO floodplain is associated with the Nyland Drain just before the confluence with Beardsley Wash. The potential exists for the Zone AO floodplain to be altered due to the widening.	Remodel Nyland Drain and Beardsley Wash. Prepare CLOMR.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.

Floodplain Crossings	Flood Zone Designation	Proposed Project Improvement	Hydraulic Modeling Conducted	Existing 100-Year Water Surface Elevation (upstream/downstream of bridge)	Proposed 100-Year Water Surface Elevation (upstream/downstream of bridge)	Change in Water Surface Elevation (upstream/downstream of bridge)	Floodplain Encroachment	Proposed Measures	Level of Risk
El Rio Drain	AO, X	None.	No. The project would not impact the culvert.	N/A	N/A	N/A	Minimal. The longitudinal encroachment onto the Zone AO floodplain due to roadway widening would reduce floodplain storage capacity.	Regrade the infields to restore the storage volume lost due to roadway widening. Remap the floodplain through the CLOMR/ LOMR process.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Santa Clara River	A, AE, X	None.	No. The project would not impact the bridge crossing over Santa Clara River.	N/A	N/A	N/A	None. The Santa Clara Bridge would not be improved; therefore, transverse encroachment onto the Santa Clara River Zone AE floodplain or regulatory floodway would not occur.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Moon Ditch	AE, X	None.	No. The project would not affect the double CMP culvert, and no changes to the channel would be made.	N/A	N/A	N/A	Minimal. The Montalvo Spur Bridge and the roadway in the vicinity of Moon Ditch would be widened. The bridge and roadway widening would result in longitudinal encroachment onto Zone AE floodplain and reduce floodplain storage capacity. New retaining walls proposed on both sides of the freeway in the vicinity of Moon Ditch would also reduce floodplain storage capacity.	Remodel Moon Ditch. Prepare CLOMR.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Arundell Barranca	X	None.	No. The project would not affect the culvert.	N/A	N/A	N/A	None. The Arundell Barranca crosses underneath US 101 and would not be affected by the project.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Barlow Barranca	A, X	None.	No. The project would not affect the culvert.	N/A	N/A	N/A	None. The Barlow Barranca crosses underneath US 101 and would not be affected by the project.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.

Floodplain Crossings	Flood Zone Designation	Proposed Project Improvement	Hydraulic Modeling Conducted	Existing 100-Year Water Surface Elevation (upstream/downstream of bridge)	Proposed 100-Year Water Surface Elevation (upstream/downstream of bridge)	Change in Water Surface Elevation (upstream/downstream of bridge)	Floodplain Encroachment	Proposed Measures	Level of Risk
Telephone Drain	A, X	None.	No. The project would not affect the culvert.	N/A	N/A	N/A	None. The Telephone Drain crosses underneath US 101 and would not be affected by the project.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.
Mills Road Drain	A, X	None.	No. The project would not affect the culvert.	N/A	N/A	N/A	None. The Arundell Barranca crosses underneath US 101 and would not be affected by the project.	None.	Low. No change to risk involving traffic disruptions or loss of life and property. No incompatible floodplain development.

Source: Location Hydraulic Study, Volumes 1–7 (Caltrans 2020a, 2020b, 2020c, 2020d, 2020e, 2020f, 2020g)
CLOMR = Conditional Letter of Map Revision; CMP = corrugated metal pipe; LOMR = Letter of Map Revision; PS&E = Plans, Specifications, and Estimates; RCB = reinforced concrete box

The project would widen five bridges that would encroach upon the area with a 1 percent probability base flood (100-year floodplain): Conejo Creek, Calleguas Creek, Arroyo Conejo, South Branch Arroyo Conejo, and Beardsley Wash. In addition, bridge and/or roadway widening near four drainages would also encroach upon the area with a 1 percent probability base flood (100-year floodplain): Camarillo Hills Drain, Crestview Drain, El Rio Drain, and Moon Ditch. The project would not affect hydraulics or floodplains at seven floodplain crossings because the bridge and drainage structures at these locations would not be altered: Lewis Road Drain, Wood Creek (Las Posas Estates Drain), Santa Clara River, Arundell Barranca, Barlow Barranca, Telephone Drain, and Miles Road Drainage.

Further information regarding bridge widening and the areas surrounding the drainage improvements where floodplain encroachment would occur is provided below.

Bridge Widening

- **Arroyo Conejo Bridge.** The Arroyo Conejo Bridge at the US 101 crossing over Conejo Creek would be widened to accommodate a new shoulder in each direction and a new lane on the northbound side of US 101. At Conejo Creek, the existing Zone AE floodplain is already confined to the limits of the regulatory floodway. Widening of the bridge and mainline would place fill within the regulatory floodway. The hydraulic analysis shows water surface elevation increases by 0.26 foot upstream of the bridge and decreases by 0.07 foot downstream of the bridge under Alternative 2 and Alternative 3. The increase in water surface elevation of 0.26 foot would exceed the 0.0-foot rise allowed within a regulatory floodway. A review of topography revealed that the floodplain and floodway may not be mapped properly. During final design, a hydraulic analysis would be conducted, the floodplain would be remapped, and a Conditional Letter of Map Revision (CLOMR) would be prepared (Standard Project Measure **HYD-2**). The hydraulic model for Conejo Creek indicates the project would not alter the base flood elevation. The project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020a).
- **Arroyo Calleguas Bridge.** The Arroyo Calleguas Bridge at the US 101 crossing over Calleguas Creek would be widened to accommodate a new lane and shoulder in each direction. At Calleguas Creek, the existing Zone AE floodplain is confined to the limits of the regulatory floodplain. Widening of the bridge would require additional columns in the channel; this would result in fill being placed within the regulatory floodway. The hydraulic analysis shows water surface elevation increases by 0.49 foot upstream of bridge and 0.06 foot downstream of the bridge under Alternative 2 and Alternative 3. The increase in water surface elevation would exceed the 0.0-foot rise allowed within a regulatory floodway. A review of topography revealed that the floodplain and floodway may not be mapped properly. During final design, a hydraulic analysis would be conducted, the floodplain would be remapped, and a CLOMR would be prepared (Standard Project Measure **HYD-2**). The hydraulic model for Calleguas Creek indicates the project would not alter the base flood elevation. The project would not result in an

adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020a).

- **Arroyo Conejo Sidehill Viaduct.** The Arroyo Conejo Sidehill Viaduct would be widened on the northbound side to accommodate a new shoulder. Furthermore, the existing 150-inch corrugated metal pipe that crosses US 101 via the viaduct and drains to Arroyo Conejo would be extended to accommodate the viaduct widening. The hydraulic analysis shows water surface elevation decreases by 0.22 foot upstream of bridge and 0.20 foot downstream of the bridge under Alternative 2 and Alternative 3. Under existing conditions, Arroyo Conejo fails to carry the 100-year flow; the flow has potential to overtop the roadway. Under Alternative 2 and Alternative 3, freeboard would not improve and would not meet Caltrans requirements under either proposed or existing conditions. However, because there would be no increase in the base flood elevation, the project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020b). Widening of the viaduct would continue to provide conveyance beneath the freeway.
- **South Branch Arroyo Conejo Bridge.** The South Branch Arroyo Conejo Bridge would be widened to accommodate a 10-foot shoulder on northbound US 101. They hydraulic analysis shows no change in water surface elevation under Alternative 2 and Alternative 3. Under existing conditions, South Branch Arroyo Conejo fails to carry the 100-year flow; the flow has potential to overtop the roadway. Under the proposed condition for Alternative 2 and Alternative 3, freeboard would not improve and would not meet Caltrans requirements. However, because there would be no increase in the base flood elevation, the project would not result in an adverse change in flood risks or damage. Although the project would not increase the water surface elevation in the channel, widening of the roadway and the South Branch Arroyo Conejo Bridge would encroach on the Zone AE floodplain and reduce floodplain storage capacity. Floodplain infields would be regraded following project construction in order to restore storage volume (Standard Project Measure **HYD-3**). During final design, the infields would be redesigned and the floodplain remapped through the CLOMR/Letter of Map Revision (LOMR) process (Standard Project Measure **HYD-2**). The project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020b).
- **Beardsley Wash Bridge.** The Beardsley Wash Bridge would be widened to accommodate a new shoulder in each direction and a new lane on northbound US 101. The hydraulic analysis shows the water surface elevation decreases by 0.43 foot upstream of the bridge and 0.42 foot downstream of the bridge under Alternative 2 and Alternative 3. The results of the hydraulic analysis for Beardsley Wash indicate the project would not increase the base flood elevation. Because there would be no increase in the base flood elevation, the project would not result in an adverse change in flood risks or damage. Although the bridge is not within a 100-year floodplain, there is a Zone AO floodplain associated with the Nyland Drain just before the confluence with Beardsley Wash. Zone AO appears to be associated with a lack of capacity in the Nyland Drain. The potential exists

for the water surface elevation to increase in the Nyland Drain due to the roadway widening. The Zone AO is bounded on the south by US 101. There is no feasible design that would allow widening to the north that would not encroach upon the floodplain. During final design, the Nyland Drain and Beardsley Wash would be remodeled and a CLOMR would be prepared (Standard Project Measures **HYD-2** and **HYD-4**). The project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020d).

Drainage Improvements

- **Camarillo Hills Drain.** The project would not alter the reinforced concrete-box (RCB) culvert associated with the Camarillo Hills Drain; however, roadway widening would result in longitudinal encroachment onto a Zone AO floodplain and reduce floodplain storage capacity. Floodplain infields would be regraded following project construction in order to restore storage volume (Standard Project Measure **HYD-3**). During final design, the infields would be redesigned and the floodplain remapped through the CLOMR/LOMR process (Standard Project Measure **HYD-2**). The project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020c).
- **Crestview Drain.** The project would not alter the RCB associated with the Crestview Drain; however, the roadway widening would result in longitudinal encroachment onto a Zone AO floodplain and reduce floodplain storage capacity. Floodplain infields would be regraded following project construction in order to restore storage volume (Standard Project Measure **HYD-3**). During final design, the infields would be redesigned and the floodplain remapped through the CLOMR/LOMR process (Standard Project Measure **HYD-2**). The project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020c).
- **El Rio Drain.** The project would not alter the culvert associated with the El Rio Drain; however, roadway widening would result in longitudinal encroachment onto a Zone AO floodplain and reduce floodplain storage capacity. Floodplain infields would be regraded following project construction in order to restore storage volume (Standard Project Measure **HYD-3**). During final design, the infields would be redesigned and the floodplain remapped through the CLOMR/LOMR process (Standard Project Measure **HYD-2**). The project would not result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020e).
- **Moon Ditch.** The project would not alter the culvert associated with the Moon Ditch. However, the Montalvo Spur Bridge and the roadway in the vicinity of Moon Ditch would be widened. The bridge and roadway widening would result in longitudinal encroachment onto a Zone AE floodplain and reduce floodplain storage capacity. New retaining walls proposed on both sides of the freeway in the vicinity of Moon Ditch would also reduce floodplain storage capacity. During final design, the Moon Ditch would be remodeled and a CLOMR would be prepared (Standard Project Measures **HYD-2** and **HYD-4**). The project would not

result in an adverse change in flood risks or damage, and there would be minimal floodplain encroachment (Caltrans 2020e).

Potential Risks to Life and Property

Construction of Alternative 2 and Alternative 3 would not result in flood-related interruption of emergency services or routes; rather, it would provide a more reliable freeway network. Operations under Alternative 2 and Alternative 3 would not result in interruption of emergency services or routes; rather, it would improve access throughout the region. In addition, implementation of Alternative 2 or Alternative 3 would not increase the risk of flooding because it would not increase the base flood elevation. Therefore, there would be no substantial flood-related risks to life or property associated with implementation of Alternative 2 or Alternative 3.

Potential Risks for Support of Incompatible Floodplain Development

Alternative 2 and Alternative 3 include improvements to an existing transportation facility within an existing state right-of-way. Alternative 2 and Alternative 3 would reduce congestion by modifying existing facilities; they would not promote incompatible floodplain development.

Potential Risks to Natural and Beneficial Floodplain Values

Alternative 2 and Alternative 3 would have the potential to affect natural and beneficial water resource values by affecting natural-bottom channels, which could affect water quality and jurisdictional waters. As discussed in detail in Section 2.3.2, *Water Quality and Stormwater Runoff*, Alternative 2 and Alternative 3 would result in a net increase in impervious surface area and, therefore, an increase in runoff. Runoff from the proposed roadway improvements would have the potential to affect water quality in receiving waters. However, best management practices (BMPs) would be implemented during operation of Alternative 2 and Alternative 3 to reduce impacts on water quality (see Section 2.3.2, *Water Quality and Stormwater Runoff*). Improvements within the 100-year floodplain proposed under Alternative 2 and Alternative 3 would result in direct, permanent impacts on water bodies within the project area, some of which are considered potentially jurisdictional by the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the RWQCB and therefore would require regulatory permits for improvements in jurisdictional waters (see Section 2.4.2, *Wetlands and Other Waters*). Therefore, with the measures proposed in Section 2.3.2, *Water Quality and Stormwater Runoff,* and Section 2.4.2, *Wetlands and Other Waters*, operation of Alternative 2 or Alternative 3 would not result in long-term adverse impacts on natural and beneficial floodplain values.

Significant Floodplain Encroachment

Alternative 2 and Alternative 3 propose highway improvements that would require encroachment within 100-year floodplains in the project area as part of project improvements, as discussed above. The proposed encroachments would not result in adverse impacts on natural and beneficial floodplain values, would not result in a substantial change in flood risk or damage, and would not have substantial potential to interrupt or terminate emergency services or emergency routes. Therefore, Alternative 2

and Alternative 3 would not constitute a significant floodplain encroachment, as defined in 23 CFR 650.105(q).

2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no hydrology or floodplains impacts would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Relevant measures include Standard Project Measure **WQ-1** (Section 2.3.2, *Water Quality and Stormwater Runoff*), which would ensure that the proposed project would comply with the National Pollutant Discharge Elimination System Statewide Stormwater Permit, the National Pollutant Discharge Elimination System General Permit for Discharges of Stormwater Associated with Construction Activities, and any subsequent permit in effect at the time of construction. In addition, Standard Project Measures **HYD-1** through **HYD-4** would be implemented to minimize and/or avoid impacts on floodplains and hydrology.

HYD-1: Schedule Construction during the Dry Season. To the maximum extent possible, construction activities would occur during the dry season. In the event of heavy rain, the construction site manager would move all construction equipment outside of the SFHAs with a 1 percent annual chance of a flood event within the project area.

HYD-2: Remap Floodplain. The floodplain would be remapped during the plans, specifications, and estimates phase of the project through the CLOMR/LOMR process.

HYD-3: Regrade Infields. Floodplain infields would be regraded following project construction in order to restore storage volume. The infields would be redesigned during the plans, specifications, and estimates phase of the project.

HYD-4: Remodel Drainages. To evaluate design alternatives to minimize floodplain encroachment, during the plans, specifications, and estimates phase of the project, the following drainages would be remodeled: Nyland Drain, Beardsley Wash, and Moon Ditch.

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2.3.2 Water Quality and Stormwater Runoff

2.3.2.1 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 source (a discrete conveyance such as a pipe or a man-made ditch) 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). The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request.
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems.
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE). For more information, please see 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. 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" the definition of which is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by waste discharge requirements and may be required even when the discharge is already permitted or exempt under the CWA.

The 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. In California, RWQCBs designate

beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with the 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 waste discharge requirements), the CWA requires the establishment of Total Maximum Daily Loads (TMDL). 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, oversees water quality functions throughout the state by approving Basin Plans, TMDLs, NPDES permits, and regulates projects spanning more than one water board region. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater discharges, including municipal separate storm sewer systems. A municipal separate storm sewer system 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 stormwater, that is designed or used for collecting or conveying stormwater.” The SWRCB has identified Caltrans as an owner/operator of a municipal separate storm sewer systems under federal regulations.

To comply with the permit, Caltrans developed a statewide Stormwater Management Plan to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California.

Construction General Permit

The SWRCB has also issued a statewide Construction General Permit (CGP) that regulates stormwater discharges from construction sites that result in a disturbed soil area of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater 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 CGP. Construction activity that results in soil disturbances of less than one acre is subject to this CGP 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 Stormwater Pollution Prevention Plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the CGP. In accordance with Caltrans’

Stormwater Management Plan and Standard Specifications, a Water Pollution Control Program is necessary for projects with a disturbed soil area less than one acre.

2.3.2.2 Affected Environment

The information in this section is based on the Water Quality Assessment Report (Caltrans 2021a) and the Stormwater Data Report (SWDR) (Caltrans 2021b) prepared for the project.

The project is under the jurisdiction of the Los Angeles RWQCB and within three watersheds: Ventura River, Calleguas Creek, and Santa Clara River (Figure 2.3.2-1).

Watersheds

Ventura River Watershed

The surface water system in the Ventura River Watershed flows southward from the upper slopes of the Transverse Range to an estuary at the mouth of the Ventura River. Groundwater basins, which are composed of alluvial aquifers, along the surface water system are highly interconnected. They are quickly recharged or depleted, depending on surface flow conditions.

Ventura River

The Ventura River is the northernmost major river system in the region. It drains an area of 235 square miles in the western Transverse Ranges. Topography in the watershed is rugged. As a result, creeks that drain to the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters (Watersheds Coalition of Ventura County 2019).

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Figure 2.3.2-1. Watershed Map



Figure 2.3.2-1
Watershed Map
US 101 Improvement Project

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Calleguas Creek Watershed

The Calleguas Creek Watershed covers approximately 343 square miles in southeastern Ventura County. The watershed includes Conejo Creek, Arroyo Santa Rosa, Arroyo Simi, Arroyo Las Posas, and Calleguas Creek, along with Revolon Slough and Mugu Lagoon. Presently, 50 percent of the watershed is undeveloped open space, 25 percent is agricultural, and the remaining 25 percent is in urban land use. The watershed ultimately drains to the Pacific Ocean through Mugu Lagoon (Watersheds Coalition of Ventura County 2019).

Arroyo Conejo

Arroyo Conejo is a regional drainage facility and part of the Calleguas Creek Watershed. Based on the City of Thousand Oaks Storm Drain System Master Plan, a 150-inch corrugated metal pipe can carry a flow of 2,200 cubic feet per second associated with a 100-year storm event from a tributary drainage area of 1.4 square miles (Caltrans 2021b).

South Branch Arroyo Conejo

The South Branch Arroyo Conejo drainage channel is a regional drainage facility that crosses US 101 at the Arroyo Conejo Bridge; it also crosses at the Borchard Road Bridge. This is a large drainage system that directs storm flows from the southwest side of the bridge to the northeast side. South Branch Arroyo Conejo is part of the Calleguas Creek Watershed.

Conejo Creek

Conejo Creek is a regional drainage facility and crosses US 101 at the Arroyo Conejo Bridge. Conejo Creek flows from the north side of the bridge to the south side.

Calleguas Creek

Prior to the 1940s, Calleguas Creek and its main tributaries provided drainage for stormwater and irrigation discharges; on rare occurrences, it carried year-round flows. Over the past 50 years, however, steadily increasing wastewater discharges and urban runoff have provided portions of Calleguas Creek and its tributaries with perennial flows (Watersheds Coalition of Ventura County 2019).

Beardsley Wash

Beardsley Wash is a regional drainage facility that crosses US 101 at the Beardsley Wash Bridge. This drainage system directs storm flows from the north side of the bridge to the south side, becoming Revolon Slough just after crossing US 101.

Santa Clara River Watershed

The Santa Clara River, along with its tributary system, has a watershed area of about 1,634 square miles. Major tributaries include Castaic Creek and San Francisquito Creek in Los Angeles County and the Sespe, Piru, and Santa Paula Creek in Ventura County. Approximately 40 percent of the watershed is in Los Angeles County; 60 percent is in Ventura County.

Santa Clara River

The Santa Clara River is the largest river system in Southern California that has remained in a relatively natural state. The river flows in a westerly direction for approximately 84 miles through Tie Canyon, Aliso Canyon, Soledad Canyon, the Santa Clarita Valley, the Santa Clara River Valley, and the Oxnard Plain before discharging to the Pacific Ocean near Ventura Harbor (Watersheds Coalition of Ventura County 2019).

Surface Waters

Beneficial uses for surface waters are the foundation for water quality protection under the Los Angeles RWQCB Basin Plan (Los Angeles RWQCB 2014). After beneficial uses are designated, water quality objectives are established. Together, the beneficial uses and water quality objectives form water quality standards. Beneficial uses are designated as existing, intermittent, or potential. Table 2.3.2-1 shows the beneficial uses and designations for the direct receiving water bodies in the project area.

Table 2.3.2-1. Beneficial Uses of Surface Waters

Water Body Name	Municipal and Domestic Supply (MUN)	Industrial Service Supply (IND)	Groundwater Recharge (GWR)	Warm Freshwater Habitat (WARM)	Wildlife Habitat (WILD)	Wetland Habitat (WET)[a]	Industrial Process Supply (PROC)	Agricultural Supply (AGR)	Freshwater Replenishment (FRSH)	Cold Freshwater Habitat (COLD)	Rare, Threatened or Endangered Species (RARE)	Migration of Aquatic Organisms (MIGR)	Spawning, Reproduction, and/or Early Development (SPWN)
Calleguas Creek Reach 5													
Beardsley Channel (above Central Avenue)	P*				EE				E				
Calleguas Creek Reach 6													
Arroyo Las Posas (Calleguas Creek Reach 3 to Long Canyon)	P*	P	E	E	E		P	P		P			
Arroyo Las Posas (Long Canyon to Hitch Road)	P*	P	E	E	E		P	P	E	P			
Calleguas Creek Reach 9B													
WBD 180701030105	P*	E	E	E	E		E	E					
WBD 180701030105	P*								I				E
Calleguas Creek Reach 13													
Arroyo Conejo (above confluence with North Fork Arroyo Conejo)	P*		I	I	E				I				
Santa Clara River Reach 1													
Santa Clara River (estuary to US 101 bridge)	P*	E	E	E	E	E	E	E	E	E	E	E	

Source: Los Angeles RWQCB 2014.

[a.] Water bodies designated as WET may have wetlands habitat associated with only a portion of the water body. Any regulatory action would require a detailed analysis of the area.

* MUN designations are designated under SWRCB Resolution No. 88-63 and RWQCB Resolution No. 89-03.

E = existing beneficial uses

I = intermittent beneficial uses

P = potential beneficial uses

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List of Impaired Waters

EPA created a Section 303(d) program as a part of the CWA that assists states, territories, and authorized tribes with (1) submitting lists of impaired and threatened waters and (2) developing TMDLs, based on the severity of the pollution and sensitivity of the waters. Impairment of water bodies may be caused by water column exceedances, excessive sediment levels of pollutants, or bioaccumulation of pollutants. Table 2.3.2-2 lists the impaired water bodies that would receive direct discharges from the project.

Table 2.3.2-2. Impaired Surface Waters

Surface Water	Pollutant
Sanjon Barranca Creek	Trash
	Escherichia coli (E. coli)
Arundell Barranca	Indicator bacteria
Santa Clara River Reach 1 (estuary to US 101 bridge)	Toxicity
	Oxygen, dissolved
	pH
	Trash
Calleguas Creek Reach 5	Nitrogen
	Diazinon
	Sedimentation/siltation
	Trash
	Chlordane (tissue and sediment)
	Polychlorinated biphenyls (PCBs) (tissue)
	Dichlorodiphenyltrichloroethane (DDT) (tissue and sediment)
	Dieldrin (tissue)
	Toxaphene (tissue and sediment)
	Chlorpyrifos (tissue)
	ChemA (tissue)
	Toxicity
	Endosulfan (tissue and sediment)
Calleguas Creek Reach 6	Indicator bacteria
	Ammonia
	Nitrate as nitrate (NO_3)
	Chlordane
	Toxicity
	Chlorpyrifos
	Chloride
	Sedimentation/siltation
	Diazinon

Surface Water	Pollutant
	DDT (sediment)
	Dieldrin
	Sulfates
Calleguas Creek Reach 9B	Indicator bacteria
	Dieldrin
	PCBs
	DDT (tissue)
	Ammonia
	Toxicity
	Chlorpyrifos
	ChemA (tissue)
	Chlordane
	Endosulfan (tissue)
	Toxaphene (tissue and sediment)
	Diazinon
	Sulfates
	Total dissolved solids
	Chloride
	Trash
Calleguas Creek Reach 13	Ammonia
	DDT (tissue)
	Chlordane
	Toxicity
	Endosulfan (tissue)
	Toxaphene (tissue and sediment)
	Dieldrin
	PCBs
	Chloride
	ChemA (tissue)
	Total dissolved solids
	Sulfates

Source: Caltrans 2021b.

Total Maximum Daily Load

Once a water body is listed as impaired, the State is required to develop a TMDL to address each pollutant causing the impairment. A TMDL defines how much of a pollutant load a water body can tolerate and still meet water quality standards. The TMDL is required to account for contributions from point sources (i.e., permitted discharges) as well as contributions from non-point sources, including natural background contributions. TMDLs allocate allowable pollutant loads for each source and

identify management measures that, when implemented, ensure that water quality standards will be attained. TMDLs, along with their associated implementation plans, are adopted into a RWQCB's basin plan through the basin planning process. TMDLs pertaining to the project are listed below.

Beardsley Wash and Revolon Slough Trash TMDL

The Beardsley Wash and Revolon Slough Trash TMDL became effective on March 6, 2008. The TMDL requires responsible agencies, including Caltrans, to reduce the amount of trash deposited in the water body or present in stormwater discharges to zero in 8 years. Responsible agencies may implement a minimum frequency of assessment and collection program in or adjacent to the water body or place full capture devices at drainage outfalls. The project engineer shall consider treatment controls for the project and consult with the district NPDES stormwater coordinator.

Calleguas Creek Nitrogen Compounds and Related Effects TMDL

The Calleguas Creek Nitrogen Compounds and Related Effects TMDL became effective on July 16, 2003. The TMDL requires the Calleguas Creek Watershed Management Plan Subcommittee to submit a Monitoring Work Plan and complete several special studies that include planning and preparing for construction of TMDL remedies to reduce nitrogen loads. Caltrans is actively participating in the subcommittee and working toward compliance with the TMDL. The targeted pollutants are ammonia, nitrate-nitrogen (NO_3-N), nitrite-nitrogen (NO_2-N), and the sum of nitrate-nitrogen and nitrite-nitrogen (NO_3-N+NO_2-N). The Department's monitoring data depict Caltrans discharges as being below the TMDL limits; therefore, additional measures need not be considered to meet the conditions of the nitrogen TMDL.

Calleguas Creek Watershed Organochlorine Pesticides and PCBs TMDL and the Calleguas Creek Watershed Toxicity, Chlorpyrifos, and Diazinon TMDL

The Calleguas Creek Watershed Organochlorine (OC) Pesticides and PCBs TMDL and the Calleguas Creek Watershed Toxicity, Chlorpyrifos, and Diazinon TMDL became effective on March 24, 2006. The targeted pollutants are chlordane, 4,4'-DDD (dichlorodiphenyldichloroethane), 4,4'-DDE (dichlorodiphenyldichloroethylene), 4,4'-DDT (dichlorodiphenyltrichloroethane), dieldrin, PCBs, and toxaphene for pesticides and chlorpyrifos and diazinon for toxicity. Caltrans is working cooperatively with other responsible agencies to jointly comply with the TMDL requirements. Project engineers shall consider treatment controls for the project and consult with the district NPDES stormwater coordinator.

Calleguas Creek Watershed Metals and Selenium TMDL

The Calleguas Creek Watershed Metals and Selenium TMDL became effective on March 26, 2007. The TMDL assigns waste load allocations to the permitted stormwater dischargers (PSDs), including the MS4 permittees, Caltrans, and others. The PSDs are required to achieve the final dry- and wet-weather waste load allocations in 15 years. Caltrans is working with a group of responsible agencies to jointly comply with the TMDL. The targeted pollutants are copper (Cu), mercury (Hg), nickel (Ni), zinc (Zn) and

selenium (Se). Project engineers shall consider treatment controls for the project and consult with the district NPDES stormwater coordinator.

Total Maximum Daily Load for Boron, Chloride, Sulfate, and TDS (salts) in the Calleguas Creek Watershed

The TMDL for Boron, Chloride, Sulfate, and TDS (salts) in the Calleguas Creek Watershed became effective on December 2, 2008. The TMDL assigns interim and final dry-weather waste load allocations (WLAs) to the PSDs for chloride, total dissolved solids (TDS), sulfate, and boron. The PSDs are required to achieve the interim WLAs in a progressive manner and meet the final WLAs in 15 years. Caltrans is not named in the TMDL.

Total Maximum Daily Load for Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3

The TMDL for Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3 became effective on October 6, 2011. The TMDL assigns waste-load and load allocations for both water and sediment for bifenthrin, total chlordane, chlorpyrifos, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, total PCBs, sediment toxicity, and toxaphene to the permitted dischargers. Caltrans is not named as a responsible jurisdiction in the TMDL.

Harbor Beaches of Ventura County Bacteria TMDL

The Harbor Beaches of Ventura County Bacteria TMDL became effective on December 18, 2008. The TMDL requires the responsible agencies, including Caltrans, to reduce exceedances of indicator bacteria in the water body to the numeric targets in 5 or 10 years. Caltrans will be working with other responsible agencies to collaboratively comply with the TMDL. The project engineer shall consider treatment controls for the project and consult with the district NPDES stormwater coordinator.

Groundwater

Lower Ventura River Subbasin

The Lower Ventura River Subbasin is bounded on the north by the Upper Ventura River Subbasin, on the south by the Pacific Ocean and the Mound Subbasin of the Santa Clara River Valley Groundwater Basin, and elsewhere by the near-impervious rocks of the Santa Ynez Mountains. The valley is drained by Canada Larga and the Ventura River. The subbasin is recharged by percolation from the Ventura River, precipitation on the valley floor, irrigation return flows, and subsurface inflows from the Upper Ventura River Subbasin. The depth to the water bearing unit is 3 to 13 feet below ground surface in the floodplain and deeper as the ground surface elevation increases toward the edges of the subbasin.

Mound Subbasin

Mound Subbasin underlies the northern part of the Ventura coastal plain in the western part of the Santa Clara River Valley Groundwater Basin. The subbasin is bounded on the north by the Santa Ynez and Topatopa Mountains, on the south by the Oak Ridge and Saticoy faults, on the northeast by the Santa Paula Subbasin, and on the west by the Pacific Ocean. The Santa Clara River and tributary creeks drain surface water

westward into the Pacific Ocean. The majority of recharge to the Mound Subbasin is from the percolation of surface flows in the Santa Clara River and minor tributary streams.

Oxnard Plain Forebay Subbasin

Oxnard Plain Forebay Subbasin is a subbasin of the Santa Clara River Valley Groundwater Basin in southern Ventura County. The northern boundary of the subbasin is the Oak Ridge fault, the southern boundary is formed by contact between the permeable alluvium and the semi-permeable rocks of the Santa Monica Mountains, the eastern edge lies against the Pleasant Valley and Las Posas Valley Basins, and the western edge is the Pacific Ocean. Calleguas Creek and tributary creeks drain the surface waters of the area westward into the Pacific Ocean. The Santa Clara River provides recharge along the northern border of the subbasin. The Oxnard Plain Forebay Subbasin is the principal recharge area for the upper and lower aquifer systems of the Oxnard Plain Pressure Basin. The approximate depth to the water bearing unit is 25 to 50 feet.

Conejo Valley Basin

This groundwater basin underlies Conejo Valley in southern Ventura County. The basin is bounded by surface drainage divides. Surface waters are drained westward by Conejo Creek. The depth to groundwater averages about 50 feet.

Thousand Oaks Basin

This groundwater basin underlies a small valley between Lake Sherwood and Thousand Oaks in southeastern Ventura County and western Los Angeles County. The basin is bounded by the semi-permeable rocks of the Santa Monica Mountains (Ventura County Watershed Protection District 2016). The valley is drained by Conejo Creek and Triunfo Canyon. Recharge to the basin relies on the percolation of precipitation to the valley floor and streamflow. The depth to the water-bearing unit measures approximately 25 to 30 feet.

The beneficial uses for the groundwater basins consist of MUN, IND, PROC, and AGR.

Area of Special Biological Significance

The project is not within a designated Area of Special Biological Significance (ASBS).

Coastal Waters

At San Jon Creek, the project is adjacent to a designated California Coastal Commission (CCC) Environmentally Sensitive Habitat Area (ESHA). It encompasses riparian communities, beach areas, wintering grounds for monarch butterfly, and USACE, RWQCB, California Department of Fish and Wildlife (CDFW), and CCC wetlands. For additional information on jurisdictional aquatic resources, see Section 2.4.2, *Wetlands and Other Waters*.

Ventura County Local Coastal Program

Lands within the California Coastal Zone under the jurisdiction of the Ventura County Local Coastal Program (LCP) occur outside of the project limits of disturbance; no Ventura County LCP Coastal Zone lands occur within the project footprint. For additional information on Ventura County LCP, see Section 2.4.2, *Wetlands and Other Waters*.

City of Ventura Local Coastal Program

Lands in the California Coastal Zone under the jurisdiction of the City of Ventura LCP occur within both the project footprint and a surrounding biological study area (BSA), including an ESHA. For additional information on the City of Ventura LCP, see Section 2.4.2, *Wetlands and Other Waters.*

2.3.2.3 Environmental Consequences

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no change to existing water quality would occur. Therefore, this alternative would not result in temporary or permanent impacts on water quality.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction

Temporary Impacts

Temporary construction-related, short-term impacts on water quality have the potential to occur during project demolition and roadway construction. The total disturbed soil area (DSA) for the project would be approximately 174 acres. This would include, but not be limited to, the following soil disturbance activities during construction:

- Clearing the land for access (i.e., access roads) to the project area as well as preparing the area for project construction,
- Grading the project area,
- Creating material and/or soil stockpiles if atop a soil surface (not if atop an impervious surface such as concrete or asphalt),
- Creating an area for asphalt or concrete pavement removal if removed entirely to a soil surface,
- Creating an area for demolition and the removal of existing structures if that demolition and removal is to a soil surface, and
- Providing concrete truck clean-out areas if atop a soil surface.

Equipment staging areas, maintenance areas, and construction easements, if atop a soil surface, would also be included in the DSA. However, details regarding the need for these have not been determined at this early stage of project development. Areas of cut and fill would be required throughout the project area to accommodate proposed project geometry. Cut-and-fill areas for the project would be developed during the design phase and shown on the plans.

Construction activities would result in exposed soil, thereby increasing the potential for soil erosion and impacts on water quality. Soil erosion could occur at an accelerated rate during a storm event. In addition, construction equipment and employee vehicles could inadvertently track sediment from the project site onto adjacent roadways; that sediment could be conveyed to stormwater drainage systems. Other pollutants that can have an impact on water quality during construction include metals, trash, concrete waste (dry and wet), sanitary waste, and chemicals, including gasoline oils, grease, solvents, lubricants, and other petroleum products. Each of these pollutants, either on its own or in combination with other pollutants, can have a detrimental impact on water quality.

The locations with the greatest risk to water quality are adjacent to or over receiving waters and stormwater discharge points. Project construction would involve bridge widening and drainage improvements within water bodies, the use of construction equipment on the banks, and excavation. The accumulation of site-specific trash, potential spills of petroleum products from heavy equipment and machinery, and runoff from the project site may contribute to water quality degradation.

Any impacts on water quality due to construction would be short term and temporary. The project would be required to comply with the Caltrans Statewide NPDES Stormwater Permit and NPDES CGP (measures **WQ-1** and **WQ-2**). In compliance with the NPDES CGP, preparation of a SWPPP and implementation of construction BMPs would be required to identify sources of stormwater pollution, prevent erosion, control stormwater, and prevent spills (measure **WQ-3**). Temporary construction site BMPs may include, but are not limited to, those shown in Table 2.3.2-3. Implementation of construction site BMPs would retain sediment and other pollutants on the project site, which would prevent potential temporary, short-term water quality impacts from sediments and construction-related pollutants that could otherwise reach receiving waters.

Table 2.3.2-3. Construction Site Best Management Practices

BMP Category	Temporary Construction Site Best Management Practices
Administrative	Scheduling
	Preservation of Existing Vegetation
Sediment/Erosion Control	Silt Fence
	Gravel Bag Berm
	Stockpile Management
	Stabilized Construction Entrance/Exit
Non-Stormwater Pollutant Control BMPs	Water Conservation Practices
	Dewatering Operations
	Material Delivery and Storage
	Spill Prevention and Control
	Solid Waste Management

BMP Category	Temporary Construction Site Best Management Practices
	Concrete Waste Management
	Sanitary/Septic Waste Management

Source: Caltrans 2021b.

A CGP risk assessment was performed for the project as part of the Water Quality Assessment Report (Caltrans 2021a). The construction risk level of a project is based on the sediment risk factor and the receiving-water risk factor. Eight hydrologic sub-areas (HSAs) are within the project area, of which seven HSAs (408.28, 408.24, 408.11, 410.00, 403.10, 407.00, and 402.10) are anticipated to have a combined Risk Level 2 under the CGP. The HSAs within the project area are shown on Figure 2.3.1-1 in Section 2.3.1, *Hydrology and Floodplain.* Therefore, the project must comply with the requirements included in Attachment D of the CGP for disturbed areas with Risk Level 2. HSA 408.12 is anticipated to have a combined Risk Level 3 under the CGP. For disturbed areas within HSA 408.12, the project must comply with the requirements included in Attachment E of the CGP. As a requirement of Risk Level 2 and Risk Level 3, water quality would be monitored during construction, as directed by the CGP. Effluent monitoring for pH and turbidity levels would be required during storm events. This would ensure that pH and turbidity levels would remain below numeric action levels established in the CGP. In addition, Risk Level 3 would also be subject to numeric effluent limitations.

During construction, groundwater removal may be required when roadway or structure widening occurs in a channel. Dewatering could result in the release of unsuitable and untreated water if discharged directly to the environment. Water diversion would also have the potential to affect water quality, especially during installation and removal of the diversion system. To minimize potential water quality impacts, dewatering involving groundwater as well as non-stormwater would be subject to the requirements of the Los Angeles RWQCB. A dewatering permit would be required (measure **WQ-4**), as would dewatering BMPs. The amount of dewatering, however, is likely to be relatively small. Therefore, no adverse changes to regional groundwater levels are anticipated.

Aquatic Environment

Potential short-term impacts on the aquatic environment may include temporary increases in sediment, oil, grease, and chemical pollutants during construction, including work in channels where bridge widening would occur. The chemicals and petroleum products anticipated to be used during construction include gasoline, oil, grease, solvents, lubricants, and other petroleum products. Many petroleum products contain a variety of toxic compounds and impurities that tend to form oily films on the surface of water, thereby altering oxygen diffusion rates. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. Wash water can easily introduce pollutants to surface waters or seep into groundwater. Also, construction chemicals may accidentally be spilled into nearby storm drains or watercourses. The impact of toxic construction-related materials on water quality would vary, depending on the quantity spilled.

Implementation of erosion and sediment control BMPs during construction would prevent sediment and suspended solids from entering surface waters or minimize the amount. In addition, implementation of non-stormwater management and material management BMPs during construction would prevent chemical pollutants, such as concrete waste, from entering surface waters or minimize the amount. These BMPs would involve keeping a clean, orderly construction site. Non-stormwater management BMPs are source-control BMPs that prevent pollution by limiting or reducing potential pollutants at their source or eliminating off-site discharges. Non-stormwater management BMPs also include procedures and practices that have been designed to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning, fueling, and maintenance operations to stormwater drainage systems or watercourses. Further, waste management BMPs consist of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater runoff or discharges through proper management of the waste. These BMPs are intended to prevent the release of pollutants during stormwater and non-stormwater discharges. With implementation of measures **WQ-1** through **WQ-4**, the potential for construction-related surface water pollution would be reduced and water quality in channels would not be compromised by erosion, sedimentation, or chemical pollutants during construction.

Coastal Waters

As a result of widening the US 101 overpass at San Jon Road, the project would have temporary impacts on San Jon Creek. This area is adjacent to a designated CCC ESHA. The project would implement measures **WET-1** and **WET-2** to avoid and/or minimize temporary impacts on San Jon Creek. **WET-1** would require the project to minimize any disturbance to jurisdictional areas to the extent practicable. **WET-2** would require Environmentally Sensitive Area fencing to be installed around all ESHAs adjacent to the project to protect such areas from nearby construction activities (see Section 2.4.2, *Wetlands and Other Waters*).

Ventura County Local Coastal Program

Lands within the California Coastal Zone under the jurisdiction of the Ventura County LCP occur outside of the project limits of disturbance; no Ventura County LCP Coastal Zone lands occur within the project footprint. All construction work within this portion of the project alignment (i.e., inside widening) would occur within the US 101 median; no work would occur outside of the existing roadway. As such, impacts on coastal lands under the jurisdiction of the Ventura County LCP would not occur (see Section 2.4.2, *Wetlands and Other Waters*).

City of Ventura Local Coastal Program

Lands within the California Coastal Zone under the jurisdiction of the City of Ventura LCP occur within both the project footprint and surrounding BSA, including an ESHA. Because the project would be performing actions that the CCC considers development activities (e.g., construction, grading, placement of fill or other materials) within designated preservation areas of the California Coastal Zone, a Coastal Development

Permit from the City of Ventura LCP would most likely be required for the project (see Section 2.4.2, *Wetlands and Other Waters*).

Based on the discussion above, with implementation of measures **WQ-1** through **WQ-4** and **WET-1** through **WET-2**, no adverse impacts on water quality are anticipated during construction of the project.

Permanent Impacts

Under Alternative 2, the project would result in a net new increase in impervious surface area amounting to approximately 78 acres. This would increase the volume and velocity of stormwater discharges as well as the amount of pollutants into receiving waterways. In addition, oil, grease, and other pollutants may be discharged into water bodies in the project area during operation. There are also impaired water bodies with TMDLs that would receive direct discharges from the project.

Permanent impacts would be minimized through implementation of design pollution prevention, treatment, and maintenance BMPs (measures **WQ-1** and **WQ-5**). Design pollution prevention BMPs for the project may include adjusting and stabilizing existing drainage features (e.g., ditches, dikes, berms, swales), slope/surface protection systems, and concentrated flow conveyance systems, along with preserving existing vegetation (Caltrans 2021b). The following treatment BMPs may be included for the project: infiltration devices, biofiltration swales, biofiltration strips, gross-solids removal devices, and Austin Vault sand filters (Caltrans 2021b).

Design pollution prevention, treatment, and maintenance BMPs will be further investigated during the final design phase for feasibility and implementation. Any design pollution prevention, treatment, or maintenance BMPs implemented within the Caltrans right-of-way as a part of the project would be selected from the Caltrans SWMP guidance and the Caltrans Project Planning and Design Guide–approved BMP list. In addition, the project would be required to comply with Caltrans Statewide NPDES Stormwater Permit (measure **WQ-1)**, which would also require the project to include Caltrans-approved treatment BMPs to comply with TMDLs.

The above BMPs would reduce pollutants from runoff. The storm drain system would be sized to accommodate implementation of Alternative 2. With implementation of design pollution prevention, treatment, and maintenance BMPs (measures **WQ-1** and **WQ-5**) and compliance with the Caltrans Statewide NPDES Stormwater Permit (measure **WQ-1**), no adverse impacts on water quality are anticipated to occur during operation of the project.

Coastal Waters

The project would have permanent impacts on San Jon Creek as a part of widening the US 101 overpass at San Jon Road. As previously discussed, this area is also adjacent to a designated CCC ESHA. Permanent impacts on San Jon Creek would be mitigated as a part of permitting for impacts on aquatic resource features that are under USACE, RWQCB, CDFW, and CCC jurisdiction (measure **WET-3**) (see Section 2.4.2, *Wetlands and Other Waters*, for details).

Lands within the California Coastal Zone under the jurisdiction of the City of Ventura LCP occur within both the project footprint and surrounding BSA, including an ESHA. Because the project would be performing actions that the CCC considers development activities (e.g., construction, grading, placement of fill or other materials) within designated preservation areas of the California Coastal Zone, a Coastal Development Permit from the City of Ventura LCP would most likely be required for the project (see Section 2.4.2, *Wetlands and Other Waters*).

Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

During construction, the total DSA would be approximately 174 acres under Alternative 3, the same as under Alternative 2. Alternative 3 would result in short-term and temporary water quality impacts similar to those under Alternative 2. Measures **WQ-1** through **WQ-4** would be implemented to avoid and/or minimize short-term and temporary water quality impacts related to construction of Alternative 3. The project would implement measures **WET-1** and **WET-2** to avoid and/or minimize temporary impacts on San Jon Creek (see Section 2.4.2, *Wetlands and Other Waters*). With implementation of measures **WQ-1** through **WQ-4** and measures **WET-1** and **WET-2**, no adverse impacts on water quality are anticipated to occur during construction of the project under Alternative 3.

Permanent Impacts

Alternative 3 would result in a net new increase in impervious surface area amounting to approximately 84 acres, which would exceed the Alternative 2 impervious surface area by 6 acres. Potential permanent water quality impacts would be similar to those under Alternative 2. The project would implement measures **WQ-1** and **WQ-5** to avoid and/or minimize permanent water quality impacts during operation of the project under Alternative 3. The project would implement measure **WET-3** (see Section 2.4.2, *Wetlands and Other Waters*) to mitigate permanent impacts on San Jon Creek. With implementation of measures **WQ-1** and **WQ-5** and measure **WET-3** (see Section 2.4.2, *Wetlands and Other Waters*), no adverse impacts on water quality are anticipated to occur during operation of the project.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the current US 101 configurations within the study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on water quality would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The measures below (**WQ-1** through **WQ-5** and measures **WET-1** through **WET-3** [see Section 2.4.2, *Wetlands and Other Waters*]) are included as part of the project to avoid and/or minimize potential water quality impacts.

WQ-1: Implement Stormwater Treatment BMPs. The project will conform to the requirements of the Caltrans Statewide NPDES Stormwater Permit, Order No. 2022-0033-DWQ, NPDES No. CAS000003, adopted by the SWRCB on June 22, 2022, and any subsequent permit in effect at the time of construction. The Caltrans Statewide Permit requires implementation of treatment BMPs to minimize potential water quality and hydrological impacts associated with operation of the project.

WQ-2: Implement Temporary Construction Site BMPs. The project will comply with the requirements of the NPDES Permit for Construction Activities, Order No. 2022-0057-DWQ, NPDES No. CAS000002, as well as implement the BMPs specified in the Caltrans Stormwater Management Plan (Caltrans 2016).

WQ-3: Prepare and Implement a Stormwater Pollution Prevention Plan. The project will prepare and implement an acceptable SWPPP. The SWPPP will identify temporary construction site BMPs that have demonstrated effectiveness at reducing stormwater pollution. The SWPPP will address all construction-related activities, equipment, and materials that have the potential to affect water quality. All construction site BMPs will follow the latest edition of the stormwater quality handbooks and the construction site BMPs manual to control and minimize the impacts of construction-related pollutants. The SWPPP will include BMPs to control pollutants, sediment from erosion, stormwater runoff, and other construction-related impacts. In addition, the SWPPP will include implementation of specific stormwater effluent monitoring requirements, based on the project's risk level, to ensure that the implemented BMPs are effective in preventing discharges from exceeding any of the water quality standards.

WQ-4: Construction Site Dewatering. If dewatering is expected for the preferred alternative, the project will fully conform to the requirements specified in the applicable dewatering NPDES permit: Los Angeles RWQCB Order No. R4-2023-0429 (NPDES No. CAG994004).

WQ-5: Implement Design Pollution Prevention BMPs. As specified in the Caltrans Stormwater Management Plan (Caltrans 2016), the project would be required to incorporate design pollution prevention BMPs to prevent erosion and promote infiltration.

2.3.3 Geology/Soils/Seismic/Topography

2.3.3.1 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 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 California Department of Transportation (Caltrans or Department) Seismic Design Criteria (SDC). The SDC provide 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.

2.3.3.2 Affected Environment

This section discusses the existing geologic and soil conditions within the project area and provides an analysis of the potential impacts of the proposed project related to geology and soils. The section is based on the Preliminary Geotechnical Design Report (Caltrans 2020a) prepared for the project and the Structure Preliminary Geotechnical Reports (SPGRs) (Caltrans 2020b, 2021) prepared for 31 separate bridge widening and retaining wall projects.

Regional Geology

The project alignment is in the Transverse Ranges geomorphic province of Southern California, which extends approximately 300 miles westward from the Mojave Desert to the Pacific Ocean. The Transverse Ranges are a belt of east–west-trending folds and associated thrust faults that formed in response to north–south crustal shortening that began in Pliocene times, approximately 4 to 5 million years before present (Yeats et al. 1988). The area continues to undergo intense deformation. As the region is compressed in a north–south direction, the bedrock units become progressively folded and faulted, forming valleys (e.g., Santa Clara Valley, San Fernando Valley) and uplands (i.e., the San Gabriel, Santa Susana, and Santa Monica Mountains). Reverse faults or thrust faults generally bound these valleys and mountains.

The project alignment traverses the Oxnard Plain from the Ventura River eastward through Pleasant Valley and over the hills north of Conejo Mountain into Conejo Valley. The Oxnard Plain is bounded by the Ventura Hills to the north, the Pacific Ocean to the west, the western terminus of the onshore Santa Monica Mountains to the southeast, and the Camarillo Hills to the east. The Ventura River, near the western end of the

project alignment, transports Holocene-age alluvial sediments from the Santa Ynez Mountains southward and into the Pacific Ocean. Holocene-age alluvial sediments associated with the Santa Clara River and Calleguas Creek, which drain westward toward the ocean and cross the project alignment, underlie much of the Oxnard Plain. These deposits are typically sandy and deposited in alluvial fan, alluvial valley, and stream channel settings.

Other major drainage features that cross the project alignment include Sanjon Barranca, Arundell Barranca, Beardsley Wash, Conejo Creek, and Arroyo Conejo. Bedrock of the Conejo Volcanics, mapped in the hills between Pleasant Valley and Conejo Valley, generally consists of basaltic and andesitic rock with sandstone interbeds, volcanic breccia, and agglomerate. The Conejo Valley is underlain by Holocene- and Pleistocene-age alluvial sediments eroded from the surrounding hills, which are composed predominantly of bedrock associated with the Conejo Volcanics. The regional geology map for the project alignment is shown in Figure 2.3.3-1.

Topography

The project alignment traverses five U.S. Geological Survey (USGS) topographic map quadrangles (from east to west): Thousand Oaks, Newbury Park, Camarillo, Oxnard, and Saticoy. In general, the existing US 101 alignment within the project limits consists of a roadway supported on aerial structures, hillside viaducts, and embankment fill or cut into the natural subgrade, with minor fill.

At the easternmost limit of the project corridor, US 101 begins at an embankment section with an elevation that reaches approximately 760 feet. The alignment then decreases in elevation compared with the surrounding ground surface. Where US 101 enters the mountainous Conejo area, construction is supported on a combination of embankment fill as well as hillside viaducts due to the hilly topography. A review of the Caltrans as-built record for the hillside viaducts indicates that the maximum reported height of the embankment fill is 71 feet, with an average height of about 25 feet. During original construction of US 101, excavation in Conejo's volcanic rocks relied on drilling and blasting. The elevation along US 101 decreases gradually to about 65 feet at the Springville Drive overcrossing (OC) and remains relatively flat to the Santa Clara River Bridge (PM 23.1). Within that area, US 101 was most likely constructed on the natural subgrade or minor cut and fill, except at creek crossing bridges and viaducts where abutment fill is present.

Beyond the Santa Clara River Bridge, US 101 continues on an embankment of about 15 to 45 feet in height until approximately 0.5 mile beyond the Lemon overhead, where it transitions to a depressed freeway section under the Seaward Avenue OC (PM 28.5). From there, US 101 transitions to a section of embankment fill. Its elevation gradually increases to about 25 feet at San Jon Creek Bridge (PM 29.6) before beginning another transition from the embankment to a depressed section at the Ventura underpass (UP) and California Street OC (PM 30.2), with elevations of about 5 feet. For the last approximately 0.5 mile of the project alignment, US 101 continues on embankment fill sections and several OC structures before ending near the intersection at State Route 33, with elevations of about 38 feet.

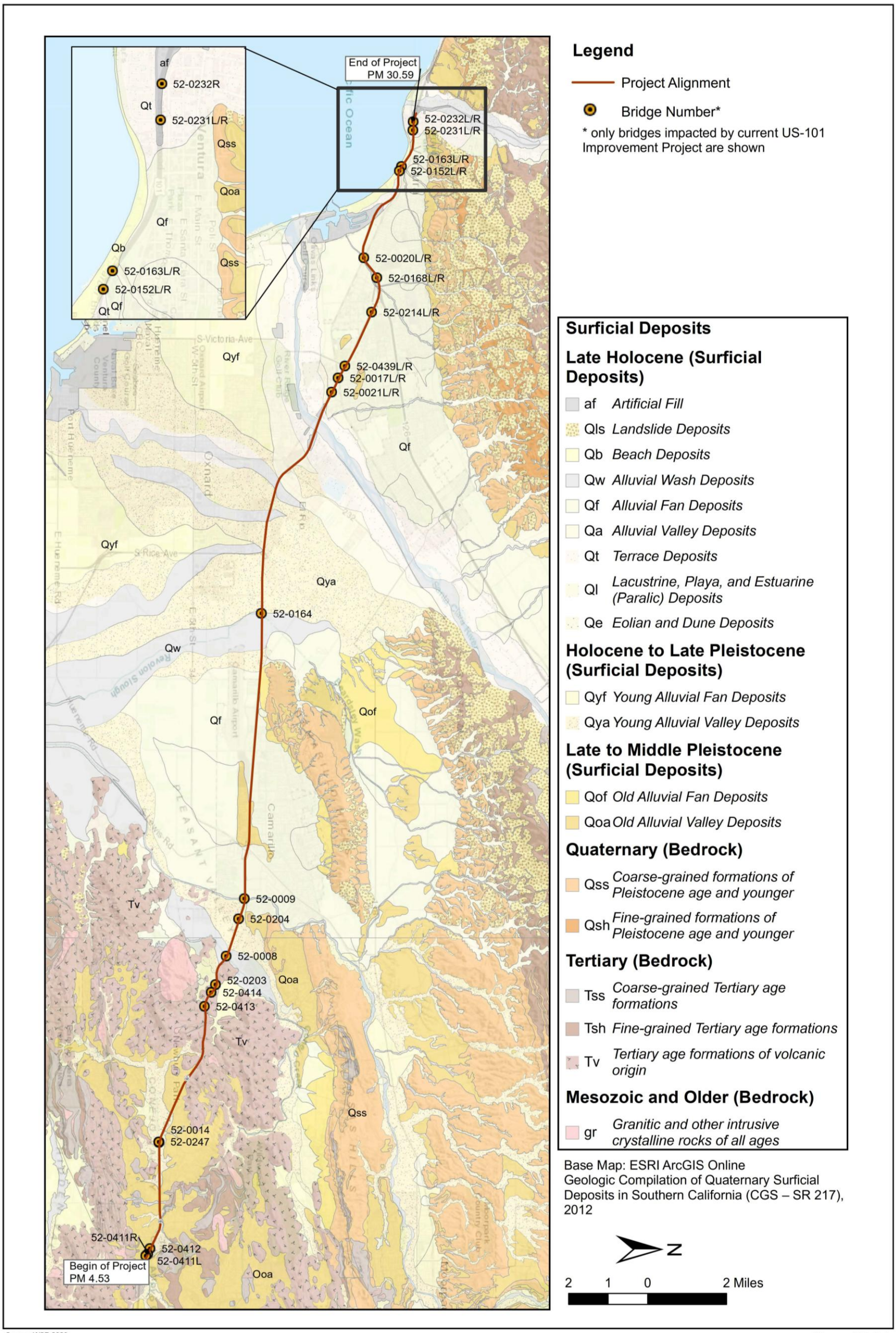
Surface Water

As stated in Section 2.3.2, *Water Quality and Stormwater Runoff*, the project is within three watersheds: Ventura River, Calleguas Creek, and Santa Clara River. The project alignment crosses several major drainages, including, from east to west, Arroyo Conejo Creek, Arroyo Calleguas Creek, Revolon Slough, and the Santa Clara River.

Arroyo Calleguas Creek, Revolon Slough, Conejo Creek, and Arroyo Conejo are the main tributaries to the Calleguas Creek watershed and almost entirely within Ventura County, along with numerous smaller creeks. Historically, Calleguas Creek and its tributaries were all intermittent streams that flowed only seasonally from headwaters near Santa Susana on the eastern end of Simi Valley to the Oxnard Plain. Due to development, Calleguas Creek is now primarily a perennial stream, fed continuously and predominantly by treated wastewater flows, with secondary surface flows originating from rising groundwater, agricultural and urban runoff, and periodic stormwater flows (Caltrans 2020a).

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Figure 2.3.3-1. Geologic Map



Source: WSP 2020

Figure 2.3.3-1
Geology Map
US 101 Improvement Project

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The Santa Clara River collects surface waters from various main streams within the tributary watershed, mainly on the north side of the San Gabriel Mountains near the unincorporated community of Acton in Los Angeles County. The Santa Clara River is a braided stream that flows westerly for approximately 84 miles, winding through Ventura County to its outlet at the Pacific Ocean on the southern boundary of the city of Ventura (Caltrans 2020a).

Soil Conditions

Top Soils – Survey Review

Soils within Ventura County vary, ranging from well-drained to excessively drained loamy sands, with silty clay barns on alluvial fans and plains and poorly drained loamy sands to silty clay barns in basins. The soils formed in alluvium derived predominantly from sedimentary rocks and, to a lesser extent, basic igneous rocks.

As shown in Figure 2.3.3-1, the project alignment encompasses numerous earth materials, as described below.

Old Alluvial Valley Deposits (Qoa) and Young Alluvial Valley Deposits (Qya): The project alignment begins near the border of the Thousand Oaks and Newbury Park quadrangles where the surficial geology consists of Qoa and Qya deposits. Qoa and Qya are both particles deposited along stream valleys and alluvial flats of larger rivers. Qoa is described as slightly to moderately consolidated and moderately dissected clay, silt, sand, and gravel. Qya is described as unconsolidated to slightly consolidated and undissected to slightly dissected. In this reach, based on the soil matrix in the predominant geologic units, depending on the slope ratios of the deposits, only Qya is considered potentially erodible and medium expansive.

Tertiary Age Formations of Volcanic Origin (Tv): Continuing west along the project alignment into Conejo Mountain, Tv deposits are expected. Tv is generally considered non-erodible and non-expansive. However, due to grading within these deposits, a portion of Tv is characterized as decomposed granite, with erosion due to a rockfall. It is considered non-expansive.

Alluvial Fan Deposits (Qf) and Alluvial Wash Deposits (Qw): Past Conejo Creek, US 101 continues east into the Camarillo quadrangles where Qf, Qoa, and Qya deposits are expected. Qf generally consists of recently deposited unconsolidated boulders, cobbles, gravel, sand, and silt where a river or stream issues from a confined valley or canyon; sediment deposited in a fan-shaped cone; and gravelly sediment, which is generally more dominant than sandy sediment. Qw deposits, described as unconsolidated sandy and gravelly sediment deposited in recently active channels of streams and rivers that may contain loose to moderately loose sand and silty sand, are expected adjacent the Conejo Creeks and Revolon Slough. In this reach, based on the soil matrix in the predominant geologic units, depending on the slope ratios of the deposits, geologic units Qf, Qya and Qw are considered potentially erodible due to lesser fines in the matrix. These are low expansive soils.

Alluvial Valley Deposits (Qa) and Terrace Deposits (Qt): From Del Norte Boulevard, US 101 continues east into the Oxnard quadrangles and crosses a major drainage, the Santa Clara River, where Qa, Qt, and Qf deposits are encountered. Qa is characterized as recently deposited unconsolidated clay, silt, sand, and gravel parallel to localized stream valleys and/or spread more regionally onto alluvial flats of larger river valleys; sandy sediment is generally more dominant than gravelly sediment. Qt includes marine and stream terrace deposits. Marine deposits include slightly to moderately consolidated and bedded gravel and conglomerate, sand and sandstone, and silt and siltstone. River terrace deposits consist of unconsolidated thin- to thick-bedded gravel. In this reach, based on the soil matrix in the predominant geologic units, depending on the slope ratios of the deposits, only Qf with sand and gravel is considered potentially erodible and non-expansive.

The remaining project alignment continues northeast into the Saticoy and Ventura quadrangles where it is mapped predominately as Qf, Qt, and man-made fill. In this reach, based on the soil matrix in the predominant geologic units, depending on the slope ratios of the deposits, only Qf deposits with sand and gravel are considered potentially erodible and non-expansive. Man-made fill with proper compaction and engineered with 2:1 (horizontal:vertical) or flatter slope ratios are considered non-erodible.

Subsurface Soils

Site-specific subsurface soil conditions for the project's proposed bridge widening and retaining walls are provided in Table 2.3.3-1. The subsurface soil information is from the SPGRs (Caltrans 2020b, 2021) and based on available soil data from the Caltrans log of test borings for various existing bridges and nearby structures.

Groundwater

The project alignment overlies several groundwater basins: Conejo, Pleasant Valley, Santa Clara River Valley–Oxnard, and Santa Clara River Valley–Mound Groundwater Basins.

Data regarding the historical highest (i.e., shallowest) groundwater levels are available from the California Geological Survey (CGS) Information Warehouse for the Thousand Oaks, Newbury Park, Camarillo, Oxnard, Saticoy, and Ventura quadrangles. The reported depth to the historical highest groundwater within the project limits is as shallow as 5 feet and as deep as 40 feet below ground surface (bgs) near Pleasant Valley and Camarillo Hills. Some impedance of groundwater flow appears to occur along the Camarillo fault as well as other possible geologic structures east of the city of Camarillo (Caltrans 2020a). Historical groundwater levels in the alluviated stream valley and lowland areas of the Thousand Oaks and Newbury Park quadrangles are generally shallow, commonly at or near a depth of 10 to 20 feet. Shallow groundwater conditions commonly exist in these types of depositional environments because they tend to receive and accumulate heavy runoff and near-surface groundwater derived from surrounding highlands (Caltrans 2020a).

Data regarding the most current depth to groundwater along the project alignment are provided below, based on available groundwater data from the Caltrans log of test borings for various bridge structures and data from monitoring wells adjacent to the project alignment.

- Beginning of project at Moorpark Road to Rancho Conejo Boulevard (PM 4 to PM 7) – range from 10 to 20 feet bgs
- Rancho Conejo Boulevard to Las Posas Road (PM 7 to PM 15.7) – range from 35 to 100 feet bgs
- Las Posas Road to Wood Road (PM 15.7 to PM 17.27) – range from 10 to 20 feet bgs
- Wood Road to Victoria Avenue (PM 17.27 to R24.68) – range from 20 to 50 feet bgs
- Rest of the project alignment (R24.68 to PM 30.59) – range from 5 to 15 bgs

Site-specific exploration borings would be drilled during advance design phases to supplement the groundwater data for foundation and seismic design and liquefaction evaluation.

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Table 2.3.3-1. Preliminary Geotechnical Conditions and Foundation Recommendations for Proposed Structures

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
Bridge Structures							
Moorpark Road UC Widening (Bridge No. 52-0237)	4.06	Site consists of fill material underlain by recent and old alluvium. The fill materials are predominately sands, silts and clays, and gravels. The fill materials are underlain by a young, granular alluvium layer (sandy lean clays, silty sands with gravels, clayey sands with gravels, poorly graded gravels with silts and sands, clayey gravels).	Site is approximately 100 feet from liquefaction hazard zone. However, soils below groundwater table consist primarily of clayey sands and silty sands interlayered with lean clays, which are typically not considered susceptible to liquefaction.	Proposed structure would not cross any rivers, creeks, channels, or other water bodies. In addition, site is not within a mapped FEMA flood zone. Potential for flooding and scour is not considered to be a design issue for the proposed bridge widening.	No risk. The site is 725 to 730 ft above sea level and 9.9 mi from the Pacific Ocean. The site is also 9.9 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The widened structures could be supported on driven pile groups, either concrete or steel, similar to existing supports, at both the abutments and bents.
Arroyo Conejo Sidehill Left Viaduct Widening (Bridge No. 52-0411L)	4.53	Site is underlain by compact to dense clayey sands and gravels, with occasional cobbles. Following that is weathered shale that breaks down into silty sand or silt.	Site is within liquefaction hazard zone; however, dense clayey sand, gravel, and siltstone with high fine content are expected below the groundwater table, which is typically not considered susceptible to liquefaction.	Potential for flooding and scour. Site borders FEMA flood Zone A. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 690 ft above sea level and 9.7 mi from the Pacific Ocean. The site is also 9.7 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type (HP 10 x 42) is applicable to the proposed bridge widening at the abutment locations as long as the soil is determined to not be corrosive to steel. For bent foundations, single 3.5-foot-diameter CIDH piles can be used to support the single column at the bents.
Arroyo Conejo Sidehill Right Viaduct Widening (Bridge No. 52-0411R)	4.58	Site is underlain by loose to slightly compact gravelly and silty sand. Following that is dense to very dense clayey sand and gravel with cobbles and boulders.	Site is within liquefaction hazard zone; however, dense clayey sand, gravel, and siltstone with high fine content are expected below the groundwater table, which is typically not considered susceptible to liquefaction. However, isolated layers of loose sand exist.	Potential for flooding and scour. Site borders FEMA flood Zone A. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 690 ft above sea level and 9.7 mi from the Pacific Ocean. The site is also 9.7 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing abutment foundation type (HP 10 x 42) and open-ended CISS piles are applicable to the proposed bridge widening as long as the soil is determined to not be corrosive to steel. For bent foundations, single 3.5-foot-diameter CIDH piles can be used to support the single column at the bents.
North Arroyo Conejo Sidehill Viaduct Widening (Bridge No. 52-0412R)	4.71	Site is underlain by silty sands, gravelly sands, and sandy gravels. Soil is generally slightly compact to dense in the upper 20 feet, becoming very dense at lower elevations.	Potential for liquefaction risk. Site is within liquefaction hazard zone; however, predominately dense to very dense silty sands and gravels are expected below the groundwater table, which is typically not considered susceptible to liquefaction.	Potential for flooding and scour. Site is within FEMA flood Zone A. In addition, Arroyo Conejo Creek could erode the creek slope adjacent to the existing structure and the proposed widening due to its flow path. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 675 to 680 ft above sea level and 9.7 mi from the Pacific Ocean. The site is also 9.7 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing abutment foundation type (HP 10 x 42) is applicable to the proposed bridge widening as long as the soil is determined to not be corrosive to steel. For bent foundations, single 3.5-foot-diamter CIDH piles can be used to support the single column at the bents.

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
South Branch Arroyo Conejo Widening (Bridge No. 52-0014)	7.01	The site is underlain by sandy clay and silty clay interbedded with clay. Following that is clayey sand and hard clayey to sandy silt.	No risk. Site is not within a liquefaction hazard zone. In addition, medium to very dense clayey and silty sands and generally stiff clays are anticipated below the groundwater table.	Potential for flooding and scour. Site is within 50 feet of FEMA flood Zone AE and crosses the South Branch Arroyo Conejo Creek. Site is not within a dam inundation area.	No risk. The site is 650 ft above sea level and 9 mi from the Pacific Ocean. The site is also 9 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Foundations consisting of reinforced-concrete spread footings, drilled and bonded to the existing foundation, are feasible.
Borchard Road OC Partial Replacement (Bridge No. 52-0247)	7.02	Site is underlain by interbedded silty clays, sandy clays, clayey and silty fine to coarse sands, and clayey gravels. Consistency of clays varies from stiff near the ground surface to hard at approximately 40 ft bgs and lower.	No risk. Site is not within a liquefaction hazard zone. In addition, medium to very dense clayey and silty sands, clayey gravels, and generally stiff clays are anticipated below the groundwater table.	Potential for flooding and scour. Site is within 50 ft of FEMA flood Zone AE. Site is not within a dam inundation area.	No risk. The site is 640 to 650 ft above sea level and 9 mi from the Pacific Ocean. The site is also 9 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Both driven concrete piles and CIDH piles are viable options for the abutment foundation at the proposed replacement structure. For bent foundations, single 8-foot-diameter CIDH pile can be used to support each column at the bents.
Conejo Grade Sidehill Viaduct No. 1 Widening (Bridge No. 52-0413)	10.21	Site is underlain by fill consisting of a mix of clay, silt, sand, gravel, cobbles, and boulders underlain by volcanic bedrock.	No risk. Site is not within liquefaction hazard zone. In addition, no shallow groundwater has been recorded at the site; the site is underlain by dense fill and bedrock.	Site is within FEMA Zone X. Potential for flooding and scour is not considered to be a design issue for the proposed bridge widening. Site is not with a dam inundation area.	No risk. The site is 290 to 400 ft above sea level and 9.5 mi from the Pacific Ocean. The site is also 9 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, CIDH pile, is applicable for support of the widened structure.
Conejo Grade Sidehill Viaduct No. 2 Widening (Bridge No. 52-0414)	10.56	Site is underlain by fill consisting of clayey sand, sand, gravel with scattered cobbles, and occasional boulders underlain by volcanic bedrock.	No risk. Site is not within liquefaction hazard zone. In addition, no shallow groundwater has been recorded at the site; the site is generally underlain by dense fill and bedrock.	Site is within FEMA Zone X. Potential for flooding and scour is not considered to be a design issue for the proposed bridge widening. Site is not with a dam inundation area.	No risk. The site is 190 to 270 ft above sea level and 9 mi from the Pacific Ocean. The site is also 9 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, CIDH pile, is applicable for support of the widened structure.
Camarillo Springs Road UC Widening (Bridge No. 52-0203)	10.74	Site is underlain by clayey sand, sand, and gravel with scattered cobbles underlain by weathered volcanic bedrock (basalt).	No risk. Site is not within liquefaction hazard zone. In addition, no shallow groundwater has been recorded at the site; the site is underlain by compact to dense fill and bedrock.	Site is within FEMA Zone X. Potential for flooding and scour is not considered to be a design issue for the proposed bridge widening. Site is not within a dam inundation area.	No risk. The site is 165 to 190 ft above sea level and 9 mi from the Pacific Ocean. The site is also 8.6 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, CIDH pile, is applicable for support of the widened structure at the abutment locations. At bent locations, spread footings are suitable due to the presence of shallow volcanic bedrock and recommended to match the existing foundation type.
Camarillo Springs Road Off-Ramp UC (new) (Bridge No. 52-XXXX)	10.74	Site is underlain by fill consisting of clayey sand, silty sand, sand, and gravel with scattered cobbles underlain by weathered volcanic bedrock (basalt).	No risk. Site is not within a liquefaction hazard zone. No shallow groundwater has been recorded at the site; the site is underlain by compact to dense fill and bedrock.	Proposed structure would not cross any rivers, creeks, channels, or other water bodies. In addition, site is within FEMA Zone X (area with minimal flood hazard) and not within an area subject to flooding and inundation as a result of dam failure. Potential for flooding and scour is not considered to be a design issue for the proposed off-ramp structure.	No risk. The site is 165 to 190 ft above sea level and 9 mi from the Pacific Ocean. The site is also 8.6 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type at the abutments for the Camarillo Springs Road UC (Bridge No. 52-0203), CIDH concrete piles, is applicable for support of the new off-ramp structure at the abutment locations. At bent locations, spread footings are suitable due to the presence of shallow volcanic bedrock and recommended to match the existing foundation type at the bents for the Camarillo Springs Road UC (Bridge No. 52-0203).

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
Arroyo Conejo Creek Bridge Widening (Bridge No. 52-0008)	11.44	Site is underlain by very fine- to medium-grained silty sands, silts, and clays.	Site is within a liquefaction hazard zone; however, soils at the site consist primarily of fine-grained materials and dense, coarse-grained materials with high fine content, which is typically not considered susceptible to liquefaction.	Potential for flooding and scour. Site is within FEMA mapped regulatory floodway, and bridge crosses Arroyo Conejo Creek. The site is not within a dam inundation area and would not be subject to flooding.	No risk. The site is 100 to 115 ft above sea level and 9 mi from the Pacific Ocean. The site is also 8 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	CIDH pile is recommended for the proposed bridge widening. Abutments and bents should be founded on pile foundations to provide scour protection and limit the potential for long-term settlement.
Santa Rosa/Pleasant Valley Road OC (Part Replacement) (Bridge No. 52-0204)	12.3	Site is underlain by very fine to medium sands, silty sands, sandy silts, clayey silts, and silty clays. The density and consistency of the soils generally increases with depth.	Potential for liquefaction risk. Site borders liquefaction hazard zone. High groundwater table recorded (20 to 49 ft bgs). Soils consist primarily of very fine silty sands, sandy silts, clayey silts, and silty clays. Loose to medium-dense fine silty sands and sandy silts present below groundwater table.	Potential for flooding and scour. Site is within FEMA mapped flood zone or flood hazard Zone X (0.2% annual chance of flood hazard) and within 250 ft of Zone AO (1% or greater annual chance of flood hazard), with base flood depth of 1 foot. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 130 ft above sea level and 9 mi from the Pacific Ocean. The site is also 8.4 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Both CIDH and driven piles are feasible options for the abutments at the replacement structure. CIDH piles are the preferred option due to deeper groundwater and less vibration during installation. For bent foundations, a typical 8-foot-diameter, single CIDH pile foundation can be used to support each column.
Arroyo Calleguas Creek Widening (Bridge No. 52-0009)	12.76	Site is underlain by very fine- to coarse-grained sand, silty sands, silts, clayey silt, and silty clay. Following that is dense to very dense sand, silty sand with silty clays and lenses of gravel, and occasional scattered pebbles.	No risk. Site is not within a liquefaction hazard zone. In addition, the depth to groundwater recorded at site is relatively deep (50 to 60 ft bgs), and dense/stiff soil is expected below the groundwater table.	Potential for flooding and scour. Site is within FEMA mapped floodway. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 135 to 150 ft above sea level and 9 mi from the Pacific Ocean. The site is also 8 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, steel pipe filled with concrete or CISS pile, is applicable to the proposed bridge widening as long as the soil is determined to not be corrosive to steel.
Revolon Slough (Beardsley Wash) Extension (Bridge No. 52-0164)	18.78	Site is underlain by loose, silty fine sand interbedded with organically rich silt and clayey silt. Following that is compact silty sand to sandy silt with fine gravel and micaceous organically rich silt, then dense to very dense sand with gravel and silt. Soil density generally increases with depth.	High potential for liquefaction. Site is within liquefaction hazard zone. Shallow groundwater (8 to 10 ft bgs) recorded and very loose to dense silty sand present. Liquefaction-induced settlement estimated to be 4 to 7 inches.	Potential for flooding and scour. Site borders a mapped FEMA flood zone and is in an area mapped as having a 0.2% annual chance of flooding (up to 1 foot in depth). Bridge also crosses Beardsley Wash. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 68 ft above sea level and 7.0 mi from the Pacific Ocean. The site is also 6.2 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Foundations consisting of reinforced-concrete spread footings, drilled and bonded to the existing foundation, are feasible. Because box culvert widening would occur in an active channel, over-excavation or use of slurry cement would be needed below bottom of proposed spread footings both upstream and downstream of the channel.
Montalvo Spur OH Widening (Bridge No. 52-0021L/R)	23.98	Site is underlain by roadway fill consisting of sand, gravel, and silt. Site is also underlain by generally loose, very fine silty sands and soft to stiff clayey silts, which are underlain by medium-dense silty, very fine to coarse sand, silt, and clayey silt.	Potential for liquefaction. Site is within liquefaction hazard zone. Medium-dense sands are present below groundwater table. The saturated silty/clayey fine sands and silts between 10 and 43 ft bgs are potentially liquefiable. Liquefaction-induced settlement estimated to be 10 inches.	Potential for flooding and scour. Site is within mapped FEMA flood zone or flood hazard Zone X (0.2% annual chance of flood hazard) and borders a regulatory floodway (with base flood elevation 66 ft). The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 80 to 85 feet above sea level and 3.8 miles from the Pacific Ocean. The site is also 3.2 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The widened structures could be supported on driven pile groups, either concrete or steel, similar to existing supports, at both the abutments and bent locations. Precast, prestressed concrete piles or heavier steel HP sections, such as HP 14 x 17, are recommended.

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
Montalvo OH Widening (Bridge No. 52-0017L/R)	24.35	Site is underlain by generally loose, very fine sandy silt and clayey silt interbedded with fine silty sand. Following that is compact to dense silty, very fine to medium sand with occasional gravels, then stiff clayey silt. Soil density generally increases with depth.	Potential for liquefaction. Site is located liquefaction hazard zone. High groundwater table (10 to 15 ft bgs) recorded.	Potential for flooding and scour, but the risk is low. Site is not within mapped FEMA flood zone or flood hazard. The nearest mapped flood zone is 1,000 feet away. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 90 to 95 ft above sea level and 3.5 miles from the Pacific Ocean. The site is also 3 miles from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, CISS pile, is applicable to the proposed bridge widening. Driven steel HP piles can also be considered.
Victoria Avenue UC Widening (Bridge No. 52-0439L/R)	24.66	Site is underlain by fill at the surface consisting of low-plasticity, stiff to very stiff silts and lean clays with compact clayey sand. Following that are alluvial soils and bedrock consisting of sandstone and siltstone.	Potential for liquefaction. Site is within liquefaction hazard zone.	Potential for flooding and scour. Site is not within a mapped FEMA flood zone; however, the site is within a dam inundation area and would be subject to flooding.	No risk. The site is 105 ft above sea level and 3.3 mi from the Pacific Ocean. The site is also 2.7 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Driven piles are a viable foundation type, provided that the noise and vibration impact on existing piles and structures is not a concern. The existing foundation type, CISS pile, is applicable to the proposed bridge widening. Non-displacement driven steel HP piles for the proposed bridge abutments and bents can also be considered.
Telephone Road UC Widening (Bridge No. 52-0214L/R)	25.97	Site is underlain by clayey silt, silty clay, silt, and occasionally fine sand. Soil consistency generally increases with depth, from soft at the ground surface to stiff at a depth of 70 ft bgs.	No risk. Site is not within a liquefaction hazard zone. In addition, site is underlain primarily by non-liquefiable clayey silts and clays, silts, and fine sands.	Potential for flooding and scour. Site is within mapped FEMA flood zone (0.2% annual chance flood hazard). The site is within a dam inundation area and would be subject to flooding.	Low risk. The site is 135 to 140 ft above sea level and 2.3 miles from the Pacific Ocean. The site is also 1.8 miles from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, CISS pile, is applicable to the proposed bridge widening.
Main Street UC Widening (Bridge No. 52-0168L/R)	26.72	Site is underlain by a mix of silts and clays, with varying amounts of very fine sands and occasional gravels. Consistency of soils ranges from soft/loose to firm/medium dense and generally increases with depth.	Potential for liquefaction. Site is within liquefaction hazard zone. High groundwater (5 to 14 ft) recorded. Liquefaction-induced settlement estimated to be 10 inches.	Potential for flooding and scour. Site is within mapped FEMA flood zone or flood hazard Zone X (0.2% annual chance of flood hazard). The site is within a dam inundation area and would be subject to flooding.	Low risk. The site is 100 ft above sea level and 1.7 mi from the Pacific Ocean. The site is also 1.2 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The widened structures could be supported on driven pile groups, either concrete or steel, at both the abutments and bents.
Lemon OH Widening (Bridge No. 52-0020L/R)	27.25	Site is underlain by generally soft to medium stiff, plastic silty clay, followed by loose to dense silty sand, with occasional clays and gravels. Soil density generally increases with depth.	Potential for liquefaction. Site is within liquefaction hazard zone. Shallow groundwater (5 to 10 ft bgs) recorded, and loose to medium-dense silty sand present. Liquefaction-induced settlement estimated to be 7 inches.	Potential for flooding and scour. Site is within FEMA flood Zone A. The site is within a dam inundation area and would be subject to flooding.	No risk. The site is 60 ft above sea level and 1.2 miles from the Pacific Ocean. The site is also 3,700 ft from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, concrete driven pile, is applicable to the proposed bridge widening and would be preferable if the site is determined to be corrosive. Similar piles, such as driven steel HP piles, for nearby bridges to be widened at the same time can also be considered.
Vista Del Mar UC Widening (Bridge No. 52-0152L/R)	29.45	Site is underlain by loose, fine to medium sand underlain by compact to dense, fine sand with scattered gravel, cobbles and shell fragments, and interbedded silt-sand combinations with occasional clay. Soil density increases generally with depth.	Potential for liquefaction risk. Site is within liquefaction hazard zone. Shallow groundwater (4 to 10 ft bgs) recorded, and loose to dense silty sand present.	Potential for flooding and scour. Site is not within a mapped FEMA flood zone; however, the site is within a dam inundation area and would be subject to flooding.	High risk. The site is 10 ft above sea level and within 500 ft of the Pacific Ocean. The site is also within 150 ft of a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, driven steel HP pile, is applicable to the proposed bridge widening.

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
San Jon Creek Widening (Bridge No. 52-0163L/R)	29.55	Site is underlain by loose sands and gravel, with cobbles occasionally interbedded with silts and clays. Following that is a medium to dense, fine to coarse silty sand layer with occasional clays, gravels, shell fragments, and organic matter. Soil density generally increases with depth.	Potential for liquefaction. Site is within liquefaction hazard zone. Shallow groundwater (5 to 10 feet bgs) recorded, and loose to medium sands and fine silty sands are present below the historic high groundwater table. Liquefaction-induced settlement estimated to be 2 to 3 inches. Soil layers at 5 to 8 ft and 13 to 17 ft have potential for liquefaction.	Potential for flooding and scour. Site is within 100 ft of FEMA flood Zone X (area with 0.2% annual chance of flood hazard; area with 1% annual chance of flood hazard, with average depths of less than 1 foot or drainage areas of less than 1 square mi; and areas protected by levees from 1% annual chance of flood hazard). In addition, backwater flooding regularly occurs at the drainage channel to the coast on San Jon Road in Ventura. The site is within a dam inundation area and would be subject to flooding.	High risk. The site is 5 ft above sea level and within 300 ft of the Pacific Ocean. The site is also at the edge of a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	CISS pile is recommended for the proposed bridge widening. Steel HP 14 x 17 piles are also considered a feasible option.
Figueroa Street UC Widening (Bridge No. 52-0231L/R)	30.4	Site is underlain by loose, fine silty sand and very soft, plastic silty clay, followed by medium-dense to dense silty sand, then by very dense sand and gravels.	Potential for liquefaction. Site is within liquefaction hazard zone. Shallow groundwater (5 to 10 ft bgs) recorded, and loose to medium-dense silty sand present. Liquefaction-induced settlement estimated to be 2.5 inches.	Potential for flooding and scour. Site is within FEMA flood Zone A. The site is within a dam inundation area and would be subject to flooding.	Moderate risk. The site is 5 to 10 ft above sea level and 0.5 mi from the Pacific Ocean. The site is also within 250 ft of a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, concrete driven pile, is applicable to the proposed bridge widening and would be preferable if the site is determined to be corrosive.
Ventura Avenue Off Ramp UC Widening (Bridge No. 52-0232R)	30.59	Site is underlain by loose, fine silty sand, followed by medium to dense, coarse sand with scattered pebble gravels and cobble.	Potential for liquefaction. Site is within liquefaction hazard zone. Shallow groundwater (5 to 10 ft bgs) recorded and silty sand present.	Potential for flooding and scour. Site is within mapped FEMA flood zone (area with reduced flood risk due to levee). Overtopping or failure of a levee system may be possible. The site is within a dam inundation area and would be subject to flooding.	Moderate risk. The site is 5 to 10 ft above sea level and 0.5 mi from the Pacific Ocean. The site is also within 250 ft of a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	The existing foundation type, steel HP pile, is applicable to the proposed bridge widening.
Retaining Walls							
Retaining Wall No. 540L (new)	10.74 to 11.44	It is suspected that some man-made fill, up to approximately 25 ft thick, was placed during the existing wall construction and US 101 widening in the 1980s. Below the fill, on-site soil is generally a soft to stiff, fine-grained material (silts, clays, and mix of the two soil types). Following that is medium-dense to very dense or very hard silty sand, sand, gravel, or a mix of these soil types.	Potential for liquefaction. Site is partially within or bordering a liquefaction hazard zone; however, liquefaction potential at the site is considered negligible because of the limited thickness and cohesiveness of the silts and clays and the presence of dense sand below historical high groundwater (10 to 20 ft bgs).	Potential for flooding and scour. The site is within a mapped FEMA Special Flood Hazard Area, Zone AE (1% annual chance of flood hazard) or flood hazard Zone X (0.2% annual chance of flood hazard). The site is not within a dam inundation area and would not be subject to flooding.	No risk. The site is 110 ft above sea level and 9 mi away from the Pacific Ocean. The site is also 8.3 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Several alternative wall types are considered to be feasible for the proposed retaining walls, including Type 1 wall (mod) on spread footing, Type 1 wall (mod) on pile footing, Type 5 wall (mod), solider pile wall, and mechanically stabilized embankment wall. Solider pile and mechanically stabilized embankment wall types are considered the most suitable for the proposed improvements.

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
Retaining Walls RW 615L, RW 615R (new) (Bridge No. 52-0204)	12.3	The onsite soils are predominately very fine to medium sands silty sands, sandy silts, clayey silts and silty clays. The density and consistency of the soils increases generally with depth.	Potential for liquefaction risk. Site borders liquefaction hazard zone. High groundwater table recorded (20 ft bgs). Soils consist primarily silty very fine sands, sandy silts, clayey silts and sandy silts. Loose to medium dense fine silty sands and sandy silts below groundwater table.	Potential for flooding and scour risk. Site is within FEMA mapped flood zone or flood hazard Zone X – 0.2% annual chance of flood hazard and 250 ft from a mapped Zone AO – 1% or greater annual chance of flood hazard with base flood depth of 1 ft. The site is located within a dam inundation area and would be subject to such flooding.	No risk. The site is 130 ft above sea level and 9 mi from the Pacific Ocean. The site is also 8.4 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	Ground anchor walls are recommended for the cut section of RW615L and RW615R. A minimum clearance of 5 ft from any existing utility should be planned for all ground anchors. The fill wall sections are anticipated to be standard Caltrans Type 1 walls supported on shallow foundations. The walls can be constructed after the existing abutments are demolished and the new abutments are built.
Retaining Wall RW 745L (new) Bridge No. 52-0428	14.8	On-site soils consist of fill material (silty sand), followed by very soft to stiff clayey silts and loose silty sands. Underlying the top layer is medium-dense to very dense silty sands, with the occasional presence of very stiff clayey silts and gravel and cobbles.	Potential for liquefaction. Site is within a liquefaction hazard zone; however, on-site soils are predominately medium-dense to very dense silty sands and clayey silts, with the occasional presence of gravel and cobbles. The medium-dense silty sands and clayey silts are generally not considered liquefiable.	Potential for flooding and scour. The site is not within a mapped FEMA flood zone. However, the site is within a few hundred feet of dam failure inundation areas.	No risk. The site is 135 ft above sea level and 8.5 mi from the Pacific Ocean. The site is also 7.5 mi from a tsunami inundation zone.	Low risk. A lake is approximately 570 feet northeast from the site.	Ground anchor walls are recommended for the cut section within the existing bridge limits of RW 745L. A minimum clearance of 5 ft from any existing utility should be planned for all ground anchors. The slope in front of the existing mechanically stabilized embankment wall outside of the bridge limits would need to be cut. A cast-in-place wall, solider pile, and lagging wall are considered feasible for this location.
Retaining Wall RW 1051L (new)	20.56 to 20.79	Site-specific soil data are not available. However, soil data are available for two nearby structures. At the Rose Avenue OC (Bridge No. 52-0438/52-0202), 1,300 ft west of the proposed RW 1051L, soils consist of loose to medium-dense sand, silty sand, and silt underlain by medium-dense to very dense sands, gravelly sands, and sand with silts interbed. On-site soils at the Rice Avenue OC (Bridge No. 52-0372), 2,400 ft east of the proposed RW 1051L, consist of fine sands to silts and silty sands, with occasional silt and clay interbeds, scattered gravel, and gravelly sands.	Potential for liquefaction. Site is within a liquefaction hazard zone. Based on soil data from nearby structures (Rose Avenue OC and Rice Avenue OC), medium-dense sands and silts might be present below the groundwater table at the site.	Potential for flooding and scour. An existing drainage channel runs parallel to and south of the proposed structure. The site is not within a mapped FEMA flood zone. The nearest mapped flood zone is north of northbound US 101 and 300 ft from the southern edge of southbound US 101. The site is also within a dam inundation zone.	No risk. The site is 75 to 85 ft above sea level and 5.8 mi from the Pacific Ocean. The site is also 4.5 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	To accommodate the right-of-way limitations between A-line station 1050+62 and 1055+31.9, a Type 5 modified wall is considered. Beyond A-line station 1055+31.9, a Type 1 modified cantilever concrete wall is feasible. It is recommended that the proposed retaining wall be supported on pile foundations. Driven piles, both steel and precast concrete, and CISS piles are considered viable options for the foundation of the proposed retaining wall. A mechanically stabilized earthen wall is also considered feasible for the site.

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
Retaining Wall RW 1096L (new)	21.36 to 21.50	Site-specific soil data are not available. However, soil data are available from two nearby structures. On-site soils at the Rose Avenue OC (Bridge No. 52-0438/52-0202), which is 1,900 ft east of the proposed RW 1096L, consist of 10 to 15 ft of loose to medium-dense sands, silty sand, and silt underlain by medium-dense to very dense sands and gravelly sands with sand and silts interbeds. Soils in the vicinity of the Vineyard Avenue separation (Bridge No. 52-0188), 2,500 ft northwest of the proposed RW 1096L, consist primarily of medium-dense, poorly graded sands. The sand is underlain by interbedded fine sands and silts, followed by dense to very dense gravelly sand.	Potential for liquefaction. Site is within a liquefaction hazard zone.	Potential for flooding and scour. Site is not mapped within a FEMA flood zone. However, there is an existing unlined drainage area at the base of the proposed wall leading to an RCB drainage structure at the eastern end of the wall. The site is within a dam inundation area.	No risk. The site is 75 to 80 ft above sea level and 5.1 mi from the Pacific Ocean. The site is also 4 mi from a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	A Type 1 modified cantilever concrete wall founded on shallow foundations is recommended. In addition, if site-specific future explorations show poor soil conditions (e.g., liquefiable soils, high groundwater table), then the Type 1 modified wall could be supported on pile foundations.
Retaining Walls Johnson Drive to S Victoria Ave (retaining wall Nos. 1215L, 1217R [Alt 3], 1224R [Alt 2], 1234L, 1235R, 1253R [Alt 2], 1253 [Alt 3], 1255L [new])	23.7 to 24.6	Santa Clara River Bridge (west end): On-site soils consist of dense to very dense sands and gravel. Montalvo Spur OH: On-site soils consist of roadway fill (sand, gravel and silt). Following that is loose, very fine silty sands and soft to stiff clayey silts. Underlying that layer is a layer of medium-dense, silty very fine to coarse sand, silt, and clayey silt. Montalvo OH: On-site soils consist of very loose to medium-dense, very fine sandy silt and clayey silt interbedded with fine silty sand. Following that is dense silty, very fine to medium sand with occasional pebbles. Victoria Avenue UC: On-site soils consist of fill at the surface, underlain by alluvium and bedrock. The on-site fill materials consist of silty clays and medium-dense clayey silts, clayey sands, silty sands, and sandy gravel.	Potential for liquefaction. The retaining walls are within a liquefaction hazard zone, with the exception of the area between A-line station 1215+00 to 1229+00. Liquefaction potential at Montalvo Spur OH, Montalvo OH, and Victoria Avenue UC.	Potential for flooding and scour. The proposed RW 1215L is within a mapped flood zone (1% annual chance flood hazard), while RW 1234L is partially within the same zone (south end of the wall). The proposed RWs 1217R (Alt 3) and 1224R (Alt 2) are within a mapped flood zone (0.2% annual chance of flood hazard), and RW 1235R is partially within the same zone (south end of the wall). The proposed RWs 1255L, 1253 (Alt 2), and 1253 (Alt 3) are not within a FEMA flood hazard zone. The proposed retaining walls are within a dam inundation zone.	No risk. Ground surface elevations vary gradually between approximately 115 and 75 ft above sea level from north to south across the proposed retaining wall sites. The sites are also 3.25 mi from the Pacific Ocean and 2.7 mi from the nearest tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	To accommodate the right-of-way limitations for RW 1215L and part of RW 1234L, a Type 5 modified wall is considered a viable option. For the rest of the locations, a Type 1 modified wall is feasible. It is recommended that the proposed retaining walls be supported on pile foundations. Driven piles, both steel and precast concrete, and CISS piles are considered feasible for the foundation of the proposed retaining walls. Mechanically stabilized earthen walls are also considered feasible for the site.

Structure	Post Mile	Subsurface Soils	Liquefaction Risk	Flood/Scour Risk	Tsunami Risk	Seiche Risk	Proposed Foundation
Retaining Walls RW 1577R and 1582R (new)	30.48 to 30.66	Site-specific soil data are not available. However, previous explorations indicate that on-site soils in the vicinity consist primarily of silty fine to medium sands, silts, sands, sandy gravels, and gravels, with the occasional presence of cobbles. At the location of Figueroa Street UC (Bridge 52-0231), on-site soils include silty clays and clays.	Potential for liquefaction risk. Site is within a liquefaction hazard zone.	Potential for flooding and scour. An existing drainage channel runs parallel to the proposed RW 1582R at the toe of the northbound US 101 side slope. The site is within a mapped FEMA area with a reduced flood risk due to levee (near South Ventura Avenue) and within a mapped FEMA flood zone (area of minimal flood hazard). The site is also near a dam failure inundation zone.	Potential for tsunami risk. The site is 12 to 45 ft above sea level and 0.25 mi from the Pacific Ocean. The site is also within 290 ft of a tsunami inundation zone.	No risk. Site is not near any large enclosed water body.	There is adequate space for the construction of a Type 1 cantilever concrete wall. It is recommended that proposed retaining walls be supported on pile foundations. Small-displacement piles, such as steel HP 14 x 89 piles, are applicable to the foundation of the proposed retaining walls, if corrosion is not found to be an issue during future explorations.

Source: Caltrans 2020b, 2021
bgs = below ground surface; CIDH = cast-in-drilled hole; CISS = cast-in-steel-shell; FEMA = Federal Emergency Management Agency: ft = feet; mi = mile; OH = overhead; RCB = reinforced concrete box; RW = retaining wall; UC = undercrossing

Geologic Hazards

Seismicity and Fault Rupture

The project site is within a seismically active area of Southern California that spans the boundary between two tectonic plates—the North American Plate on the east and the Pacific Plate on the west. According to the CGS definition, an active fault has had surface displacement within the Holocene Epoch (roughly the last 11,700 years). The CGS defines a potentially active fault as one that has been active during the Quaternary period (approximately the last 1,600,000 years). These definitions are used in delineating Earthquake Fault Zones, as mandated by the Alquist-Priolo Geologic Hazard Zones Act of 1972, subsequently revised in 1997 as Alquist-Priolo Earthquake Fault Zones. The intent of the act is to require fault investigations on sites within Special Studies Zones to preclude new construction of certain structures across the trace of active faults. As shown in Figure 2.3.3-2 and summarized in Table 2.3.3-2, the Sycamore Canyon fault, Bailey fault, Simi-Santa Rosa Fault Zone, and Oak Ridge fault traverse the project alignment. In addition, the project is also within CGS Alquist-Priolo Earthquake Fault Zones.

Of the bridge structures located along the project alignment, only Bridge 52-0009 would be widened as part of the project; Bridge 52-0009 is within an Alquist-Priolo Earthquake Fault Zone or within 1,000 feet of an earthquake fault that is Holocene or younger in age. Additional evaluations of improvements that could be affected by Alquist-Priolo Earthquake Fault Zones would be conducted during the final design phase.

Table 2.3.3-2. Areas with Fault Crossing Hazard

Area (PM)	City	APEFZ	Fault	Distance from APEFZ
4.33	Thousand Oaks	No	Sycamore Canyon fault	4.24 miles
5.84	Thousand Oaks	No	Sycamore Canyon fault	3.62 miles
12.05	Camarillo	Yes	Bailey fault	0.2 mile
12.5 to 13.7	Camarillo	Yes	Simi-Santa Rosa Fault Zone	Within APEFZ
17.6 to 17.8	Camarillo	Yes	Simi-Santa Rosa Fault Zone	Within APEFZ
R25.3	Ventura	No	Oak Ridge fault	1.53 miles

Source: Caltrans 2020a.
PM = post mile; APEFZ = Alquist-Priolo Earthquake Fault Zone

The proposed project elements are anticipated to be affected by ground motion from seismic shaking. The mean earthquake moment magnitude at the bridge widening sites is anticipated to range from 6.61 to 6.97 for a design earthquake event return period of 975 years (Caltrans 2020a). The potential exists for ground surface rupture due to active and potentially active faults that traverse the project alignment or are close to the alignment.

Ground motion was evaluated at several bridge sites and documented in the SPGRs. Typically, peak ground acceleration, defined as the maximum ground acceleration that occurs during earthquake shaking, would be from 0.54 gravity (g) to 0.65g along the project corridor for a design earthquake event return period of 975 years. At alignment segments between post mile (PM) 18.78 and 30.59, the mean earthquake moment magnitude would be greater than 0.6g.

Liquefaction, Seismic Settlement, and Lateral Spreading

Liquefaction is a phenomenon in which saturated granular soils lose their inherent shear strength due to a build-up of excess pore water pressure induced by cyclic loading such as that caused by an earthquake. Liquefaction potential is influenced by several factors, primarily 1) the relative density and type of soil, 2) depth to groundwater, and 3) duration and intensity of seismic shaking. Loose, saturated granular materials (e.g., sands and low- to non-plastic silts) are most susceptible to liquefaction. Most of the project alignment is within a liquefaction zone, shown in Figure 2.3.3-2. The liquefaction potential can be considered high in some areas along the project alignment where relatively loose alluvial soil below groundwater is present. Additional information regarding the liquefaction potential of the project's proposed bridge widening and retaining wall locations is provided in Table 2.3.3-1.

Seismic settlement may be divided into liquefaction-induced seismic settlement and seismic densification. Liquefaction-induced seismic settlement occurs in liquefiable materials as a result of liquefaction and dissipation of the excess pore water pressures developed during the seismic event. Because there is potential for liquefaction at the site, there may be associated liquefaction-induced seismic settlement, which may result in settlement at bridge and retaining wall structures.

Seismic densification is a phenomenon in which loose, unsaturated coarse-grained soils densify during an earthquake. Seismic settlement is expected to be minimal or insignificant due to the presence of compact to dense soil at the site, such as fine-grained materials, fine sands, silty clays, and clayey silts.

Lateral spreading is a consequence of liquefaction when free faces of slopes are present above the liquefied materials. Lateral spreading can result in several feet of lateral soil movement, which can have an adverse impact on structures if not adequately designed to resist the kinematic loading imposed by the soil movement. Because there is potential for liquefaction, there may also be potential for lateral spreading.

The potential for liquefaction, seismic settlement, and lateral spreading should be anticipated and accounted for in the design and construction of embankments, widened bridges, and retaining walls. The liquefaction potential, seismic settlement, and lateral spreading will be further evaluated during site-specific geotechnical investigation associated with the final design phase.

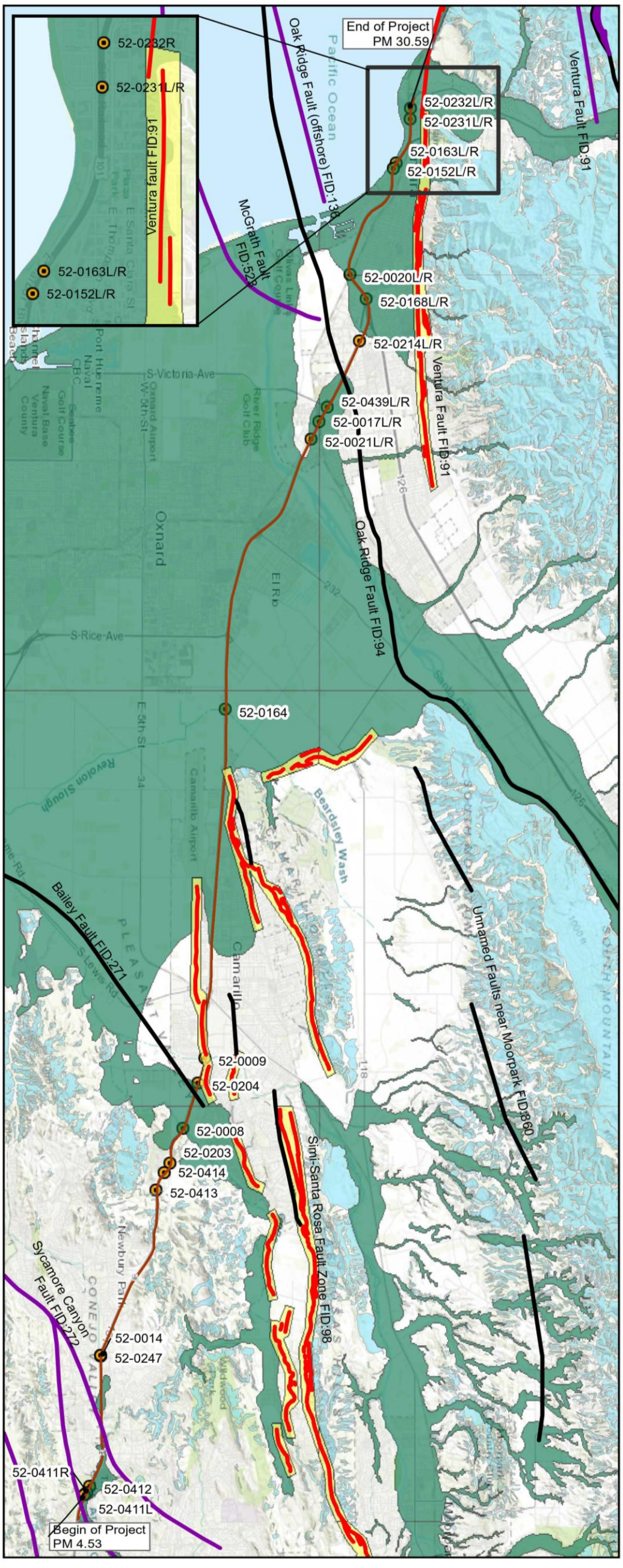
Expansive and Collapsible Soils

Expansive soils expand when wet and contract when dry. Expansive soils can cause uplift pressures that can lead to structure damage. Historically, expansive soils have caused

considerable damage in Ventura County, especially in Thousand Oaks near a private development called Shadow Oaks. The resources most often affected by expansive soils are structure foundations, retaining walls, and pavement subgrades; at times, the lack of near-source non-expansive backfill is another factor. Although expansive soils are scattered throughout the county, their potential impact on structures is limited to just a few developed areas (i.e., portions of the Ojai Valley, the Camarillo Hills, and areas around the community of Moorpark). Expansive soils in these developed areas present a low threat, however, because soil tests and engineering solutions can prevail over the dangers of expansive soils. Near-surface soils along the alignment are characterized as Subgrade Type I (granular) or Subgrade Type II (clayey), based on correlations with the previously defined geologic map units. In general, the presence of Type III soils (i.e., expansive soils) along the project alignment is less likely. Expansive soils will be further evaluated during site-specific geotechnical investigation associated with the final design phase.

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Figure 2.3.3-2. Geologic Hazards Map



Structure No.	Structure Name
52-0232 R	Ventura Ave. Off-Ramp UC
52-0231 L/R	Figueroa St. UC
52-0163 L/R	San Jon Creek
52-0152 L/R	Vista Del Mar UC
52-0020 L/R	Lemon OH
52-0168 L/R	Main Street UC
52-0214 L/R	Telephone Rd UC
52 0439 L/R	Victoria Ave UC
52-0017 L/R	Montalvo OH
52-0021 L/R	Montalvo Spur OH
52-0164	Beardsley Wash
52-0009	Arroyo Calleguas Creek
52-0204	Santa Rosa Rd OC (Pleasant Valley Rd)
52-0008	Arroyo Conejo Creek
52-0203	Camarillo Springs Rd UC
52-0414	Conejo Grade Sidehill Viaduct 2
52-0413	Conejo Grade Sidehill Viaduct 1
52-0247	Borchard Rd OC
52-0014	South Branch Arroyo Conejo (Across S. Branch)
52-0412 R	N Arroyo Conejo Sidehill Viaduct
52-0411 L/R	Arroyo Sidehill Viaduct

Source: WSP

Figure 2.3.3-2
Geologic Hazards Map
US 101 Improvement Project

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Collapsible soils undergo settlement upon wetting, even without the application of additional loads. Typical collapsible soils, such as low-density, dry sandy soils with little or no fine content, are subjected to collapse with the addition of excess moisture. Based on the geology of the project alignment, the presence of collapsible soils along the project alignment is less likely. Collapsible soils will be further evaluated during site-specific geotechnical investigation associated with the final design phase.

Corrosive Soils

Fine-grained soils (silts and clays) are the typical soil types responsible for corrosive site conditions. Because both fine-grained and coarse-grained materials exist throughout the project alignment, these subgrade soils may be corrosive to concrete and steel. Corrosive soils will be further evaluated during site-specific geotechnical investigation associated with the final design phase.

Landslides

According to the Ventura County 2040 General Plan (County of Ventura 2020a), landslides have occurred historically in areas along the Rincon fault, the hillsides south of the Santa Clara River, and at the eastern side of the Ventura River. In recent years, the most damaging landslides in Ventura County have occurred in the coastal community of La Conchita, just southeast of the Santa Barbara county line. La Conchita has been the site of multiple non-earthquake-induced landslides. As shown in Figure 2.3.3-2, the project alignment is within a CGS Landslide Zone, predominately along the steep grade of the Conejo Pass. In this area, the slopes of the roadway alignment are cut at gradients steeper than 45 degrees due to the presence of hard volcanic rock. This area has medium to high landslide susceptibility. Landslide susceptibility will be further evaluated during site-specific geotechnical investigation associated with the final design phase.

Cut-and-Fill Slopes

The existing project corridor runs through varying ground surface elevations. At several locations along the corridor, the roadway alignment runs across canyons and hilly terrain. At some locations, the existing cut-and-fill slopes are steeper than 2:1 (horizontal:vertical) where underlying soil conditions permit this type of slope configuration. The project would require significant grading, with several major cut-and-fill slopes to accommodate the widened roadway shoulders and ramps. A vast majority of the proposed cut-and-fill slopes would be 2:1 (horizontal:vertical) or flatter. However, at a few locations, proposed cut slopes would be steeper than 2:1 (horizontal:vertical) where underlying soil conditions permit this type of slope configuration to match the existing slope ratios. The proposed graded cut-and-fill slopes are anticipated to be up to 30 feet high. Where new cut-and-fill slopes are anticipated for the proposed improvements, site-specific geotechnical investigation would be required for proper design.

Tsunamis, Seiches, Scour, and Flood Hazards

As discussed in Section 2.2.3, *Coastal Zone,* a portion of the project area is within the Coastal Zone (from the northern terminus of the project to the approximate location of

the Arundell Avenue/Channel Drive OC), including the four proposed bridge widening locations between PM 29.45 and PM 30.59 and the two proposed retaining wall structures (RWs 1577R and 1582R between PM 30.48 and PM 30.66). In addition, as discussed in Section 2.3.1, *Hydrology and Floodplains,* portions of the project area are within 100-year floodplains. Some of the project's proposed bridge widening areas and retaining walls would be near tsunami inundation zones or within inundation zones and flood hazard zones associated with dam failure (see Table 2.3.3-1). These areas could be subjected to tsunami inundation, scour, and flood hazards. The potential for tsunami inundation, scour, and flood hazards will be further evaluated during the final design phase.

A seiche is a wave generated by disturbance or ground oscillation within a lake or large enclosed body of water. The majority of the project alignment is not within the proximity of any large open water body. The risk associated with seiche for such areas is considered nonexistent. However, proposed retaining wall RW 745L at Bridge No. 52-0428 (PM 14.8) would be within approximately 570 feet of a lake northeast of the site. The potential for seiche is considered low for proposed retaining wall RW 745L (Caltrans 2020b).

Additional information on the potential risk associated with tsunami inundation, seiche, scour, and flood hazards for the project's proposed bridge widening areas and retaining wall locations is provided in Table 2.3.3-1.

2.3.3.3 Environmental Consequences

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the existing configuration of US 101 and would not result in improvements. Under the No-Build Alternative, the project would not be constructed, and no impacts related to geology, soils, seismicity, or topography would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction of the project would require grading, cut and fill, vegetation clearing, compacting, and excavating and exposing subsurface soils, increasing the possibility of soil erosion or landslide. Water intrusion into subsurface soils would increase the potential for soil expansion or collapse. In addition, seismic activity is possible during construction. Seismic shaking can create opportunities for liquefaction and settlement as well as slope instability at natural and temporary slopes. Measures **GEO-1** through **GEO-4** as well as measures **WQ-3** and **NC-8** describe the efforts that would be made to avoid or minimize adverse impacts from soil erosion and geologic-related hazards, including seismic shaking, soil expansion or collapse, and liquefaction and settlement.

Compliance with the most current Caltrans procedures regarding seismic design, which is standard practice on all Caltrans projects, is anticipated to prevent any adverse effects related to seismic ground shaking. Conformance with the California Building Code as well as adherence to standard engineering practices and Caltrans design criteria would reduce the effects of seismic ground shaking. A comprehensive geotechnical exploration program would be developed by geotechnical engineers during the final design phase (measure **GEO-1**). The geotechnical exploration program would include exploratory soil borings along the project alignment (measure **GEO-2**) to obtain site-specific data for foundation and seismic design and liquefaction evaluation. A geotechnical design report and foundation reports would be prepared (measure **GEO-3**) to properly assess and minimize potential geotechnical impacts associated with the project site, proposed bridge widening areas, and retaining walls. In addition, during construction, all earthwork, including cut and fill, would be conducted in accordance with Caltrans Standard Specifications, Section 19, Earthwork, and require a qualified geotechnical engineer to observe earthwork activities (measure **GEO-4**). A Stormwater Pollution Prevention Plan would be prepared, and implementation of construction site best management practices (BMPs) would be required to minimize impacts related to soil erosion (see measure **WQ-3** in Section 2.3.2, *Water Quality and Stormwater Runoff*, and measure **NC-8** in Section 2.4.1, *Natural Communities*). All work related to erosion protection and drainage control would be done in accordance with Caltrans Standard Specifications, Section 21, Erosion Control.

With implementation of measures **GEO-1** through **GEO-4** as well as measures **WQ-3** and **NC-8**, the project would not result in or contribute to erosion or geologic-related hazards to the degree that would result in an impact on construction workers or the traveling public. Construction of the project would not result in adverse temporary impacts related to geology, soils, seismicity, or topography under Alternative 2 or Alternative 3.

Permanent Impacts

Seismic Ground Shaking and Ground Surface Fault Ruptures

The project is within a seismically active region that could be subject to future seismic ground shaking from earthquakes occurring along regional and local faults. Multiple faults traverse the project alignment, as shown in Figure 2.3.3-2 and summarized in Table 2.3.3-2. The project is also within CGS Alquist-Priolo Earthquake Fault Zones. Moderate to strong ground shaking is expected along the project limits from nearby earthquake sources. In addition, the potential exists for ground surface fault ruptures due to active and potentially active faults that traverse the project alignment or are in the proximity.

The project would implement measure **GEO-3**, which requires preparation of a geotechnical report and foundation reports that document geotechnical exploratory boring activities (measures **GEO-1** and **GEO-2**) to confirm soil types and geologic conditions as well as address any potential impacts related to soils, liquefaction, and seismic activity during final design. Recommendations from the geotechnical report

and foundation reports would be incorporated into the final project plans and specifications during the final design phase to ensure the geotechnical stability of the project (measure **GEO-3**). The project would be designed and constructed in accordance with recommendations from the geotechnical design report and foundation reports as well as applicable federal, state, and local seismic codes; the Caltrans Highway Design Manual; and the Caltrans seismic design criteria for structures. With implementation of measures **GEO-1** through **GEO-3** and compliance with seismic codes and design criteria for structures, no substantial permanent adverse impacts related to seismic ground shaking or ground surface fault ruptures are anticipated under Alternative 2 or Alternative 3.

Liquefaction, Seismic Settlement, and Lateral Spreading

Most of the project alignment is within a liquefaction zone, as shown in Figure 2.3.3-2. The liquefaction potential can be considered high in some areas along the project alignment where presence of relatively loose alluvial soil below groundwater is present. In these areas, the potential for liquefaction, seismic settlement, and lateral spreading should be anticipated and accounted for in the design and construction of embankments, widened bridges, and retaining walls. The potential for liquefaction, seismic settlement, and lateral spreading will be further investigated during the final design phase (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, with implementation of measures **GEO-1** through **GEO-3**, no substantial permanent adverse impacts related to liquefaction, seismic settlement, and lateral spreading are anticipated under Alternative 2 or Alternative 3.

Expansive and Collapsible Soils

Although it is unlikely that expansive and collapsible soils would be encountered in the project corridor, this cannot be conclusively determined without a site-specific subsurface investigation. During the final design phase, expansive and collapsible soils will be further investigated (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with the recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, with implementation of measures **GEO-1** through **GEO-3**, no substantial permanent adverse impacts related to expansive and collapsible soils are anticipated under Alternative 2 or Alternative 3.

Corrosive Soils

Because both fine-grained and coarse-grained soils (silts and clays) exist throughout the project alignment, subgrade soils may be corrosive to concrete and steel. During the final design phase, corrosive soils will be further investigated (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with the recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, with implementation of measures **GEO-1** through **GEO-3**, no substantial permanent adverse impacts related to corrosive soils are anticipated under Alternative 2 or Alternative 3.

Landslides

The project alignment is within the CGS Landslide Zone (as shown in Figure 2.3.3-2), predominately along the steep grade of the Conejo Pass. In this area, the slopes of the existing roadway alignment are cut at gradients steeper than 45 degrees due to the presence of hard volcanic rock. This area has medium to high landslide susceptibility. The potential for landslides and slope instability that could affect the project's proposed structures and embankments will be further investigated during the final design phase. Measures **GEO-1** and **GEO-2** will be implemented, and the project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, with implementation of measures **GEO-1** through **GEO-3**, no substantial permanent adverse impacts related to landslides are anticipated under Alternative 2 or Alternative 3.

Cut-and-Fill Slopes

New embankment side slopes should be constructed no steeper than 4:1 (horizontal:vertical), based on information from the Caltrans Highway Design Manual; otherwise, a design exception would be required. Given current site conditions along US 101, space is limited due to right-of-way constraints or existing structures. Therefore, cut slopes with inclinations of 4:1 (horizontal:vertical) or less may not be feasible. During the final design phase, cut-and-fill slopes and retaining walls will be further investigated (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with the recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, with implementation of measures **GEO-1** through **GEO-3**, no substantial permanent adverse impacts related to cut-and-fill slopes are anticipated under Alternative 2 or Alternative 3.

Mineral Resources

A review of the USGS Mineral Resources Online Spatial Data was conducted (USGS 2024); no known mineral resources were identified within the project area. However, the Ventura County 2040 General Plan, Chapter 6, Conservation and Open Space (County of Ventura 2020b), shows a portion of the project alignment in the Oxnard area to be located within Mineral Resource Zones (MRZs) 2, 3, and 4. These are areas that contain mineral resources (MRZ-2), areas that may qualify as mineral resources (MRZ-3), and areas where geologic information does not rule out either the presence or absence of mineral resources (MRZ-4). It is not anticipated that the project would encounter mineral resources because the project is within an existing, urbanized transportation corridor.

Tsunamis, Seiches, Scour, and Flood Hazards

As previously discussed, a portion of the project area is within the Coastal Zone (from the northern terminus of the project to the approximate location of the Arundell Avenue/Channel Drive OC), including the four proposed bridge widening locations between PM 29.45 and PM 30.59 and two proposed retaining wall structures (RWs 1577R and 1582R between PM 30.48 and PM 30.66). In addition, as previously discussed, portions of the project area are within 100-year floodplains. Some of the project's proposed bridge widening areas and retaining walls are near tsunami inundation zones or within inundation zones and flood hazard zones associated with

dam failure (see Table 2.3.3-1). These areas could be subjected to tsunami inundation, scour, and flood hazards. The SPGRs (Caltrans 2020b, 2021) include preliminary foundation recommendations for the proposed bridge widening areas and retaining walls, as summarized in Table 2.3.3-1. More detailed information on the different foundation types considered for the proposed bridge widening areas and retaining walls can be found in the SPGRs (Caltrans 2020b, 2021). The potential for tsunami inundation, scour, and flood hazards will be further investigated during the final design phase. The project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, with implementation of measure **GEO-3**, no substantial permanent adverse impacts related to tsunami inundation, scour, and flood hazards are anticipated under Alternative 2 or Alternative 3.

The project would not propose shoreline protective structures or alterations to rivers that would conflict with California Coastal Act Sections 30235 and 30236. Measures **HYD-1** through **HYD-4** (see Section 2.3.1, *Hydrology and Floodplains*) would be implemented to avoid or minimize impacts on floodplains from the proposed bridge widening and drainage improvements.

As discussed in Section 2.2.11, *Visual/Aesthetics*, overall, viewer response would be low. The project would not diminish the scenic and visual qualities of coastal areas in the area. In addition, measures **VIA-1** through **VIA-3** would be implemented to minimize visual impacts on coastal areas, as discussed in Section 2.2.11, *Visual/Aesthetics*. Therefore, with implementation of measures **VIA-1** through **VIA-3**, the scenic and visual qualities of the area would be protected, consistent with Section 30251 of the California Coastal Act.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the existing configuration of US 101 and would not result in improvements. Under the No-Build Alternative, the project would not be constructed, and no impacts related to geology, soils, seismicity, or topography would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The measures below, **GEO-**1 through **GEO-4**, as well as measures **VIA-1** through **VIA-3** from Section 2.2.11, *Visual/Aesthetics*; **HYD-1** through **HYD-4** from Section 2.3.1, *Hydrology and Floodplains*; **WQ-3** from Section 2.3.2, *Water Quality and Stormwater Runoff*; and **NC-8** from Section 2.4.1, *Natural Communities*; are included as part of the project to avoid and/or minimize potential impacts related to geology soils, seismic, and topography.

GEO-1: Geotechnical Exploration Program. During final design, geotechnical engineers will develop a comprehensive geotechnical exploration program to ensure sufficient data for various project elements is available, in general accordance with Caltrans standards and local practice.

GEO-2: Exploratory Soil Borings. During final design, exploratory soil borings and cone penetration tests will be conducted throughout the project alignment as part of **GEO-1** to obtain groundwater data and to characterize the soil subsurface conditions for foundation, seismic design, and liquefaction evaluation.

GEO-3: Geotechnical Design Report and Foundation Reports. During final design, geotechnical engineers will prepare a geotechnical design report and foundation reports. Recommendations from the final design-level geotechnical report and foundation reports will be incorporated into the final project plans and specifications during the final design phase to ensure the geotechnical stability of the project. The reports will document soil-related constraints and hazards, such as slope instability, settlement, liquefaction, or related secondary seismic impacts, which may be present. Site-specific design measures will be based on State of California guidelines. The reports will include:

- Evaluation of settlement, expansive and collapsible soils, and potentially corrosive soils and recommendations regarding construction procedures and/or design criteria to reduce the impact of these soils on project development.
- Identification of seismically induced (dry) settlement, as well as potential liquefiable soil and lateral spreading within the project limits, and recommendations for mitigation measures.
- Demonstration that the design of all proposed retaining walls, soundwalls, and bridges is geotechnically suitable for soils within the project limits.
- Geotechnical recommendations for the specific foundation design and earthwork construction considered for the project.

GEO-4: Observation of Earthwork. During construction, a qualified geotechnical engineer will observe earthwork to verify that it exposes firm and unyielding subgrade soils. Fill placed on sloping ground will be properly keyed and benched into the existing ground and placed as specified in Caltrans Standard Specifications (2024).

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2.3.4 Paleontology

2.3.4.1 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.

23 United States Code (USC) 305 (Archeological and Paleontological Salvage) authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 54 USC 320301-320303 above and state law.

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

2.3.4.2 Affected Environment

This section is based on the Paleontological Identification Report/Paleontological Evaluation Report prepared for the project (Caltrans 2021), the geologic map of the Ventura 7.5' quadrangle for Ventura County, CA (California Department of Conservation 2003), and the Ventura County Coastal Zoning Ordinance (Ventura County Planning Division 2022).

The project area is within the Transverse Ranges Geomorphic Province. Geologic mapping indicates that the project area is underlain by recent artificial fill, Holocene-age deposits, alluvial fan deposits, stream channel sand and gravel deposits, and wash deposits. Numerous additional geologic units are mapped in the project vicinity, within the half-mile buffer, including Holocene-age alluvium, alluvial deposits, alluvial fan deposits, alluvial fan gravel and sand deposits, stream terrace deposits, active wash deposits, and wash deposits; Holocene- to Pleistocene-age landslide deposits; Holocene- to Pleistocene-age older alluvium, Pleistocene-age Saugus Formation, early Pliocene-age Las Posas Sand; middle Miocene-age detrital sediments of Lindero Canyon, cobble-boulder conglomerate; middle Miocene-age Conejo Volcanics, andesitic flows and flow breccias, intrusive basalt, and intrusive dacite; middle Miocene-age Monterey Formation; and early to middle Miocene-age Lower Topanga Formation, micaceous clay shale, and arkosic sandstone. The geologic units that are mapped within the half-mile buffer may be present in the subsurface of the project area and are therefore included in this analysis.

Geologic units within the project alignment were ranked using the California Department of Transportation's (Caltrans') tripartite scale (Caltrans 2016) and best practices in mitigation paleontology (Murphey et al. 2019), as well as the Bureau of Land Management Paleontological Classifications that are used by the County of Ventura to

rank the importance of paleontological resources (Ventura County Planning Division 2022). Caltrans uses a tripartite scale to characterize paleontological sensitivity of an area as having no potential, low potential, or high potential for paleontological resources because the actual presence of paleontological resources is not known until a project is underway. The Bureau of Land Management uses a quadripartite scale to characterize the paleontological importance of an area as having no importance to low, moderate, or high importance for paleontological resources. Areas with high, low, and no potential for paleontological sensitivity were identified in several geological formations throughout the project site (refer to Figure 2.3.4-1). In addition, geologic formations within the project alignment that overlaps the county's coastal zone boundary were identified as areas having no importance and moderate importance for paleontological resources (refer to Figure 2.3.4-2). During the field survey, no paleontological resources were observed, although sediments conducive to fossilization were encountered.

2.3.4.3 Environmental Consequences

Surface grading or shallow excavations entirely within geologic units with low paleontological sensitivity—including Holocene-age artificial fill, stream channel sand and gravel, active wash deposits, wash deposits, alluvium, alluvial fan gravel and sand, alluvial fan deposits, alluvial deposits, stream terrace deposits, and Holocene- to Pleistocene-age landslide deposits—are unlikely to uncover significant fossil vertebrate remains due to their young age and/or lack of stratigraphic context. However, these deposits may shallowly overlie older in-situ sedimentary deposits. Excavations within the project area that affect geologic units with high paleontological sensitivity—including Holocene- to Pleistocene-age older alluvium, Pleistocene-age Saugus Formation, early Pliocene-age Las Posas Sand, middle Miocene-age detrital sediments of Lindero Canyon, conglomerate, middle Miocene-age Monterey Formation, and early to middle Miocene-age lower Topanga Formation, micaceous clay shale, and arkosic sandstone—may result in an impact on scientifically important paleontological resources.

The following geologic units are within the project alignment and also within the coastal zone boundary: Holocene-age artificial fill, active beach deposits, alluvial fan deposits, paralic deposits of the Sea Cliff marine terrace, and stream terrace deposits. With the exception of the paralic deposits of the Sea Cliff marine terrace, all of the geologic units are classified as having no paleontological importance per the County of Ventura's Coastal Zoning Ordinance (County of Ventura 2022). The paleontological importance of the paralic deposits of the Sea Cliff marine terrace is classified in the County of Ventura's Coastal Zoning Ordinance as having moderate paleontological importance (County of Ventura 2022). It is anticipated that areas with paralic deposits of the Sea Cliff marine terrace have moderate paleontological importance and project excavation activities within such areas may affect scientifically important paleontological resources.

Geologic units with low paleontological sensitivity—including Holocene-age artificial fill, stream channel sand and gravel, active wash deposits, wash deposits, alluvium, alluvial fan gravel and sand, alluvial fan deposits, alluvial deposits, stream terrace deposits, and Holocene- to Pleistocene-age landslide deposits—may be shallowly underlain by older,

more paleontologically sensitive sediments and, therefore, should be spot-checked when excavations are greater than 5 feet deep to determine whether project excavations will disturb paleontologically sensitive units and scientifically significant fossils that may be preserved within them. Construction excavations that disturb geologic units with high paleontological sensitivity or moderate paleontological importance, either at the surface or in the subsurface, should be monitored by a professional paleontologist in order to reduce potential impacts on scientifically important paleontological resources to a less-than-substantial level.

Alternative 1: No-Build Alternative

Temporary Impacts

The No-Build Alternative would maintain the current configuration of US 101 in the study area. Under the No-Build Alternative, the project would not be constructed. The No-Build Alternative would not result in temporary impacts related to paleontological resources as a result of construction activities.

Permanent Impacts

The No-Build Alternative would maintain the current configuration of US 101 in the project area. Under the No-Build Alternative, the project would not be constructed. The No-Build Alternative would not result in ground disturbance or excavation; therefore, no permanent impacts on paleontological resources would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction of Alternatives 2 and 3 would not result in temporary impacts on paleontological resources because any impacts during construction would be considered permanent (see below).

Permanent Impacts

Surface grading or shallow excavations entirely within geologic units with low paleontological sensitivity are unlikely to uncover significant fossil vertebrate remains due to their young age and/or lack of stratigraphic context. However, geologic units with low paleontological sensitivity may be shallowly underlain by older, more paleontologically sensitive sediments and, therefore, should be spot-checked when excavations are greater than 5 feet deep to determine whether project excavations will disturb paleontologically sensitive units.

Construction excavations that disturb geologic units with high paleontological sensitivity or moderate paleontological importance, either at the surface or in the subsurface, should be monitored by a professional paleontologist in order to reduce potential impacts on scientifically important paleontological resources to the maximum extent feasible. A Paleontological Mitigation Plan (PMP) would be prepared for the project during final design, described in measure **PAL-1**. The PMP will follow Caltrans and Society of Vertebrate Paleontology guidelines and would contain training, monitoring, fossil recovery, sampling, and notification protocols should a fossil be discovered. Both

Alternatives 2 and 3 are equally likely to have impacts on paleontological resources, as the project footprints and construction activities are similar to each other.

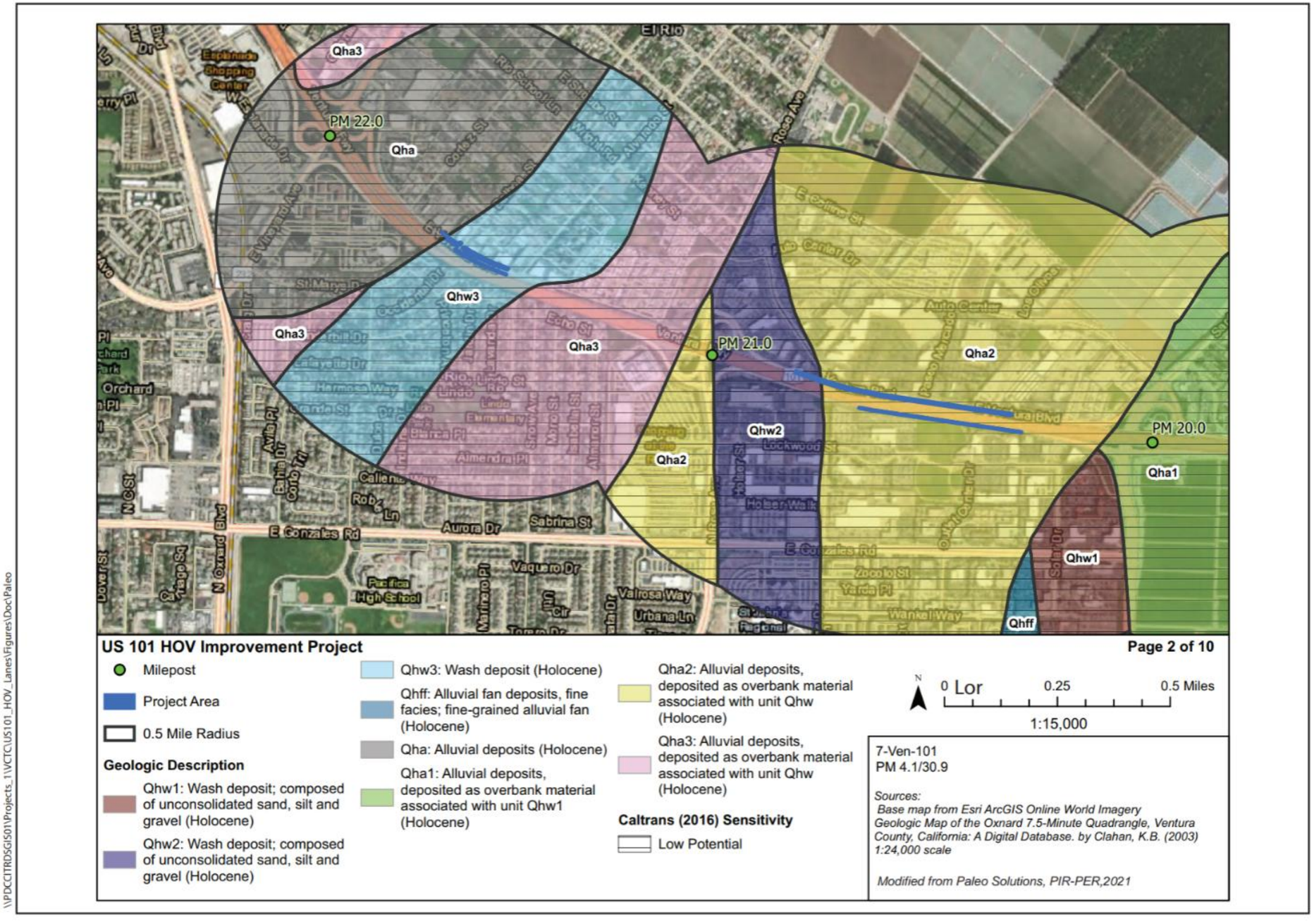
Figure 2.3.4-1. Paleontological Sensitivity (Sheet 1 of 10)



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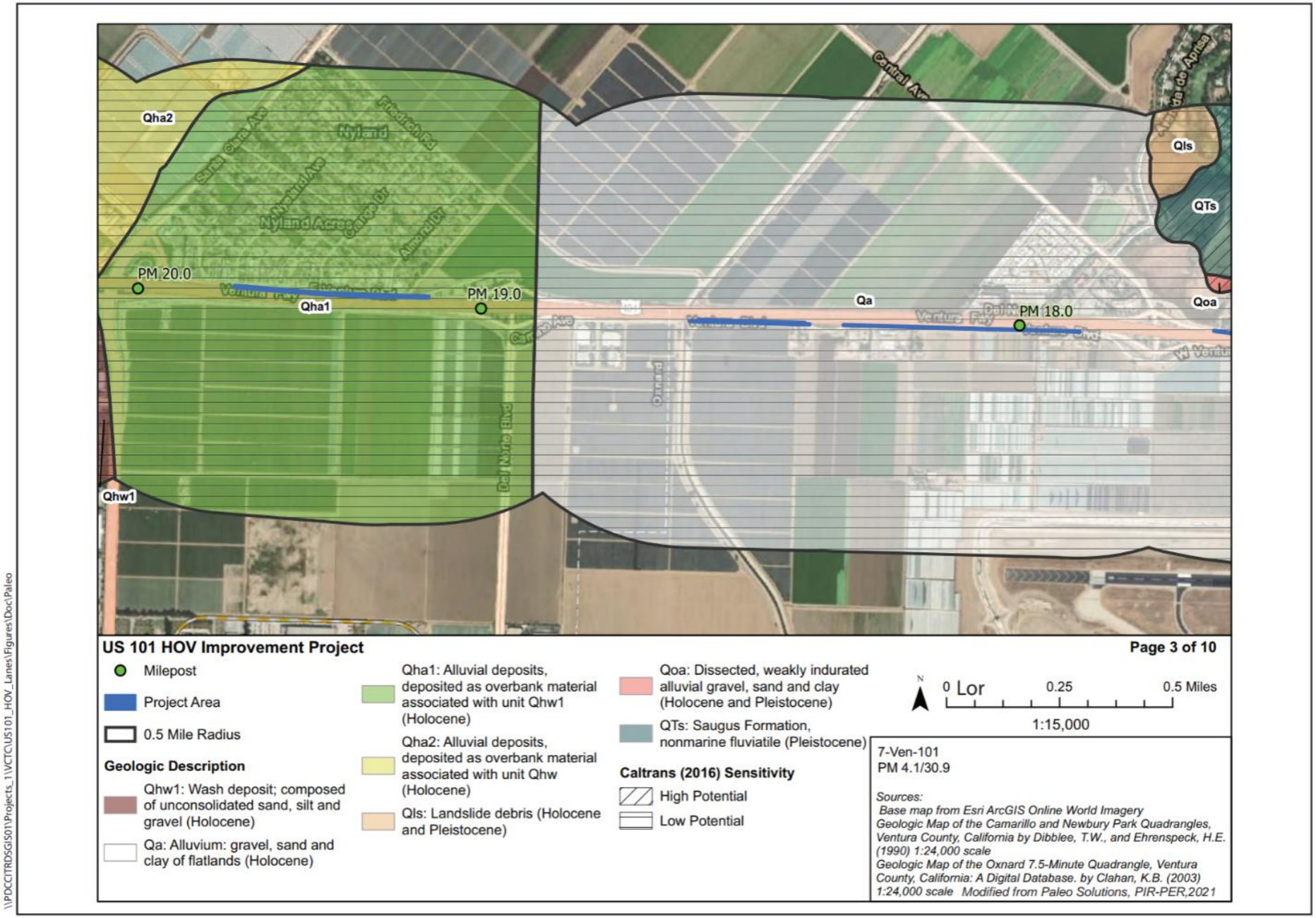
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 2 of 10)



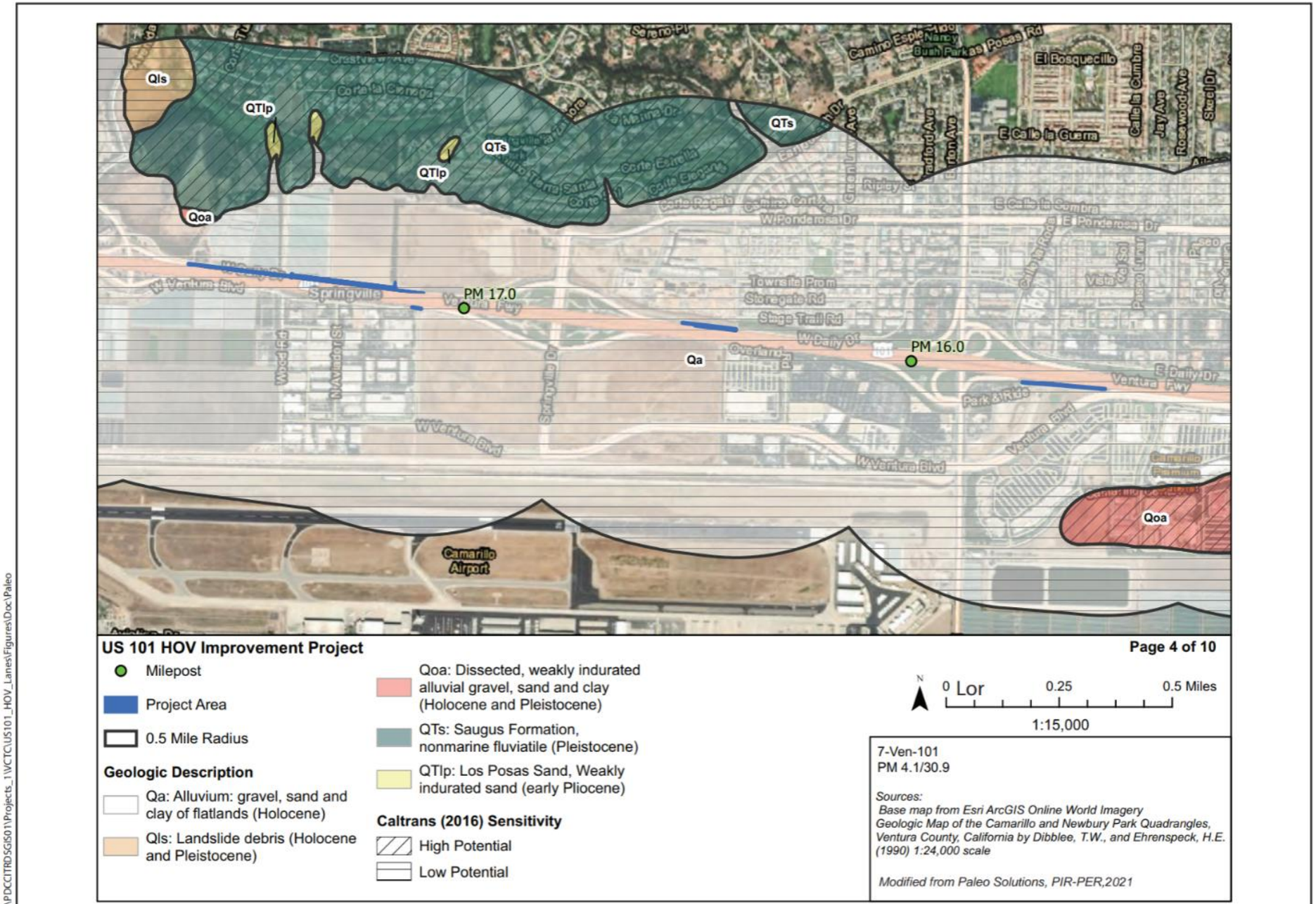
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 3 of 10)



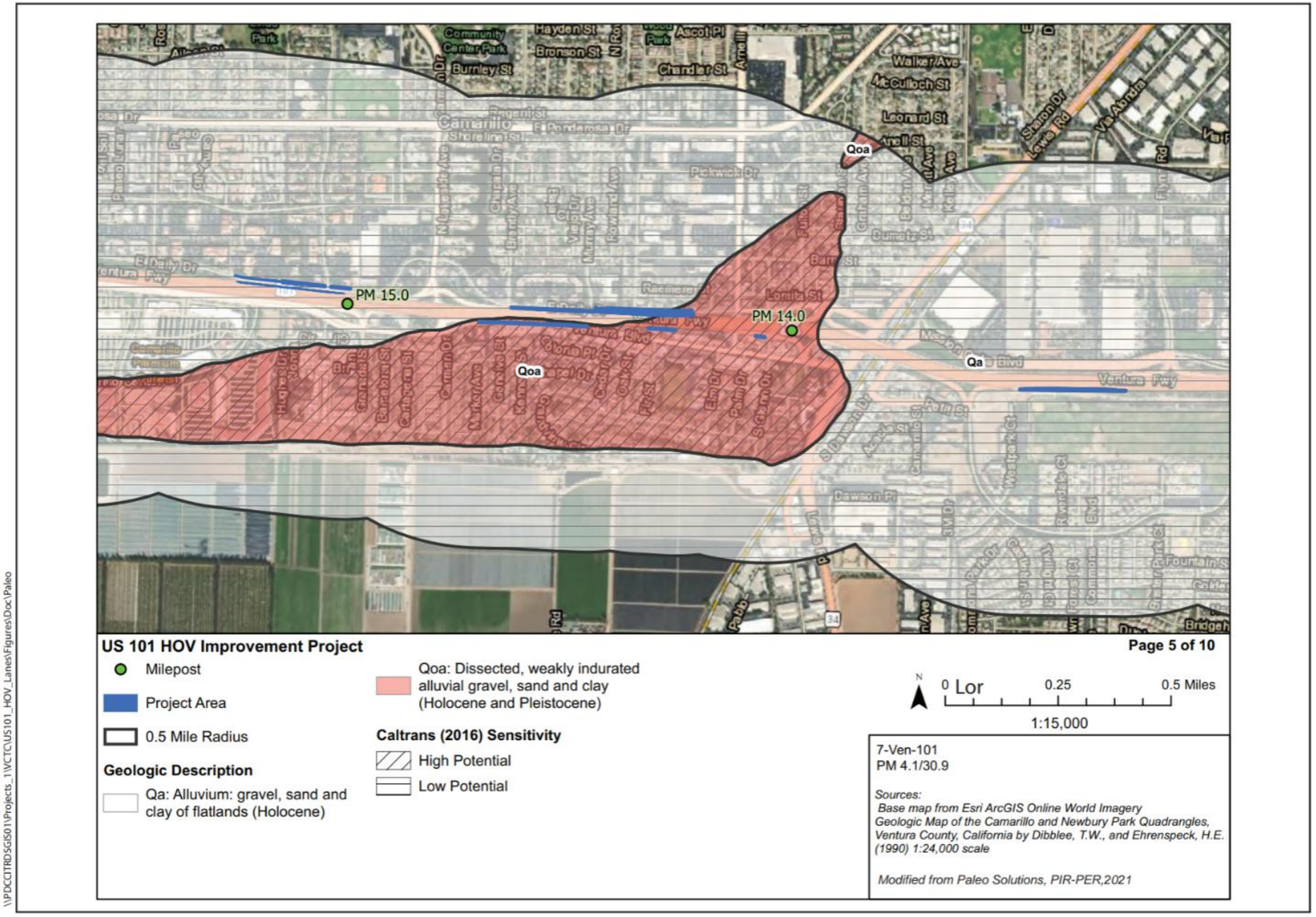
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 4 of 10)



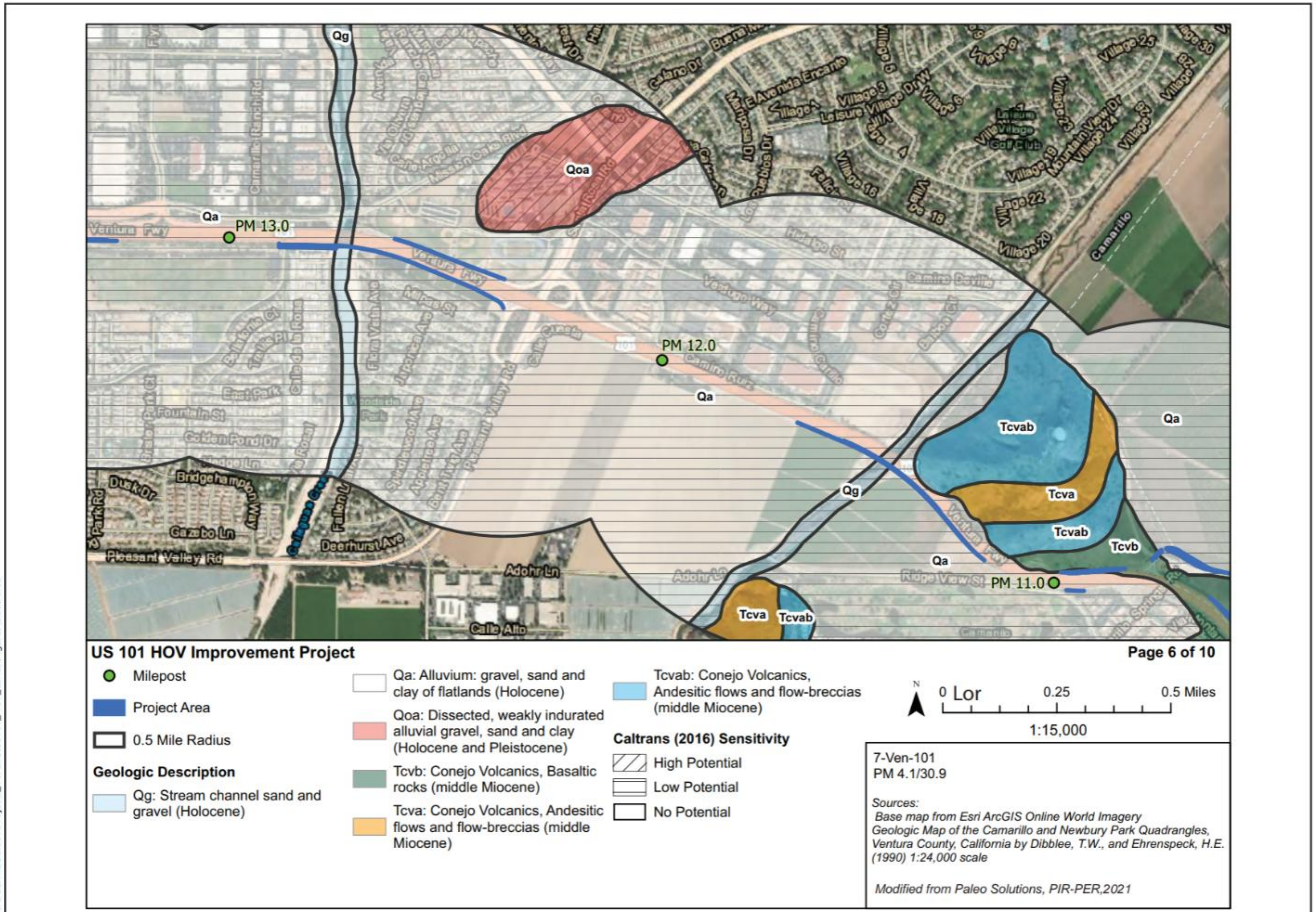
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 5 of 10)



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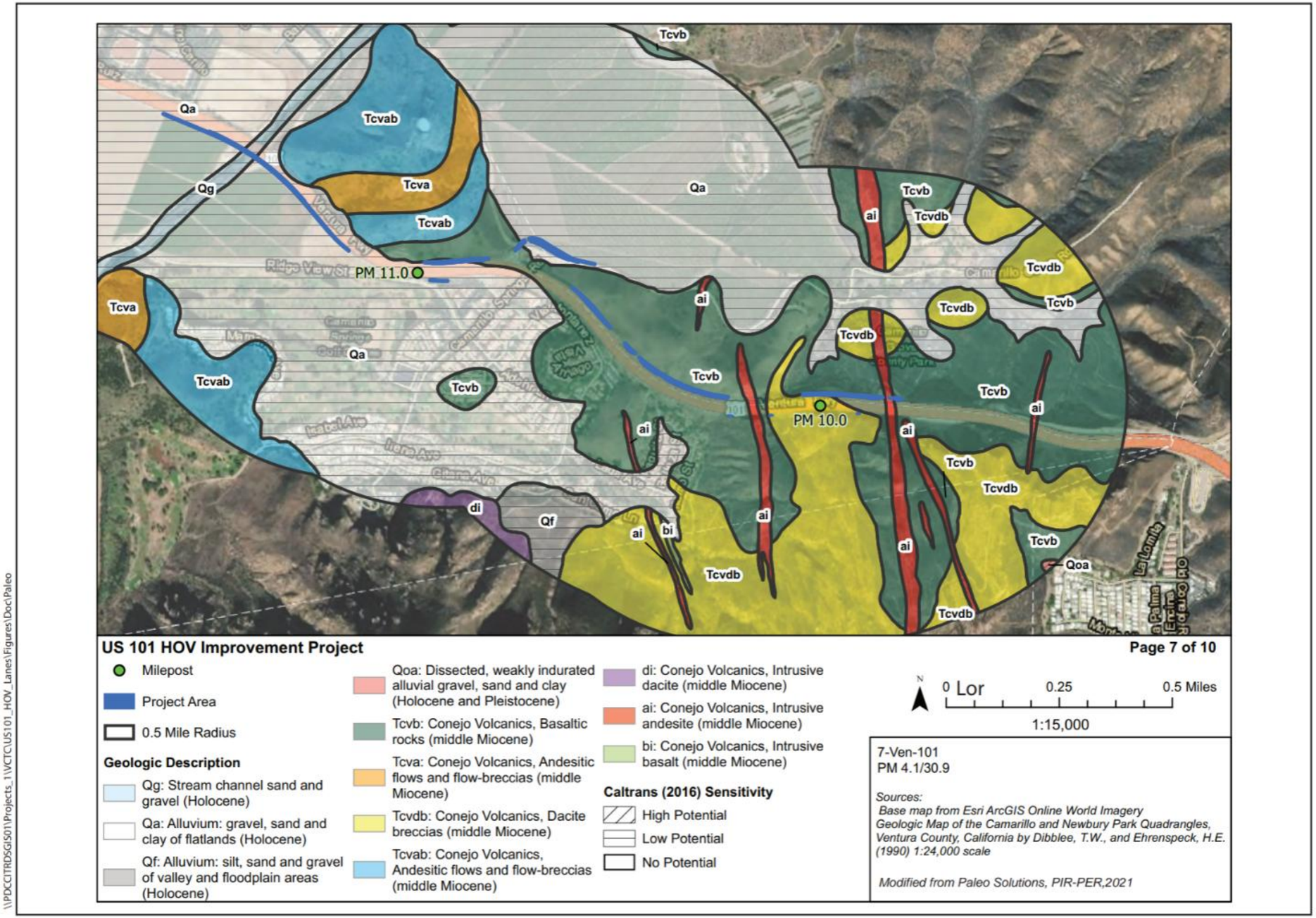
Figure 2.3.4-1. Paleontological Sensitivity (Sheet 6 of 10)



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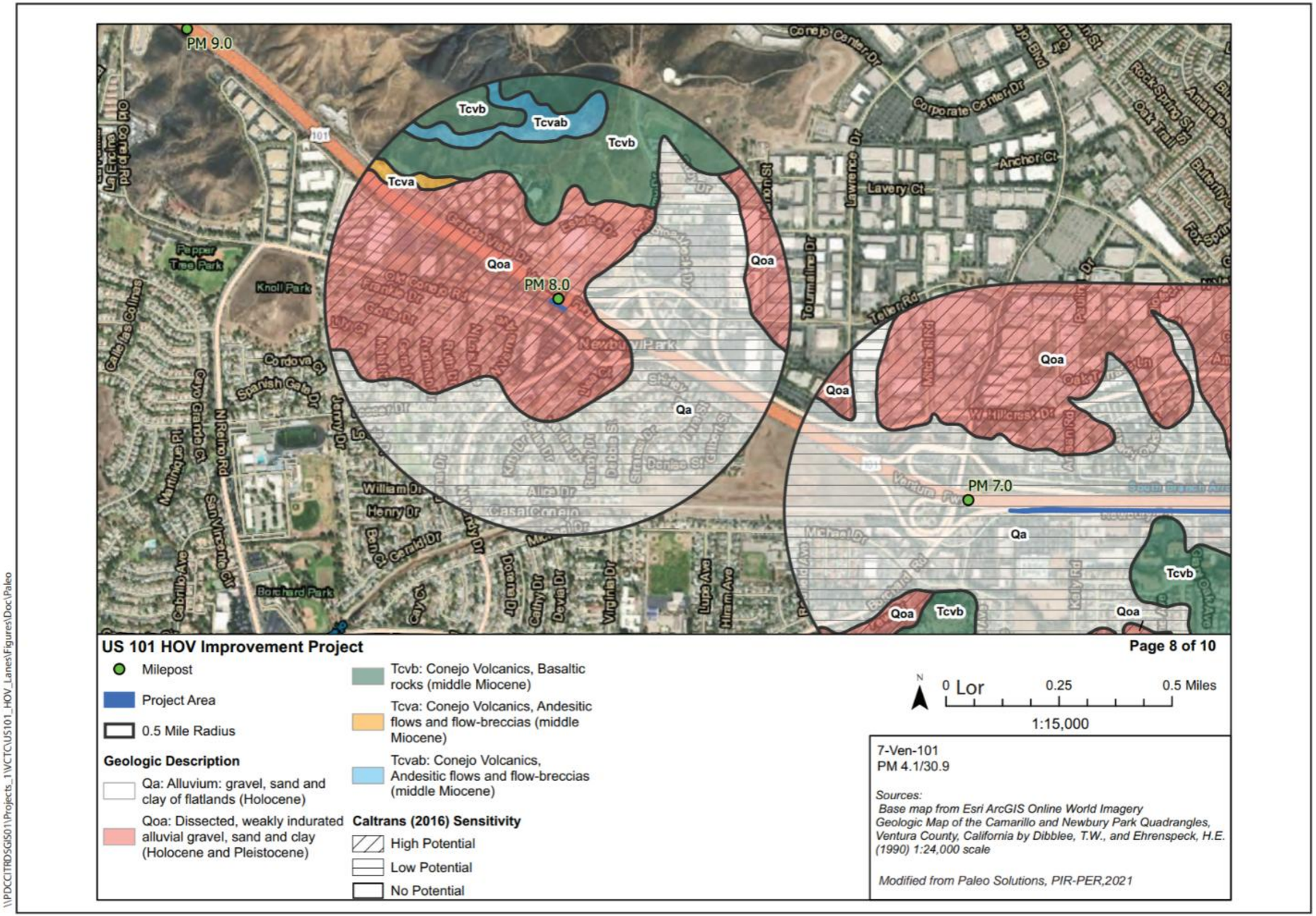
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 7 of 10)



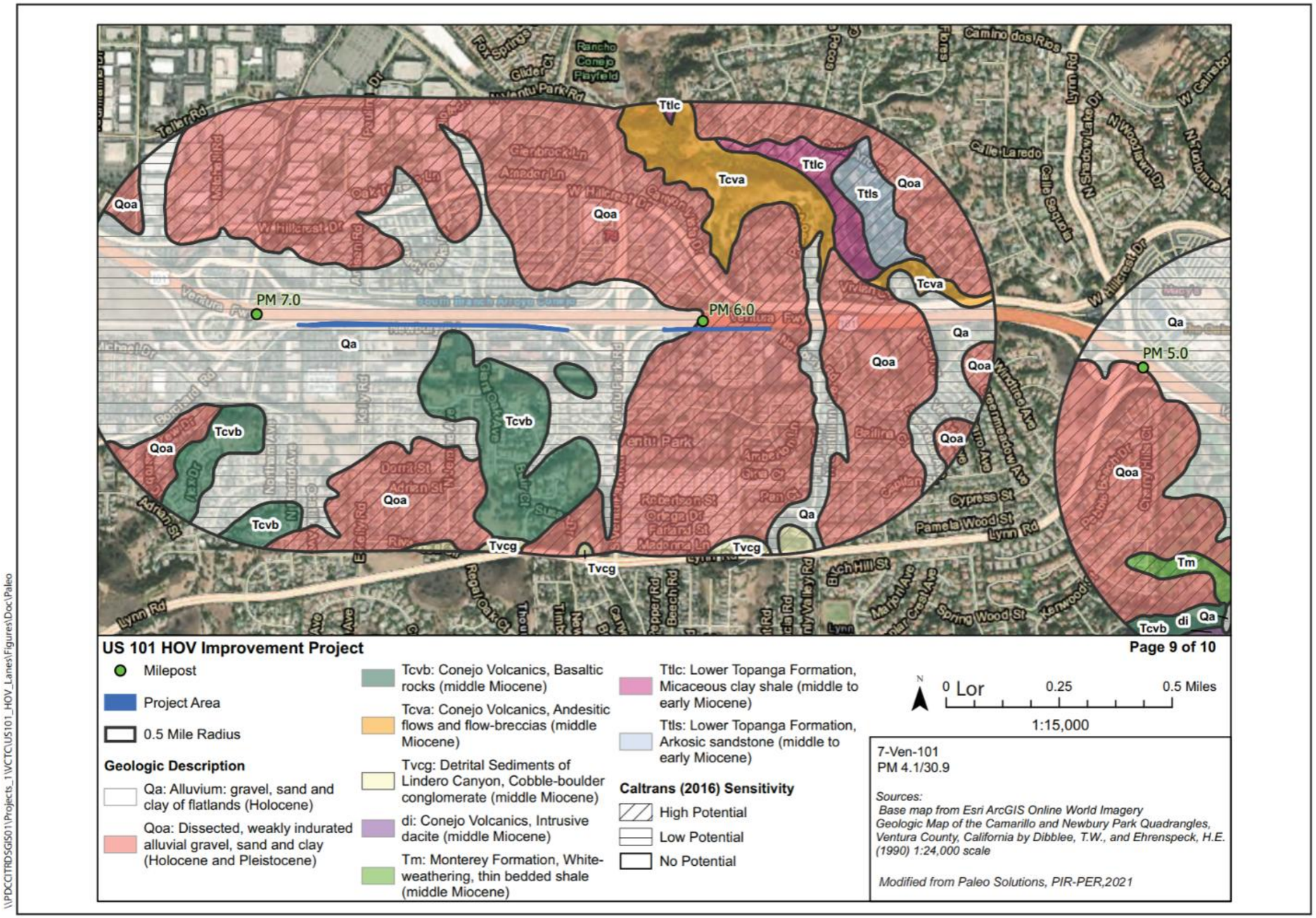
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 8 of 10)



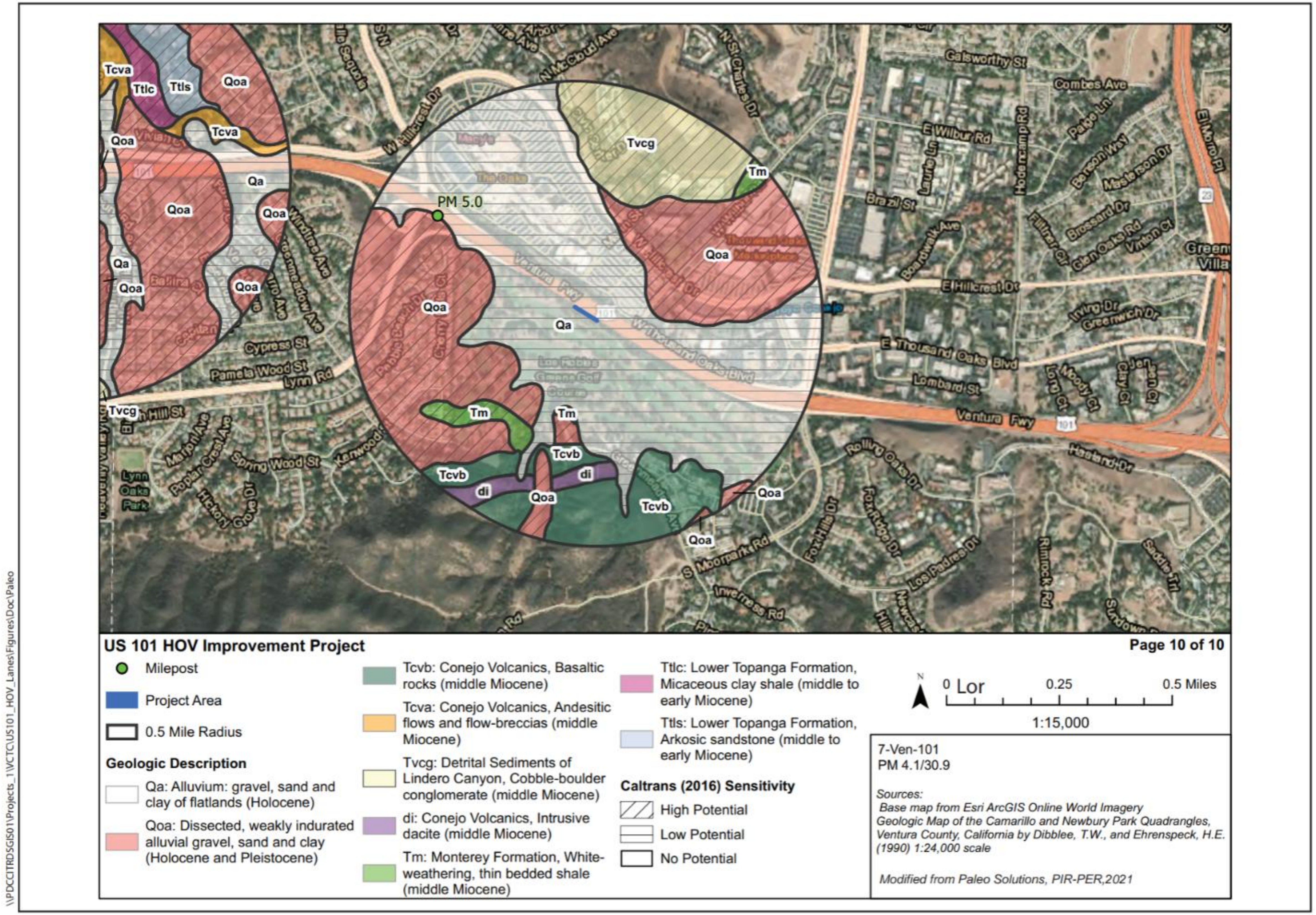
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 9 of 10)



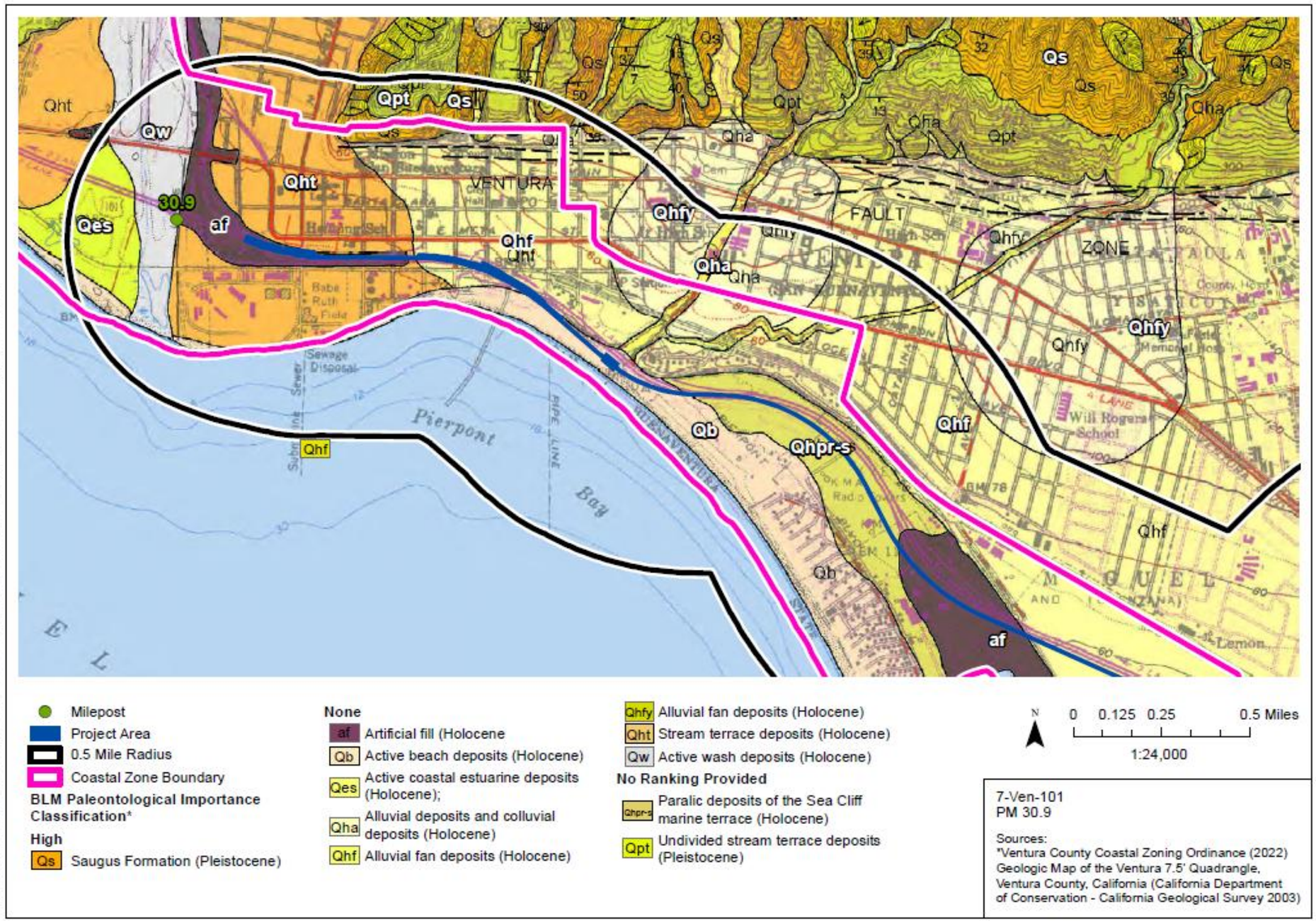
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Figure 2.3.4-1. Paleontological Sensitivity (Sheet 10 of 10)



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Figure 2.3.4-2. Paleontological Importance within Coastal Zone Boundary



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2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on paleontological resources would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

To minimize impacts on any paleontological resources that may be present within the project area, a PMP, as specified below in measure **PAL-1**, would be implemented during construction.

PAL-1: Prepare and Implement a Paleontological Mitigation Plan (PMP). A PMP will be prepared once a project alternative has been selected and once 60 percent project design plans are available. The PMP will follow the Caltrans guidelines in the *Standard Environmental Reference (SER) Environmental Handbook*, Volume 1, Chapter 8 (Caltrans 2017), Caltrans Standard Specifications 14-7, Paleontological Resources, as well as guidelines from the Society of Vertebrate Paleontology. Following these guidelines, the PMP will be prepared by a qualified paleontologist and will include the following elements:

- Detailed recommended monitoring locations; a description of a worker training program; detailed procedures for monitoring, fossil recovery, laboratory analysis, and museum curation; and notification procedures in the event of a fossil discovery by a paleontological monitor or other project personnel.
- Required 1-hour preconstruction paleontological sensitivity training for earthmoving personnel.
- A signed repository agreement.
- Field and laboratory methods proposed (must be consistent with repository requirements).
- A required Paleontological Mitigation Report upon completion of project earthmoving.
- Full-time monitoring shall be implemented during excavations affecting geologic units with high paleontological sensitivity.
- Excavations affecting sedimentary units with low paleontological sensitivity shall be periodically spot-checked to inspect for the presence of older, more paleontologically sensitive geologic units at depth, particularly when excavations are greater than 5 feet. If it is determined that only geologic units with low paleontological sensitivity or previously disturbed sediments (low sensitivity) are affected, or sediments that are deemed non-conducive to fossil preservation, the monitoring program shall be reduced or suspended in those locations. Any subsurface bones or potential fossils

that are unearthed during construction shall be evaluated by a professional paleontologist as described in the PMP.

- A curation agreement with the Natural History Museum of Los Angeles County or another accredited repository shall also be obtained.

2.3.5 Hazardous Waste/Materials

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

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

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

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

2.3.5.2 Affected Environment

This section is based on the Phase 1 Environmental Site Assessment (ESA)/Initial Site Assessment (ISA) (April 2021) prepared for the project (Caltrans 2021).

The purpose of the Phase 1 ESA/ISA was to review past and present land use practices, current site conditions, and adjacent land uses to evaluate any environmental impairment or recognized environmental condition (REC),[1] as defined in the ASTM International (ASTM), *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-13*, that may affect the project. The resource study area for the Phase 1 ESA/ISA included an approximately 500-foot distance from the alignment; although, for select properties, about 1,000 feet were reviewed based on the potential for the identified contaminants to affect soils and/or groundwater within the project footprint. The Phase 1 ESA/ISA was prepared in general accordance with the ASTM Standard (E1527-13) and California Department of Transportation (Caltrans) ISA procedures.

The following tasks were conducted as part the Phase 1 ESA/ISA:

- Environmental database search
- Historical land use records review (historical aerials, topographic maps, Sanborn fire insurance maps, and historic oil and gas maps)
- Agency records review
- Site reconnaissance
- Report preparation

The Phase 1 ESA/ISA is a screening-level study and is based on a limited review of site data. It does not include soil or groundwater sampling or laboratory analysis, which is typically conducted after the Phase 1 ESA/ISA, and it does not provide a definitive determination of the actual presence or absence of contamination.

Recognized Environmental Conditions Database Summary

The Phase 1 ESA/ISA identified 16 sites within the resource study area with known hazardous material or petroleum hydrocarbon releases, as shown in Table 2.3.5-1 and

[1] Per ASTM Standard E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, the term *REC* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property involving: (1) a release to the environment; (2) conditions indicative of a release to the environment; or (3) conditions that pose a material threat of a future release to the environment.

on Figure 2.3.5-1. While all 16 sites have the potential for contaminants to migrate onto soils and/or groundwater within the project footprint, only two open case sites (TFX Aviation Inc. and Talley Corporation/Telair International, Inc.) were identified as having a contamination plume that had migrated within the project footprint. Both sites are collectively known as the TFX Aviation Facility and are undergoing groundwater remediation activities.

Asbestos-Containing Materials and Lead-Based Paint

Existing structures within the project footprint, including building and bridge structures, have the potential to contain asbestos-containing materials (ACM) and lead-based paint (LBP). ACM and LBP were commonly used prior to 1978. The project includes proposed property acquisitions and temporary construction easements (TCEs) where one parcel, Assessor's Parcel Number (APN) 145-022-136, would require the demolition and replacement of a commercial storage building. In addition, the project would affect bridge structures, which may include partial replacement of two bridges and widening of 21 bridges.

Aerially Deposited Lead

Aerially deposited lead (ADL) could be present in soils along major roadway routes from the aerial deposition of lead from past vehicular emissions (i.e., having occurred when leaded gasoline was widely used). The U.S. Environmental Protection Agency (USEPA) began to require gasoline to be unleaded beginning in 1973, and leaded gas was phased out entirely by 1996 for automobiles. The presence of ADL in soils does not necessarily pose a threat in its current state. However, it is considered to have the potential to affect the environment and workers on site during construction activities, as well as affect disposal methods if soils cannot be reused and must be moved off site. ADL-contaminated soils could be encountered during roadway excavation activities.

Paint and Thermoplastic Striping

Historically, chrome yellow (containing lead chromate) was used as the primary yellow pigment in traffic lane paint and thermoplastic striping (PTS). In California, lead chromate traffic striping was phased out in waterborne traffic paint between 1997 and 2000 and in thermoplastic striping by 2004. It is generally assumed that existing yellow PTS associated with roadway markings within a given Caltrans construction project area contains lead and chromium, unless it has been demonstrated that lead or chromium are not present (i.e., analytical data or definitive identification of the PTS source material). Therefore, a potential exists for hazardous thermoplastic striping to be present within the project footprint. Project construction activities have the potential to expose construction personnel to lead or chromium during the removal of yellow or white painted or thermoplastic traffic stripes.

Oil and Gas Wells

The State of California Division of Oil, Gas and Geothermal Energy maps (Caltrans 2021) for the abandoned Conejo Oil Field near the Camarillo Springs Road interchange (Post Mile [PM] 9.6 to PM 10.4) show dozens of historical oil wells in the area adjacent

to and partially within the existing US 101 corridor, as well as within parcels proposed for property acquisition and TCEs. These areas have the potential to contain soil and groundwater contamination from petroleum hydrocarbons release incidents from equipment or from improperly cased or plugged wells.

Treated Wood Waste

Wooden utility poles, road signs, thrie beam barrier, piles, and railroad ties, as well as wood used to support metal beam guardrails, may contain preserving chemicals that protect against insects and fungal decay. These chemicals, which may be hazardous, include creosote, pentachlorophenol, and treatment compounds such as copper azole, alkaline copper quaternary, chromate copper arsenate, and other associated compounds. Wooden guardrail posts and wooden posts supporting roadway signs are located within the project footprint and may contain creosote and pentachlorophenol.

Pesticides and Herbicides

Pesticides and herbicides related to farming activities may be present in soils along the project corridor, primarily between Camarillo Grove Park (PM 10.0) and Ventura Pier (PM 30.0).

Agency Coordination

Beyond the regulatory agency environmental database review, additional coordination with regulatory agencies such as USEPA and/or state agencies such as the California Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Boards (RWQCBs), or local agencies such as county environmental health departments, regarding hazardous materials or waste was not warranted and has not been initiated to date. Additional information provided by such agencies is unlikely to change the results of the Phase 1 ESA/ISA.

Table 2.3.5-1. Potential Hazardous Waste/Material Sites

Site ID[1]	Site / Adress	Distance/Direction from the Project	Databases	Site Summary	REC	Potential to Affect the Project
1	Semtech Corp 652 Mitchell Road, Thousand Oaks, CA	1,030 feet northeast	CA HIST UST, RCRA-LQG, CA LUST, CA CPS-SLIC, CA UST, CA CERS HAZ WASTE	Oversight agency in charge of remediation: LARWQCB. Located down-/cross-gradient from the project site; ongoing groundwater remediation and cleanup occurring on site. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Release did not occur within the project footprint. Because this release was down-gradient and greater than 1,000 feet from the project footprint, there is a low potential for the project to encounter hazardous materials associated with this release. The risk ranking for this site is considered low and a PSI is not warranted.
2	Skyworks Solutions/ Rockwell 2421 / 2427 Hillcrest Drive, Thousand Oaks, CA	650 feet northeast	CA AST, RCRA-LQG, CA CPS-SLIC, CA HIST UST, FINDS, CA UST, CA EMI, CA NPDES, CA CIWQS, CA ENVIROSTOR, CA CERS HAZ WASTE, CA SWEEPS UST, CA FID UST	Oversight agency in charge of remediation: LARWQCB. Located down-/cross-gradient from the project site; ongoing groundwater remediation and cleanup occurring on site. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Release did not occur within the project footprint. Because this release was down-gradient and greater than 600 feet from the project footprint, there is a low potential for the project to encounter hazardous materials associated with this release. The risk ranking for this site is considered low and a PSI is not warranted.
3	TFX Aviation Inc 3085 Old Conejo Road, Thousand Oaks, CA	250 feet southwest	CA ENVIROSTOR, CA CERS HAZ WASTE, CA DEED, CORRACTS, RCRA-TSDF, RCRA-VSQG, US INST CONTROLS	Oversight agency in charge of remediation: DTSC. Located up-gradient from the project site; ongoing groundwater remediation since 1989 using an onsite groundwater extraction and treatment system. The contaminants of concern are trichloroethylene and chromium. The contamination plumes extend beneath US 101 from approximately PM 7.6 to PM 8.1. The depth to groundwater adjacent to US 101 generally ranges from approximately 25.28 to 59.82 feet below ground surface (bgs), with a groundwater flow to the southeast (based on data from monitoring wells E-7, E-9, E-12, E-20, E-21, E-25, E-29, E-30, and E-32, which are adjacent to US 101; the wells were measured in 2016) (Teleflex 2017). Site surface soils have been remediated to industrial/commercial standards, which has allowed redevelopment of the site into 31 commercial office buildings. Soil vapor extraction was completed in 2003; however, DTSC requested new soil vapor sampling in 2026 to assess current conditions and potential exposure pathways from indoor air. The TFX Aviation property contains a deed restriction that prohibits the property from being used for a residence, hospital, school for persons under 21 years of age, or a day-care center for children. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Although contamination plumes associated with the TFX Aviation site extend beneath US 101 from approximately PM 7.6 to PM 8.1, project construction within this area would require minimal excavation (e.g., for the installation of footings for signs and retaining walls [maximum depth of excavation would be 12 feet and 8 feet, respectively] and laying of pavement [maximum depth of excavation would be 3 feet]). Dewatering would not be required for this work. Because the depth to groundwater in this area is approximately 25.28 to 59.82 feet bgs, the potential for the project to encounter offsite groundwater contamination is considered low. Although groundwater contamination is not expected to be encountered, precautions should be taken for expected and unexpected encounters with contaminants during construction near this site. A HASP, CMMP, and CCP would be prepared for the project, outlining specific procedures for expected and unexpected encounters with contaminants to ensure worker health and safety. The risk ranking for this site is considered low and a PSI is not warranted.
4	Talley Corporation/Telair International, Inc. 3303 / 3305 Old Conejo Road, Thousand Oaks, CA	250 feet southwest	CA ENVIROSTOR, CA CERS HAZ WASTE, CA DEED, CORRACTS, RCRA-TSDF, RCRA-VSQG, US INST CONTROLS	Oversight agency in charge of remediation: DTSC. Open case with ongoing groundwater remediation. Part of TFX Aviation property. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Refer to TFX Aviation property.
5	Unocal Gas Station 2911 Petit Street, Camarillo, CA	340 feet southwest	CA UST, EDR Hist Auto, CA AST, CA CERS HAZ WASTE, CA CERS TANKS	The oversight agency is undisclosed, as release did not occur on site. Located down-/cross-gradient from the project site; no additional information available. The Phae I EAS/ISA identified the site as a potential REC to the project site.	Yes	Low. Release did not occur within the project footprint. Because this release was down-gradient and greater than 300 feet from the project footprint, there is a low potential for the project to encounter hazardous materials associated with this release. The risk ranking for this site is considered low and a PSI is not warranted.

Site ID[1]	Site / Adress	Distance/Direction from the Project	Databases	Site Summary	REC	Potential to Affect the Project
6	Mobil Station 501 Las Posas Avenue, Camarillo, CA	1,100 feet north	CA LUST, CA HAZNET, CA HWTS, CA VENTURA CO. BWT, CA CORTESE, RCRA-SQG, CA UST, CA CERS HAZ WASTE, CA CERS TANKS	The oversight agency is undisclosed, as release did not occur on site. Operating gas station; up-gradient from the project site; open case, groundwater, and soil vapor remediation ongoing; REC. Based on distance from US 101 corridor, a VEC is considered unlikely, but cannot be ruled out.	Yes	Low. Release did not occur within the project footprint. Because this release was greater than 1,000 feet from the project footprint, there is a low potential for the project to encounter hazardous materials associated with this release. The risk ranking for this site is considered low and a PSI is not warranted.
7	Imation 350 South Lewis Road, Camarillo, CA	1,900 feet southwest	CA LUST, CA CPS-SLIC, CA VENTURA CO. BWT, CA CORTESE, FINDS, ECHO	The oversight agency is undisclosed, as release did not occur on site. Open case; located down-gradient 1,900 feet from the project site; not a concern for project alignment based on down-gradient distance. The Phase I ESA/ISA did not identify the site as a potential REC to the project site.	No	Low. Release did not occur within the project footprint. Because this release was down-gradient and nearly 2,000 feet from the project footprint, there is a low potential for the project to encounter hazardous materials associated with this release. The risk ranking for this site is considered low and a PSI is not warranted.
8	Former Texaco Gas Station 3025 Santa Clara Road, Oxnard, CA (Rice Avenue interchange)	Within existing US 101 ROW	CA HIST UST, CA HWTS, CA LUST, CA CORTESE, CA HIST CORTESE, CA SWEEPS UST, CA FID UST, RCRA NONGEN/NLR, CA UST	Case completed and closed by LARWQCB on 3/6/2013. Based on potential for residual contamination within existing US 101 corridor, a VEC is possible. The Phase I ESA/ISA did not identify the site as a potential REC to the project site.	No	Low. Case granted closure by oversight agency. Site is within the US 101 ROW. The risk ranking for this site is considered low and a PSI is not warranted.
9	Former Paymard Mobil Gas Station 2505 E. Ventura Boulevard, Oxnard, CA	Within existing US 101 ROW	CA LUST, CA CHMIRS, CA VENTURA CO. BWT, CA UST, EDR Hist Auto, CA LUST, CA CORTESE, CA CERS	Case completed and closed by LARWQCB on 8/14/1997. Based on potential for residual contamination within existing US 101 corridor, a VEC is possible. The Phase I ESA/ISA did not identify the site as a potential REC to the project site.	No	Low. Case granted closure by oversight agency. Site is within US 101 ROW. The risk ranking for this site is considered low and a PSI is not warranted.
10	Several Former City of Oxnard Clean-Up Sites Oxnard, CA (Rice Avenue/US 101 interchange)	Within existing US 101 ROW	CA CPS-SLIC, CA CERS	Case completed and closed by LARWQCB on 6/16/1965; extent of previous cleanup is not well documented. Based on potential for contamination within existing US 101 corridor; a VEC is possible. The Phase I ESA/ISA did not identify the site as a potential REC to the project site.	No	Low. Case granted closure by oversight agency. Site is within US 101 ROW. The risk ranking for this site is considered low and a PSI is not warranted.
11	Former Shell-Gordon Donion Lease Oxnard, CA (Rice Avenue/US 101 interchange)	Within existing US 101 ROW	CA CPS-SLIC, CA CHMIRS, CA CERS	Case completed and closed by LARWQCB 6/4/1991. Based on potential for residual contamination within existing US 101 corridor, a VEC is possible. The Phase I ESA/ISA did not identify the site as a potential REC to the project site.	No	Low. Case granted closure by oversight agency. Site is within US 101 ROW. The risk ranking for this site is considered low and a PSI is not warranted.
12	Larry's Transport and Towing/Bill's RV Service 2811 Beene Road, Ventura, CA	485 feet northeast	SEMS-ARCHIVE, CA CPS-SLIC	The oversight agency is undisclosed, as release did not occur on site. Located up-gradient from the project site; open site assessment. Property continues to function as an auto repair facility. Based on distance from US 101 corridor, a VEC is considered unlikely, but cannot be ruled out. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Although the release was up-gradient, the release did not occur within the project footprint. In addition, the site is greater than 400 feet from the project footprint. The potential for the project to encounter hazardous materials associated with this release is low. The risk ranking for this site is considered low and a PSI is not warranted.
13	Master Plating 1255 Callens Road, Ventura, CA	980 feet south	CA HIST UST, RCRA-SQG, CA RESPONSE, CA ENVIROSTOR	The oversight agency is undisclosed, as release did not occur on site. Located down-gradient from the project site; case open with LARWQCB. Last correspondence 1/28/2015. Down-gradient, low potential for impact. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Because this release was down-gradient and nearly 1,000 feet from the project footprint, there is a low potential for the project to encounter hazardous materials associated with this release. The risk ranking for this site is considered low and a PSI is not warranted.

Site ID[1]	Site / Adress	Distance/Direction from the Project	Databases	Site Summary	REC	Potential to Affect the Project
14	Vacant Lot 24 Santa Clara Street, Ventura, CA	450 feet north	LARWQCB	Oversight agency in charge of remediation: LARWQCB. Located up-gradient from the project site; open, eligible for closure. UST previously removed and assessment performed. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Although the release was up-gradient and remains an open case site, the release did not occur within the project footprint. In addition, the site is pending case closure and is greater than 400 feet from the project footprint. The potential for the project to encounter hazardous materials associated with this release is low. The risk ranking for this site is considered low and a PSI is not warranted.
15	Texaco/Chevron Office Building 133 W. Santa Clara Street, Ventura, CA	525 feet north	RCRA NONGEN/NLR, CA CPS-SLIC, CA HAZNET, CA MED WASTE VENTURA	Oversight agency in charge of remediation: LARWQCB. Located up-gradient from the project site; open, closure pending. UST removed 1993. TPH mitigated. Regional tetrachloroethylene (PCE) and trichloroethylene not related to site. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Although the release was up-gradient and remains an open case site, the release did not occur within the project footprint. In addition, the site is pending case closure and is greater than 500 feet from the project footprint. The potential for the project to encounter hazardous materials associated with this release is low. The risk ranking for this site is considered low and a PSI is not warranted.
16	Ventura Muffler and Brake 150 W. Main Street, Ventura, CA	365 feet northeast	RCRA-SQG, FINDS, ECHO, CA CERS HAZ WASTE, CA HAZNET, CA CERS, RCRA NONGEN/NLR	Oversight agency in charge of remediation: LARWQCB. Located up-gradient from the project site; open site assessment phase, UST removed 1995. Closure request pending. The Phase I ESA/ISA identified the site as a potential REC to the project site.	Yes	Low. Although the release was up-gradient and remains an open case site, the release did not occur within the project footprint. In addition, the site is pending case closure and is greater than 300 feet from the project footprint. The potential for the project to encounter hazardous materials associated with this release is low. The risk ranking for this site is considered low and a PSI is not warranted.

Source: Caltrans 2021.

[1] Refer to Figure 2.3.5-1 for a map showing the location of each site.

CA AST = California Aboveground Petroleum Storage Tank Facilities; CA CERS = California Environmental Reporting System; CA CERS HAZ WASTE = List of sites in the California Environmental Protection Agency Regulated Site Portal that fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs; CA CERS TANKS = California Environmental Reporting System Tanks; CA CHMIRS = California Hazardous Material Incident Report System; CA CIWQS = California Integrated Water Quality System; CA CORTESE = California Hazardous Waste and Substances Sites List; CA CPS-SLIC = Statewide Cleanup Program Sites formerly known as Spills, Leaks, Investigations, and Cleanups; CA DEED = California Deed Restriction Listing; CA EMI = California Emissions Inventory Data; CA ENVIROSTOR = California Department of Toxic Substances Control's EnviroStor Database; CA FID UST = California Facility Inventory Database of Underground Storage Tanks; CA HAZNET = California Facility and Manifest Data; CA HIST CORTESE = Historical Hazardous Waste & Substance Site List; CA HIST UST = California Hazardous Substance Storage Container Database; CA HWTS = California Hazardous Waste Tracking System; CA LUST = California Leaking Underground Storage Tank; CA MED WASTE VENTURA = Medical Waste Program List; CA NPDES = California National Pollutant Elimination System; CA RESPONSE = State Response Sites; CA SWEEPS UST = Statewide Environmental Evaluation and Planning System Underground Storage Tanks; CA UST = California Underground Storage Tanks; CA VENTURA CO. BWT = Ventura County Business Plans; CCP = Construction Contingency Plan; CMMP = Contaminated Media Management Plan; CORRACTS = Corrective Action Report; DTSC = Department of Toxic Substances Control; ECHO = Enforcement and Compliance History Information; EDR Hist Auto = Environmental Data Resources Exclusive Historical Auto Stations; FINDS = Facility Index System/Facility Registry System; HASP = Health and Safety Plan; LARWQCB = Los Angeles Regional Water Quality Control Board; PM = Post Mile; PSI = preliminary site investigation; RCRA NONGEN/NLR = Resource Conservation and Recovery Act - Non-Generators/No Longer Regulated; RCRA-LQG = Resource Conservation and Recovery Act – Large Quantity Generator; RCRA-SQG = Resource Conservation and Recovery Act – Small-Quantity Generator; RCRA-TSDF = Resource Conservation and Recovery Act – Treatment, Storage and Disposal; RCRA-VSQG = Resource Conservation and Recovery Act - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators); ROW = right of way; SEMS-ARCHIVE = Superfund Enterprise Management System Archive; TPH = total petroleum hydrocarbons; US INST CONTROLS = United States Institutional Controls Sites Listed; UST = underground storage tank; VEC = vapor encroachment condition

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Figure 2.3.5-1. Potential Hazardous Waste/Material Sites (Sheet 1 of 6)

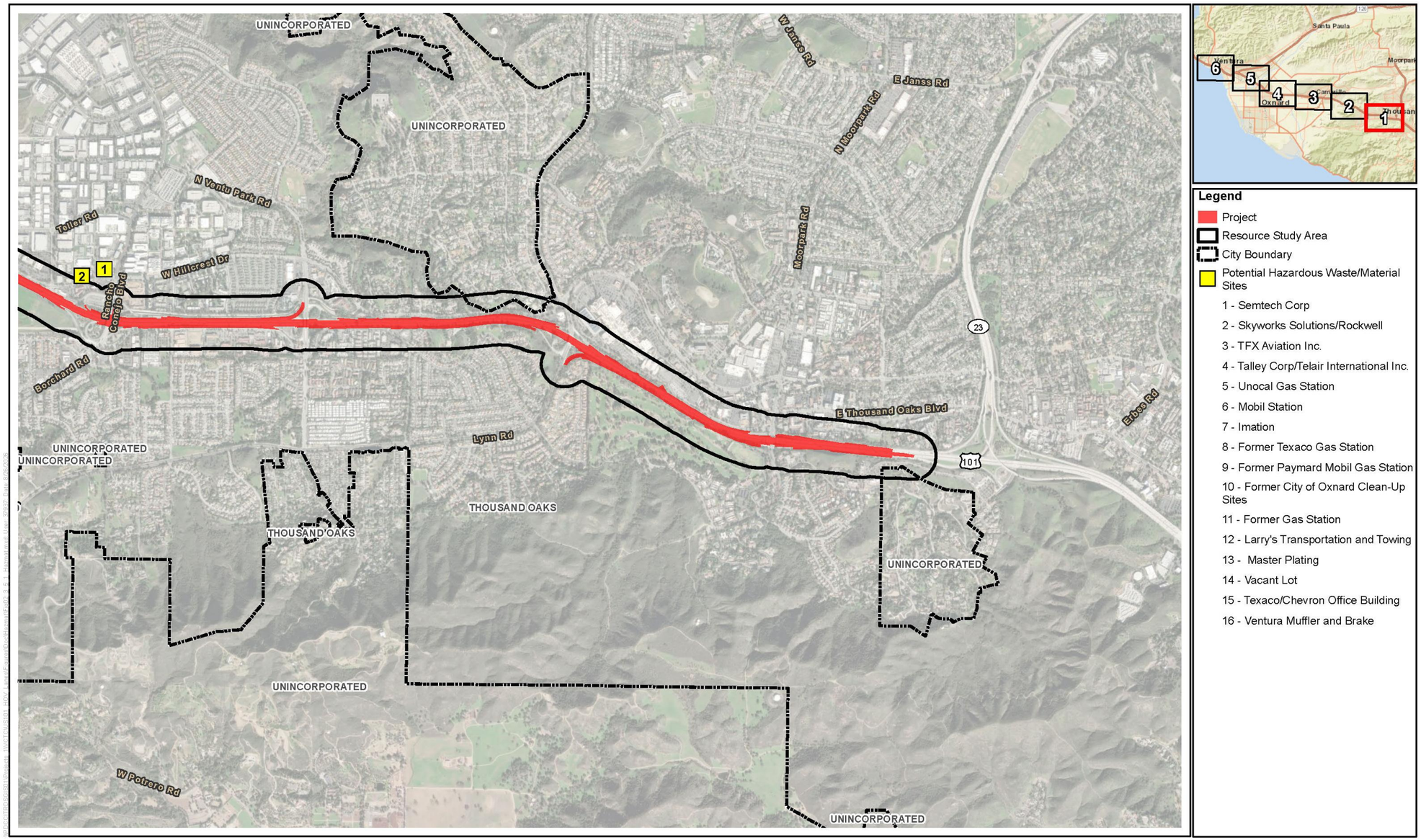


Figure 2.3.5-1, Sheet 1 of 6
Potential Hazardous Waste/Material Sites
US 101 Improvement Project

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Figure 2.3.5-1. Potential Hazardous Waste/Material Sites (Sheet 2 of 6)

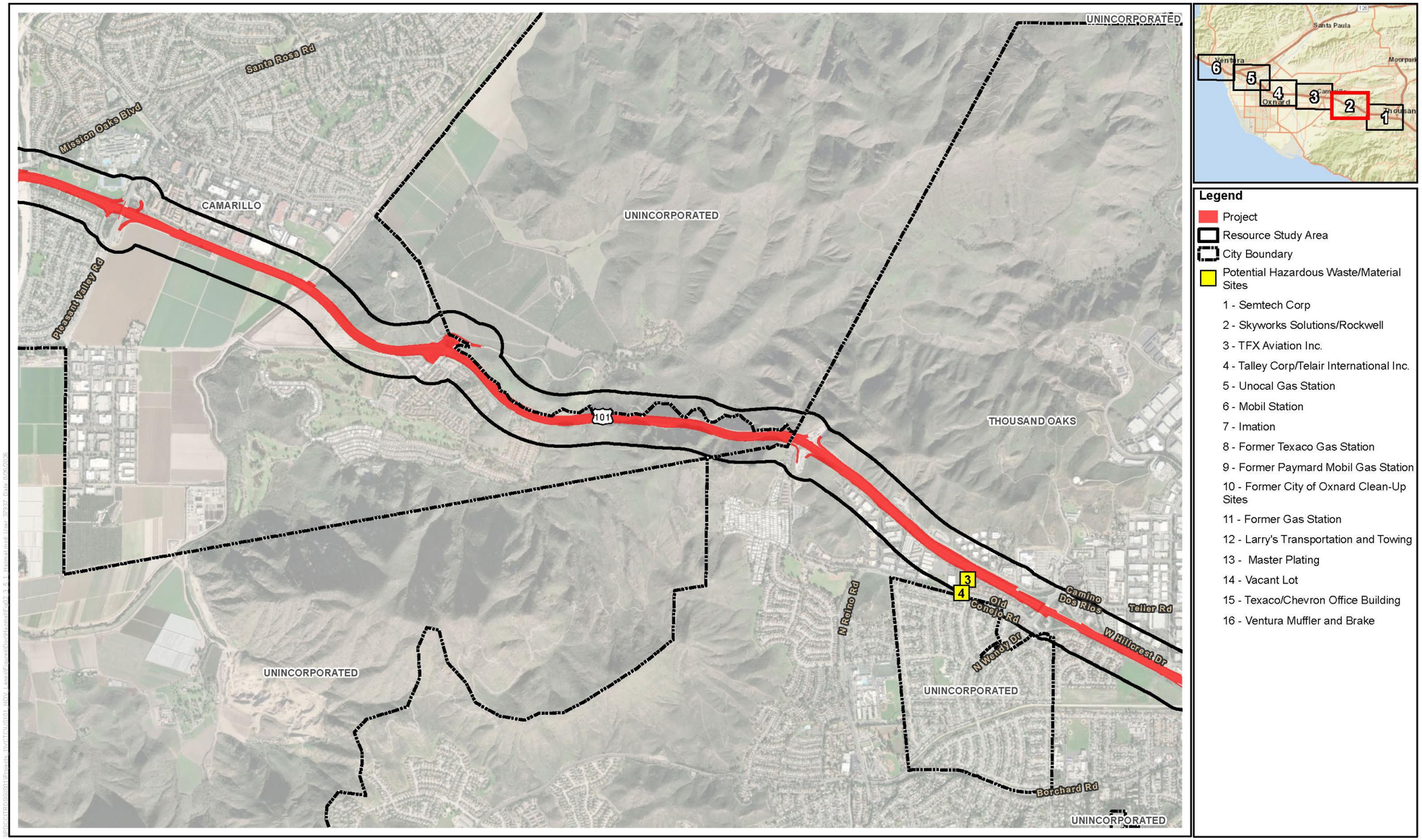


Figure 2.3.5-1, Sheet 2 of 6
Potential Hazardous Waste/Material Sites
US 101 Improvement Project

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Figure 2.3.5-1. Potential Hazardous Waste/Material Sites (Sheet 3 of 6)

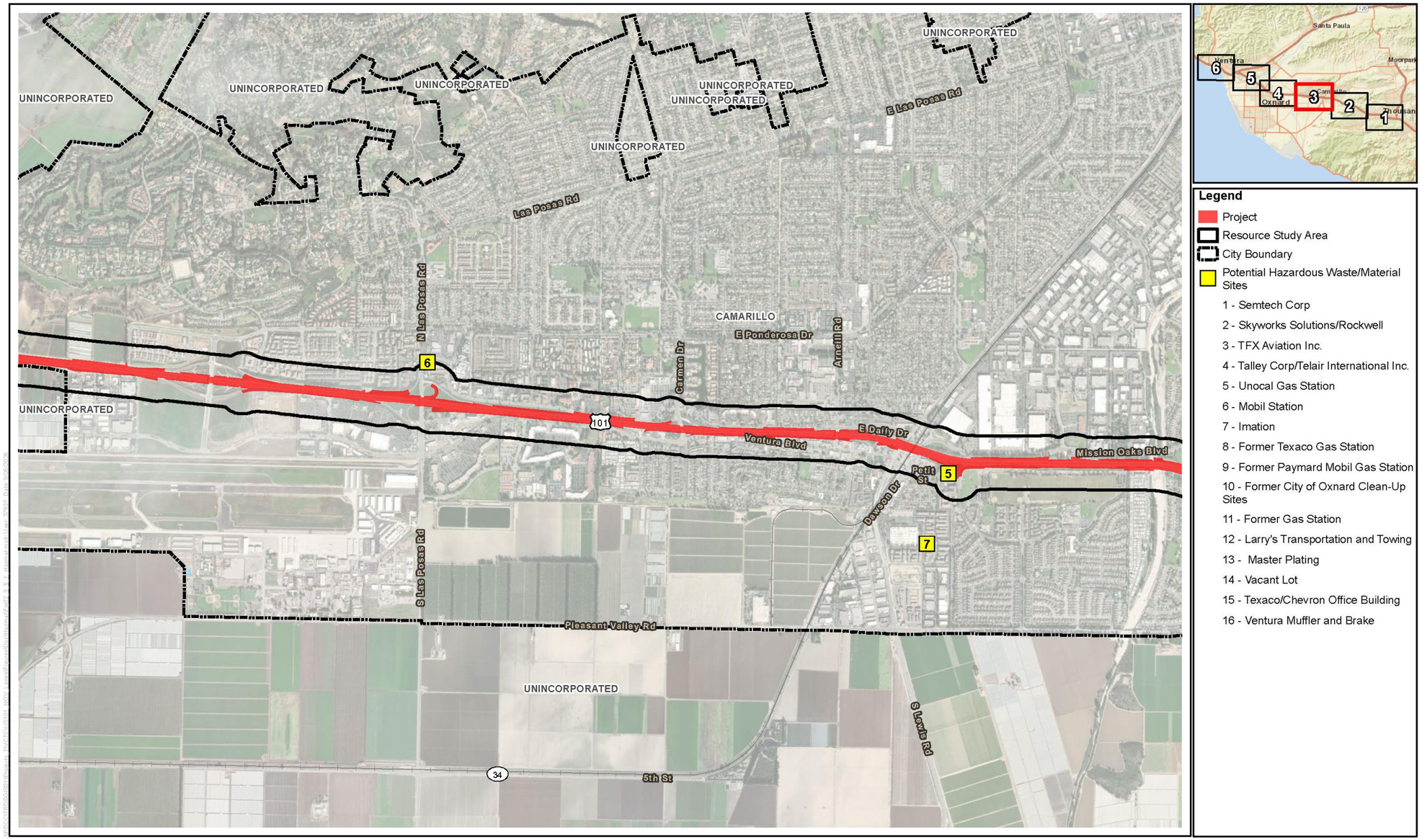


Figure 2.3.5-1, Sheet 3 of 6
Potential Hazardous Waste/Material Sites
US 101 Improvement Project

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Figure 2.3.5-1. Potential Hazardous Waste/Material Sites (Sheet 4 of 6)

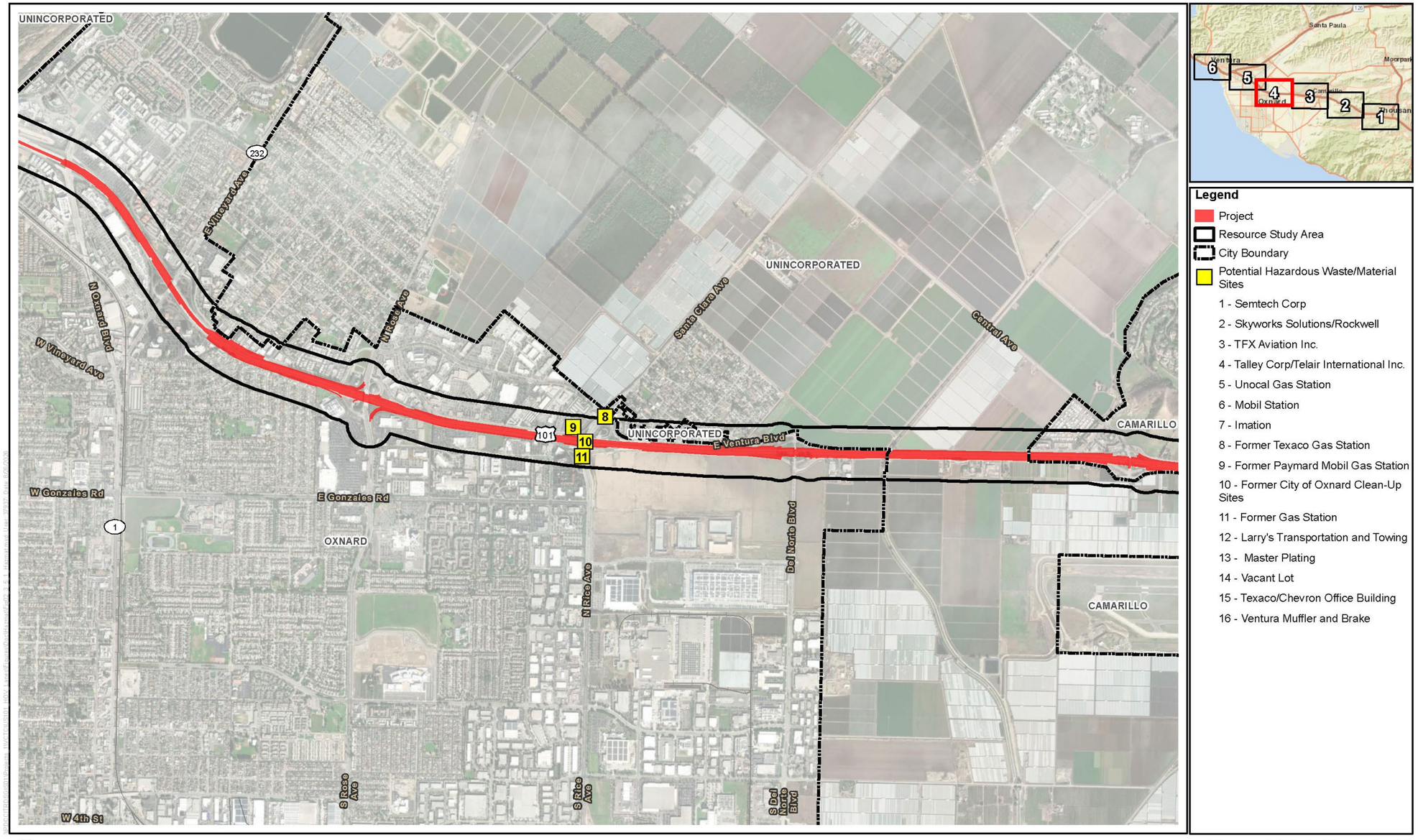


Figure 2.3.5-1, Sheet 4 of 6
Potential Hazardous Waste/Material Sites
US 101 Improvement Project

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Figure 2.3.5-1. Potential Hazardous Waste/Material Sites (Sheet 5 of 6)

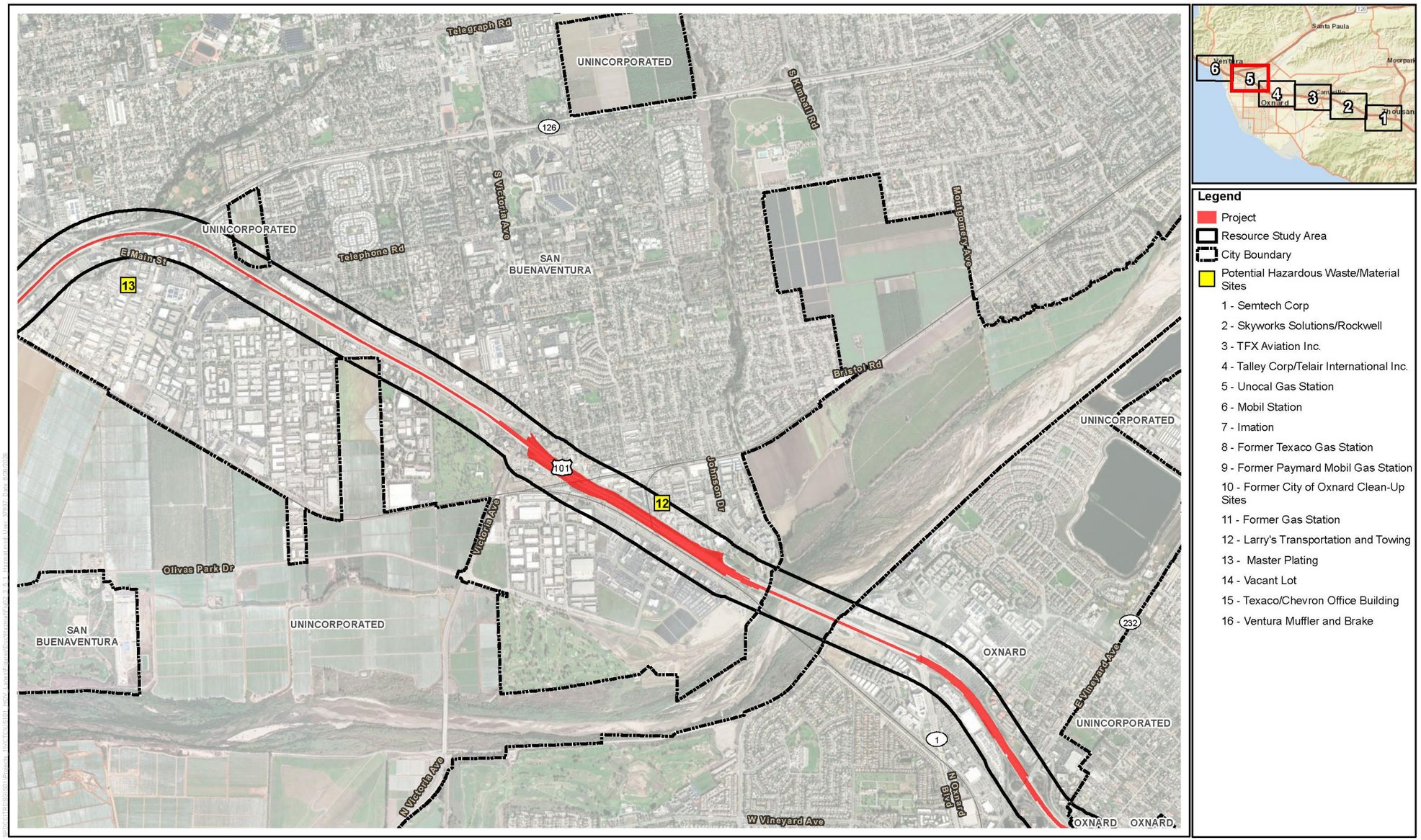


Figure 2.3.5-1, Sheet 5 of 6
Potential Hazardous Waste/Material Sites
US 101 Improvement Project

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Figure 2.3.5-1. Potential Hazardous Waste/Material Sites (Sheet 6 of 6)



Legend

- Project
- Resource Study Area
- City Boundary
- Potential Hazardous Waste/Material Sites
  - 1 - Semtech Corp
  - 2 - Skyworks Solutions/Rockwell
  - 3 - TFX Aviation Inc.
  - 4 - Talley Corp/Telair International Inc.
  - 5 - Unocal Gas Station
  - 6 - Mobil Station
  - 7 - Imation
  - 8 - Former Texaco Gas Station
  - 9 - Former Paymard Mobil Gas Station
  - 10 - Former City of Oxnard Clean-Up Sites
  - 11 - Former Gas Station
  - 12 - Larry's Transportation and Towing
  - 13 - Master Plating
  - 14 - Vacant Lot
  - 15 - Texaco/Chevron Office Building
  - 16 - Ventura Muffler and Brake

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Figure 2.3.5-1, Sheet 6 of 6
Potential Hazardous Waste/Material Sites
US 101 Improvement Project

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2.3.5.3 Environmental Consequences

Alternative 1: No-Build Alternative

Temporary Impacts

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no temporary impacts related to hazardous waste and materials would occur.

Permanent Impacts

Under the No-Build Alternative, the project would not be implemented. Therefore, no permanent impacts related to hazardous waste or materials would occur. Routine maintenance activities, such as repaving or striping, would be required to follow applicable federal and state regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials or waste.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction impacts would be similar under either build alternative. Therefore, they are analyzed conjointly throughout the analysis.

As previously discussed, RECs have been identified within the resource study area. In addition, environmental conditions such as ACM, LBP, ADL, PTS, oil wells, treated wood waste (TWW), pesticides and herbicides, and construction-generated hazardous waste may be encountered during construction activities. Hazardous wastes and materials would be properly handled, contained, transported, and disposed of in compliance with applicable regulations and requirements, which may include those of the RCRA, Clean Air Act, Clean Water Act, DTSC Environmental Health Standards for the Management of Hazardous Waste, the provisions of the Los Angeles County Fire Department Health Hazardous Materials Division, and U.S. Department of Transportation hazardous materials regulations. Measures **HW-1** through **HW-10** and measure **WQ-3** describe the efforts that would be made to avoid or minimize adverse impacts from known or suspected hazardous materials and wastes during construction.

Sites of Concern

As detailed in Table 2.3.5-1, there are 16 sites within the resource study area with known hazardous material or petroleum hydrocarbon releases that were found to pose a low potential risk to the project. Of the 16 sites, only two open case sites (TFX Aviation, Inc., and Talley Corporation/Telair International, Inc., collectively known as the TFX Aviation Facility) were identified as having contamination plumes that had migrated beneath US 101 from approximately PM 7.6 to PM 8.1. The TFX Aviation Facility is undergoing groundwater remediation. The contaminants of concern are trichloroethylene and chromium. A deed restriction is in place to protect human health, safety, and the environment due to existing site contamination. The depth to

groundwater adjacent to US 101 generally ranges from approximately 25.28 to 59.82 feet below ground surface (bgs). The potential for the project to encounter groundwater contamination from the TFX Aviation Facility during construction is considered low because project construction within this area would require only minimal excavation (e.g., for the installation of footings for signs and retaining walls [maximum depth of excavation would be 12 feet and 8 feet, respectively] and laying of pavement [maximum depth of excavation would be 3 feet]). Dewatering would not be required for this work. Although groundwater contamination is not expected to be encountered, precautions should be taken for expected and unexpected encounters with contaminants during construction near this site. A Health and Safety Plan (HASP), Contaminated Media Management Plan (CMMP), and Construction Contingency Plan (CCP) would be prepared for the project, outlining specific procedures for expected and unexpected encounters with contaminants to ensure worker health and safety, as described in measures **HW-1** through **HW-3**.

There are other open case sites within the resource study area, as shown in Table 2.3.5-1, that are either up-gradient, down-gradient, or cross-gradient from the project site, but do not extend into the US 101 corridor right of way, proposed property acquisitions, or TCE areas. Taking into consideration the environmental history of the sites, their regulatory status, and their location in relation to the proposed project, the likelihood for the proposed project to be affected by these sites is considered low.

Asbestos-Containing Materials and Lead-Based Paint

The project includes proposed property acquisitions and TCEs where one parcel, APN 145-022-136, would require the demolition and replacement of a commercial storage building. In addition, the project would affect bridge structures, which may include partial replacement of two bridges and the widening of up to 21 bridges. The potential exists for ACM and LBP to exist in all building and bridge structures. Therefore, the commercial storage building at APN 145-022-136 and the affected bridges would be sampled for ACM and LBP content during the final design phase and prior to any demolition or disturbance activities in all areas that would be disturbed by the project, as identified in measure **HW-4**.

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 DTSC. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met. ADL soil sampling would be conducted along the US 101 project corridor in undisturbed soil areas during the final design phase and prior to any soil disturbance activities, as identified in measure **HW-5.**

Paint and Thermoplastic Striping

Paint used for traffic striping and pavement marking may contain lead chromate. During construction, Ventura County Transportation Commission's (VCTC's) resident engineer would ensure that the sampling, analysis, removal, and disposal of any traffic striping and pavement materials would be completed in accordance with Caltrans and DTSC requirements, as identified in measure **HW-6**.

Oil and Gas Wells

The State of California Geologic Energy Management Division maps (Caltrans 2021) for the abandoned Conejo Oil Field near the Camarillo Springs Road interchange (PM 9.6 to PM 10.4) show dozens of historical oil wells in the area adjacent to and partially within the existing US 101 corridor, as well as within parcels proposed for property acquisition and TCEs. These areas have the potential to contain soil and groundwater contamination from petroleum hydrocarbons release incidents from equipment or from improperly cased or plugged wells. During the final design phase, a Phase 2 ESA (**HW-7**) and geophysical surveys of this area within the project footprint (between PM 9.6 and PM 10.4) would be performed to evaluate for the presence of petroleum hydrocarbon impacts.

Treated Wood Waste

Wooden guardrail posts and wooden posts supporting roadway signs are located within the project footprint. Treated wood objects removed from the project corridor would be classified as TWW. The handling and removal of any TWW would be conducted in accordance with Chapter 34, Title 22, California Code of Regulations Sections 67386.1 through 67386.12, Alternative Management Standards for Treated Wood Waste, and in accordance with Caltrans Standard Specifications, Section 14-11.14, Treated Wood Waste. All TWW would be properly disposed of at a landfill that has been permitted to accept TWW, as identified in measure **HW-8**.

Pesticides and Herbicides

Pesticides and herbicides related to farming activities may be present in soils along the project corridor, primarily between Camarillo Grove Park (PM 10.0) and Ventura Pier (PM 30.0). VCTC's resident engineer would ensure that soil on agricultural land (between PM 10.0 and PM 30.0) that may be disturbed by the project would be sampled for pesticides and herbicides during the final design phase (**HW-9**).

Construction-Generated Hazardous Waste

Construction of the project would require the use of hazardous substances and may generate hazardous waste. The use of hazardous materials and generation of hazardous waste are considered temporary construction impacts. Examples of the hazardous materials that are likely to be used during construction of the project include lubricants (both grease and oils), petroleum fuels, cleaning solvents, and paint. Hazardous wastes generated during construction of the project would require disposal and could include used oil (not hazardous) and sediment from vehicle washing.

Potential impacts from construction-related hazardous waste and materials would be addressed through preparation of a Stormwater Pollution Prevention Plan, as identified in measure **WQ-3** (Section 2.3.2, *Water Quality and Stormwater Runoff*). The Stormwater Pollution Prevention Plan would be developed in compliance with the National Pollutant Discharge Elimination System General Construction Permit and include best management practices to address potential impacts related to the use and potential discharge of construction-related hazardous waste and materials. In addition, all hazardous waste generated during construction would be handled, stored, and disposed of in accordance with Caltrans Standard Specifications, Section 7-107A of the Construction Manual, as identified in measure **HW-10**.

Discovery of Unexpected or Unknown Contaminants

There is a potential for the project to encounter unexpected or unknown contaminants in soil and groundwater during construction activities. Prior to construction, a HASP, CMMP, and CCP would be prepared to outline specific procedures to follow when encountering expected and unexpected contaminants to help protect worker health and safety, the public, and the environment during construction, as identified in measures **HW-1** through **HW-3**.

Based on the discussion above, with measures **HW-1** through **HW-10** and **WQ-3** (Section 2.3.2, *Water Quality and Stormwater Runoff*), the project alternatives would not result in adverse impacts related to hazardous waste or materials during construction of the project.

Permanent Impacts

Routine maintenance activities, such as repaving or striping, would be required to follow applicable federal and state regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, the project alternatives would not result in adverse impacts related to hazardous waste or materials during operation of the project.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to hazardous waste and materials would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The measures below, **HW-1** through **HW-10**, and measure **WQ-3** (Section 2.3.2, *Water Quality and Stormwater Runoff*), are included as part of the project to minimize potential effects related to exposure to contaminants:

HW-1: Construction Health and Safety Plan. Prior to construction, VCTC's resident engineer will ensure the development of a HASP to be implemented during construction activities. A Certified Industrial Hygienist will prepare the HASP to guide all construction activities. The HASP will identify all potential hazards and contain specific procedures for encountering expected and unexpected contaminants. The HASP will prescribe safe work practices, contaminant monitoring, personal protective equipment, emergency response procedures, and safety training requirements to protect construction workers and third parties. The HASP will meet the requirements of 29 Code of Federal Regulations 1910 and 1926, and all other applicable federal, state, and local regulations and requirements. The designated contractor will be responsible for preparing the HASP before the start of construction.

HW-2: Contaminated Media Management Plan. Prior to construction, VCTC's resident engineer will ensure the preparation of a Contaminated Media Management Plan. This plan will include procedures for contaminant monitoring and identification and temporary storage, handling, treatment, and disposal of waste and materials (including soil) in accordance with applicable federal, state, and local regulations and requirements. The designated contractor will be responsible for preparing the Contaminated Media Management Plan before the start of construction.

HW-3: Construction Contingency Plan. Prior to construction, VCTC's resident engineer will ensure the preparation of a CCP, in accordance with the guidance provided in Chapter 7-107 of the Caltrans Construction Manual for handling and dealing with unknown hazards (refer to Figure 7-1.1 of the Caltrans Construction Manual for the Caltrans Unknown Hazards Procedure). The CCP will include provisions for responding to events such as the discovery of unidentified underground storage tanks, hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes during construction. The CCP will address underground storage tank decommissioning, field screening, and material testing methods; mitigation and contaminant management requirements; and health and safety requirements for construction workers. If an unexpected release of hazardous substances is found in reportable quantities, the National Response Center must be notified by calling 1-800-424-8802, and cleanup must be coordinated with environmental agencies. The designated contractor will be responsible for preparing the CCP before the start of construction.

HW-4: Asbestos-Containing Materials and Lead-Based Paint. The project includes proposed property acquisitions and TCEs where one parcel, APN 145-022-136, would require the demolition and replacement of a commercial storage building. In addition, the project would affect bridge structures, which may include partial replacement of two bridges and the widening of up to 21 bridges. The potential exists for ACM and LBP to exist in all building and bridge structures. VCTC's resident engineer will ensure that

building and bridge structures with a likelihood to contain ACMs and LBPs will be sampled for all areas of the affected building structure and bridge structures that will be disturbed by the project during the Plans, Specifications, and Estimates phase, prior to any demolition or disturbance activities. VCTC's resident engineer will ensure that the survey will be conducted in conformance with USEPA's National Emission Standards for Hazardous Air Pollutants, 40 Code of Federal Regulations, and South Coast Air Quality Management District Rule 1403; and in accordance with Caltrans Standard Specifications Section 14-11.13, Disturbance of Existing Paint Systems on Bridges, and Section 14-11.16, Asbestos-Containing Construction Materials in Bridges.

HW-5: Aerially Deposited Lead. ADL soil sampling would be conducted along the US 101 project corridor in undisturbed soil areas during the Plans, Specifications, and Estimates phase and prior to any soil-disturbance activities. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and DTSC. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met, which include preparation of a Lead Compliance Plan (LCP) required for worker safety. Prior to construction, VCTC's resident engineer will ensure that an LCP is developed by a Certified Industrial Hygienist to protect workers from exposure to lead associated with ADL, LBP, and traffic stripe and pavement markings. The LCP will include procedures for the handling, management, sampling, and disposal of material containing lead. ADL and LBP investigations and traffic striping removal are separate tasks usually conducted by separate contractors, which each require a separate LCP.

HW-6: Paint and Thermoplastic Striping. Paint used for traffic striping and pavement marking may contain lead chromate. During construction, VCTC's resident engineer will ensure that sampling, analysis, removal, and disposal of any traffic striping and pavement materials will be completed in accordance with Construction Program Procedure Bulletin 99-2; Caltrans Standard Specifications Section 14-11.12, Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue, and Section 36-4, Residue Containing Lead from Paint and Thermoplastic (2018); and Caltrans Construction Manual Chapter 7-107E, Removing Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue (2019). Before disposal, the contractor is required to sample the removed material for proper waste classification. Yellow traffic stripe and pavement marking that is characterized as hazardous waste requires disposal to a DTSC-permitted Class I disposal facility.

HW-7: Oil and Gas Wells. The abandoned Conejo Oil Field near the Camarillo Springs Road interchange (PM 9.6 to PM 10.4) has historic oil wells in the area adjacent to and partially within the existing US 101 corridor, as well as within parcels proposed for property acquisition and TCEs. These areas have the potential to contain soil and groundwater contamination from petroleum hydrocarbons release incidents from equipment or from improperly cased or plugged wells. During the Plans, Specifications, and Estimates phase, a Phase 2 ESA and geophysical surveys within the project footprint (between PM 9.6 and PM 10.4) would be conducted to determine the presence or absence of petroleum hydrocarbon in soil and groundwater.

HW-8: Treated Wood Waste. Wooden guardrail posts and wooden posts supporting roadway signs may contain creosote and pentachlorophenol. During construction, VCTC's resident engineer will ensure that treated wood objects are handled as TWW and managed per Chapter 34, Title 22 California Code of Regulations Sections 67386.1 through 67386.12, Alternative Management Standards for Treated Wood Waste, and in accordance with Caltrans Standard Specifications Section 14-11.14, Treated Wood Waste. All TWW shall be properly disposed at a landfill permitted to accept TWW.

HW-9: Pesticides and Herbicides. Pesticides and herbicides related to farming activities may be present in soils along the project corridor, primarily between Camarillo Grove Park (PM 10.0) and Ventura Pier (PM 30.0). VCTC's resident engineer will ensure that soil on agricultural land (between PM 10.0 and PM 30.0) that may be disturbed by the project will be sampled for pesticides and herbicides during the Plans, Specifications, and Estimates phase.

HW-10: Construction Generated Hazardous Waste. Construction of the project may generate hazardous waste. Hazardous wastes generated during construction of the project would require disposal and could include used oil (not hazardous), sediment from vehicle washing, petroleum materials, cleaning solvents, and paint. VCTC's resident engineer will ensure that all hazardous waste generated during construction will be handled, stored, and disposed of in accordance with Caltrans Standard Specifications Section 7-107A of the Caltrans Construction Manual.

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2.3.6 Air Quality

2.3.6.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality; the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations of the U.S. Environmental Protection Agency (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). The NAAQS and California Ambient Air Quality Standards (CAAQS) have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO); nitrogen dioxide (NO_2); ozone (O_3); particulate matter (PM), which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$); lead (Pb); and sulfur dioxide (SO_2). In addition, state standards exist for visibility-reducing particles, sulfates, hydrogen sulfide (H_2S), and vinyl chloride. The NAAQS and CAAQS are set at levels that protect public health with a margin of safety. Both are subject to periodic review and revision. Furthermore, both federal and State of California (State) 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 a State Implementation Plan (SIP) for attaining the NAAQS. Transportation conformity applies to highway and transit projects and takes place on two levels: the regional level (or planning and programming level) and the project level. A proposed project must conform at both levels to be approved.

For the NAAQS, conformity requirements apply only to nonattainment and maintenance areas (i.e., former nonattainment areas) and only for the specific NAAQS that were violated. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for the NAAQS and do not apply at all for the CAAQS 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 CO, NO_2, O_3, PM (i.e., PM_{10} and $PM_{2.5}$), and, in some areas (although not in California), SO_2. California has nonattainment or

maintenance areas for all of these transportation-related criteria pollutants except SO_2. It also has a nonattainment area for Pb; however, Pb is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on an emission analysis of regional transportation plans (RTPs) and federal transportation improvement programs (FTIPs), which 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 implementation of a project would conform to emission budgets or other tests at various analysis years to show that the requirements of the FCAA and the SIP have been met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make 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, as well as 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 a project comes from a conforming RTP and FTIP; that is, the project has a design concept and a design scope[1] that have not changed significantly from those in the RTP and FTIP. If the design concept and scope have changed substantially from that used in the RTP conformity analysis, RTP and FTIP amendments may be needed. Project-level conformity also needs to demonstrate that project analyses have used the latest planning assumptions and EPA-approved emissions models; in areas with PM issues, it must be demonstrated that the project is in compliance with control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.3.6.2 Affected Environment

The project is located in Ventura County, part of the South Central Coast Air Basin (SCCAB). The SCCAB encompasses San Luis Obispo, Santa Barbara, and Ventura Counties. The Ventura County Air Pollution Control District (VCAPCD) administers air quality regulations in the SCCAB. The information in this section is based on the air quality report (Caltrans 2025a) prepared for the project.

Climate, Meteorology, and Topography

Meteorology (i.e., weather) and terrain can influence air quality. Certain weather parameters are highly correlated to air quality, including temperature, the amount of sunlight, and the type of wind at the surface and above the surface. Winds can transport

[1] *Design concept* means the type of facility proposed, such as a freeway or an arterial highway. *Design scope* refers to those aspects of a project, such as the number of lanes and the length of the project, that would clearly affect capacity and thus any regional emissions analysis.

O_3 and O_3 precursors from one region to another, thereby contributing to air quality problems downwind of source regions. Furthermore, mountains can act as barriers that prevent O_3 from dispersing.

The SCCAB region, which covers approximately 7,887 square miles, is bounded by the Pacific Ocean on the west and south. All three counties within the SCCAB (i.e., San Luis Obispo, Santa Barbara, and Ventura) have a relatively narrow coastal strip that gives way to inland mountains, with the highest elevations ranging from 6,000 to more than 8,000 feet (ARB 2011). Ventura County is the southernmost county in the SCCAB region and also the smallest, with an area of 1,843 square miles. The northern portion of the county includes the mountainous Los Padres National Forest; the southern portion of the county includes 42 miles of coastline that gives way to a coastal plain (i.e., Oxnard Plain) and broad inland valleys. Most of the population resides in the southern portion of the county (VCAPCD 2022).

The county's topography is characterized by mountain ranges to the north, two major river valleys (i.e., the Santa Clara, which trends east–west, and the Ventura, which trends roughly north–south), and the Oxnard Plain to the south and west. The northern half of the county is mountainous and sparsely populated; the southern half includes populated areas where the VCAPCD has an established ambient-air monitoring network. The southern half of the county includes the Oxnard Plain, with the cities of Oxnard and Ventura, as well as four distinct inland valleys: Simi, Conejo (i.e., the Thousand Oaks area), Santa Clara River, and Ojai. Generally, steep hills border the inland valleys. Bluffs dominate the coastline north of the mouth of the Ventura River; the coastline south of the Ventura River to Point Mugu is near sea level. The Santa Monica Mountains rise above the Oxnard Plain and continue east into Los Angeles County (VCAPCD 1998).

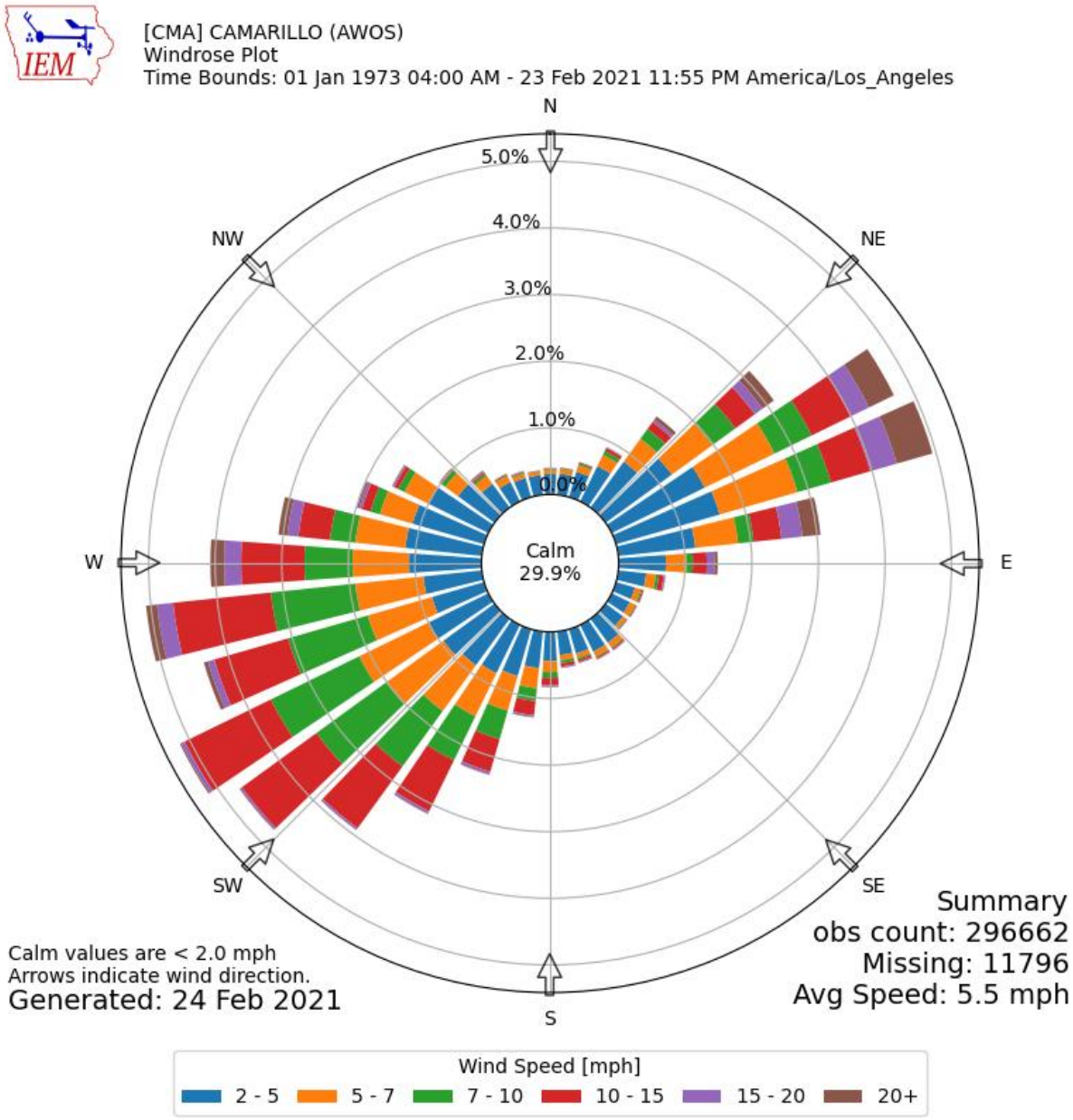
In terms of climate, the SCCAB generally has relatively wet winters and warm, dry summers. Coastal areas benefit from the marine influence, with onshore breezes that keep beach communities cooler in summer and warmer in winter than communities located farther inland. Year-round temperatures near the coast are mild, with average minimums in the 40s and 50s and average maximums in the 60s and low 70s. Average precipitation in this part of the region is between 15 and 25 inches per year. In contrast, the inland areas are warmer and dryer. In those areas, average minimum temperatures are still in the 40s and 50s. However, average maximums can be in the high 70s, and daily summer maximums can exceed 100 degrees Fahrenheit (°F). Rainfall totals in the inland portions of the SCCAB generally amount to less than 15 inches per year (ARB 2011).

The two climatological stations closest to the approximately 26.8-mile-long project corridor are the Camarillo Airport and Oxnard Ventura County Airport stations, which are maintained by the National Oceanic and Atmospheric Administration. Data collected at the two stations are representative of meteorological conditions along the project corridor. Figure 2.3.6-1 and Figure 2.3.6-2 are wind rose diagrams, illustrating the predominant wind patterns along the project corridor. Based on data collected at the Camarillo Airport station over the past 10 years, the annual average maximum and minimum

temperatures were 73.1°F and 52.5°F, respectively. During this same period, the annual average maximum and minimum temperatures at the Oxnard Ventura County Airport station were 69.5°F and 53.7°F, respectively. The coldest temperatures were recorded in the month of February at both stations. In addition, annual average rainfall recorded at both stations was approximately 11 inches, occurring mainly during the winter months.

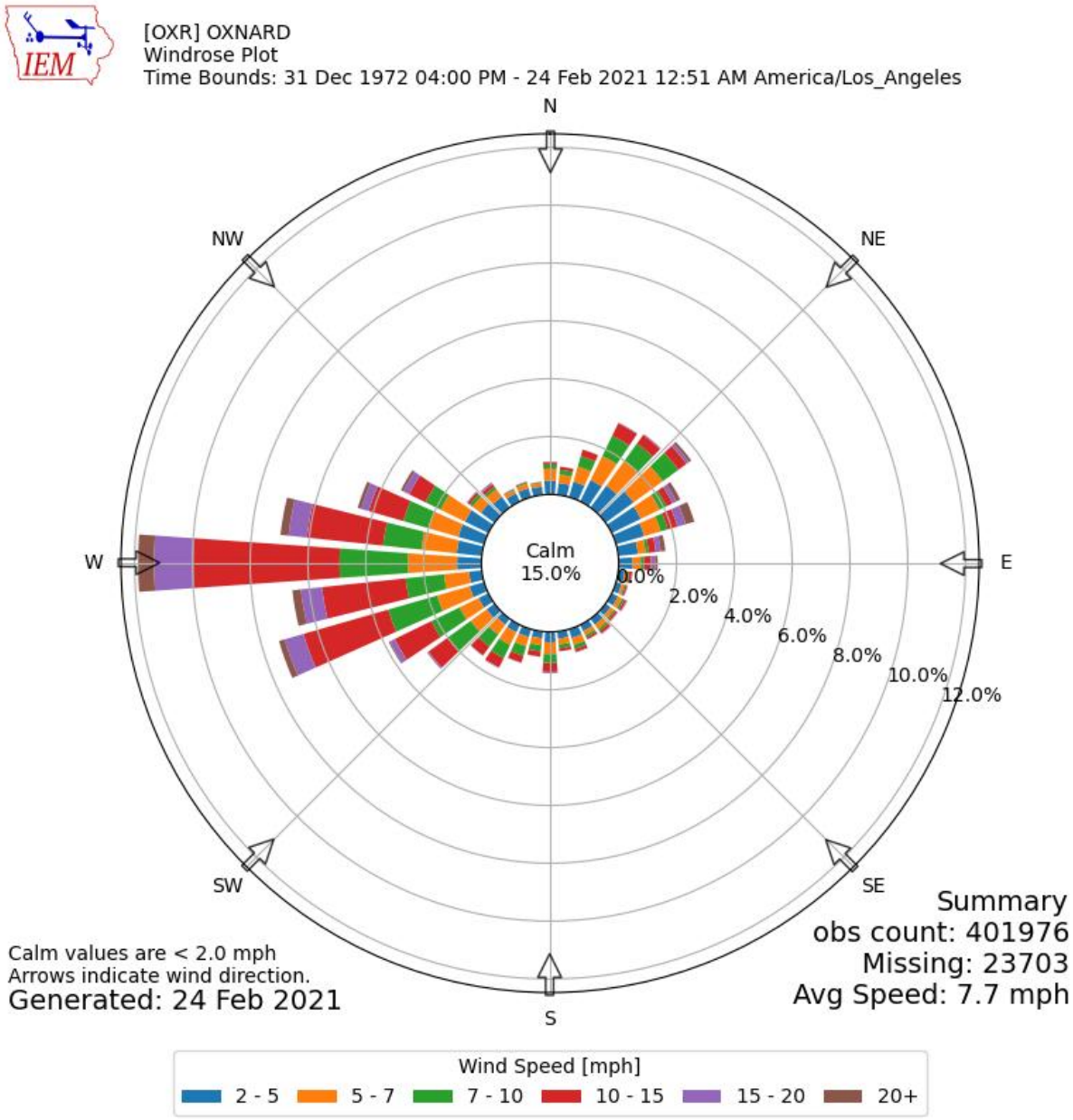
The air above the county often exhibits weak vertical and horizontal dispersion characteristics. These limit the dispersion of emissions and increase pollutant levels in ambient air. Persistent temperature inversions prevent vertical dispersion. The inversions act as a ceiling that prevents pollutants from rising and dispersing. Furthermore, mountain ranges act as walls that inhibit any horizontal dispersion of air pollutants (VCAPCD 2003). The common diurnal land/sea breeze pattern in the county recirculates air contaminants. Air pollutants are pushed toward the ocean during the early morning by the land breeze and toward the east in the afternoon by the sea breeze. This creates a “sloshing” effect, causing pollutants to remain in the area for several days. Residual emissions from previous days accumulate and chemically react with new emissions in the presence of sunlight, thereby increasing pollutant levels in ambient air. This pollutant sloshing effect happens most predominantly from May through October (i.e., smog season) when air temperatures are usually higher and sunlight more intense. As such, the county experiences most exceedances of the federal and state O_3 standards during this 6-month period (VCAPCD 2003).

Figure 2.3.6-1. Predominant Wind Patterns at the Camarillo Airport Climatological Station



Source: https://mesonet.agron.iastate.edu/.

Figure 2.3.6-2. Predominant Wind Patterns at the Oxnard Ventura County Airport Climatological Station



Source: https://mesonet.agron.iastate.edu/.

Criteria Pollutants and Attainment Status

The FCAA requires EPA to designate areas as attainment, nonattainment, or maintenance areas (i.e., previous nonattainment areas that are currently in attainment) with respect to each criteria pollutant, based on whether the NAAQS have been achieved. EPA has classified the Ventura County portion of the SCCAB as a nonattainment area for the federal 8-hour O_3 standard; that same area is in attainment or unclassified with respect to all other criteria pollutants and their precursors. The

federal or State attainment status of each regulated pollutant in the Ventura County portion of the SCCAB is shown in Table 2.3.6-1. With respect to the State standards, the Ventura County portion of the SCCAB is in nonattainment for the 1-hour and 8-hour O_3 and PM_{10} standards and in attainment for all other standards. Table 2.3.6-2 highlights the principal health and atmospheric effects, as well as the sources, associated with these criteria pollutants.

Table 2.3.6-1. Federal and State Criteria Air Pollutant Standards, Ventura County Attainment Status

Pollutant	Averaging Time	Federal Standard[a]	State Standard[b]	Federal Project Area Attainment Status	State Project Area Attainment Status
O_3[c]	1 hour	–	0.09 ppm	–	Nonattainment
O_3	8 hours	0.070 ppm (4th highest in 3 years)	0.070 ppm	Serious nonattainment	Nonattainment
CO[d]	1 hour	35 ppm	20 ppm	Attainment	Attainment
CO	8 hours	9 ppm	9.0 ppm	Attainment	Attainment
PM_{10}[e]	24 hours	150 µg/m^3 (expected number of days above standard less than or equal to 1)	50 µg/m^3	Attainment	Nonattainment
PM_{10}	Annual	–	20 µg/m^3	–	Nonattainment
$PM_{2.5}$[e,f]	24 hours	35 µg/m^3[g]	–	Attainment	–
$PM_{2.5}$[e,f,h]	Annual	9.0 µg/m^3	12 µg/m^3	Attainment	Attainment
NO_2[i]	1 hour	0.100 ppm	0.18 ppm	Attainment/ unclassified	Attainment
NO_2	Annual	0.053 ppm	0.030 ppm	Attainment/ unclassified	Attainment
SO_2[j]	1 hour	0.075 ppm (99th percentile over 3 years)	0.25 ppm	Attainment/ unclassified	Attainment
SO_2[j]	3 hours	0.5 ppm	–	Attainment/ unclassified	–
SO_2[j]	24 hours	0.14 ppm (for certain areas)	0.04 ppm	Attainment/ unclassified	Attainment
SO_2[j]	Annual	0.030 ppm (for certain areas)	–	Attainment/ unclassified	–
Pb[k]	Monthly	–	1.5 µg/m^3	–	Attainment
Pb[k,l]	Calendar quarter	1.5 µg/m^3 (for certain areas)	–	Attainment	–

Pollutant	Averaging Time	Federal Standard[a]	State Standard[b]	Federal Project Area Attainment Status	State Project Area Attainment Status
Pb[k,l]	Rolling 3-month average	0.15 µg/m^3	–	Attainment	–
Sulfates	24 hours	–	25 µg/m^3	–	Attainment
H_2S	1 hour	–	0.03 ppm	–	Attainment
Visibility-Reducing Particles[m]	8 hours	–	Visibility of 10 miles or more (Tahoe: 30 miles), with relative humidity less than 70 percent	–	Attainment
Vinyl Chloride[k]	24 hours	–	0.01 ppm	–	Attainment

Sources: ARB 2024a, 2024b; EPA 2024.

Note: Federal and State standard concentrations are expressed in the units in which the standards were first promulgated.

a. Federal standards (other than O_3, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current national policies.

b. California standards for O_3, CO (except 8-hour Lake Tahoe standard), SO_2 (1- and 24-hour standards), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. The CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

c. On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. Transportation conformity applies in newly designated nonattainment areas for the 2015 national 8-hour O_3 primary and secondary standards on and after August 4, 2019 (see *Transportation Conformity Guidance for 2015 Ozone NAAQS Nonattainment Areas* [EPA 2018a]).

d. Transportation conformity requirements for CO no longer apply after June 1, 2018, for the California CO maintenance areas (see EPA CO maintenance letter [EPA 2018b]).

e. On February 7, 2024, the national annual $PM_{2.5}$ primary standard was lowered from 12.0 µg/m^3 to 9.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

f. The 65 µg/m^3 $PM_{2.5}$ (24-hour) NAAQS was not revoked when the 35 µg/m^3 NAAQS was promulgated in 2006, and the 15 µg/m^3 annual $PM_{2.5}$ standard was not revoked when the 12 µg/m^3 standard was promulgated in 2012. Therefore, for areas designated nonattainment or nonattainment/maintenance for the 1997 and or 2006 $PM_{2.5}$ NAAQS, conformity requirements still apply until the NAAQS are fully revoked.

g. Secondary standard; the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.

h. The federal attainment status was determined for the 2012 annual $PM_{2.5}$ standard of 12 µg/m^3. The attainment status for the 9 µg/m^3 standard is still pending.

i. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm

j. On June 2, 2010, a new 1-hour SO_2 NAAQS was established; the existing 24-hour and annual primary NAAQS were revoked. To attain the 1-hour NAAQS, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 parts per billion. The 1971 SO_2 NAAQS (24 hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated as nonattainment areas for the 1971 NAAQS, the 1971 NAAQS remain in effect until implementation plans to attain or maintain the 2010 NAAQS are approved.

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

l. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved. Pb NAAQS are not considered in transportation conformity analyses.

m. In 1989, ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

CO = carbon monoxide; H_2S = hydrogen sulfide; NO_2 = nitrogen dioxide; O_3 = ozone; Pb = lead; PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; ppm = parts per million; SO_2 = sulfur dioxide; µg/m^3 = micrograms per cubic meter; "–"= not applicable.

Table 2.3.6-2. Federal and State Criteria Air Pollutant Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
O_3	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants (TACs). Biogenic volatile organic compounds (VOCs) may also contribute.	Low-altitude O_3 forms almost entirely from reactive organic gases (ROGs)/VOCs and nitrogen oxides (NO_X) in the presence of sunlight and heat. Common precursor emitters include internal combustion engines, evaporating solvents, boilers, furnaces, and industrial processes.
CO	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical O_3. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM_{10})	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some TACs. Many toxic and other aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations, combustion smoke and vehicle exhaust, atmospheric chemical reactions, construction and other dust-producing activities, unpaved road dust and re-entrained paved road dust, natural sources.

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Fine Particulate Matter ($PM_{2.5}$)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility, and produces surface soiling. Most diesel exhaust particulate matter—a TAC—is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of $PM_{2.5}$.	Combustion, including combustion related to operation of motor vehicles, other mobile sources, and industrial activities. Residential and agricultural burning. Also formed through atmospheric chemical and photochemical reactions involving other pollutants, including NO_X, SO_x, ammonia, and ROG.
NO_2	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the NO_X group of O_3 precursors.	Motor vehicles and other sources with mobile or portable engines, especially diesel engines; refineries; industrial operations.
SO_2	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, and steel. Contributes to acid rain. Limits visibility.	Fuel, especially coal and high-sulfur oil, combustion as well as chemical, sulfur recovery, and metal-processing plants. Some natural sources (e.g., active volcanoes). Limited contribution possible from heavy-duty diesel vehicles if ultra-low-sulfur fuel is not used.
Pb	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. TAC and water pollutant.	Pb-based industrial processes (e.g., battery production facilities, smelters). Pb paint, leaded gasoline. Aerially deposited lead from past gasoline use may exist in soils along major roads.
Sulfates	Premature mortality and respiratory effects. Contributes to acid rain. Some TACs attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources (e.g., volcanic areas), salt-covered dry lakes, and large sulfide rock areas.
H_2S	Colorless, flammable, and poisonous. Respiratory irritant. Neurological damage and premature death. Headache and nausea. Strong odor.	Industrial processes, such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources, such as volcanic areas and hot springs.
Visibility-Reducing Particles	Reduces visibility. Produces haze. Not directly related to the regional haze program under the FCAA, which is oriented primarily toward visibility issues in national parks and other Class I areas. However, some issues and measurement methods are similar.	See $PM_{2.5}$ and PM_{10}, above. May be related more to aerosols than solid particles.
Vinyl Chloride	Neurological effects, liver damage, cancer. Also considered a TAC.	Industrial processes.

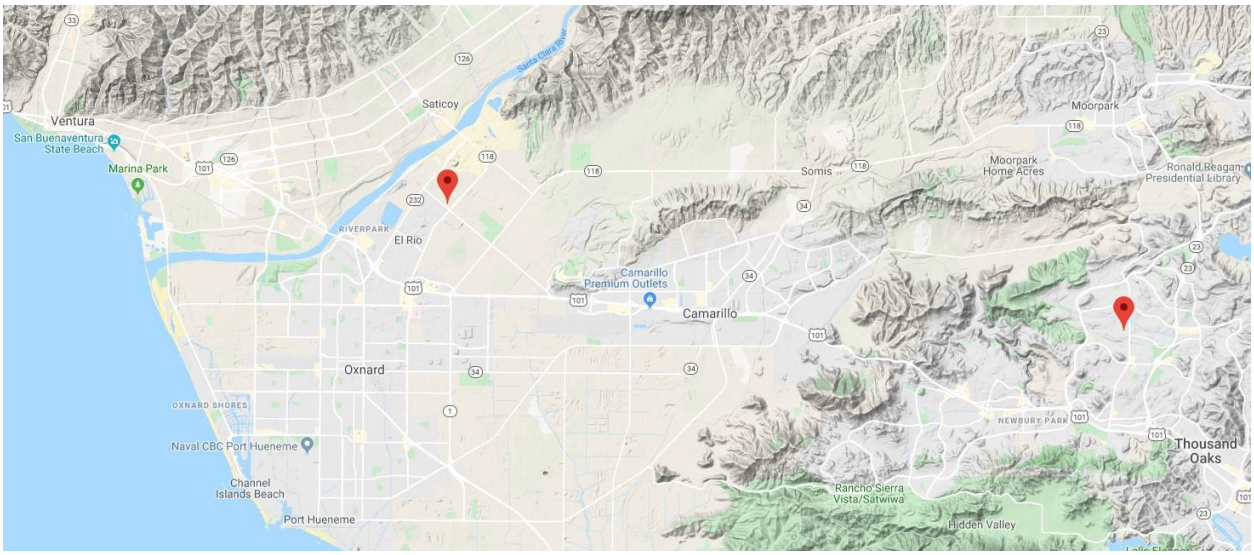
Source: Caltrans 2020.

CO = carbon monoxide; FCAA = Federal Clean Air Act; H_2S = hydrogen sulfide; NO_2 = nitrogen dioxide; NO_X = nitrogen oxide; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; ppm = parts per million; ROG = reactive organic gas; SO_2 = sulfur dioxide; SO_X = sulfur oxide; TAC = toxic air contaminant; VOC = volatile organic compound

Existing Air Quality Status

This section summarizes existing air quality conditions near the project area. It includes the attainment status of each criteria pollutant, its local ambient concentration during the most recent 5-year period from which data are available, and data regarding mobile-source air toxic (MSAT) emissions. The closest air quality monitoring stations to the project corridor are the Thousand Oaks–Moorpark Road (2323 Moorpark Road in Thousand Oaks, approximately 2.3 miles north of US 101) and El Rio–Rio Mesa School #2 (545 Central Avenue in the community of El Rio, approximately 2 miles north of US 101). The locations for the two stations are shown in Figure 2.3.6-3.

Figure 2.3.6-3. Map of Air Quality Monitoring Stations near the Project



Because the 26.8-mile-long project corridor begins inland, in Thousand Oaks, and ends near the coast, in Ventura, the wide stretch of corridor that the land spans is characterized by different local ambient concentrations of criteria pollutants. As such, air quality data from both the Thousand Oaks–Moorpark Road and El Rio–Rio Mesa School #2 stations are reported because they are representative of air quality in the project area.

Table 2.3.6-1 and Table 2.3.6-2 list the air quality trends noted in the data collected from the Thousand Oaks–Moorpark Road and El Rio–Rio Mesa School #2 stations, respectively, during the most recent 5-year period from which data are available (i.e., 2019 to 2023). Currently, the Thousand Oaks–Moorpark Road station monitors only O_3 and $PM_{2.5}$; the El Rio–Rio Mesa School #2 station monitors O_3, PM_{10}, $PM_{2.5}$, and NO_2. None of the air monitoring stations in Ventura County currently measure concentrations of CO or SO_2.

As shown in Table 2.3.6-3, during the 2019 to 2023 monitoring period, exceedances were recorded at the Thousand Oaks–Moorpark Road station for both the federal and state 8-hour O_3 standards and the state 1-hour O_3 standard. In addition, the federal 24-

hour $PM_{2.5}$ standard was exceeded for 1 day in 2020, whereas no exceedances of the federal and state annual $PM_{2.5}$ standards occurred during this period.

Table 2.3.6-3. Air Quality Concentrations for the Past 5 Years, Measured at the Thousand Oaks–Moorpark Road Air Monitoring Station

Pollutant	Standard	2019	2020	2021	2022	2023
O_3						
Maximum 1-hour concentration (ppm)	–	0.082	0.097	0.077	0.084	0.085
Number of days exceeded: State	*0.09 ppm*	*0*	*1*	*0*	*0*	*0*
Maximum 8-hour concentration (ppm)	No	0.074	0.084	0.073	0.068	0.070
Number of days exceeded: Federal	*0.070 ppm*	*1*	*7*	*1*	*0*	*0*
Number of days exceeded: State	*0.070 ppm*	*1*	*7*	*1*	*0*	*0*
$PM_{2.5}$						
Maximum 24-hour concentration (µg/m^3)	–	24.5	36.3	29.1	20.6	23.0
Number of days exceeded: Federal	*35 µg/m^3*	*0*	*1*	*0*	*0*	*0*
Maximum annual concentration	–	7.2	7.4	7.6	8.2	6.5
Exceeded: Federal	*9.0 µg/m^3*	*No*	*No*	*No*	*No*	*No*
Exceeded: State	*12 µg/m^3*	*No*	*No*	*No*	*No*	*No*

Source: ARB 2024c.
O_3 = ozone; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; ppm = parts per million; µg/m^3 = micrograms per cubic meter.

As shown in Table 2.3.6-4, during the 2019 to 2023 monitoring period, exceedances were recorded at the El Rio–Rio Mesa School #2 air monitoring station for both the federal and state 8-hour O_3 standards and the state 1-hour O_3 standard. During this period, the federal and state 24-hour PM_{10} standards were exceeded for a total of 5 days and 57 days, respectively; the state annual PM_{10} standard was exceeded in each year between 2019 and 2022. The federal 24-hour $PM_{2.5}$ standard was exceeded a total of 3 days in 2020, with no exceedances of either the federal or state annual $PM_{2.5}$ standards during this period. No exceedances of the applicable federal and state NO_2 standards were recorded during the 2019 to 2023 monitoring period.

Table 2.3.6-4. Air Quality Concentrations for the Past 5 Years, Measured at El Rio-Rio Mesa School #2 Air Monitoring Station

Pollutant	Standard	2019	2020	2021	2022	2023
O_3						
Maximum 1-hour concentration (ppm)	–	0.078	0.104	0.073	0.077	0.071
Number of days exceeded: State	*0.09 ppm*	*0*	*2*	*0*	*0*	*0*
Maximum 8-hour concentration (ppm)	–	0.070	0.086	0.067	0.063	0.058
Number of days exceeded: Federal	*0.070 ppm*	*0*	*3*	*0*	*0*	*0*

Pollutant	Standard	2019	2020	2021	2022	2023
Number of days exceeded: State	*0.070 ppm*	*0*	*3*	*0*	*0*	*0*
PM_{10}						
Maximum 24-hour concentration ($\mu g/m^3$)	–	187.8	200.7	377.8	57.9	102.8
Number of days exceeded: Federal	*150 $\mu g/m^3$*	*2*	*2*	*1*	*0*	*0*
Number of days exceeded: State	*50 $\mu g/m^3$*	*14*	*21*	*12*	*3*	*7*
Maximum annual concentration	–	24.4	25.3	24.7	23.1	20.4
Exceeded: State	*20 $\mu g/m^3$*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
$PM_{2.5}$						
Maximum 24-hour concentration ($\mu g/m^3$)	–	25.5	58.7	31.7	18.5	24.5
Number of days exceeded: Federal	*35 $\mu g/m^3$*	*0*	*3*	*0*	*0*	*0*
Maximum annual concentration	–	6.5	7.5	6.8	6.4	6.1
Exceeded: Federal	*9.0 $\mu g/m^3$*	*No*	*No*	*No*	*No*	*No*
Exceeded: State	*12 $\mu g/m^3$*	*No*	*No*	*No*	*No*	*No*
$N0_2$						
Maximum 1-hour concentration (ppb)	–	41.0	31.0	33.0	32.0	27.0
Number of days exceeded: Federal	*100 ppb*	*0*	*0*	*0*	*0*	*0*
Number of days exceeded: State	*0.18 ppm*	*0*	*0*	*0*	*0*	*0*
Maximum annual concentration (ppb)	–	5	5	4	4	3
Exceeded: Federal	*53 ppb*	*No*	*No*	*No*	*No*	*No*
Exceeded: State	*0.030 ppm*	*No*	*No*	*No*	*No*	*No*

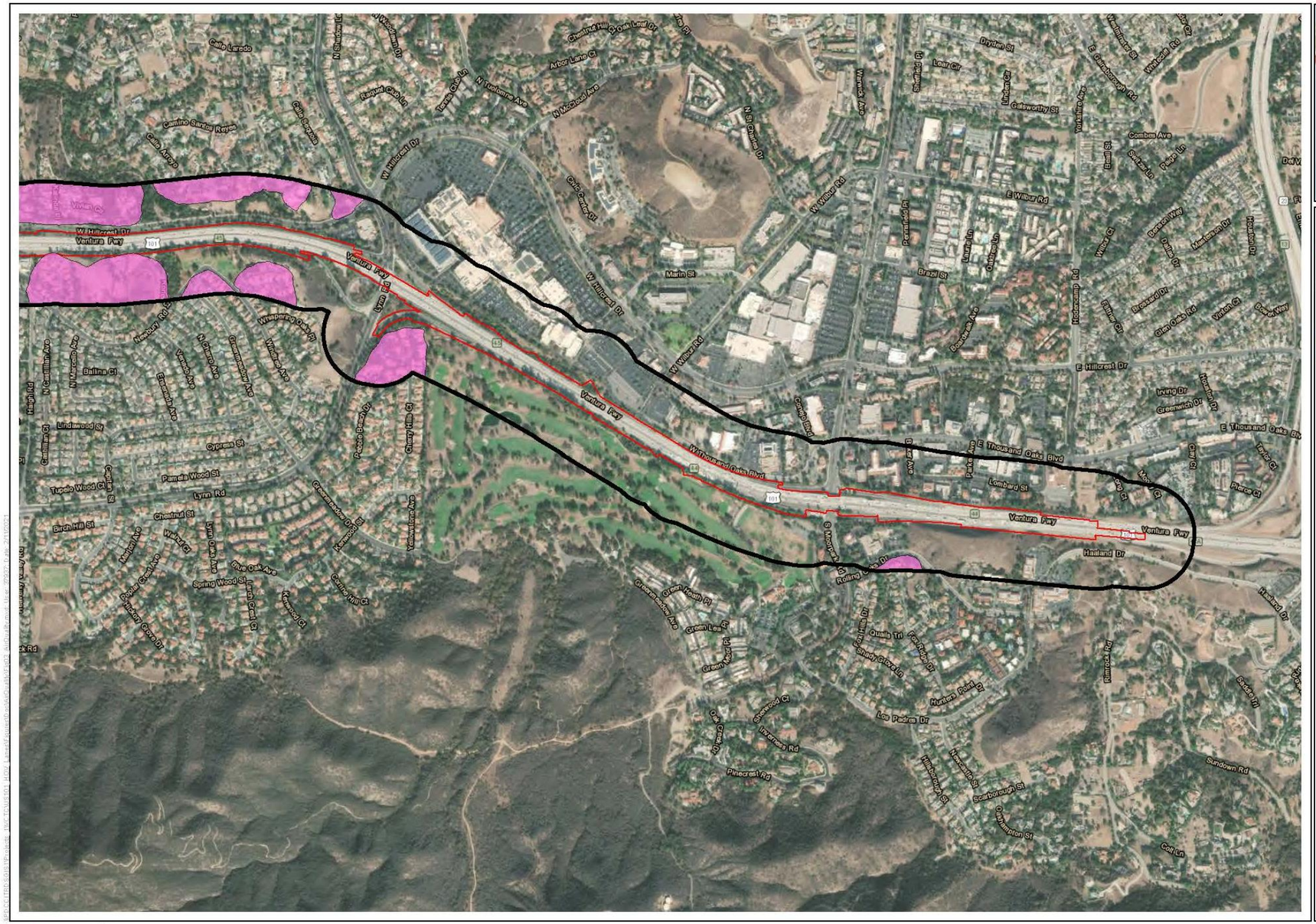
Source: ARB 2024c.
NO_2 = nitrogen dioxide; O_3 = ozone; $PM_{2.5}$ = particulate matter 2.5 microns less in diameter; PM_{10} = particulate matter 2.5 microns less in diameter; ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter.

Sensitive Receptors

Research shows that that the zone of greatest concern near roadways is within 500 feet. Therefore, sensitive receptors within 500 feet have been identified and documented (see Figure 2.3.6-4).

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 1 of 11)





Legend

- Alternative 2 and 3 Limits of Disturbance
- Sensitive Air Receptor Study Area (500-ft Buffer)
- Skilled Nursing Facility
- Schools
- Residential

0 500 1,000 Feet
1:12,000

N

Figure 2.3.6-4, Sheet 1 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 2 of 11)

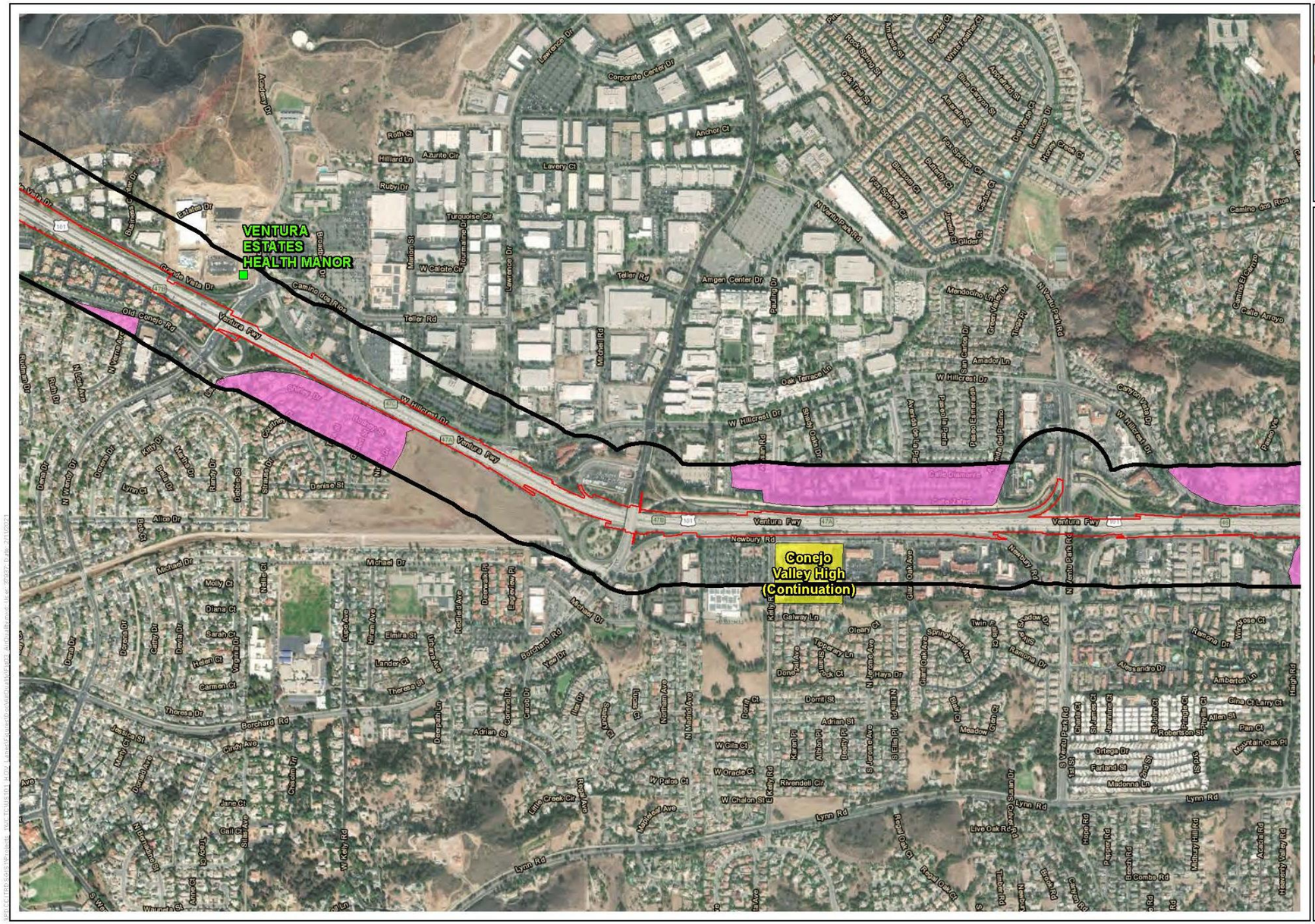


Figure 2.3.6-4, Sheet 2 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 3 of 11)

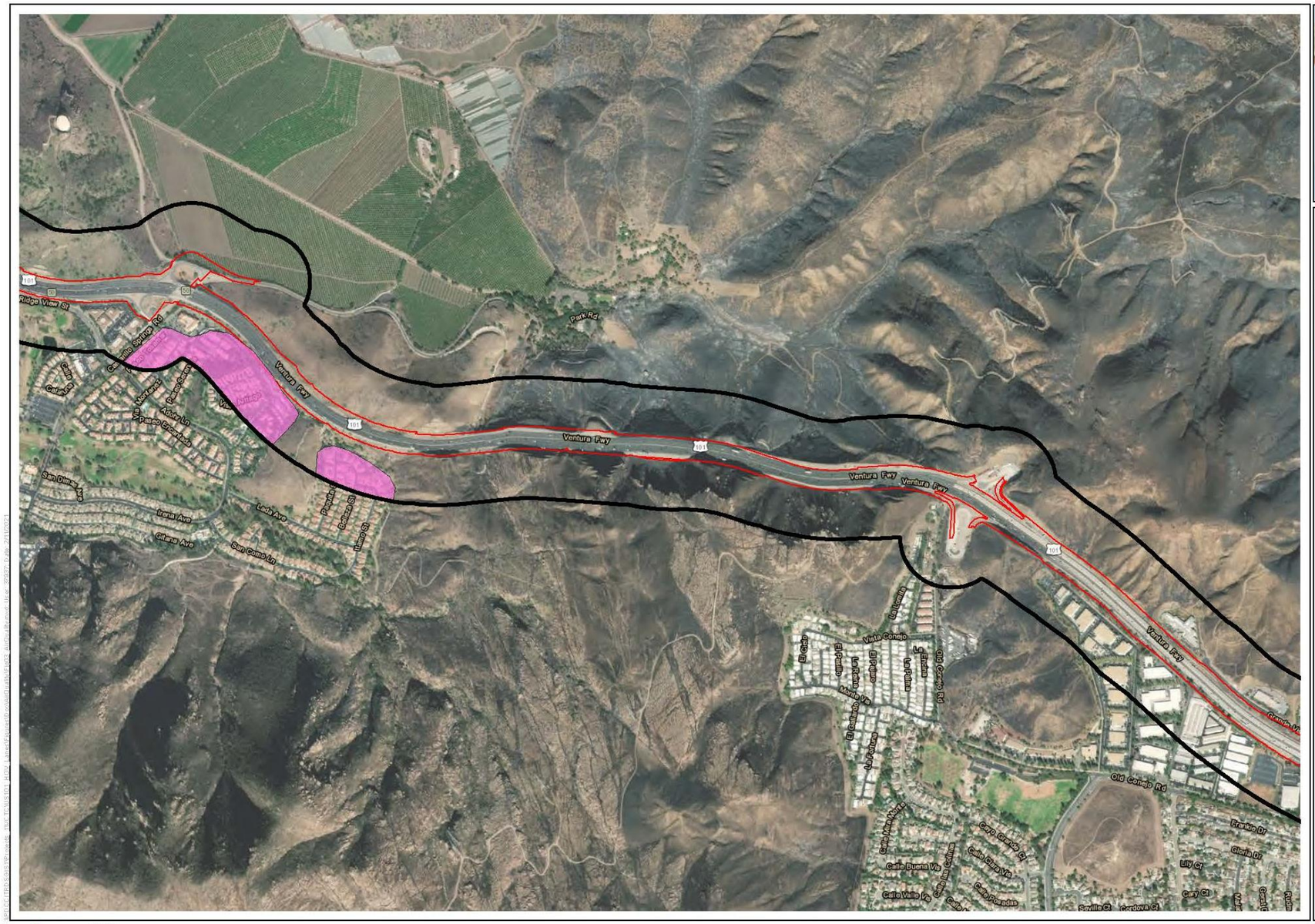


Figure 2.3.6-4, Sheet 3 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 4 of 11)

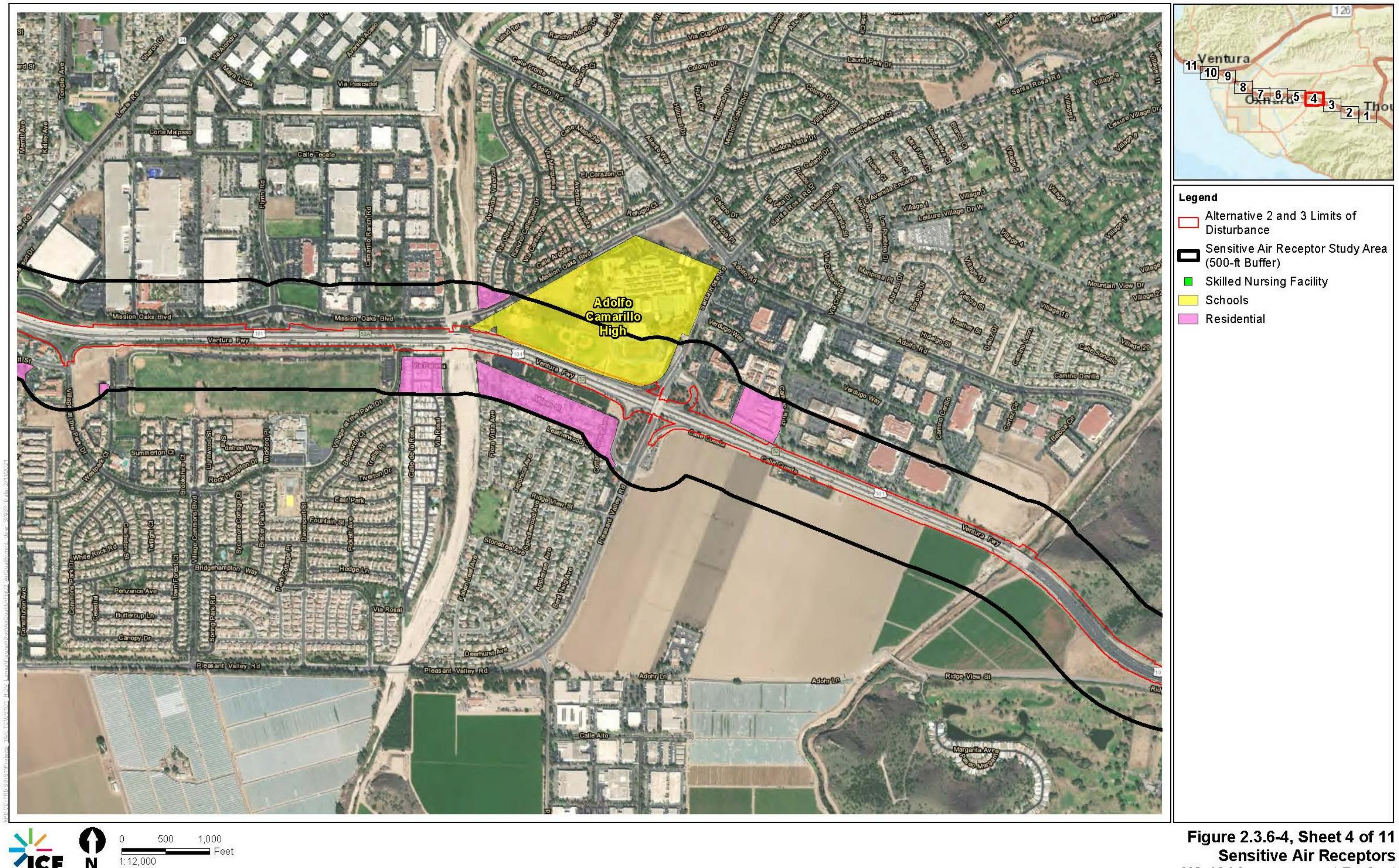


Figure 2.3.6-4, Sheet 4 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 5 of 11)

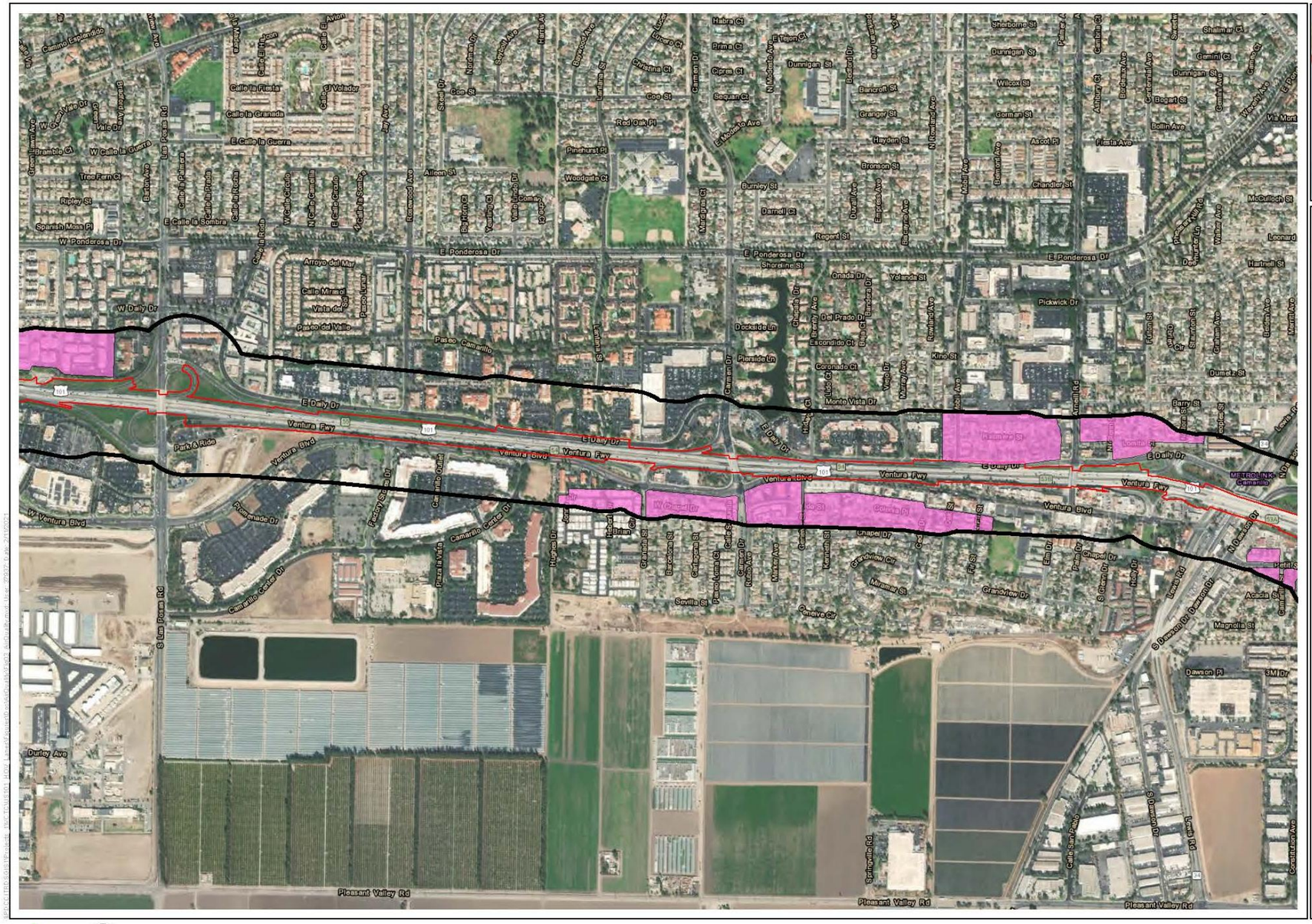
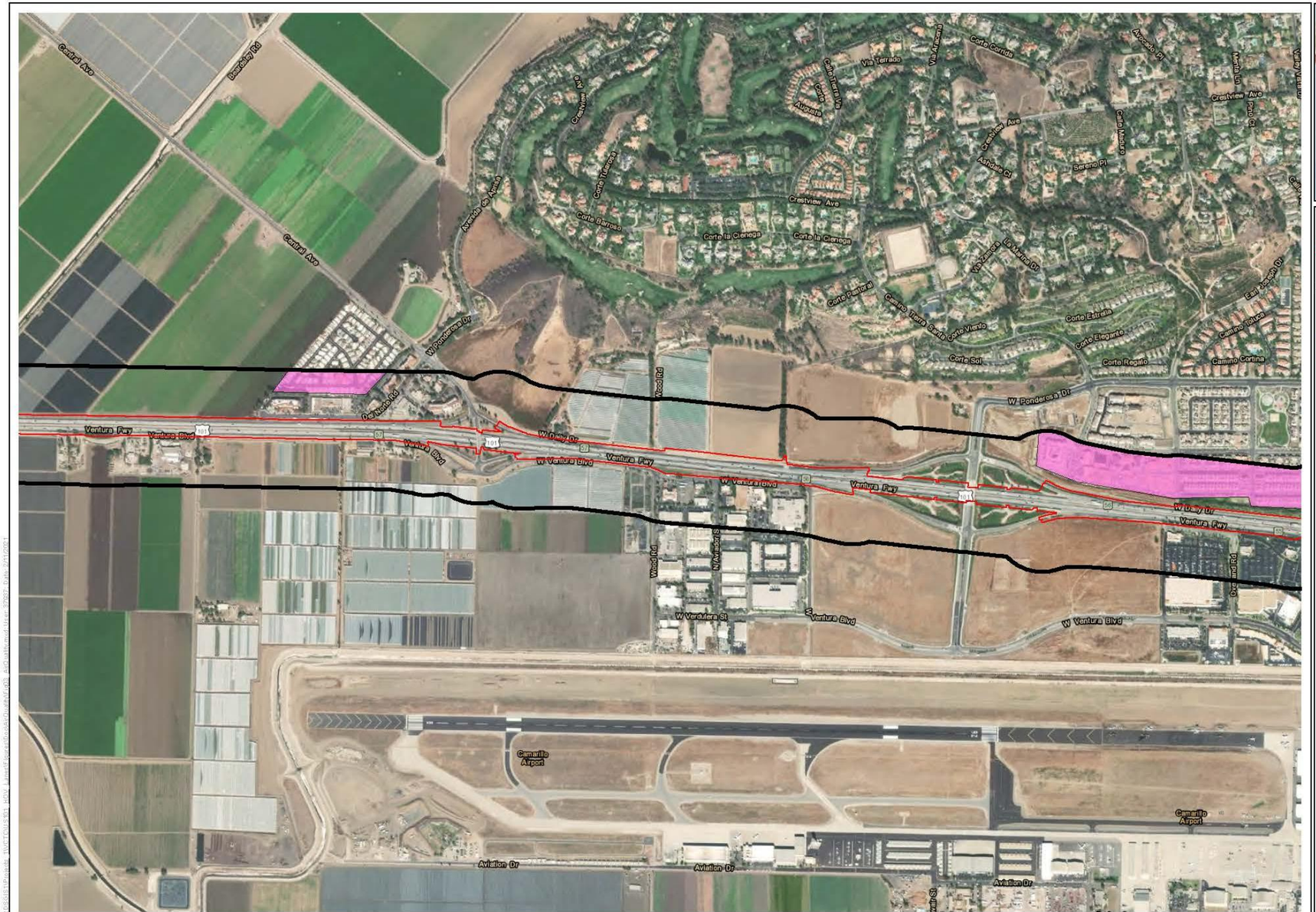


Figure 2.3.6-4, Sheet 5 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 6 of 11)





Legend

- Alternative 2 and 3 Limits of Disturbance
- Sensitive Air Receptor Study Area (500-ft Buffer)
- Skilled Nursing Facility
- Schools
- Residential

ICF

N

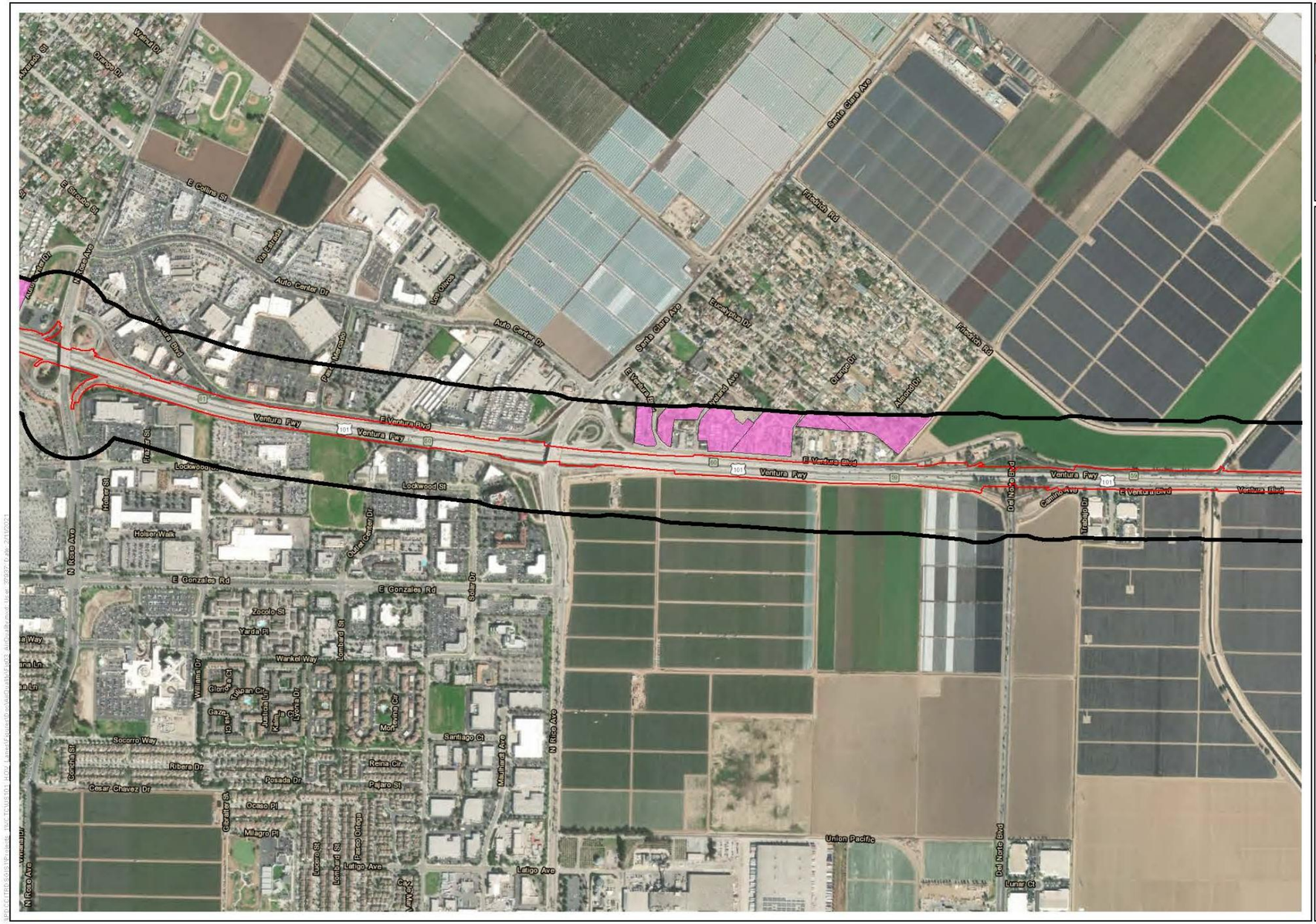
0 500 1,000 Feet

1:12,000

Figure 2.3.6-4, Sheet 6 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 7 of 11)



Legend

- Alternative 2 and 3 Limits of Disturbance
- Sensitive Air Receptor Study Area (500-ft Buffer)
- Skilled Nursing Facility
- Schools
- Residential

0 500 1,000 Feet
1:12,000

N

Figure 2.3.6-4, Sheet 7 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 8 of 11)

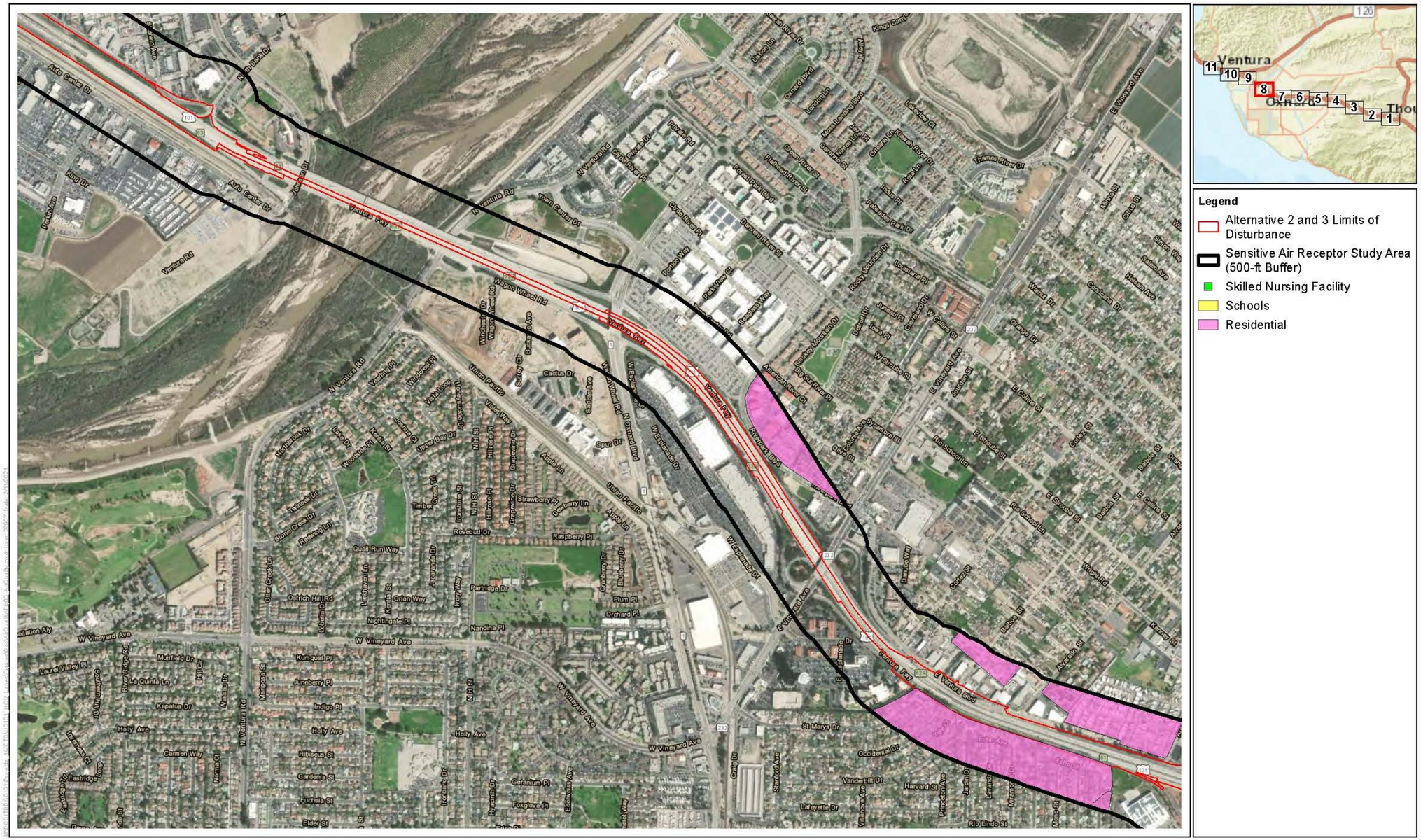


Figure 2.3.6-4, Sheet 8 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 9 of 11)

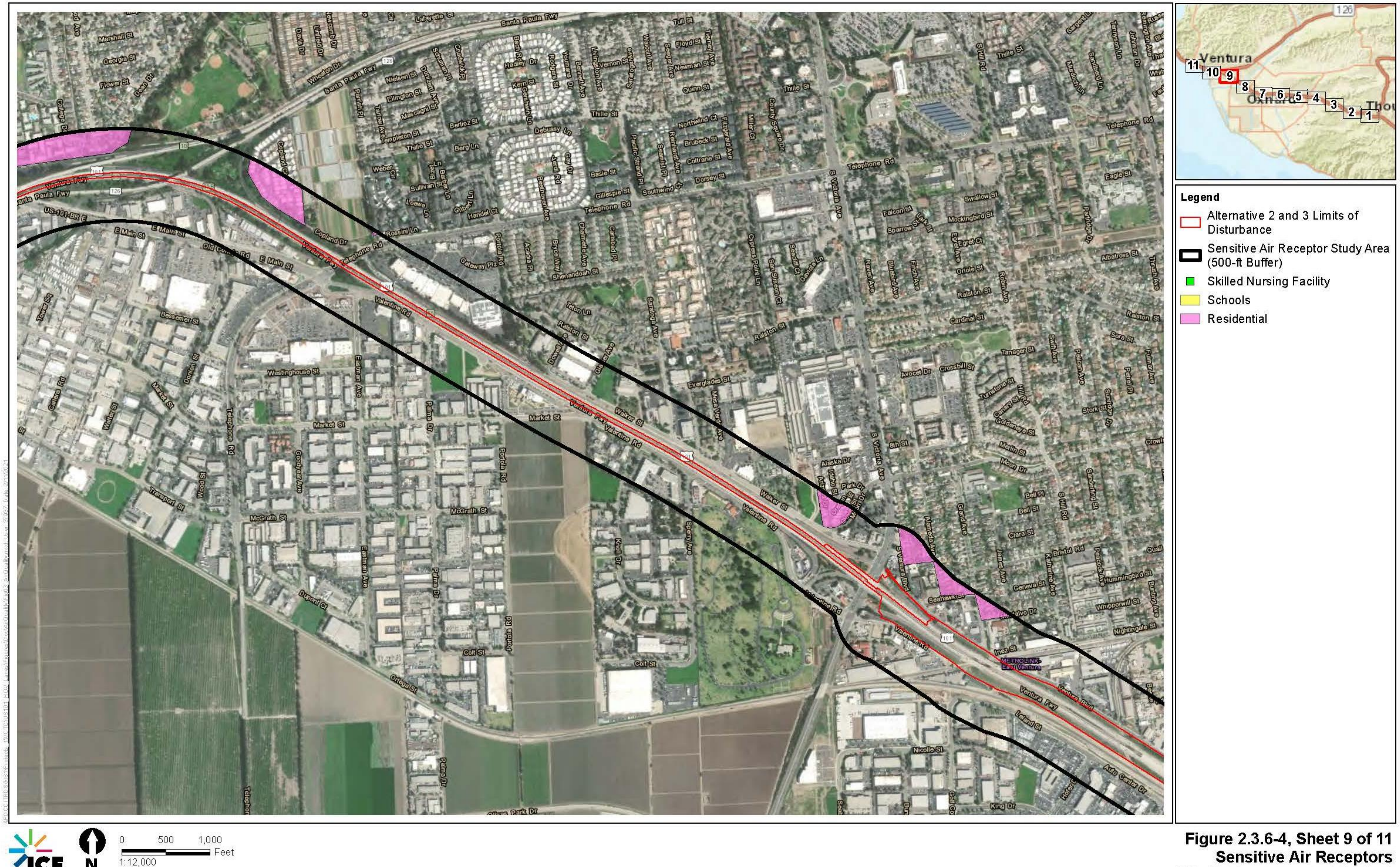


Figure 2.3.6-4, Sheet 9 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 10 of 11)

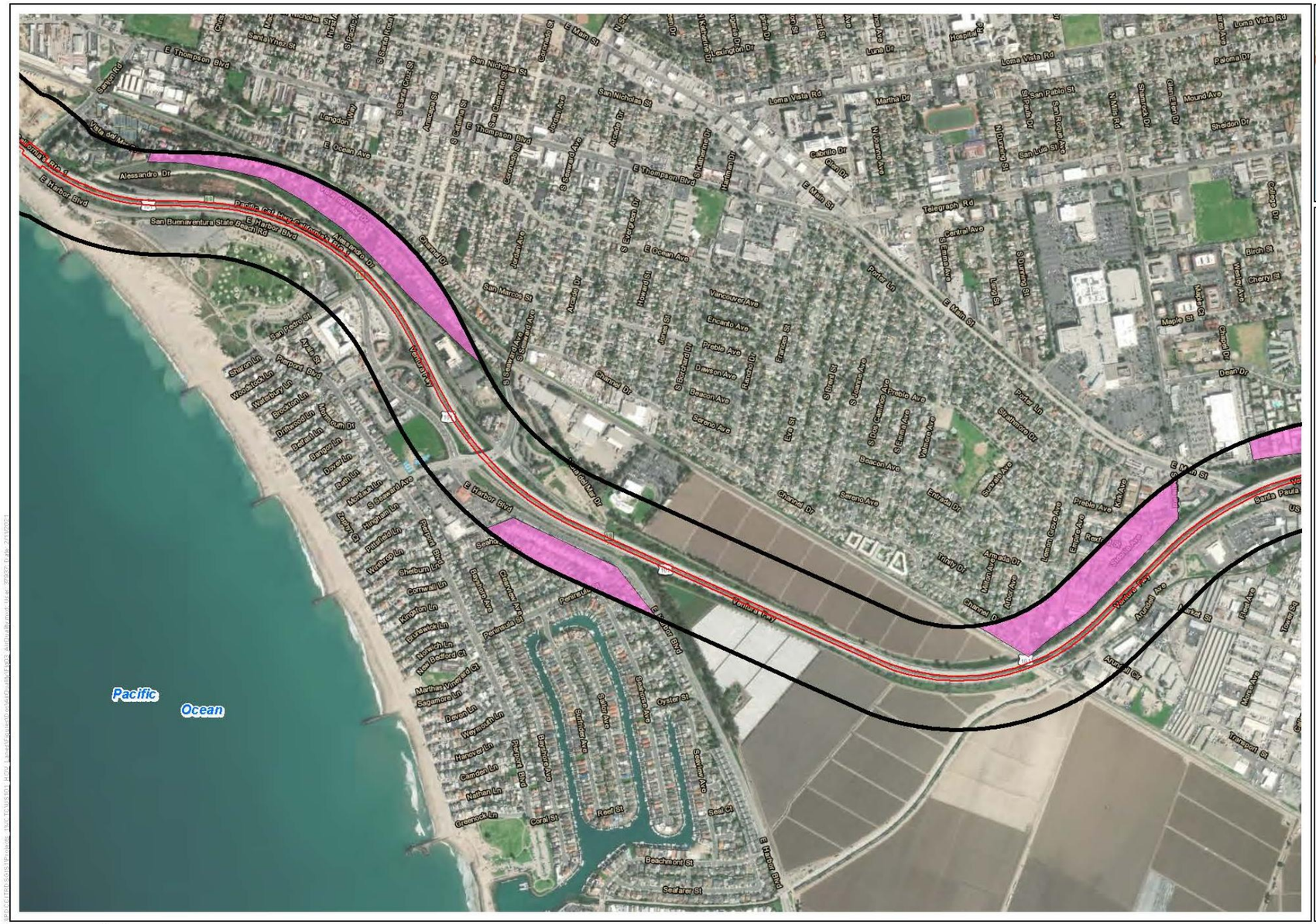


Figure 2.3.6-4, Sheet 10 of 11
Sensitive Air Receptors
US 101 Improvement Project

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Figure 2.3.6-4. Sensitive Air Receptors Location Map (Sheet 11 of 11)



Figure 2.3.6-4, Sheet 11 of 11
Sensitive Air Receptors
US 101 Improvement Project

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2.3.6.3 Environmental Consequences

This section describes the methods, impact criteria, and results of the air quality analyses for the proposed project. The analyses were conducted using methodology and assumptions consistent with the requirements of NEPA, the California Environmental Quality Act (CEQA), the Clean Air Act Amendments of 1988, and the Clean Air Act Amendments of 1990. The analyses also use guidelines and procedures provided in applicable air quality analysis protocols, such as the Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) (Garza et al. 1997), Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{10} and $PM_{2.5}$ Nonattainment and Maintenance Areas (EPA 2021), and the FHWA Updated Interim Guidance on Mobile-Source Air Toxics Analysis in NEPA Documents (FHWA 2023).

Impact Criteria

Project-related emissions would have an adverse environmental impact if they were to result in pollutant emissions levels that would either create or worsen a violation of an ambient air quality standard (as identified in Table 2.3.6-1) or contribute to an existing air quality violation.

Alternative 1: No-Build Alternative

Temporary Impacts

The No-Build Alternative, which proposes no further improvements to US 101, would not result in short-term impacts on air quality.

Permanent Impacts

The No-Build Alternative proposes no further improvements to US 101. All freeway facilities would remain in their existing condition, with two to four general-purpose lanes in each direction and no high-occupancy vehicle or additional auxiliary lanes. Operational deficiencies along US 101 would continue to deteriorate as traffic volumes increase. The No-Build Alternative would not result in permanent adverse impacts on air quality.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add and HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction Emissions

Site preparation and construction of the project would involve demolition, the relocation of utilities, clearing, cut-and-fill activities, grading, and paving roadway surfaces. During construction, short-term degradation of air quality is expected from the release of particulate emissions (i.e., airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated. These would include CO, NO_X, VOCs, directly emitted PM_{10} and $PM_{2.5}$, and TACs such as diesel exhaust PM. Construction activities are expected to increase traffic congestion in the area, resulting

in increases in emissions from traffic during delays. However, emissions would be temporary and limited to the immediate area surrounding the construction site.

Under the transportation conformity regulations (40 CFR 93.123[c][5]), construction-related activities that cause temporary increases in emissions are not included in hot-spot analysis. These temporary increases in emissions occur only during the construction phase and last 5 years or less at any individual site. They typically fall into two main categories:

- **Fugitive Dust** (emissions from construction due to ground disturbance). The California Health and Safety Code (Sections 41700–41701) and all air districts prohibit "visible emissions" for more than 3 minutes in 1 hour. This applies not only to dust but also to engine exhaust. In general, this is interpreted to mean visible emissions that cross the right-of-way (ROW) line. Sources of fugitive dust include disturbed soil at a construction site and trucks carrying uncovered soil. Unless properly controlled, vehicles leaving the site may deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions may vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions depend on soil moisture, the silt content of the soil, wind speed, and the number of pieces of equipment operating. Larger dust particles settle near the source, while fine particles are dispersed over greater distances.
- **Construction Equipment Emissions**: Diesel PM is a California-identified TAC. Localized issues may exist if diesel-powered construction equipment is operated near sensitive receptors.

Construction of the proposed project is anticipated to span approximately 12 years, from 2028 through 2040. Construction emissions were estimated using the latest Road Construction Model (version 9.0) from the Sacramento Metropolitan Air Quality Management District (SMAQMD) (SMAQMD 2018). Although the model was developed for Sacramento conditions (e.g., fleet emission factors, silt loading, other model assumptions), the VCAPCD, in its CEQA guidance, considers the model adequate for estimating road construction emissions. It is therefore used for that purpose in this project analysis.

Construction-related emissions are presented in Table 2.3.6-5 through Table 2.3.6-8 for construction phases 1 through 4, respectively. The peak emissions are listed in Table 2.3.6-9. Because both alternatives have the same construction duration, the same post miles, and a similar number of structures to be replaced and widened, the differences in construction activity is negligible. Therefore, the construction emissions are applicable to both build alternatives. The emissions presented are based on the best information available at the time of the calculations. They represent the peak daily construction emissions that would be generated by the build alternatives.

Table 2.3.6-5. Phase 1 Construction Emissions

Activity	VOC (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Grubbing/Land Clearing	0.80	10.13	6.82	5.37	1.33
Grading/Excavation	4.03	42.42	38.28	6.66	2.48
Drainage/Utilities/Sub-Grade	2.96	33.68	68.63	7.41	2.38
Paving	2.41	31.67	111.46	3.86	1.85
Maximum Daily Emissions	4.03	42.42	111.46	7.41	2.48

Source: Emissions estimated using the SMAQMD Road Construction Model, version 9.0, with project-specific data provided by the design staff (Caltrans 2025a).
Note:
Emissions of SO_X would total less than 1 pound per day during each phase of construction.
CO = carbon monoxide; lbs = pounds; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter; VOC = volatile organic compound.

Table 2.3.6-6. Phase 2 Construction Emissions

Activity	VOC (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Grubbing/Land Clearing	0.95	10.38	3.29	5.21	1.19
Grading/Excavation	4.70	40.05	19.81	5.80	1.74
Drainage/Utilities/Sub-Grade	3.00	33.13	66.34	7.23	2.22
Paving	2.40	31.65	113.10	3.87	1.86
Maximum Daily Emissions	4.70	40.05	113.10	7.23	2.22

Source: Emissions estimated using the SMAQMD Road Construction Model, version 9.0, with project-specific data provided by the design staff (Caltrans 2025a).
Note:
Emissions of SO_X would total less than 1 pound per day during each phase of construction.
CO = carbon monoxide; lbs = pounds; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter; VOC = volatile organic compound.

Table 2.3.6-7. Phase 3 Construction Emissions

Activity	VOC (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Grubbing/Land Clearing	0.94	10.27	3.29	5.21	1.19
Grading/Excavation	4.45	39.65	17.36	5.69	1.63
Drainage/Utilities/Sub-Grade	2.75	32.80	64.20	7.09	2.08
Paving	2.22	31.56	111.91	3.76	1.75
Maximum Daily Emissions	4.45	39.65	111.91	7.09	2.08

Source: Emissions estimated using the SMAQMD Road Construction Model, version 9.0, with project-specific data provided by the design staff (Caltrans 2025a).
Note:
Emissions of SO_X would total less than 1 pound per day during each phase of construction.
CO = carbon monoxide; lbs = pounds; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter; VOC = volatile organic compound.

Table 2.3.6-8. Phase 4 Construction Emissions

Activity	VOC (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Grubbing/Land Clearing	0.84	10.16	2.28	5.17	1.15
Grading/Excavation	4.19	39.29	14.75	5.57	1.51
Drainage/Utilities/Sub-Grade	2.74	32.72	64.18	7.09	2.08
Paving	2.21	31.49	111.86	3.76	1.75
Maximum Daily Emissions	4.19	39.29	111.86	7.09	2.08

Source: Emissions estimated using the SMAQMD Road Construction Model, version 9.0, with project-specific data provided by the design staff (Caltrans 2025a).
Note:
Emissions of SO_X would total less than 1 pound per day during each phase of construction.
CO = carbon monoxide; lbs = pounds; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter; VOC = volatile organic compound.

Table 2.3.6-9. Peak and Total Construction Emissions

Activity	VOC (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Grubbing/Land Clearing	0.95	10.38	6.82	5.37	1.33
Grading/Excavation	4.70	42.42	38.28	6.66	2.48
Drainage/Utilities/Sub-	3.00	33.68	68.63	7.41	2.38
Paving	2.41	31.67	113.10	3.87	1.86
Maximum Daily Emissions	4.70	42.42	113.10	7.41	2.48
Total Emissions for All Phases (tons)	5.14	53.61	74.62	9.39	2.98

Source: Emissions estimated using the SMAQMD Road Construction Model, version 9.0, with project-specific data provided by the design staff (Caltrans 2025a).
Note:
Emissions of SO_X would total less than 1 pound per day during each phase of construction.
CO = carbon monoxide; lbs = pounds; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter; VOC = volatile organic compound.

Implementation of the following measures, some of which may also be required for other purposes, such as stormwater pollution control, would reduce air quality impacts resulting from construction activities. Please note that, although anticipated to reduce construction-related emissions, the measures cannot be quantified at this time.

- The construction contractor must comply with the Caltrans Standard Specifications in Section 14-9, as required by measure **AQ-1** (Caltrans 2025b). Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. For example, VCAPCD Rule 55 is intended to reduce the amount of PM in the ambient air resulting from anthropogenic fugitive dust sources by requiring projects to prevent, reduce, or mitigate fugitive dust emissions. All

construction-related sources of fugitive dust are required to implement control measures indicated in VCAPCD Rule 55.

- As referenced by measure **AQ-4**, water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible dust" criterion, either at the point of emissions or at the ROW line, depending on local regulations.
- As referenced by measure **AQ-4**, soil binder will be spread on any unpaved roads used for construction purposes and on all project construction parking areas.
- Trucks will be washed as they leave the ROW as necessary to control fugitive dust emissions. As required by measure **AQ-2**, all trucks that are to haul excavated or graded material on-site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.
- As required by measure **AQ-3**, project grading plans will show the duration of construction. In addition, O_3 precursor emissions from construction equipment and vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications.
- All construction equipment will use low-sulfur fuel, as required by California Code of Regulations Title 17, Section 93114.
- As referenced by measure **AQ-4**, track-out reduction measures will be used, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- As referenced by measure **AQ-4**, all transported loads of soils and wet materials will be covered before transport or adequate freeboard (i.e., space from the top of the material to the top of the truck) will be provided to minimize emissions of dust during transport.
- As referenced by measure **AQ-4**, dust and mud deposited on paved public roads due to construction activity and traffic will be promptly and regularly removed to reduce PM emissions.
- Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown PM in the area.

Asbestos

According to maps prepared by the State and the California Department of Conservation, Division of Mines and Geology, the project site is not in a county that is likely to contain naturally occurring asbestos (California Department of Conservation 2000). Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none. However, structures, including buildings and bridges, may contain asbestos containing materials (ACM). Asbestos was used in many building materials prior to 1978 and may have been used up until the early 1980s.

ACMs include fireproofing material, acoustic ceiling material, transite pipes, roofing materials, thermal insulation, support piers, expansion joint material in bridges, asphalt, concrete, and other building materials. ACM is of primary concern when it is friable (i.e., material that can be easily crumbled). During demolition, if not properly identified and mitigated, asbestos fibers could become airborne. Project improvements would require demolition or disturbance of existing structures, including bridges that may contain ACM. In addition, the soil surrounding railroad tracks within the project study area may also contain ACMs if disc brake pads manufactured for railroad use contained ACMs.

Sampling and analyzing materials for ACM content prior to demolition or disturbance is standard practice for structures. Soils surrounding structures and roadway improvements that would be disturbed should also be sampled and analyzed for ACM content. ACM sampling and analysis would be conducted prior to any ground-disturbing activity or at the completion of the plans, specifications, and estimates phase. The ACM survey would be conducted in conformance with the EPA National Emission Standard for Hazardous Air Pollutants regulation (40 CFR) and Caltrans Standard Special Provision 14-11.16, Asbestos-Containing Construction Materials in Bridges. ACM survey requirements are outlined in measure **HW-4** in Section 2.3.5.4.

Lead

Lead is normally not an air quality issue for transportation projects unless a project disturbs soils containing high levels of aerially deposited lead (ADL) or involves painting or modifying structures with lead-based coatings. As such, there is potential for the presence of ADL in unpaved areas within the project limits, particularly in areas where the project footprint is close to US 101. Testing for ADL and lead-based paint would be conducted prior to any ground-disturbing activity or at the completion of the plans, specifications, and estimates phase. A work plan for conducting ADL testing would be submitted to the Caltrans Hazardous Waste Branch for review and acceptance prior to conducting site investigation testing. The handling and disposal of excavated material would be in accordance with the results of the site investigation. Where the presence of ADL is confirmed, a lead compliance plan (LCP) prepared by a certified industrial hygienist would be required to protect workers from exposure. The lead-based paint and ADL survey requirements are outlined in measures **HW-4** and **HW-5**, respectively, in Section 2.3.5.4.

Valley Fever

Valley fever is not an air pollutant but a disease caused by inhaling Coccidioides immitis (*C. immitis*) spores, which are found in certain types of soil and become airborne when the soil is disturbed. Ventura County authorities reported 305 cases in 2020, an incidence rate of 0.36 per 100,000 people (California Department of Public Health 2020).

The presence of *C. immitis* in Ventura County does not guarantee that construction activities would result in an increased incidence of Valley fever. Propagation of *C. immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. Although *C. immitis* spores can be released when areas are disturbed by earthmoving activities, receptors

must be exposed to and must inhale the spores to be at increased risk of contracting Valley Fever. Moreover, exposure to *C. immitis* does not guarantee that an individual will become ill—approximately 60 percent of people exposed to the fungal spores are asymptomatic and show no signs of an infection (U.S. Geological Survey 2000).

Although several factors influence receptor exposure and development of Valley Fever, earthmoving activities during construction could release *C. immitis* spores if filaments are present and soil chemistry and climatic conditions are conducive to spore development. Receptors within several miles of the construction area, particularly adjacent residential receptors, may be exposed to an increased risk of inhaling *C. immitis* spores and subsequent development of Valley Fever. Dust control measures are the primary defense against infection (USGS 2000). With implementation of the fugitive dust control plan outlined in measure **AQ-4**, dusty conditions would be avoided. Routine watering would also reduce the risk of people contracting Valley Fever.

Construction Conformity

Construction activities would not last for more than 5 years at one location. Therefore, construction-related emissions would not need to be included in regional and project-level conformity analysis (40 CFR 93.123[c][5]).

Permanent Impacts

Operational emissions take into account long-term changes in emissions due to a project (excluding the construction phase). The operational emissions analysis compares forecast emissions to existing/baseline, no-build, and build conditions for the existing (2018), opening-year (2040), RTP/sustainable communities strategy (SCS) horizon-year (2045), and horizon-year (2060) scenarios.[2]

Regional Conformity

The proposed project is listed in 2024–2050 RTP/SCS financially constrained RTP Amendment 1, which was adopted by the Southern California Association Governments (SCAG) on September 5, 2024; FHWA and FTA made a regional conformity determination finding on December 16, 2024 (Table 2.3.6-10). The project is also included in SCAG financially constrained 2025 FTIP Amendment 25-24. SCAG 2025 FTIP Amendment 25-24 was approved by FHWA on May 26, 2026. The latest FTIP amendment to receive federal approval was Amendment 25-29 on July 24, 2026. A copy of the project's RTP and FTIP listings are included in Appendix G of this Environmental Impact Report/Environmental Assessment. The design concept and design scope of the proposed project are consistent with the project description in the 2024–2050 RTP/SCS, 2025 FTIP, and the open-to-traffic assumptions of SCAG's regional emissions analysis. A request for Air Quality Conformity Determination for the proposed project will be submitted to FHWA following selection of a preferred alternative. The Air Quality Conformity Determination must be obtained prior to receiving the Finding of No Significant Impact (FONSI) for the proposed project.

[2] The horizon year of 2060 for the proposed project extends beyond the RTP/SCS horizon year of 2045.

Table 2.3.6-10. Status of Transportation Plans Related to Regional Conformity

MPO	Plan/TIP	Date of MPO Adoption	Date of FHWA/FTA Approval	Last Amendment	Date of FHWA/FTA Approval of Last Amendment
SCAG	2024–2050 RTP	April 4, 2024	May 10, 2024	Amendment 1	December 16, 2024
SCAG	2025 FTIP	September 5, 2024	December 16, 2024	Amendment 25-29	July 24, 2026

FHWA = Federal Highway Administration; FTA = Federal Transit Administration; FTIP = Federal Transportation Improvement Program; MPO = Metropolitan Planning Organization; RTIP = Regional Transportation Plan; SCAG = Southern California Association of Governors; TIP = Transportation Improvement Program.

Regional Emissions Analysis

Criteria-pollutant emissions generated along each segment of US 101 were calculated for the number of average daily trips (ADT), truck ADT, the length of the segment in miles, and emission rate, using the latest version of CT-EMFAC, CT-EMFAC2021, released in February 2023.

Operational emissions of criteria pollutants and their precursors would occur because of changes in roadway operations as a result of project implementation. In addition, operational emissions between different time periods are affected by changes in circulation patterns, population growth, and reductions in per vehicle emissions as older, less efficient vehicles are retired and replaced by cleaner vehicles. Estimates of emissions are based on the proposed project's vehicle miles traveled (VMT), which was based on the length of the analyzed roadway segments in the project area. The proposed project's estimated operational emissions are shown in Table 2.3.6-11.

Based on the estimated operational emissions shown in Table 2.3.6-11, implementation of the proposed project would result in nominal increases in criteria pollutant emissions under the build alternatives compared to the No-Build Alternative and substantial reductions in CO and NO_X emissions under the build alternatives compared to existing (2018) conditions. Compared to existing (2018) conditions, PM_{10} emissions would increase under all future years and alternatives.

Table 2.3.6-11. Summary of Regional Emissions Analysis

	ROG (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)*	$PM_{2.5}$ (lbs/day)*
Baseline (existing conditions) 2018	2,890.0	41,181.1	11,410.6	4,546.6	937.9
2040 Opening Year					
Alternative 1 No Build	1,183.7	15,843.4	2,117.7	5,035.9	899.8
Increase from Existing	(1,706.2)	(25,337.7)	(9,292.9)	489.4	(38.2)

	ROG (lbs/day)	CO (lbs/day)	NO_X (lbs/day)	PM_{10} (lbs/day)*	$PM_{2.5}$ (lbs/day)*
Alternative 2	1,186.5	15,880.1	2,122.6	5,047.6	901.9
Increase from Existing	(1,703.5)	(25,301.0)	(9,288.0)	501.0	(36.1)
Increase from No Build	2.7	36.7	4.9	11.7	2.1
Alternative 3	1,191.6	15,949.2	2,131.8	5,069.6	905.8
Increase from Existing	(1,698.3)	(25,231.9)	(9,278.8)	523.0	(32.2)
Increase from No Build	7.9	105.8	14.1	33.6	6.0
2045 RTP/SCS Horizon Year					
Alternative 1 No Build	1,054.7	14,804.1	1,923.3	5,177.1	920.3
Increase from Existing	(1,835.2)	(26,377.0)	(9,487.3)	630.5	(17.6)
Alternative 2	1,057.2	14,838.4	1,927.8	5,189.1	922.4
Increase from Existing	(1,832.8)	(26,342.7)	(9,482.8)	642.5	(15.5)
Increase from No Build	2.4	34.3	4.5	12.0	2.1
Alternative 3	1,061.8	14,903.0	1,936.2	5,211.7	926.4
Increase from Existing	(1,828.2)	(26,278.2)	(9,474.4)	665.1	(11.5)
Increase from No Build	7.0	98.9	12.8	34.6	6.1
2060 Horizon Year					
Alternative 1 No Build	1,007.8	14,708.3	1,941.6	5,444.3	962.0
Increase from Existing	(1,882.2)	(26,472.8)	(9,469.0)	897.7	24.1
Alternative 2	1,010.1	14,742.4	1,946.1	5,456.9	964.2
Increase from Existing	(1,879.8)	(26,438.7)	(9,464.5)	910.3	26.3
Increase from No Build	2.3	34.1	4.5	12.6	2.2
Alternative 3	1,014.5	14,806.6	1,954.6	5,480.6	968.4
Increase from Existing	(1,875.4)	(26,374.6)	(9,456.0)	934.0	30.5
Increase from No Build	6.7	98.2	13.0	36.4	6.4

Source: Emissions modeled using CT-EMFAC2021. See modeling outputs provided in the air quality report (Caltrans 2025a).
Note: Emissions of SO_X would be negligible, based on the use of ultra-low-sulfur diesel and gasoline.
* Includes tire wear, brake wear, and re-entrained road dust.
CO = carbon monoxide; lbs = pounds; NO_X = nitrogen oxides; PM_{10} = particulate matter 10 microns in diameter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter; ROG = reactive organic gases; RTP = regional transportation plan; SCS = Sustainable Communities Strategy; ( ) = negative value

Project-Level Conformity

The proposed project would not cause or contribute to any new localized CO, $PM_{2.5}$, and/or PM_{10} violations or delay timely attainment of any NAAQS, required interim emission reductions, or other milestones during the timeframe of the transportation plan or regional emissions analysis. The proposed project would not interfere with implementation of any transportation control measures.

Carbon Monoxide Analysis

The CO Protocol was used to analyze CO impacts for the proposed project. The hot-spot analysis covered the most congested intersections that the project would affect in

2060. Specifically, the ambient air quality effects of traffic emissions were evaluated qualitatively according to the CO Protocol. The project screens out at Level 7 of the flow chart in Figure 3 of the CO Protocol because it does not qualify as a roadway or intersection project that would worsen air quality, necessitating further analysis. Therefore, the project would not have the potential for causing or worsening a violation of the NAAQS for CO.

Particulate Matter Analysis

FCAA Section 176(c)(1) is a statutory requirement that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. Ventura County does not have a federal nonattainment or maintenance status for PM_{10} or $PM_{2.5}$. As such, a project-level PM analysis is not required for transportation conformity.

As shown in Table 2.3.6-11, compared to existing (2018) conditions, there would be an increase in future PM_{10} emissions along all roadway segments. In addition, in the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year, the build alternatives would increase regional PM emissions by 36 pounds per day, an increase of 3.7 percent. When compared to existing (2018) conditions, the project alternatives would increase regional PM_{10} emissions by up to 934 pounds per day. The increase in total regional PM emissions is due to the increase in re-entrained road dust, which is directly proportional to the increase in VMT.

Because the project area is currently in nonattainment for the state PM_{10} standards, a quantitative screening-level dispersion analysis was conducted to determine local emission concentrations for the existing (2018) and future 2040 opening-year, 2045 RTP/SCS horizon-year, and 2060 horizon-year no-build and build conditions.

Using EPA's AERSCREEN model (version 21112), emissions concentrations along a 1-mile section of US 101 were calculated using the peak traffic volumes associated with existing (2018) and future 2040 opening-year, 2045 RTP/SCS horizon-year, and 2060 horizon-year no-build (Alternative 1) and build (Alternatives 2 and 3) conditions. The analysis calculated the maximum estimated off-site impact or point of maximum impact (PMI) adjacent to the modeled 1-mile section of the freeway. The projected emissions concentrations were added to the background concentrations calculated, following the methodology included in the Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas (EPA 2021). For all years and alternatives, the peak traffic volumes and grams of PM_{10} per mile occur east of the State Route 23 northbound off-ramp. Although it is outside of the project study area, this segment has the highest volumes and would be affected by the increased traffic from the project. Because this is a screening-level analysis, topography was not included and specific sensitive land uses were not modeled.

Tables showing the results of the dispersion analysis are included in the air quality report (Caltrans 2025). The dispersion analysis for the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year found that the build alternatives would increase 24-hour PM_{10} concentrations by a maximum of 4.3 micrograms per cubic

meter compared to existing (2018) conditions and 0.4 micrograms per cubic meter compared to no-build conditions. The same analysis for annual PM_{10} concentrations found that the build alternatives would increase annual PM_{10} concentrations by a maximum of 0.7 microgram per cubic meter compared to existing (2018) conditions and 0.1 microgram per cubic meter compared to no-build conditions. For comparison, the background 24-hour and annual PM_{10} concentrations are 107 micrograms per cubic meter and 22.7 micrograms per cubic meter, respectively.

Additional Environmental Analysis

NO_2 Analysis

As a surrogate for NO_2 emissions that would result from the proposed project, NO_X emissions were estimated for the existing 2018 baseline as well as the No-Build Alternative and the build alternatives for the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year using project-specific traffic data and CT-EMFAC2021. As shown in Table 2.3.6-11, compared to existing (2018) conditions, there would be a substantial reduction in the future NO_X emissions along all roadway segments. In addition, at the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year, the build alternatives would increase regional NO_X emissions by a maximum of 14.2 pounds per day, an increase of 0.7 percent. NO_X emissions for the build alternatives and No-Build Alternative would be less than under existing (2018) conditions at 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year due to the improvement in engine emissions technologies as well as the retirement of older vehicles.

Mobile-Source Air Toxics Analysis

FHWA released updated guidance in January 2023 (FHWA 2023) for determining when and how to address MSAT impacts in the NEPA process for transportation projects. FHWA identified three levels of analysis:

- No analysis for exempt projects or projects with no potential for meaningful MSAT effects,
- Qualitative analysis for projects with low potential MSAT effects, and
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

Projects with no impacts generally include those that a) qualify for a categorical exclusion under 23 CFR 771.117, b) qualify as exempt under the FCAA conformity rule (40 CFR 93.126), and c) are not exempt but have no meaningful impacts on traffic volumes or vehicle mix.

Projects that have low potential MSAT effects are those that serve to improve highway, transit, or freight operations or movement without adding substantial new capacity or creating a facility that is likely to substantially increase emissions. The large majority of projects fall into this category.

Projects with high potential MSAT effects include those that:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel PM in a single location; or
- Create new or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where annual ADT (AADT) is projected to be in the range of 140,000 to 150,000, or greater, by the design year; and
- Are proposed to be located in proximity to populated areas or, in rural areas, in proximity to concentrations of vulnerable populations (i.e., schools, nursing homes, hospitals).

With respect to the proposed project, the projected maximum AADT volumes at the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year would be above the 140,000 to 150,000 AADT criterion established by FHWA for projects considered to have higher potential for 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.

The latest version of CT-EMFAC, CT-EMFAC2021, released in February 2023, was used to estimate emissions of benzene, 1,3-butadiene, formaldehyde, acrolein, naphthalene, diesel PM, and polycyclic organic matter. Figure 2.3.6-4 illustrates the extent of the area considered in the MSAT analysis. Traffic activity data were estimated for the 2018 baseline, 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year. The air quality report includes traffic activity data (Caltrans 2025). Emissions were estimated for all MSATs using CT-EMFAC, based on EMFAC and speciation factors provided by ARB and EPA.

MSAT emissions were estimated for the baseline, No-Build Alternative, and build alternatives for the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year. The modeling results for the baseline, No-Build Alternative, and build alternatives are presented in Table 2.3.6-12 and the air quality report (Caltrans 2025).

In addition to regional emissions, MSAT emissions generated along each segment of US 101 were calculated using total ADT, truck ADT, the length of the roadway segment in miles, and the emission rates generated by the CT-EMFAC2021 model. The emission results are included in the air quality report (Caltrans 2025).

As shown in Table 2.3.6-12 and the highway segment analysis included in the air quality report, minor increases in MSAT emissions would occur under the build alternatives relative to the No-Build Alternative in the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year (Caltrans 2025). In the 2040 opening year, 2045 RTP/SCS horizon year, and 2060 horizon year, MSAT emissions for the build alternatives and No-Build Alternative would be less than under existing (2018) conditions due to the improvement in engine emissions technologies as well as the retirement of older vehicles.

Air toxics analysis is an emerging field, and current scientific techniques, tools, and data are not sufficient for estimating accurately the human health effects that would result from a transportation project in a way that would be useful to decision-makers. Per FHWA's Updated Interim Guidance on Mobile-Source Air Toxic Analysis in NEPA Documents (2023), information is incomplete or unavailable to credibly predict project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

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Table 2.3.6-12. Summary of Comparative MSAT Emissions Analysis (pounds per day)

Analysis Scenario	1,3-Butadiene	Acetaldehyde	Acrolein	Benzene	Diesel PM	Ethyl-benzene	Formaldehyde	Naphthalene	Polycyclic Organic Matter
2018 Baseline/Existing	5.48	24.36	0.61	73.39	145.87	27.71	55.42	4.87	1.52
2040 Opening Year									
Alternative 1 No Build	1.37	6.84	0.34	23.95	20.53	10.26	13.68	1.03	0.34
Increase from Existing	(4.11)	(17.52)	(0.27)	(49.44)	(125.34)	(17.45)	(41.74)	(3.85)	(1.18)
Alternative 2	1.37	6.86	0.34	24.00	20.57	10.29	13.72	1.03	0.34
Increase from Existing	(4.11)	(17.50)	(0.27)	(49.39)	(125.29)	(17.42)	(41.71)	(3.84)	(1.18)
Increase from No Build	0.00	0.02	0.00	0.06	0.05	0.02	0.03	0.00	0.00
Alternative 3	1.38	6.89	0.34	24.11	20.66	10.33	13.78	1.03	0.34
Increase from Existing	(4.10)	(17.47)	(0.26)	(49.28)	(125.20)	(17.38)	(41.65)	(3.84)	(1.18)
Increase from No Build	0.01	0.05	0.00	0.16	0.14	0.07	0.09	0.01	0.00
2045 RTP/SCS Horizon Year									
Alternative 1 No Build	1.03	3.45	0.34	20.68	20.68	10.34	10.34	1.03	0.34
Increase from Existing	(4.45)	(20.92)	(0.26)	(52.71)	(125.19)	(17.37)	(45.08)	(3.84)	(1.18)
Alternative 2	1.04	3.45	0.35	20.73	20.73	10.36	10.36	1.04	0.35
Increase from Existing	(4.45)	(20.91)	(0.26)	(52.66)	(125.14)	(17.35)	(45.06)	(3.84)	(1.18)
Increase from No Build	0.00	0.01	0.00	0.05	0.05	0.02	0.02	0.00	0.00
Alternative 3	1.04	3.47	0.35	20.82	20.82	10.41	10.41	1.04	0.35
Increase from Existing	(4.44)	(20.89)	(0.26)	(52.57)	(125.05)	(17.30)	(45.01)	(3.83)	(1.18)
Increase from No Build	0.01	0.02	0.00	0.14	0.14	0.07	0.07	0.01	0.00
2060 Horizon Year									
Alternative 1 No Build	1.06	3.52	0.35	21.14	21.14	10.57	10.57	1.06	0.35
Increase from Existing	(4.42)	(20.84)	(0.26)	(52.25)	(124.73)	(17.14)	(44.85)	(3.82)	(1.17)
Alternative 2	1.06	3.53	0.35	21.19	21.19	10.60	10.60	1.06	0.35
Increase from Existing	(4.42)	(20.83)	(0.26)	(52.20)	(124.68)	(17.12)	(44.83)	(3.81)	(1.17)
Increase from No Build	0.00	0.01	0.00	0.05	0.05	0.02	0.02	0.00	0.00
Alternative 3	1.06	3.55	0.35	21.28	21.28	10.64	10.64	1.06	0.35
Increase from Existing	(4.42)	(20.81)	(0.25)	(52.11)	(124.58)	(17.07)	(44.78)	(3.81)	(1.17)
Increase from No Build	0.01	0.02	0.00	0.14	0.14	0.07	0.07	0.01	0.00

Source: Emissions modeled using CT-EMFAC2017. See modeling outputs provided in the air quality report (Caltrans 2025).
DPM = diesel particulate matter; ( ) = negative value.

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2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain the existing configuration of US 101 and would not result in improvements. Under the No-Build Alternative, the project would not be constructed, and no impacts related to air quality would occur. Therefore, the No-Build Alternative would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add and HOV/Express Bus Lane in Each Direction with Design Variations

The measures below, **AQ-1** through **AQ-4**, and measures **HW-4** and **HW-5** (see Section 2.3.5.4) are included as part of the project to avoid and/or minimize impacts related to air quality. Measures **AQ-1** through **AQ-4** would be implemented during construction.

AQ-1: Adhere to Caltrans Standard Specifications. The contractor will adhere to Caltrans Standard Specifications for construction (Section 14-9.02) and nonstandard Special Provision 14-9.05, which requires the contractor to comply with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

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

AQ-3: Control Ozone Precursor Emissions. Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications.

AQ-4: Control Fugitive Dust Emissions. During clearing, grading, earthmoving, or excavation, fugitive dust emissions will be controlled by regular watering or with other dust preventive measures using the following procedures, as specified in VCAPCD Rule 55. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The areas disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.

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2.3.7 Noise and Vibration

2.3.7.1 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 foster a healthy environment. The requirements for the analysis of noise and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strict baseline-versus-build analysis to assess whether a proposed project would have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless the measures are not feasible.

The rest of this section focuses on the NEPA/Title 23 Code of Federal Regulations (CFR) Part 772 noise analysis (23 CFR 772). Please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration (FHWA) involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require potential noise impacts in areas of frequent human use to be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC), which are used to determine when a noise impact would occur. The NAC differ, depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2.3.7-1 lists the NAC for use in a NEPA/23 CFR 772 analysis.

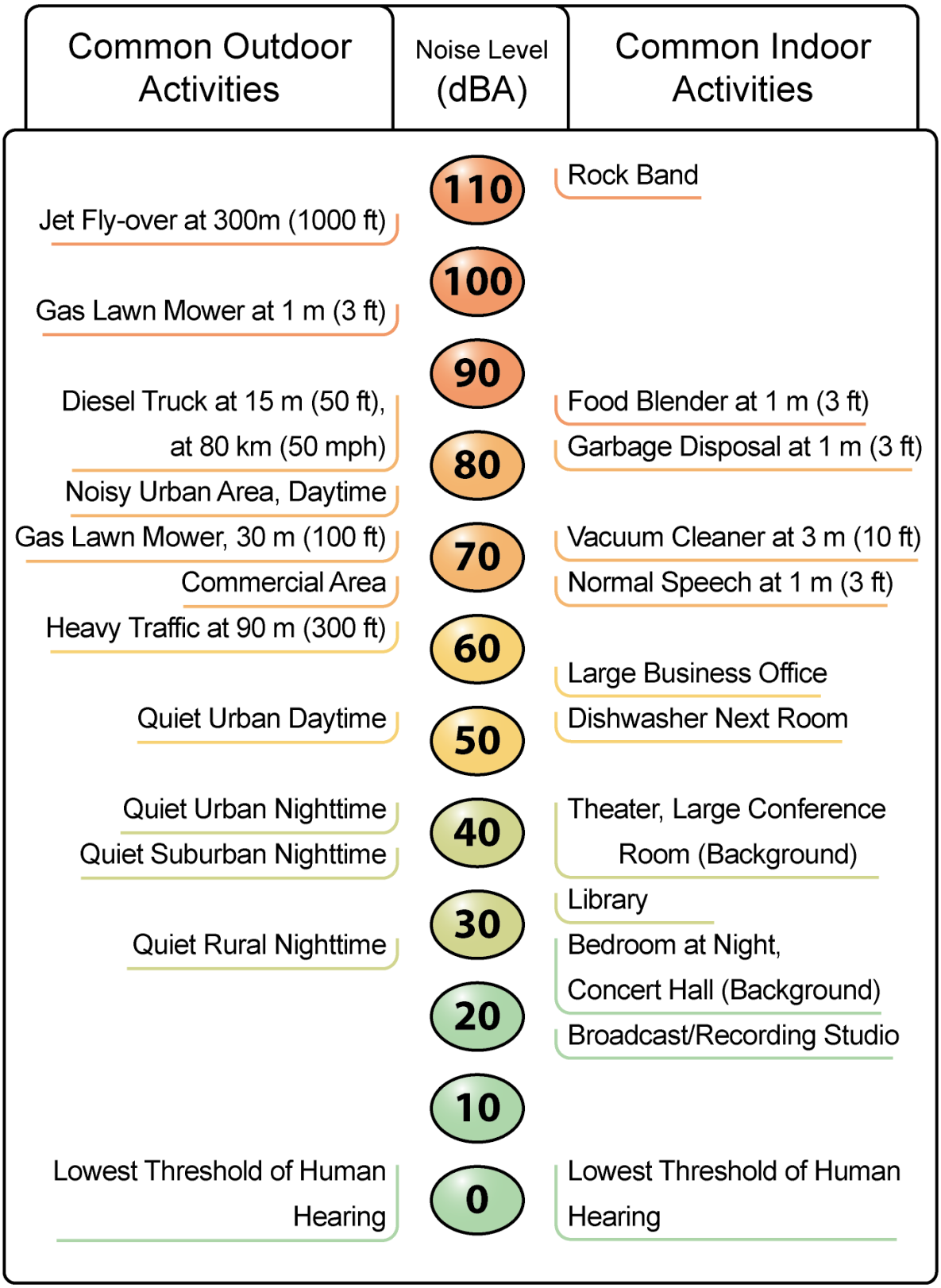
Table 2.3.7-1. Noise-Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, $L_{eq}(h)$	Description of Activity Category[a]
A	57 (exterior)	Lands where 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[a]	67 (exterior)	Residential.
C	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.

[a] Includes undeveloped lands that are permitted for the activity category.
NAC = noise abatement criteria; $L_{eq}(h)$ = hourly equivalent continuous sound level

Figure 2.3.7-1 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 2.3.7-1. Noise Levels of Common Activities



According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects,* May 2011*,* a noise impact occurs when the predicted future noise level with a project substantially exceeds the existing noise level (defined as 12 dBA or more) or when the future noise level with a project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC.

If it is determined that a project would have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 decibels (dB) at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors, 2) the cost of noise abatement, and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

2.3.7.2 Affected Environment

This section is based on the analysis and findings presented in the Noise Study Report (NSR) (Caltrans 2022a) and Noise Abatement Decision Report (NADR) (Caltrans 2022b).

Land Uses

As required by the *Traffic Noise Analysis Protocol*, noise abatement is considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, the impact analysis focused primarily on locations with defined outdoor activity areas, such as residential backyards, common use areas at multi-family residences, parks, schools, and places of worship. Table 2.3.7-2 provides a summary of the project's noise study areas. Maps showing measurement (short- and long-term) and modeling locations are provided on the project's website at http://www.ourfuture101.org/.

Table 2.3.7-2. Summary of Noise Study Areas

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
1	South side of US 101 between SR-23 and N. Moorpark Road	6	• M01.01 through M01.07 • M01.02/LT01.01 • M01.04/ST01.01 • M01.06/ST01.02	• Undeveloped (Activity Category G) • Commercial (Activity Category E) • Residential (Activity Category B)
2	North side of US 101 between SR-23 and N. Moorpark Road	3	• M02.01/ST02.01, through M02.07/ST02.02 • M02.01/ST02.01 • M02.04/LT02.01 • M02.07/ST02.02	• Commercial (Activity Category E)
3	South side of US 101 between N. Moorpark Road and Lynn Road	32	• M03.01 through M03.23 • M03.02/ST01.01 • M03.17/LT03.01	• Recreational (Activity Category C) • Residential (Activity Category B)
4	North side of US 101 between N. Moorpark Road and Lynn Road	2	• M04.01/ST04.01 through M04.06 • M04.01/ST04.01	• Commercial (Activity Category E)
5	South side of US 101 between Lynn Road and N. Ventu Park Road	66	• M05.01 through M05.43/ST05.04 • M05.05/ST05.01 • M05.13/ST05.02 • M05.24/LT05.01 • M05.33/ST05.03 • M05.43/ST05.04	• Residential (Activity Category B) • Recreational (Activity Category C) • Commercial (Activity Category E)
6	North side of US 101 between Lynn Road and N. Ventu Park Road	27	• M06.01 through M06.25/ST06.04 • M06.03/ST06.01 • M06.06/ST06.02 • M06.12/LT06.01 • M06.17/ST06.03 • M06.25/ST06.04	• Residential (Activity Category B) • Commercial (Activity Category E)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
7	South side of US 101 between N. Ventu Park Road and Rancho Conejo Boulevard	12	• M07.01/ST07.01 through M07.14 • M07.01/ST07.01 • M07.04/ST07.02 • M07.10/ST07.03	• Commercial (Activity Category E) • School field (Activity Category C)
8	North side of US 101 between N. Ventu Park Road and Rancho Conejo Boulevard	166	• M08.01 through M08.74 • M08.02/ST08.01 • M08.08/ST08.02 • M08.13/LT08.01 • M08.59/ST08.03 • M08.68/ST08.04	• Residential (Activity Category B) • Commercial (Activity Category E)
9	South side of US 101 between Rancho Conejo Boulevard and Camino Dos Rios	46	• M09.01 through M09.25 • M09.05/ST09.01 • M09.08/LT09.01 • M09.17/ST09.02 • M09.22/ST09.03	• Residential (Activity Category B) • Undeveloped (Activity Category G) • Commercial (Activity Category E)
10	North side of US 101 between Rancho Conejo Boulevard and Camino Dos Rios	5	• M10.01 through M10.07 • M10.02/ST10.01 • M10.05/ST10.02	• Commercial (Activity Category E)
11	South side of US 101 between Camino Dos Rios and the US 101 weigh station	3	• M11.01/ST11.01 through M11.09 • M11.01/ST11.01 • M11.04/ST11.02 • M11.05/LT11.01	• Commercial (Activity Category E) • Churches (Activity Category C)
12	North side of US 101 between Camino Dos Rios and the US 101 weigh station	3	• M12.01 through M12.07 • M12.02/ST12.01 • M12.04/ST12.02	• Commercial (Activity Category E) • Senior living facility (Activity Category C)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
13	South side of US 101 between the US 101 weigh station and Camarillo Springs Road	54	• M13.01 through M13.38 • M13.04/ST13.01 • M13.04/LT13.01 • M13.30/ST13.02	• Residential (Activity Category B) • Undeveloped (Activity Category G)
14	North side of US 101 between the US 101 weigh station and Camarillo Springs Road	0	• N/A	• Completely undeveloped
15	South side of US 101 between Camarillo Springs Road and Pleasant Valley Road	7	• M15.01 through M15.12 • M15.03/ST15.01 • M15.07/ST15.02 • M15.11/ST15.03	• Agricultural (Activity Category F) • Recreational (Activity Category C) • Commercial (Activity Category E)
16	North side of US 101 between Camarillo Springs Road and Pleasant Valley Road	54	• M16.01 through M16.31 • M16.04/ST16.01 • M16.11/ST16.02 • M16.26/LT16.01 • M16.30/ST16.03	• Commercial (Activity Category E) • Undeveloped (Activity Category G) • Residential (Activity Category B)
17	South side of US 101 between Pleasant Valley Road and Village at the Park Drive	50	• M17.01 through M17.35 • M17.10/LT17.01 • M17.16/ST17.01 • M17.28/ST17.02	• Residential (Activity Category B) • Recreational (Activity Category C)
18	North side of US 101 between Pleasant Valley Road and the Amtrak overcrossing	17	• M18.01 through M18.17 • M18.07/ST18.01 • M18.14/ST18.02	• Commercial (Activity Category E) • Recreational (Activity Category C)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
19	South side of US 101 between Village at the Park Drive and Carmen Drive	68	• M19.01 through M19.51/ST19.07 • M19.03/ST19.01 • M19.06/ST19.02 • M19.09/ST19.03 • M19.18/ST19.04 • M19.20/ST19.05 • M19.39/ST19.06 • M19.51/ST19.07	• Residential (Activity Category B) • Commercial (Activity Category E) • Recreational (Activity Category C)
20	North side of US 101 between Pleasant Valley Road and the Amtrak overcrossing	54	• M20.01 through M20.29/ST20.03 • M20.03/LT20.01 • M20.11/ST20.01 • M20.26/ST20.02 • M20.29/ST20.03	• Residential (Activity Category B)
21	South side of US 101 between Carmen Drive and Las Posas Road	35	• M21.01 through M21.21/ST21.04 • M21.06/ST21.01 • M21.08/ST21.02 • M21.11/ST21.03 • M21.18/LT21.01 • M21.21/ST21.05	• Residential (Activity Category B) • Commercial (Activity Category E)
22	North side of US 101 between Carmen Drive and Las Posas Road	6	• M22.01 through M22.13 • M22.05/ST22.01 • M22.11/ST22.02	• Commercial (Activity Category E)
23	South side of US 101 between Las Posas Road and Springville Drive	1	• M23.01 through M23.07 • M23.02/ST23.01	• Commercial (Activity Category E) • Undeveloped (Activity Category G)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
24	North side of US 101 between Las Posas Road and Springville Drive	129	• M24.01 through M24.83 • M24.05/ST24.01 • M24.40/ST24.02 • M24.60/LT24.01 • M24.79/ST24.03	• Residential (Activity Category B) • Commercial (Activity Category E)
25	South side of US 101 between Springville Drive and Central Avenue	1	• M25.01 through M25.06 • M25.04/ST25.01	• Commercial (Activity Category E) • Undeveloped (Activity Category G)
26	North side of US 101 between Springville Drive and Central Avenue	1	• M26.01 through M26.07 • M26.02/ST26.01 • M26.06/LT26.01	• Undeveloped (Activity Category G) • Agricultural (Activity Category F) • Residential (Activity Category B)
27	South side of US 101 between Central Avenue and N. Del Norte Boulevard	6	• M27.01/ST27.01 through M27.11 • M27.01/ST27.01 • M27.04/LT27.01 • M27.10/ST27.02	• Residential (Activity Category B) • Undeveloped (Activity Category G) • Agricultural (Activity Category F) • Commercial (Activity Category E) • Church (Activity Category C)
28	North side of US 101 between Central Avenue and N. Del Norte Boulevard	23	• M28.01 through M28.16 • M28.02/ST28.01 • M28.09/ST28.02	• Commercial (Activity Category C) • Residential (Activity Category B) • Undeveloped (Activity Category G) • Agricultural (Activity Category F) • Church (Activity Category C)
29	South side of US 101 between N. Del Norte Boulevard and Rice Avenue	0	• M29.01 through M29.05	• Agricultural (Activity Category F)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
30	North side of US 101 between N. Del Norte Boulevard and Rice Avenue	54	• M30.01/ST30.01 through M30.44 • M30.01/ST30.01 • M30.18/ST30.02 • M30.34/LT30.01 • M30.41/ST30.03	• Residential (Activity Category B) • Commercial (Activity Category E)
31	South side of US 101 between Rice Avenue and N. Rose Avenue	7	• M31.01 through M31.09 • M31.02/ST31.01 • M31.06/ST31.02	• Commercial (Activity Category E) • College (Activity Category C)
32	North side of US 101 between Rice Avenue and N. Rose Avenue	37	• M32.01/LT32.01 through M32.26 • M32.01/LT32.01 • M32.14/ST32.01 • M32.23/ST32.02	• Residential (Activity Category B) • Commercial (Activity Category E)
33	South side of US 101 between N. Rose Avenue and E. Vineyard Avenue	84	• M33.01 through M33.52 • M33.06/ST33.01 • M33.15/ST33.02 • M33.33/LT33.01 • M33.38/ST33.03 • M33.50/ST33.04	• Residential (Activity Category B) • Daycare centers, churches (Activity Category C) • Commercial (Activity Category E)
34	North side of US 101 between N. Rose Avenue and E. Vineyard Avenue	78	• M34.01/ST34.01 through M34.53 • M34.01/ST34.01 • M34.12/ST34.02 • M34.47/ST34.03 • M34.50/ST34.04	• Residential (Activity Category B) • Commercial (Activity Category E)
35	South side of US 101 between E. Vineyard Avenue and the Santa Clara River	6	• M35.01 through M35.13 • M35.12/ST35.01	• Residential (Activity Category B) • Commercial (Activity Category E)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
36	North side of US 101 between E. Vineyard Avenue and the Santa Clara River	81	• M36.01 through M36.60/ST36.04 • M36.02/ST36.01 • M36.13/ST36.02 • M36.20/LT36.01 • M36.41/ST36.03 • M36.60/ST36.04	• Residential (Activity Category B) • Commercial (Activity Category E)
37	South side of US 101 between the Santa Clara River and S. Victoria Avenue	2	• M37.01 through M37.08/ST37.02 • M37.03/ST37.01 • M37.08/ST37.02	• Commercial (Activity Category E)
38	North side of US 101 between the Santa Clara River and S. Victoria Avenue	28	• M38.01/ST38.01 through M38.17 • M38.01/ST38.01 • M38.12/LT38.01 • M38.16/ST38.02	• Residential (Activity Category B) • Commercial (Activity Category E)
39	South side of US 101 between the S. Victoria Avenue and Telephone Road	16	• M39.01 through M39.22 • M39.03/ST39.01 • M39.06/ST39.02 • M39.14/ST39.03 • M39.20/ST39.04	• Commercial (Activity Category E) • School and a cemetery (Activity Category C)
40	North side of US 101 between S. Victoria Avenue and the SR-126 interchange	90	• M40.01 through M40.63 • M40.09/LT40.01 • M40.30/ST40.01 • M40.37/ST40.02 • M40.38/LT40.02 • M40.61/ST40.03	• Residential (Activity Category B) • Recreational (Activity Category C) • Commercial (Activity Category E)
41	South side of US 101 between the Telephone Road and the SR-126 interchange	4	• M41.01 through M41.10 • M41.06/ST41.01	• Commercial (Activity Category E) • Church (Activity Category C)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
42	North side of US 101 between S. Victoria Avenue and the SR-126 interchange	88	• M42.01 through M42.60 • M42.05/ST42.01 • M42.12/LT42.01 • M42.30/ST42.02	• Residential (Activity Category B) • Recreational (Activity Category C)
43	South side of US 101 between the SR-126 interchange and Seaward Avenue	82	• M43.01 through M43.49 • M43.14/ST43.01 • M43.37/LT43.01 • M43.45/ST43.02	• Residential (Activity Category B) • Commercial (Activity Category E)
44	North side of US 101 between E. Main Street and Seaward Avenue (NAA 44)	74	• M44.01 through M44.41 • M44.06/ST44.01 • M44.17/LT44.01 • M44.31/ST44.02	• Residential (Activity Category B) • Commercial (Activity Category E)
45	South side of US 101 between Seaward Avenue and the San Jon Road overcrossing	10	• M45.01/ST45.01 through M45.13 • M45.01/ST45.01 • M45.05/ST45.02 • M45.09/ST45.03	• Recreational (Activity Category C), including San Buenaventura State Beach • Commercial (Activity Category E)
46	North side of US 101 between Seaward Avenue and the San Jon Road overcrossing	81	• M46.01/ST46.01 through M46.38 • M46.01/ST46.01 • M46.08/ST46.02 • M46.12/ST46.03 • M46.29/LT46.01	• Residential (Activity Category B) • Commercial (Activity Category E)
47	South side of US 101 between the San Jon Road overcrossing and California Street	3	• M47.01 through M47.07 • M47.05/ST47.01	• Recreational (Activity Category C) • Commercial (Activity Category E)

NAA No.	Location	Number of Receivers/ Equivalent Dwelling Units	Receptors/Measurement Locations	Activity Categories Represented
48	North side of US 101 between the San Jon Road overcrossing and California Street	64	• M48.01/ST48.01 through M48.21 • M48.01/ST48.01 • M48.07/ST48.02 • M48.16/ST48.03	• Residential (Activity Category B) • Commercial (Activity Category E)
49	South side of US 101 between California Street and the project terminus at SR-33	72	• M49.01 through M49.38 • M49.26/LT49.01 • M49.34/ST49.01 • M49.37/ST49.02	• Residential (Activity Category B) • Commercial (Activity Category E)
50	North side of US 101 between California Street and the project terminus at SR-33	62	• M50.01 through M50.45/ST50.02 • M50.10/LT50.01 • M50.19/ST50.01 • M50.45/ST50.02	• Residential (Activity Category B) • Commercial (Activity Category E)

Maps showing the location for all measurements (both short and long term) as well as the locations for modeling are provided on the project's website at: http://www.ourfuture101.org/. The maps also provide a visual representation of the land uses surrounding the project alignment.
NAA = Noise Analysis Area; SR = State Route

Existing Noise Environment

In November and December 2020, analysts took noise measurements at 149 representative locations within the project study area for use in evaluating the existing noise environment and calibrating the traffic noise model. A map of these locations can be found on the project's website at http://www.ourfuture101.org/. Short-term measurements (20 minutes each) were conducted at 120 locations; long-term measurements (22–36 hours) were conducted at 29 locations. Exterior noise measurements were also taken to determine the interior noise levels at 20 locations: 11 places of worship, five schools, two day-care centers, one cemetery chapel, and one radio studio. To determine interior noise impacts, the design-year noise levels calculated during the modeling process assumed a 20 dB exterior-to-interior insertion loss to account for the building shell. The 20 dB exterior-to-interior insertion loss is based on FHWA's *Highway Traffic Noise Analysis and Abatement Guidance* (FHWA 2011) for building noise reduction factors—specifically, for light-frame buildings. The measured building attenuation was applied to the predicted future exterior noise level to obtain the predicted future indoor noise level.

Traffic Noise Model

Traffic Noise Model (TNM) version 2.5 was used for noise level computations. TNM input is based on a three-dimensional grid created for the study area to be modeled. In order to make sure the TNM modeling represents actual conditions, the model was validated by comparing measured traffic noise levels to the model's estimate of existing noise levels at field measurement locations. Short-term and long-term noise measurements were used for TNM calibration. Multiple refinements were made to the noise models; however, after discussion with Caltrans, due to the complexity of the topography in the project area, K-factors for any deviation between modeled and measured noise levels were applied to monitoring locations. Detailed information about how traffic noise levels were calculated and the TNM calibration process is provided in more detail in the NSR.

2.3.7.3 Environmental Consequences

Alternative 1: No-Build Alternative

Noise in the study area is dominated by traffic along US 101, State Route (SR-) 23, SR-33, and local arterial streets. Existing noise levels in the bordering communities within the project corridor are already affected by highway noise, and these conditions are projected to worsen. The No-Build Alternative would not result in any improvements within the study area; therefore, noise abatement would not be implemented.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction

State highway agencies must complete a noise analysis for a project if the requirements of 23 CFR 772 apply. The project would include an activity associated with a Type I or Type II project, as defined. The US 101 Improvement Project is considered a Type I project under 23 CFR 772 because the proposed construction would add capacity

through a high-occupancy vehicle/express bus lane, thereby triggering the requirement for noise analysis.

Temporary Impacts

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 2.3.7-3 summarizes noise levels produced by construction equipment commonly used on roadway construction projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 89 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of approximately 6 dB per doubling of distance.

Table 2.3.7-3. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 2018.

Construction noise varies greatly, depending on the construction process, the type and condition of the equipment used, and the layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of assessment. Temporary construction noise impacts would be unavoidable in areas immediately adjacent to the proposed project alignment.

Permanent Impacts

The NSR summarizes the predicted traffic noise levels for the existing-year and design-year no-build conditions as well as design-year conditions for Build Alternative 2. Predicted design-year traffic noise levels are compared to existing conditions and the design-year no-build condition. Modeling results within the NSR indicate that predicted worst-hour traffic noise levels (hourly equivalent continuous sound level, or $L_{eq}[h]$) for design-year Build Alternative 2 conditions approach or exceed the NAC of 67 dBA for Activity Categories B and C land uses at many of the residences, schools, churches, and parks throughout the study corridor.

Modeling results also indicate that several Activity Category D land uses are predicted to have worst-hour traffic noise levels for design-year Build Alternative 2 conditions that approach or exceed the interior NAC of 52 dBA. Many hotels, restaurants, and commercial buildings with outdoor use areas were also predicted to have worst-hour traffic noise levels for design-year Build Alternative 2 conditions that approach or

exceed the NAC of 72 dBA for Activity Category E land uses. Therefore, traffic noise impacts are predicted to occur at Activity Category B, C, D, and E land uses within the project area. Accordingly, noise abatement must be considered at those locations; however, in some cases, noise abatement has not been considered for Activity Category E land uses where there are no discernible outdoor areas. Although outdoor trails along the project corridor are classified as Activity Category C, they are deemed to be transient uses, which do not warrant consideration of noise abatement measures. For a complete list of affected receivers, please refer to the impact tables in Appendix B of the NSR.

The preliminary noise abatement decisions for each acoustically feasible soundwall that meets the design goal, identified for Alternative 2 within the NSR and NADR, are provided below in Table 2.3.7-4, and a map of the proposed barrier locations can be found on the project's website at http://www.ourfuture101.org/.

Table 2.3.7-4. Summary of Soundwall Abatement Key Information – Alternative 2

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
NAA 2 and 4	S182 and S194	Edge of Shoulder	1,140 (S182) and 790 (S194)	10	3	$321,000	$790,812	No
				12	3	$321,000	$907,540	No
				14	3	$321,000	$1,024,269	No
				16	3	$321,000	$1,140,998	No
				18	3	$321,000	$1,257,726	No
NAA 3	S209 and S229	Edge of Shoulder	4,210 (S209) and 600 (S229)	8	7	$749,000	$2,764,244	No
				10	7	$749,000	$3,055,364	No
				12	8	$856,000	$3,346,484	No
				14	8	$856,000	$3,637,604	No
				16	10	$1,070,000	$3,928,724	No
				18	12	$1,284,000	$4,219,844	No
NAA 5	S261 and S281	Edge of Shoulder	2,595 (S261) and 1,285 (S281)	8	20	$2,140,000	$1,377,773	Yes
				10	24	$2,568,000	$1,612,544	Yes
				12	25	$2,675,000	$1,847,314	Yes
				14	26	$2,782,000	$2,082,084	Yes
				16	31	$3,317,000	$2,316,854	Yes
				18	34	$3,638,000	$2,551,625	Yes
NAA 6	S262	Edge of Shoulder	4,615	10	13	$1,391,000	$1,693,555	No
				12	25	$2,675,000	$1,972,721	Yes
				14	26	$2,782,000	$2,251,886	Yes
				16	26	$2,782,000	$2,531,051	Yes
				18	26	$2,782,000	$2,810,216	Yes[b]
NAA 7	S299, S303,	Edge of Shoulder	300 (S299), 1,685 (S303), 1,100	8	7	$749,000	$2,242,311	No
				10	9	$963,000	$2,417,590	No
				12	10	$1,070,000	$2,597,984	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
	S319, and S327		(S319), and 300 (S327)	14	10	$1,070,000	$2,782,266	No
				16	10	$1,070,000	$2,969,571	No
				18	10	$1,070,000	$3,159,273	No
NAA 8	S314 and S330	Edge of Shoulder	3,215 (S314) and 595 (S330)	8	112	$11,984,000	$1,053,550	Yes
				10	127	$13,589,000	$1,278,489	Yes
				12	144	$15,408,000	$1,503,428	Yes
				14	164	$17,548,000	$1,728,367	Yes
				16	165	$17,655,000	$1,953,306	Yes
				18	165	$17,655,000	$2,178,245	Yes
NAA 9	S359	Edge of Shoulder	900	14	2	$214,000	$308,438	No
				16	2	$214,000	$362,870	No
				18	2	$214,000	$417,302	No
NAA 9	S387	Right of Way, Transitioning to Edge of Shoulder	560	14	1	$107,000	$273,488	No
				16	1	$107,000	$307,392	No
				18	1	$107,000	$341,297	No
NAA 11	S403	Edge of Shoulder	1,400	16	2	$214,000	$718,188	No
				18	2	$214,000	$803,015	No
NAA 13	S519, S525, and S531	Edge of Shoulder	625 (S519), 505 (S525), and 665 (S531)	10	20	$2,140,000	$506,729	Yes
				12	23	$2,461,000	$615,073	Yes
				14	25	$2,675,000	$723,416	Yes
				16	27	$2,889,000	$831,759	Yes
				18	28	$2,996,000	$940,103	Yes
NAA 15	S555	Edge of Shoulder	1,125	12	4	$428,000	$849,105	No
				14	4	$428,000	$917,215	No
				16	4	$428,000	$985,326	No
				18	4	$428,000	$1,053,437	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
NAA 16	S586	Edge of Shoulder	1,400	14	3	$321,000	$632,367	No
				16	3	$321,000	$717,061	No
				18	3	$321,000	$801,755	No
NAA 16	S606	Edge of Shoulder	1,090	10	5	$535,000	$1,143,072	No
				12	5	$535,000	$1,193,280	No
				14	7	$749,000	$1,246,003	No
				16	11	$1,177,000	$1,300,683	Yes[b]
				18	13	$1,391,000	$1,356,916	Yes
NAA 17	S657	Edge of Shoulder	4,870	8	2	$214,000	$1,846,634	No
				10	9	$963,000	$2,141,317	No
				12	16	$1,712,000	$2,436,000	No
				14	18	$1,926,000	$2,730,684	No
				16	20	$2,140,000	$3,025,367	No
				18	23	$2,461,000	$3,320,051	No
NAA 18	S668	Edge of Shoulder	1,175	16	2	$214,000	$1,402,985	No
				18	2	$214,000	$1,463,660	No
NAA 19	S695, S707, and S729	Edge of Shoulder	1,630 (S695), 580 (S707), and 2,950 (S729)	8	4	$428,000	$2,900,975	No
				10	14	$1,498,000	$3,207,137	No
				12	23	$2,461,000	$3,514,819	No
				14	27	$2,889,000	$3,823,655	No
				16	34	$3,638,000	$4,133,389	No
				18	42	$4,494,000	$4,443,834	Yes[b]
NAA 20	S714, S720, S726, and S736	Edge of Shoulder	360 (S714), 700 (S720), 600 (S726), and 945 (S736)	8	18	$1,926,000	$571,490	Yes
				10	27	$2,889,000	$729,286	Yes
				12	28	$2,996,000	$887,082	Yes
				14	31	$3,317,000	$1,044,878	Yes

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
				16	31	$3,317,000	$1,202,674	Yes
				18	34	$3,638,000	$1,360,470	Yes
NAA 21	S755, S757, and S765	Edge of Shoulder	720 (S755), 510 (S757), and 1,000 (S765)	10	2	$214,000	$1,920,590	No
				12	6	$642,000	$2,030,641	No
				14	13	$1,391,000	$2,144,661	No
				16	18	$1,926,000	$2,261,767	No
				18	18	$1,926,000	$2,381,322	No
NAA 22	S760	Edge of Shoulder	900	8	3	$321,000	$555,938	No
				10	3	$321,000	$610,369	No
				12	4	$428,000	$664,801	No
				14	4	$428,000	$719,233	No
				16	4	$428,000	$773,665	No
				18	4	$428,000	$828,097	No
NAA 23	S813 and S819	Edge of Shoulder	500 (S813) and 895 (S819)	10	1	$107,000	$309,998	No
				12	1	$107,000	$394,547	No
				14	1	$107,000	$479,095	No
				16	1	$107,000	$563,644	No
				18	1	$107,000	$648,193	No
NAA 24	S810, S826, and S848	Edge of Shoulder	240 (S810), 3,980 (S826), and 500 (S848)	12	17	$1,819,000	$4,538,871	No
				14	61	$6,527,000	$4,776,161	Yes
				16	71	$7,597,000	$5,020,597	Yes
				18	73	$7,811,000	$5,270,701	Yes
NAA 25	S885	Edge of Shoulder	1,400	8	1	$107,000	$378,367	No
				10	1	$107,000	$463,079	No
				12	1	$107,000	$547,791	No
				14	1	$107,000	$632,503	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
				16	1	$107,000	$717,215	No
				18	1	$107,000	$801,927	No
NAA 26	S896	Edge of Shoulder	1,400	10	1	$107,000	$411,663	No
				12	1	$107,000	$496,254	No
				14	1	$107,000	$580,845	No
				16	1	$107,000	$665,436	No
				18	1	$107,000	$750,027	No
NAA 27	S913	Edge of Shoulder	695	12	1	$107,000	$245,962	No
				14	1	$107,000	$287,888	No
				16	1	$107,000	$329,815	No
				18	1	$107,000	$371,741	No
NAA 27	S939	Edge of Shoulder	2,000	8	4	$428,000	$540,392	No
				10	4	$428,000	$661,380	No
				12	4	$428,000	$782,368	No
				14	4	$428,000	$903,356	No
				16	4	$428,000	$1,024,344	No
				18	4	$428,000	$1,145,332	No
NAA 27	S969	Edge of Shoulder	800	10	1	$107,000	$177,370	No
				12	1	$107,000	$225,746	No
				14	1	$107,000	$274,121	No
				16	1	$107,000	$322,497	No
				18	1	$107,000	$370,873	No
NAA 28	S918	Edge of Shoulder	2,000	8	3	$321,000	$322,888	Yes[b]
				10	4	$428,000	$443,979	Yes[b]
				12	4	$428,000	$565,070	No
				14	4	$428,000	$686,161	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
				16	7	$749,000	$807,251	Yes[b]
				18	10	$1,070,000	$928,342	Yes
NAA 30	S1002 and S1018	Edge of Shoulder	3,170 (S1002) and 700 (S1018)	8	21	$2,247,000	$3,635,823	No
				10	31	$3,317,000	$3,814,765	No
				12	39	$4,173,000	$4,003,339	Yes
				14	46	$4,922,000	$4,199,235	Yes
				16	49	$5,243,000	$4,400,824	Yes
				18	52	$5,564,000	$4,606,928	Yes
NAA 31	S1037	Edge of Shoulder	895	8	4	$428,000	$144,723	Yes
				10	4	$428,000	$198,998	Yes
				12	4	$428,000	$253,272	Yes
				14	4	$428,000	$307,547	Yes
				16	4	$428,000	$361,821	Yes
				18	4	$428,000	$416,096	Yes
NAA 32	S1034	Edge of Shoulder	755	8	10	$1,070,000	$607,493	Yes
				10	15	$1,605,000	$660,949	Yes
				12	15	$1,605,000	$718,350	Yes
				14	15	$1,605,000	$773,799	Yes
				16	18	$1,926,000	$829,036	Yes
				18	18	$1,926,000	$903,589	Yes
NAA 32	S1050	Edge of Shoulder	500	12	1	$107,000	$141,049	No
				14	1	$107,000	$171,274	No
				16	1	$107,000	$201,500	No
				18	1	$107,000	$231,726	No
NAA 33	S1085, S1097,		550 (S1085), 2,105 (S1097),	10	4	$428,000	$2,085,024	No
				12	6	$642,000	$2,300,870	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
	S1109, and S1117	Edge of Shoulder and Right of Way	740 (S1109), and 175 (S1117)	14	10	$1,070,000	$2,516,716	No
				16	33	$3,531,000	$2,732,562	Yes
				18	47	$5,029,000	$2,948,408	Yes
NAA 34	S1090	Edge of Shoulder	1,885	8	3	$321,000	$304,417	Yes
				10	6	$642,000	$418,580	Yes
				12	12	$1,284,000	$532,744	Yes
				14	28	$2,996,000	$646,907	Yes
				16	49	$5,243,000	$761,071	Yes
				18	62	$6,634,000	$875,234	Yes
NAA 34	S1116	Edge of Shoulder	1,080	8	4	$428,000	$1,084,640	No
				10	6	$642,000	$1,131,029	No
				12	6	$642,000	$1,180,693	No
				14	9	$963,000	$1,232,845	No
				16	9	$963,000	$1,286,933	No
				18	10	$1,070,000	$1,342,557	No
NAA 36	S1146	Edge of Shoulder	1,915	8	44	$4,708,000	$1,918,284	Yes
				10	56	$5,992,000	$2,000,686	Yes
				12	69	$7,383,000	$2,088,906	Yes
				14	75	$8,025,000	$2,181,547	Yes
				16	76	$8,132,000	$2,277,626	Yes
				18	76	$8,132,000	$2,376,433	Yes
NAA 37	S1263	Edge of Shoulder	490	16	1	$107,000	$636,389	No
				18	1	$107,000	$661,775	No
NAA 38 and 40	S1196	Edge of Shoulder	1,195	12	1	$107,000	$1,307,775	No
				14	1	$107,000	$1,365,593	No
				16	1	$107,000	$1,425,556	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
				18	1	$107,000	$1,487,222	No
NAA 38 and 40	S1258, S1268, and S1280	Edge of Shoulder	1,125 (S1258), 1,140 (S1268), and 1,305 (S1280)	8	28	$2,996,000	$2,766,499	Yes
				10	29	$3,103,000	$2,940,187	Yes
				12	39	$4,173,000	$3,121,257	Yes
				14	46	$4,922,000	$3,307,938	Yes
				16	52	$5,564,000	$3,498,983	Yes
				18	52	$5,564,000	$3,693,488	Yes
NAA 38 and 40	S1298	Edge of Shoulder	1,105	12	2	$214,000	$1,209,158	No
				14	2	$214,000	$1,262,583	No
				16	2	$214,000	$1,317,990	No
				18	2	$214,000	$1,374,971	No
NAA 38 and 40	S1354	Edge of Shoulder	2,160	8	21	$2,247,000	$2,164,768	Yes
				10	38	$4,066,000	$2,257,808	Yes
				12	43	$4,601,000	$2,357,416	Yes
				14	49	$5,243,000	$2,462,017	Yes
				16	49	$5,243,000	$2,570,499	Yes
				18	49	$5,243,000	$2,682,061	Yes
NAA 39	S1275 and S1287	Edge of Shoulder	600 (S1275) and 2,285 (S1287)	8	3	$321,000	$2,894,640	No
				10	4	$428,000	$3,018,754	No
				12	7	$749,000	$3,151,630	No
				14	9	$963,000	$3,291,164	No
				16	10	$1,070,000	$3,435,878	No
				18	12	$1,284,000	$3,584,700	No
NAA 39	S1311	Edge of Shoulder	805	8	1	$107,000	$810,542	No
				10	1	$107,000	$845,093	No
				12	1	$107,000	$882,082	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
				14	1	$107,000	$920,926	No
				16	1	$107,000	$961,211	No
				18	1	$107,000	$1,002,640	No
NAA 41	S1355	Edge of shoulder	565	12	3	$321,000	$743,073	No
				14	3	$321,000	$770,334	No
				16	3	$321,000	$798,608	No
				18	3	$321,000	$827,684	No
NAA 42	S1362 and S1372	Edge of Shoulder	3,400 (S1362) and 1,325 (S1372)	10	29	$3,103,000	$4,930,991	No
				12	41	$4,387,000	$5,148,618	No
				14	52	$5,564,000	$5,377,150	Yes
				16	60	$6,420,000	$5,614,165	Yes
				18	69	$7,383,000	$5,857,908	Yes
NAA 43	S1459	Edge of Shoulder	1,505	8	20	$2,140,000	$1,509,874	Yes
				10	37	$3,959,000	$1,574,633	Yes
				12	53	$5,671,000	$1,643,964	Yes
				14	55	$5,885,000	$1,716,770	Yes
				16	55	$5,885,000	$1,792,277	Yes
				18	55	$5,885,000	$1,869,929	Yes
NAA 44	S1396	Edge Shoulder	2,940	8	21	$2,247,000	$2,939,668	No
				10	38	$4,066,000	$3,066,183	Yes
				12	61	$6,527,000	$3,201,629	Yes
				14	70	$7,490,000	$3,343,863	Yes
				16	71	$7,597,000	$3,491,377	Yes
				18	71	$7,597,000	$3,643,077	Yes
NAA 45	S1503	Edge of Shoulder	1,760	14	6	$642,000	$2,004,620	No
				16	6	$642,000	$2,092,852	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance[a]	Estimated Construction Cost	Cost Less than Allowance?
				18	6	$642,000	$2,183,588	No
NAA 46 and 48	S1492, S1522, S1536, and S1546	Edge of Shoulder and Right of Way	4,665 (S1492), 1,620 (S1522), 1,405 (S1536), and 305 (S1546)	8	25	$2,675,000	$2,152,118	Yes
				10	32	$3,424,000	$2,273,095	Yes
				12	49	$5,243,000	$9,246,806	No
				14	76	$8,132,000	$9,676,387	No
				16	102	$10,914,000	$10,116,778	Yes
				18	106	$11,342,000	$10,609,833	Yes
NAA 46 and 48	S1550	Right of Way	245	14	1	$107,000	$250,943	No
				16	1	$107,000	$268,837	No
				18	1	$107,000	$292,988	No
NAA 46 and 48	S1554 and S1556	Edge of Shoulder and Right of Way	310 (S1554) and 210 (S1556)	12	2	$214,000	$496,536	No
				14	2	$214,000	$534,815	No
				16	6	$642,000	$572,947	Yes
				18	6	$642,000	$624,415	Yes
NAA 49	S1561 and S1567	Edge of Shoulder and Right of Way	300 (S1561) and 900 (S1567)	14	43	$4,601,000	$1,649,903	Yes
				16	49	$5,243,000	$1,723,446	Yes
				18	49	$5,243,000	$1,808,197	Yes
NAA 50	S1560 and S1578	Edge of Shoulder and Right of Way	685 (S1560) and 2,615 (S1578)	8	26	$2,782,000	$3,793,940	No
				10	46	$4,922,000	$3,954,822	Yes
				12	56	$5,992,000	$4,127,217	Yes
				14	57	$6,099,000	$4,303,875	Yes
				16	59	$6,313,000	$4,485,033	Yes
				18	60	$6,420,000	$4,687,417	Yes

[a.] Reasonableness allowance is based on the 2019 construction price Index of $107,000 per benefited receptor.
[b.] Cost to construct the soundwall is within 10 percent of the reasonableness allowance. Per Caltrans District 7 policy, this soundwall is therefore reasonable from a cost perspective.

A more detailed discussion of soundwalls considered under Alternative 2 is included below under the discussion of avoidance and minimization.

Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction activities and associated equipment and phases of the project under Build Alternative 3 would be similar to those under Build Alternative 2. Therefore, temporary construction noise impacts identified for Build Alternative 2 would also apply to Build Alternative 3.

Permanent Impacts

The NSR summarizes the predicted traffic noise levels for the existing-year and design-year no-build conditions as well as design-year conditions for Build Alternative 3. Predicted design-year traffic noise levels with the project are compared to existing conditions and the design-year no-build condition. The comparison to existing conditions is included in the analysis to identify "substantial" traffic noise impacts under 23 CFR 772. The comparison to no-build conditions indicates the direct impact of noise resulting from the project.

Modeling results within the NSR indicate that predicted worst-hour traffic noise levels (L_{eq}[h]) for design-year Build Alternative 3 conditions approach or exceed the NAC of 67 dBA for Activity Categories B and C land uses at many of the residences, schools, churches, and parks throughout the study corridor. Modeling results also indicate that several Activity Category D land uses are predicted to have worst-hour traffic noise levels for design-year Build Alternative 3 conditions that approach or exceed the interior NAC of 52 dBA. Many hotels, restaurants, and commercial buildings with outdoor use areas were also predicted to have worst-hour traffic noise levels for design-year Build Alternative 3 conditions that approach or exceed the NAC of 72 dBA for Activity Category E land uses. Therefore, traffic noise impacts are predicted to occur at Activity Category B, C, D, and E land uses within the project area. Accordingly, noise abatement must be considered at those locations; however, in some cases, noise abatement has not been considered for Activity Category E land uses where there are no discernible outdoor areas. Although outdoor trails along the project corridor are classified as Activity Category C, they are deemed to be transient uses, which do not warrant consideration of noise abatement measures. For a complete list of affected receivers, please refer to the impact tables in Appendix B of the NSR.

The preliminary noise abatement decision for each acoustically feasible soundwall that meets the design goal identified for Alternative 3 in the NSR and NADR is provided below in Table 2.3.7-5.

Table 2.3.7-5. Summary of Soundwall Abatement Key Information – Alternative 3

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
NAA 2 through 4	S182 and S194	Edge of Shoulder	1,140 (S182) and 790 (S194)	10	3	$321,000	$790,812	No
				12	3	$321,000	$907,540	No
				14	3	$321,000	$1,024,269	No
				16	3	$321,000	$1,140,998	No
				18	3	$321,000	$1,257,726	No
NAA 3	S209 and S229	Edge of Shoulder	4,210 (S209) and 600 (S229)	8	7	$749,000	$2,764,244	No
				10	7	$749,000	$3,055,364	No
				12	8	$856,000	$3,346,484	No
				14	8	$856,000	$3,637,604	No
				16	10	$1,070,000	$3,928,724	No
				18	12	$1,284,000	$4,219,844	No
NAA 5	S261 and S281	Edge of Shoulder	2,595 (S261) and 1,285 (S281)	8	20	$2,140,000	$1,377,773	Yes
				10	24	$2,568,000	$1,612,544	Yes
				12	25	$2,675,000	$1,847,314	Yes
				14	26	$2,782,000	$2,082,084	Yes
				16	31	$3,317,000	$2,316,854	Yes
				18	34	$3,638,000	$2,551,625	Yes
NAA 6	S262	Edge of Shoulder	4,615	10	14	$1,498,000	$1,693,555	No
				12	23	$2,461,000	$1,972,721	Yes
				14	25	$2,675,000	$2,251,886	Yes
				16	25	$2,675,000	$2,531,051	Yes
				18	25	$2,675,000	$2,810,216	Yes[a]
NAA 7	S299, S303,	Edge of Shoulder	300 (S299), 1,685 (S303),	8	7	$749,000	$2,242,311	No
				10	9	$963,000	$2,417,590	No
				12	10	$1,070,000	$2,597,984	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
	S319, and S327		1,100 (S319), and 300 (S327)	14	10	$1,070,000	$2,782,266	No
				16	10	$1,070,000	$2,969,571	No
				18	10	$1,070,000	$3,159,273	No
NAA 8	S314 and S330	Edge of Shoulder	3,215 (S314) and 595 (S330)	8	104	$11,128,000	$1,053,550	Yes
				10	127	$13,589,000	$1,278,489	Yes
				12	144	$15,408,000	$1,503,428	Yes
				14	164	$17,548,000	$1,728,367	Yes
				16	165	$17,655,000	$1,953,306	Yes
				18	165	$17,655,000	$2,178,245	Yes
NAA 9	S359	Edge of Shoulder	900	14	2	$214,000	$308,438	No
				16	2	$214,000	$362,870	No
				18	2	$214,000	$417,302	No
NAA 9	S387	Right of Way	560	14	1	$107,000	$273,488	No
				16	1	$107,000	$307,392	No
				18	1	$107,000	$341,297	No
NAA 11	S403	Edge of Shoulder	1,400	16	2	$214,000	$718,188	No
				18	2	$214,000	$803,015	No
	S525, and S531			12	12	$1,284,000	$438,705	Yes
				14	14	$1,498,000	$509,254	Yes
				16	16	$1,712,000	$579,804	Yes
				18	16	$1,712,000	$650,352	Yes
NAA 15	S555	Edge of Shoulder	1,125	12	4	$428,000	$849,105	No
				14	4	$428,000	$917,215	No
				16	4	$428,000	$985,326	No
				18	4	$428,000	$1,053,437	No
NAA 16	S586	Edge of Shoulder	1,400	12	3	$321,000	$547,673	No
				14	3	$321,000	$632,367	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
				16	3	$321,000	$717,061	No
				18	3	$321,000	$801,755	No
NAA 16	S606	Edge of Shoulder	1,090	10	5	$535,000	$1,143,072	No
				12	5	$535,000	$1,193,280	No
				14	8	$856,000	$1,246,003	No
				16	10	$1,070,000	$1,300,683	No
				18	13	$1,391,000	$1,356,916	No
NAA 17	S657	Edge of Shoulder	4,870	8	5	$535,000	$1,846,634	No
				10	9	$963,000	$2,141,317	No
				12	16	$1,712,000	$2,436,000	No
				14	18	$1,926,000	$2,730,684	No
				16	21	$2,247,000	$3,025,367	No
				18	22	$2,354,000	$3,320,051	No
NAA 18	S668	Edge of Shoulder	1,175	16	2	$214,000	$1,402,985	No
				18	2	$214,000	$1,463,660	No
NAA 19	S695, S707, S711, and S729	Edge of Shoulder	1,630 (S695), 580 (S707), 365, (S711), and 2,500 (S729),	8	7	$749,000	$2,900,975	No
				10	14	$1,498,000	$3,207,137	No
				12	23	$2,461,000	$3,514,819	No
				14	28	$2,996,000	$3,823,655	No
				16	33	$3,531,000	$4,133,389	No
				18	40	$4,280,000	$4,443,834	Yes[a]
NAA 20	S714, S720, S726, and S736	Edge of Shoulder	360 (S714), 700 (S720), 600 (S726), and 945 (S736)	8	18	$1,926,000	$571,490	Yes
				10	27	$2,889,000	$729,286	Yes
				12	28	$2,996,000	$887,082	Yes
				14	31	$3,317,000	$1,044,878	Yes
				16	31	$3,317,000	$1,202,674	Yes
				18	34	$3,638,000	$1,360,470	Yes

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
NAA 21	S755, S757, and S765	Edge of Shoulder	720 (S755), 510 (S757), and 1,000 (S765)	8	2	$214,000	$1,815,761	No
				10	2	$214,000	$1,920,590	No
				12	6	$642,000	$2,030,641	No
				14	13	$1,391,000	$2,144,661	No
				16	18	$1,926,000	$2,261,767	No
				18	18	$1,926,000	$2,381,322	No
NAA 22	S760	Edge of Shoulder	900	8	3	$321,000	$555,938	No
				10	3	$321,000	$610,369	No
				12	4	$428,000	$664,801	No
				14	4	$428,000	$719,233	No
				16	4	$428,000	$773,665	No
				18	4	$428,000	$828,097	No
NAA 23	S813 and S819	Edge of Shoulder	500 (S813) and 895 (S819)	10	1	$107,000	$309,998	No
				12	1	$107,000	$394,547	No
				14	1	$107,000	$479,095	No
				16	1	$107,000	$563,644	No
				18	1	$107,000	$648,193	No
NAA 24	S810, S826, and S848	Edge of Shoulder	240 (S810), 3,980 (S826), and 500 (S848)	10	3	$321,000	$4,310,768	No
				12	17	$1,819,000	$4,538,871	No
				14	58	$6,206,000	$4,776,161	Yes
				16	68	$7,276,000	$5,020,597	Yes
				18	73	$7,811,000	$5,270,701	Yes
NAA 25	S885	Edge of Shoulder	1,400	8	1	$107,000	$378,367	No
				10	1	$107,000	$463,079	No
				12	1	$107,000	$547,791	No
				14	1	$107,000	$632,503	No
				16	1	$107,000	$717,215	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
				18	1	$107,000	$801,927	No
NAA 26	S896	Edge of Shoulder	1,400	10	1	$107,000	$411,663	No
				12	1	$107,000	$496,254	No
				14	1	$107,000	$580,845	No
				16	1	$107,000	$665,436	No
				18	1	$107,000	$750,027	No
NAA 27	S913	Edge of Shoulder	695	12	1	$107,000	$245,962	No
				14	1	$107,000	$287,888	No
				16	1	$107,000	$329,815	No
				18	1	$107,000	$371,741	No
NAA 27	S939	Edge of Shoulder	2,000	8	4	$428,000	$540,392	No
				10	4	$428,000	$661,380	No
				12	4	$428,000	$782,368	No
				14	4	$428,000	$903,356	No
				16	4	$428,000	$1,024,344	No
				18	4	$428,000	$1,145,332	No
NAA 27	S969	Edge of Shoulder	800	10	1	$107,000	$177,370	No
				12	1	$107,000	$225,746	No
				14	1	$107,000	$274,121	No
				16	1	$107,000	$322,497	No
				18	1	$107,000	$370,873	No
NAA 28	S918	Edge of Shoulder	2,000	8	3	$321,000	$322,888	Yes[a]
				10	4	$428,000	$443,979	Yes[a]
				12	4	$428,000	$565,070	No
				14	4	$428,000	$686,161	No
				16	7	$749,000	$807,251	Yes[a]
				18	10	$1,070,000	$928,342	Yes

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
NAA 30	S1002 and S1018	Edge of Shoulder	3,170 (S1002) and 700 (S1018)	8	21	$2,247,000	$3,635,823	No
				10	31	$3,317,000	$3,814,765	No
				12	39	$4,173,000	$4,003,339	Yes
				14	46	$4,922,000	$4,199,235	Yes
				16	49	$5,243,000	$4,400,824	Yes
				18	52	$5,564,000	$4,606,928	Yes
NAA 31	S1037	Edge of Shoulder	895	8	4	$428,000	$144,723	Yes
				10	4	$428,000	$198,998	Yes
				12	4	$428,000	$253,272	Yes
				14	4	$428,000	$307,547	Yes
				16	4	$428,000	$361,821	Yes
				18	4	$428,000	$416,096	Yes
NAA 32	S1034	Edge of Shoulder	755	8	10	$1,070,000	$607,493	Yes
				10	15	$1,605,000	$660,949	Yes
				12	15	$1,605,000	$718,350	Yes
				14	15	$1,605,000	$773,799	Yes
				16	18	$1,926,000	$829,036	Yes
				18	18	$1,926,000	$903,589	Yes
NAA 32	S1050	Edge of Shoulder	500	12	1	$107,000	$141,049	No
				14	1	$107,000	$171,274	No
				16	1	$107,000	$201,500	No
				18	1	$107,000	$231,726	No
NAA 33	S1085, S1097, S1109, and S1117	Edge of Shoulder and Right of Way	550 (S1085), 2,105 (S1097), 740 (S1109), and 175 (S1117)	10	4	$428,000	$2,085,024	No
				12	7	$749,000	$2,300,870	No
				14	10	$1,070,000	$2,516,716	No
				16	33	$3,531,000	$2,732,562	Yes
				18	46	$4,922,000	$2,948,408	Yes

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
NAA 34	S1090	Edge of Shoulder	1,885	8	3	$321,000	$304,417	No
				10	5	$535,000	$418,580	No
				12	14	$1,498,000	$532,744	Yes
				14	30	$3,210,000	$646,907	Yes
				16	49	$5,243,000	$761,071	Yes
				18	62	$6,634,000	$875,234	Yes
NAA 34	S1116	Edge of Shoulder	1,080	8	4	$428,000	$1,084,640	No
				10	6	$642,000	$1,131,029	No
				12	6	$642,000	$1,180,693	No
				14	9	$963,000	$1,232,845	No
				16	9	$963,000	$1,286,933	No
				18	10	$1,070,000	$1,342,557	No
NAA 36	S1146	Edge of Shoulder	1,915	8	40	$4,280,000	$1,918,284	Yes
				10	60	$6,420,000	$2,000,686	Yes
				12	68	$7,276,000	$2,088,906	Yes
				14	77	$8,239,000	$2,181,547	Yes
				16	77	$8,239,000	$2,277,626	Yes
				18	77	$8,239,000	$2,376,433	Yes
NAA 37	S1263	Edge of Shoulder	490	14	1	$107,000	$611,703	No
				16	1	$107,000	$636,389	No
				18	1	$107,000	$661,775	No
NAA 38 and 40	S1196	Edge of Shoulder	1,195	12	1	$107,000	$1,307,775	No
				14	1	$107,000	$1,365,593	No
				16	1	$107,000	$1,425,556	No
				18	1	$107,000	$1,487,222	No
NAA 38 and 40		Edge of Shoulder	1,125 (S1258), 1,140 (S1268),	8	25	$2,675,000	$2,766,499	Yes[a]
				10	28	$2,996,000	$2,940,187	Yes

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
	S1258, S1268, and S1280		and 1,305 (S1280)	12	37	$3,959,000	$3,121,257	Yes
				14	48	$5,136,000	$3,307,938	Yes
				16	52	$5,564,000	$3,498,983	Yes
				18	52	$5,564,000	$3,693,488	Yes
NAA 38 and 40	S1298	Edge of Shoulder	1,105	12	2	$214,000	$1,209,158	No
				14	2	$214,000	$1,262,583	No
				16	2	$214,000	$1,317,990	No
				18	2	$214,000	$1,374,971	No
NAA 38 and 40	S1354	Edge of Shoulder	2,160	8	22	$2,354,000	$2,164,768	Yes
				10	39	$4,173,000	$2,257,808	Yes
				12	43	$4,601,000	$2,357,416	Yes
				14	49	$5,243,000	$2,462,017	Yes
				16	49	$5,243,000	$2,570,499	Yes
				18	49	$5,243,000	$2,682,061	Yes
NAA 39	S1275 and S1287	Edge of Shoulder	600 (S1275) and 2,285 (S1287)	8	2	$214,000	$2,894,640	No
				10	4	$428,000	$3,018,754	No
				12	5	$535,000	$3,151,630	No
				14	7	$749,000	$3,291,164	No
				16	10	$1,070,000	$3,435,878	No
				18	11	$1,177,000	$3,584,700	No
NAA 39	S1311	Edge of Shoulder	805	8	1	$107,000	$810,542	No
				10	1	$107,000	$845,093	No
				12	1	$107,000	$882,082	No
				14	1	$107,000	$920,926	No
				16	1	$107,000	$961,211	No
				18	1	$107,000	$1,002,640	No
NAA 41	S1355		565	12	3	$321,000	$622,073	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
		Edge of Shoulder		14	3	$321,000	$649,334	No
				16	3	$321,000	$677,608	No
				18	3	$321,000	$706,684	No
NAA 42	S1362 and S1372	Edge of Shoulder	3,400 (S1362) and 1,325 (S1372)	10	28	$2,996,000	$4,930,991	No
				12	41	$4,387,000	$5,148,618	No
				14	52	$5,564,000	$5,377,150	Yes
				16	60	$6,420,000	$5,614,165	Yes
				18	69	$7,383,000	$5,857,908	Yes
NAA 43	S1459	Edge of Shoulder	1,505	8	20	$2,140,000	$1,509,874	Yes
				10	37	$3,959,000	$1,574,633	Yes
				12	53	$5,671,000	$1,643,964	Yes
				14	55	$5,885,000	$1,716,770	Yes
				16	55	$5,885,000	$1,792,277	Yes
				18	55	$5,885,000	$1,869,929	Yes
NAA 44	S1396	Edge Shoulder	2,940	8	21	$2,247,000	$2,939,668	No
				10	38	$4,066,000	$3,066,183	Yes
				12	61	$6,527,000	$3,201,629	Yes
				14	70	$7,490,000	$3,343,863	Yes
				16	71	$7,597,000	$3,491,377	Yes
				18	71	$7,597,000	$3,643,077	Yes
NAA 45	S1503	Edge of Shoulder	1,760	14	6	$642,000	$2,004,620	No
				16	6	$642,000	$2,092,852	No
				18	6	$642,000	$2,183,588	No
NAA 46 and 48	S1492, S1522, S1536, and S1546	Edge of Shoulder and Right of Way	4,665 (S1492), 1,620 (S1522), 1,405 (S1536), and 305 (S1546)	8	27	$2,889,000	$2,152,118	Yes
				10	30	$3,210,000	$2,273,095	Yes
				12	49	$5,243,000	$9,246,806	No
				14	75	$8,025,000	$9,676,387	No

Noise Analysis Area	Soundwall Name	Soundwall Location	Soundwall Length (ft)	Soundwall Height (ft)	Number of Benefited Receptors	Total Reasonable Allowance*	Estimated Construction Cost	Cost Less than Allowance?
				16	102	$10,914,000	$10,116,778	Yes
				18	107	$11,449,000	$10,609,833	Yes
NAA 46 and 48	S1550	Right of Way	245	14	1	$107,000	$250,943	No
				16	1	$107,000	$268,837	No
				18	1	$107,000	$292,988	No
NAA 46 and 48	S1554 and S1556	Edge of Shoulder and Right of Way	310 (S1554) and 210 (S1556)	12	2	$214,000	$496,536	No
				14	5	$535,000	$534,815	Yes
				16	6	$642,000	$572,947	Yes
				18	6	$642,000	$624,415	Yes
NAA 49	S1561 and S1567	Edge of Shoulder and Right of Way	300 (S1561) and 900 (S1567)	14	43	$4,601,000	$1,649,903	Yes
				16	47	$5,029,000	$1,723,446	Yes
				18	49	$5,243,000	$1,808,197	Yes
NAA 50	S1560 and S1578	Edge of Shoulder and Right of Way	685 (S1560) and 2,615 (S1578)	8	35	$3,745,000	$3,793,940	Yes
				10	48	$5,136,000	$3,954,822	Yes
				12	52	$5,564,000	$4,127,217	Yes
				14	55	$5,885,000	$4,303,875	Yes
				16	59	$6,313,000	$4,485,033	Yes
				18	59	$6,313,000	$4,687,417	Yes

* $107,000 per benefited receptor.

[a.] Cost to construct the soundwall is within 10 percent of the reasonableness allowance.

A more detailed discussion of soundwalls considered under Alternative 3 is included below under the discussion of avoidance and minimization.

2.3.7.4 Avoidance, Minimization, and/or Abatement Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to noise and/or vibration would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction

Temporary Impacts

As discussed above, during the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. With implementation of avoidance measure **N-1**, sound control would conform to the provisions in Section 14-8.02, *Noise Control*, of the Caltrans Standard Specifications (2023). According to the requirements of the specifications, construction noise cannot exceed 86 dBA, maximum sound level (L_{max}), at 50 feet from the job site between 9:00 p.m. and 6:00 a.m. In addition, minimization measure **N-2** outlines procedures that would be implemented to minimize potential noise disturbances at sensitive areas during construction.

It is possible that certain construction activities could cause intermittent, localized concern from vibration in the project area. Processes such as earthmoving with bulldozers, the use of vibratory compaction rollers, demolition, or pavement breaking may cause construction-related vibration impacts such as human annoyance or, in some cases, building damage. In addition, it may be necessary to use vibration-generating equipment close to residential buildings. Minimization measure **N-3** includes procedures to be followed to minimize potential impacts from construction vibration. A combination of minimization techniques for equipment vibration control as well as administrative measures when properly implemented, provide the most effective means for minimizing the effects of construction activity. Application of the minimization measures would reduce the construction impacts; however, temporary increases in vibration would very likely occur at some locations.

The following avoidance and minimization measures will be implemented to minimize impacts during construction:

N-1: Sound Control Will Conform to the Provisions in Section 14-8.02, Noise Control, of the Caltrans Standard Specifications (2023). According to requirements of the specifications, construction noise cannot exceed 86 dBA L_{max} at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m.

N-2: Control Measures to Minimize Noise. The following are the control measures that will be implemented to minimize noise disturbances at sensitive areas during construction:

- All equipment will have sound control devices no less effective than those provided on the original equipment. Each internal-combustion engine used for any purpose on the job site or related to the job will be equipped with a muffler of a type recommended by the manufacturer. No internal-combustion engine will be operated on the job site without an appropriate muffler.
- Construction methods or equipment types that generate the lowest level of noise impact will be used.
- Idling equipment will be turned off.
- Truck loading, unloading, and hauling operations will be restricted so that noise and vibration are kept to a minimum throughout residential neighborhoods to the greatest possible extent.
- Construction activities will be coordinated so that recommended permanent soundwalls are built during the first phase of construction to protect sensitive receptors from subsequent construction noise, dust, light, glare, and other impacts to the extent feasible.
- Where feasible, temporary soundwalls will be used and relocated, as needed, to protect sensitive receptors against excessive noise from construction activities involving large equipment and small items such as compressors, generators, pneumatic tools, and jackhammers. Soundwalls can be made of heavy plywood, moveable insulated sound blankets, or other best available control techniques.
- Construction activities will be minimized in residential areas during evening, nighttime, weekend, and holiday periods. Noise impacts are typically minimized when construction activities are performed during daytime hours; however, nighttime construction may be desirable (e.g., in commercial areas where businesses may be disrupted during daytime hours) or necessary to avoid major traffic disruptions. Coordination with each city will occur before construction is performed in noise-sensitive areas.
- Construction lay-down or staging areas will be selected in industrially zoned districts. If industrially zoned areas are not available, then commercially zoned areas may be used or locations that are at least 100 feet from any noise-sensitive land use (e.g., residences).

N-3: Minimize Construction Vibration. The following procedures will be used to minimize the potential impacts from construction vibration:

- The hours for the use of vibration-intensive equipment such as vibratory rollers will be restricted so that impacts on residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).

- The owner of a building that is close to a construction vibration source with the potential to cause damage to the structure will be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.
- Vibration monitoring will be conducted during vibration-intensive activities, such as the use of vibratory compaction rollers, demolition, or pavement breaking.

Permanent Impacts

As discussed above, modeling results predict that worst-hour traffic noise levels (L_{eq}[h]) for design-year Build Alternative 2 conditions would approach or exceed the NAC for Activity Categories B, C, D and E land uses. Accordingly, noise abatement in the form of soundwalls was considered.

Consistent with Caltrans' *Traffic Noise Analysis Protocol, e*ach soundwall has been evaluated for feasibility, based on the achievable noise reduction (5 dB or more) at the outdoor frequent-use areas of the representative receivers. For each soundwall determined to be acoustically feasible, if it was determined that the design goal of 7 dB insertion loss could be achieved, then reasonable cost allowances were calculated. The estimated cost to build the soundwall should be equal to or less than the total calculated cost allowance of benefited receivers for the soundwall to be considered reasonable from a cost perspective.

For locations along the alignment where soundwalls were demolished as part of the project, traffic noise results for new soundwalls were analyzed relative to the no-soundwall results to determine if the soundwall satisfied the feasibility (5 dB insertion loss) and design goal (7 dB insertion loss) requirements. If no modeled receiver approached or exceeded the respective NAC or was predicted to have a substantial increase (12 dB increase relative to the existing) at locations where soundwalls were removed as part of the project, then the existing soundwall would be replaced as part of the project at the same height and length, and no additional analysis was necessary. However, if noise impacts were identified behind the removed soundwall, then, starting at the height of the existing soundwall, the soundwall was modeled up to 18 feet to determine whether increased soundwall heights or soundwall extensions could achieve the feasibility and design-goal requirements.

The physical characteristics of noise abatement, as described herein, may be subject to change. If pertinent parameters change substantially during the final project design, then the abatement measures or preliminary noise abatement decisions may be modified or changed for the final project design. A final decision about whether and how to construct noise abatement will be made on completion of the project design. For soundwalls determined to be feasible and reasonable, the property owners will be given an opportunity to decide whether they are in favor of construction of the feasible soundwalls at the proposed locations. The process of surveying the viewpoints of the benefited receptors is the last of three reasonableness criteria that must be satisfied for a given soundwall to be classified wholly as feasible and reasonable.

The preliminary noise abatement decision for each acoustically feasible soundwall that meets the design goal identified for Alternative 2 within the NSR and NADR is provided in Table 2.3.7-4 and discussed below.

Noise Analysis Area 1 – South Side of US 101 between SR-23 and N. Moorpark Road
Within NAA 1, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 59 to 76 dBA. No receivers would approach or exceed the NAC for Activity Categories B or C, and impacts would not be anticipated within NAA 1; therefore, consideration of noise abatement is not required.

Noise Analysis Areas 2 and 4 – North Side of US 101 between SR-23 and N. Moorpark Road (NAA 2) and North Side of US 101 between N. Moorpark Road and Lynn Road (NAA 4)
Within NAAs 2 and 4, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 77 dBA. Three receivers would approach or exceed the NAC for Activity Category E; therefore, consideration of noise abatement is required.

Soundwalls S182 and S194: Soundwalls S182 and S194 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 3 and 4 of Figure 1 in the NADR show the locations of these soundwalls.

Noise Analysis Area 3 – South Side of US 101 between N. Moorpark Road and Lynn Road
Within NAA 3, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 50 to 78 dBA. A total of 14 receivers would approach or exceed the NAC for Activity Categories B and C; therefore, consideration of noise abatement is required.

Soundwalls S209 and S229: Soundwalls S209 and S229 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 3 through 6 of Figure 1 in the NADR show the locations of these soundwalls.

Noise Analysis Area 5 – South Side of US 101 between Lynn Road and N. Ventu Park
Within NAA 5, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 82 dBA. A total of 25 receivers would approach or exceed the NAC for Activity Categories B and C, with a substantial increase (12 dB or more increase) at two locations. Therefore, consideration of noise abatement is required.

Soundwalls S261 and S281: Soundwalls S261 and S281 would work as a system for reasonableness purposes. The proposed soundwall system would be feasible and

would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 8 to 18 feet were found to be reasonable from a cost perspective; however, only heights of 16 and 18 feet will be considered because the height of the existing soundwall is approximately 16 feet. Sheets 9 through 11 in Figure 1 in the NADR show the locations of the soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet would provide three additional benefited receptors and one additional affected receiver compared to a height of 16 feet. These two soundwall heights would provide similar levels of insertion loss (up to 15 dB for a soundwall height of 18 feet and 14 dB for 16 feet). With consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S261 and S281.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S261 and S281 at the edge of shoulder (EOS) from stations 248+00 to 274+00 and 274+00 to 286+87, respectively, with respective lengths of 2,595 and 1,285 feet and a height of 18 feet. Calculations based on preliminary design data show that the soundwalls would reduce noise levels by 5 to 15 dBA for 34 benefited receptors at a cost of $2,551,625. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 6 – North Side of US 101 between Lynn Road and N. Ventu Park Road

Within NAA 6, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 64 to 75 dBA. A total of 13 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S262: Soundwall S262 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet. Soundwall heights of 12 to 16 feet were found to be reasonable from a cost perspective. In addition, the reasonableness allowance for a soundwall height of 18 feet is within 10 percent of the engineer's cost to construct; therefore, per Caltrans District 7 policy, this soundwall height is considered reasonable from a cost perspective. Sheets 9 through 11 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet provides the same number of benefited receptors as soundwall heights of 16 feet and 18 feet. In addition, soundwall heights of 16 feet and 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S262.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S262 at the EOS from stations 239+00 to 285+00,

with a length of 4,615 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 10 dBA for 26 benefited receptors at a cost of $2,251,886. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 7 – South Side of US 101 between N. Ventu Park Road and Rancho Conejo Boulevard

Within NAA 7, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 45 to 76 dBA. Eight receivers would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwalls S299, S303, S319, and S327: Soundwalls S299, S303, S319, and S327 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 12 and 13 of Figure 1 in the NADR show the locations of the soundwalls.

An existing soundwall that would be removed due to project improvements is located along the shoulder of the southbound US 101 mainline and the southbound US 101 slip on-ramp from Rancho Conejo Boulevard. The existing soundwall has heights ranging from approximately 7 to 16 feet and is in the same general area as Soundwall S319. The existing soundwall is located between station 314+10 and station 324+64 and has a total length of approximately 1,055 feet. This soundwall would be removed and replaced as part of the project, regardless of cost.

Noise Analysis Area 8 – North Side of US 101 between N. Ventu Park Road and Rancho Conejo Boulevard

Within NAA 8, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 77 dBA. A total of 58 receivers would approach or exceed the NAC for Activity Category B, with a substantial increase (12 dB or more increase) at 26 receivers. Therefore, consideration of noise abatement is required.

Soundwalls S314 and S330: Soundwalls S314 and S330 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective; however, only heights of 12 to 18 feet would be considered because the height of the existing soundwall is approximately 12 feet. Sheets 12 and 13 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet provides only one less unaffected benefited receptor compared to soundwall heights of 16 and 18 feet. A soundwall height of 14 feet would also benefit all receivers in areas where there would be impacts. Soundwall heights of 16 and 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of

cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwalls S314 and S330.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S314 and S330 at the EOS from stations 298+00 to 329+27 and 329+00 to 335+00, respectively, with respective lengths of 3,125 and 595 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 164 benefited receptors at a cost of $1,728,367. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 9 – South Side of US 101 between Rancho Conejo Boulevard and Camino Dos Rios

Within NAA 9, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 53 to 79 dBA. Ten receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S359: Soundwall S359 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 15 and 16 of Figure 1 in the NADR show the location of this soundwall.

Soundwall S373: Soundwall S373 is located along the right of way (ROW) of the southbound US 101 mainline and the southbound US 101 slip on-ramp from Wendy Drive. Soundwall S373 is an existing soundwall that is not expected to be removed as part of the project. The existing soundwall has a height of approximately 15 feet. It is located between station 362+16 and station 384+21 and has a total length of approximately 2,245 feet. Because Soundwall S373 is not expected to be removed as part of the project, additional heights above 15 feet were analyzed; however, the additional heights were found not to provide any additional feasible abatement. Therefore, this soundwall was not considered for abatement.

Noise Analysis Area 10 – North Side of US 101 between Rancho Conejo Boulevard and Camino Dos Rios

Within NAA 10, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 58 to 78 dBA. No receivers would approach or exceed the NAC for Activity Category E, and impacts would not be anticipated within NAA 10; therefore, consideration of noise abatement is not required.

Noise Analysis Area 11 – South Side of US 101 between Camino Dos Rios and the US 101 Weigh Station

Within NAA 11, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 65 to 82 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 46 to 62 dBA. Two receivers would approach or exceed the NAC for Activity Category D. Therefore, consideration of noise abatement is required.

Soundwall S387: Soundwall S387 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 17 and 18 of Figure 1 in the NADR show the location of this soundwall.

Soundwall S403: Soundwall S403 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 16 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 18 and 19 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 12 – North Side of US 101 between Camino Dos Rios and the US 101 Weigh Station

Within NAA 12, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 48 to 77 dBA. No receivers would approach or exceed the NAC for Activity Category E or B, and impacts would not be anticipated in NAA 12; therefore, consideration of noise abatement is not required.

Noise Analysis Area 13 – South Side of US 101 between the US 101 Weigh Station and Camarillo Springs Road

Within NAA 13, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 50 to 66 dBA. Three receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwalls S519, S525, and S531: Soundwalls S519, S525, and S531 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet. All five soundwall heights were found to be reasonable from a cost perspective; however, only heights of 12 to 18 feet would be considered because the heights of the existing soundwalls are approximately 10 to 12 feet. Sheets 24 through 26 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet would result in only one additional benefited receptor that would not be affected and up to 1 additional dB of insertion loss compared to a soundwall height of 16 feet. In addition, a soundwall height of 16 feet would provide benefit to all affected receivers. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the

soundwall heights, a soundwall height of 16 feet is recommended for Soundwalls S519, S525, and S531.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S519, S525, and S531 at the EOS from stations 515+00 to 521+00, 521+00 to 526+00, and 526+00 to 533+00, respectively, with respective lengths of 625, 505, and 665 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 9 dBA for 27 benefited receptors at a cost of $831,759. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 15 – South Side of US 101 between Camarillo Springs Road and Pleasant Valley Road

Within NAA 15, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 57 to 81 dBA. Two receivers would approach or exceed the NAC for Activity Category C. Therefore, consideration of noise abatement is required.

Soundwall S555: Soundwall S555 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 26 and 27 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 16 – North Side of US 101 between Camarillo Springs Road and Pleasant Valley Road

Within NAA 16, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 51 to 78 dBA. Seven receivers would approach or exceed the NAC for Activity Categories B, C, and E. Therefore, consideration of noise abatement is required.

Soundwall S586: Soundwall S586 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 30 of Figure 1 in the NADR shows the location of this soundwall.

Soundwall S606: Soundwall S606 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-4, only soundwall heights of 16 and 18 feet were found to be reasonable from a cost perspective. Sheet 31 of Figure 1 in the NADR shows the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet was found to be reasonable from a cost perspective. In addition, the reasonableness allowance for a soundwall height of 16 feet is within 10 percent of the engineer’s cost to construct;

therefore, per Caltrans District 7 policy, this soundwall height is considered reasonable from a cost perspective. Soundwall heights of 16 and 18 feet would provide benefit to all affected receivers. A soundwall height of 18 feet would provide only two additional benefited receptors that would not be affected and only up to 1 additional dB of insertion loss compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended for Soundwall S606.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S606 at the EOS from stations 600+00 to 610+80 along the mainline station line (Station 611+00 along the off-ramp to Santa Rosa Road station line), with a length of approximately 1,090 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 1 to 10 dBA for 11 benefited receptors at a cost of $1,300,683. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 17 – South Side of US 101 between Pleasant Valley Road and Village at the Park Drive

Within NAA 17, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 59 to 82 dBA. The design-year Build Alternative 2 predicted interior traffic noise level is 62 dBA. A total of 18 receivers would approach or exceed the NAC for Activity Categories B, C, and D, with a substantial increase (12 dB or more increase) at one receiver. Therefore, consideration of noise abatement is required.

Soundwall S657: Soundwall S657 would be would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 32 through 35 of Figure 1 in the NADR show the location of this soundwall.

An existing soundwall that would be removed due to project improvements is located along the shoulder of the southbound US 101 mainline, north of the southbound US 101 off-ramp to Santa Rosa Road. The existing soundwall has a height of approximately 10.5 feet and is in the same general area as a portion of Soundwall S657. The existing soundwall is located between station 637+05 and station 648+09 and has a total length of approximately 1,095 feet. This soundwall would be removed and replaced as part of the project, regardless of cost.

Noise Analysis Area 18 – North Side of US 101 between Pleasant Valley Road and the Amtrak Overcrossing

Within NAA 18, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 54 to 78 dBA. Seven receivers would approach or exceed the NAC for Activity Categories C and E. Therefore, consideration of noise abatement is required.

Soundwall S628: Soundwall S628 would be feasible at a height of 18 feet; however, the proposed soundwall would not achieve the design goal of 7 dB insertion loss at any height. Therefore, this soundwall is not recommended. Sheets 31 through 33 of Figure 1 in NADR show the location of this soundwall.

The existing soundwall, represented by Soundwall S628, would not be removed by the project and would remain at its existing height of approximately 12 feet. The existing soundwall is located between station 617+84 and station 638+11 and has a total length of approximately 2,025 feet.

Soundwall S668: Soundwall S668 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 16 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 34 and 35 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 19 – South Side of US 101 between Village at the Park Drive and Carmen Drive

Within NAA 19, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 54 to 82 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 38 to 50 dBA. A total of 17 receivers would approach or exceed the NAC for Activity Categories B, C, and E, with a substantial increase (12 dB or more increase) at one receiver. Therefore, consideration of noise abatement is required.

Soundwalls S695, S707, and S729: Soundwalls S695, S707, and S729 would work as a system for reasonableness purposes. As summarized in Table 2.3.7-4, a soundwall height of 18 feet was the only soundwall height found to be reasonable from a cost perspective. Therefore, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S695, S707, and S729. Sheets 35 through 38 of Figure 1 in the NADR show the locations of the soundwalls.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S695 at the EOS of the southbound US 101 on-ramp from Ventura Boulevard from the station 687+00 Petit Street off-ramp station line (687+13 along the mainline station line) to the station 702+57 Ventura Boulevard on-ramp line (703+36 along the mainline station line), with length of approximately 1,630 feet and a height of 18 feet; Soundwall S707 at the EOS from stations 704+10 to 709+00, with length of approximately 580 feet and a height of 18 feet; and Soundwall S729 at the EOS from stations 718+10 to 743+00, with length of approximately 2,950 feet and a height of 18 feet. Calculations, based on preliminary design data, show that

the soundwalls would reduce noise levels by 0 to 14 dBA for 42 benefited receptors at a cost of $4,443,834. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 20 – North Side of US 101 between Pleasant Valley Road and the Amtrak Overcrossing

Within NAA 20, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 58 to 79 dBA. A total of 15 receivers would approach or exceed the NAC for Activity Categories B and E, with a substantial increase (12 dB or more increase) at one receiver. Therefore, consideration of noise abatement is required.

Soundwalls S704 and S708: Soundwalls S704 and S708 would work as a system for reasonableness purposes. Soundwall S704 would be located along the shoulder of the northbound US 101 mainline, between the northbound US 101 on- and off-ramps at Daily Drive. Soundwall S708 would be located along the shoulder of the northbound US 101 on-ramp from Daily Drive. A map of the proposed soundwall locations can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 1, Sheets 36 and 37). The proposed soundwall system would not provide feasible traffic noise abatement at any affected receivers. Therefore, these soundwalls would not be considered for abatement.

Soundwalls S714, S720, S726, and S736: Soundwalls S714, S720, S726 and S736 would be feasible and achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective; however, only heights of 12 to 18 feet would be considered because the height of the existing soundwall is approximately 11 feet. Sheets 37 and 38 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet would result in the same number of benefited receptors as a height of 16 feet and only three fewer benefited receptors than a soundwall height of 18 feet. It should be noted that the three additional benefited receptors gained at a soundwall height of 18 feet are receptors that would not be affected. In addition, a soundwall height of 18 feet would result in additional insertion loss of up to only 2 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwalls S714, S720, S726, and S736.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S714, S720, S726, and S736 at the EOS from stations 713+39 to 717+00, 717+00 to 724+00, 724+00 to 730+00, and 730+00 to 739+47, respectively, with respective lengths of 360, 700, 600, and 945 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 31 benefited receptors at a cost of $1,044,878. These measures may change, based on input received from the public. If conditions change

substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 21 – South Side of US 101 between Carmen Drive and Las Posas Road

Within NAA 21, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 53 to 81 dBA. Two receivers would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwalls S755, S757, and S765: Soundwalls S755, S757, and S765 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 38 through 40 of Figure 1 in the NADR show the locations of these soundwalls.

Noise Analysis Area 22 – North Side of US 101 between Carmen Drive and Las Posas Road

Within NAA 22, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 60 to 77 dBA. Two receivers would approach or exceed the NAC for Activity Categories E. Therefore, consideration of noise abatement is required.

Soundwall S760: Soundwall S760 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 39 of Figure 1 in the NADR shows the location of this soundwall.

Noise Analysis Area 23 – South Side of US 101 between Las Posas Road and Springville Drive

Within NAA 23, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 73 dBA. One receiver would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwalls S813 and S819: Soundwalls S813 and S819 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheet 42 of Figure 1 in the NADR shows the locations of these soundwalls.

Noise Analysis Area 24 – North Side of US 101 between Las Posas Road and Springville Drive

Within NAA 24, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 53 to 78 dBA. A total of 44 receivers would approach or exceed the

NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required.

Soundwalls S810, S826, and S848: Soundwalls S810, S826, and S848 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet. Soundwall heights of 14 to 18 feet were found to be reasonable from a cost perspective. Sheets 42 through 44 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. In addition, a soundwall height of 18 feet would benefit one additional affected receiver. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S810, S826, and S848.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S810, S826, and S848 at the EOS from stations 809+00 to 811+40, 809+00 to 849+00, and 845+00 to 850+00, respectively, with respective lengths of 240, 3,980, and 500 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 73 benefited receptors at a cost of $5,270,701. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 25 – South Side of US 101 between Springville Drive and Central Avenue

Within NAA 25, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 70 to 76 dBA. One receiver would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwall S885: Soundwall S885 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 45 and 46 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 26 – North Side of US 101 between Springville Drive and Central Avenue

Within NAA 26, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 59 to 80 dBA. One receiver would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S896: Soundwall S896 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost

perspective at any height. Therefore, this soundwall is not recommended. Sheets 46 and 47 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 27 – South Side of US 101 between Central Avenue and N. Del Norte Boulevard

Within NAA 27, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 67 to 84 dBA. The design-year Build Alternative 2 predicted interior traffic noise level is 53 dBA. Six receivers would approach or exceed the NAC for Activity Categories B, D, and E. Therefore, consideration of noise abatement is required.

Soundwall S913: Soundwall S913 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 47 of Figure 1 in the NADR shows the location of this soundwall.

Soundwall S939: Soundwall S939 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 48 and 49 of Figure 1 in the NADR show the location of this soundwall.

Soundwall S969: Soundwall S969 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 50 of Figure 1 in the NADR shows the location of this soundwall.

Noise Analysis Area 28 – North Side of US 101 between Central Avenue and N. Del Norte Boulevard

Within NAA 28, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 78 dBA. The design-year Build Alternative 2 predicted interior traffic noise level is 58 dBA. Three receivers would approach or exceed the NAC for Activity Categories D and E. Therefore, consideration of noise abatement is required.

Soundwall S918: Soundwall S918 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. As summarized in Table 2.3.7-4, the cost to construct exceeds the reasonable allowance for five soundwall heights. The reasonableness allowance for soundwall heights of 8, 10, and 16 feet are all within 10 percent of the engineer's cost to construct, and it is Caltrans District 7's practice to therefore consider this soundwall height to be reasonable from a cost perspective. Sheets 47 and 48 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, soundwall heights of 10, 16, and 18 feet would benefit all affected receivers. A soundwall height of 16 feet would provide an additional three

benefited receptors that would not be affected compared to a soundwall height of 10 feet. Similarly, a soundwall height of 18 feet would provide an additional three benefited receptors that would not be affected compared to a soundwall height of 16 feet. However, a soundwall height of 18 feet would provide only up to an additional 1 dB of insertion loss compared to a soundwall height of 16 feet. A soundwall height of 16 feet would provide up to an additional 4 dB of insertion loss compared to a soundwall height of 10 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwall S918.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S918 at the EOS from stations 911+00 to 931+00, with a length of 2,000 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for seven benefited receptors at a cost of $807,251. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 29 – South Side of US 101 between N. Del Norte Boulevard and Rice Avenue

Within NAA 29, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 67 to 76 dBA. No receivers would be affected because all land uses are agricultural and do not have NAC. Therefore, consideration of noise abatement is not required.

Noise Analysis Area 30 – North Side of US 101 between N. Del Norte Boulevard and Rice Avenue

Within NAA 30, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 60 to 80 dBA. A total of 31 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwalls S1002 and S1018: Soundwalls S1002 and S1018 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 12 to 18 feet were found to be reasonable from a cost perspective. Sheets 51 through 53 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet would result in three fewer benefited receptors compared to a height of 16 feet and six fewer benefited receptors compared to a height of 18 feet. However, a soundwall height of 14 feet would provide benefit to all affected receptors. In addition, a soundwall height of 18 feet would result in additional insertion loss of only 1 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwalls S1002 and S1018.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1002 and S1018 at the EOS from stations 986+00 to 1017+82 and 1015+32 to 1022+34, respectively, with respective lengths of 3,170 and 700 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 46 benefited receptors at a cost of $4,199,235. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 31 – South Side of US 101 between Rice Avenue and N. Rose Avenue

Within NAA 31, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 50 to 81 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 50 to 55 dBA. Four receivers would approach or exceed the NAC for Activity Categories C, D, and E. Therefore, consideration of noise abatement is required.

Soundwall S1037: Soundwall S1037 would be feasible and would achieve the design goal of 7 dB insertion loss, with reasonable heights ranging from 8 to 18 feet. Sheets 53 and 54 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, soundwall heights of 8 to 18 feet would provide the same number of benefited receptors and benefit all affected receptors. However, a soundwall height of 12 feet would provide up to an additional 4 dB of insertion loss compared to a soundwall height of 8 feet. A soundwall height of 14 feet would provide only up to an additional 1 dB of insertion loss compared to a soundwall height of 12 feet. Soundwall heights of 16 and 18 feet would provide only up to an additional 2 dB of insertion loss compared to a soundwall height of 12 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 12 feet is recommended to be constructed for Soundwall S1037.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1037 at the EOS from stations 1032+00 to 1041+00, with a length of 895 feet and a height of 12 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for four benefited receptors at a cost of $253,272. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 32 – North Side of US 101 between Rice Avenue and N. Rose Avenue

Within NAA 32, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 60 to 79 dBA. Nine receivers would approach or exceed the NAC for Activity Categories B and E. Therefore, consideration of noise abatement is required.

Soundwall S1034: Soundwall S1034 would be feasible and achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. Sheets 53 and 54 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 16 feet provides the same number of benefited receptors as a soundwall height of 18 feet. In addition, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwall S1034.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1034 at the EOS from stations 1027+31 to 1035+00, with a length of 755 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 18 benefited receptors at a cost of $829,036. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1050: Soundwall S1050 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 54 of Figure 1 in the NADR shows the location of this soundwall.

Noise Analysis Area 33 – South Side of US 101 between N. Rose Avenue and E. Vineyard Avenue

Within NAA 33, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 51 to 71 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 44 to 47 dBA. A total of 18 receivers would approach or exceed the NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required.

Soundwalls S1085, S1097, S1109, and S1117: Soundwalls S1085, S1097, S1109, and S1117 would be feasible and achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet. Soundwall heights of 16 and 18 feet were found to be reasonable from a cost perspective. Sheets 56 through 58 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. In addition, a soundwall height of 18 feet would benefit an additional seven affected receptors compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S1085, S1097, S1109, and S1117.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1085, S1097, S1109, and S1117 at the EOS and ROW from stations 1082+50 to 1088+08, 1088+10 to 1107+63, 1107+00 to 1114+28, and 1114+28 to 1116+00, respectively, with respective lengths of 550, 2,105, 740, and 175 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 47 benefited receptors at a cost of $2,948,408. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 34 – North Side of US 101 between N. Rose Avenue and E. Vineyard Avenue

Within NAA 34, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 59 to 80 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 49 to 55 dBA. A total of 27 receivers would approach or exceed the NAC for Activity Categories B, C, D, and E. Therefore, consideration of noise abatement is required.

Soundwall S1090: Soundwall S1090 would be feasible, would achieve the design goal of 7 dB insertion loss, and would be reasonable at heights ranging from 8 to 18 feet. Soundwall heights of 8 to 18 feet were found to be reasonable from a cost perspective. Sheets 56 and 57 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwall S1090.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1090 at the EOS from stations 1079+00 to 1098+00, with a length of 1,885 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 62 benefited receptors at a cost of $875,234. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1116: Soundwall S1116 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 58 and 59 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 35 – South Side of US 101 between E. Vineyard Avenue and the Santa Clara River

Within NAA 35, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 52 to 74 dBA. Two receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1173:[1] Soundwall S1173 is located along the ROW of the southbound US 101 off-ramp to Oxnard Boulevard. Soundwall S1173 is an existing soundwall that is not expected to be removed as part of the project. The existing height of Soundwall S1173 is approximately 12 feet. A map of the proposed soundwall location can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 1, Sheets 61 and 62). Because Soundwall S1173 is not expected to be removed as part of the project, additional heights above 12 feet were analyzed; however, the additional heights were found not to provide any additional feasible abatement. Therefore, additional heights to this soundwall will not be considered for abatement.

Noise Analysis Area 36 – North Side of US 101 between E. Vineyard Avenue and the Santa Clara River

Within NAA 36, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 57 to 76 dBA. A total of 45 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1146: Soundwall S1146 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. Sheets 59 through 61 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet would result in only one less benefited receptor compared to soundwall heights of 16 and 18 feet. This benefited receptor is a receptor that would not be affected. In addition, a soundwall height of 18 feet would result in an additional insertion loss of only up to 2 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and

[1] It should be noted that, during preparation of the NSR, land uses represented by the modeled receivers analyzed for abatement at Soundwall S1173 were being developed. Attempts to obtain the developers' computer-aided design files in order to accurately model the development were not successful. Therefore, the modeled receivers and relevant geometry were modeled to the greatest extent practical. During final design, should the geometry of this soundwall and the surrounding land uses be different from what was modeled in the NSR, revalidation of this soundwall may be necessary.

the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwall S1146.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1146 at the EOS from stations 1135+00 to 1154+00, with a length of 1,915 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 75 benefited receptors at a cost of $2,181,547. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 37 – South Side of US 101 between Santa Clara River and S. Victoria Avenue

Within NAA 37, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 67 to 72 dBA. One receiver would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwall S1263: Soundwall S1263 would be feasible and would achieve the design goal of 7dB insertion loss at heights ranging from 16 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 66 and 67 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Areas 38 and 40 – North Side of US 101 between Santa Clara River and S. Victoria Avenue (NAA 38) and the North Side of US 101 between S. Victoria Avenue and the SR-126 Interchange (NAA 40)

Within NAAs 38 and 40, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 53 to 78 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 51 to 58 dBA. Five receivers would approach or exceed the NAC for Activity Categories B, D, and E in NAA 38. A total of 38 receivers would approach or exceed the NAC for Activity Categories B, C, D, and E in NAA 40. Therefore, consideration of noise abatement is required.

Soundwall S1196: Soundwall S1196 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. A map of the proposed soundwall location can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 1, Sheets 63 and 64).

Soundwalls S1258, S1268, and S1280: Soundwalls S1258, S1268, and S1280 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 8 to 18 feet were found to be reasonable from a cost perspective. Sheets 66 through 68 of Figure 1 in the NADR show the locations of the soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 16 feet provides the same number of benefited receptors as a soundwall height of 18 feet. In addition, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwalls S1258, S1268, and S1280.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1258, S1268, and S1280 at the EOS and ROW from stations 1252+58 to 1264+00, 1263+00 to 1274+42, and 1273+00 to 1286+00, respectively, with respective lengths of 1,125, 1,140, and 1,305 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 52 benefited receptors at a cost of $3,498,983. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1298: Soundwall S1298 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 68 and 69 of Figure 1 in the NADR show the location of this soundwall.

Soundwall S1354: Soundwall S1354 would be feasible, would achieve the design goal of 7 dB insertion loss, and would be reasonable at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. A map of the proposed soundwall location can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 1, Sheets 71 through 73).

As summarized in Table 2.3.7-4, a soundwall height of 14 feet provides the same number of benefited receptors as soundwall heights of 16 and 18 feet. In addition, a soundwall height of 18 feet would provide only up to 2 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S1354.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1354 at the EOS from stations 1342+00 to 1358+50, with a length of 2,160 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 49 benefited receptors at a cost of $2,462,017. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 39 – South Side of US 101 between S. Victoria Avenue and Telephone Road

Within NAA 39, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 52 to 78 dBA. The design-year Build Alternative 2 predicted interior traffic noise levels range from 47 to 53 dBA. Six receivers would approach or exceed the NAC for Activity Categories C, D, and E. Therefore, consideration of noise abatement is required.

Soundwalls S1275 and S1287: Soundwalls S1275 and S1287 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 67 through 69 of Figure 1 in the NADR show the locations of these soundwalls.

Soundwall S1311: Soundwall S1311 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 69 and 70 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Area 41 – South Side of US 101 between S. Victoria Avenue and Telephone Road

Within NAA 41, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 62 to 70 dBA. The design-year Build Alternative 2 predicted interior traffic noise level is 50 dBA. One receiver would approach or exceed the NAC for Activity Category C. Therefore, consideration of noise abatement is required.

Soundwall S1355: Soundwall S1355 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 72 of Figure 1 in the NADR shows the location of this soundwall.

Noise Analysis Area 42 – North Side of US 101 between S. Victoria Avenue and the SR-126 Interchange

Within NAA 42, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 51 to 71 dBA. A total of 12 receivers would approach or exceed the NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required.

Soundwall S1362 and S1372: Soundwalls S1362 and S1372 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet. Soundwall heights of 14 to 18 feet were found to be reasonable from a cost perspective. Sheets 73 through 75 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet provides nine more benefited receptors compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S1362 and S1372.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1362 and S1372 at the EOS from stations 1343+00 to 1378+00 and 1364+50 to 1377+65, respectively, with respective lengths of 3,400 and 1,325 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 69 benefited receptors at a cost of $5,857,908. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 43 – South Side of US 101 between the SR-126 Interchange and Seaward Avenue

Within NAA 43, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 75 dBA. A total of 12 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1459: Soundwall S1459 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. Sheets 79 and 80 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet provides the same number of benefited receptors as soundwall heights of 16 and 18 feet. In addition, soundwall heights of 16 and 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S1459.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1459 at the EOS from stations 1449+00 to 1464+00, with a length of 1,505 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 55 benefited receptors at a cost of $1,716,770. These measures may change, based on input received from the public. If conditions change substantially during final

design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 44 – North Side of US 101 between E. Main Street and Seaward Avenue

Within NAA 44, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 59 to 79 dBA. A total of 21 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1396: Soundwall S1396 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 10 to 18 feet were found to be reasonable from a cost perspective. Sheets 75 through 77 of Figure 1 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-4, a soundwall height of 14 feet would result in only one less benefited receptor compared to soundwall heights of 16 and 18 feet. This benefited receptor is a receptor that would not be affected. In addition, a soundwall height of 18 feet would result in additional insertion loss of only up to 1 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwall S1396.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1396 at the EOS from stations 1386+00 to 1416+00, with a length of 2,940 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 16 dBA for 70 benefited receptors at a cost of $3,343,863. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 45 – South Side of US 101 between Seaward Avenue and the San Jon Road Overcrossing

Within NAA 45, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 62 to 75 dBA. Six receivers would approach or exceed the NAC for Activity Category C. Therefore, consideration of noise abatement is required.

Soundwall S1503: Soundwall S1503 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-4, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 82 and 83 of Figure 1 in the NADR show the location of this soundwall.

Noise Analysis Areas 46 and 48 – North Side of US 101 between Seaward Avenue and the San Jon Road Overcrossing (NAA 46) and North Side of US 101 between the San Jon Road Overcrossing and California Street (NAA 48)

Within NAA 46, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 71 to 81 dBA. A total of 35 receivers would approach or exceed the NAC for Activity Categories B and E. Therefore, consideration of noise abatement is required.

Within NAA 48, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 75 dBA. A total of 38 receivers would approach or exceed the NAC for Activity Categories B and E. Therefore, consideration of noise abatement is required.

Soundwalls S1492, S1522, S1536, and S1546:[2] Soundwalls S1492, S1522, S1536, and S1546 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 8, 10, 16, and 18 feet were found to be reasonable from a cost perspective. Sheets 80 through 86 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. In addition, a soundwall height of 18 feet benefits an additional four affected receptors compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S1492, S1522, S1536, and S1546.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1492, S1522, S1536, and S1546 at the EOS and ROW from stations 1469+00 to 1515+00, 1513+31 to 1530+00, 1530+00 to 1543+88, and 1543+91 to 1546+83, respectively, with respective lengths of 4,665, 1,620, 1,405, and 305 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 14 dBA for 106 benefited receptors at a cost of $10,609,833. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1550: Soundwall S1550 would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-4,

[2] It should be noted that, during preparation of the NSR, land uses represented by the modeled receivers analyzed for abatement at S1522, S1536, and S1546 were being developed. Attempts to obtain the developers' computer-aided design files in order accurately model the development were not successful. Therefore, the modeled receivers and relevant geometry were modeled to the greatest extent practical. During final design, should the geometry of this soundwall and the surrounding land uses be different from what was modeled in the NSR, revalidation of this soundwall may be necessary.

this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 86 of Figure 1 in the NADR shows the locations of this soundwall.

Soundwalls S1554 and S1556: Soundwalls S1554 and S1556 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet. Soundwall heights of 16 and 18 feet were found to be reasonable from a cost perspective. Sheet 86 of Figure 1 in the NADR shows the locations of the soundwalls.

As summarized in Table 2.3.7-4, soundwall heights of 16 and 18 feet provide the same number of benefited receptors. A soundwall height of 18 feet provides only up to an additional 1 dB of insertion loss compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, it is recommended that a soundwall height of 16 feet be constructed for Soundwalls S1554 and S1556.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1554 and S1556 at the EOS and ROW from stations 1551+85 to 1554+65 and 1554+65 to 1556+64, respectively, with respective lengths of 310 and 210 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 9 dBA for six benefited receptors at a cost of $572,947. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 47 – South Side of US 101 between the San Jon Road Overcrossing and California Street

Within NAA 47, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 57 to 73 dBA. No receivers would approach or exceed the NAC for Activity Category E, and impacts would not be anticipated within NAA 47; therefore, consideration of noise abatement is not required.

Noise Analysis Area 49 – South Side of US 101 between California Street and the Project Terminus at SR-33

Within NAA 49, the design-year Build Alternative 2 predicted exterior traffic noise levels have a range of 55 to 78 dBA. A total of 24 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwalls S1561 and S1567: Soundwalls S1561 and S1567 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet. Soundwall heights of 14 feet to 18 feet were found to be reasonable from a cost perspective. Sheets 86 and 87 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 16 feet provides the same number of benefited receptors as a soundwall height of 18 feet. In addition, a soundwall

height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwalls S1561 and S1567.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1561 and S1567 at the EOS and ROW from stations 1558+00 to 1562+00 and 1561+00 to 1570+00, respectively, with respective lengths of 390 and 900 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 8 dBA for 49 benefited receptors at a cost of $1,723,446. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwalls S1589, S1590, and S1593: Soundwalls S1589, S1590, and S1593 were modeled as a system for reasonableness purposes. Sheet 88 of Figure 1 in the NADR shows the location of the soundwall system. The proposed soundwall system would not provide feasible traffic noise abatement at any receivers. Therefore, this soundwall system will not be considered for abatement.

Noise Analysis Area 50 – North Side of US 101 between California Street and the Project Terminus at SR-33

Within NAA 50, the Design-Year Build Alternative 2 predicted exterior traffic noise levels have a range of 59 to 80 dBA. A total of 28 receivers would approach or exceed the NAC for Activity Categories B, C, and E. Therefore, consideration of noise abatement is required.

Soundwalls S1560 and S1578: Soundwalls S1560 and S1578 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 10 to 18 feet were found to be reasonable from a cost perspective. Sheets 86 through 88 of Figure 1 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-4, a soundwall height of 16 feet would result in only one less benefited receptor compared to a height of 18 feet. This benefited receptor is a receptor that would not be affected. In addition, soundwall heights of 16 and 18 feet would result in the same level of insertion loss for affected receptors. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended for Soundwalls S1560 and S1578.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1560 and S1578 at the EOS from stations 1558+26 to 1565+00 and 1564+50 to 1591+00, respectively, with respective lengths of 685 and 2,615 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 59

benefited receptors at a cost of $4,485,033. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Construction activities and associated equipment and phases of the project under Build Alternative 3 would be similar to those under Build Alternative 2. Therefore, avoidance and minimization measures **N-1** through **N-3** identified for Build Alternative 2 to address temporary construction noise and vibration impacts would also apply to Build Alternative 3.

Permanent Impacts

As discussed above, modeling results predict that worst-hour traffic noise levels (L_{eq}[h]) for design-year Build Alternative 3 conditions would approach or exceed the NAC for Activity Categories B, C, D and E land uses. Accordingly, noise abatement in the form of soundwalls was considered.

The preliminary noise abatement decision for each acoustically feasible soundwall that meets the design goal identified for Alternative 3 within the NSR and NADR is provided in Table 2.3.7-5 and discussed below.

Noise Analysis Area 1 – South Side of US 101 between SR-23 and N. Moorpark Road

Within NAA 1, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 76 dBA. No receivers would approach or exceed the NAC for Activity Categories B or C, and impacts would not be anticipated within NAA 1; therefore, consideration of noise abatement is not required.

Noise Analysis Areas 2 and 4 – North Side of US 101 between SR-23 and N. Moorpark Road (NAA 2) and North Side of US 101 between N. Moorpark Road and Lynn Road (NAA 4)

Within NAAs 2 and 4, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 77 dBA. A total of three receivers would approach or exceed the NAC for Activity Category E; therefore, consideration of noise abatement is required.

Soundwalls S182 and S194: Soundwalls S182 and S194 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 3 and 4 of Figure 2 in the NADR show the locations of these soundwalls.

Noise Analysis Area 3 – South Side of US 101 between N. Moorpark Road and Lynn Road

Within NAA 3, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 50 to 78 dBA. A total of 14 receivers would approach or exceed the NAC for Activity Categories B and C; therefore, consideration of noise abatement is required.

Soundwalls S209 and S229: Soundwalls S209 and S229 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 3 through 6 of Figure 2 in the NADR show the locations of these soundwalls.

Noise Analysis Area 5 – South Side of US 101 between Lynn Road and N. Ventu Park

Within NAA 5, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 81 dBA. A total of 25 receivers would approach or exceed the NAC for Activity Categories B and C, with a substantial increase (12 dB or more increase) at one location. Therefore, consideration of noise abatement is required.

Soundwalls S261 and S281: Soundwalls S261 and S281 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 8 to 18 feet were found to be reasonable from a cost perspective; however, only heights of 16 and 18 feet will be considered because the height of the existing soundwall is approximately 16 feet. Sheets 9 through 11 in Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet would provide three additional benefited receptors and benefit one additional affected receiver compared to a height of 16 feet. The soundwall heights considered would provide similar levels of insertion loss (up to 15 dB for a soundwall height of 18 feet and 14 dB for 16 feet). With consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S261 and S281.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S261 and S281 at the EOS from stations 248+00 to 274+00 and 274+00 to 286+87, respectively, with respective lengths of 2,595 and 1,285 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 15 dBA for 34 benefited receptors at a cost of $2,551,625. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 6 – North Side of US 101 between Lynn Road and N. Ventu Park Road

Within NAA 6, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 63 to 75 dBA. A total of 13 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S262: Soundwall S262 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet. Soundwall heights of 12 to 16 feet were found to be reasonable from a cost perspective. In addition, the reasonableness allowance for a soundwall height of 18 feet is within 10 percent of the engineer's cost to construct, and it is Caltrans District 7 practice to therefore consider this soundwall height to be reasonable from a cost perspective. Sheets 9 through 11 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet provides the same number of benefited receptors as a soundwall height of 16 feet. In addition, soundwall heights of 16 feet and 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S262.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S262 at the EOS from stations 239+00 to 285+00, with a length of 4,615 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 10 dBA for 25 benefited receptors at a cost of $2,251,886. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 7 – South Side of US 101 between N. Ventu Park Road and Rancho Conejo Boulevard

Within NAA 7, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 45 to 76 dBA. Eight receivers would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwalls S299, S303, S319, and S327: Soundwalls S299, S303, S319, and S327 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 12 and 13 of Figure 2 in the NADR show the locations of these soundwalls.

An existing soundwall that would be removed due to project improvements is located along the shoulder of the southbound US 101 mainline and the southbound US 101 slip on-ramp from Rancho Conejo Boulevard. The existing soundwall has heights ranging from approximately 7 to 16 feet and is in the same general area as Soundwall S319.

The existing soundwall is located between station 314+10 and station 324+64 and has a total length of approximately 1,055 feet. This soundwall would be removed and replaced as part of the project regardless of cost.

Noise Analysis Area 8 – North Side of US 101 between N. Ventu Park Road and Rancho Conejo Boulevard

Within NAA 8, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 77 dBA. A total of 58 receivers would approach or exceed the NAC for Activity Category B, with a substantial increase (12 dB or more increase) at 25 receivers. Therefore, consideration of noise abatement is required.

Soundwalls S314 and S330: Soundwalls S314 and S330 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective; however, only heights of 12 to 18 feet will be considered because the height of the existing soundwall is approximately 12 feet. Sheets 12 and 13 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet provides only one less benefited receptor compared to soundwall heights of 16 and 18 feet. A soundwall height of 14 feet would also benefit all receivers in areas where there would be impacts. In addition, soundwall heights of 16 and 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwalls S314 and S330.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S314 and S330 at the EOS from stations 298+00 to 329+27 and 329+00 to 335+00, respectively, with respective lengths of 3,125 and 595 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 164 benefited receptors at a cost of $1,728,367. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 9 – South Side of US 101 between Rancho Conejo Boulevard and Camino Dos Rios

Within NAA 9, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 53 to 79 dBA. Ten receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S359: Soundwall S359 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a

cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 15 and 16 of Figure 2 in the NADR show the location of this soundwall.

Soundwall S373: Soundwall S373 is located along the ROW of the southbound US 101 mainline and the southbound US 101 slip on-ramp from Wendy Drive. Soundwall S373 is an existing soundwall that is not expected to be removed as part of the project. The existing soundwall has a height of approximately 15 feet. It is located between station 362+16 and station 384+21 and has a total length of approximately 2,245 feet. Because Soundwall S373 is not expected to be removed as part of the project, additional heights above 15 feet were analyzed; however, the additional heights were found not to provide any additional feasible abatement. Therefore, this soundwall was not considered for abatement.

Noise Analysis Area 10 – North Side of US 101 between Rancho Conejo Boulevard and Camino Dos Rios

Within NAA 10, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 58 to 78 dBA. No receivers would approach or exceed the NAC for Activity Category E; impacts would not be anticipated in NAA 10; therefore, consideration of noise abatement is not required.

Noise Analysis Area 11 – South Side of US 101 between Camino Dos Rios and the US 101 Weigh Station

Within NAA 11, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 64 to 82 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 46 to 62 dBA. Two receivers would approach or exceed the NAC for Activity Category D. Therefore, consideration of noise abatement is required.

Soundwall S387: Soundwall S387 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 17 and 18 of Figure 2 in the NADR show the location of this soundwall.

Soundwall S403: Soundwall S403 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 16 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 18 and 19 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 12 – North Side of US 101 between Camino Dos Rios and the US 101 Weigh Station

Within NAA 12, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 48 to 77 dBA. No receivers would approach or exceed the NAC for Activity Category E or B, and impacts would not be anticipated in NAA 12; therefore, consideration of noise abatement is not required.

Noise Analysis Area 13 – South Side of US 101 between the US 101 Weigh Station and Camarillo Springs Road

Within NAA 13, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 49 to 66 dBA. Three receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwalls S525 and S531: Soundwalls S525, and S531 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet. All four soundwall heights were found to be reasonable from a cost perspective; however, only heights of 12 to 18 feet would be considered because the height of the existing soundwall, which would be removed, is generally 12 feet. Sheets 24 through 26 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 16 feet would provide the same number of benefited receptors as a soundwall height of 18 feet. In addition, soundwall heights of 16 and 18 feet would provide the same level of insertion loss at affected receptors. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwalls S525 and S531.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S525 and S531 at the EOS from stations 521+00 to 526+00 and 526+00 to 533+00, respectively, with respective lengths of 505, and 665 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 9 dBA for 16 benefited receptors at a cost of $579,804. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 15 – South Side of US 101 between Camarillo Springs Road and Pleasant Valley Road

Within NAA 15, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 57 to 81 dBA. Two receivers would approach or exceed the NAC for Activity Category C. Therefore, consideration of noise abatement is required.

Soundwall S555: Soundwall S555 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 26 and 27 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 16 – North Side of US 101 between Camarillo Springs Road and Pleasant Valley Road

Within NAA 16, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 50 to 78 dBA. Seven receivers would approach or exceed the NAC for

Activity Categories B, C, and E. Therefore, consideration of noise abatement is required.

Soundwall S586: Soundwall S586 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 30 of Figure 2 in the NADR shows the location of this soundwall.

Soundwall S606: Soundwall S606 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 31 of Figure 2 in the NADR shows the location of this soundwall.

Noise Analysis Area 17 – South Side of US 101 between Pleasant Valley Road and Village at the Park Drive

Within NAA 17, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 82 dBA. The design-year Build Alternative 3 predicted interior traffic noise level is 62 dBA. A total of 18 receivers would approach or exceed the NAC for Activity Categories B, C, and D, with a substantial increase (12 dB or more increase) at one receiver. Therefore, consideration of noise abatement is required.

Soundwall S657: Soundwall S657 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. A map of the proposed soundwall location can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 2, Sheets 32 through 35).

An existing soundwall that would be removed due to project improvements is located along the shoulder of the southbound US 101 mainline, north of the southbound US 101 off-ramp to Santa Rosa Road. The existing soundwall has a height of approximately 10.5 feet and is in the same general area as a portion of Soundwall S657. The existing soundwall is located between station 637+05 and station 648+09 and has a total length of approximately 1,095 feet. This soundwall would be removed and replaced as part of the project regardless of cost.

Noise Analysis Area 18 – North Side of US 101 between Pleasant Valley Road and the Amtrak Overcrossing

Within NAA 18, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 54 to 78 dBA. Seven receivers would approach or exceed the NAC for Activity Categories C and E. Therefore, consideration of noise abatement is required.

Soundwall S628: Soundwall S628 would be feasible at a height of 18 feet; however, the proposed soundwall would not achieve the design goal of 7 dB insertion loss at any height.

Therefore, this soundwall is not recommended. Sheets 31 through 33 of Figure 2 in the NADR show the location of this soundwall.

The existing soundwall represented by Soundwall S628 would not be removed by the project and would remain at its existing height of approximately 12 feet. The existing soundwall is located between station 617+84 and station 638+11 and has a total length of approximately 2,025 feet.

Soundwall S668: Soundwall S668 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 16 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 34 and 35 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 19 – South Side of US 101 between Village at the Park Drive and Carmen Drive

Within NAA 19, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 54 to 81 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 38 to 50 dBA. A total of 18 receivers would approach or exceed the NAC for Activity Categories B, C, and E, with a substantial increase (12 dB or more increase) at one receiver. Therefore, consideration of noise abatement is required.

Soundwalls S695, S707, and S729: Soundwalls S695, S707, and S729 would work as a system for reasonableness purposes. Soundwall S695 would be located along the shoulder of the southbound US 101 on-ramp from Ventura Boulevard to the southbound US 101 off-ramp to Petit Street; this soundwall would be approximately 1,630 feet long. Soundwall S707 would be located along the shoulder of the southbound US 101 mainline, between the southbound US 101 on- and off-ramps at Ventura Boulevard; this soundwall would be approximately 580 feet long. Soundwall S729 would be located along the shoulder of the southbound US 101 mainline and the southbound US 101 on-ramp from Carmen Drive; this soundwall would be approximately 2,500 feet long. An existing soundwall that would not be removed due to project improvements is located along the shoulder and ROW of the southbound US 101 off-ramp to Ventura Boulevard. The existing soundwall has a height of 14 feet and is in the same approximate area as a portion of Soundwall S711. The existing soundwall is located between approximately station 709+00 and station 712+55 and has a total length of approximately 365 feet. A map of the proposed soundwall locations can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 2, Sheets 35 through 38).

As summarized in Table 2.3.7-5, a soundwall height of 18 feet was the only soundwall height found to be reasonable from a cost perspective because the reasonableness allowance was within 10 percent of the engineer's cost to construct. Therefore, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S695, S707, and S729.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S695 at the EOS of the southbound US 101 on-

ramp from Ventura Boulevard from the station 687+00 Petit Street off-ramp station line (687+13 along the mainline station line) to the station 702+57 Ventura Boulevard on-ramp line (703+36 along the mainline station line), with a length of approximately 1,630 feet and a height of 18 feet; Soundwall S707 at the EOS from stations 704+10 to 709+00, with a length of approximately 580 feet and a height of 18 feet; and Soundwall S729 at the EOS from stations 718+10 to 743+00, with length of approximately 2,500 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 0 to 14 dBA for 40 benefited receptors at a cost of $4,443,834. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 20 – North Side of US 101 between Pleasant Valley Road and the Amtrak Overcrossing

Within NAA 20, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 58 to 79 dBA. A total of 15 receivers would approach or exceed the NAC for Activity Categories B and E, with a substantial increase (12 dB or more increase) at one receiver. Therefore, consideration of noise abatement is required.

Soundwalls S704 and S708: Soundwalls S704 and S708 would work as a system for reasonableness purposes. Soundwall S704 would be located along the shoulder of the northbound US 101 mainline, between the northbound US 101 on- and off-ramps at Daily Drive. Soundwall S708 would be located along the shoulder of the northbound US 101 on-ramp from Daily Drive. A map of the proposed soundwall locations can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 2, Sheets 36 and 37). The proposed soundwall system would not provide feasible traffic noise abatement at any receivers. Therefore, the soundwalls will not be considered for abatement.

Soundwalls S714, S720, S726, and S736: Soundwalls S714, S720, S726, and S736 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective; however, only heights of 12 to 18 feet would be considered because the height of the existing soundwall is approximately 11 feet. Sheets 37 and 38 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet would result in the same number of benefited receptors as a height of 16 feet and only three fewer benefited receptors than a soundwall height of 18 feet. It should be noted that the three additional benefited receptors gained at a soundwall height of 18 feet are receptors that would be not affected. In addition, a soundwall height of 18 feet would result in additional insertion loss of up to only 2 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwalls S714, S720, S726, and S736.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S714, S720, S726, and S736 at the EOS from stations 713+39 to 717+00, 717+00 to 724+00, 724+00 to 730+00, and 730+00 to 739+47, respectively, with respective lengths of 360, 700, 600, 945 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 31 benefited receptors at a cost of $1,044,878. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 21 – South Side of US 101 between Carmen Drive and Las Posas Road

Within NAA 21, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 53 to 81 dBA. Two receivers would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwalls S755, S757, and S765: Soundwalls S755, S757, and S765 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 38 through 40 of Figure 2 in the NADR show the locations of these soundwalls.

Noise Analysis Area 22 – North Side of US 101 between Carmen Drive and Las Posas Road

Within NAA 22, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 60 to 77 dBA. Two receivers would approach or exceed the NAC for Activity Categories E. Therefore, consideration of noise abatement is required.

Soundwall S760: Soundwall S760 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, the soundwall is not recommended. Sheet 39 of Figure 2 in in the NADR shows the location of this soundwall.

Noise Analysis Area 23 – South Side of US 101 between Las Posas Road and Springville Drive

Within NAA 23, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 73 dBA. One receiver would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwalls S813 and S819: Soundwalls S813 and S819 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is

not recommended. Sheet 42 of Figure 2 in the NADR shows the location of these soundwalls.

Noise Analysis Area 24 – North Side of US 101 between Las Posas Road and Springville Drive

Within NAA 24, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 53 to 78 dBA. A total of 44 receivers would approach or exceed the NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required.

Soundwall S810, S826, and S848: Soundwalls S810, S826, and S848 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet. Soundwall heights of 14 through 18 feet were found to be reasonable from a cost perspective. Drive Sheets 42 through 44 of Figure 2 in the NADR show the locations of the soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. In addition, a soundwall height of 18 feet would benefit one additional affected receiver. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S810, S826, and S848.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S810, S826, and S848 at the EOS from stations 809+00 to 811+40, 809+00 to 849+00, and 845+00 to 850+00, respectively, with respective lengths of 240, 3,980, and 500 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 73 benefited receptors at a cost of $5,270,701. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 25 – South Side of US 101 between Springville Drive and Central Avenue

Within NAA 25, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 70 to 76 dBA. One receiver would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwall S885: Soundwall S885 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 45 and 46 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 26 – North Side of US 101 between Springville Drive and Central Avenue

Within NAA 26, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 80 dBA. One receiver would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S896: Soundwall S896 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, the soundwall is not recommended. Sheets 46 and 47 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 27 – South Side of US 101 between Central Avenue and N. Del Norte Boulevard

Within NAA 27, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 67 to 84 dBA. The design-year Build Alternative 3 predicted interior traffic noise level is 53 dBA. Six receivers would approach or exceed the NAC for Activity Categories B, D, and E. Therefore, consideration of noise abatement is required.

Soundwall S913: Soundwall S913 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, the soundwall is not recommended. Sheet 47 of Figure 2 in the NADR shows the location of this soundwall.

Soundwall S939: Soundwall S939 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, the soundwall is not recommended. Sheets 48 and 49 of Figure 2 in the NADR show the location of this soundwall.

Soundwall S969: Soundwall S969 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, the soundwall is not recommended. Sheet 50 of Figure 2 in the NADR shows the location of this soundwall.

Noise Analysis Area 28 – North Side of US 101 between Central Avenue and N. Del Norte Boulevard

Within NAA 28, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 78 dBA. The design-year Build Alternative 3 predicted interior traffic noise level is 58 dBA. Three receivers would approach or exceed the NAC for Activity Categories D and E. Therefore, consideration of noise abatement is required.

Soundwall S918: Soundwall S918 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. As summarized in Table 2.3.7-5, construction of a soundwall at a height of 18 feet was found to be reasonable from a cost perspective. In addition, the reasonableness allowances for soundwall heights of 8, 10, and 16 feet are within 10 percent of the engineer's cost to construct; therefore, per Caltrans District 7 policy, these soundwall heights are considered reasonable from a cost perspective. Sheets 47 and 48 of Figure 2 in the NADR show the location of this soundwall.

Soundwall heights of 10, 16, and 18 feet would benefit all affected receivers. A soundwall height of 16 feet would provide an additional three benefited receptors that are not affected compared to a soundwall height of 10 feet. Similarly, a soundwall height of 18 feet would provide an additional three benefited receptors that are not affected compared to a soundwall height of 16 feet. However, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a soundwall height of 16 feet. A soundwall height of 16 feet would provide up to 4 additional dB of insertion loss compared to a soundwall height of 10 feet. Therefore, a soundwall height of 16 feet is recommended to be constructed for Soundwall S918.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S918 at the EOS from stations 911+00 to 931+00, with a length of 2,000 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 7 benefited receptors at a cost of $807,251. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 29 – South Side of US 101 between N. Del Norte Boulevard and Rice Avenue

Within NAA 29, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 67 to 76 dBA. No receivers would be affected because all land uses are agricultural and do not have an NAC. Therefore, consideration of noise abatement is not required.

Noise Analysis Area 30 – North Side of US 101 between N. Del Norte Boulevard and Rice Avenue

Within NAA 30, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 60 to 80 dBA. A total of 31 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwalls S1002 and S1018: Soundwalls S1002 and S1018 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 12 to 18 feet were found to be reasonable from a cost perspective. Sheets 51 through 53 of Figure 2 in the NADR show the locations of the soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet would result in three fewer benefited receptors compared to a height of 16 feet and six fewer benefited receptors compared to a height of 18 feet. However, a soundwall height of 14 feet would provide benefit to all affected receptors. In addition, a soundwall height of 18 feet would result in additional insertion loss of only 1 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwalls S1002 and S1018.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1002 and S1018 at the EOS from stations 986+00 to 1017+82 and 1015+32 to 1022+34, respectively, with respective lengths of 3,170 and 700 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 46 benefited receptors at a cost of $4,199,235. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 31 – South Side of US 101 between Rice Avenue and N. Rose Avenue

Within NAA 31, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 81 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 50 to 55 dBA. Four receivers would approach or exceed the NAC for Activity Categories C, D, and E. Therefore, consideration of noise abatement is required.

Soundwall S1037: Soundwall S1037 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 8 to 18 feet were found to be reasonable from a cost perspective. Sheets 53 and 54 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, soundwall heights of 8 to 18 feet would provide the same number of benefited receptors and benefit all affected receptors. However, a soundwall height of 12 feet would provide up to 4 additional dB of insertion loss compared to a height of 8 feet. A soundwall height of 14 feet would provide only up to 1 additional dB of insertion loss compared to a height of 12 feet; soundwall heights of 16 and 18 feet would provide only up to 2 additional dB of insertion loss compared to a soundwall height of 12 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 12 feet is recommended to be constructed for Soundwall S1037.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1037 at the EOS from stations 1032+00 to 1041+00, with a length of 895 feet and a height of 12 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for four benefited receptors at a cost of $253,272. These measures may change,

based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 32 – North Side of US 101 between Rice Avenue and N. Rose Avenue

Within NAA 32, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 60 to 79 dBA. Nine receivers would approach or exceed the NAC for Activity Categories B and E. Therefore, consideration of noise abatement is required.

Soundwall S1034: Soundwall S1034 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. Sheets 53 and 54 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, a soundwall height of 16 feet provides the same number of benefited receptors as a soundwall height of 18 feet. In addition, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwall S1034.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1034 at the EOS from stations 1027+31 to 1035+00, with a length of 755 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 18 benefited receptors at a cost of $829,036. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1050: Soundwall S1050 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 54 of Figure 2 in the NADR shows the location of this soundwall.

Noise Analysis Area 33 – South Side of US 101 between N. Rose Avenue and E. Vineyard Avenue

Within NAA 33, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 51 to 71 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 44 to 47 dBA. A total of 18 receivers would approach or exceed the NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required.

Soundwalls S1085, S1097, S1109, and S1117: Soundwalls S1085, S1097, S1109, and S1117 would be feasible and would achieve the design goal of 7 dB insertion loss

at heights ranging from 10 to 18 feet. Soundwall heights of 16 and 18 feet were found to be reasonable from a cost perspective. Sheets 56 through 58 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. In addition, a soundwall height of 18 feet would benefit an additional seven affected receptors compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S1085, S1097, S1109, and S1117.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1085, S1097, S1109, and S1117 at the EOS and ROW from stations 1082+50 to 1088+08, 1088+10 to 1107+63, 1107+00 to 1114+28, and 1114+28 to 1116+00, respectively, with respective lengths of 550, 2,105, 740, and 175 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 46 benefited receptors at a cost of $2,948,408. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 34 – North Side of US 101 between N. Rose Avenue and E. Vineyard Avenue

Within NAA 34, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 80 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 49 to 55 dBA. A total of 27 receivers would approach or exceed the NAC for Activity Categories B, C, D, and E. Therefore, consideration of noise abatement is required.

Soundwall S1090: Soundwall S1090 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 12 to 18 feet were found to be reasonable from a cost perspective. Sheets 56 and 57 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet provides significantly more benefited receptors compared to a soundwall height of 14 or 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwall S1090.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1090 at the EOS from stations 1079+00 to 1098+00, with a length of 1,885 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 62 benefited receptors at a cost of $1761,071. These measures may change,

based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1116: Soundwall S1116 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 58 and 59 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 35 – South Side of US 101 between E. Vineyard Avenue and the Santa Clara River

Within NAA 35, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 53 to 74 dBA. Two receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1173:[3] Soundwall S1173 is located along the ROW of the southbound US 101 off-ramp to Oxnard Boulevard. Furthermore, Soundwall S1173 is an existing soundwall that is not expected to be removed as part of the project. The existing height of Soundwall S1173 is approximately 12 feet. A map of the proposed soundwall location can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 2, Sheets 61 and 62). Because Soundwall S1173 is not expected to be removed as part of the project, additional heights above 12 feet were analyzed; however, the additional heights were found not to provide any additional feasible abatement. Therefore, additional heights to this soundwall will not be considered for abatement.

Noise Analysis Area 36 – North Side of US 101 between E. Vineyard Avenue and the Santa Clara River

Within NAA 36, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 60 to 77 dBA. A total of 49 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1146: Soundwall S1146 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. Sheets 59 through 61 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, soundwall heights of 14 to 18 feet provide the greatest number of benefited receptors compared to other soundwall heights. A soundwall height of 14 feet provides the same number of benefited receptors as a soundwall height of 16

[3] It should be noted that, during preparation of the NSR, land uses represented by the modeled receivers analyzed for abatement at S1173 were being developed. Attempts to obtain the developers' computer-aided design files in order accurately model the development were not successful. Therefore, the modeled receivers and relevant geometry were modeled to the greatest extent practical. During final design, should the geometry of this soundwall and the surrounding land uses be different from what was modeled in the NSR, revalidation of this soundwall may be necessary.

or 18 feet. In addition, a soundwall height of 18 feet would provide only up to 2 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S1146.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1146 at the EOS from stations 1135+00 to 1154+00, with a length of 1,915 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 77 benefited receptors at a cost of $2,181,547. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 37 – South Side of US 101 between Santa Clara River and S. Victoria Avenue

Within NAA 37, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 67 to 72 dBA. One receiver would approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required.

Soundwall S1263: Soundwall S1263 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 66 and 67 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Areas 38 and 40 – North Side of US 101 between Santa Clara River and S. Victoria Avenue (NAA 38) and the North Side of US 101 between S. Victoria Avenue and the SR-126 Interchange (NAA 40)

Within NAAs 38 and 40, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 53 to 78 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 53 to 58 dBA. Five receivers would approach or exceed the NAC for Activity Categories B, D, and E in NAA 38. A total of 38 receivers would approach or exceed the NAC for Activity Categories B, C, D, and E in NAA 40. Therefore, consideration of noise abatement is required.

Soundwall S1196: Soundwall S1196 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 63 and 64 of Figure 2 in the NADR show the location of this soundwall.

Soundwalls S1258, S1268, and S1280: Soundwalls S1258, S1268, and S1280 were found to be reasonable from a cost perspective at heights of 10 to 18 feet. In addition, the reasonableness allowance for a soundwall height of 8 feet is within 10 percent of the

engineer's cost to construct; therefore, per Caltrans District 7 policy, these soundwall heights are considered reasonable from a cost perspective. Sheets 66 through 68 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 16 feet provides the same number of benefited receptors as a soundwall height of 18 feet. In addition, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwalls S1258, S1268, and S1280.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1258, S1268, and S1280 at the EOS and ROW from stations 1252+58 to 1264+00, 1263+00 to 1274+42, and 1273+00 to 1286+00, respectively, with respective lengths of 1,125, 1,140, and 1,305 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 12 dBA for 52 benefited receptors at a cost of $3,498,983. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1298: Soundwall S1298 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 68 and 69 of Figure 2 in the NADR show the location of this soundwall.

Soundwall S1354: Soundwall S1354 was found to be acoustically feasible and would meet the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. In addition, all considered soundwall heights were found to be reasonable from a cost perspective. Sheets 71 through 73 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet provides the same number of benefited receptors as soundwall heights of 16 and 18 feet. In addition, a soundwall height of 18 feet would provide only up to 2 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S1354.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1354 at the EOS from stations 1342+00 to 1358+50, with a length of 2,160 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 13 dBA for 49 benefited receptors at a cost of $2,462,017. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise

abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 39 – South Side of US 101 between S. Victoria Avenue and Telephone Road

Within NAA 39, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 52 to 78 dBA. The design-year Build Alternative 3 predicted interior traffic noise levels range from 46 to 53 dBA. Six receivers would approach or exceed the NAC for Activity Categories C, D, and E. Therefore, consideration of noise abatement is required.

Soundwalls S1275 and S1287: Soundwalls S1275 and S1287 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 67 through 69 of Figure 2 in the NADR show the locations of these soundwalls.

Soundwall S1311: Soundwall S1311 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall system was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall system is not recommended. Sheets 69 and 70 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Area 41 – South Side of US 101 between S. Victoria Avenue and Telephone Road

Within NAA 41, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 62 to 70 dBA. The design-year Build Alternative 3 predicted interior traffic noise level is 50 dBA. One receiver would approach or exceed the NAC for Activity Category C. Therefore, consideration of noise abatement is required.

Soundwall S1355: Soundwall S1355 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheet 72 of Figure 2 in the NADR shows the location of this soundwall.

Noise Analysis Area 42 – North Side of US 101 between S. Victoria Avenue and the SR-126 Interchange

Within NAA 42, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 51 to 71 dBA. A total of 12 receivers would approach or exceed the NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required.

Soundwall S1362 and S1372: Soundwalls S1362 and S1372 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 10 to 18

feet. Soundwall heights of 14 to 18 feet were found to be reasonable from a cost perspective. Sheets 73 through 75 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet provides nine more benefited receptors compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S1362 and S1372.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1362 and S1372 at the EOS from stations 1343+00 to 1378+00 and 1364+50 to 1377+65, respectively, with respective lengths of 3,400 and 1,325 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 69 benefited receptors at a cost of $5,857,908. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 43 – South Side of US 101 between the SR-126 Interchange and Seaward Avenue

Within NAA 43, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 75 dBA. A total of 12 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1459: Soundwall S1459 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. All six soundwall heights were found to be reasonable from a cost perspective. Sheets 79 and 80 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet provides the same number of benefited receptors as soundwall heights of 16 and 18 feet. In addition, soundwall heights of 16 and 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended to be constructed for Soundwall S1459.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1459 at the EOS from stations 1449+00 to 1464+00, with a length of 1,505 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 55 benefited receptors at a cost of $1,716,770. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 44 – North Side of US 101 between E. Main Street and Seaward Avenue

Within NAA 44, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 79 dBA. A total of 21 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwall S1396: Soundwall S1396 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 10 to 18 feet were found to be reasonable from a cost perspective. Sheets 75 through 77 of Figure 2 in the NADR show the location of this soundwall.

As summarized in Table 2.3.7-5, a soundwall height of 14 feet would result in only one less benefited receptor compared to soundwall heights of 16 and 18 feet. This benefited receptor is a receptor that would not be affected. In addition, a soundwall height of 18 feet would result in additional insertion loss of only up to 1 dB compared to a height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 14 feet is recommended for Soundwall S1396.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwall S1396 at the EOS from stations 1386+00 to 1416+00, with a length of 2,940 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 16 dBA for 70 benefited receptors at a cost of $3,343,863. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 45 – South Side of US 101 between Seaward Avenue and the San Jon Road Overcrossing

Within NAA 45, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 62 to 75 dBA. Six receivers would approach or exceed the NAC for Activity Category C. Therefore, consideration of noise abatement is required.

Soundwall S1503: Soundwall S1503 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, this soundwall is not recommended. Sheets 82 and 83 of Figure 2 in the NADR show the location of this soundwall.

Noise Analysis Areas 46 and 48 – North Side of US 101 between Seaward Avenue and the San Jon Road Overcrossing (NAA 46) and North Side of US 101 between the San Jon Road Overcrossing and California Street (NAA 48)

Within NAA 46, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 71 to 81 dBA. A total of 35 receivers would approach or exceed the NAC for Activity Categories B and E in NAA 46.

Within NAA 48, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 75 dBA. A total of 38 receivers would approach or exceed the NAC for Activity Categories B and E in NAA 48. Therefore, consideration of noise abatement is required.

Soundwalls S1492, S1522, S1536, and S1546:[4] Soundwalls S1492, S1522, S1536, and S1546 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 8, 10, 16, and 18 feet were found to be reasonable from a cost perspective. Sheets 80 through 86 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet provides the greatest number of benefited receptors compared to other soundwall heights. In addition, a soundwall height of 18 feet benefits an additional four affected receptors compared to a soundwall height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 18 feet is recommended to be constructed for Soundwalls S1492, S1522, S1536, and S1546.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1492, S1522, S1536, and S1546 at the EOS and ROW from stations 1469+00 to 1515+00, 1513+31 to 1530+00, 1530+00 to 1543+88, and 1543+91 to 1546+83, respectively, with respective lengths of 4,665, 1,620, 1,405, and 305 feet and a height of 18 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 14 dBA for 107 benefited receptors at a cost of $10,609,833. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwall S1550: Soundwall S1550 would be feasible and achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet; however, as summarized in Table 2.3.7-5, this soundwall was found not to be reasonable from a cost perspective at any height. Therefore, it is not recommended. Sheet 86 of Figure 2 in the NADR show the locations of the soundwalls.

Soundwalls S1554 and S1556: Soundwalls S1554 and S1556 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 12 to 18

[4] It should be noted that, during preparation of the NSR, land uses represented by the modeled receivers analyzed for abatement at S1522, S1536, and S1546 were being developed. Attempts to obtain the developers' computer-aided design files in order accurately model the development were not successful. Therefore, the modeled receivers and relevant geometry were modeled to the greatest extent practical. During final design, should the geometry of this soundwall and the surrounding land uses be different from what was modeled in the NSR, revalidation of this soundwall may be necessary.

feet. Soundwall heights of 14 to 18 feet were found to be reasonable from a cost perspective. Sheet 86 of Figure 2 in the NADR shows the locations of the soundwalls.

A soundwall height of 14 feet would benefit only one less receptor that would not be affected compared to soundwall heights of 16 and 18 feet. In addition, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a soundwall height of 14 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, it is recommended that a soundwall height of 14 feet be constructed for Soundwalls S1554 and S1556.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1554 and S1556 at the EOS and ROW from stations 1551+85 to 1554+65 and 1554+65 to 1556+64, respectively, with respective lengths of 310 and 210 feet and a height of 14 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 9 dBA for five benefited receptors at a cost of $572,815. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Noise Analysis Area 47 – South Side of US 101 between the San Jon Road Overcrossing and California Street

Within NAA 47, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 57 to 73 dBA. No receivers would approach or exceed the NAC for Activity Category E, and impacts would not be anticipated in NAA 47; therefore, consideration of noise abatement is not required.

Noise Analysis Area 49 – South Side of US 101 between California Street and the Project Terminus at SR-33

Within NAA 49, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 55 to 78 dBA. A total of 24 receivers would approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required.

Soundwalls S1561 and S1567: Soundwalls S1561 and S1567 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 14 to 18 feet. Soundwall heights of 14 to 18 feet were found to be reasonable from a cost perspective. Sheets 86 and 87 of Figure 2 in the NADR show the locations of the soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 18 feet would result in only two additional benefited receptors compared to a height of 16 feet. It should be noted that the two additional benefited receptors gained at a soundwall height of 18 feet are receptors that would not be affected. In addition, a soundwall height of 18 feet would result in additional insertion loss of up to only 1 dB compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the

general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended for Soundwalls S1561 and S1567.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1561 and S1567 at the EOS and ROW from stations 1558+00 to 1562+00 and 1561+00 to 1570+00, respectively, with respective lengths of 390 and 900 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 9 dBA for 47 benefited receptors at a cost of $1,723,446. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Soundwalls S1589, S1590, and S1593: Soundwalls S1589, S1590, and S1593 were modeled as a system for reasonableness purposes. A map of the location of the proposed soundwall system can be found on the project's website at http://www.ourfuture101.org/ (refer to Figure 2, Sheet 88). The proposed soundwall system would not provide feasible traffic noise abatement at any receivers. Therefore, this soundwall system will not be considered for abatement.

Noise Analysis Area 50 – North Side of US 101 between California Street and the Project Terminus at SR-33

Within NAA 50, the design-year Build Alternative 3 predicted exterior traffic noise levels have a range of 59 to 79 dBA. A total of 26 receivers would approach or exceed the NAC for Activity Categories B, C, and E. Therefore, consideration of noise abatement is required.

Soundwalls S1560 and S1578: Soundwalls S1560 and S1578 would be feasible and would achieve the design goal of 7 dB insertion loss at heights ranging from 8 to 18 feet. Soundwall heights of 10 to 18 feet were found to be reasonable from a cost perspective. In addition, the reasonableness allowance for a soundwall height of 8 feet is within 10 percent of the engineer's cost to construct, and it is Caltrans District 7 practice to therefore consider this soundwall height to be reasonable from a cost perspective. Sheets 86 through 88 of Figure 2 in the NADR show the locations of these soundwalls.

As summarized in Table 2.3.7-5, a soundwall height of 16 feet provides the same number of benefited receptors as a soundwall height of 18 feet. In addition, a soundwall height of 18 feet would provide only up to 1 additional dB of insertion loss compared to a height of 16 feet. Therefore, with consideration of cost, the number of benefited receptors, and the general effectiveness of the soundwall heights, a soundwall height of 16 feet is recommended to be constructed for Soundwalls S1560 and S1578.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of Soundwalls S1560 and S1578 at the EOS from stations 1558+26 to 1565+00 and 1564+50 to 1591+00, respectively, with respective lengths of 685 and 2,615 feet and a height of 16 feet. Calculations, based on preliminary design data, show that the soundwalls would reduce noise levels by 5 to 11 dBA for 59 benefited receptors at a cost of $4,485,033. These measures may change, based on input received from the public. If conditions change substantially during final design, then noise abatement may not be constructed. The final decision on noise abatement will be made on completion of the project design.

Abatement Measures

N-1: Noise Abatement. Based on the studies completed to date, the project will incorporate noise abatement in the form of the soundwalls described in this section and listed in Table 2.3.7-4 and Table 2.3.7-5, depending on the selected alternative.

The physical characteristics of noise abatement for both alternatives (Alternatives 2 and 3), as described herein, may be subject to change. If pertinent parameters change substantially during the final project design, then the abatement measures or preliminary noise abatement decisions may be modified or changed for the final project design. A final decision about whether and how to construct noise abatement will be made on completion of the project design. For soundwalls determined to be feasible and reasonable, the property owners will be given an opportunity to decide whether they are in favor of construction of the feasible soundwalls at the proposed locations. The process of surveying the viewpoints of the benefited receptors is the last of the three reasonableness criteria that must be satisfied for a given soundwall to be classified wholly as feasible and reasonable.

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2.3.8 Energy

This section is based on the Energy Technical Report (Caltrans 2022), Addendum to Energy Technical Report (Caltrans 2025a), Traffic Operations Analysis Report (TOAR) (Caltrans 2021), Air Quality Report (Caltrans 2025b), and Draft Project Report (Caltrans 2026) prepared for the project.

2.3.8.1 Regulatory Setting

The Energy Policy and Conservation Act of 1975 established fuel economy standards for on-road motor vehicles sold in the United States. Subsequent federal Energy Policy Acts (e.g., 1992, 2005) have been passed since the original act of 1975. The National Highway Traffic Safety Administration and U.S. Environmental Protection Agency set Corporate Average Fuel Economy standards for passenger cars and for light trucks (collectively, light-duty vehicles) and separately set fuel consumption standards for medium- and heavy-duty trucks and engines.

The National Environmental Policy Act (NEPA) (42 U.S. Code [USC] 4332) requires the identification of all potentially significant impacts on the environment, including impacts on energy resources. Guidance for evaluating energy impacts of transportation projects subject to NEPA is outlined in the Federal Highway Administration's Technical Advisory T 6640.8A.

The California Environmental Quality Act (CEQA) Guidelines require environmental documents include an analysis of a project's potential for significant environmental effects resulting from wasteful, inefficient, or unnecessary use of energy; or wasteful use of energy resources (Guidelines Section 15126.2[b]). The document must also describe feasible measures which could minimize inefficient and unnecessary consumption of energy (Guidelines Section 15126.4).

2.3.8.2 Affected Environment

The energy analysis is based on the methodology described in the California Department of Transportation (Caltrans) Standard Environmental Reference, Volume 1, Chapter 13, *Energy*. The energy analysis addresses both direct and indirect energy consumption, which, in the context of project-level transportation planning, are defined as follows:

- **Direct energy** involves all energy consumed by vehicle propulsion (e.g., automobiles, trains, airplanes). This energy consumption is a function of traffic characteristics, such as vehicle miles traveled (VMT), speed, vehicle mix, and the thermal value of the fuel being used.
- **Indirect energy** is all the remaining energy needed to construct, operate, and maintain the roadway.

Energy consumption is commonly expressed in British thermal units (BTUs), which is the quantity of heat required to raise the temperature of 1 pound of water 1 degree Fahrenheit at sea level. Because other units of energy can be converted into equivalent BTU, the BTU is used as a basis for comparing the consumption of different types of energy resources. Energy consumption is also expressed in terms of the energy volumes that are consumed. The units for energy volume depend on the energy type. For example, diesel and gasoline consumption are reported in terms of gallons of each fuel type, whereas electricity consumption is reported in terms of kilowatt-hours (kWh). The fuel unit for natural gas is standard cubic feet (scf).

Existing Project Area Conditions

US 101 is a major freeway in the southern part of Ventura County, where it is known as the Ventura Freeway, which, despite the overall north-south orientation of the whole freeway, runs in a general southeastern-northwestern direction through Thousand Oaks, Camarillo, Oxnard, and the city of Ventura. Within the project area, US 101 primarily consists of three general purpose lanes in each direction, with additional auxiliary lanes at spot locations. Congestion in the project region has steadily increased since 1990 and is anticipated to increase further because California's population is estimated to exceed 45 million by 2053 (California Department of Finance 2021), which would result in substantial increases in transportation fuel demand for the state.

The project area includes lighting along the freeway but does not currently include any transportation management systems elements. Additional details regarding existing conditions in the project area that affect energy usage, such as existing traffic conditions, vehicle mix, and pavement surfaces, are included below.

Existing Traffic Conditions

The VMT in the study area has been analyzed in the TOAR (Caltrans 2021) prepared for the project. Table 2.3.8-1 shows the estimated daily VMT within the study area for existing conditions is approximately 14 million, with the majority of the VMT on freeways.

Table 2.3.8-1. Daily Vehicle Miles Traveled for Existing (2018) Conditions

Functional Classification	Sub-Region			County		
	Lane Miles	Model VMT	Percent of Travel	Lane Miles	Model VMT	Percent of Travel
Freeway	409	6,667,642	48.3%	518	7,892,671	48.1%
HOV	0	1,780	0.0%	9	10,797	0.1%
Expressway/Parkway	0	0	0.0%	0	0	0.0%
Principal Arterial	702	3,200,276	23.2%	845	4,019,627	24.5%
Minor Arterial	735	2,272,455	16.5%	973	2,556,181	15.6%
Major Collector	547	968,558	7.0%	728	1,107,320	6.7%
Minor Collector	230	210,752	1.5%	321	318,803	1.9%
Ramp	124	491,862	3.6%	135	506,469	3.1%

Functional Classification	Sub-Region			County		
	Lane Miles	Model VMT	Percent of Travel	Lane Miles	Model VMT	Percent of Travel
Trucks Only	0	0	0.0%	0	0	0.0%
Total	2,748	13,813,325	100.0%	3,528	16,411,869	100.0%

Source: Caltrans 2021
HOV = high-occupancy vehicle

The TOAR analysis (Caltrans 2021) showed that under current conditions (Existing Year, 2018), the level of service (LOS) on US 101 within the proposed project limits varies from F (vehicle operating speed under 29 miles per hour) to C (vehicle operating speed greater than 54 miles per hour) during peak travel periods. LOS is a measurement of traffic operations that corresponds to traffic speeds and density (passenger cars per lane per mile) as measures of traffic operations. LOS A represents the best operating conditions and LOS F represents the worst. LOS E and F are generally considered unacceptable. The TOAR analysis found that 64 of 127 segments of northbound US 101 operate at unacceptable LOS and 77 of the 129 segments of southbound US 101 operate at unacceptable LOS.

Existing and Projected Vehicle Mix

US 101 is part of the National Highway System and the California Freeway and Expressway System. US 101 is also on the National Network for Surface Transportation Assistance Act Trucks and Subsystem of Highway for the Movement of Extra-Legal Permit Loads. The US 101 corridor serves between 96,000 Annual Average Daily Traffic (AADT) and 187,000 AADT (Caltrans 2021). Current levels of truck traffic range from 4.2 percent to 10.7 percent of the total volume, depending on the roadway segment (Caltrans 2022). The truck AADT includes all trucks from two-axle six-tire single-unit vehicles and larger. Non-truck AADT includes motorcycles, passenger cars, two-axle four-tire single-unit trucks such as pick-up trucks and vans, and buses.

In 2040, the corridor is forecast to carry approximately 74,400 to 214,330 average daily traffic in the general-purpose lanes (Caltrans 2021). Truck volume will be approximately 18 percent on the corridor. By 2060, daily traffic will increase to approximately 76,640 to 220,760 in the general-purpose lanes (Caltrans 2021).

Conditions of Existing Pavement Surface

The existing mainline pavement is generally rigid concrete within the project limits, except between Santa Rosa Road and the Conejo Grade Weigh Stations, in which pavement at shoulders consists of rubberized hot-mix asphalt/asphalt concrete.

2.3.8.3 Environmental Consequences

Alternative 1: No-Build Alternative

Direct Energy

Under the No-Build Alternative, the increase in forecasted traffic volumes would result in worsening of traffic congestion, slower traffic speeds, and increases in traffic delays.

Without the improvements proposed in the build alternatives, congested traffic conditions would be more prevalent throughout the study area. These conditions would contribute to inefficient energy consumption, as vehicles would use extra fuel while idling in stop-and-go traffic or moving at slow speeds through congested roadways.

Indirect Energy

The No-Build Alternative would not require construction in the project area as a result of the high-occupancy vehicle (HOV)/Express Bus Lane. Therefore, indirect energy consumption for project construction activities would not be required. However, under the No-Build Alternative, indirect energy use would be required for road maintenance activities. Indirect energy would be consumed by equipment and vehicles required for preventive and corrective maintenance. Regular maintenance of US 101 occurs under existing conditions and will continue under the No-Build Alternative. Newer and more fuel-efficient equipment and vehicles, including zero-emission vehicles, will operate in the future due to energy policies and legislation. This more efficient maintenance fleet may reduce or offset additional energy consumption from increased maintenance activity under the No-Build Alternative, relative to existing conditions (Caltrans 2025a). The No-Build Alternative serves as a baseline for comparison against Alternatives 2 and 3, as discussed below.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Implementation of the project is expected to affect the use of energy resources in the study area during short-term construction and long-term operations.

The analysis of project impacts is conducted at the regional level. The following analysis discusses the direct and indirect energy use impacts for Alternatives 2 and 3.

Direct Energy

Direct energy calculations for transportation projects are dependent on VMT and vehicle fuel consumption. For the study area, energy calculations are based on annual VMT, shown in Table 2.3.8-2. In addition, the existing year 2018, Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) horizon year 2045, and horizon year 2060 conditions are shown in Table 2.3.8-2 to provide a comparative context of the VMT use. As shown in Table 2.3.8-2, annual VMT under existing conditions (2018) is lower than annual VMT in the future years 2040, 2045, and 2060. The increase in annual VMT can be attributed to the projected increase in population growth and increased employment in the region.

Table 2.3.8-2. Operational Vehicle Miles Traveled by Alternative and Study Year

Alternative and Study Year	Annual VMT	VMT Change from 2018 Existing (% Change)	VMT Change from No-Build (% Change)
Existing Conditions (2018)	4,793,223,775	N/A	N/A
Opening Year (2040)			
Alternative 1 No-Build	5,384,878,901	591,655,126 (12.3%)	N/A
Alternative 2	5,397,369,513	604,145,738 (12.6%)	12,490,612 (2.1%)
Alternative 3	5,420,848,921	627,625,146 (13.1%)	35,970,020 (6.1%)
RTP/SCS Horizon Year (2045)			
Alternative 1 No-Build	5,425,265,537	632,041,762 (13.2%)	N/A
Alternative 2	5,437,849,492	644,625,717 (13.4%)	12,583,955 (2.0%)
Alternative 3	5,461,505,176	668,281,401 (13.9%)	36,239,639 (5.7%)
Horizon Year (2060)			
Alternative 1 No-Build	5,546,425,445	753,201,670 (15.7%)	N/A
Alternative 2	5,559,290,470	766,066,695 (16.0%)	12,865,025 (1.7%)
Alternative 3	5,583,474,288	790,250,513 (16.5%)	37,048,843 (4.9%)

Source: Caltrans 2025a

In addition to VMT, factors such as fleet mix and travel speeds also affect fuel consumption. Vehicle fuel consumption was estimated based on vehicle types (e.g., automobiles, light-duty trucks) traveling within the project area using the CT-EMFAC2021 model, which relies on emission factors from the EMFAC2021 model. Annual gallons of gasoline and diesel fuel and annual kWh of electricity consumption were directly obtained from the CT-EMFAC2021 model output. CT-EMFAC2021 reports natural gas in terms of diesel equivalent gallon (DEG). A DEG has an equivalent energy content to a gallon of diesel fuel. The CT-EMFAC2021 reported annual DEG of natural gas was converted to scf using a conversion factor of 144 scf per DEG (Caltrans 2021). Table 2.3.8-3 summarizes projected annual energy consumption under the build alternatives and No-Build Alternative.

Table 2.3.8-3. Annual Vehicle Fuel and Electricity Consumption

Alternative and Study Year	Gasoline (gallons)	Diesel (gallons)	Natural Gas (scf)	Electricity (kWh)
2018 Existing Conditions	190.7	28.2	91.8	14.2
Opening Year (2040)				
Alternative 1 No-Build	141.3	22.8	89.2	308.6
Alternative 2	141.6	22.8	89.4	309.3
Alternative 3	142.2	22.9	89.8	310.6
RTP/SCS Horizon Year (2045)				
Alternative 1 No-Build	138.4	22.7	58.6	354.4
Alternative 2	138.7	22.7	58.7	355.2

Alternative and Study Year	Gasoline (gallons)	Diesel (gallons)	Natural Gas (scf)	Electricity (kWh)
Alternative 3	139.3	22.8	59.0	356.8
Horizon Year (2060)				
Alternative 1 No-Build	139.0	24.3	56.7	393.2
Alternative 2	139.3	24.3	56.8	394.1
Alternative 3	139.9	24.4	57.1	395.8

Source: Caltrans 2025a

As discussed above, direct energy can be represented in terms of thermal value, known as BTU. Gasoline, diesel, natural gas, and electricity consumption reported in Table 2.3.8-3 were converted to BTU using the heat content of each fuel (Caltrans 2025a). Table 2.3.8-4 summarizes the annual direct energy use for existing conditions (2018), Opening Year (2040), RTP/SCS Horizon Year (2045), and Horizon Year (2060) under the No-Build Alternative and build alternative conditions.

Table 2.3.8-4. Annual Direct Energy Use by Alternative and Study Year

Alternative and Study Year	Direct Energy (million BTU)	Direct Energy Change from 2018 Existing (% Change)	Direct Energy Change from No-Build (% Change)
2018 Existing Conditions	26,938,899	N/A	N/A
Opening Year (2040)			
Alternative 1 No-Build	21,254,664	-5,684,234 (-21.1%)	N/A
Alternative 2	21,303,966	-5,634,932 (-20.9%)	49,302 (0.2%)
Alternative 3	21,396,642	-5,542,257 (-20.6%)	141,977 (0.7%)
RTP/SCS Horizon Year (2045)			
Alternative 1 No-Build	21,016,828	-5,922,071 (-22.0%)	N/A
Alternative 2	21,065,576	-5,873,322 (-21.8%)	48,749 (0.2%)
Alternative 3	21,157,216	-5,781,683 (-21.5%)	140,388 (0.7%)
Horizon Year (2060)			
Alternative 1 No-Build	21,439,669	-5,499,229 (-20.4%)	N/A
Alternative 2	21,489,399	-5,449,500 (-20.2%)	49,730 (0.2%)
Alternative 3	21,582,881	-5,356,017 (-19.9%)	143,212 (0.7%)

Source: Caltrans 2025a
N/A = comparison not applicable

Under the build alternatives, there would be direct energy use from vehicles operating on regional roadways. Table 2.3.8-2 shows Alternatives 2 and 3 would have a higher regional VMT than the No-Build Alternative by values ranging from 1.7 percent to 6.1 percent, resulting in higher energy consumption. The higher VMT under Alternatives 2 and 3 is attributed to an increase in the overall capacity of the corridor, allowing for greater vehicular throughput during peak travel periods, thereby providing operational benefits.

As shown in Table 2.3.8-4, when compared to existing conditions (2018), annual energy consumption under Alternative 2 and Alternative 3 would decrease by 5,635 billion BTUs (20.9 percent) and 5,542 billion BTUs (20.6 percent), respectively, in 2040. When compared to existing conditions (2018), annual energy consumption under Alternative 2 and Alternative 3 would decrease by 5,873 billion BTUs (21.8 percent) and 5,782 billion BTUs (21.5 percent), respectively, in 2045. Similarly, when compared to existing conditions (2018), annual energy consumption under Alternative 2 and Alternative 3 would decrease by 5,450 billion BTUs (20.2 percent) and 5,356 billion BTUs (19.9 percent), respectively, in 2060. However, when compared to existing conditions (2018), annual VMT under Alternative 2 and Alternative 3 would increase by 604 million miles (12.6 percent) and 628 million miles (13.1 percent), respectively, in 2040. When compared to existing conditions (2018), annual VMT under Alternative 2 and Alternative 3 would increase by 645 million miles (13.4 percent) and 668 million miles (13.9 percent), respectively, in 2045. Similarly, when compared to existing conditions (2018), annual VMT under Alternative 2 and Alternative 3 would increase by 766 million miles (16.0 percent) and 790 million miles (16.5 percent), respectively, in 2060. This disparity of decreased energy consumption and increased VMT is attributed to fleet turnover, as older, less fuel-efficient vehicles are replaced by later-model, more fuel-efficient vehicles over time. These later-model replacement vehicles would also include hybrid and all-electric vehicles. As such, energy consumption under both build alternatives would decrease during Opening Year (2040), RTP/SCS Horizon Year (2045), and Horizon Year (2060) conditions compared to existing conditions (2018).

Additionally, implementation of Alternative 2 or Alternative 3 would improve traffic flow during peak travel demand periods. As discussed in Section 2.2.10, *Transportation*, both Alternative 2 and Alternative 3 would result in operational improvements in average travel time, traffic density, vehicle-hours of delay, and travel speed compared to the No-Build Alternative in 2040 and 2060. As vehicles traveling at free-flow speeds are more fuel efficient, operational improvements that smooth traffic flow and decrease traffic congestion, such as those of the build alternatives, improve vehicle fuel economies. This in turn results in a more efficient use of energy. Ultimately, the travel time improvements achieved by reduced congestion under either build alternative will enhance operational productivity and associated energy efficiency.

The project is identified in the Southern California Association of Governments' (SCAG's) 2024–2050 RTP/SCS under project number 5160001. The build alternatives directly support the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and congestion. The project is also included in the SCAG financially constrained 2025 Federal Transportation Improvement Program under project number VEN131201. Therefore, the build alternatives are consistent with the goals of SCAG's 2024–2050 RTP/SCS and do not conflict with a state or local plan for renewable energy or energy efficiency.

Consequently, direct energy use associated with project operation would not result in wasteful, inefficient, or unnecessary consumption of energy.

Indirect Energy

Construction

Indirect energy consumption from construction activities would occur at different rates throughout the construction phases. Project construction would utilize equipment such as crawler tractors, excavators, graders, rollers, rubber-tired loaders, scrapers, rough-terrain forklifts, and paving equipment. Construction emissions were calculated in the Air Quality Report (Caltrans 2025b) for each of the four phases using the Sacramento Metropolitan Air Quality Management District Roadway Construction Emissions Model and estimated to total approximately 32,037 metric tons over the course of the approximately 12-year construction period. Construction emissions modeling assumptions are detailed in the Air Quality Report (Caltrans 2025b).

This conservative analysis assumes 100 percent diesel equipment, as diesel equipment and exhaust typically represent the majority of overall construction emissions. Diesel consumption was estimated using a conversion factor of 22.2 pounds of carbon dioxide per gallon of diesel (U.S. EPA 2025). Energy consumption was estimated by applying the heat content for diesel fuel.

Under Alternative 2 and Alternative 3, there would be indirect energy use from construction vehicle exhaust. Energy consumption from construction activities is presented in Table 2.3.8-5 through Table 2.3.8-8 for construction phases 1 through 4, respectively. The total energy use for the construction period is provided in Table 2.3.8-9. These estimates apply to both build alternatives and overlap between the phases is not anticipated.

Table 2.3.8-5. Phase 1 Construction Energy Use

Construction Phase	Diesel Consumption (gallons/phase)	Energy Consumption (million BTU/phase)
Grubbing/Land Clearing	8,659	1,190
Grading/Excavation	160,918	22,107
Drainage/Utilities/Sub-grade	327,241	44,957
Paving	277,862	38,173
Total	774,679	106,426

Source: Caltrans 2025a
Totals may not add due to rounding.
Energy consumption conservatively estimated assuming 100% of emissions from diesel fuel.

Table 2.3.8-6. Phase 2 Construction Energy Use

Construction Phase	Diesel Consumption (gallons/phase)	Energy Consumption (million BTU/phase)
Grubbing/Land Clearing	9,777	1,343
Grading/Excavation	188,128	25,845
Drainage/Utilities/Sub-grade	321,074	44,109
Paving	269,266	36,992
Total	788,245	108,290

Source: Caltrans 2025a
Totals may not add due to rounding.
Energy consumption conservatively estimated assuming 100% of emissions from diesel fuel.

Table 2.3.8-7. Phase 3 Construction Energy Use

Construction Phase	Diesel Consumption (gallons/phase)	Energy Consumption (million BTU/phase)
Grubbing/Land Clearing	9,661	1,327
Grading/Excavation	187,225	25,721
Drainage/Utilities/Sub-grade	311,650	42,815
Paving	260,053	35,726
Total	**768,590**	**105,590**

Source: Caltrans 2025a
Totals may not add due to rounding.
Energy consumption conservatively estimated assuming 100% of emissions from diesel fuel.

Table 2.3.8-8. Phase 4 Construction Energy Use

Construction Phase	Diesel Consumption (gallons/phase)	Energy Consumption (million BTU/phase)
Grubbing/Land Clearing	9,577	1,316
Grading/Excavation	186,570	25,631
Drainage/Utilities/Sub-grade	303,046	41,633
Paving	251,696	34,578
Total	**750,890**	**103,158**

Source: Caltrans 2025a
Totals may not add due to rounding.
Energy consumption conservatively estimated assuming 100% of emissions from diesel fuel.

Table 2.3.8-9. Total Construction Energy Use

Construction Phase	Total Diesel Consumption (gallons/phase)	Total Energy Consumption (million BTU/phase)
Phase 1	774,679	106,426
Phase 2	788,245	108,290
Phase 3	768,590	105,590
Phase 4	750,890	103,158
Project Total	**3,082,405**	**423,464**

Source: Caltrans 2025a
Totals may not add due to rounding.
Energy consumption conservatively estimated assuming 100% of emissions from diesel fuel.

As shown in Table 2.3.8-9 construction of the project is expected to consume approximately 3,082,405 gallons of diesel fuel, with energy consumption totaling approximately 423 billion BTUs over the 12-year period.

Although construction would result in a short-term increase in energy use, construction design features would help conserve energy. The proposed improvements would maintain much of the existing pavement along the project corridor. The improvements primarily consist of freeway widening and not reconstruction of the freeway structural sections. However, there would be some pavement removal and replacement on the freeway shoulders and interchange ramps as part of the proposed improvements. The potential for recycling existing asphalt concrete pavements in these locations can help conserve energy. Recycled products typically have lower manufacturing and transport energy costs because they do not utilize raw materials, which must be mined and transported to a processing facility. If new materials must be used, a fly ash mix may be considered to lower the heat island effect, depending on what is allowable under Caltrans specifications. The energy conservation features would be consistent with state and local policies to reduce energy consumption. The potential for recycling existing asphalt concrete pavements will be investigated during the final design phase along with other potential ways to conserve resources (measure **EN-1**). In addition, a Transportation Management Plan (measure **TR-1**, Section 2.2.10, *Transportation*) would be developed for the project to address potential traffic and circulation impacts during the construction phase. The Transportation Management Plan would include temporary traffic control devices that would reduce gasoline consumption by limiting traffic congestion and reducing the length of detours. In addition, the project would implement Caltrans Standard Specifications 6-1.03, Local Materials; 14-9, Air Quality; and 14-10, Solid Waste Disposal and Recycling, which may reduce diesel fuel consumption by promoting the use of local materials, requiring compliance with applicable air pollution control rules and regulations, and recycling non-hazardous waste and excess materials to the extent practicable. The construction contractors would also be required to comply with state regulations, including the In-Use Off-Road Diesel-Fueled Fleets Regulation, which requires construction equipment to use renewable diesel fuel beginning in 2024. Therefore, with implementation of measures **EN-1** and **TR-1**; Caltrans Standard Specifications 6-1.03, 14-9, and 14-10; and compliance with state regulations, the project is not anticipated to result in the

inefficient, wasteful, or unnecessary consumption of energy during the construction phase.

Maintenance

Long-term maintenance of the various roadways within the project footprint would occur under either build alternative and the No-Build Alternative. Indirect energy consumption would be consumed by equipment and vehicles required for preventive and corrective maintenance. These activities would require gasoline and diesel equipment, such as trimmers and pavers. Light-duty work trucks would also be required for site access (Caltrans 2025a).

The improvements proposed under the build alternatives would reduce the frequency of required maintenance, compared to the No-Build Alternative. Therefore, implementation of either build alternative would reduce indirect maintenance energy compared to the No-Build Alternative.

Operations

The operation of traffic lights, streetlights, and sensors consumes electricity. These features are required to manage traffic and provide safe driving conditions. Light-emitting diode (LED) fixtures would be used wherever traffic lights or streetlights are installed or replaced (measure **EN-2**). LED street lighting consumes up to 70 percent less energy per year as compared to incandescent bulbs (The Climate Group 2023). All new traffic signals would likewise use LED bulbs, which reduce signal energy consumption by up to 80 percent (U.S. DOE 2004). Therefore, indirect energy use associated with project operation would not result in the inefficient, wasteful, or unnecessary consumption of energy.

2.3.8.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to energy would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The measures below, **EN-1** and **EN-2**, are included as part of the project to minimize impacts related to energy demand.

EN-1: During final design, energy conservation features, including recycling existing asphalt concrete pavements, will be further investigated along with other potential ways to conserve resources.

EN-2: Light fixtures and traffic signals will be replaced or installed with highly efficient LEDs.

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2.4 BIOLOGICAL ENVIRONMENT

2.4.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species (which are discussed in Sections 2.4.3, *Plant Species*; Section 2.4.4, *Animal Species*; and Section 2.4.5, *Threatened and Endangered Species*). This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

2.4.1.1 Regulatory Setting

Federal Regulations

MAP 21 (Public Law Section 113-159) and FAST Act (Public Law Section 114-94)

The Moving Ahead for Progress in the 21st Century Act (MAP 21), and its continuation under the Fixing America's Surface Transportation Act (FAST Act), provides federal funding for surface transportation. It is the first national transportation law to incorporate the authority for federal, state, local, and tribal land managers, as well as researchers, to use program funds to reduce the number of wildlife/vehicle collisions and improve connectivity among habitats that have been disrupted by roads.

State Regulations

Senate Bill 857/California Fish and Game Code Section 5901, Fish Passages

Section 5901 of the California Fish and Game Code (CFG Code) stipulates that it is unlawful to construct or maintain any device or contrivance that prevents, impedes, or tends to prevent or impede the passage of fish up and down a stream. Senate Bill 857 was adopted in 2005 to amend Section 5901. It requires Caltrans to prepare an annual report to the state legislature regarding barriers to anadromous fish passage and remediation. The bill requires Caltrans to complete assessments of potential barriers to anadromous fish passage prior to commencing any project that uses state or federal transportation funds and submit the assessments to the California Department of Fish and Wildlife (CDFW) for inclusion in the CalFish database. The bill also requires projects to be constructed without presenting barriers to fish passage and remediation for existing barriers on the state highway system.

Assembly Bill 498/California Fish and Game Code Section 1797.5

Assembly Bill (AB) 498 was adopted to amend CFG Code Section 1797.5. It describes the state's policy to promote voluntary protection for functioning wildlife corridors and habitat strongholds in order to enhance the resiliency of wildlife and their habitats to climate change, protect biodiversity, and allow the migration and movement of species by providing connectivity between habitat lands wherever feasible and practicable. This includes, but is not limited to, acquiring or protecting wildlife corridors through conservation easements, installing wildlife-friendly or directional fencing, siting

mitigation and conservation banks in areas that provide habitat connectivity, and providing roadway wildlife undercrossings, overpasses, culverts, and bridges that allow wildlife movement between habitat areas.

Assembly Bill 2785/California Fish and Game Code Sections 1930, 1932, 1920.5, and 1932.5

AB 2785 was adopted to amend Sections 1930 and 1932 of the CFG Code and add Sections 1930.5 and 1932.5. The bill requires the CDFW to investigate, study, and identify the areas in the state that are the most essential wildlife corridors and habitat linkages and prioritize vegetative data development in those areas. AB 2785 also requires the CDFW to develop and maintain a database that identifies the areas that are essential for maintaining habitat connectivity. Furthermore, it requires the CDFW to actively pursue grants and cost-sharing opportunities with federal, state, and local agencies as well as private entities that use the data sets and benefit from their creation and maintenance.

California Coastal Act of 1976

The California Coastal Act of 1976 (CCA) declares that the California Coastal Zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem. California's basic goals (CCA Section 30001.5) for the Coastal Zone are to (a) protect, maintain, and, where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and artificial resources; (b) ensure orderly, balanced utilization and conservation of Coastal Zone resources, taking into account the social and economic needs of the people of the state; (c) maximize public access to and along the coast and maximize public recreational opportunities in the Coastal Zone consistent with sound resources-conservation principles and constitutionally protected rights of private property owners; (d) ensure priority for coastal-dependent and coastal-related development over other development on the coast; and (e) encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the Coastal Zone.

The CCA outlines standards for development within the Coastal Zone that seek to balance the right to develop with strong environmental policies aimed to protect coastal resources. It includes specific policies that address issues such as shoreline public access and recreation, lower-cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the CCA constitute the statutory standards applied to planning and regulatory decisions made by the California Coastal Commission (CCC) and local governments, pursuant to the CCA. The CCC plans and regulates the use of land and water in the Coastal Zone. If the proposed project would result in an impact within the Coastal Zone, then the impact would be subject to the provisions of the CCA and the authority of the CCC.

Environmentally Sensitive Habitat Areas

CCA Section 30240 provides protections for environmentally sensitive habitat areas (ESHAs), defined as any area in which plant or animal life or their habitats are either rare or especially valuable due to their special nature or role in an ecosystem and could be easily disturbed or degraded by human activities and developments. The CCA requires that such areas be protected and that development projects within or adjacent to such areas be planned and sited to prevent degradation of ESHAs.

Local Coastal Programs

The CCC requires adoption of a Local Coastal Program (LCP) for each local government lying in whole or in part within the Coastal Zone. Generally, development activity, as defined by the CCA, occurring within the California Coastal Zone requires a Coastal Development Permit from the CCC or local governments with a certified LCP. Development includes, but is not limited to, the demolition, construction, or replacement of a structure or a change in its size; grading, removing, or placing fill or other materials; clearing vegetation in sensitive habitat; impeding access to the beach or public trails; and conducting repair or maintenance activities that could result in environmental impacts. If a project within the Coastal Zone requires federal funding, then federal coastal consistency certification may be required to ensure federal actions or financial assistance affecting land, water use, or natural resources of the Coastal Zone are consistent with the state coastal management programs and provisions of the LCPs.

Ventura County Local Coastal Program

Portions of the west end of the project alignment fall within the area covered by the Ventura County Coastal Area Plan and the Coastal Zoning Ordinance, which, together, constitute the LCP for the unincorporated coastal portions of Ventura County. The primary goal of the LCP is to ensure that a local government's land use plans, zoning ordinances, zoning maps, and implemented actions meet the requirements of the CCA and implement the provisions and policies of the CCA at the local level. In addition to being an element of the Ventura County LCP, the Coastal Area Plan is also an area plan for the unincorporated coastal portions of Ventura County and, as such, is part of the Ventura County General Plan. The Coastal Area Plan addresses topics such as shoreline access and public trails, development in scenic areas, coastal hazards, coastal bluffs, ESHAs, cultural resources, transportation, and public service. The LCP specifically applies to development undertaken in the unincorporated portions of the Coastal Zone of Ventura County. The Ventura County LCP was certified by the CCC in 1983; since then, the County of Ventura (County) has made numerous amendments, including a major amendment in 2008. The County is currently completing a series of amendments to the LCP, with a focus on addressing ESHAs, to bring County regulations into conformance with federal, state, and local standards.

City of Ventura Local Coastal Program

Portions of the west end of the project alignment fall within the area covered by the City of Ventura LCP, which is a part of the City of Ventura Comprehensive Plan and General Plan. The City of Ventura LCP, as part of the general plan, was adopted in August 2005, replacing the August 1989 Comprehensive Plan – Update to the Year 2010 (City

of San Buenaventura 1989). The general plan satisfies state requirements for the City of Ventura LCP, in accordance with the CCA (California Public Resources Code [PRC] Section 30000, *et seq.*). Actions in the general plan that affect coastal resources are intended to become part of the LCP's Land Use Plan and accomplished through specific or community plans for the areas in question. Policies under the Conservation and Open Space Element of the general plan protect coastal resources, per the provisions and polices of the CCA, at the local level (Policy 1A, Action 1.1); protect and increase the area of open space in the Coastal Zone (Policy 1B, Actions 1.8–1.11); and improve protection for native coastal plant and animal species (Policy 1C, Actions 1.16–1.20).

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed in Section 2.4.5, *Threatened and Endangered Species*. Wetlands and other waters are discussed in Section 2.4.2, *Wetlands and Other Waters*.

2.4.1.2 Affected Environment

Unless otherwise noted, the information from this section is based on the Natural Environment Study (NES) prepared for the project (Caltrans 2021a). References used in the NES are not carried over into this section. The analysis in this section focuses on those habitats that occur in or have the potential to occur in the biological study area (BSA) described below.

Several references were used to determine what natural vegetation communities of concern are present. The California Natural Diversity Database (CNDDB) tracks natural communities of concern by the CDFW and was the primary reference with respect to natural vegetation communities of concern. Detailed information on methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a).

Biological Study Area

The BSA is a buffered area around the outer edges of the project limits of disturbance, comprising the area that was surveyed for biological resources (Figure 2.4.1-1). Buffers are used to provide context for the resources identified within the BSA, address potential indirect effects, and allow revisions to the project design while maintaining an adequate representation of the biological resources present. A 250-foot buffer was applied around the limits of disturbance for the general reconnaissance survey and the vegetation mapping regarding potential natural communities of concern (Figure 2.4.1-1).

The 250-foot BSA used for the general biological resources assessment and vegetation mapping extends approximately 27 linear miles along the US 101 corridor, from approximately 0.5 mile west of State Route (SR) 23 (just east of Moorpark Road in Thousand Oaks) to approximately 0.5 mile east of SR-33 (just west of Figueroa Street in Ventura) (Figure 2.4.1-1).

The BSA occurs in the South Coast subregion of the Southwestern California region and within the California Floristic Province. The natural vegetation of the subregion

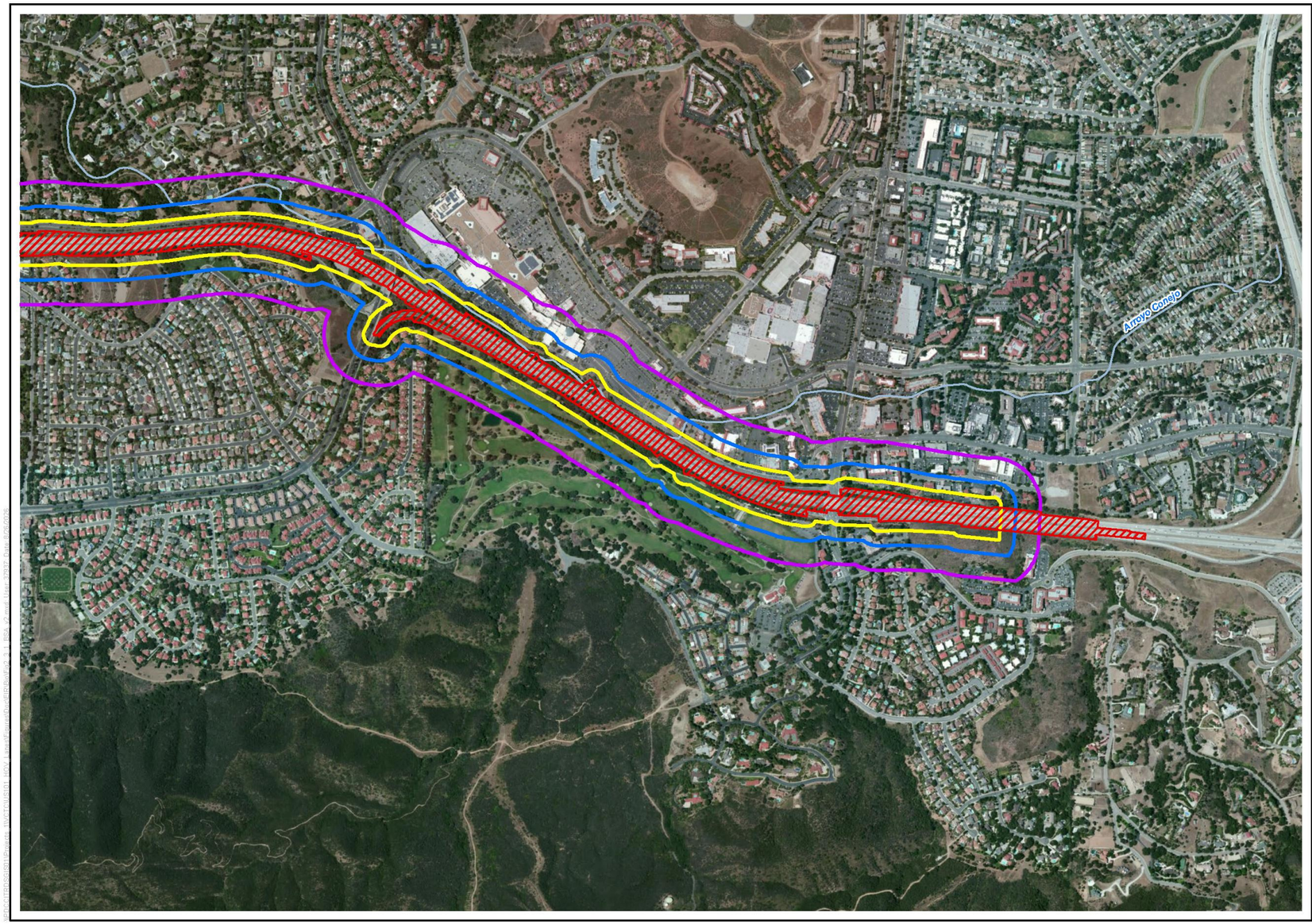
consists primarily of chaparral, sage scrub, annual grasslands, woodland, riparian scrub, and forest. Much of the natural vegetation occurs in preserved open space or is scattered in fragmented patches in areas that are not developed. Further contextual information regarding the natural conditions, topography, elevation, and land uses in the surrounding areas by the BSA can be found in the NES (Caltrans 2021a).

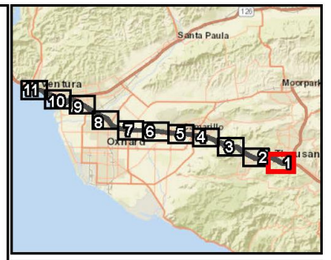
Vegetation Communities Within the Biological Study Area

Thirty-three vegetation communities/land use types were identified in the BSA, as listed in Table 2.4.1-1, along with their acreage in the BSA, and shown in Figure 2.4.1-2 in Appendix I. Fourteen of these communities are classified as a sensitive natural community and habitat of concern by CDFW and discussed in detail following Table 2.4.1-1.

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Figure 2.4.1-1. Biological Study Area (Sheet 1 of 11)





Legend

Alternatives 2 & 3

Study Area (100-foot Buffer):
Rare Plants,
Bat Habitat Assessment,
Jurisdictional Delineation

Study Area (250-foot Buffer):
General Reconnaissance,
Vegetation Communities

Study Area (500-foot Buffer):
Burrowing Owl,
Coastal California Gnatcatcher,
Least Bell's Vireo,
Southwestern Willow Flycatcher,
Corridor/Linkage Evaluation

N

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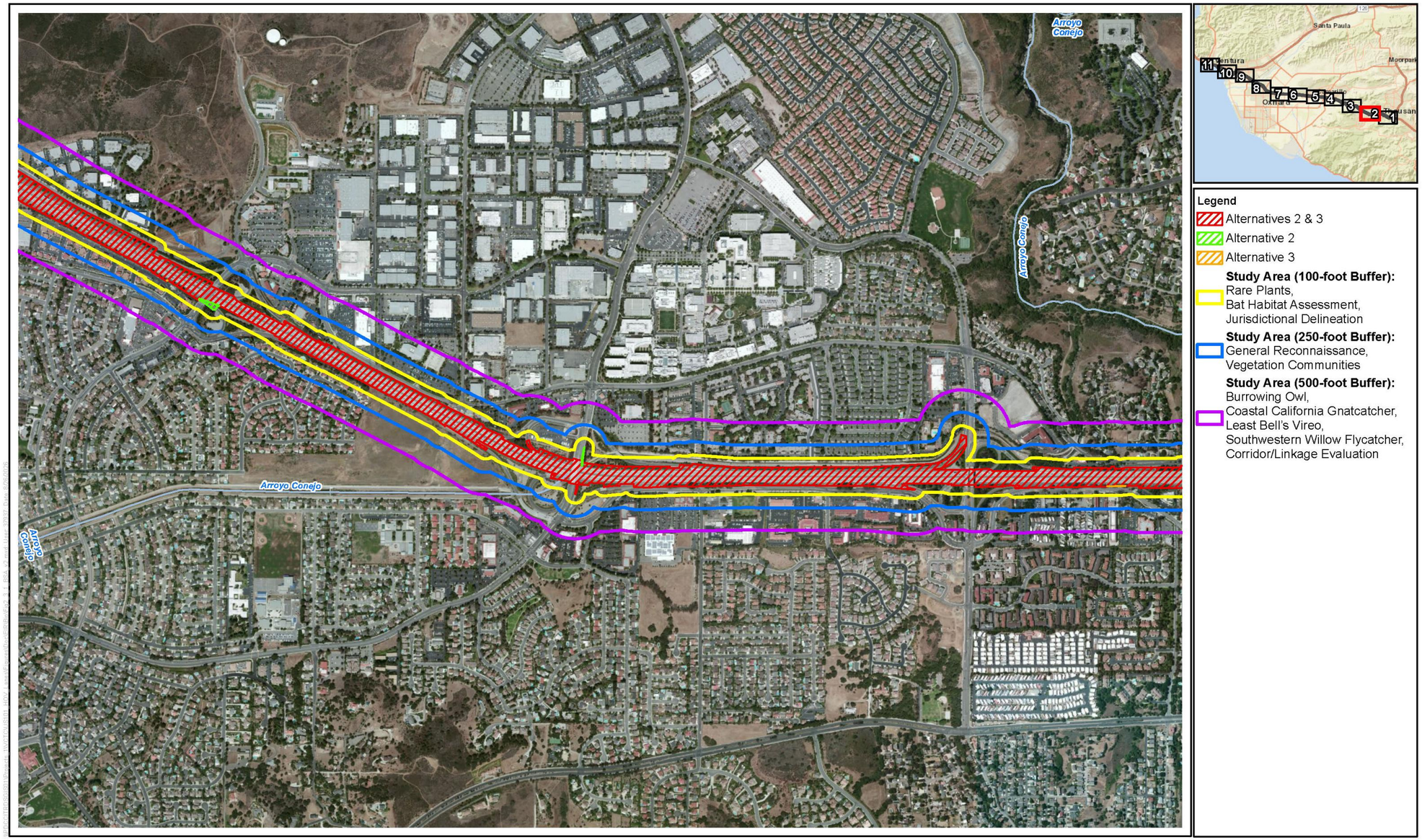
Source: VCTC; ESRI

Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 1 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 2 of 11)

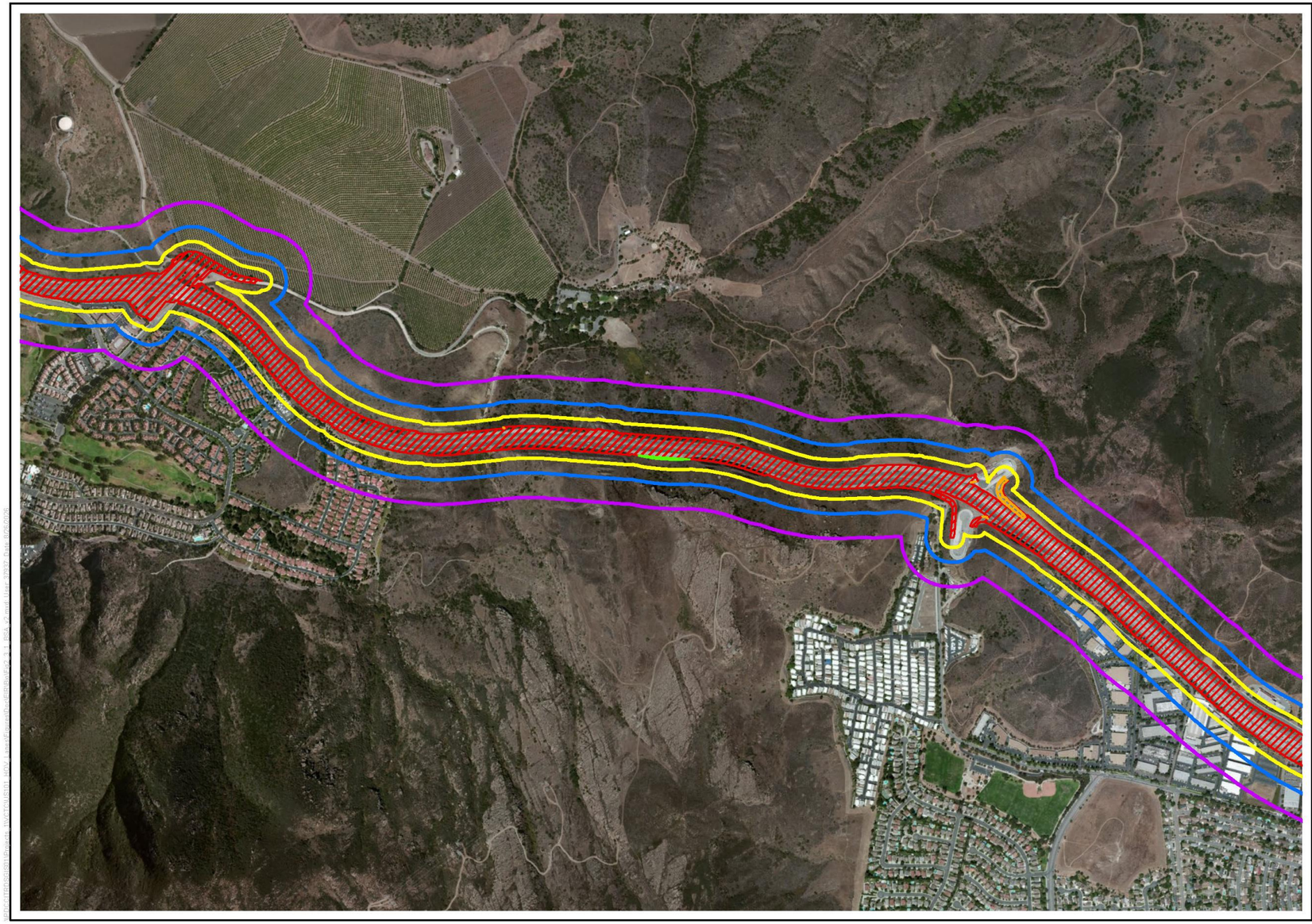


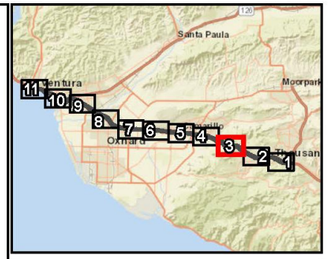
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 2 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 3 of 11)





Legend

- Alternatives 2 & 3
- Alternative 2
- Alternative 3
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

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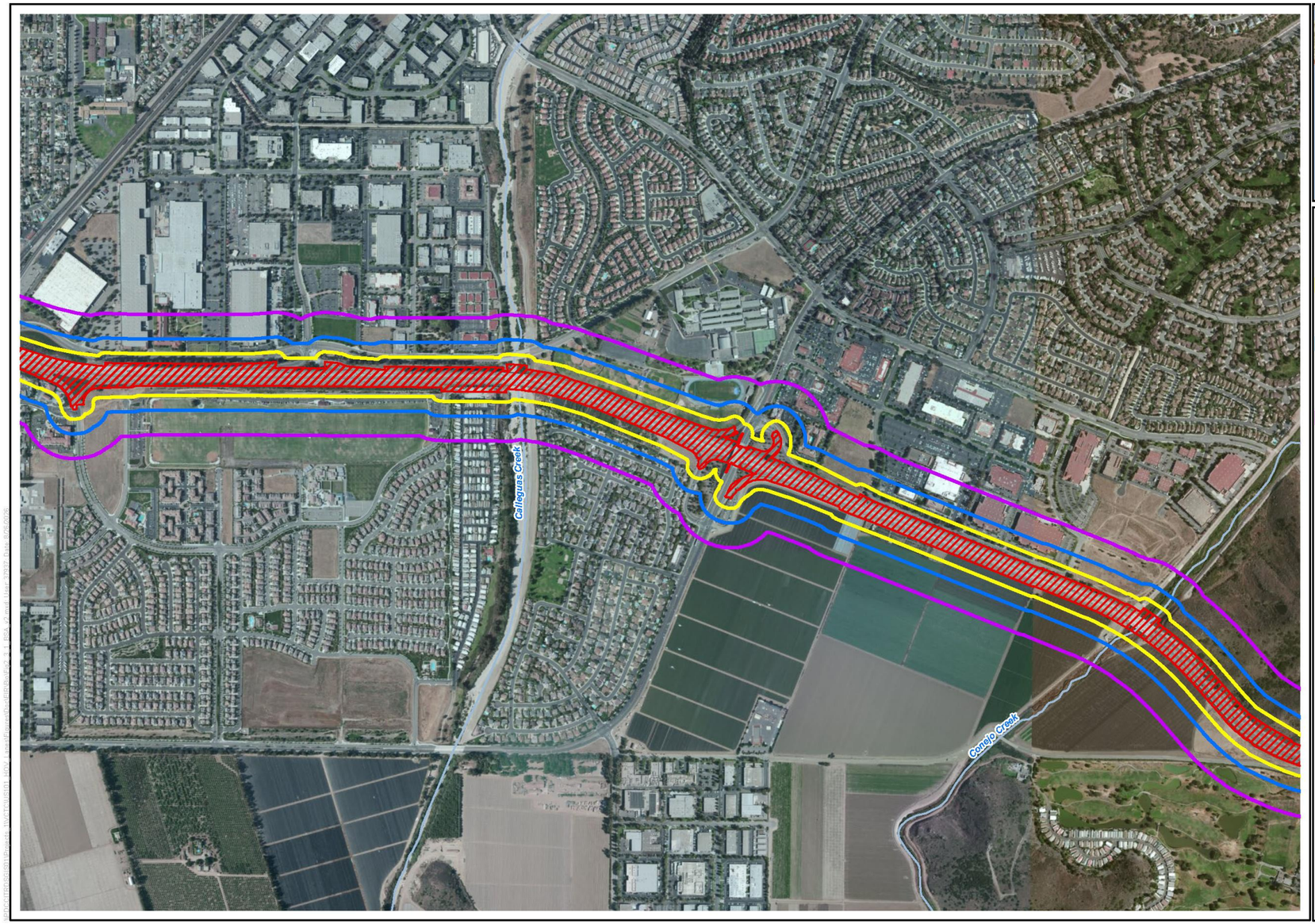
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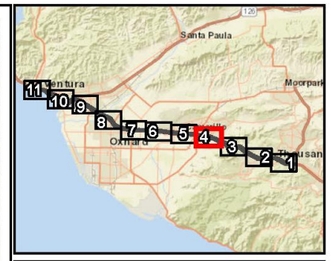
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 3 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 4 of 11)





Legend

- Alternatives 2 & 3
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

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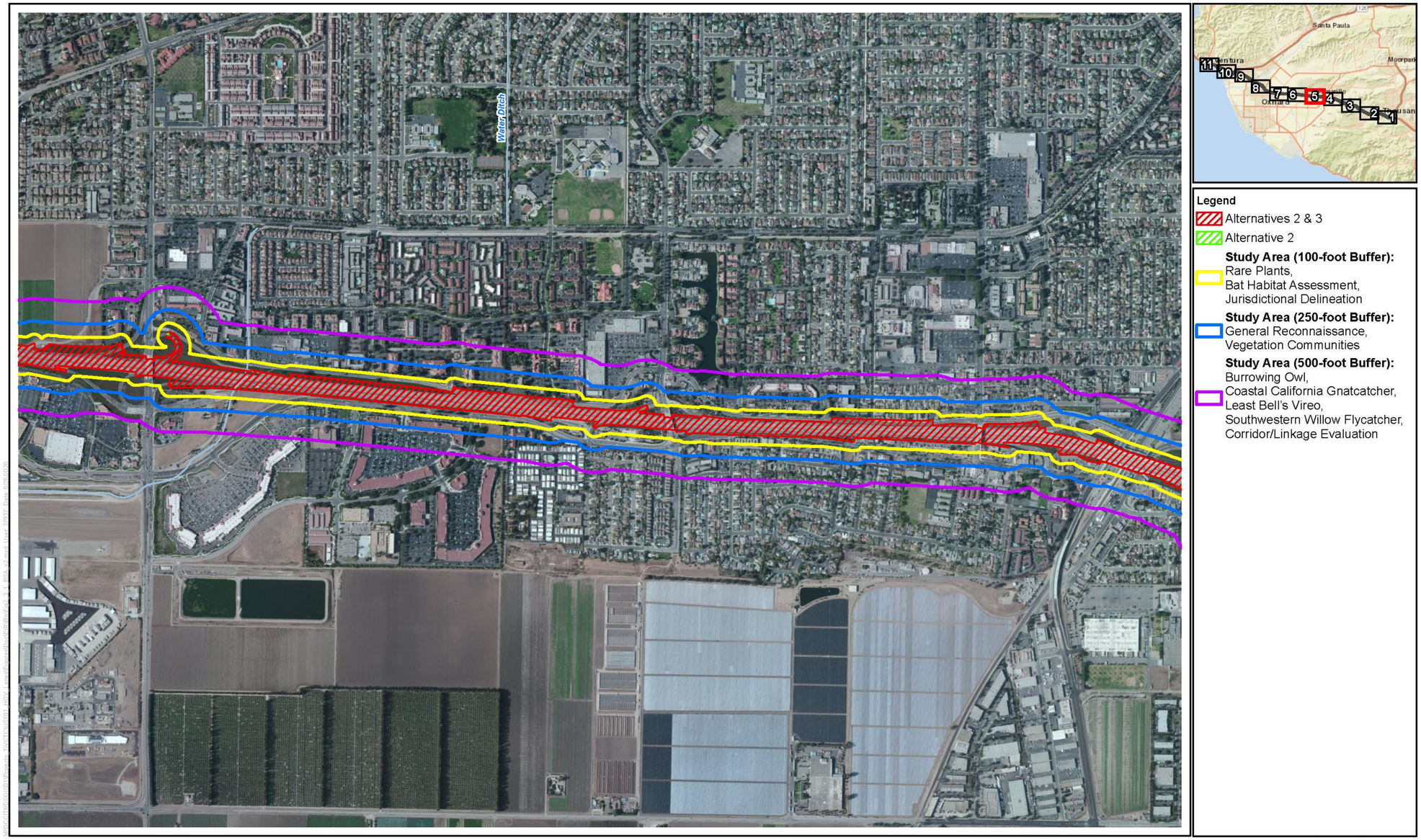
Source: VCTC; ESRI

Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 4 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 5 of 11)

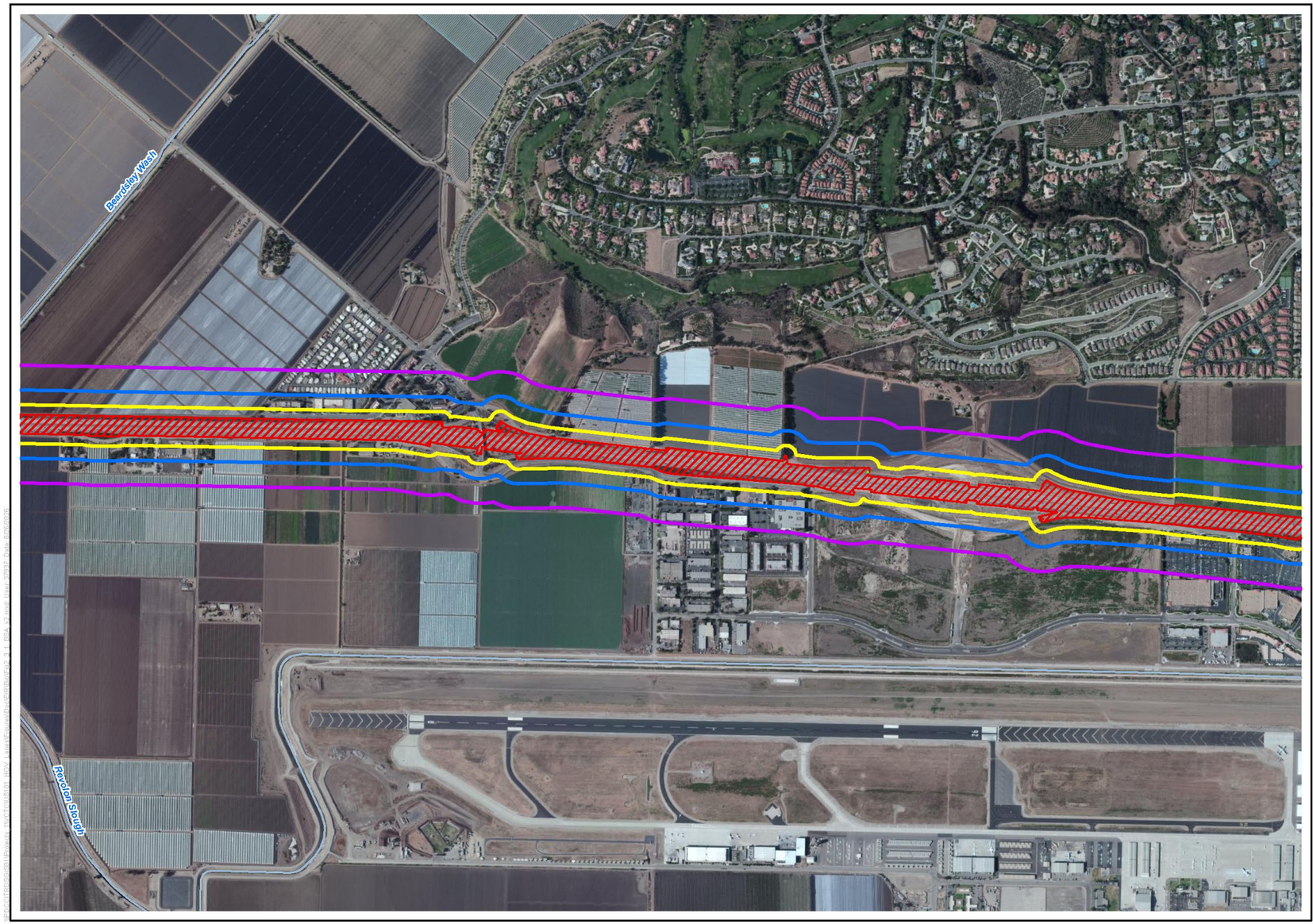


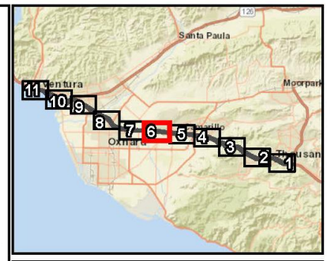
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 5 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 6 of 11)





Legend

- Alternatives 2 & 3
- Alternative 2
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

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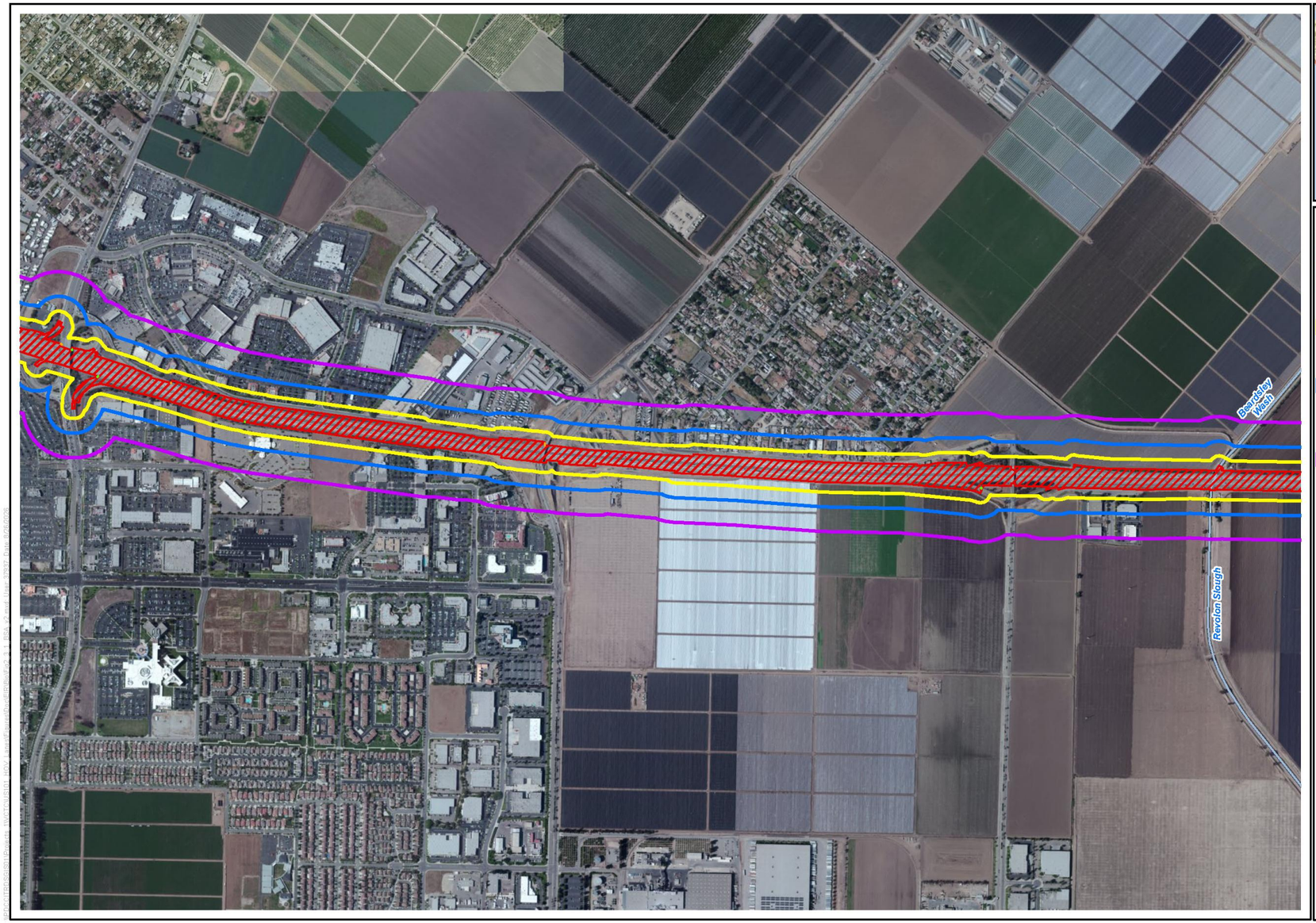
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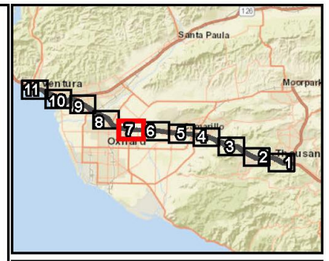
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4.1-1, Sheet 6 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 7 of 11)





Legend

- Alternatives 2 & 3
- Alternative 2
- Alternative 3
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

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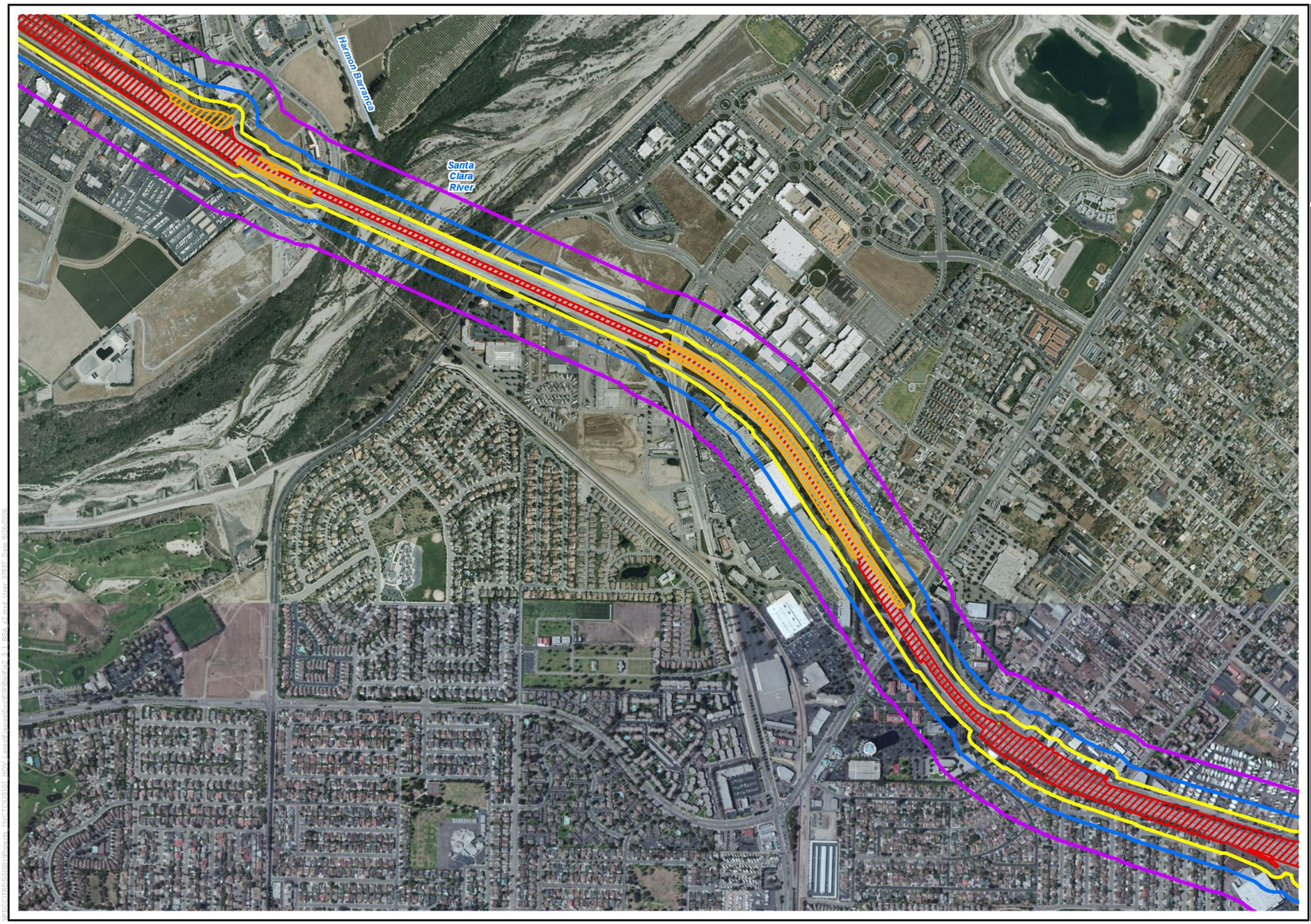
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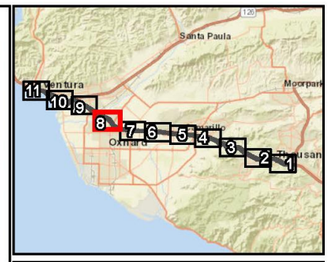
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4.1-1, Sheet 7 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 8 of 11)





Legend

- Alternatives 2 & 3
- Alternative 2
- Alternative 3
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

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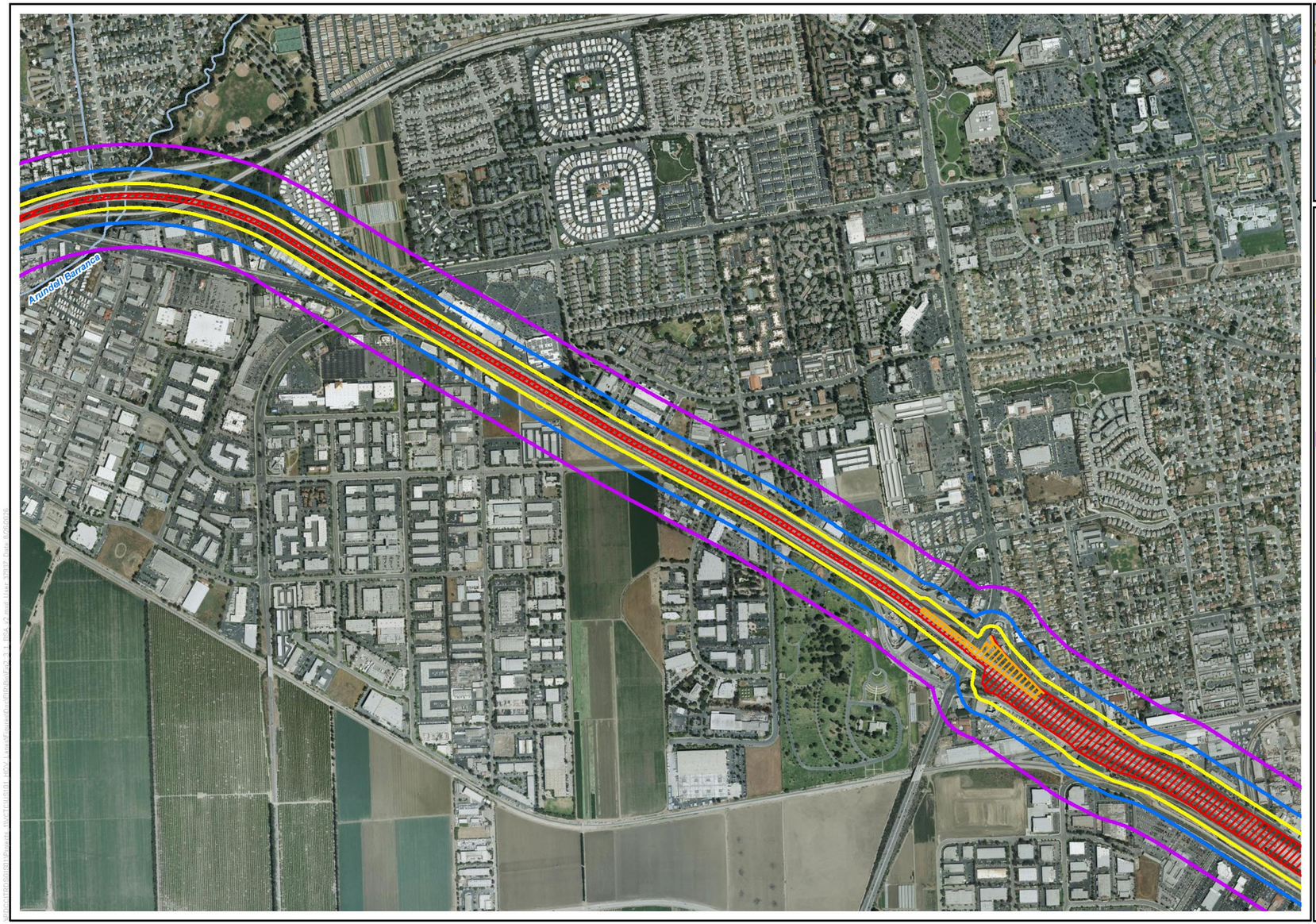
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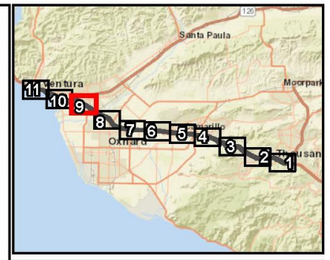
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 8 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 9 of 11)





Legend

- Alternatives 2 & 3
- Alternative 3
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

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Source: VCTC; ESRI

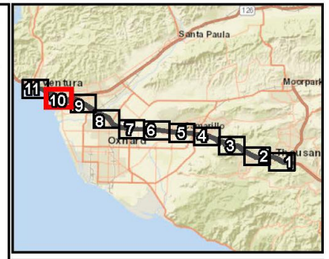
Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 9 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 10 of 11)





Legend

- Alternatives 2 & 3
- **Study Area (100-foot Buffer):** Rare Plants, Bat Habitat Assessment, Jurisdictional Delineation
- **Study Area (250-foot Buffer):** General Reconnaissance, Vegetation Communities
- **Study Area (500-foot Buffer):** Burrowing Owl, Coastal California Gnatcatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Corridor/Linkage Evaluation

N

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Source: VCTC; ESRI

Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 10 of 11
Biological Study Area
US 101 Improvement Project

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Figure 2.4.1-1. Biological Study Area (Sheet 11 of 11)



Note: Design changes following initial project limits of disturbance establishment and completion of field surveys precluded buffer expansion in certain areas.

Figure 2.4-1-1, Sheet 11 of 11
Biological Study Area
US 101 Improvement Project

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Table 2.4.1-1. Vegetation Communities and Land Cover Types and Acreages within the Biological Study Area

Vegetation Communities	Biological Study Area, 250-foot Buffer (acres)
Herbaceous Upland Communities	
Curly Blue Grass–Squirreltail Patches[a]	1.93
Dune Mat[a]	3.43
Dune Mat (Disturbed)[a]	0.12
Fountain Grass Swards[b]	3.06
Giant Wild Rye Grasslands[a]	36.82
Giant Wild Rye Grasslands (Disturbed)[a]	3.05
Ice Plant Mats[b]	0.45
Needle Grass–Melic Grass Grasslands[a]	5.76
Perennial Rye Grass Fields[b]	0.26
Upland Mustard and Other Ruderal Forbs[b]	21.64
Wild Oats and Annual Brome Grasslands[b]	112.86
Riparian Communities	
Arroyo Willow Thickets[a]	1.22
Arroyo Willow Thickets (Disturbed)[a]	0.19
Coast Live Oak Woodland and Forest (Riparian)[a]	0.19
Goodding's Willow–Red Willow Riparian Woodland[a]	5.30
Hardstem and California Bulrush Marshes[a]	3.62
Mulefat Thickets[a]	4.43
Sandbar Willow Thickets[a]	9.51
Shrubland Upland Communities	
California Brittle Bush–Ashy Buckwheat Scrub[a]	27.65
California Brittle Bush–Ashy Buckwheat Scrub (Disturbed)[a]	18.59
California Sagebrush–California Buckwheat Scrub	17.07
Coast Prickly Pear Scrub[a]	25.26
Coyote Brush Scrub	0.29
Laurel Sumac Scrub	21.33
Lemonade Berry Scrub[a]	2.43
Purple Sage Scrub	3.74
Purple Sage Scrub (Disturbed)	3.78
Quailbush Scrub	7.09
Silver Dune Lupine–Mock Heather Scrub[a]	2.06
Woodland and Forest Upland Communities	
Coast Live Oak Woodland and Forest (Upland)	10.65
Eucalyptus–Tree of Heaven–Black Locust Groves[b]	42.23
Pepper Tree or Myoporum Groves[b]	45.86

Vegetation Communities	Biological Study Area, 250-foot Buffer (acres)
Other Land Cover Types	
Agriculture	203.45
Beach	2.10
Developed	2,204.52
Disturbed	115.95
Open Water	0.18
Unvegetated Stream Channel	7.44
Total	**2,975.51**

[a.] Sensitive natural community
[b.] Nonnative vegetation community

Natural Communities of Concern

Fourteen sensitive natural communities CDFW considers important were identified within the BSA. CDFW classifies these habitats as sensitive natural communities because their extent has been substantially reduced, primarily due to urbanization and development, and they provide the natural life history characteristics required for a variety of special-status species, including federally and/or state-listed threatened and endangered plant and animal species.

An estimated 151.56 acres of sensitive natural communities was mapped within the BSA, including the following vegetation communities: Dune Mat, Curly Blue Grass–Squirreltail Patches, Giant Wild Rye Grasslands, Needle Grass–Melic Grass Grasslands, California Brittle Brush–Ashy Buckwheat Scrub, Silver Dune Lupine–Mock Heather Scrub, Lemonade Berry Scrub, Coast Prickly Pear Scrub, Hardstem and California Bulrush Marshes, Arroyo Willow Thickets, Mulefat Thickets, Sandbar Willow Thickets, Goodding's Willow–-Red Willow Riparian Woodland, and Coast Live Oak Woodland and Forest (Riparian) (see Table 2.4.1-1, above). These communities are equivalent to Southern Foredunes, Native Grassland, Valley Wild Rye Grasslands, Valley Needlegrass Grassland, Venturan Coastal Sage Scrub, Southern Dune Scrub, Diegan Coastal Sage Scrub, Venturan Coastal Sage Scrub, Coastal and Valley Freshwater Marsh, Southern Willow Scrub, Mule Fat Scrub, Southern Willow Scrub, Southern Riparian Forest, and Southern Coast Live Oak Riparian Forest, respectively, as classified by Holland (Caltrans 2021a).

Riparian habitats within the BSA (i.e., Hardstem and California Bulrush Marshes, Arroyo Willow Thickets, Mulefat Thickets, Sandbar Willow Thickets, Goodding's Willow-Red Willow Riparian Woodland, Coast Live Oak Woodland and Forest [Riparian]) are found primarily along the Santa Clara River, Calleguas Creek, and Alessandro Lagoon as well as in scattered patches within Santa Buenaventura State Beach, with an isolated patch adjacent to an agricultural field.

Sensitive dune habitat (i.e., Dune Mat, Silver Dune Lupine–Mock Heather Scrub) is found within the Santa Buenaventura State Beach portions of the BSA outside of the project limits of disturbance.

Sensitive grassland and coastal scrub communities (i.e., Giant Wild Rye Grasslands, Needle Grass–Melic Grass Grasslands, California Brittle Brush–Ashy Buckwheat Scrub, Coast Prickly Pear Scrub, Lemonade Berry Scrub) are associated primarily with the slopes and cut banks of the Conejo Grade, with an isolated Curly Blue Grass–Squirreltail Patches along a hillside near the east end of the BSA.

Herbaceous Upland Communities

Curly Blue Grass–Squirreltail Patches (Poa secunda–Elymus elymoides–Herbaceous Alliance)

Curly Blue Grass–Squirreltail Patches is characterized by native bunchgrass species, with curly blue grass (*Poa secunda*) and/or squirreltail (*Elymus elymoides*) being dominant or co-dominant within the herbaceous layer. The herbaceous cover is open to intermittent, typically less than 1 meter in height; emergent trees and shrubs may be present at low cover. Within the BSA, this community is dominated by curly blue grass. Associated annual and perennial herbs include popcorn flower (*Cryptantha* spp.), heliotropes (*Phacelia* spp.), lupines (*Lupine* spp.), fiddler's neck (*Amsinckia* spp.), foothill needlegrass (*Stipa pulchra*), coast range onion grass (*Melica imperfecta*), blue dicks (*Dichlostemma capitatum*), Catalina mariposa lily (*Calochortus catalinae*, California Rare Plant Rank [CRPR] 4.2), large fruit wild cucumber (*Marah macrocarpa*), and cliff desert dandelion (*Malacothrix saxatilis*). Nonnative grasses (*Bromus* spp. and *Avena* spp.) and mustards (*Hirschfeldia incana*, *Sisymbrium* spp. and *Brassica* spp.) are sparsely present. Shrubs are also present but at low cover; these include California buckwheat (*Eriogonum fasciculatum*), California sage (*Artemisia californica*), California encelia (*Encelia californica*), and desert wishbone bush (*Mirabilis laevis*). Curly Blue Grass–Squirreltail Patches are isolated in a hillside along US 101 within the eastern portion of the BSA and cover approximately 1.93 acres of land.

Curly Blue Grass–Squirreltail Patches is classified as Native Grassland by Holland and considered a CDFW sensitive vegetation community.

Dune Mat (Abronia latifolia – Ambrosia chamissonis Herbaceous Alliance)

Dune Mat is identified by broad-leaf sand-verbena (*Abronia latifolia*) and beach bur-sage (*Ambrosia chamissonis*), with other mixed perennial herbs and low shrubs associated with sand dunes along the immediate coastline. The herbaceous cover is open to continuous and typically less than 50 centimeters in height. Within the BSA, this community is an association of native perennial herbs that includes broad-leaf sand-verbena, beach bur-sage, and beach evening-primrose (*Camissoniopsis cheiranthifolia*) as well as nonnative species such as European sea rocket (*Cakile maritima*) and sea daffodil (*Pancratium maritimum*). Scattered shrubs are present at low cover and include seacliff buckwheat (*Eriogonum parvifolium*), mock heather (*Ericameria ericoides*), and coastal goldenbush (*Isocoma menziesii*). Within the BSA, Dune Mat is located in San Buenaventura State Beach and covers approximately 3.55 acres of land.

Dune Mat is classified as Southern Foredunes by Holland and considered a CDFW sensitive vegetation community.

Giant Wild Rye Grasslands (Leymus condensatus Herbaceous Alliance)

Giant Wild Rye Grasslands is characterized by giant wild rye (*Leymus condensatus*) being dominant (greater than 30 percent relative cover) or co-dominant in the herbaceous layer. The herbaceous cover is open to intermittent and typically less than 0.5 meter in height; emergent trees and shrub may be present at low cover. Within the BSA, this community is dominated by giant wild rye or co-dominated by giant wild rye and Coast Range onion grass. Associated perennial and annual herbs within this community include coastal lotus (*Acmispon maritimus*), canyon sunflower (*Venegasia carpesiodes*), coast morning-glory (*Calystegia macrostegia*), popcorn flower, heliotropes, lupine, fiddler's neck, cliff desert dandelion, large fruit wild cucumber, blue dicks, and Catalina mariposa lily as well as nonnative grasses and mustards. This vegetation assemblage appears to be a secondary successional community recovering from a 2017 fire. Severely burnt shrubs, such as laurel sumac (*Malosma luarina*) and lemonade berry (*Rhus intergrifolia*), were observed to be resprouting at the root crown; this community may eventually progress to a shrubland. Wild Rye Grasslands are found on slopes throughout the Conejo Grade of US 101 within the BSA and cover approximately 39.87 acres of land.

Giant Wild Rye Grasslands is classified as Valley Wild Rye Grasslands by Holland and considered a CDFW sensitive vegetation community.

Needle Grass–Melic Grass Grasslands (Stipa spp. – Melica spp. Herbaceous Alliance)

Needle Grass–Melic Grass Grasslands is identified by foothill needle grass (*Stipa lepida*) or other needle grass species being characteristically present (greater than 2 percent absolute cover) in the herbaceous layer. The herbaceous cover is open to continuous and typically less than 1 meter in height; emergent shrubs may be present at low cover. Within the BSA, this community is dominated by purple needle grass, with a diverse mix of native perennial and annual herbs, including California poppy (*Eschscholzia californica*), goldfields (*Lasthenia spp*.), pepperweed (*Lepidium* spp.), erect plantain (*Plantago erecta*), sancula (*Sanicula* spp.), blue-eyed grass (*Sisyrinchium bellum*), coastal lotus, coast morning-glory, large fruit wild cucumber, lupines, popcorn flowers, blue dicks, and Catalina mariposa lily. Needle Grass–Melic Grass Grasslands are found on slopes throughout the Conejo Grade of US 101 within the BSA and cover approximately 5.76 acres of land.

Needle Grass–Melic Grass Grasslands is classified as Valley Needlegrass Grassland by Holland and considered a CDFW sensitive vegetation community.

Riparian Communities

Arroyo Willow Thickets (Salix lasiolepis Shrubland Alliance)

Arroyo Willow Thickets is a dense growth of broadleaf, winter-deciduous riparian species dominated or co-dominated by arroyo willow (*Salix lasiolepis*). The tall-shrub/tree canopy is open to continuous and typically less than 10 meters in height; emergent trees may be present at low cover and include Fremont's cottonwood (*Populus fremontii*) and western sycamore. Within the BSA, this community is strongly dominated by arroyo willow. Associated native trees and tall shrubs occur at low relative

cover and include red willow (*Salix laevigata*), coast live oak (*Quercus agrifolia*), elderberry (*Sambucus nigra*), and velvet ash (*Fraxinus velutina*). Perennial exotic trees and shrubs are also prevalent in some areas within this community and include giant reed (*Arundo donax*), Canary Island date palm (*Phoenix canariensis*), ngaio (*Myoporum laetum*), and pepper trees (*Schinus* spp.). The low shrub layer is sparse; it includes mugwort (*Artemisia douglasiana),* tarragon (*Artemisia dracunculus*), and mule fat (*Baccharis salicifolia*). The herbaceous understory is either bare or composed primarily of nonnative grasses and mustards. Arroyo Willow Thickets occur near the west end of the BSA between Highway 1 and Alessandro Drive and in scattered patches within Santa Buenaventura State Beach. This community covers approximately 1.41 acres of land within the BSA.

Arroyo Willow Thickets is classified as Southern Willow Scrub by Holland and considered a CDFW sensitive vegetation community.

Coast Live Oak Woodland and Forest (Riparian) (Quercus agrifolia Woodland and Forest Alliance)

Coast Live Oak Woodland and Forest (Riparian) is dominated (greater than 50 percent relative cover) or co-dominated by coast live oak in the tree canopy. The tree canopy is open to continuous, reaching heights of up to 30 meters. The shrub layer is sparse to intermittent, and the herbaceous layer is sparse or grassy. Within the BSA, this community is dominated by coast live oak, with associated tree and tall shrub species such as velvet ash, arroyo willow, toyon, and laurel sumac. Nonnative trees are also present but at low cover; these include Mexican fan palm (*Washington robusta*), eucalyptus (*Eucalyptus* spp.), ornamental pines (*Pinus spp*.), and pepper tree. The shrub and herbaceous layers are sparse. Both upland and riparian Coast Live Oak Woodland and Forest communities are found within the BSA. Coast Live Oak Woodland and Forest (Riparian) is found along the edges of Alessandro Lagoon, at the west end of the project alignment, and associated with other riparian habitats; it covers approximately 0.19 acre of land.

The Coast Live Oak Woodland and Forest (Riparian) community is classified as Southern Coast Live Oak Riparian Forest by Holland and considered a CDFW sensitive vegetation community.

Goodding's Willow–Red Willow Riparian Woodland (Salix laevigata Woodland Alliance)

Goodding's Willow–Red Willow Riparian Woodland is a dense growth of broadleaf, winter-deciduous riparian species dominated or co-dominated by Goodding's willow (*Salix gooddingii*) and/or red willow within the tree canopy. The tree canopy is continuous and typically less than 30 meters in height. Within the BSA, this community is strongly dominated by red willow, with associated tree species that include white alder (*Alnus rhombifolia*), velvet ash, Goodding's willow, and Fremont's cottonwood. The sub-canopy is composed of arroyo willow, sandbar willow, and mule fat; the understory is sparse to bare. Within the BSA, Goodding's Willow–Red Willow Riparian Woodland occurs within the Santa Clara River and Calleguas drainages and covers approximately 5.30 acres of land.

Goodding's Willow–Red Willow Riparian Woodland is classified as Southern Riparian Forest by Holland and considered a CDFW sensitive vegetation community.

Hardstem and California Bulrush Marshes (Schoenoplectus acutus, californicus Herbaceous Alliance)

Hardstem and California Bulrush Marshes is characterized by hardstem bulrush (*Schoenoplectus acutus*) and/or California bulrush (*S. californicus*) being dominate (greater than 50 percent relative cover) within the herbaceous layer; one or both of these species may form a co-dominate alliance with cattails (*Typha* spp.). The herbaceous canopy is intermittent to continuous and typically less than 4 meters in height; emergent shrubs and trees may be present but only at low relative cover. Within the BSA, this community is dominated by California bulrush, which largely forms uniform stands, although cattails are integrated into this community in some areas. Trees and shrubs such as mule fat, sand bar willow (*Salix exigua*), arroyo willow, and coast live oak can occur at low cover along the periphery of this community. Hardstem and California Bulrush Marshes are found near the west end of the BSA between SR-1 and Alessandro Drive and cover approximately 3.62 acres of land.

Hardstem and California Bulrush Marshes is classified as Coastal and Valley Freshwater Marsh by Holland and considered a CDFW sensitive vegetation community.

Mulefat Thickets (Baccharis silicifolia Shrubland Alliance)

Mulefat Thickets is a dense riparian shrub community dominated or co-dominated by species such as toyon, sandbar willow, elderberry, coyote bush, laurel sumac, and arroyo willow. The shrub cover is variable and typically less than 3 meters in height; emergent trees may be present at low cover. Within the BSA, this community is an intermittently open-to-dense thicket co-dominated by mulefat. The understory is composed of nonnative grasses and mustards; elderberry is present at low cover. Within the BSA, Mulefat Thickets occur primarily within the Santa Clara River corridor, along with a few scattered patches in Santa Buenaventura State Beach. Mulefat Thickets cover approximately 4.43 acres of land.

Mulefat Thickets is classified as Mule Fat Scrub by Holland and considered a CDFW sensitive vegetation community.

Sandbar Willow Thickets (Salix exigua Shrubland Alliance)

Sandbar Willow Thickets is characterized by sandbar willow being dominant or co-dominant within the shrub layer. The shrub cover is intermittent to continuous and typically less than 7 meters in height; emergent trees of many different species may be present at low cover. Within the BSA, this community is dominated by sandbar willow, with associated shrubs such as mule fat and arroyo willow. The herbaceous layer is sparse to bare. Sandbar Willow Thickets occur within frequently flooded channels of large rivers and drainages with sandy soils in the BSA and cover approximately 9.51 of land.

Sandbar Willow Thickets is classified as Southern Willow Scrub by Holland and considered a CDFW sensitive vegetation community.

Shrubland Upland Communities

California Brittle Bush–Ashy Buckwheat Scrub (Encelia California – Eriogonum cinereum Shrubland Alliance)

California Brittle Bush–Ashy Buckwheat Scrub is characterized by California encelia and/or ashy buckwheat (*Eriogonum cinereum*) being dominant or co-dominant (greater than 50 percent relative cover) within the shrub canopy. The shrub cover is intermittent to continuous and typically less than 2 meters in height; emergent trees may be present at low cover, including California black walnut, elderberry, and coast live oak. Within the BSA, this community is a co-dominated alliance of California Brittle Bush and Ashy Buckwheat Scrub, with a diverse mix of associated shrubs, including, but not limited, to Conejo buckwheat (*Eriogonum crocatum*, California Native Plant Society [CNPS] 1B.2), giant coreopsis (*Leptosyne gigantea*), sticky monkeyflower (*Diplacus aurantiacus*), chaparral yucca (*Hesperoyucca whipplei*), golden yarrow (*Eriophyllum confertiflorum*), chalk dudleya (*Dudleya pulverulenta*), lanceleaf liveforever (*Dudleya lanceolata*), laurel sumac, and California buckwheat. The herbaceous understory is sparsely composed of native annual species that include lupines, popcorn flower, and fiddler's neck. Within the BSA, California Brittle Bush and Ashy Buckwheat Scrub is found on slopes and cut banks throughout the Conejo Grade of US 101 and covers approximately 46.24 acres of land.

California Brittle Bush–Ashy Buckwheat Scrub is classified as Venturan Coastal Sage Scrub by Holland and considered a CDFW sensitive vegetation community.

Coast Prickly Pear Scrub (Opuntia littoralis–Opuntia oricola–Cylindropuntia prolifera Shrubland Alliance)

Coast Prickly Pear Scrub is characterized by coast prickly pear (*Opuntia littoralis*) and/or other cacti being dominant (greater than 50 percent relative cover) or co-dominant within the shrub layer. The shrub cover is intermittent to continuous and typically less than 2 meters in height; emergent trees may be present at low cover, including elderberry, California walnut, and coast live oak. Within the BSA, this community is strongly dominated by coast prickly pear, with associated shrubs such as California sage, California buckwheat, California encelia, sticky monkeyflower, lemonade berry, and chaparral yucca. The herbaceous understory is sparse to bare due to the dense shrub cover throughout this community. Within the BSA, Coast Prickly Pear Scrub is found on slopes throughout the Conejo Grade of US 101 and covers approximately 25.26 acres of land.

Coast Prickly Pear Scrub is classified as Venturan Coastal Sage Scrub by Holland and considered a CDFW sensitive vegetation community.

Lemonade Berry Scrub (Rhus integrifolia Shrubland Alliance)

Lemonade Berry Scrub is characterized by lemonade berry being dominant (greater than 50 percent relative cover) or co-dominant within the shrub layer. The shrub cover is open to continuous and typically less than 5 meters in height; emergent trees may be present at low cover, including California walnut, coast live oak, or nonnative pepper trees. Within the BSA, this community is dominated by lemonade berry, with associated

shrubs such as California buckwheat, California sage, California encelia, laurel sumac, sticky monkeyflower, and chaparral yucca. The understory is composed of nonnative grasses as well as mustards and native species such as giant rye, canyon sunflower, cliff desert dandelion, and morning-glory. Within the BSA, Lemonade Berry Scrub is found on slopes throughout the Conejo Grade of US 101 and covers approximately 2.43 acres of land.

Lemonade Berry Scrub is classified as Diegan Coastal Sage Scrub by Holland and considered a CDFW sensitive vegetation community.

Silver Dune Lupine–Mock Heather Scrub (Lupinus chamissonis–Ericameria ericoides Shrubland Alliance)

Silver Dune Lupine–Mock Heather Scrub is identified by silver dune lupine (*Lupinus chamissonis*) and/or mock heather being characteristically present in the shrub layer. The shrub cover is variable and typically less than 1 meter in height. Within the BSA, this community is a co-dominate alliance of mock heather and seacliff buckwheat, with goldenbush being the only other shrub associated with this community. The shrub canopy is intermittent, with a sparse herbaceous layer composed of broad-leaf sand verbena, beach evening-primrose, beach bur-sage, and European sea rocket. Within the BSA, Silver Dune Lupine–Mock Heather Scrub is found within San Buenaventura State Beach and covers approximately 2.06 acres of land.

Silver Dune Lupine–Mock Heather Scrub is classified as Southern Dune Scrub by Holland and considered a CDFW sensitive vegetation community.

Corridors and Linkages

Existing connectivity corridors and linkages were identified within the BSA during the database and literature review; these include Essential Connectivity Areas and Natural Landscape Blocks (Large and Natural Areas Small), as mapped by the California Essential Habitat Connectivity Project. The BSA also occurs within Terrestrial Connectivity, Areas of Conservation Emphasis, as defined by CDFW, and the Ventura County Greenbelts, as mapped by the Ventura County Greenbelt Program. Missing linkages identified within the BSA include Missing Linkages in California's Landscape, as mapped by the Missing Linkages: Restoring Connectivity to the California Landscape Project, and South Coast Missing Linkages, Ventura County Habitat Connectivity, as mapped by the South Coast Missing Linkages Project. Existing connectivity corridors and linkages within the BSA are summarized in Table 2.4.1-2 and described in detail and illustrated in Figure 2.4.1-3 in Appendix I.

Six existing crossing structures were identified and assessed for the project (Table 2.4.1-3 and Figure 2.4.1-3 in Appendix I). Of these, it was determined that three would provide high connectivity value and function (i.e., Santa Clara River Bridge, Calleguas Creek Bridge, Conejo Creek Bridge), two would provide moderate connectivity value and function (i.e., Arroyo Conejo) Culvert under US 101, Conejo Grade Culvert), and one would provide low connectivity value and function (i.e., Beardsley Wash Culvert).

Table 2.4.1-2. Wildlife Connectivity Literature Review and Evaluation Results

Layer Type	Layer Description	Layer Present/ Absent within BSA	Rationale
Missing Linkages in California's Landscape [ds420]	Identifies 232 habitat linkages across California that are essential to preventing isolation of wildlands in California.	Present	The Santa Clara River linkage and Conejo Grade linkage intersect the BSA (see Figure 3 in the wildlife connectivity assessment report [provided in Appendix G of the NES]). The Santa Clara River linkage was identified as a riparian river corridor that provides movement habitat for the following key species groups (i.e., species used as connectivity indicators): fish, birds, reptiles, and amphibians. The Conejo Grade linkage was identified as a landscape linkage that provides movement habitat for the following key species: mountain lion and bobcat.
California Essential Habitat Connectivity Natural Landscape Blocks – Large [ds621]	Designed to support connectivity conservation in land use and transportation planning. Identifies essential habitat connectivity across California, depicting large and small Natural Landscape Blocks of relatively intact habitat as well as Essential Connectivity Areas that serve to connect Natural Landscape Blocks and have been deemed essential for ecological connectivity for a broad range of species.	Present	The Conejo Grade portion of the BSA passes through two Natural Landscape Blocks – Large (see Figure 4 in the wildlife connectivity assessment report [provided in Appendix G of the NES]).
Natural Landscape Blocks – Natural Areas Small [ds1073]		Present	Ten Natural Landscape Blocks – Natural Areas Small are present within or adjacent to the BSA (see Figure 4 in the wildlife connectivity assessment report [provided in Appendix G of the NES]).
Essential Connectivity Areas [ds620]		Absent	No Essential Connectivity Areas occur within or adjacent to the BSA.

Layer Type	Layer Description	Layer Present/ Absent within BSA	Rationale
Terrestrial Connectivity – Areas of Conservation Emphasis [ds2734]	Summarizes information on terrestrial connectivity, including the presence of mapped corridors or linkages and proximity to large, contiguous natural areas within Areas of Conservation Emphasis. Uses hexagonal mapping units with connectivity rank values from 1 to 5, with 5 indicating areas of irreplaceable and essential connectivity conservation priority.	Present	The BSA contains mapping units with connectivity rankings of 1, 3, and 5 (defined below), with the majority of mapping units throughout the BSA having a connectivity ranking of 1. Higher connectivity rankings are present within the Santa Clara River and Conejo Grade portions of the BSA (see Figure 5 in the wildlife connectivity assessment report [provided in Appendix G of the NES]). 1 – Limited Connectivity Opportunity 3 – Connections with Implementation Flexibility 5 – Irreplaceable and Essential Corridors
South Coast Missing Linkages [ds419] Ventura County Habitat Connectivity [ds419]	South Coast Missing Linkages delineates the outer boundaries of 12 critical landscape linkages within the South Coast ecoregion and identifies the potential movement needs for focal species within each of the critical linkages. Ventura County Habitat Connectivity is a subset of the South Coast Missing Linkages layer and limited to Ventura County.	Present	The BSA crosses the Santa Monica-Sierra Madre linkage at two locations: the Santa Clara River and in the vicinity of the Conejo Grade (see Figure 6 in the wildlife connectivity assessment report [provided in Appendix G of the NES]). US 101 is noted in the South Coast Missing Linkages report as an obvious barrier to wildlife movement between core reserves in the Santa Monica and Sierra Madre Mountains.

Layer Type	Layer Description	Layer Present/ Absent within BSA	Rationale
Ventura County Greenbelts	Ventura County Greenbelts are areas of open space or agricultural use that are under voluntary agreements to protect identified lands. Seven greenbelts are present in Ventura County: Ventura-Santa Paula Greenbelt, Santa Paula-Fillmore Greenbelt, Camarillo-Oxnard Greenbelt, Santa Rosa Valley Greenbelt, Tierra Rejada Greenbelt, Ventura-Oxnard Greenbelt, and the Fillmore-Piru Greenbelt.	Present	The BSA passes directly through the Ventura-Oxnard Greenbelt (northernmost corner) and the Oxnard-Camarillo Greenbelt; it also passes directly south of the Santa Rosa Valley Greenbelt (see Figure 7 in the wildlife connectivity assessment report [provided in Appendix G of the NES]). The portions of the Ventura-Oxnard Greenbelt and Oxnard-Camarillo Greenbelt within the BSA are composed of agricultural lands that have limited connectivity function and value, although they may serve as dispersal and/or live-in habitat for species that are adapted to agricultural land uses. These areas may also serve as stopover habitat for migratory birds. The Santa Rosa Valley Greenbelt is north of US 101 along the Conejo Grade and composed predominately of natural open space.

Table 2.4.1-3. Existing Crossing Structures within the BSA

Crossing (Data Sheet ID)	Structure Name, Number[a]	Post Mile[b]	Station	Existing Crossing Dimensions (L × H × W)	Crossing Description and Passage Assessment System Ranking[c]
Santa Clara River Bridge	Santa Clara River Bridge, 52-0049	PM VEN 23.1 to 23.5	Sta. 1186–1204	209' × 35' × 1,798'	Located in an intact riverine system that is a mainstem corridor in a major regional watershed (Santa Clara River watershed). Intact habitat on both sides upstream and downstream. Surrounding land uses consist of urban development and agriculture. Important and unobstructed fish corridor. “A” ranking for all occurring Wildlife Crossing Guilds (WCGs). High connectivity value and function.

Crossing (Data Sheet ID)	Structure Name, Number[a]	Post Mile[b]	Station	Existing Crossing Dimensions (L × H × W)	Crossing Description and Passage Assessment System Ranking[c]
Beardsley Wash Culvert	Beardsley Wash, 52-0164	PM VEN 18.7	Sta. 959	137' × 17' × 49' (width of each box culvert is 22 feet, 7 inches, separated by a center wall)	Located in a highly modified riverine system that is a minor corridor in a major regional watershed (Calleguas Creek watershed). Nearest intact habitat is miles away. In either the upstream or downstream direction, stream is channelized for miles. Surrounding land use consists primarily of agriculture. "A" ranking for all occurring WCGs. Low connectivity value and function.
Calleguas Creek Bridge	Arroyo Calleguas Creek, 52-0009	PM VEN 12.7	Sta. 640	128' × 14.3'–16.2' × 241' (width consists of four separate chambers, the largest of which is 69.5 feet wide)	Located in a moderately modified riverine system that is a primary corridor in a major regional watershed (Calleguas Creek watershed). Intact, though modified, stream habitat on both sides upstream and downstream. Channel is maintained for flood-control purposes. Surrounding land use consist primarily of residential development. "A" ranking for occurring WCGs. High connectivity value and function. Most important, the downstream flood-control drop structures substantially impair connectivity for most, if not all, species, especially Low-Mobility Small Fauna, Moderate-Mobility Small Fauna, and Aquatic Fauna WCGs in the vicinity.
Conejo Creek Bridge	Arroyo Conejo Creek, 52-0008	PM VEN 11.5	Sta. 572	123' × 18.9'–20.8' × 250' (width consists of four chambers separated by walls; the largest two are 71 feet wide)	Located in moderately a modified riverine system that is a primary corridor in a major regional watershed (Calleguas Creek watershed). Intact, though modified, stream habitat on both sides upstream and downstream. Channel is maintained for flood-control purposes. Surrounding land uses consist of agriculture and open space. "A" ranking for all occurring WCGs. High connectivity value and function.

Crossing (Data Sheet ID)	Structure Name, Number[a]	Post Mile[b]	Station	Existing Crossing Dimensions (L × H × W)	Crossing Description and Passage Assessment System Ranking[c]
Conejo Grade Culvert	Concrete-bottom box culvert, originally built in 1936 and listed as existing drainage structure in 1954 construction documents	PM VEN 10.3	Sta. 511	140' × 9' × 8'	Located in intact grassland habitat. Intact habitat is present on both sides uphill and downhill. Surrounding land uses consist of open space, agriculture (ranching), and residential development. “F” ranking for Aquatic and Aerial WCGs. “A” ranking for all other WCGs. Culvert located in significant connectivity area, although the small size constrains connectivity value and function.
Arroyo Conejo Culvert under US 101	Existing 150-inch corrugated steel pipe, half full of concrete (culvert runs through highway fill under Arroyo side-hill viaducts 52-0411L and 52-0411R)	PM VEN 4.6	Sta. 210	281' × 6' × 12'	Located in a moderately modified riverine habitat that is a primary corridor in a major regional watershed (Calleguas Creek watershed). Intact stream habitat is present on both sides uphill and downhill, although channel has been modified in the region by many culvert and bank stabilization activities. Surrounding land uses consist of urban development, residential development, and a golf course (Los Robles Greens Golf Course sits on the north side of Los Robles Open Space). High number of homeless encampments noted under highway above stream. “A” ranking for Low-Mobility Fauna, Moderate-Mobility Small Fauna, Adaptive High-Mobility Fauna, and Aquatic Fauna. “F” ranking for High-Openness, High-Mobility Carnivores, Adaptive Ungulates, and Aerial Fauna WCGs. Moderate connectivity value and function.

a. Caltrans structure number
b. Caltrans post mile in Ventura County (post mile [PM] VEN)
c. “A” ranking = WCG could pass through the structure as is or with minor modifications; “C” ranking = with modest modifications, this structure could be functional; “F” ranking = structure cannot be fixed with modification/retrofit; PAS ranking = Passage Assessment System ranking.

According to the wildlife connectivity assessment conducted for the project, the greatest number of wildlife/vehicle collisions within existing crossings and corridors/linkages were at the Conejo Grade.

Fifteen potential fish passage barriers were identified within the BSA as a part of the literature and database review. Of these, 10 crossings were screened out and determined to not warrant wildlife passage assessments because of their lack of fish passage function; five crossings were visited during field surveys. None of the potential fish passage barriers within the BSA are known anadromous streams, with the exception of the Santa Clara River, which is known to support anadromous fish; however, fish passage barriers are not present at the US 101 crossing of the Santa Clara River.

Please refer to the wildlife connectivity assessment report for further information (Appendix G of the NES, Caltrans 2021a).

California Coastal Act

Environmentally Sensitive Habitat Areas

Because the western portion of the alignment falls within the Coastal Zone, a determination of ESHAs, per the CCA, was made for the portions of the project footprint occurring within the Coastal Zone (Figure 2.4.1-4, Sheets 4 and 5, in Appendix I).

Local Coastal Programs

Ventura County Local Coastal Program

The project limits of disturbance do not overlap within the coastal jurisdiction of the Ventura County LCP (Figure 2.4.1-4, Sheets 4 and 5, in Appendix I). Therefore, there are no impacts on the coastal jurisdiction of the Ventura County LCP. A small ESHA for overwintering monarch habitat is present along Harbor Boulevard adjacent to the project footprint but outside of the project limits of disturbance.

City of Ventura Local Coastal Program

The project limits of disturbance overlap the California Coastal Zone under the jurisdiction of the City of Ventura LCP and also ESHAs in several areas (see *Environmental Sensitive Habitat Areas* subsection, above, for details and Figure 2.4.1-4 in Appendix I).

Local Regulations

Local Tree Policies and Ordinances

The BSA is within areas under local tree policies and ordinances, including the Ventura County Tree Protection Ordinance, City of Ventura Tree Protection Ordinance (Policy 1C, Actions 1.22–1.24), City of Thousand Oaks Tree Preservation and Protection Ordinances (Article 42 and Chapter 24), City of Oxnard Landscape Standards, and City of Camarillo Tree Protection. Proposed project activities may occur in areas that contain protected trees, including riparian habitats and urban areas.

Local Corridor Policies and Ordinances

A designated Ventura County Wildlife Crossing, the Conejo Grade Box Culvert, occurs in the project area. The Conejo Grade Box Culvert is underneath US 101, near the western edge of the Conejo Grade. The concrete box culvert is 140 feet long, 9 feet high, and 8 feet wide and allows wildlife movement and habitat connectivity in the region between the northern and southern Conejo Grade mountains along the highway.

Conejo Open Space Conservation Agency

Seven Conejo Open Space Conservation Agency– (COSCA-) designated Natural Open Space Area units occur within the BSA: Los Padres Open Space Unit, Walnut Open Space Unit, Arroyo Conejo Open Space Unit, Conejo Canyons Open Space Unit, Conejo Ridge Open Space Unit, Old Conejo Open Space Unit, and Vallecito Open Space Unit (Figure 2.4.1-4 in Appendix I). These lands consist of native chaparral, oak woodland, and coastal sage scrub habitats and support a variety of native plants and wildlife, including coast live oak, southern mule deer, California quail (*Callipepla californica*), California thrasher (*Toxostoma redivivum*), bobcat, and mountain lion. They provide important nesting and foraging habitat for native wildlife as well as linkages and connections to other open space areas necessary for wildlife movement in the region.

2.4.1.3 Environmental Consequences

This section addresses project effects on natural communities of concern; wildlife corridors, linkages, and fish passages; CCC ESHAs; and local tree and wildlife crossing ordinances.

Alternative 1: No-Build Alternative

Under Alternative 1, the project would not be constructed. There would be no new or additional impacts on sensitive natural communities, wildlife movement corridors, or ESHAs within the BSA beyond those that would be expected to occur with the existing facility. There would be no impact on local tree policies and ordinances or wildlife corridor policies and ordinances. In addition, there would be no impact on natural open space areas designated by the Conejo Open Space Conservation Agency.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Natural Communities

Alternatives 2 and 3 would result in permanent and temporary impacts on sensitive natural communities as a result of widening US 101 (Table 2.4.1-4). All temporary and permanent impacts within the BSA under Alternatives 2 and 3 are shown in Figure 2.4.1-5 in Appendix I.

Temporary Impacts

Temporary direct impacts are associated with construction clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes. Sensitive native coastal scrub and grassland habitat removed and/or disturbed along Conejo Grade because of widening includes Coast

Prickly Pear Scrub, Lemonade Berry Scrub, California Brittle Brush–Ashy Buckwheat Scrub, Curly Blue Grass–Squirreltail Patches, and Giant Wild Rye Grasslands. Bridge widening would remove native riparian habitats within Calleguas Creek; these include Goodding's Willow–Red Willow Riparian Woodland and Sandbar Willow Thickets (Table 2.4.1-4).

Temporary impacts on sensitive natural communities reflect conservative preliminary design estimates to allow flexibility in temporary construction work areas during the final design phase of the project; these are generally identified as a worst-case scenario (i.e., the entire existing limits of disturbance, in many cases). The actual temporary impacts on sensitive natural communities would most likely be refined (i.e., reduced) compared with those described in the NES during the final design and permitting phase of the project and may be less than those shown in Table 2.4.1-4. Given the current design, it is anticipated that there will be 1.74 acres of temporary impacts on herbaceous upland communities, 0.34 acre of temporary impacts on riparian communities, and 6.64 acres of temporary impacts on shrubland upland communities (a total of 8.72 acres of temporary impacts) under both Build Alternative 2 and 3.

Temporary indirect impacts may be caused by construction activities (e.g., dust, increased fire risk, chemical spills, sedimentation, littering) that affect sensitive natural communities adjacent to the project limits of disturbance; this could lead to temporary degradation of such communities. The use of construction equipment at the edge of the project limits of disturbance could also damage adjacent native vegetation through airborne sedimentation, for example. However, these impacts are expected to be greatly reduced with implementation of avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure **NC-13**.

Permanent Impacts

Both build alternatives would directly and permanently remove sensitive natural communities. Permanent impacts from construction of an additional high-occupancy vehicle (HOV)/express bus lane in each direction of US 101, as well as auxiliary lanes, shoulders, retaining walls, and the bridge expansion at Calleguas Creek (i.e., expanded walls, piers, and abutments), may result from the removal of vegetation and encroachment into the plant community. Modification of Arroyo Calleguas Bridge (Bridge Number 52-0009), which crosses Calleguas Creek, as a part of both Alternatives 2 and 3 would permanently remove sensitive natural communities. The existing Arroyo Calleguas Bridge is a solid bridge with no gap between the northbound and southbound lanes and 123 feet wide. The bridge would be widened on both sides of the highway, adding 23 feet, 1.5 inches on the northbound side and 22 feet, 4.9 inches on the southbound side, resulting in 45 feet, 6.4 inches of widening and a total new bridge width of 168 feet, 6.4 inches. This would result in permanent shading that could directly affect riparian habitats. A lack of full sunlight for plants can result in reduced photosynthetic capacity, a reduction in root and shoot biomass, alterations to the timing of flowering and seed maturation, and stunted growth after defoliation, which can then lead to an overall reduction in the quality of the habitat.

Table 2.4.1-4. Impacts on Vegetation Communities (Natural Communities of Concern)

Vegetation Community/Land Cover Type	Alternative 2		Alternative 3	
	Permanent Impact (acre)	Temporary Impact (acre)	Permanent Impact (acre)	Temporary Impact (acre)
Herbaceous Upland Communities				
Curly Blue Grass–Squirreltail Patches[a]	–	0.09	–	0.09
Dune Mat[a]	–	–	–	–
Dune Mat (Disturbed)[a]	–	–	–	–
Giant Wild Rye Grasslands[a]	0.00	1.65	0.00	1.65
Giant Wild Rye Grasslands (Disturbed)[a]	–	–	–	–
Needle Grass–Melic Grass Grasslands[a]	–	0.00	–	0.00
Herbaceous Upland Communities Subtotal	***0.00***	***1.74***	***0.00***	***1.74***
Riparian Communities				
Arroyo Willow Thickets[a]	–	–	–	–
Arroyo Willow Thickets (Disturbed)[a]	–	–	–	–
Coast Live Oak Woodland and Forest (Riparian)[a]	–	–	–	–
Goodding's Willow-Red Willow Riparian Woodland[a]	0.01	0.25	0.01	0.25
Hardstem and California Bulrush Marshes[a]	–	–	–	–
Mulefat Thickets[a]	–	–	–	–
Sandbar Willow Thickets[a]	0.00	0.09	0.00	0.09
Riparian Communities Subtotal	***0.01***	***0.34***	***0.01***	***0.34***
Shrubland Upland Communities				
California Brittle Brush–Ashy Buckwheat Scrub[a]	0.82	3.56	0.82	3.56
California Brittle Brush–Ashy Buckwheat Scrub, Disturbed[a]	0.63	1.71	0.63	1.71
Coast Prickly Pear Scrub[a]	0.66	1.19	0.66	1.19
Lemonade Berry Scrub[a]	0.00	0.18	0.00	0.18
Silver Dune Lupine–Mock Heather Scrub[a]	–	–	–	–
Shrubland Upland Communities Subtotal	***2.11***	***6.64***	***2.11***	***6.64***
Total	**2.12**	**8.72**	**2.12**	**8.72**

[a.] Sensitive natural community.
"–" indicates no impact; "0.00" indicates < 0.001-acre impact.

No widening of the Santa Clara River Bridge is proposed as a part of either build alternative; thus, no shade impacts on riparian habitat within the Santa Clara River channel would occur as a result of project implementation. Riparian habitat is not present in the other drainages of the bridges that would be expanded as a part of the project (i.e., Conejo Creek, San Jon Creek, and Beardsley Wash).

It is anticipated that there would be 0.01 acre of permanent impacts on riparian communities and 2.11 acres of impacts on shrubland upland communities under both Alternative 2 and 3.

Once either Alternative 2 or Alternative 3 is constructed, there could be indirect impacts in the form of habitat degradation through a risk of fire, air pollution, litter, and noise. However, conditions with operation of either build alternative are not expected to be different from current conditions and would not pose an increase in risk. The wider roadbed would create a less permeable surface and, thus, could alter surface flows into storm drain facilities and riparian/riverine features. The drainage design and proposed water quality best management practices (BMPs), as identified in measures **WQ-1** and **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*), would reduce the amount of roadway pollutants entering riparian/riverine resources and federal and state jurisdictional water features.

Corridors and Linkages

Implementation of Alternative 2 or 3 would temporarily and permanently affect existing wildlife movement corridors, wildlife movement, and wildlife crossings within the BSA and project region, including increased habitat fragmentation, reduced structural openness of crossings, and increased noise and light disturbances.

Temporary Impacts

Project construction activities could temporarily affect wildlife corridors within the BSA due to the increased presence of noise, equipment, and construction personnel, which may temporarily deter terrestrial wildlife movement within the area. Implementation of avoidance and minimization measures **NC-14** through **NC-25** would help offset temporary impacts on wildlife corridors and terrestrial wildlife movement in the project area.

Permanent Impacts

Although no new barriers to wildlife movement would be created, nor would existing crossing structures be eliminated, as a result of either build alternative, some existing crossings would experience a reduction in connectivity function and value. The addition of an HOV/express bus lane would require expansion at Beardsley Wash Culvert, Calleguas Creek Bridge, Conejo Creek Bridge, and the Conejo Grade Box Culvert, resulting in the crossings being lengthened (i.e., reduction of openness). Reducing the openness of a crossing structure can cause the crossing to be longer, narrower, darker, and more constrained. It can also increase the amount of shade and reduce the amount of vegetation within a drainage, which can negatively affect an animal's willingness to move through and use the structure as a crossing, particularly smaller animals and some aerial species. Potential increases in noise and light disturbance from increased

traffic volumes and widening may also occur at these locations, further decreasing the function and values of the existing crossings.

The changes to existing crossing structures as a result of Alternative 2 and 3 are detailed in the NES. Although some reduction in connectivity function and value is anticipated with structure widening, no structure modifications would result in an exceedance of the recommended dimensions (i.e., L × H × W: < 230 feet × ≥ 15 feet × ≥ 30 feet). Proposed changes to existing crossing structures are outlined below in Table 2.4.1-5.

Table 2.4.1-5. Changes to Crossing Structures under the Proposed Project

Structure	Existing Crossing Dimensions (L × H × W)	Proposed Project Dimensions (L × H × W)	Impact Summary
Santa Clara River Bridge	209' × 35' × 1,798'	209' × 35' × 1,798'	No changes to structure; potential increase in noise and light disturbance
Beardsley Wash Culvert	137' × 17' × 49' (width of each box culvert is 22 feet, 7 inches, separated by a center wall)	165' × 17' × 49'	Lengthening by 28 feet; potential increase in noise and light disturbance
Calleguas Creek Bridge	128' × 14.3'-16.2' × 241' (width consists of four separate chambers, the largest of which is 69.5 feet wide)	172' × 14.3'–16.2' × 241'	Lengthening by 44 feet; potential increase in noise and light disturbance
Conejo Creek Bridge	123' × 18.9-20.8' × 250' (width consists of four chambers separated by walls; the largest two are 71 feet wide)	155' × 18.9'–20.8' × 250'	Lengthening by 32 feet; potential increase in noise and light disturbance
Conejo Grade Box Culvert	140' × 9' × 8'	150' × 9' × 8'	Lengthening by 10 feet; potential increase in noise and light disturbance
Arroyo Conejo Culvert under U.S. 101	281' × 6' × 12'	281' × 6' × 12'	No changes to structure; potential increase in noise and light disturbance

Of the two habitat linkages identified within the BSA (i.e., Santa Clara River and Conejo Grade), one would be affected by the project. The Conejo Grade Box Culvert, a designated Ventura County Wildlife Crossing, occurs in the project area and would be affected by implementation of the project. Widening US 101 through the Conejo Grade would further increase the barrier effect that US 101 has on habitat connectivity and wildlife movement in this linkage. In addition, some functional reduction would occur

with widening of the existing Conejo Grade culvert (i.e., reduction of structure openness), which is the only structure in the Conejo Grade that may facilitate safe wildlife movement across the highway. Because connectivity in this linkage is already highly constrained by US 101, these impacts would be biologically substantial. In addition to the physical widening, an increase in noise and light disturbance from increased traffic volumes and highway widening would also negatively affect the function and value of this linkage and the existing Conejo Grade culvert crossing. The Santa Clara River Bridge would not be widened as a part of either Alternative 2 or Alternative 3, and no changes to the grade or river are proposed that would affect fish or wildlife movement or connectivity at this linkage. Per the Ventura County Habitat Connectivity and Wildlife Corridor Ordinance 4537, a County of Ventura Planned Development Permit would be required for encroachment upon and modifications to the Conejo Grade Box Culvert. Potential increases in noise and light disturbance due to increased traffic volumes and highway widening may be offset by implementation of noise and/or light barriers.

Implementation of avoidance and minimization measures **NC-14** through **NC-25**, including preparing a wildlife fencing plan and adding features that would improve connectivity function and values for crossings (e.g., vegetation enhancements, noise and light barriers), would help offset the impacts from project construction activities and the lengthening of existing crossings. Overall, with implementation of avoidance and minimization measures, combined with the wildlife collaring and tracking study (see mitigation measure **TE-11**, Section 2.4.5, *Threatened and Endangered Species*), wildlife movement and crossings within the project region would be enhanced as a whole.

California Coastal Act: Environmentally Sensitive Habitat Areas

Temporary Impacts

It is anticipated approximately 0.05 acre of San Jon Creek, which is considered ESHA under the CCC, would be temporarily affected to accommodate widening of the US 101 overpass at San Jon Road (see Figure 2.4.1-4 in Appendix I). Environmentally sensitive area (ESA) fencing would be erected around all ESHA areas that are adjacent to the project to protect them from temporary indirect impacts that could result from nearby project construction activities, and avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure **NC-13** would be implemented to reduce any indirect impacts that may occur on adjacent habitat (e.g., dust, erosion, introduction of invasive species) (see below for details). No further action for ESHAs is necessary.

Permanent Impacts

It is anticipated that less than 0.001 acre of San Jon Creek, which is considered ESHA under the CCC, would be permanently affected to accommodate widening of the US 101 overpass at San Jon Road (see Figure 2.4.1-4 in Appendix I). The project would avoid all other CCC ESHA areas within the BSA (which encompasses riparian communities, beach areas, wintering grounds for monarch butterfly, and U.S. Army Corps of Engineers [USACE], Regional Water Quality Control Board [RWQCB], CDFW, and CCC wetlands). Direct impacts on San Jon Creek would be mitigated as a part of permitting for impacts on aquatic resource features that are jurisdictional under USACE,

RWQCB, CDFW, and CCC (see Section 2.4.2, *Wetlands and Other Waters*, for details). Avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure **NC-13** would be implemented to minimize impacts that could occur on adjacent sensitive habitat and San Jon Creek (e.g., dust, erosion, introduction of invasive species).

Ventura County Local Coastal Program

Temporary Impacts

The project is not within the coastal jurisdiction of the Ventura County LCP (Figure 2.4.1-4, Sheets 4 of 5, in Appendix I). Therefore, no temporary impacts on ESHA and coastal resources are anticipated. All construction work within this portion of the project alignment would occur within the U.S. 101 median as inside widening; no work would occur outside of the existing roadway.

Permanent Impacts

The project is not anticipated to have permanent impacts on ESHA and coastal resources under the Ventura County LCP.

City of Ventura Local Coastal Program

Temporary Impacts

Temporary impacts within the project footprint could result from temporary fill, temporary access areas, work areas, and areas with grade changes or permanent structures. Implementation of avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure **NC-13** would ensure that indirect impacts from construction would be minimized and sensitive coastal resources and ESHAs would be adequately protected.

Permanent Impacts

Lands within the California Coastal Zone under the jurisdiction of the City of Ventura LCP occur within the project footprint, including areas containing sensitive coastal resources within ESHAs (see Figure 2.4.1-4 in Appendix I). ESHA resources, including sensitive coastal resources, and habitat categorizations are defined in the Ventura County LCP, to which the City of Ventura LCP defers. Sensitive coastal resources in the BSA can be considered to be riparian vegetation communities, beach areas, wintering grounds for monarch butterfly, and USACE, RWQCB, CDFW, and CCC wetlands and waters (Figure 2.4.1-4 in Appendix I). These resource areas contain sensitive natural communities, including wetlands and riparian habitats, and have the potential to support special-status species such as San Diego marsh-elder (*Iva hayesiana*), western snowy plover (*Charadrius alexandrinus nivosus*), and monarch butterfly. Permanent impacts include construction activities associated with road widening within LCP jurisdiction. Because the project would be performing actions that the CCC considers development activities (e.g., construction, grading, placement of fill or other materials) within designated preservation areas of the California Coastal Zone, a Coastal Development Permit from the City of Ventura LCP would be required for the project. Implementation of avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure

NC-13 would ensure that potential direct impacts from construction would be minimal and that sensitive coastal resources and ESHAs would be adequately protected.

The CCC requires that a 100-foot buffer (minimum) be set between development and wetlands, unless an LCP specifies a specific buffer for a designated area. *Buffer areas* are undeveloped lands surrounding wetlands that act to protect the wetland from the direct effects of nearby disturbance and provide necessary habitat for organisms that spend only a portion of their life in the wetland, such as amphibians, reptiles, birds, and mammals. The City of Ventura LCP does not specify a specific buffer within the plan, only that barrancas and creeks that retain natural soil slopes must be buffered from development according to federal and state guidelines (Policy 1B, Action 1.8). Therefore, the CCC-required 100-foot buffer between development and wetlands would apply, where applicable.

Local Tree Policies and Ordinances

Implementation of the project may conflict with local tree policies and ordinances under the Ventura County Tree Protection Ordinance, City of Ventura Tree Protection Ordinance (Policy 1C, Actions 1.22–1.24), City of Thousand Oaks Tree Preservation and Protection Ordinances (Article 42 and Chapter 24), City of Oxnard Landscape Standards, and/or City of Camarillo Tree Protection Ordinance. Proposed project activities may occur in areas that contain protected trees, including riparian habitats, as well as urban areas.

Temporary Impacts

Temporary impacts on protected trees may result from pruning or trimming, damage to root systems, temporary work within the canopy, or other temporary work that does not include tree removal or result in tree death. Measure **NC-25** would ensure that the project would be in compliance with applicable local tree policies and/or ordinances as well as general plan or municipal codes that pertain to protected trees. No further action is needed.

Permanent Impacts

Construction of the project, including an additional HOV lane in each direction of US 101, auxiliary lanes, shoulders, and retaining walls, could require tree removal during vegetation clearing and grading or other construction activities. Measure **NC-25** would ensure that the project would be in compliance with applicable local tree policies and/or ordinances as well as general plan or municipal codes that pertain to protected trees. No further action is needed.

Conejo Open Space Conservation Agency

Temporary Impacts

No COSCA-designated Natural Open Space Areas would be directly affected by the project (see Figure 2.4.1-3 in Appendix I). The project would avoid all seven of the COSCA open space areas within the BSA, and no temporary construction or encroachment within a designated area, per Sections 232 and 234 of the COSCA Rules and Regulations Ordinance Manual (January 2020), would occur. As such, it appears

that a COSCA temporary encroachment permit would not be needed. ESA fencing would be erected around any open space areas adjacent to the project work area to protect them from nearby project construction activities, and avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure **NC-13** would be implemented to reduce any indirect impacts that may occur on adjacent habitat (e.g., dust, erosion, introduction of invasive species). No further action is anticipated.

Permanent Impacts

There would be no permanent impact on natural open space areas designated by the Conejo Open Space Conservation Agency.

2.4.1.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configuration within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on natural communities would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Avoidance and minimization measures **NC-1** through **NC-12** and mitigation measure **NC-13**, below, would be incorporated to avoid and minimize impacts on sensitive natural communities. Avoidance and minimization measures **NC-6** through **NC-8**, below, would be implemented to reduce impacts on riparian habitats within and adjacent to waterways.

NC-1: Install Barriers. Prior to clearing or construction, highly visible barriers (e.g., orange construction fencing) will be installed under the supervision of a qualified biologist around all sensitive natural communities that will be avoided and adjacent to the project limits of disturbance to designate ESAs to be preserved. The riparian communities that occur within the BSA are dynamic and can change, depending on precipitation events, associated scour, and flood-control maintenance activities. As such, ESA fencing in areas to be avoided may need to be field adjusted prior to construction. No grading or fill activity of any type will be permitted within these ESAs. All construction equipment will be operated in a manner that prevents accidental damage to ESAs. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.

NC-2: Conduct Preconstruction Plant and Wildlife Surveys. Prior to construction, the biological monitor will perform a preconstruction survey for sensitive plant and wildlife species to avoid. Surveys will focus on special-status species having the potential to occur within the work area. Any plant populations will be flagged with ESA fencing or other identifiable flagging, and crews will be instructed to avoid these areas if they can feasibly be avoided. The qualified project biologist will monitor construction

activities near the location for the duration of the proposed project at a frequency necessary to ensure that practicable measures are being employed. Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of avoidance and minimization measures.

NC-3: Prohibit Access to ESAs. No construction activities, materials, or equipment will be allowed within the ESAs. Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the limits of disturbance and designated staging areas and routes of travel. The construction area(s) will be the minimal area necessary to construct the project, and ESAs will be specified in the final design plans. Employees will be instructed that their activities are restricted to the construction areas. Access to sites will be from pre-existing access routes to the greatest extent possible.

NC-4: Maintain ESA Fencing. The ESA fencing will be inspected by the biological monitor at a frequency necessary to ensure that it is in place and properly maintained. ESA fencing and exclusion fencing will remain in place and be maintained until project construction is completed.

NC-5: Monitor Work Activities within Sensitive Areas. A biological monitor will be present on site during clearing/grubbing and earthwork within or adjacent to sensitive natural communities or other protected biological resources to ensure that avoidance and minimization measures are in place, according to specifications, and will monitor construction in the vicinity of biological resources at a frequency necessary to ensure that avoidance and minimization measures are properly followed. The biological monitor will report any noncompliance to the resident engineer within 24 hours.

NC-6: Maintain Hydrologic Connectivity. Hydrologic connectivity will be maintained within drainages during the duration of construction. No erodible materials will be deposited into watercourses or areas demarcated with ESA fencing. Vegetation, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.

NC-7: Site Work Areas away from Sensitive Habitats. Equipment storage, fueling, and staging areas will be sited on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas will be sited so as to prevent runoff from entering sensitive habitat. Necessary precautions will be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials will be reported to appropriate entities, including, but not limited to, the applicable jurisdictional city (i.e., Thousand Oaks, Camarillo, Oxnard, or Ventura), U.S. Fish and Wildlife Service (USFWS), CDFW, and RWQCB, and cleaned up immediately. Contaminated soils will be removed to an approved disposal area.

NC-8: Develop and Implement an SWPPP. A Stormwater Pollution Prevention Plan (SWPPP) will be developed prior to construction to minimize erosion and identify specific pollution prevention measures to eliminate or control potential point source and

nonpoint sources of pollution on-site during and following the project construction phase. The SWPPP will ensure that no pollutants or sediment from construction will enter waterways or ESA-fenced areas. The SWPPP will identify specific BMPs to be implemented during project construction to avoid causing or contributing to any water quality standard exceedances. In addition, the SWPPP will contain provisions for changes to the plan, such as alternative mechanisms, if necessary, during project design and/or construction to achieve the stated goals and performance standards. Sediment and erosion control measures will be implemented until such time that soils are determined to be successfully stabilized.

NC-9: Protect against Human-Caused Fires. When work is conducted during the fire season (as identified by the Ventura County Fire Department), appropriate fire-fighting equipment (e.g., extinguishers, shovels) and a water tender will be available on the project site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire-prevention equipment and methods will be used during grinding, welding, and other spark-inducing activities near vegetated areas.

NC-10: Control Dust. Active construction areas will be watered regularly to control dust and minimize impacts on adjacent vegetation. Dust control measures may include wetting work areas, using soil binders on dirt surfaces, and/or wetting or covering stockpiles. If water trucks are to be used, then pooling of water will be avoided to minimize the potential of attracting opportunistic predators.

NC-11: Prepare a Weed Abatement Plan. A weed abatement plan will be developed to minimize the spread and importation of nonnative plant material during and after construction, in compliance with Executive Order (EO) 13112, and will include the following:

- Any exotic species removed during construction will be properly handled to prevent sprouting or regrowth. Care will be taken to not spread exotic plant seeds during plant removal. Plants will be removed prior to flowering, if feasible.
- Equipment (e.g., vehicles, trucks, heavy equipment) will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected prior to entering the worksite as well as between worksites to reduce the potential for spreading noxious weeds. Equipment cleaning will occur in a designated area at least 300 feet from ESA fencing.
- Trucks carrying loads of vegetation to be removed from the project footprint will be covered in accordance with applicable laws and regulations.
- Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control. Fill material will be obtained from weed-free sources.
- All revegetated areas will avoid the use of species listed on the California Invasive Plant Council's (Cal-IPC's) California Invasive Plant Inventory.

NC-12: Revegetate Disturbed Areas following Construction. Post-construction, any disturbed areas remaining as bare ground will be revegetated with a native hydroseed mix and/or native container plantings. All planting plans will be approved by a Caltrans District Biologist prior to implementation. All revegetated areas will avoid the use of species listed in Cal-IPC's California Invasive Plant Inventory.

NC-13: Conduct On-Site Restoration following Construction. Impacts on sensitive habitats, such as those used by special-status species, will be restored at a 1:1 ratio through on-site restoration. On-site, in-kind restoration of affected habitats will occur at the current locations of the habitats on completion of construction. This will consist of returning affected areas to original contour grades, decompacting the soil, and replanting through hydroseeding and/or the use of container plantings, using a plant palette composed of native species from the local region prior to disturbance. All planting plans will be approved by a Caltrans District Biologist prior to implementation. All revegetated areas will avoid the use of species listed in Cal-IPC's California Invasive Plant Inventory. Restoration performance standards and monitoring requirements will follow the directives outlined in a Habitat Mitigation and Monitoring Plan.

Impacts on wildlife movement corridors should be minimized to the extent feasible through the measures suggested below. The final project design will include design features to facilitate and improve wildlife movement within the project area. Mitigation measure **TE-11** (Section 2.4.5, *Threatened and Endangered Species*) and avoidance and minimization measures **NC-14** through **NC-25** are recommended.

NC-14: Develop and Implement a Wildlife Fencing Plan. A wildlife fencing plan will be developed and implemented for the chosen build alternative to reduce wildlife/vehicle collisions and guide wildlife to safe crossing locations. Final wildlife fencing plans will include the following considerations, at a minimum:

- Guidelines for fencing design
- Design of access gates
- Construction requirements for fence ends
- Facilitation of escape opportunities (if applicable)

The plan will be prepared by a qualified biologist and use current resources, based on the best-available science, including *Construction Guidelines for Wildlife Fencing and Associated Escape and Lateral Access Control Measures* (Huijser et al. 2015).

NC-15: Ensure Safe/Nonintrusive Staging Practices. No equipment or materials will be staged or stored in a manner that will impede movement of any fish or wildlife species through existing bridges, wildlife crossings, and wildlife linkages/corridors.

NC-16: Limit Construction Hours and Unnecessary Lighting. Contractors should avoid nighttime construction to the extent practicable and keep night lighting from spilling into potential wildlife movement areas through the use of shielding and height minimization. If night work is required, then construction lighting should avoid

illuminating natural lands and should be restricted to the immediate work area. The use of bulbs of a spectrum, wavelength, and intensity that minimizes disruption to wildlife should also be considered.

NC-17: Identify Existing Wildlife Movement Areas. Existing structures known to be used for wildlife movement (e.g., culverts, bridges, wildlife crossings) will be identified on construction plans and documents to support implementation of relevant avoidance, minimization, and mitigation measures.

NC-18: Maintain Openness and Line of Sight. For many prey species (e.g., deer, fox), openness and clear line of sight from end to end and on the horizontal plane should be maintained when possible.

NC-19: Provide Cover to Accommodate Wildlife Movement. Small animals, such as rodents, reptiles, and birds, prefer cover when using crossing structures, and sufficient vegetation and/or other cover should be provided. Examples may include contiguous rubble piles/strips arranged to provide interstices along one side of the structure.

NC-20: Erect Sound and Light Barriers. Sound and light barriers will be placed between existing/new wildlife crossings and US 101 to limit noise and light disturbances on wildlife and habitats and prevent such disturbances from affecting the use of wildlife crossing structures. Such barriers should be designed to serve as flight diversion barriers for aerial species to prevent their flight paths from crossing into highway traffic, thereby preventing wildlife/vehicle collisions.

NC-21: Avoid Artificial Lighting in Critical Spaces. Artificial lighting should be avoided in and adjacent to all crossing structures and wildlife linkages/corridors because it may deter animal use/passage.

NC-22: Use Appropriate Lighting. Temporary and permanent lighting should be directional, and shielding should be used to narrowly focus the light within the construction footprint or the permanent footprint of development. The number of lights should be minimized, and motion sensors should be used for all security lights such that, under normal circumstances, the light remains inactive. Lights of a wavelength and spectrum that are known to have reduced effects on wildlife should be used.

NC-23: Limit Human Activity near Wildlife Crossings. Human activity should be avoided whenever possible near wildlife crossing structures and wildlife corridors because it may deter animal use/passage. Measures will be taken to prevent such disturbance at dedicated wildlife crossing structures, wildlife linkages/corridors, and, if possible, at other wildlife crossing locations.

NC-24: Provide Native Vegetation Cover. Native vegetative cover will be provided adjacent to and near the entrances of wildlife crossings to facilitate use by a variety of species. This vegetation should be heterogeneous and contiguous (where possible) with surrounding native habitat to help facilitate movement to the structures from surrounding landscapes. This can be especially important for small species that require

cover to move safely through their environment. Avoidance and minimization measure **NC-25** will ensure that the project will be in compliance with applicable local tree policies and/or ordinances as well as general plan or municipal codes that pertain to protected trees.

NC-25: Comply with Local Policies. All applicable local policies and ordinances, including tree preservation policies, will be followed, and protected trees will be avoided where possible. If protected trees have been identified and cannot be avoided, then prior to ground-disturbing activities, where local tree policies exist and trees are present in the work area, a qualified biologist or arborist will conduct surveys in the work area to identify protected trees. The biologist or arborist will establish ESAs around protected trees that have the potential to be affected by construction activities but do not require removal or trimming. ESAs will be based on local government ordinances, policies, and regulations. Compensatory mitigation for impacts on protected trees will be required, including impacts associated with removing or trimming a protected tree, based on requirements set out in applicable local government ordinances, policies, and regulations. Compensatory mitigation, based on these local ordinances, policies, and regulations, may include, but is not limited to, transplantation of protected trees to areas outside of the work area and/or replacement of protected trees on or off site, based on the number of protected trees affected, at a ratio required by local government ordinances or regulations.

2.4.2 Wetlands and Other Waters

2.4.2.1 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 United States, 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, under which the discharge of dredged or fill material cannot be permitted if a practicable alternative exists that would be less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by USACE, with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

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 effects. 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 (Guidelines) (40 Code of Federal Regulations [CFR] Part 230) and whether permit approval is in the public interest. The Guidelines developed by U.S. EPA, in conjunction with USACE, allow the discharge of dredged or fill material into the aquatic system (WoUS) only if there is no practicable alternative that would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to a proposed discharge that would have lesser effects on WoUS and would not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) regulates activities of federal agencies that involve wetlands. Essentially, EO 11990 states that a federal agency, such as the Federal Highway Administration (FHWA) and/or the Department, as assigned, cannot undertake or provide assistance for new construction in wetlands unless the head of the agency finds that (1) that there is no practicable alternative to construction and (2) the proposed project includes all practicable measures to minimize harm. A "wetlands only practicable alternative finding" must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the RWQCBs, and CDFW. In certain circumstances, the CCC (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600–1607 of the CFG 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 USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) to oversee water quality. Discharges under the Porter-Cologne Act are permitted by waste discharge requirements (WDRs), which 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 that may result in a discharge to WoUS. This is most frequently required in tandem with a Section 404 permit request. Please see Section 2.3.2, *Water Quality and Stormwater Runoff,* for more details.

2.4.2.2 Affected Environment

The information in this section is based on the NES (Caltrans 2021a) and the jurisdictional delineation (JD) (Caltrans 2020) prepared for the project. Findings from the 2021 NES and 2020 JD were updated in the environmental impact report/environmental assessment (EIR/EA) to reflect subsequent regulatory updates, including vacatur of the Navigable Waters Protection Act in 2022 and establishment of the final rule defining WoUS in 2023. The 2021 NES and 2020 JD have not been revised to reflect the updates, and references used in the NES and JD are not carried over into this section.

The study area for the JD included a 100-foot buffer from the edge of the project limits of disturbance; this defined the jurisdictional study area (JSA) (see Figure 2.4.2-1). For a few locations, an additional area beyond the buffer was reviewed for local watershed characteristics in order to assess hydrological connections throughout the JSA. In those cases, upstream and/or downstream portions of a drainage were reviewed in order to provide contextual information for the JSA. The JSA is composed primarily of developed lands associated with the existing right of way (ROW) (e.g., residential, commercial,

industrial, recreational lands), along with agricultural lands throughout the Oxnard Plain and Santa Clara River Valley and pockets of natural habitat, primarily in the eastern half of the project area, especially on the Conejo Grade.

The topography within the JSA is relatively flat, with minimal changes in elevation across most of the alignment. With the exception of the occasional rise and fall in road elevation, the most notable change in elevation in the JSA is found on the Conejo Grade, with a change in elevation of approximately 700 feet. West of the Conejo Grade, the JSA generally slopes down from east to west, toward the Pacific Ocean. Average precipitation at the Thousand Oaks weather station, approximately 2.3 miles north of the JSA, is approximately 11.5 inches per year.

The JSA occurs within two watersheds, the Santa Clara River watershed and Calleguas Creek watershed. The Santa Clara River watershed includes the Santa Clara River and covers approximately 1,634 square miles; it empties into the Pacific Ocean after passing through the BSA. The Calleguas Creek watershed includes Calleguas Creek as well as major tributaries (e.g., Conejo Creek, Arroyo Conejo) and covers approximately 341 square miles. The Calleguas Creek watershed eventually drains to the Pacific Ocean from Mugu Lagoon. Several major waterways, including the Santa Clara River, Calleguas Creek, and Conejo Creek, cross through the JSA.

Agency Coordination

No coordination with agencies has occurred to date; agency coordination would occur during the permitting phase.

Jurisdictional Delineation Results

A total of 39 features were mapped within the JSA, including ephemeral, intermittent, and perennial features; flood-control channels; and isolated wetlands. In total, 0.56 acre of USACE/RWQCB/CCC wetland WoUS, 0.33 acre of USACE/RWQCB/CCC non-wetland WoUS, 8.74 acres of USACE/RWQCB wetland WoUS, 11.28 acres of USACE/RWQCB non-wetland WoUS, 11.98 acres of CDFW unvegetated streambed, and 18.64 acres of CDFW vegetated streambed and associated riparian vegetation were mapped within the JSA (Table 2.4.1-1). The locations of all USACE/RWQCB/CCC and CDFW jurisdictional water resources are shown in Figure 2.4.2-1 and Figure 2.4.2-2, respectively.

Table 2.4.2-1. Potential USACE, RWQCB, and CCC WoUS and CDFW Jurisdiction within the JSA

	USACE/RWQCB/ CCC WoUS		USACE/RWQCB WoUS		CDFW	
Feature Type	**Wetland (acres)**	**Non-Wetland (acres/linear feet)**	**Wetland (acres)**	**Non-Wetland (acres/ linear feet)**	**Unvegetated Streambed/ Lake (acres/ linear feet)**	**Riparian (acres/ linear feet)**
Ephemeral Features	–	–	–	1.83/8,646	2.20/8,594	–/–

Feature Type	USACE/RWQCB/ CCC WoUS		USACE/RWQCB WoUS		CDFW	
	Wetland (acres)	Non-Wetland (acres/linear feet)	Wetland (acres)	Non-Wetland (acres/ linear feet)	Unvegetated Streambed/ Lake (acres/ linear feet)	Riparian (acres/ linear feet)
Intermittent Features	–	0.21/813	7.93	2.62/6,472	2.37/4,550	13.10/3,601
Perennial Features	–	–	0.73	5.54/6,358	5.99/5,757	5.54/2,411
Flood-Control Channels	–	0.12/314	–	1.29/3,815	1.42/4,129	–/–
Isolated Wetlands	0.56	–	0.08	–/–	–/–	–/–
Total	**0.56**	**0.33/1,127**	**8.74**	**11.28/25,291**	**11.98/23,030**	**18.64/6,012**

JSA = jurisdictional study area; CCC = California Coastal Commission; CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers; WoUS = waters of the United States
"–" indicates none are present.

Ephemeral Features

Within the JSA are 15 ephemeral features. These include relatively small drainages with an OHWM ranging from 2 to 20 feet wide; the drainages are composed of concrete, sediment, or both. Ephemeral features that collect primarily rainwater runoff from culverts occur throughout most of the JSA and drain either parallel or perpendicular to US 101. The features are unvegetated or dominated by upland vegetation. All of the features are expected to be subject to USACE, RWQCB, and CDFW jurisdiction.

Intermittent Features

Within the JSA are 13 intermittent features. These include both relatively small drainages and large rivers ranging from 2 to 1,279 feet wide; the drainages are composed of concrete, sediment, or both. Intermittent features occur throughout most of the JSA; these drain either parallel or perpendicular to US 101. The features collect primarily rainwater but also urban and agricultural runoff from culverts. The intermittent features contain wetland vegetation or are unvegetated. At the time of the delineation, they contained some flowing water, indicating a dry-season flow, whether anthropogenically influenced or not. All of these features may be subject to USACE, RWQCB, and CDFW jurisdiction. Two of the features (Features A102 and A185) are subject to CCC jurisdiction.

Perennial Features

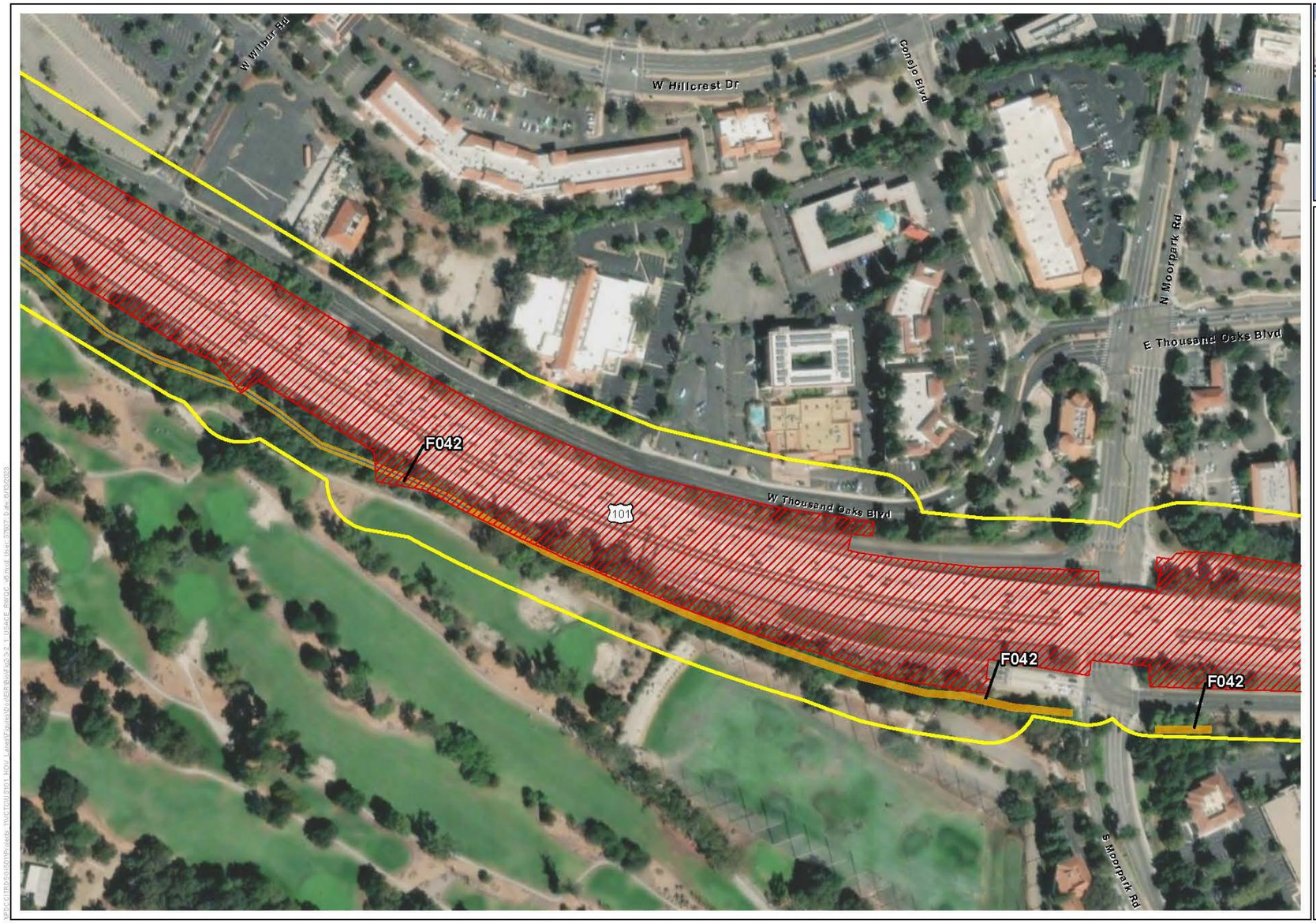
Within the JSA are four perennial features that include relatively large rivers with an OHWM ranging anywhere from 25 to 150 feet wide; the features are composed of concrete, sediment, or both. Perennial features occur within the western portion of the JSA and drain either parallel or perpendicular to US 101. At the time of the delineation, the features contained wetland vegetation and exhibited a significant amount of flowing water, indicating year-round flows. These features may be subject to USACE, RWQCB, and CDFW jurisdiction.

Flood-Control Channels

Within the JSA, four features have been classified as flood-control channels, including concrete-walled drainages with an OHWM ranging from 9 to 50 feet wide. These features occur throughout the JSA and drain either parallel or perpendicular to US 101; the features collect primarily rainwater from large flood events but also urban and agricultural runoff from culverts. All of these features may be subject to USACE, RWQCB, and CDFW jurisdiction. One feature (Feature A104) may also be subject to CCC jurisdiction.

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 1 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters
- USACE/RWQCB Wetland Waters

N

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Figure 2.4.2-1, Sheet 1 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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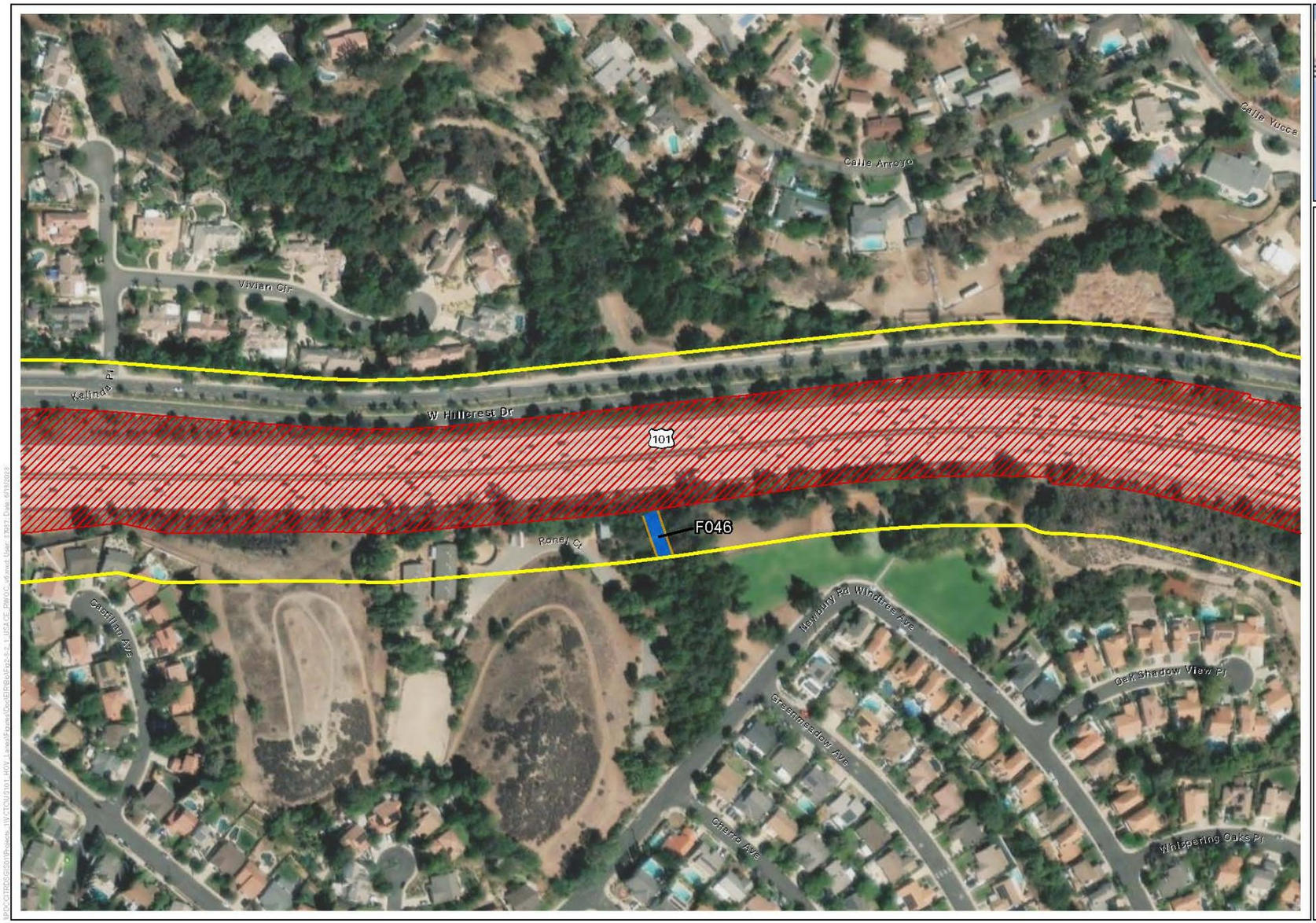
Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 2 of 26)



Figure 2.4.2-1, Sheet 2 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 3 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters
- USACE/RWQCB Wetland Waters

Figure 2.4.2-1, Sheet 3 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 4 of 26)

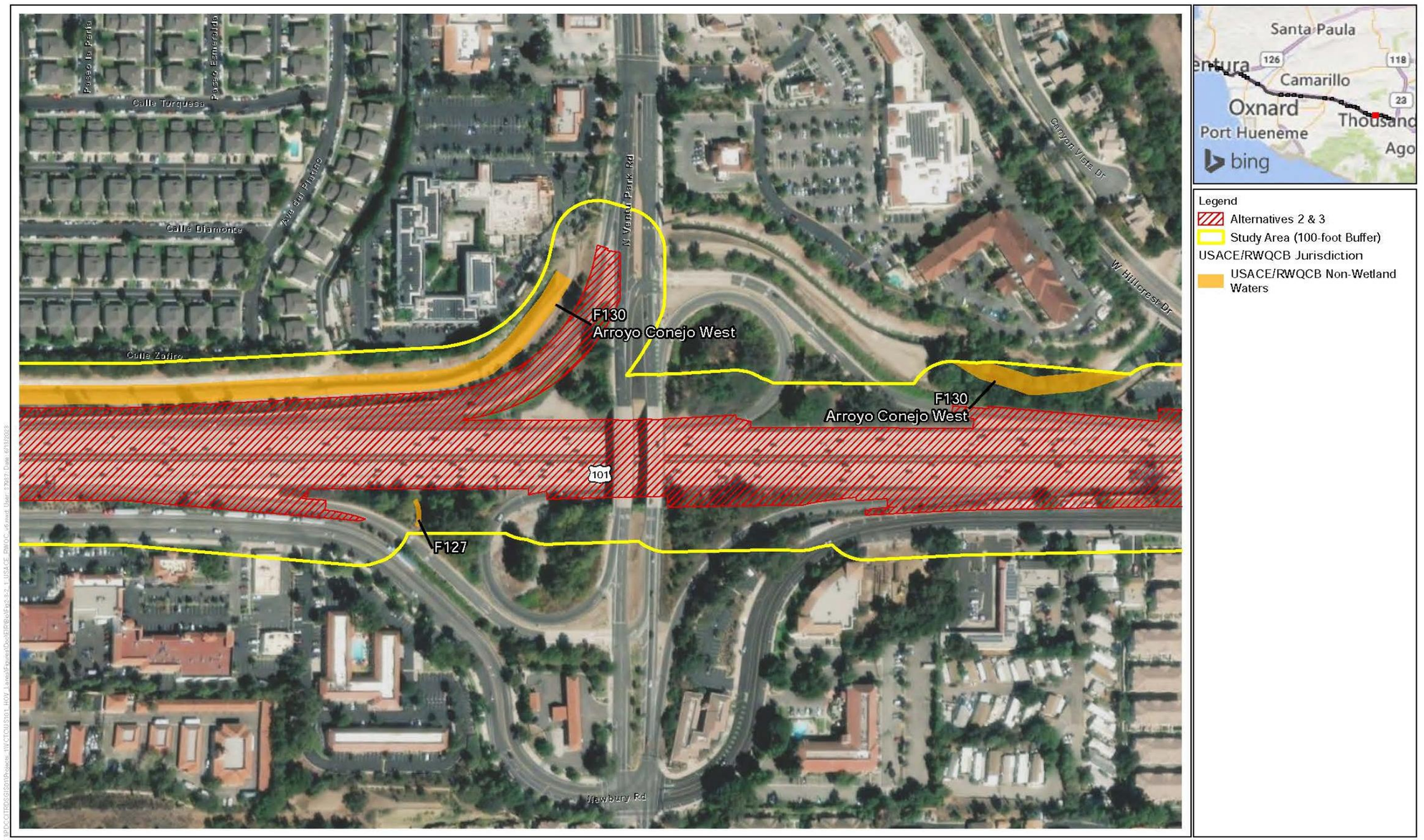


Figure 2.4.2-1, Sheet 4 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 5 of 26)

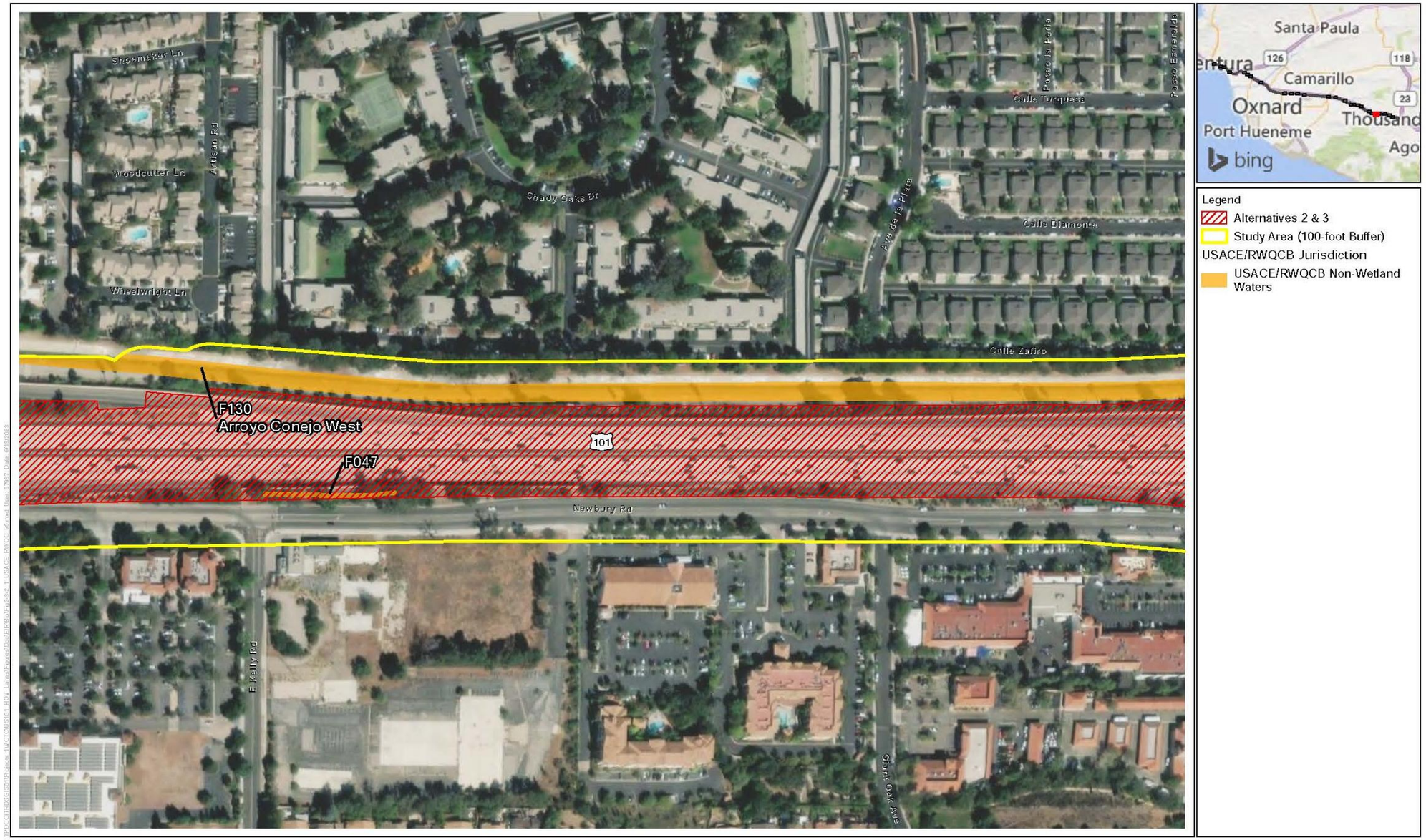


Figure 2.4.2-1, Sheet 5 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 6 of 26)

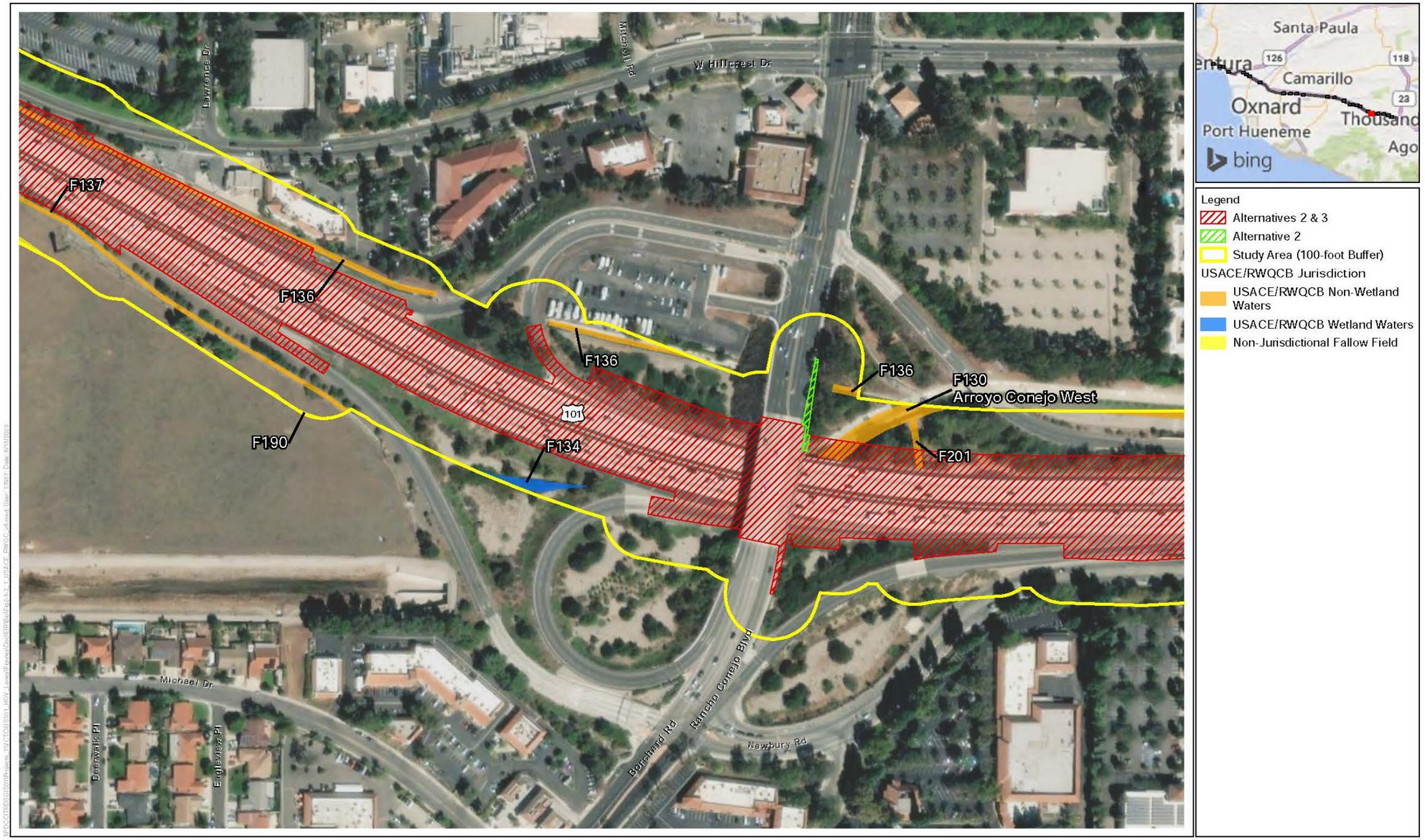
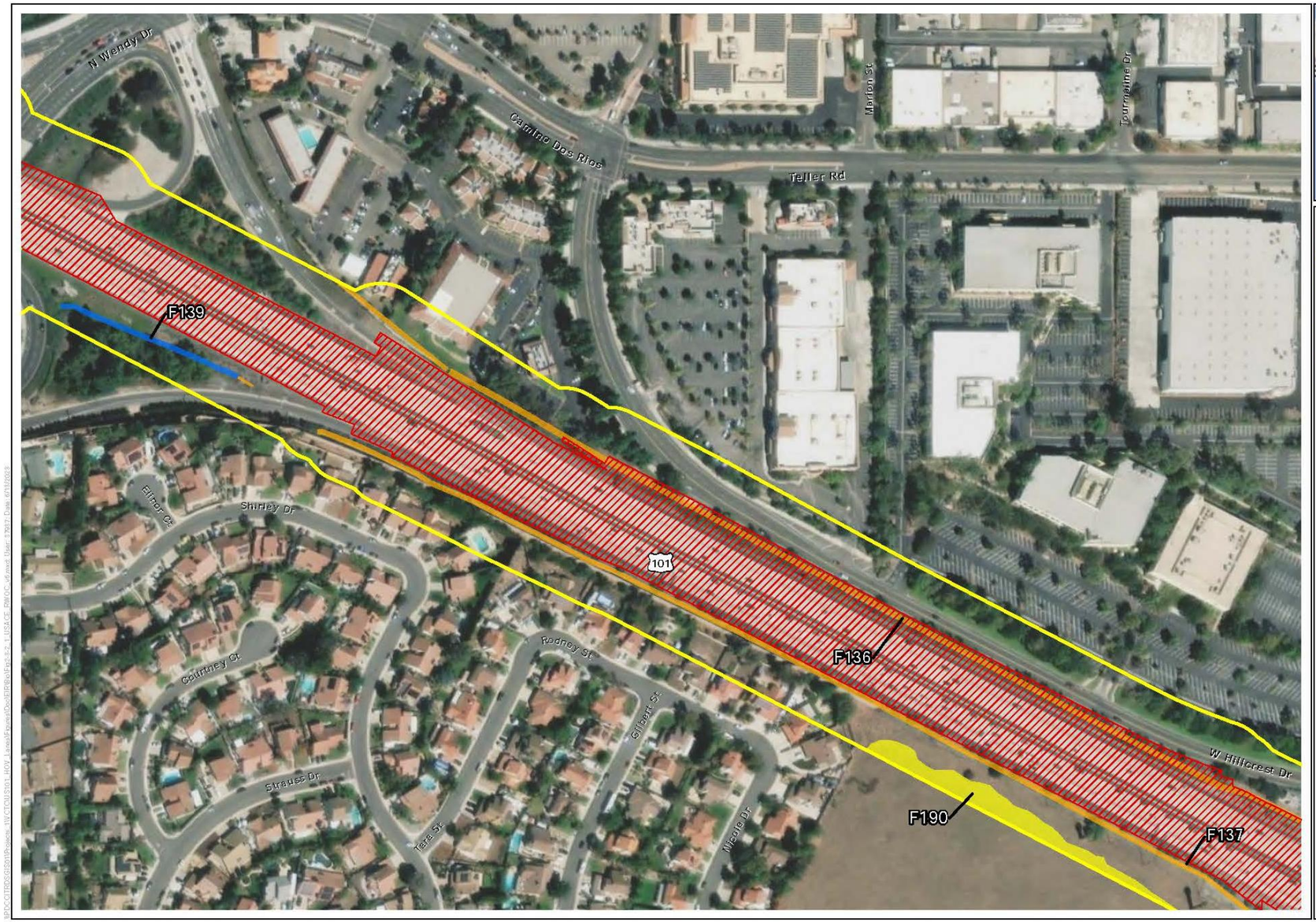


Figure 2.4.2-1, Sheet 6 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 7 of 26)





Legend
- Alternatives 2 & 3
- Alternative 2
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters
- USACE/RWQCB Wetland Waters
- Non-Jurisdictional Fallow Field

N

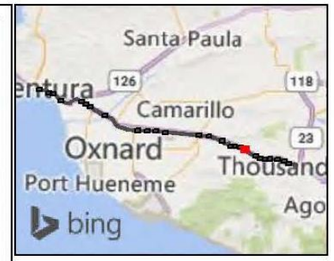
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Figure 2.4.2-1, Sheet 7 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 8 of 26)





Legend
- Alternatives 2 & 3
- Alternative 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

N

0 100 200 Feet
1:2,400

Figure 2.4.2-1, Sheet 8 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 9 of 26)

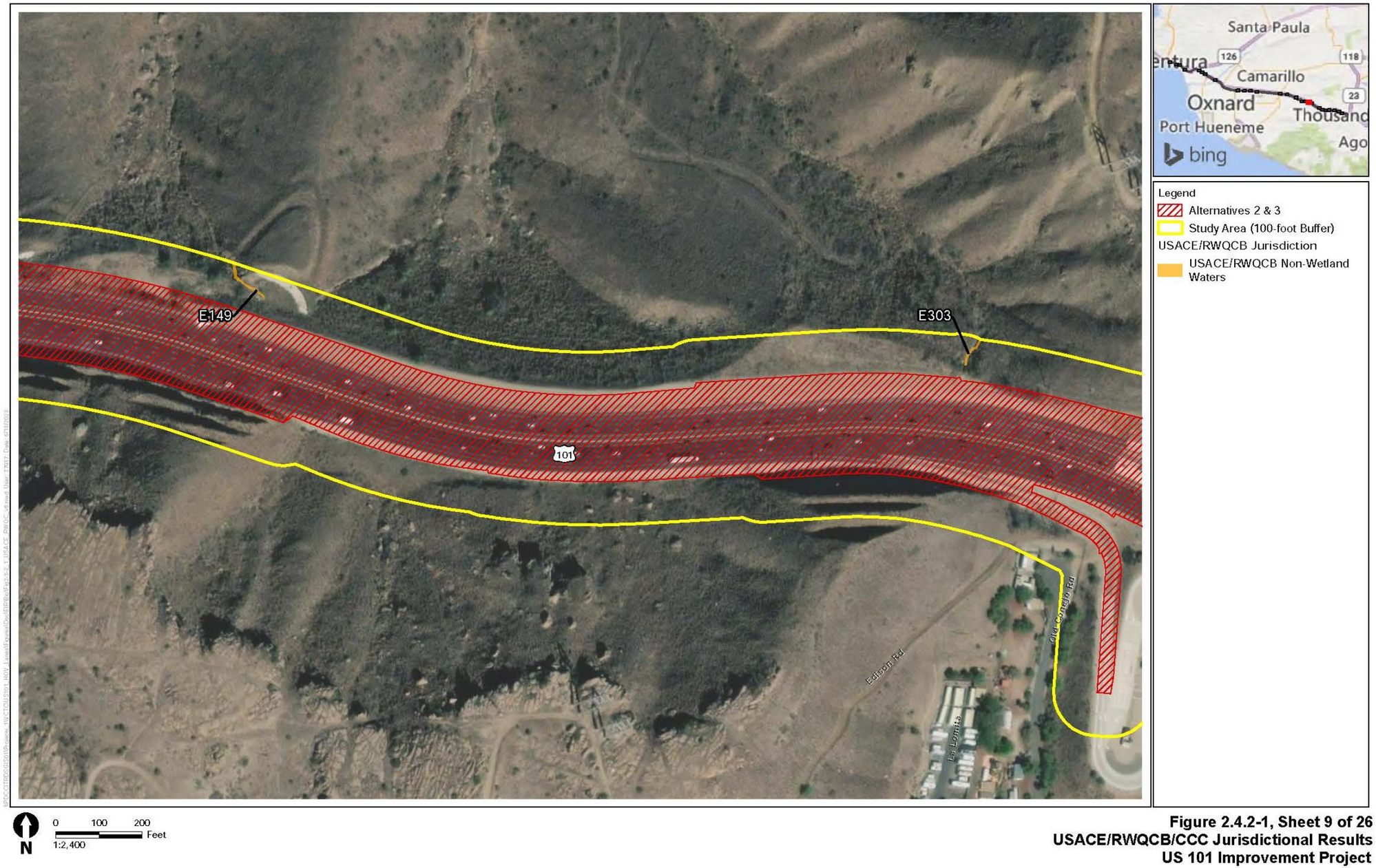
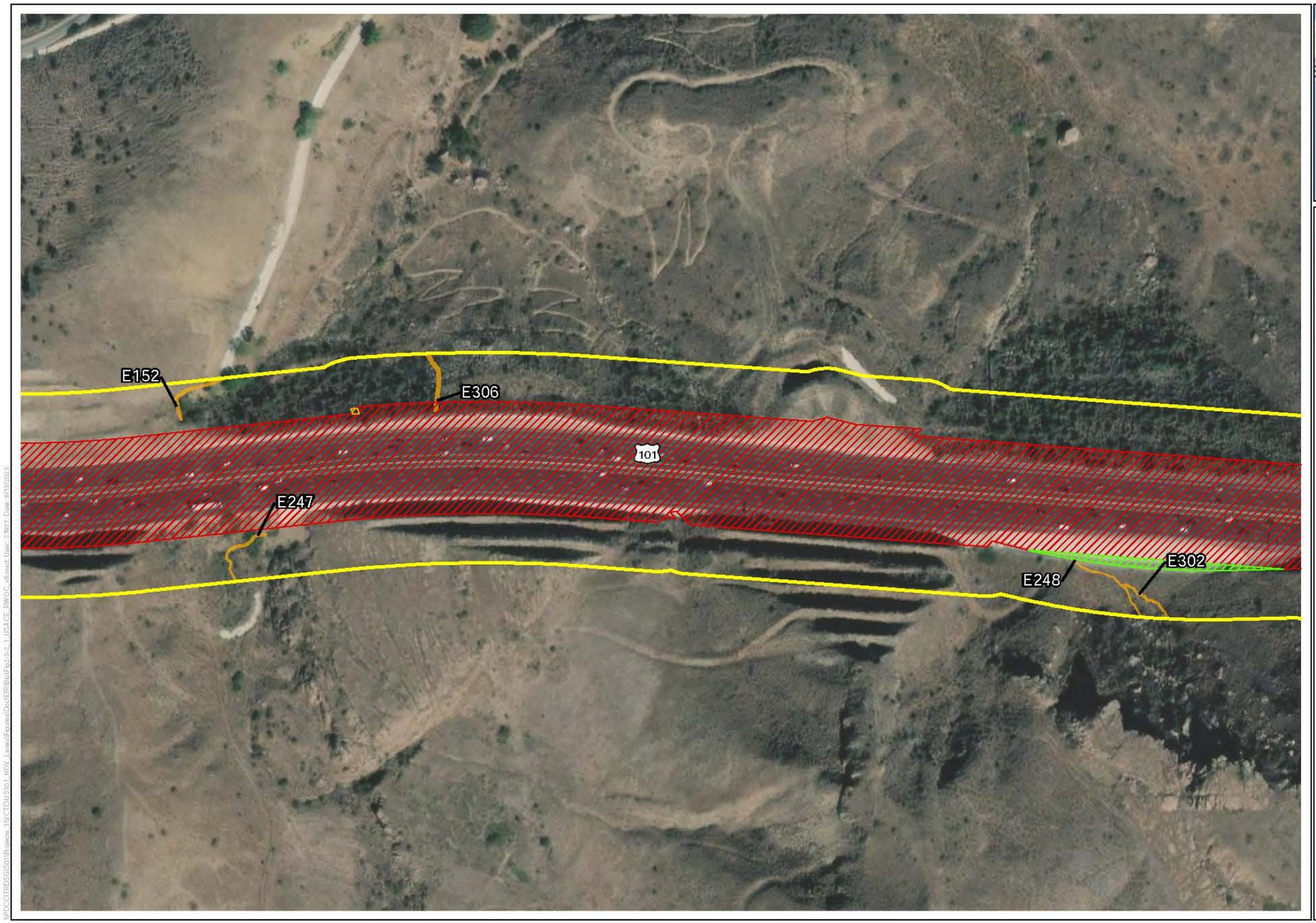
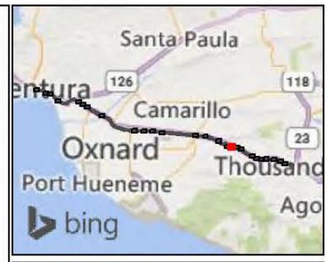


Figure 2.4.2-1, Sheet 9 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 10 of 26)





Legend
- Alternatives 2 & 3
- Alternative 2
- Alternative 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

N

0 100 200 Feet
1:2,400

Figure 2.4.2-1, Sheet 10 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 11 of 26)

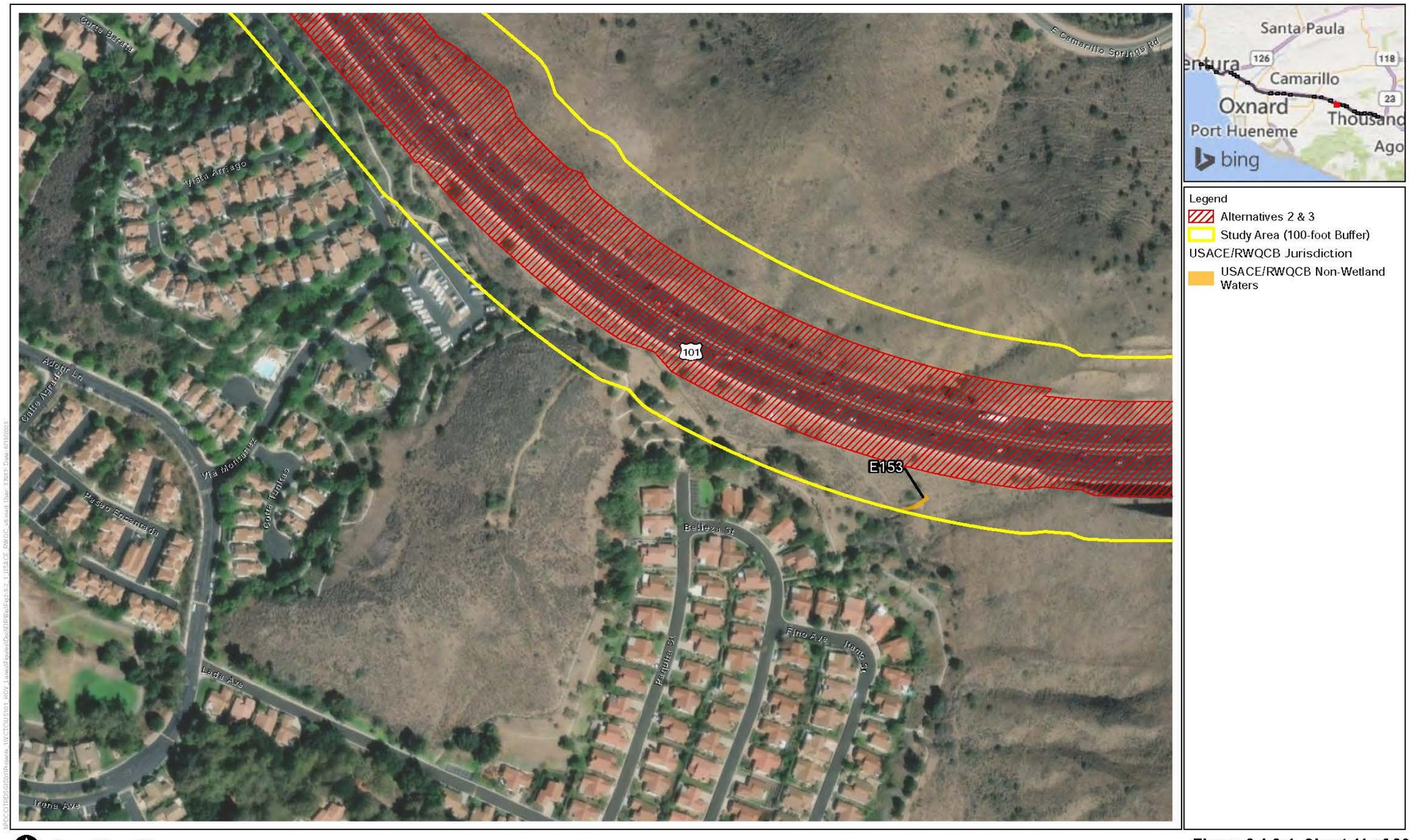


Figure 2.4.2-1, Sheet 11 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 12 of 26)

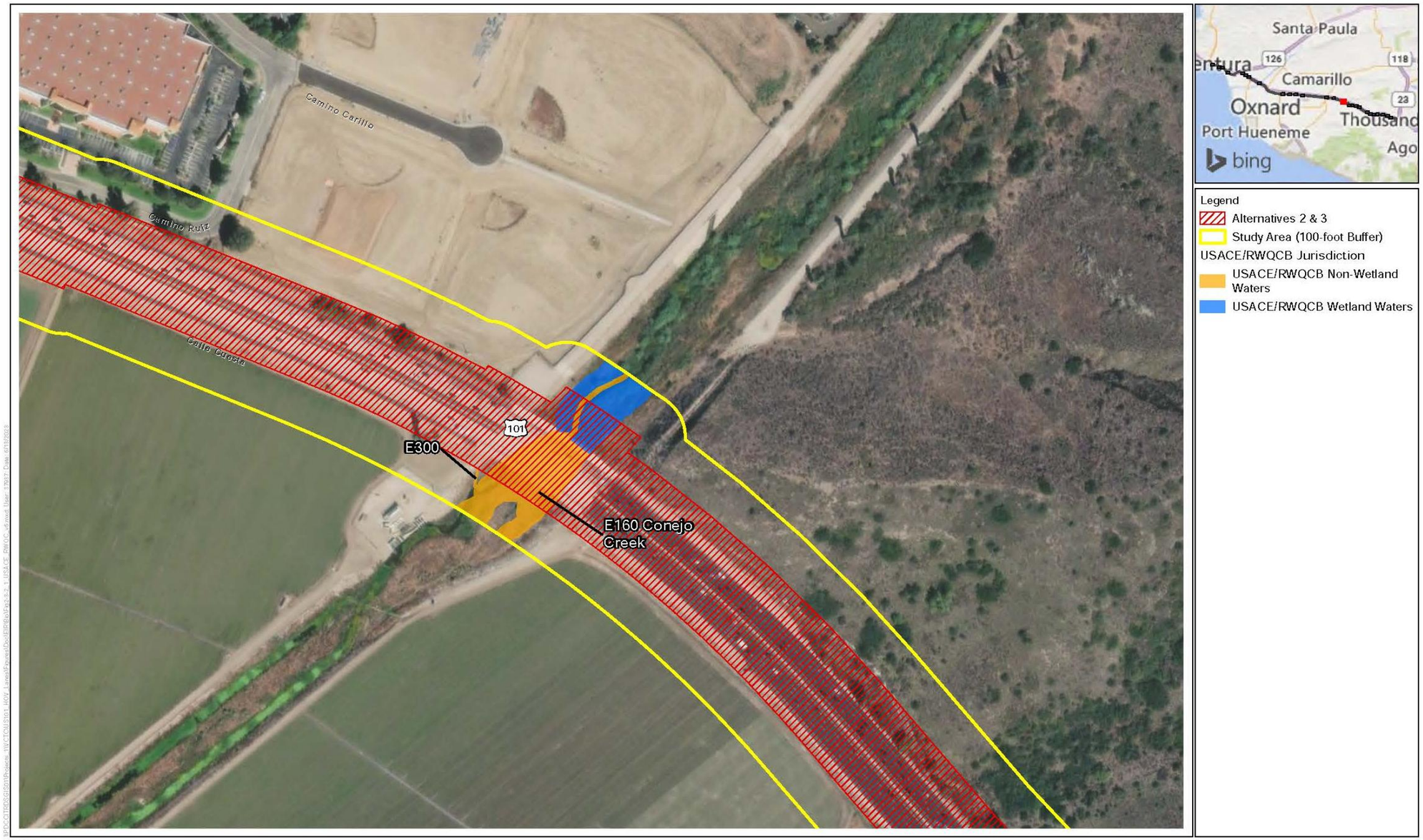
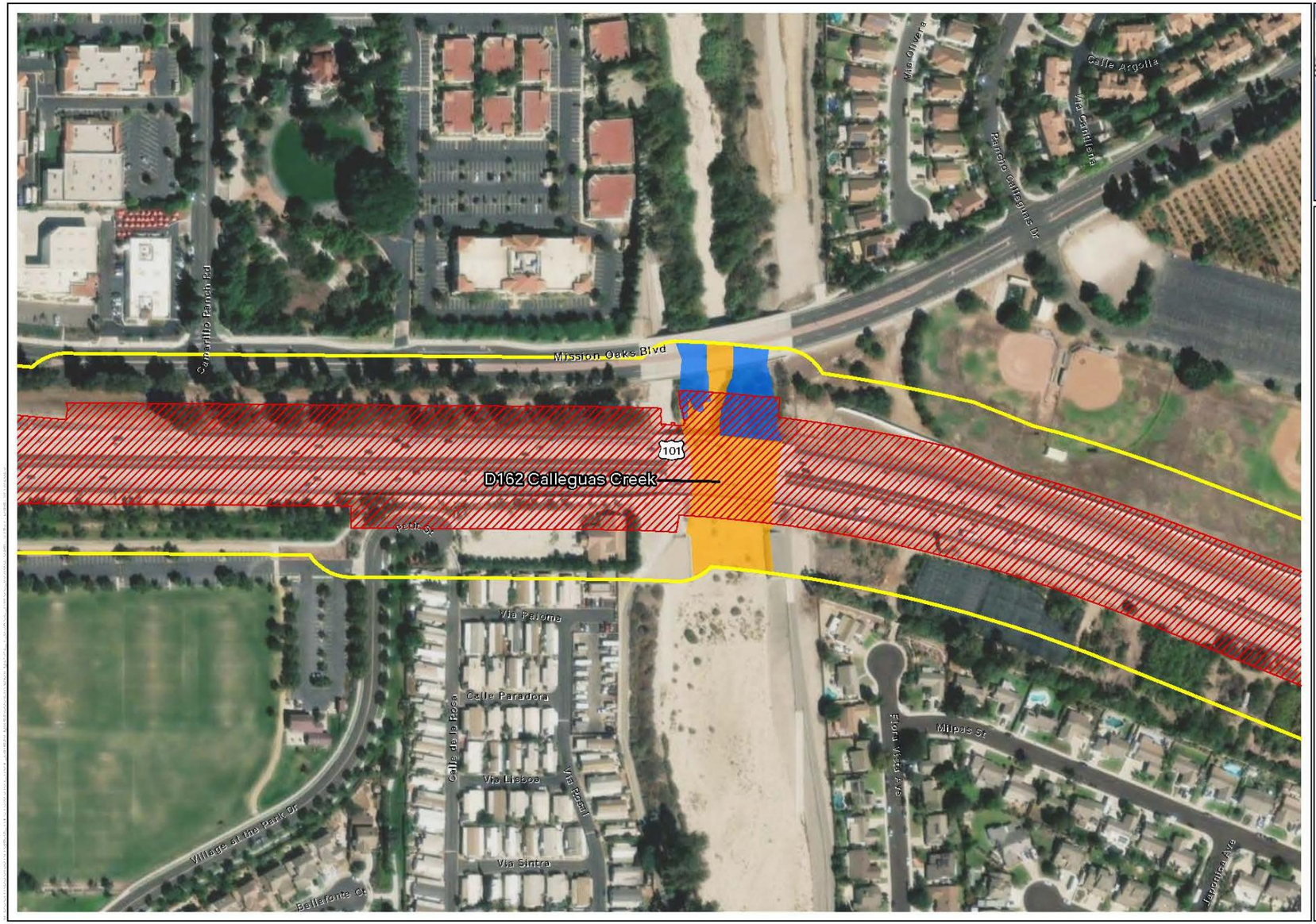


Figure 2.4.2-1, Sheet 12 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 13 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters
- USACE/RWQCB Wetland Waters

N

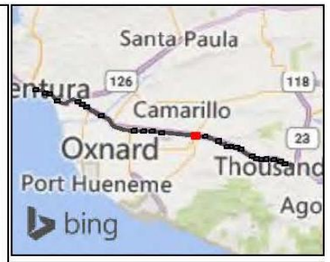
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Figure 2.4.2-1, Sheet 13 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 14 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

Figure 2.4.2-1, Sheet 14 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 15 of 26)

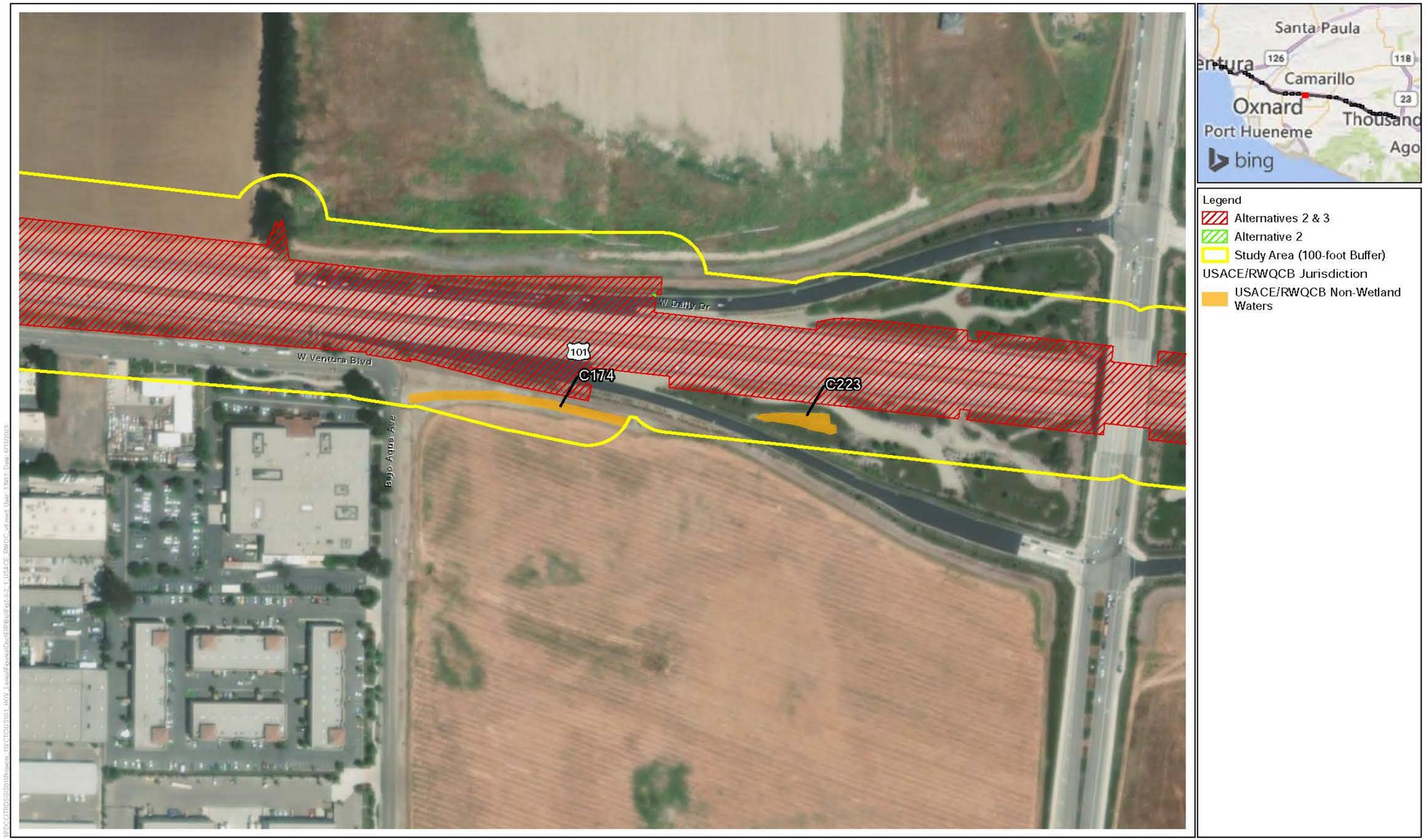


Figure 2.4.2-1, Sheet 15 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 16 of 26)

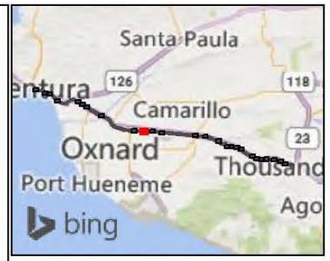


Figure 2.4.2-1, Sheet 16 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 17 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

N

0 100 200 Feet
1:2,400

Figure 2.4.2-1, Sheet 17 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 18 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

N

0 100 200 Feet
1:2,400

Figure 2.4.2-1, Sheet 18 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 19 of 26)

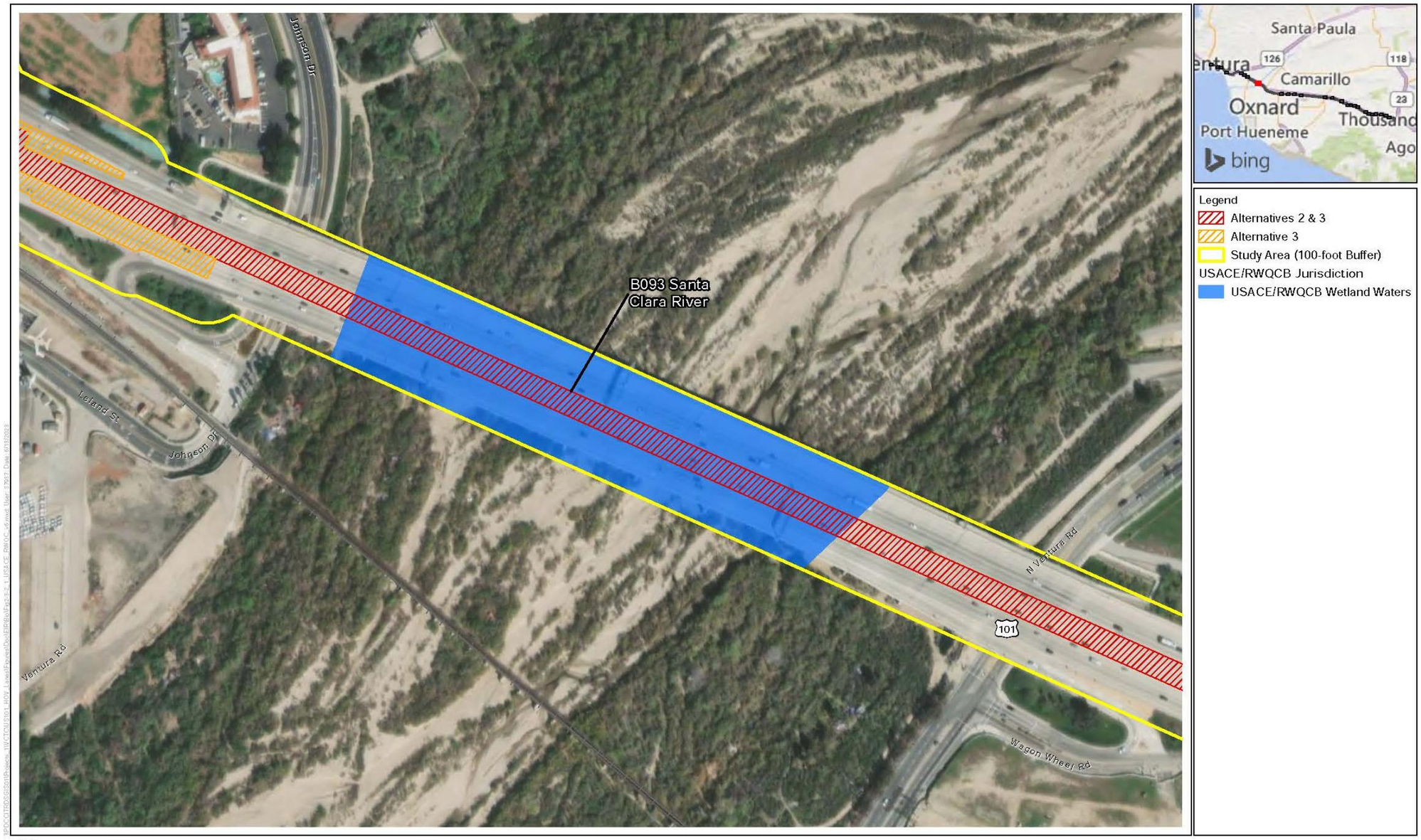


Figure 2.4.2-1, Sheet 19 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 20 of 26)





Legend
- Alternatives 2 & 3
- Alternative 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

N

0 100 200 Feet
1:2,400

Figure 2.4.2-1, Sheet 20 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 21 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

Figure 2.4.2-1, Sheet 21 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 22 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)

USACE/RWQCB Jurisdiction
- USACE/RWQCB Non-Wetland Waters

N

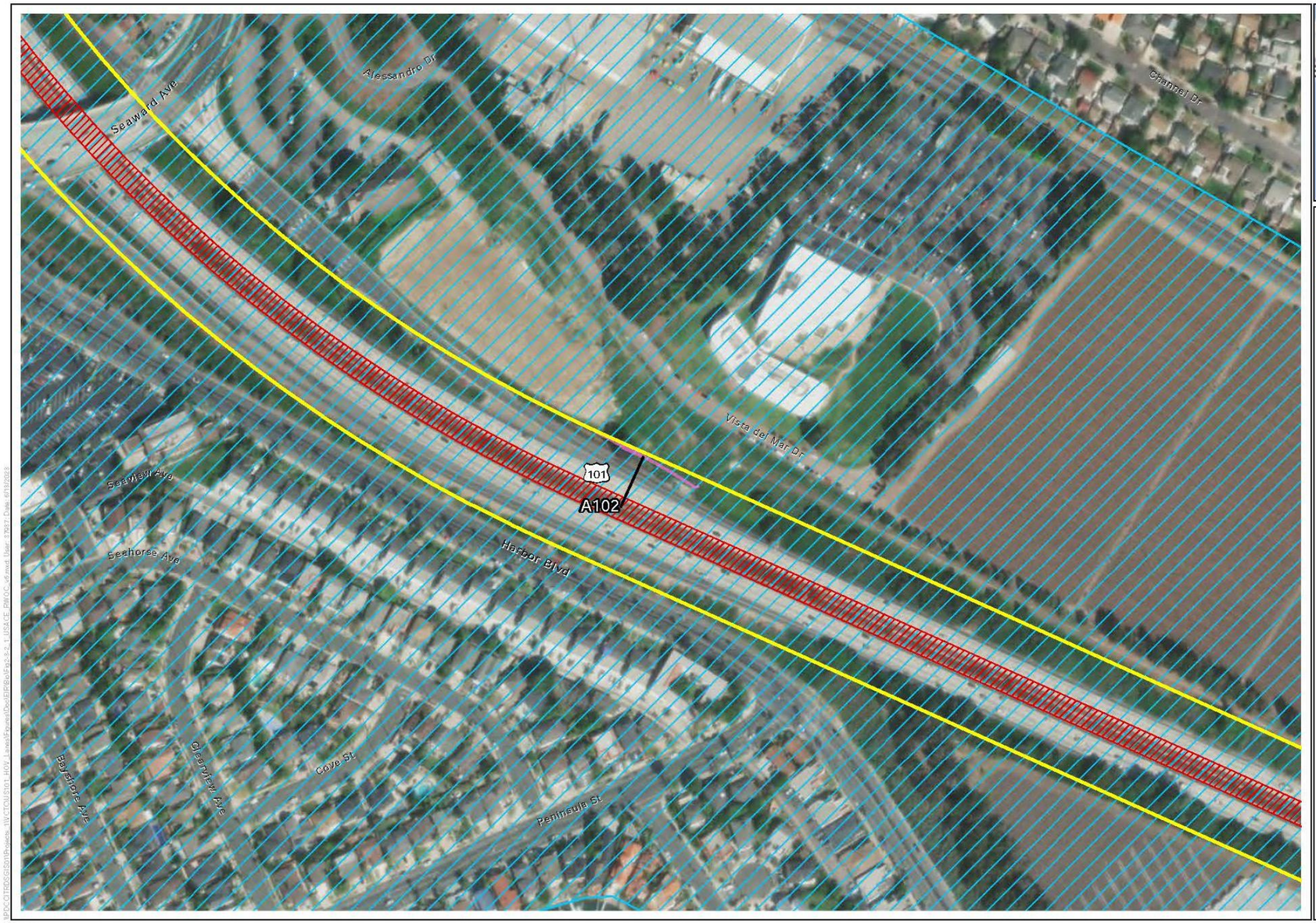
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1:2,400

Figure 2.4.2-1, Sheet 22 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 23 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- Coastal Zone

USACE/RWQCB Jurisdiction
- USACE/RWQCB/CCC Non-Wetland Waters

N

0 100 200 Feet
1:2,400

Figure 2.4.2-1, Sheet 23 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 24 of 26)

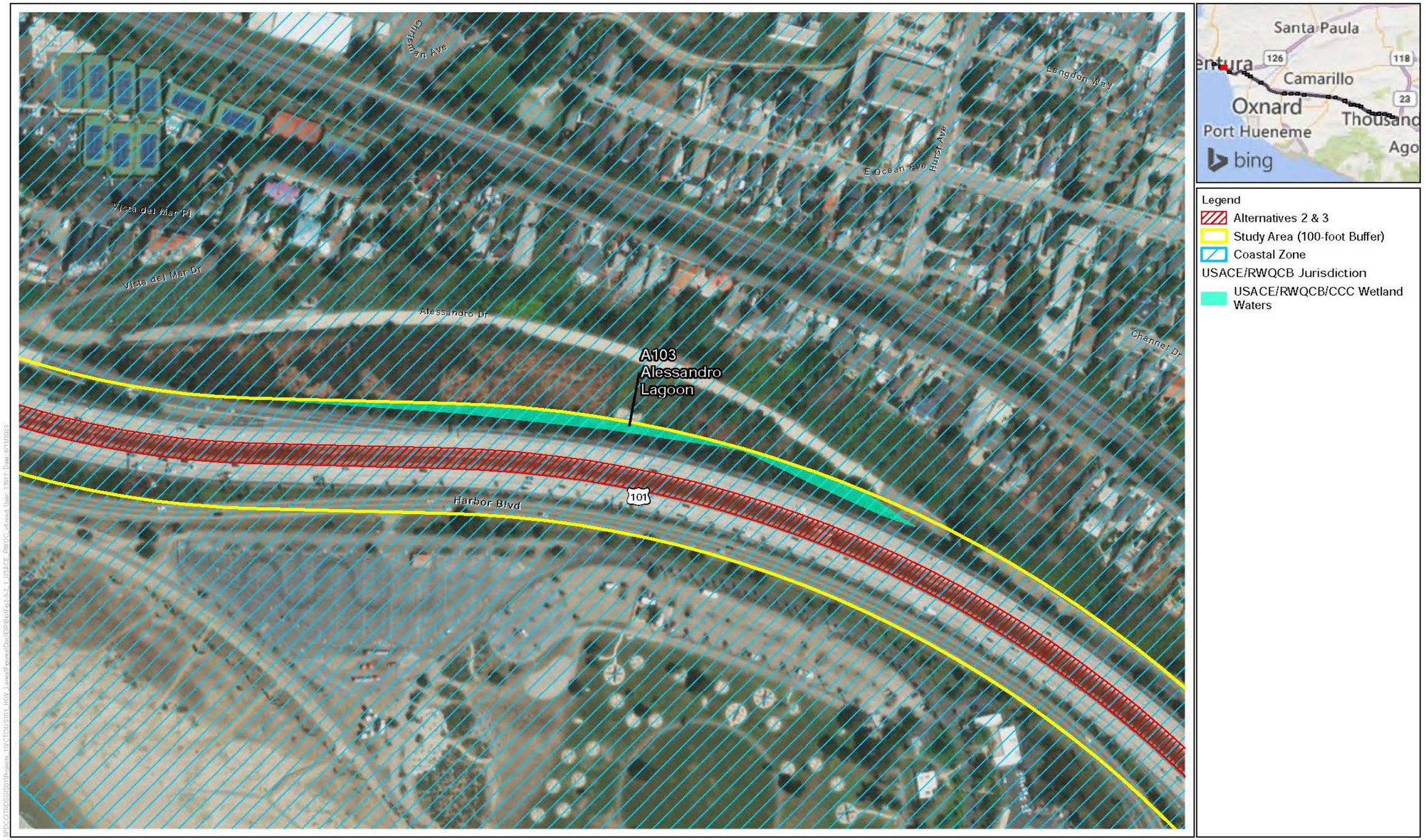


Figure 2.4.2-1, Sheet 24 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 25 of 26)





Legend
- Alternatives 2 & 3
- Alternative 3
- Study Area (100-foot Buffer)
- Coastal Zone

USACE/RWQCB Jurisdiction
- USACE/RWQCB/CCC Non-Wetland Waters

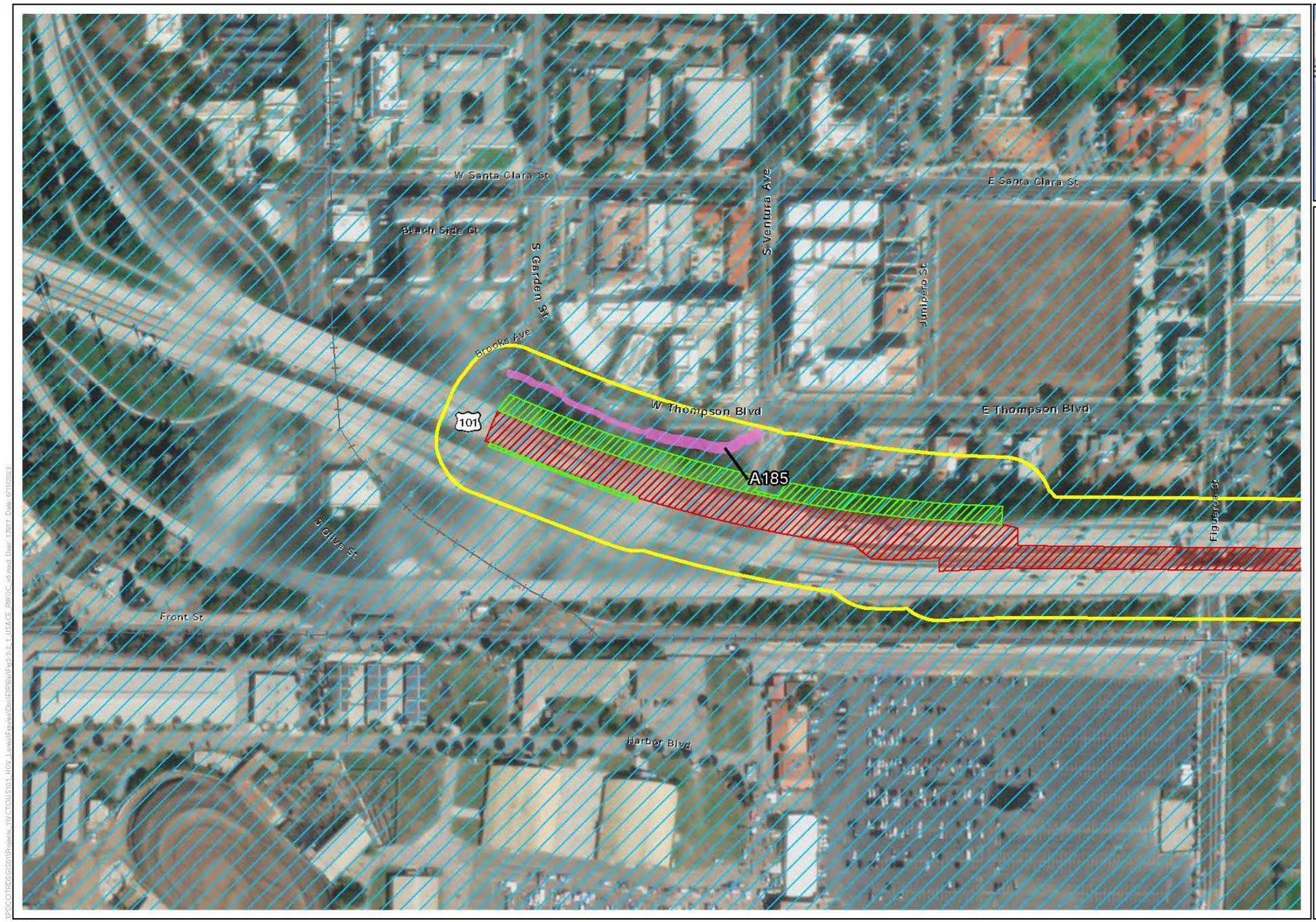
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1:2,400

Figure 2.4.2-1, Sheet 25 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-1. USACE/RWQCB/CCC Jurisdictional Results (Sheet 26 of 26)





Legend
- Alternatives 2 & 3
- Alternative 2
- Study Area (100-foot Buffer)
- Coastal Zone

USACE/RWQCB Jurisdiction
- USACE/RWQCB/CCC Non-Wetland Waters

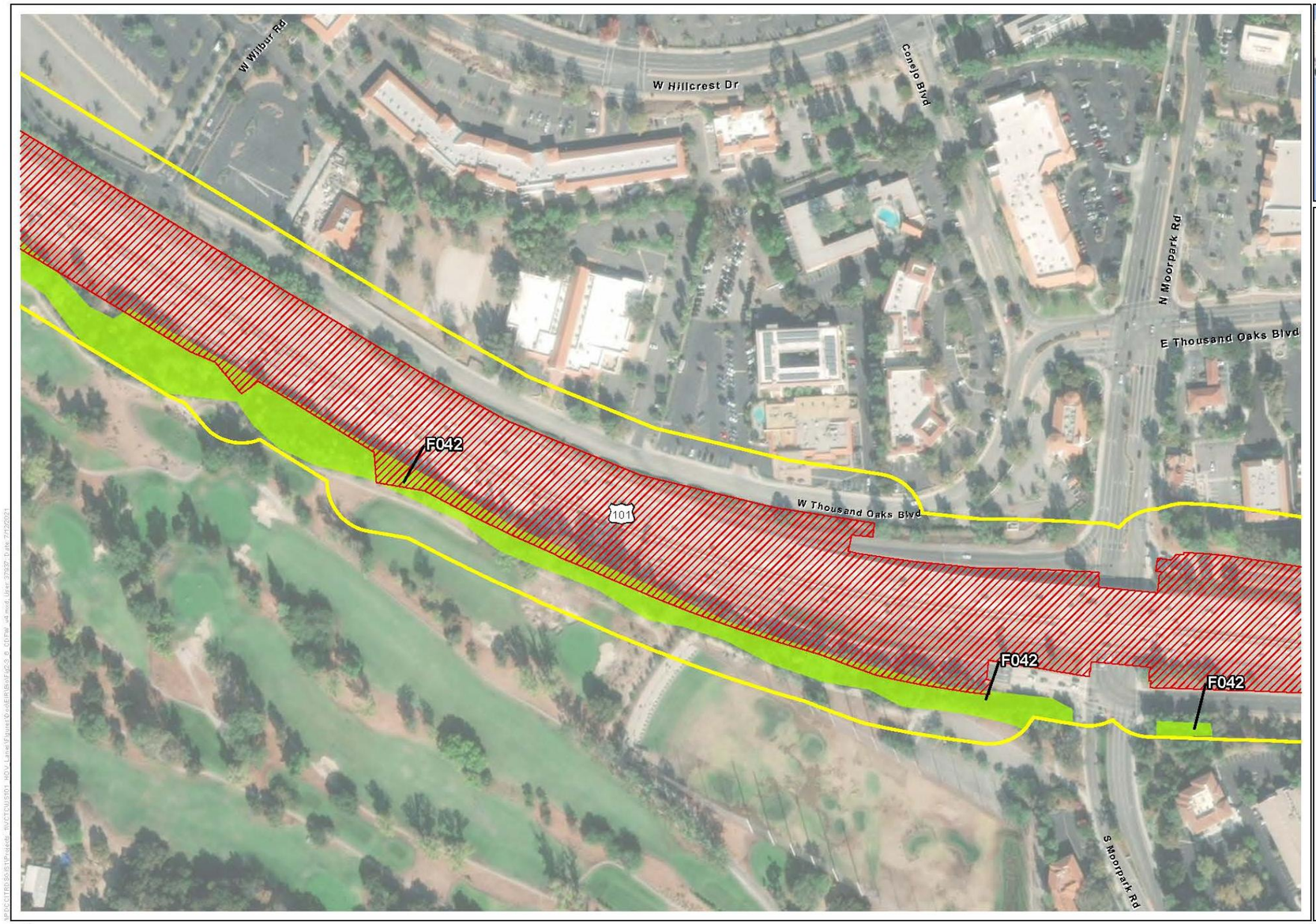
N

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1:2,400

Figure 2.4.2-1, Sheet 26 of 26
USACE/RWQCB/CCC Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 1 of 26)





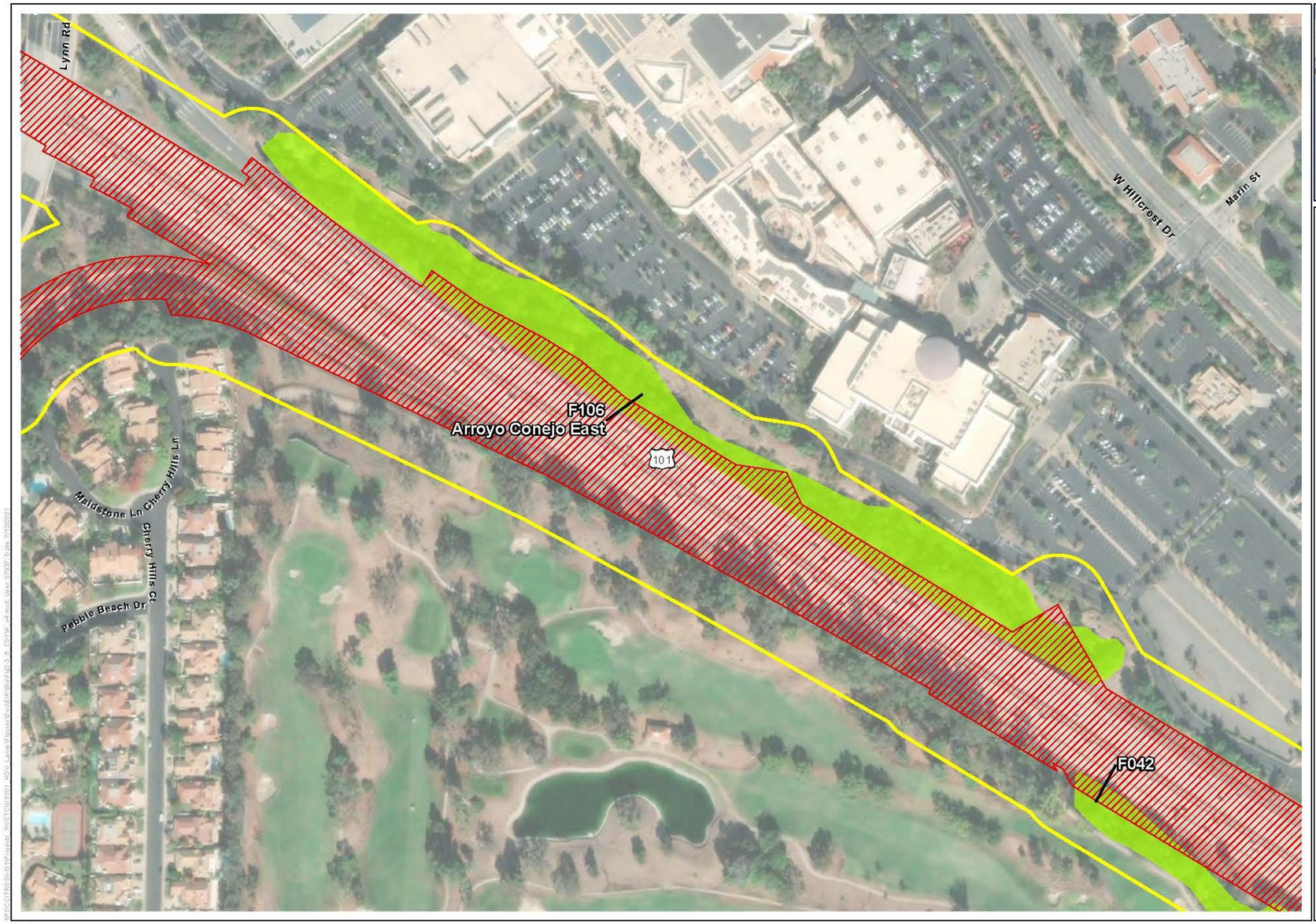
Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Riparian

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 1 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 2 of 26)





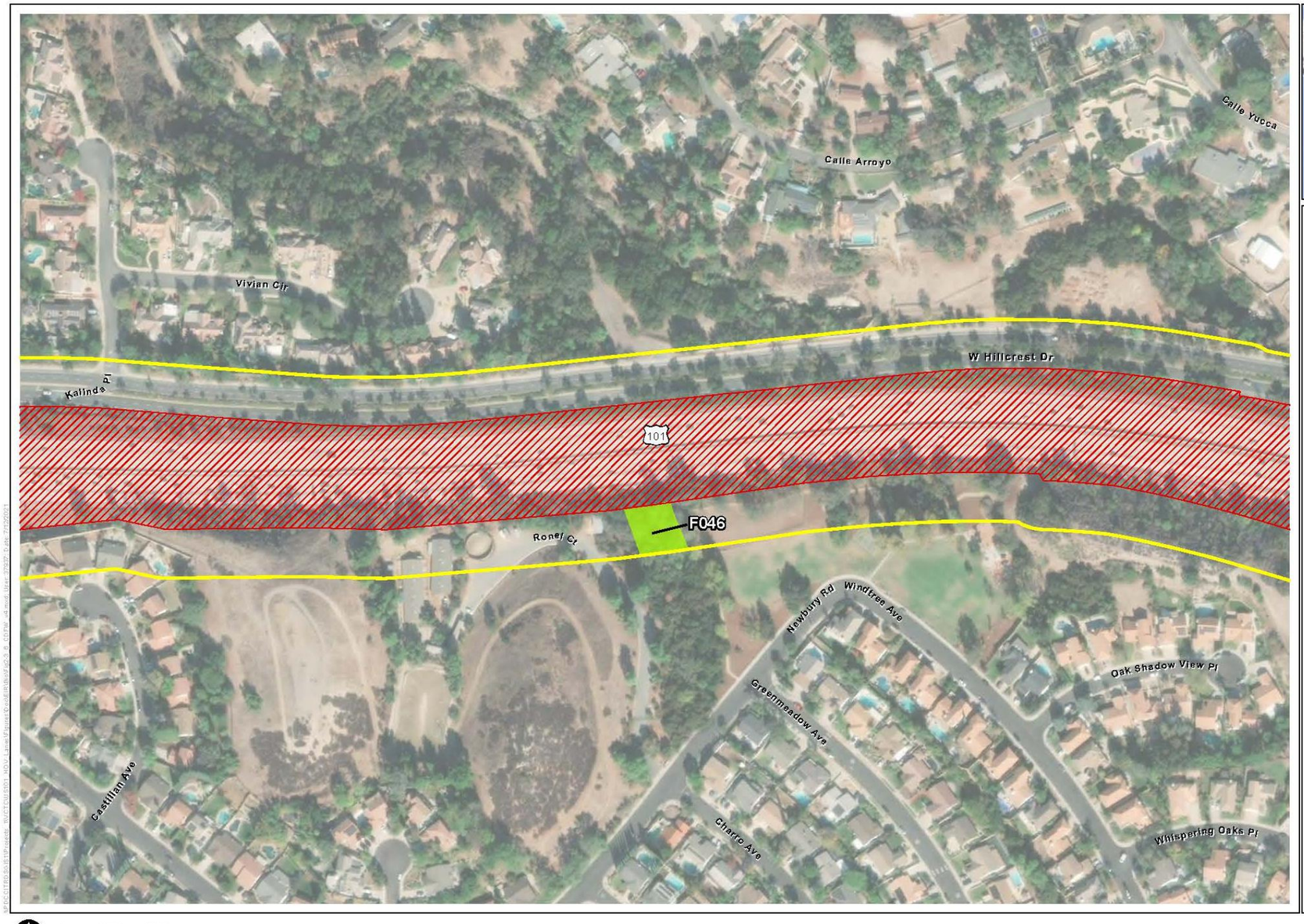
Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Riparian

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 2 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 3 of 26)



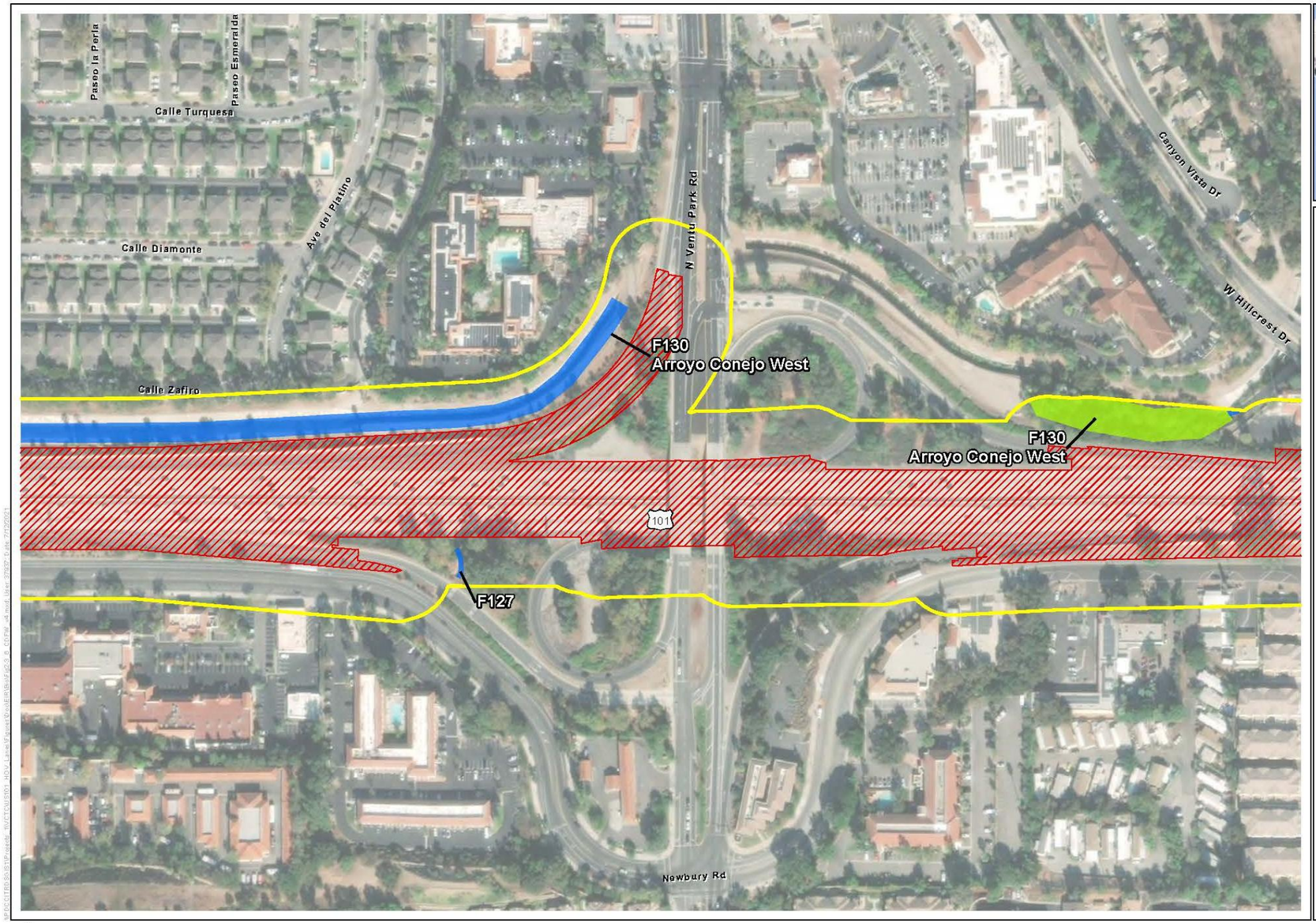


Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Riparian

Figure 2.4.2-2, Sheet 3 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 4 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Riparian
- CDFW Streambed

Figure 2.4.2-2, Sheet 4 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 5 of 26)

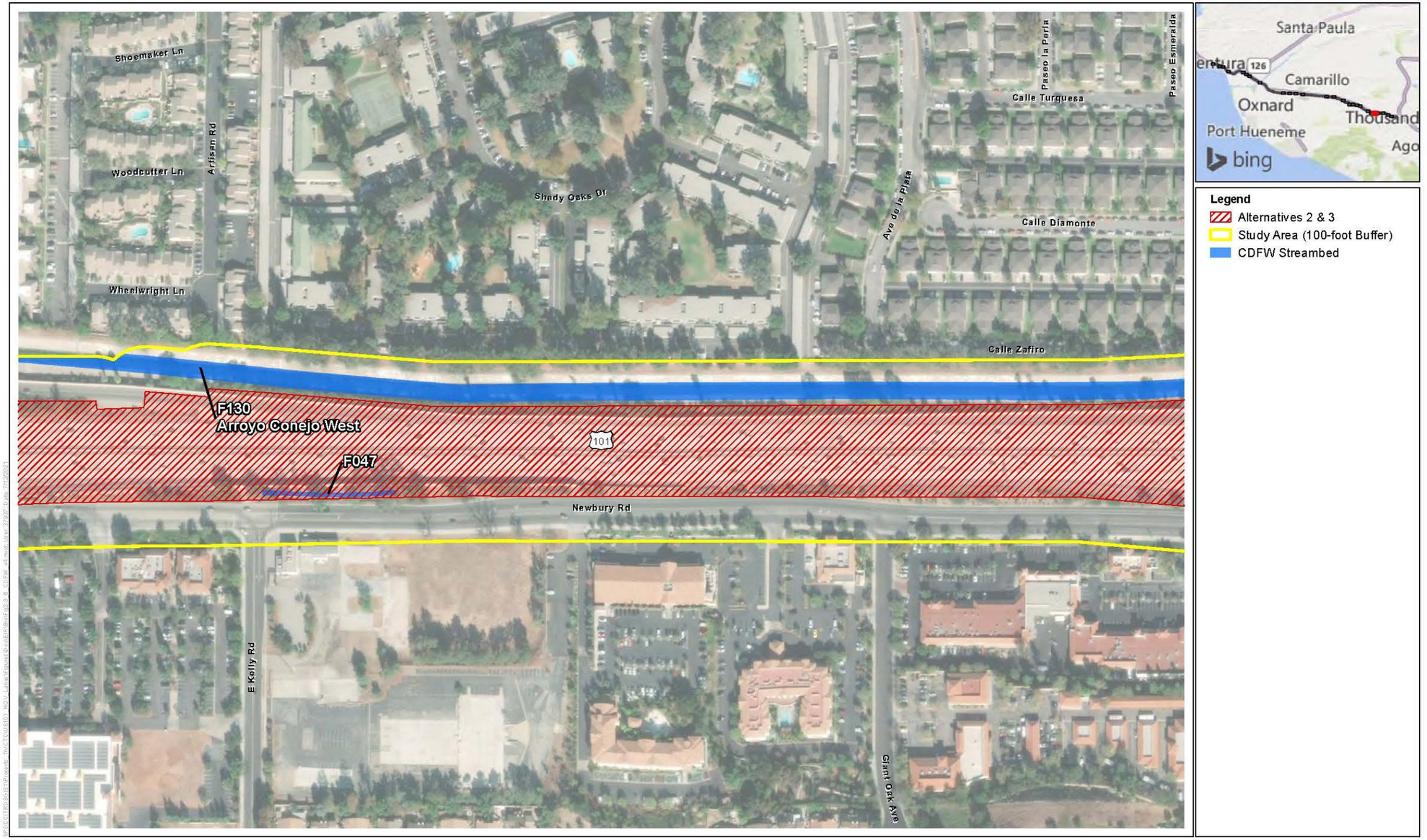


Figure 2.4.2-2, Sheet 5 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 6 of 26)

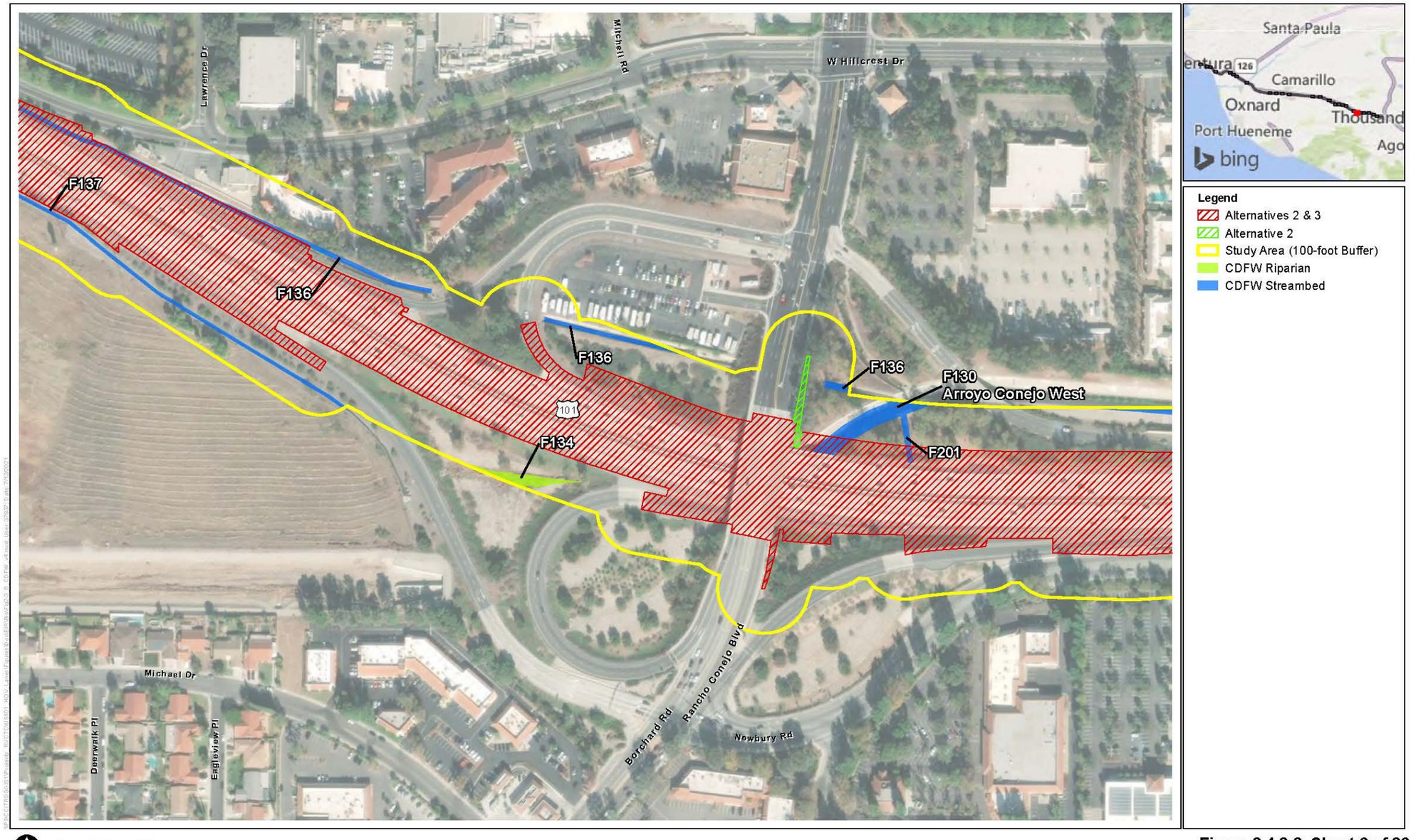


Figure 2.4.2-2, Sheet 6 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 7 of 26)

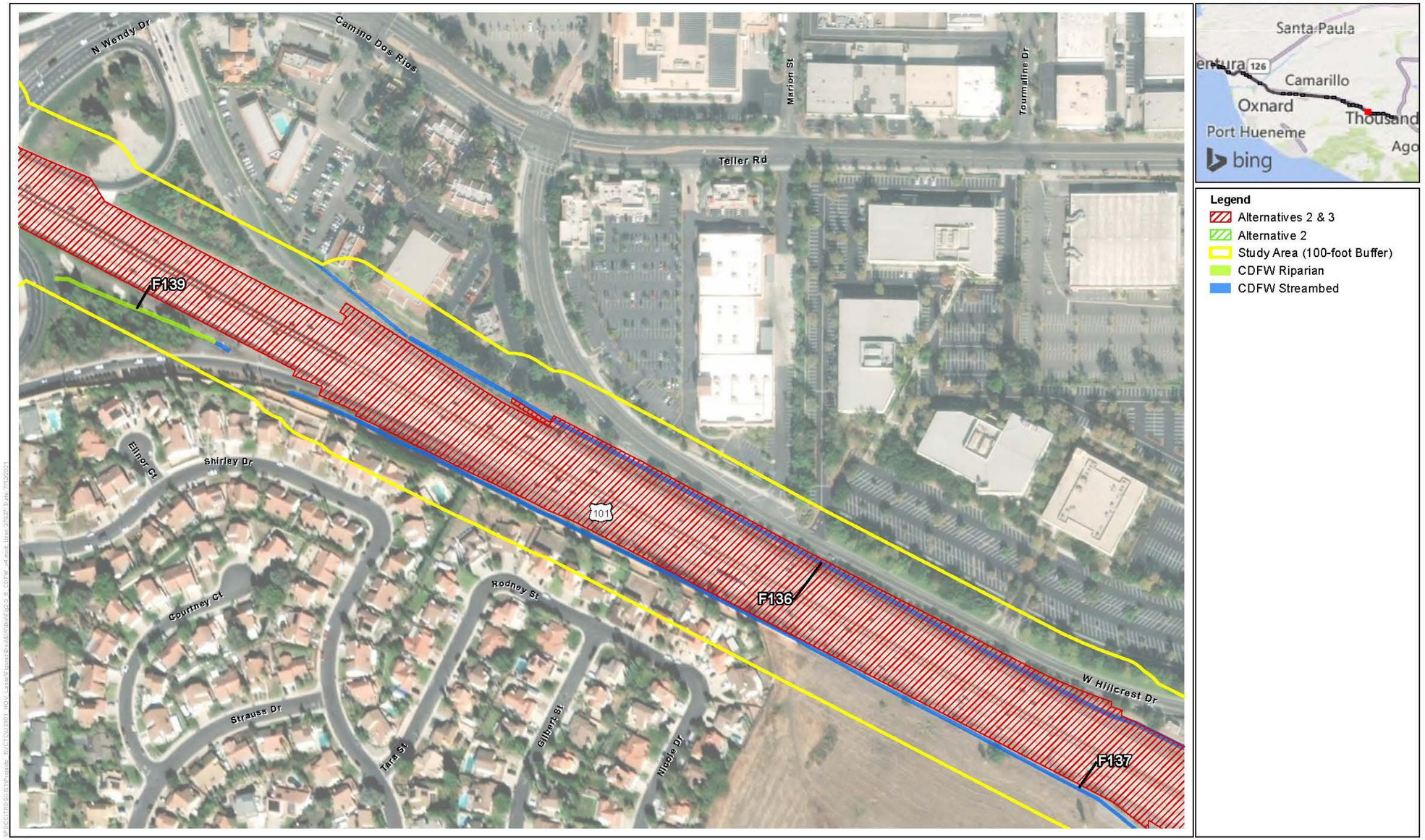
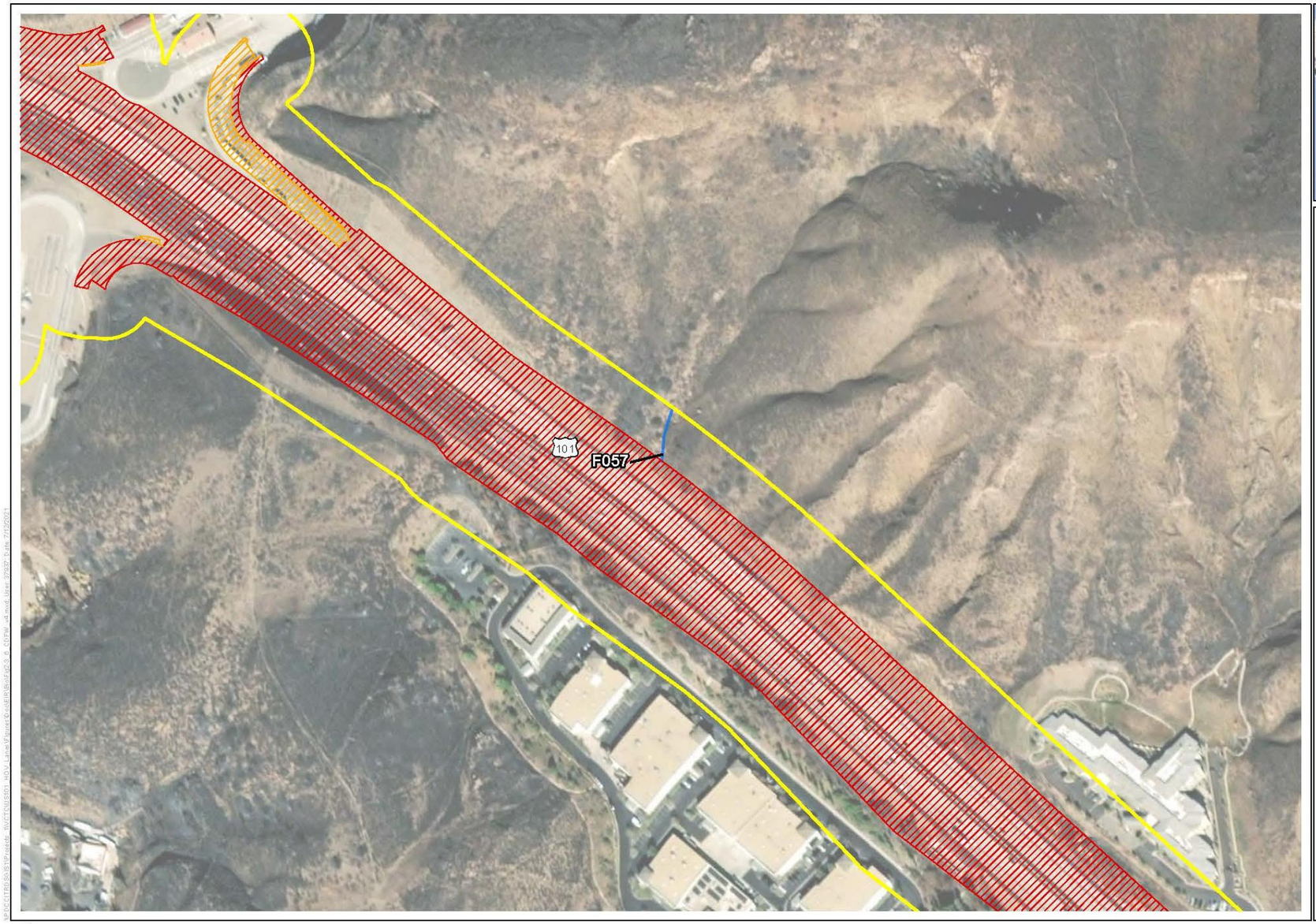


Figure 2.4.2-2, Sheet 7 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 8 of 26)





Legend
- Alternatives 2 & 3
- Alternative 3
- Study Area (100-foot Buffer)
- CDFW Streambed

N

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 8 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 9 of 26)

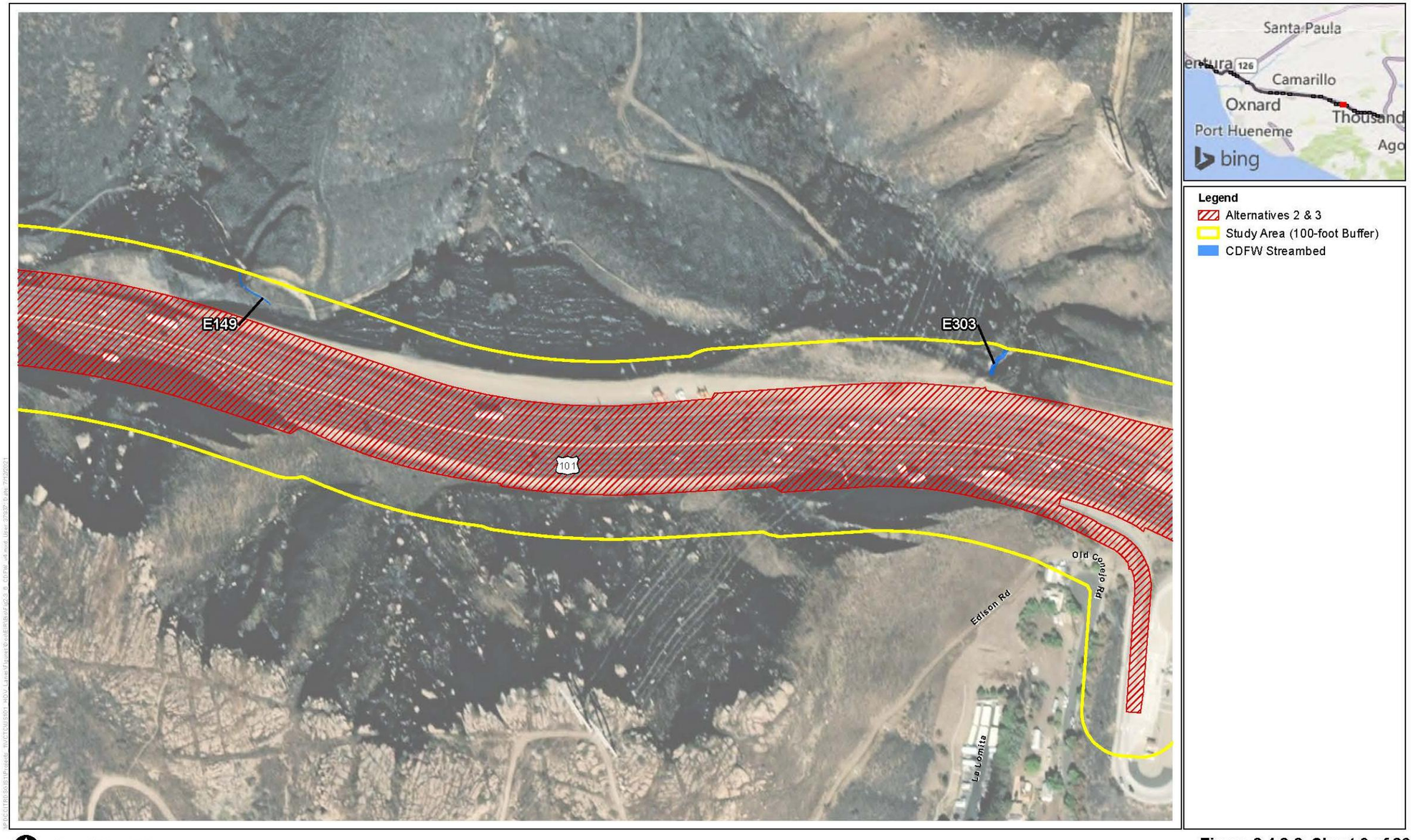
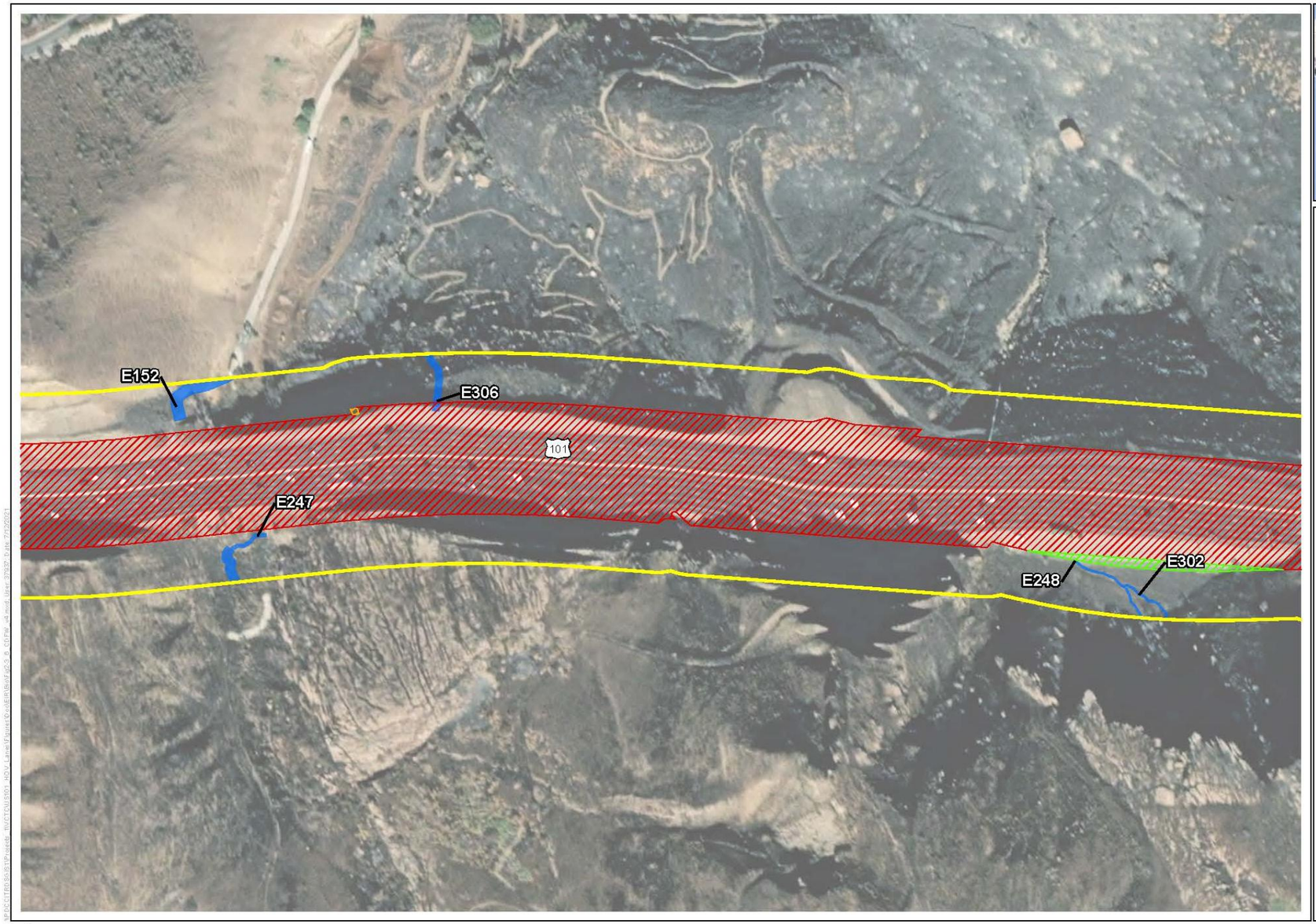


Figure 2.4.2-2, Sheet 9 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 10 of 26)





Legend
- Alternatives 2 & 3
- Alternative 2
- Alternative 3
- Study Area (100-foot Buffer)
- CDFW Streambed

N

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 10 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 11 of 26)



Figure 2.4.2-2, Sheet 11 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 12 of 26)

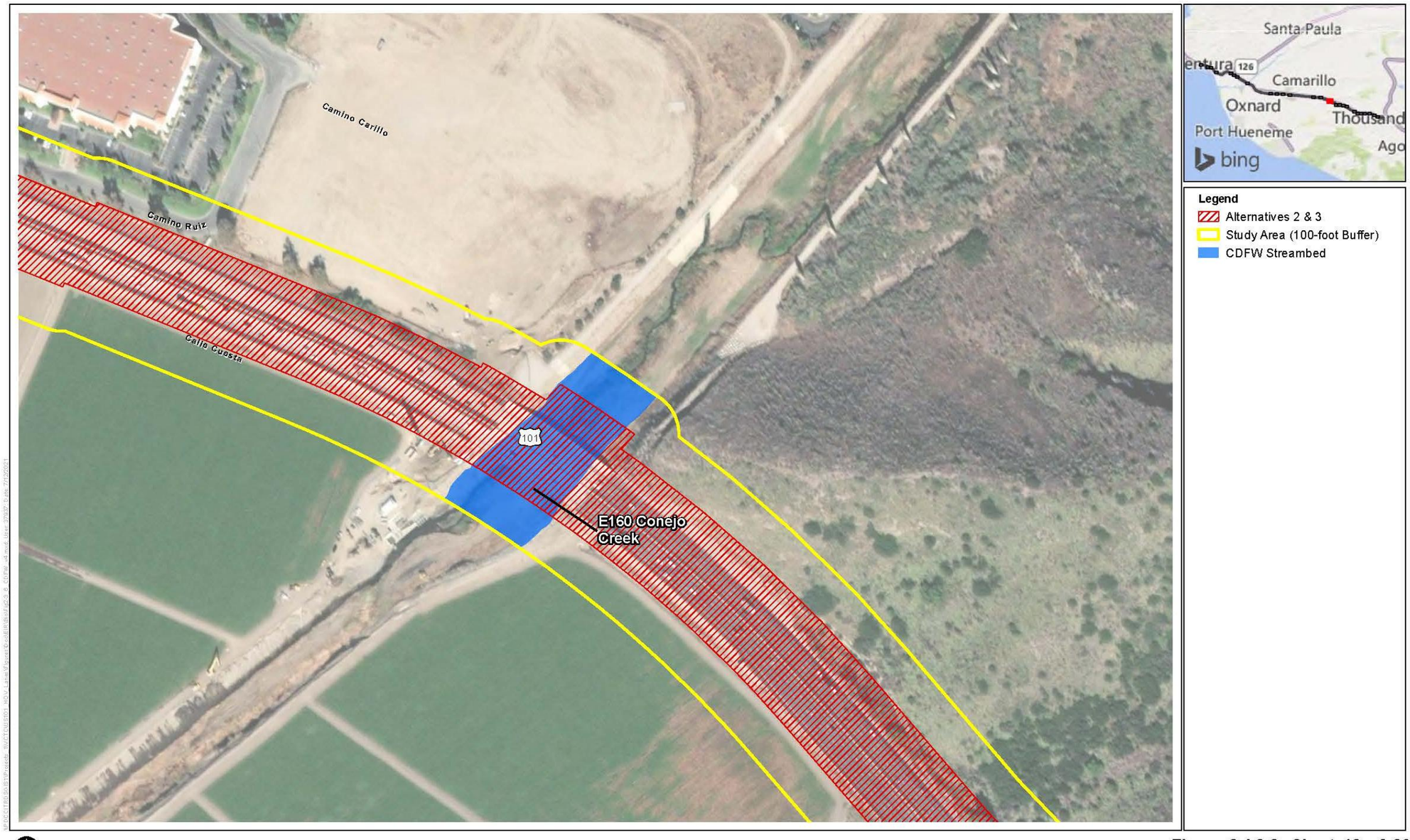


Figure 2.4.2-2, Sheet 12 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 13 of 26)

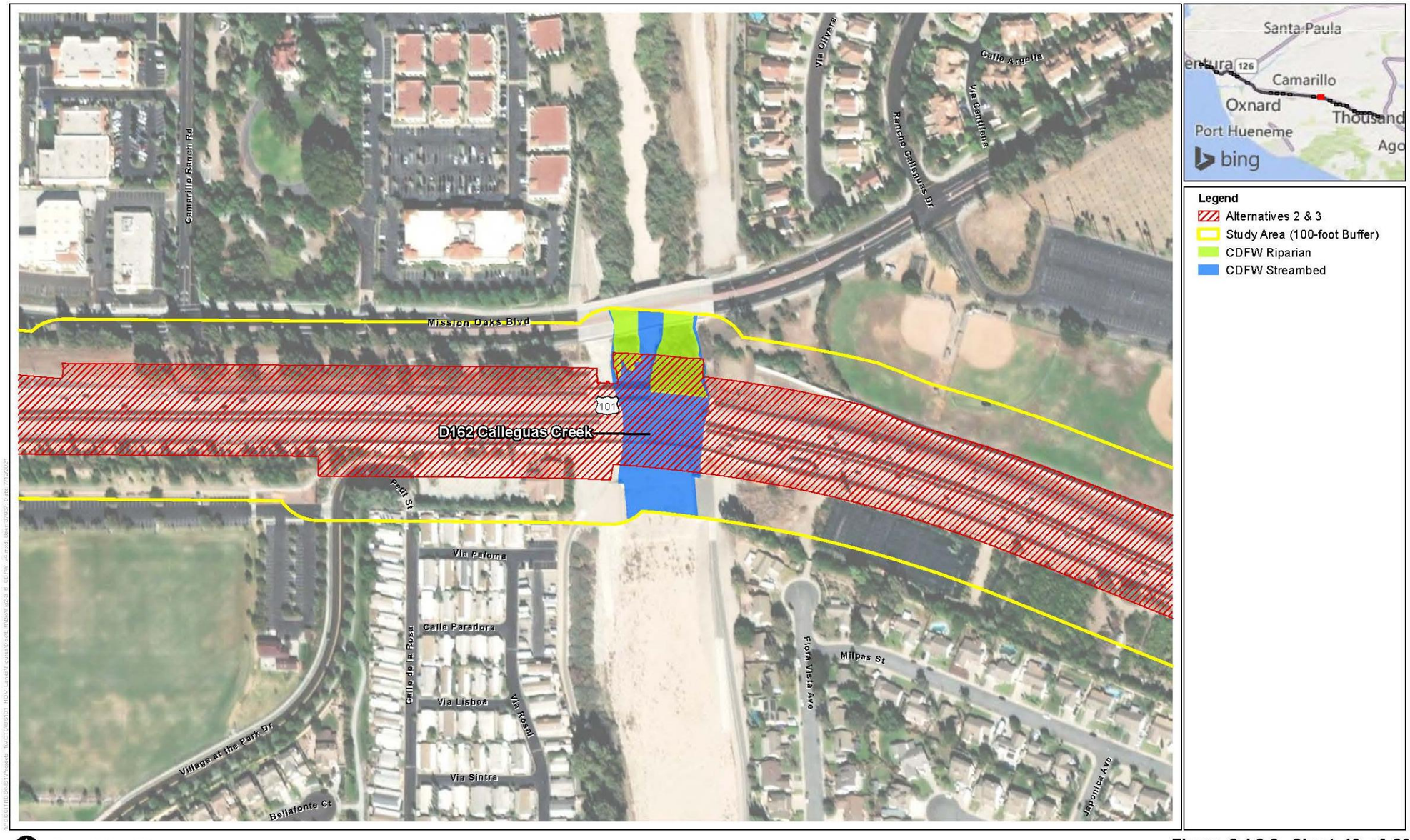
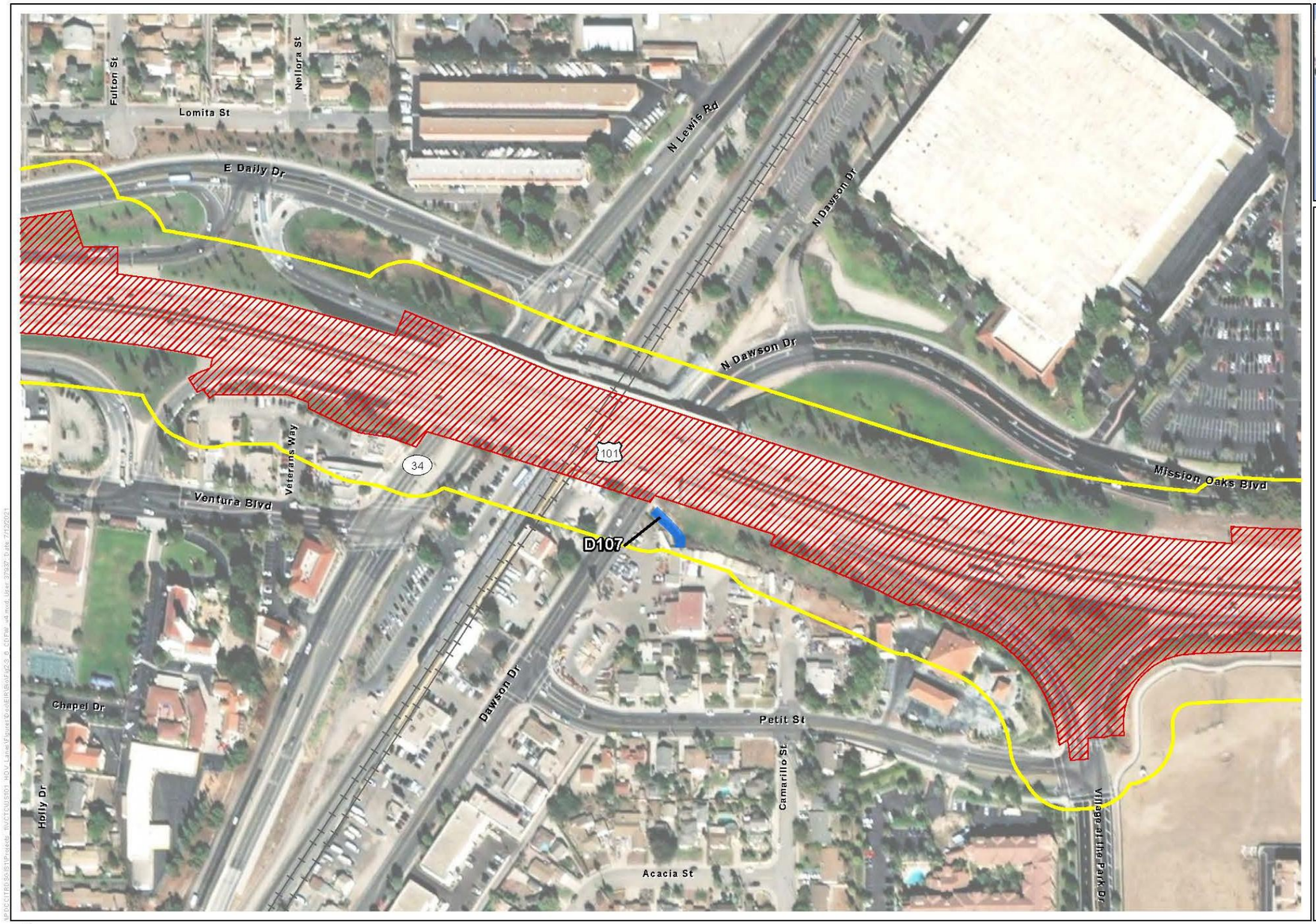


Figure 2.4.2-2, Sheet 13 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 14 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Streambed

N

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 14 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 15 of 26)

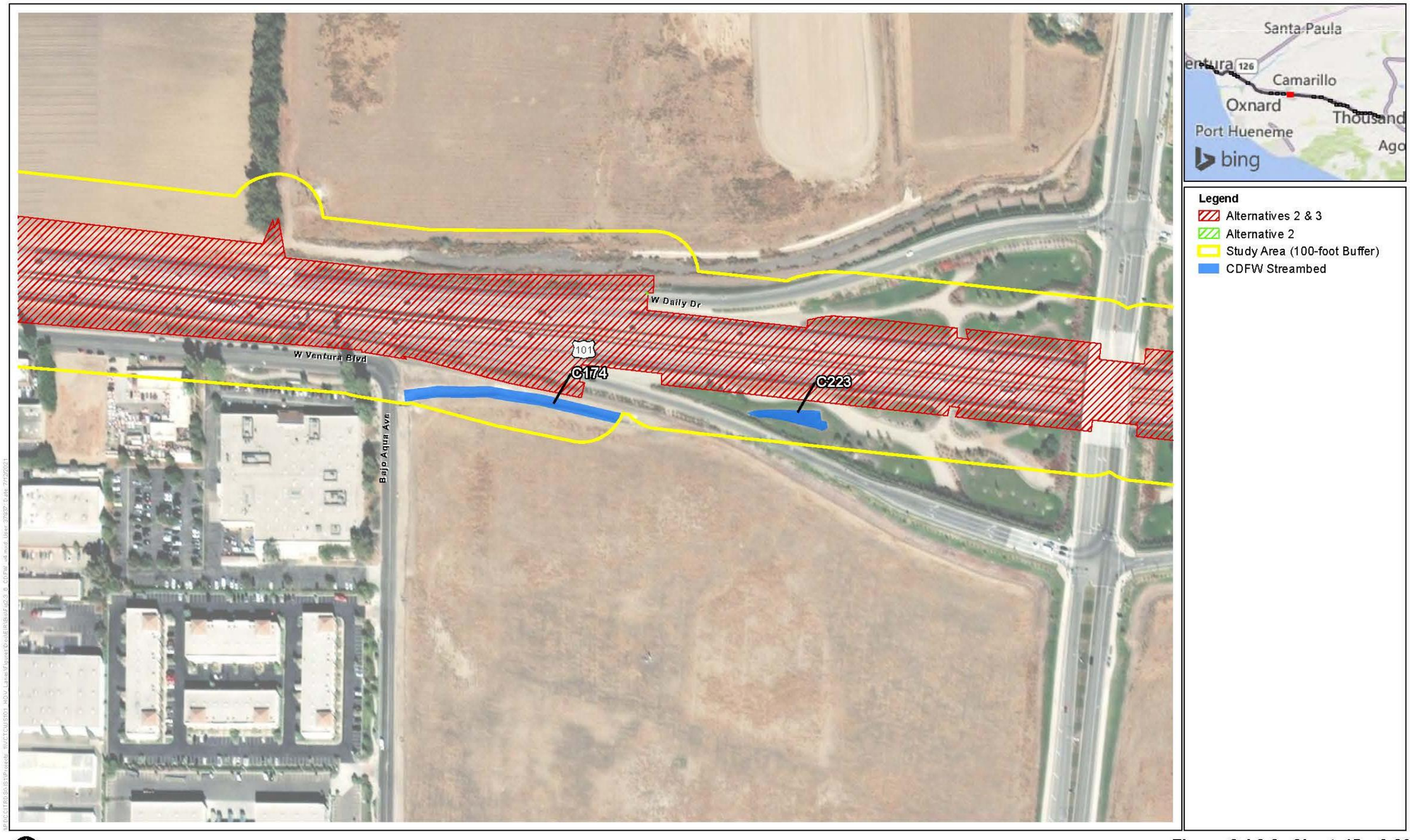


Figure 2.4.2-2, Sheet 15 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 16 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Riparian
- CDFW Streambed

N

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 16 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 17 of 26)

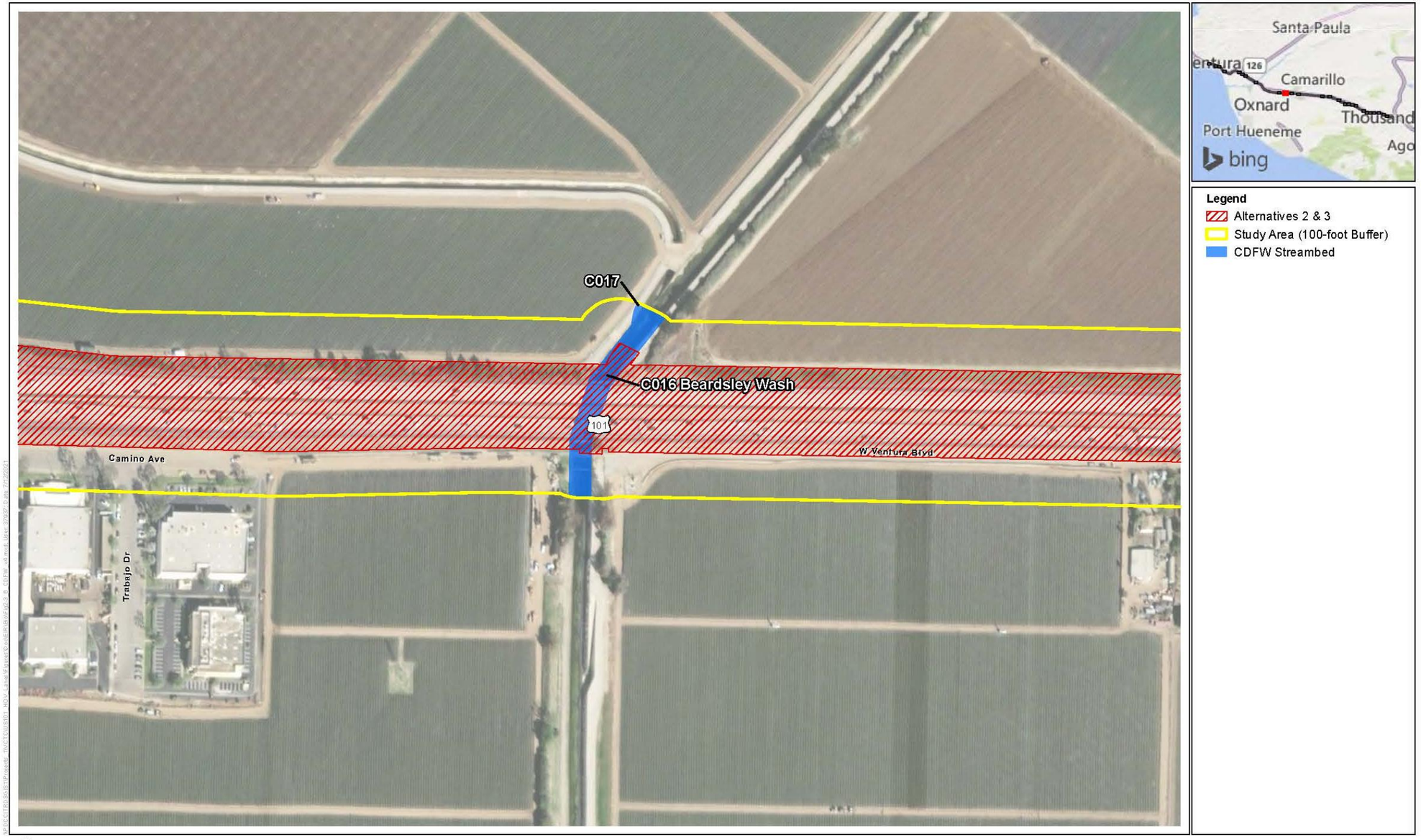


Figure 2.4.2-2, Sheet 17 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 18 of 26)



Figure 2.4.2-2, Sheet 18 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 19 of 26)

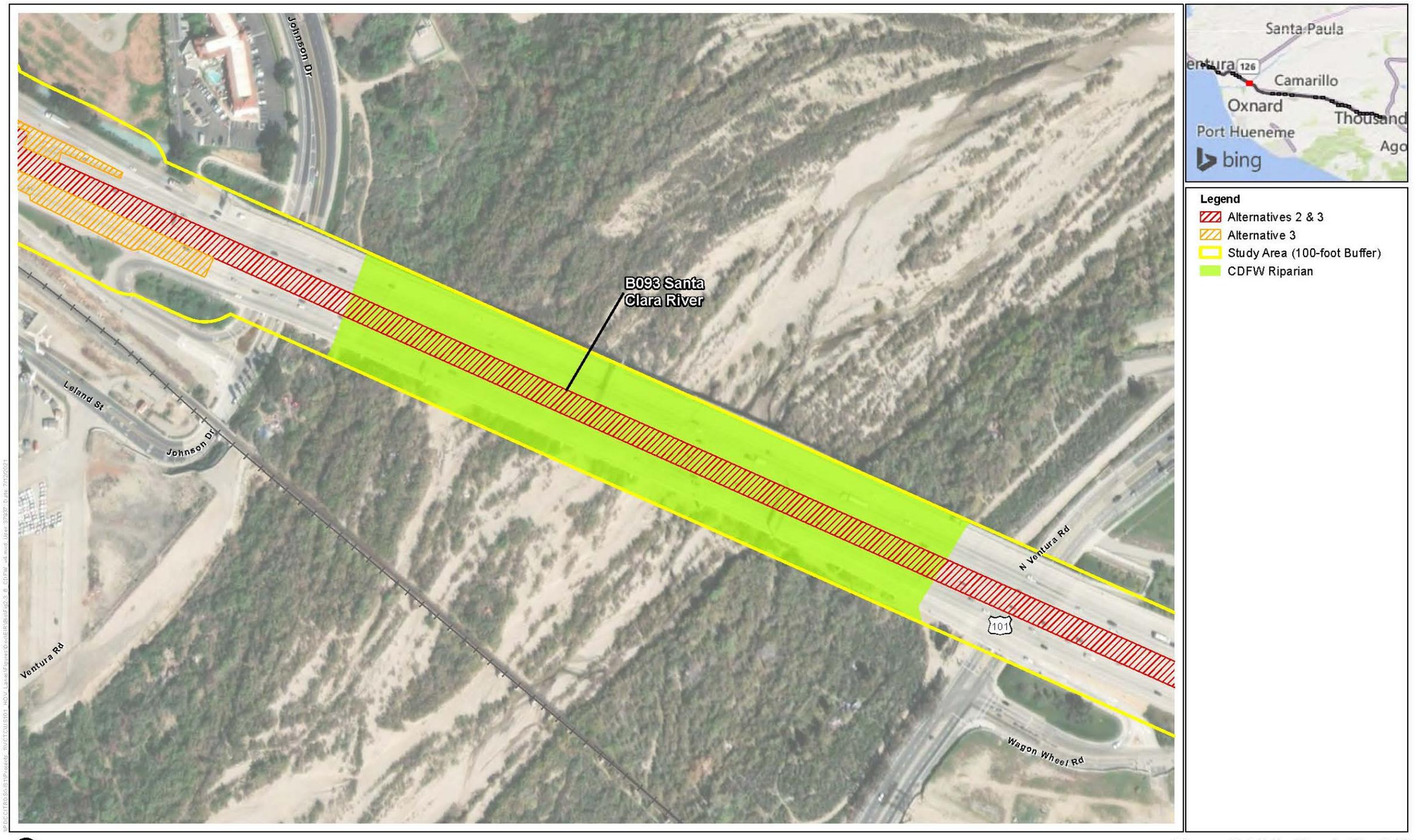
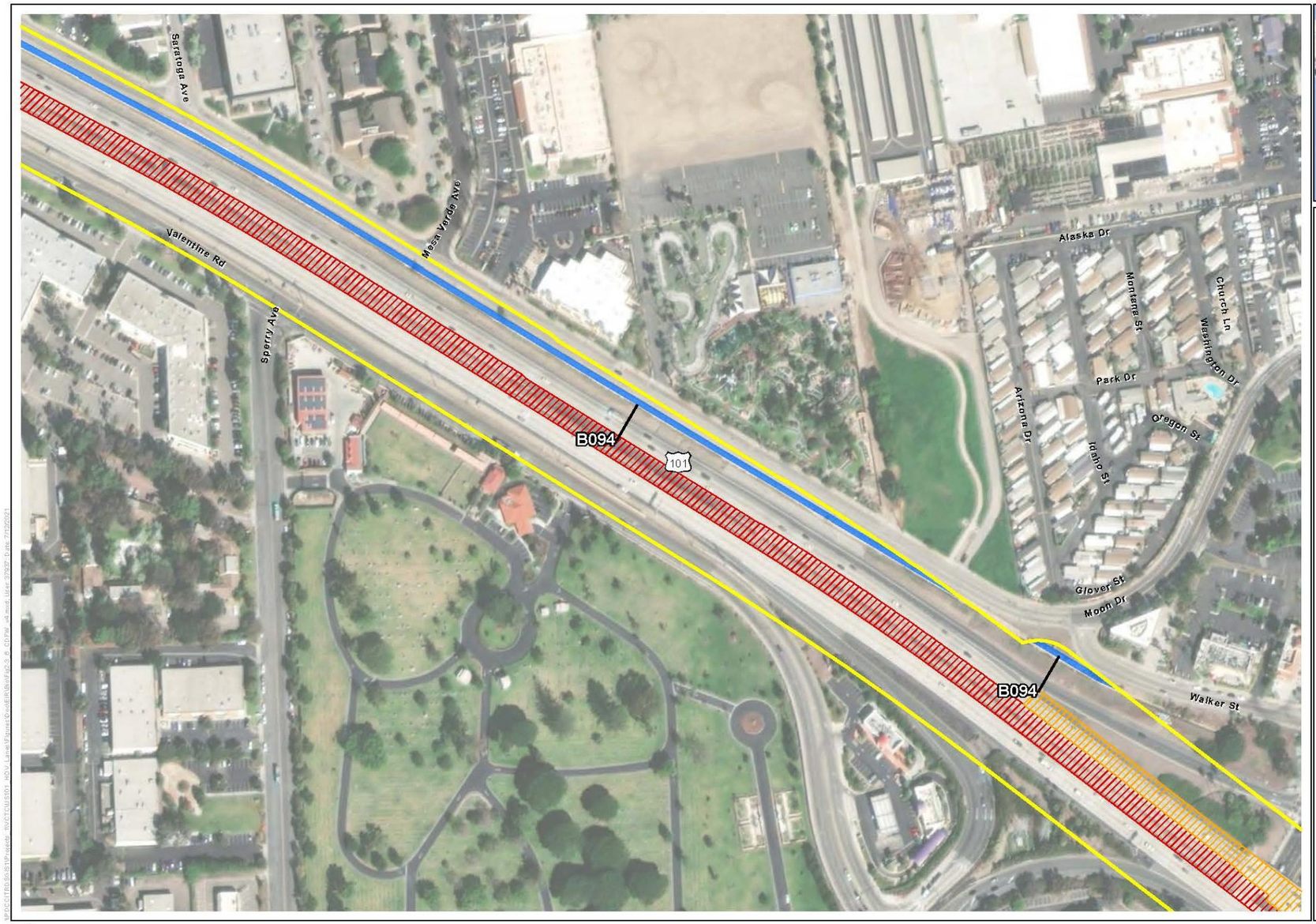


Figure 2.4.2-2, Sheet 19 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 20 of 26)





Legend
- Alternatives 2 & 3
- Alternative 3
- Study Area (100-foot Buffer)
- CDFW Streambed

N

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 20 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 21 of 26)

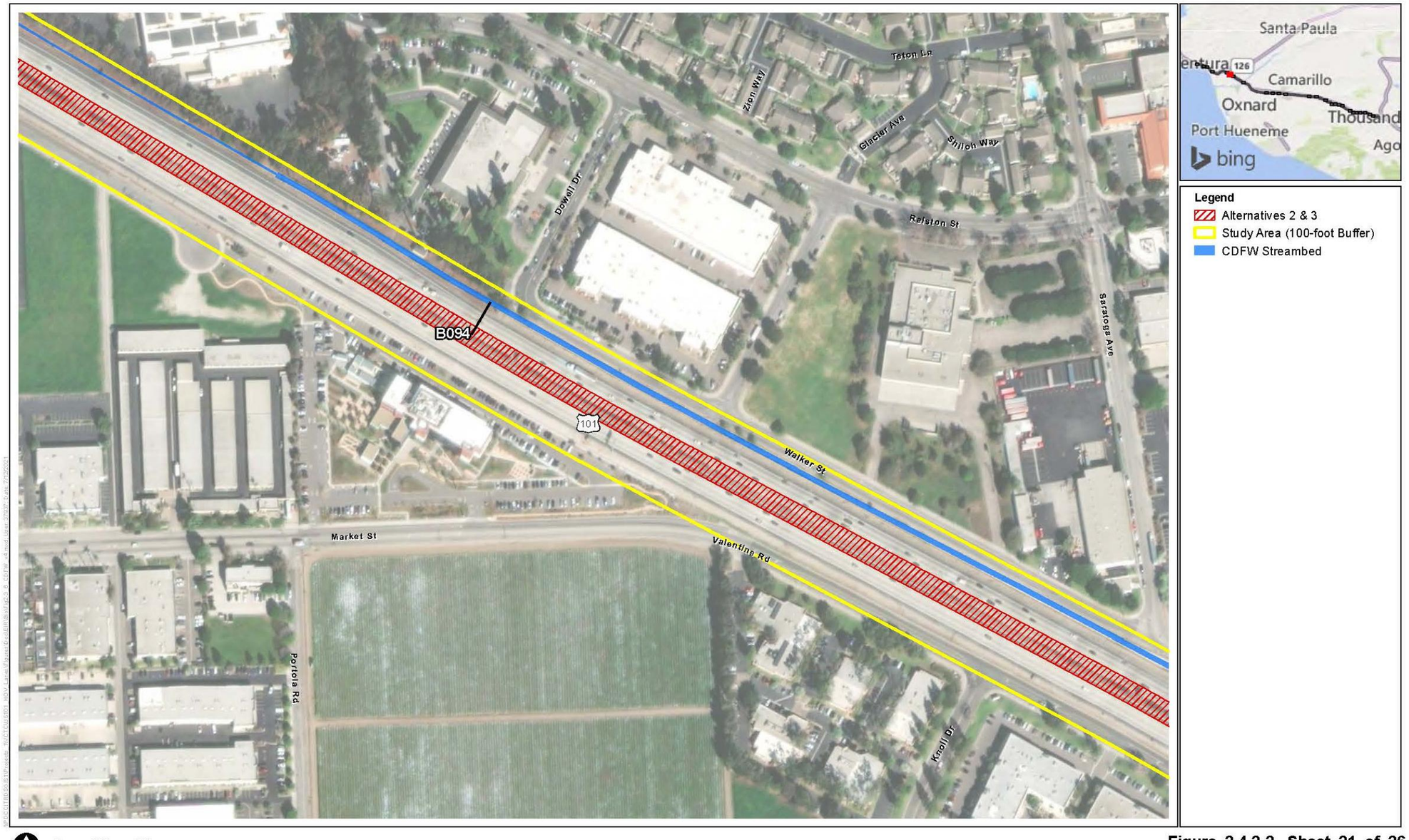


Figure 2.4.2-2, Sheet 21 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 22 of 26)



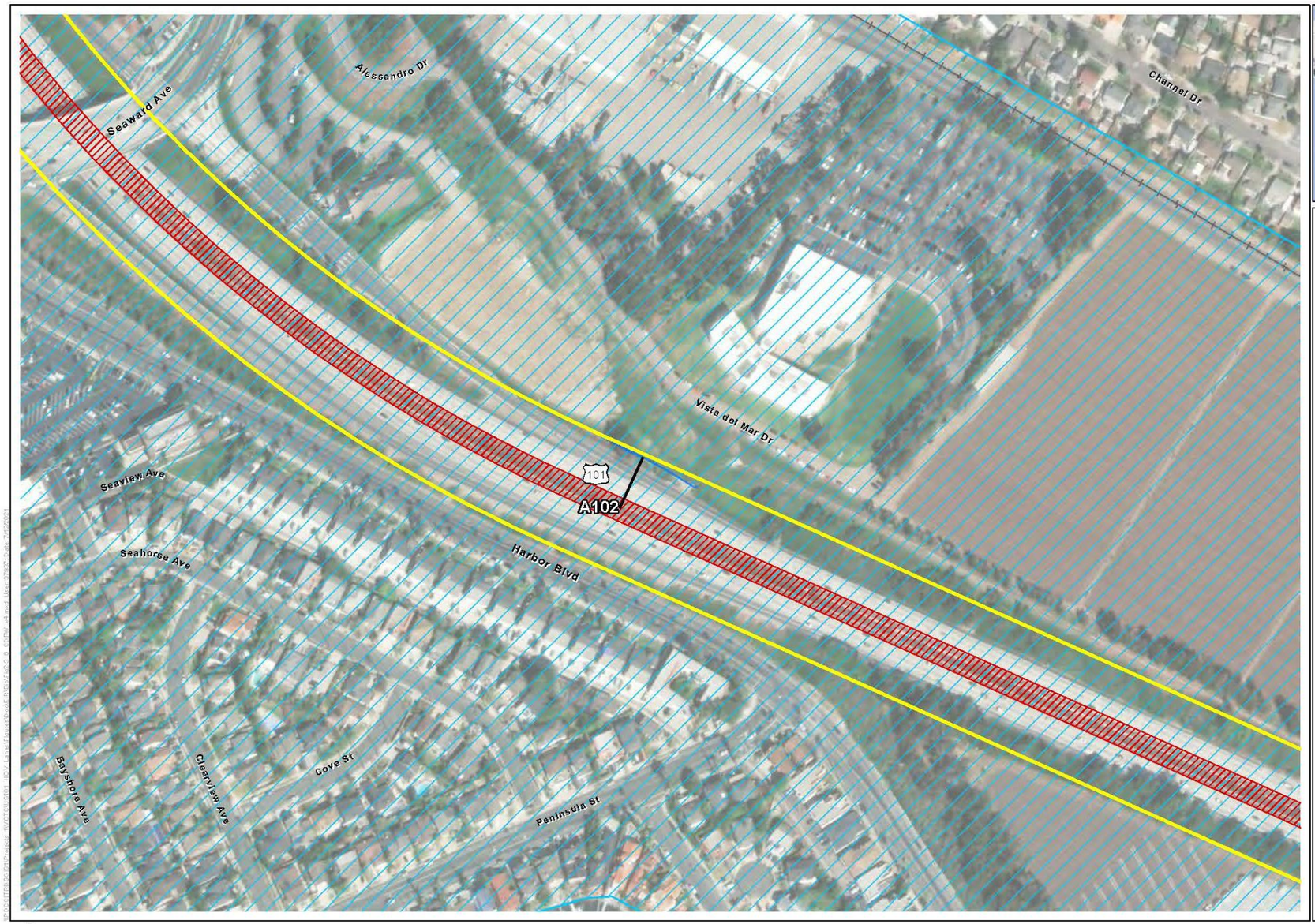


Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- CDFW Streambed

Figure 2.4.2-2, Sheet 22 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 23 of 26)





Legend
- Alternatives 2 & 3
- Study Area (100-foot Buffer)
- Coastal Zone
- CDFW Streambed

N

0 100 200 Feet
1:2,400

Figure 2.4.2-2, Sheet 23 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 24 of 26)

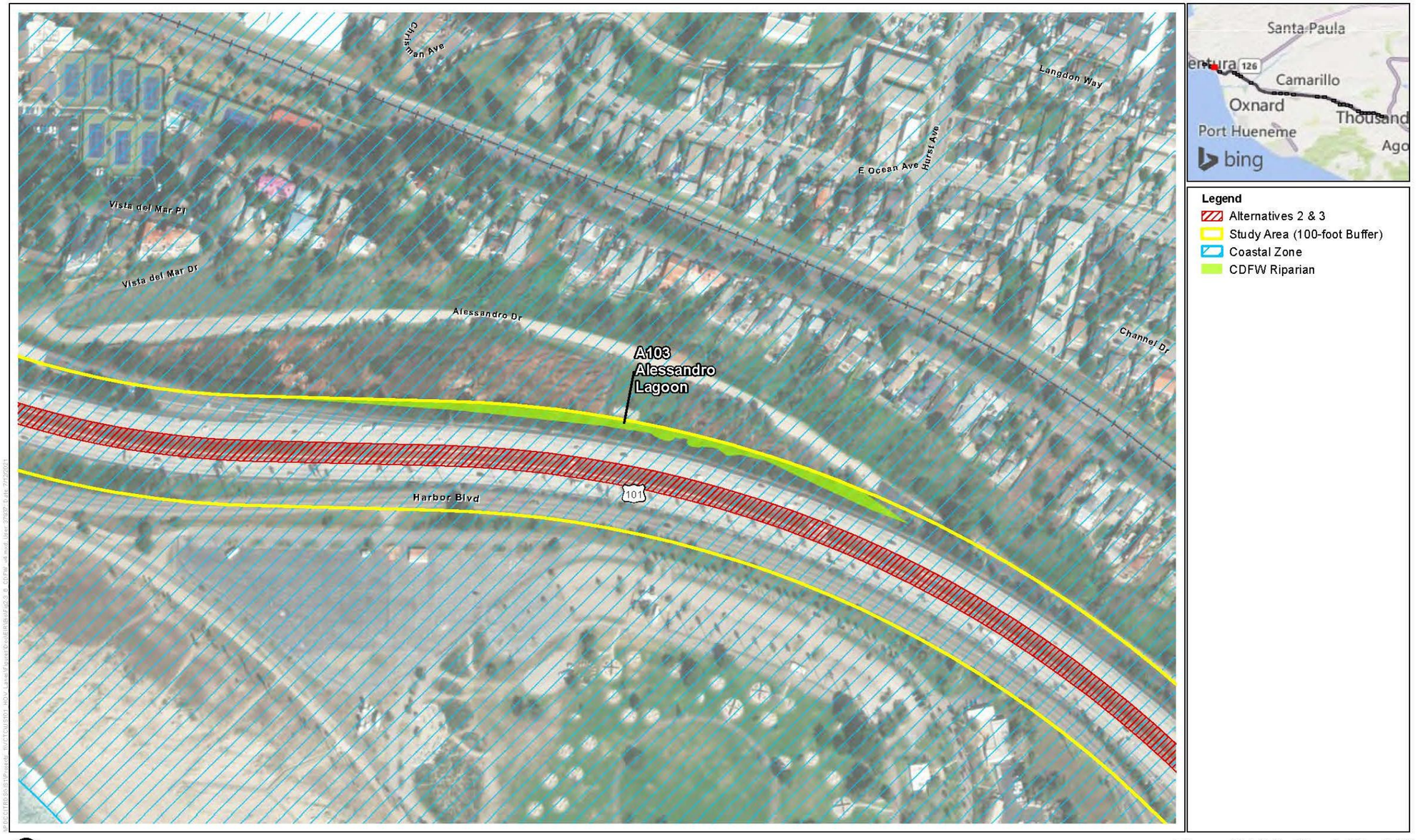


Figure 2.4.2-2, Sheet 24 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 25 of 26)



Figure 2.4.2-2, Sheet 25 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Figure 2.4.2-2. CDFW Jurisdictional Results (Sheet 26 of 26)

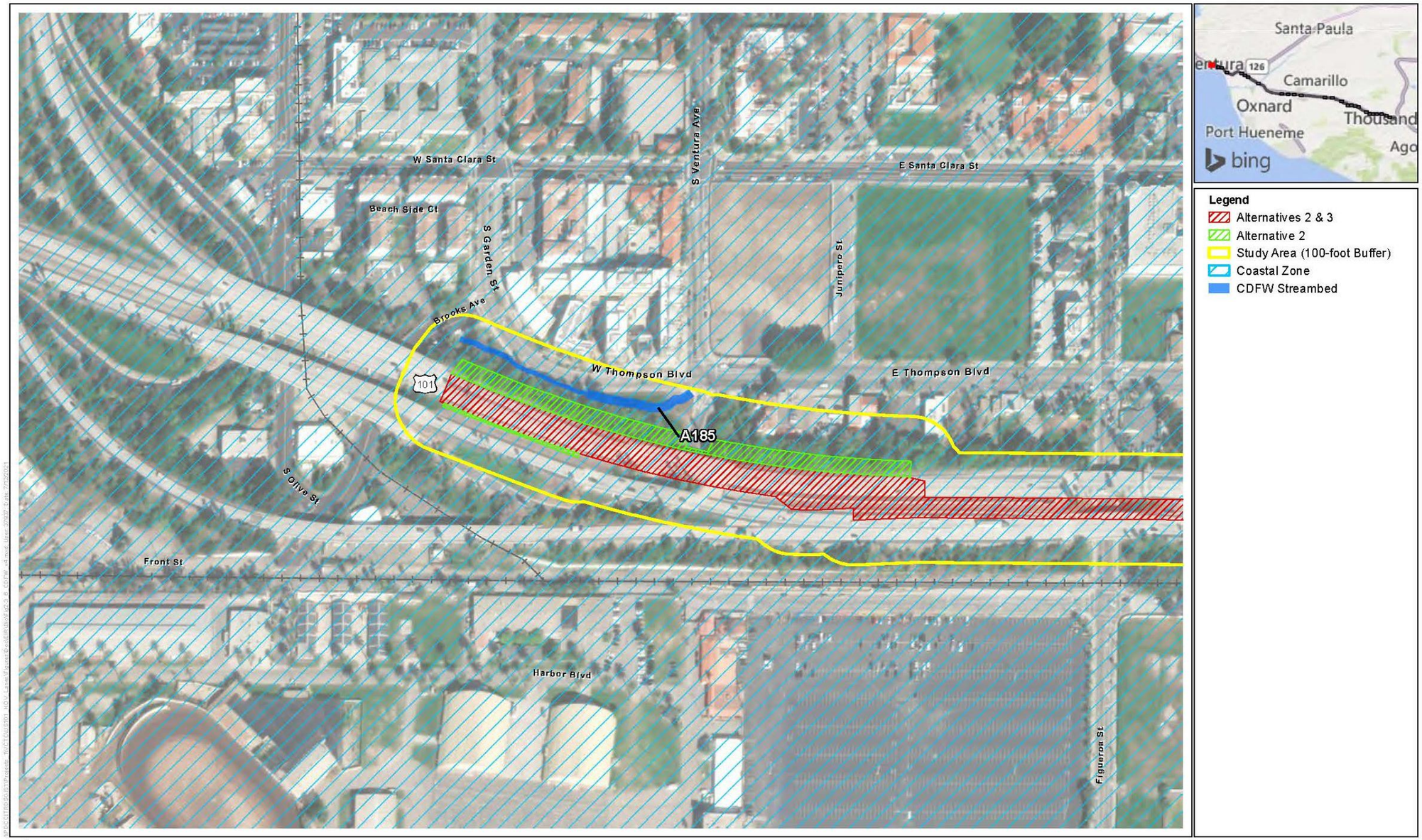


Figure 2.4.2-2, Sheet 26 of 26
CDFW Jurisdictional Results
US 101 Improvement Project

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Soils in the JSA generally consist of clay or sandy loam soils; most are at least moderately well drained. The soil series mapped within the JSA include Anacapa, Azule, Camarillo, Chesterton, Cibo, Cropley, Diablo, Garretson, Gilroy, Hambright, Hueneme, Huerhuero, Igneous, Metz, Mocho, Pacheco, Pico, Rincon, San Benito, Soper, Sorrento, Vina, and Zamora. No soils are mapped as hydric soils, with the exception of the Anacapa, Camarillo, Cropley, Hueneme, and Mocho series.

Jurisdictional Delineation Methodology

Prior to field visits, aquatic resources were identified using high-resolution aerial imagery, overlaid with geographic information system (GIS) data, from the National Wetlands Inventory (NWI) and National Hydrography Dataset (NHD). These were used to identify potential areas of USACE, RWQCB, and CDFW jurisdiction within the JSA. The extent of the aquatic resources as well as the approximate locations were identified from the observed vegetation types, topographic changes, and visible drainage patterns. In addition, the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey was reviewed to identify soil series that occur in the JSA.

The entire JSA was walked and visually examined for the presence of drainage features. This occurred from June 2019 through November 2019.

Potential WoUS, including wetlands, were evaluated for potential wetlands using the methodology set forth in the 1987 *Corps of Engineers Wetland Delineation Manual* (1987 Manual) and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Regional Supplement). Vascular plants were identified using *The Jepson Manual: Vascular Plants of California* and the National Wetland Plant List. The evaluation of jurisdictional waters of the State (WoS) followed guidance from CWA Section 401; these were typically the same as the USACE jurisdictional areas. In addition, the JSA was evaluated for resources regulated under the Porter-Cologne Act (e.g., isolated features).

All features observed within the JSA were considered jurisdictional unvegetated streambed features and riparian-associated vegetation and therefore subject to regulation by CDFW under CFG Code Section 1600. Areas subject to Section 1600 of the CFG Code exhibited a discernable bed and bank. These areas were delineated by measuring the outer width and length, with the boundaries consisting of the top-of-bank measurement, the outer extent of evidence of concentrated surface flows, or the outer extent of associated riparian or wetland vegetation, whichever was the greatest. Portions of features were mapped as either riparian vegetation or unvegetated streambed.

In the Coastal Zone, the presence of wetlands was determined using one criterion, as defined in 14 California Code of Regulations (CCR) Section 13577. Under Section 13577, wetlands are defined as:

> … land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, including wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent drastic fluctuations of surface water levels, wave action, water flow, turbidity, or high concentration of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or a saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetland or deep-water habitats.

Detailed information on the methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a).

Isolated Wetlands

Within the JSA are two potential isolated wetlands, consisting of a large potential wetland, which is gated for preservation, and a small human-made potential wetland within a maintained area between freeway on- and off-ramps. One isolated wetland occurs within the eastern portion of the JSA, along US 101 near Borchard Road; the other is near the west end of the JSA, along US 101 near Alessandro Drive. At the time of the delineation, these features contained wetland vegetation and exhibited both saturated soils and standing water, indicating wetland hydrology. These features may be subject to USACE, RWQCB, and CDFW jurisdiction. One feature (Feature A103) may also be subject to CCC jurisdiction.

2.4.2.3 Environmental Consequences

Alternative 1: No-Build Alternative

Under the No-Build Alternative, no impacts on USACE/RWQCB/CCC wetlands, non-wetland WoUS, or a CDFW streambed and associated riparian habitat would occur.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Project engineers and biologists reviewed all of the build alternatives to determine whether construction activities related to the addition of an HOV lane in each direction could avoid jurisdictional areas or minimize impacts on such areas. However, full avoidance of jurisdictional WoUS/WoS, state streambeds, and riparian habitat under each build alternative was not practicable or feasible because such areas run perpendicular to US 101; therefore, a crossing would be necessary. As a result, full wetland avoidance under both Build Alternatives 2 and 3 was not practicable or feasible.

Although full wetland avoidance is not possible, the build alternatives and associated permanent and temporary impacts on wetlands and other aquatic resources were reviewed and refined to minimize the project limits of disturbance where feasible. For

many locations, impact areas were reduced by decreasing the size of the project construction areas, using the existing roadway and ROW, and avoiding sensitive biological areas to the maximum extent possible. Staging areas would be placed within the US 101 median or paved shoulder and avoid areas that contain sensitive resources. In addition, the project would be designed so that construction on the Santa Clara River Bridge would be limited to the bridge deck to avoid direct impacts on both the river and surrounding riparian habitats; no work would be performed in the channel. Further information on how temporary and permanent impacts under the build alternatives would be minimized is provided below.

Both Build Alternative 2 and 3 would require acquisition of Nationwide Permit 14 under CWA Section 404 as well as CWA Section 401 water quality certification and/or WDRs from the RWQCB. The permits would ensure compliance with EO 11990. A Lake or Streambed Alteration Agreement from CDFW and Coastal Development Permit from the CCC/City of Ventura would also be required under each build alternative.

Temporary Impacts

Direct temporary effects on wetlands and/or jurisdictional aquatic resources could result from construction activities, including grading, excavating, soil stockpiling, or other earth-disturbing activities. The use of construction equipment, machinery, and vehicles within wetlands and/or jurisdictional aquatic resources could alter hydrologic conditions or remove soil, vegetation, or other resources, leading to decreased quality or loss of resources. Clearing and grading activities, as well as elevation modifications, could disturb and compact soils and affect hydrologic conditions. These effects could be both short and long term in nature during the course of construction. Through implementation of avoidance and minimization measures **NC-6** through **NC-8** (Section 2.4.1, *Natural Communities*), **AS-5** through **AS-7** (Section 2.4.4, *Animal Species*), and **WET-1** and **WET-2**, as well as mitigation measure **WET-3**, temporary impacts would be minimized to the greatest extent possible.

Construction of Build Alternatives 2 or 3 could result in indirect impacts on wetlands and/or potentially jurisdictional aquatic resources present in the area surrounding the development site. It is anticipated that there would be approximately 0.05 acre of temporary impacts on USACE, RWQCB, and CCC non-wetland waters; 0.51 acre of temporary impacts on jurisdictional wetlands; and 2.02 acres of temporary impacts on non-wetland WoUS (Table 2.4.2-2). It is anticipated that there would be approximately 3.96 acres of temporary impacts on CDFW jurisdictional limits (1.5 acres of riparian habitat and 2.46 acres of unvegetated streambed/lake) (Table 2.4.2-4). Temporary impacts are the same between Alternatives 2 and 3. Indirect impacts could include the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrologic, vegetative, and/or soil conditions. Construction equipment, vehicles, or imported materials used during project construction could introduce and spread nonnative invasive plant species from tracked-in mud and debris from other sites with invasive plants and/or seeds. Invasive plant species could outcompete native wetland plant species for resources, such as water and space, which could either reduce their reproductive productivity (i.e., reduce the number of flowers and/or seeds produced) or displace them from the area. Sites degraded because of an exposure to

indirect stressors may become low-value sites over time or no longer exhibit wetland or aquatic resource conditions. Erosion, sedimentation, and chemical spills may also reduce the quality of the wetlands and/or jurisdictional aquatic resources, and the accumulation of soils from erosion or sedimentation could fill, alter, or remove a resource.

Permanent Impacts

Direct permanent impacts on potential USACE, RWQCB, CCC, and CDFW jurisdictional features would occur as a result of adding an HOV/express bus lane and expanding the bridges at Calleguas Creek, Conejo Creek, Beardsley Wash, San Jon Creek, and Arroyo Creek (e.g., expanding nosing walls, piers, abutments) as a part of Build Alternatives 2 and 3. Permanent impacts on USACE, RWQCB, CCC, and CDFW jurisdictional areas would be the same under Build Alternatives 2 and 3, as provided in Table 2.4.2-3 and Table 2.4.2-4 and shown in Figure 2.4.2-1 and Figure 2.4.2-2. It is anticipated that there would be approximately 0.05 acre of permanent impacts on jurisdictional wetlands and 0.43 acre of permanent impacts on non-wetland WoUS (Table 2.4.2-3). It is anticipated that there would be approximately 1.27 acres of permanent impacts on CDFW jurisdictional limits (0.77 acre of riparian habitat and 0.5 acre of unvegetated streambed/lake) (Table 2.4.2-4). Through implementation of avoidance and minimization measures **NC-6** through **NC-8** (Section 2.4.1, *Natural Communities*), **AS-5** through **AS-7** (Section 2.4.4, *Animal Species*), and **WET-1** and **WET-2**, as well as mitigation measure **WET-3**, permanent impacts would be minimized to the greatest extent possible to protect jurisdictional resources.

Table 2.4.2-2. Temporary Impacts on Potential USACE, RWQCB, and CCC Jurisdiction

Drainage Feature ID	USACE/RWQCB/CCC		USACE/RWQCB WoUS	
	Wetland (acres)	Non-Wetland (acres/linear feet)	Wetland (acres/linear feet)	Non-Wetland (acres/linear feet)
Build Alternative 2				
A104	–	0.05/137	–/–	–/–
C016 (Beardsley Wash)	–	–/–	–/–	0.21/249
C075	–	–/–	–/–	0.07/386
C239	–	–/–	–/–	0.00/15
D162 (Calleguas Creek)	–	–/–	0.24/–	0.75/251
E160 (Conejo Creek)	–	–/–	0.21/–	0.48/260
E306	–	–/–	–/–	0.00/17
F042	–	–/–	0.02/97	0.08/176
F047	–	–/–	–/–	0.03/179
F057	–	–/–	–/–	0.00/4
F106	–	–/–	0.04/–	0.18/277
F130 (Arroyo Conejo West)	–	–/–	–/–	0.05/54

Drainage Feature ID	USACE/RWQCB/CCC		USACE/RWQCB WoUS	
	Wetland (acres)	Non-Wetland (acres/linear feet)	Wetland (acres/linear feet)	Non-Wetland (acres/linear feet)
F136	–	–/–	–/–	0.17/723
F201	–	–/–	–/–	–/–
Total Build Alternative 2	**–**	**0.05/137**	**0.51/97**	**2.02/2,591**
Build Alternative 3				
A104	–	0.05/137	–/–	–/–
C016 (Beardsley Wash)	–	–/–	–/–	0.21/249
C075	–	–/–	–/–	0.07/386
C239	–	–/–	–/–	0.00/15
D162 (Calleguas Creek)	–	–/–	0.24/–	0.75/251
E160 (Conejo Creek)	–	–/–	0.21/–	0.48/260
E306	–	–/–	–/–	0.00/17
F042	–	–/–	0.02/97	0.08/176
F047	–	–/–	–/–	0.03/179
F057	–	–/–	–/–	0.00/4
F106	–	–/–	0.04/–	0.18/277
F130	–	–/–	–/–	0.05/54
F136	–	–/–	–/–	0.17/723
F201	–	–/–	–/–	–/–
Total Build Alternative 3	**–**	**0.05/137**	**0.51/97**	**2.02/2,591**

Note: The impact acreages for Build Alternatives 2 and 3 differ slightly (less than a ten-thousandth decimal difference); the numbers for each build alternative appear the same because of rounding.
CCC = California Coastal Commission; RWQCB = Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers; WoUS = waters of the United States.

Table 2.4.2-3. Permanent Impacts on Potential USACE, RWQCB, and CCC Jurisdiction

Drainage Feature ID	USACE/RWQCB/CCC		USACE/RWQCB WoUS	
	Wetland (acres)	Non-Wetland (acres/linear feet)	Wetland (acres/linear feet)	Non-Wetland (acres/linear feet)
Build Alternative 2				
A104	–	0.00/–	–/–	–/–
C016 (Beardsley Wash)	–	–/–	–/–	0.03/6
C075	–	–/–	–/–	0.07/571
C239	–	–/–	–/–	–/–
D162 (Calleguas Creek)	–	–/–	0.02/–	0.01/–
E160 (Conejo Creek)	–	–/–	0.00/–	0.02/27
E306	–	–/–	–/–	–/–

Drainage Feature ID	USACE/RWQCB/CCC		USACE/RWQCB WoUS	
	Wetland (acres)	Non-Wetland (acres/linear feet)	Wetland (acres/linear feet)	Non-Wetland (acres/linear feet)
F042	–	–/–	0.03/189	0.03/5
F047	–	–/–	–/–	0.02/117
F057	–	–/–	–/–	–/–
F106	–	–/–	0.00/–	0.00/–
F130	–	–/–	–/–	0.00/–
F136	–	–/–	–/–	0.24/1,130
F201	–	–/–	–/–	0.01/38
Total Build Alternative 2	**–**	**0.00/–**	**0.05/189**	**0.43/1,894**
Build Alternative 3				
A104	–	0.00/–	–/–	–/–
C016 (Beardsley Wash)	–	–/–	–/–	0.03/6
C075	–	–/–	–/–	0.07/571
C239	–	–/–	–/–	–/–
D162 (Calleguas Creek)	–	–/–	0.02/–	0.01/–
E160 (Conejo Creek)	–	–/–	0.00/–	0.02/27
E306	–	–/–	–/–	–/–
F042	–	–/–	0.03/189	0.03/5
F047	–	–/–	–/–	0.02/117
F057	–	–/–	–/–	–/–
F106	–	–/–	0.00/–	0.00/–
F130	–	–/–	–/–	0.00/–
F136	–	–/–	–/–	0.24/1,130
F201	–	–/–	–/–	0.01/38
Total Build Alternative 3	**–**	**0.00/–**	**0.05/189**	**0.43/1,894**

Note: The impact acreages for Build Alternatives 2 and 3 differ slightly (less than a ten-thousandth decimal difference); the numbers for each build alternative appear the same because of rounding.
CCC = California Coastal Commission; RWQCB = Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers; WoUS = waters of the United States
"–" indicates no impact; "0.00" indicates impact on less than 0.001 acre.

Table 2.4.2-4. Permanent and Temporary Impacts on Potential CDFW Jurisdiction

Drainage Feature ID	Permanent Impacts (acres/linear feet)		Temporary Impacts (acres/linear feet)	
	Riparian	Unvegetated Streambed/Lake	Riparian	Unvegetated Streambed/Lake
Build Alternative 2				
A104	–/–	0.00/14	–/–	0.05/122
C016 (Beardsley Wash)	–/–	0.03/97	–/–	0.21/166

Drainage Feature ID	Permanent Impacts (acres/linear feet)		Temporary Impacts (acres/linear feet)	
	Riparian	Unvegetated Streambed/Lake	Riparian	Unvegetated Streambed/Lake
C075	–/–	0.12/1,337	–/–	0.11/15
C239	–/–	–	–/–	0.01/15
D162 (Calleguas Creek)	0.02/25	0.02/25	0.25/60	0.80/142
E160 (Conejo Creek)	–/–	0.05/38	–/–	1.01/249
E306	–/–	–/–	–/–	0.01/17
F042	0.41/812	–/–	0.41/1,157	–/–
F046	–/–	–/–	0.00/2	–/–
F047	–/–	0.03/117	–/–	0.04/179
F057	–/–	–/–	–/–	0.00/4
F106	0.34/1,399	–/–	0.84/145	–/–
F130 (Arroyo Conejo West)	–/–	0.00/17	–/–	0.05/39
F136	–/–	0.24/1,131	–/–	0.17/723
F201	–/–	0.01/38	–/–	–/–
Total Build Alternative 2	**0.77/2,236**	**0.50/2,814**	**1.50/1,364**	**2.46/1,671**
Build Alternative 3				
A104	–/–	0.00/14	–/–	0.05/122
C016 (Beardsley Wash)	–/–	0.03/97	–/–	0.21/166
C075	–/–	0.12/1,337	–/–	0.11/15
C239	–/–	–/–	–/–	0.01/15
D162 (Calleguas Creek)	0.02/25	0.02/25	0.25/60	0.80/142
E160 (Conejo Creek)	–/–	0.05/38	–/–	1.01/249
E306	–/–	–	–/–	0.01/17
F042	0.41/812	–/–	0.41/1,157	–/–
F046	–/–	–/–	0.00/2	–/–
F047	–/–	0.03/117	–/–	0.04/179
F057	–/–	–/–	–/–	0.00/4
F106	0.34/1,399	–/–	0.84/145	–/–
F130 (Arroyo Conejo West)	–/–	0.00/17	–/–	0.05/39
F136	–/–	0.24/1,113	–/–	0.17/723
F201	–/–	0.01/38	–/–	–/–
Total Build Alternative 3	**0.77/2,236**	**0.50/2,814**	**1.50/1,364**	**2.46/1,671**

CDFW = California Department of Fish and Wildlife
"–" indicates no impact; "0.00" indicates impact on less than 0.001 acre.

2.4.2.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on wetlands would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Avoidance and minimization measures **NC-6** through **NC-8** (Section 2.4.1, *Natural Communities*), **AS-5** through **AS-7** (Section 2.4.4, *Animal Species*), and **WET-1** and **WET-2**, as well as mitigation measure **WET-3**, would be incorporated to avoid, minimize, and mitigate effects on WoUS and WoS.

WET-1: Minimize Disturbance. Construction activity and access roads will be minimized to the maximum extent practicable in all drainages, streams, pools, or other features under the jurisdiction of the USACE, RWQCB, CCC, and/or CDFW.

WET-2: Avoid Aquatic Resources. The project limits of disturbance, including the upstream, downstream, and lateral extents of any jurisdictional aquatic resource within or adjacent to the project footprint, will be clearly defined and marked in the field. The biological monitor will review the limits of disturbance prior to initiation of construction activities. The upstream and downstream limits of project disturbance, plus the lateral limits of disturbance of any aquatic resource, will be clearly defined and marked in the field; this includes installing ESA fencing during construction to ensure avoidance of jurisdictional areas.

WET-3: Aquatic Resources Compensation. To address effects on jurisdictional aquatic resources, a compensatory mitigation plan will be developed during the permitting phase of the selected alternative and include a minimum ratio of 1:1 for permanent impacts on jurisdictional resources. The required mitigation will be implemented through the use of an agency-approved mitigation bank, in-lieu fee provider, permittee-responsible mitigation site, or any other agency-approved mitigation provider.

2.4.2.5 Wetlands Only Practicable Alternative Finding

Per EO 11990, federal agencies must consider project alternatives to limit potential impacts on wetlands resulting from a project. Two alternatives, in addition to the No-Build Alternative, are being considered for the project. Both alternatives being considered would have similar impacts on wetlands (see Table 2.4.2-2 to Table 2.4.2-4). There are wetlands that run perpendicular to the US 101; therefore, a shift in design would not avoid impacts on wetlands. To accomplish the purpose of the project (e.g., improve trip reliability and traffic operations, achieve regional HOV connectivity along US 101, support regional prosperity), widening the US 101 over wetlands and expanding the bridges at Calleguas Creek, Conejo Creek, Beardsley

Wash, San Jon Creek, and Arroyo Creek would need to be conducted. The improvements would be conducted along an existing highway; therefore, alternative alignments are not feasible. Additional alternatives other than the alternatives already being considered would not accomplish the purpose of the project. The measures listed above would be implemented to reduce impacts on wetlands to the extent feasible. In addition, the project would be conducted in compliance with Section 404 of the CWA and any wetlands affected by the project would be replaced or mitigated, to ensure that there is "no net loss" of wetlands. Based on the above considerations, it is determined that there is no practicable alternative to the proposed project's construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

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2.4.3 Plant Species

2.4.3.1 Regulatory Setting

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 FESA and/or the California Endangered Species Act (CESA). Please see Section 2.4.5, *Threatened and Endangered Species*, for detailed information about these species.

This section discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and 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 CFG Code Section 2050, *et seq*. Department projects are also subject to the Native Plant Protection Act, found at CFG Code Sections 1900–1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code Sections 21000–21177.

2.4.3.2 Affected Environment

Unless otherwise noted, the information in this section is based on the NES prepared for the project (Caltrans 2021a). References used in the NES are not carried over into this section.

Plant species in California that have special regulatory or management status were evaluated for their potential to occur within the rare plant study area (RPSA), which consists of the project limits of disturbance plus a 100-foot buffer (see Table 2.4.3-1). Development of a list of special-status species in the region relied on information compiled from USFWS data, the CNDDB, and the CNPS Rare Plant Inventory, which lists the CRPR for all species. New species lists were obtained in August 2026 to account for new plant species or listing changes that occurred subsequent to approval of the NES. One new species, rocky mountain bulrush (*Schoenoplectiella saximontana*), which was identified from an updated CNDDB database query, is a special-status species with a 2B.1 CRPR and has no potential to occur in the BSA (see Table 2.4.5-2).

Special-status plant surveys were conducted between April 15 and 19, 2019, within the RPSA. Specifically, surveys were targeted to unique portions of the RPSA where microhabitats had increased potential with respect to supporting special-status species. The focused rare plant surveys were conducted during the appropriate blooming season for all special-status plant species potentially occurring within the RPSA that require flowers for detection. In addition, a follow-up survey was performed on June 21, 2019,

to confirm the presence/absence of species whose blooming period was not captured during the April surveys (i.e., Ventura marsh milk-vetch and dudleya species). This follow-up survey, which focused on portions of the Conejo Grade and San Buenaventura State Beach, consisted primarily of checking individual dudleya plants that were found in vegetative form during the April surveys and confirming the species. Detailed information on methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a).

Special-Status Plant Species Observed

Five special-status plant species were documented in the RPSA during focused surveys conducted for the project: San Diego marsh-elder, Catalina mariposa lily, small-flowered morning-glory, Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*), and Conejo buckwheat (see Figure 2.4.3-1 in Appendix I).

Table 2.4.3-1. Non-Listed Special-Status Plants with Potential to Occur in the Rare Plant Study Area

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
red sand-verbena (*Abronia maritima*)	–/4.2	Perennial herb	February–November	Coastal dunes. Elevation range: 0–100 meters.	HP	Suitable habitat is present within the BSA outside the project footprint.
chaparral sand-verbena (*Abronia villosa* var. *aurita*)	–/1B.1	Annual herb	(January) March–September	Sandy areas in chaparral, coastal scrub, and desert dune habitats. Elevation range: 75–1,600 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
aphanisma (*Aphanisma blitoides*)	–/1B.2	Annual herb	February–June	Coastal bluff scrub, coastal dunes, and coastal scrub habitats in sandy or gravelly soils. Elevation range: 1–305 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
western spleenwort (*Asplenium vespertinum*)	–/4.2	Perennial rhizomatous herb	February–June	Rocky areas in chaparral, cismontane woodland, and coastal scrub habitats. Elevation range: 180–1,000 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Miles' milk-vetch (*Astragalus didymocarpus* var. *milesianus*)	–/1B.2	Annual herb	March–June	Coastal scrub habitats with clay soils. Elevation range: 20–90 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Coulter's saltbush (*Atriplex coulteri*)	–/1B.2	Perennial herb	March–October	Coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland habitats in alkaline or clay soils. Elevation range: 3–460 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
south coast saltscale (*Atriplex pacifica*)	–/1B.2	Annual herb	March–October	Coastal bluff scrub, coastal dunes, coastal scrub, and playas. Elevation range: 0–140 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)	–/1B.2	Annual herb	April–October	Coastal bluff scrub and coastal scrub habitats in alkaline areas. Elevation range: 10–200 meters.	HA	Suitable coastal scrub habitats with alkaline soils do not exist within the BSA.
Malibu baccharis (*Baccharis malibuensis*)	–/1B.1	Perennial deciduous shrub	August	Chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. Elevation range: 150–305 meters.	HP	Suitable habitat is present in the coastal scrub and riparian woodland habitats within the BSA.
Catalina mariposa lily (*Calochortus catalinae*)	–/4.2	Perennial bulbiferous herb	(February) March–June	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Elevation range: 15–700 meters.	HP	Present. Suitable habitat is present in the coastal scrub and grassland habitats within the BSA. This species was detected within the BSA during 2019 focused rare plant surveys.
club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*)	–/4.3	Perennial bulbiferous herb	(March) May–June	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats, usually in serpentinite, clay, or rocky areas. Elevation range: 75–1,300 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.
slender mariposa lily (*Calochortus clavatus* var. *gracilis*)	–/1B.2	Perennial bulbiferous herb	March–June (November)	Chaparral, coastal scrub, valley and foothill grassland. Elevation range: 320–1,000 meters.	HA	Although suitable habitat exists within the BSA, elevations within the BSA are lower than those

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
						associated with the known occurrences of this species.
late-flowered mariposa lily (*Calochortus fimbriatus*)	–/1B.3	Perennial bulbiferous herb	June–August	Chaparral, cismontane woodland, and riparian woodland, often in serpentinite areas. Elevation range: 275–1,905 meters.	HA	Suitable cismontane woodland and riparian woodland habitats with serpentine soils do not exist within the BSA; the majority of the BSA is at a lower elevation than that associated with the known range for this species.
Plummer's mariposa lily (*Calochortus plummerae*)	–/4.2	Perennial bulbiferous herb	May–July	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland in granitic, rocky areas. Elevation range: 100–1,700 meters.	HA	Suitable habitats in granitic rock areas do not exist within the BSA.
Lewis' evening-primrose (*Camissoniopsis lewisii*)	–/3	Annual herb	March–May (June)	Coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland in sandy soils or clay. Elevation range: 0–300 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.
southern tarplant (*Centromadia parryi* ssp. *australis*)	–/1B.1	Annual herb	May–November	Margins of marshes and swamps, vernally mesic valley and foothill grassland, and vernal pools. Elevation range: 0–480 meters.	HP	Suitable habitat is present in the freshwater marsh habitats within the BSA.

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
island mountain-mahogany (*Cercocarpus betuloides* var. *blancheae*)	–/4.3	Perennial evergreen shrub	February–May	Closed-cone coniferous forest and chaparral habitats. Elevation range: 30–600 meters.	HA	Suitable coniferous forest and chaparral habitats do not exist within the BSA.
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	–/1B.1	Annual herb	January–August	Sandy areas of coastal bluff scrub and coastal dunes. Elevation range: 0–100 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	–/1B.1	Annual herb	April–June	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland in sandy or rocky openings. Elevation range: 275–1,220 meters.	HP	Suitable cismontane woodland, coastal scrub, and valley and foothill grasslands exist within the BSA; however, the majority of the BSA is at a lower elevation than that associated with the known range for this species.
small-flowered morning-glory (*Convolvulus simulans*)	–/4.2	Annual herb	March–July	Openings in chaparral, coastal scrub, and valley and foothill grassland habitats in clay and serpentinite seeps. Elevation range: 30–740 meters.	HP	Present. Suitable habitat is present in the coastal scrub and grassland habitats within the BSA. This species was detected within the BSA during 2019 focused rare plant surveys.
Santa Susana tarplant (*Deinandra minthornii*)	R/1B.2	Perennial deciduous shrub	July–November	Chaparral and coastal scrub habitats in rocky areas. Elevation range: 280–760 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA. However, the BSA is outside the elevation range for this species; therefore, the species is unlikely to occur.

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
dune larkspur (*Delphinium parryi* ssp. *blochmaniae*)	–/1B.2	Perennial herb	April–June	Maritime chaparral and coastal dunes habitats. Elevation range: 0–200 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Mt. Pinos larkspur (*Delphinium parryi* ssp. *purpureum*)	–/4.3	Perennial herb	May–June	Mojavean desert scrub, chaparral, and pinyon and juniper woodland habitats. Elevation range: 1,000–2,600 meters.	HA	Suitable habitat does not exist, and the BSA is well outside the elevational range for this species.
western dichondra (*Dichondra occidentalis*)	–/4.2	Perennial rhizomatous herb	(January) March–July	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Elevation range: 50–500 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.
Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*)	–/1B.1	Perennial herb	April–June	Coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland habitats in rocky areas. Often in clay or serpentinite soils. Elevation range: 5–450 meters.	HP	Present. Suitable habitat in the BSA is limited to the shrubland and grassland habitats with rocky volcanic substrates adjacent to the Conejo Grade. This species was detected within the BSA during 2019 focused rare plant surveys.
Conejo buckwheat (*Eriogonum crocatum*)	R/1B.2	Perennial herb	April–July	Chaparral, coastal scrub, and valley and foothill grassland habitats in Conejo volcanic outcrops and rocky areas. Elevation range: 50–580 meters.	HP	Present. Suitable habitat is present in the coastal scrub and grassland habitats within the BSA. This species was detected within the BSA during 2019 focused rare plant surveys.
beach goldenaster	–/1B.1	Perennial herb	March–December	Coastal chaparral, coastal dunes, and coastal scrub	HP	Suitable habitat is present in the coastal scrub and

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
(*Heterotheca sessiliflora* ssp. *sessiliflora*)				habitats. Elevation range: 0–1,225 meters.		grassland habitats within the BSA.
vernal barley (*Hordeum intercedens*)	–/3.2	Annual herb	March–June	Coastal dunes, coastal scrub, vernal pools, and saline flats and depressions in valley and foothill grasslands. Elevation range: 5–1,000 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
mesa horkelia (*Horkelia cuneata* var. *puberula*)	–/1B.1	Perennial herb	February–July (September)	Maritime chaparral, cismontane woodland, and coastal scrub in sandy or gravelly soils. Elevation range: 70–810 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
San Diego marsh-elder (*Iva hayesiana*)	–/2B.2	Perennial herb	April–October	Marshes and swamps as well as playas in alkali sink and wetland riparian communities. Elevation range: 10–500 meters.	HP	Present. Suitable habitat is present in the marsh habitats within the BSA. This species was detected within the BSA during 2019 focused rare plant surveys.
southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	–/4.2	Perennial rhizomatous herb	(March) May–June	Mesic areas of coastal dunes, alkaline seeps in meadows and seeps, and coastal salt marshes and swamps. Elevation range: 3–900 meters.	HP	Suitable habitat is present in the dune and marsh habitats within the BSA outside the project footprint.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	–/1B.1	Annual herb	February–June	Coastal salt marshes as well as swamps, playas, and vernal pools. Elevation range: 1–1,220 meters.	HA	Suitable coastal salt marshes, as well as swamps, playas, and vernal pools, do not exist within the BSA.

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
fragrant pitcher sage (*Lepechinia fragrans*)	–/4.2	Perennial shrub	March–October	Chaparral habitats. Elevation range: 20–1,310 meters.	HA	Suitable chaparral habitat does not exist within the BSA.
ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)	–/4.2	Perennial bulbiferous herb	March–July (August)	Openings with chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland habitats. Elevation range: 30–1,800 meters.	HP	Suitable habitat is present in the coastal scrub and riparian woodland habitats within the BSA.
Payne's bush lupine (*Lupinus paynei*)	–/1B.1	Perennial shrub	March–April (May–July)	Coastal scrub, riparian scrub, and valley and foothill grassland habitats in sandy soils. Elevation range: 220–420 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.
Mexican malacothrix (*Malacothrix similis*)	–/2A	Annual herb	April–May	Coastal dunes habitat. Elevation range: 0–40 meters.	HA	Suitable habitat exists within the dune habitat in the BSA outside the project footprint; however, this species is assumed extirpated from California. It was not detected during 2019 focused rare plant surveys.
white-veined monardella (*Monardella hypoleuca* ssp. *hypoleuca*)	–/1B.3	Perennial herb	(April) May–August (September–December)	Chaparral and cismontane woodland habitats. Elevation range: 50–1,525 meters.	HP	Suitable habitat is present in the scrub and woodland habitats within the BSA.
Gerry's curly-leaved monardella (*Monardella sinuata* ssp. *gerryi*)	–/1B.1	Annual herb	April–June	Sandy openings in coastal scrub habitats. Elevation range: 150–245 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
southern curly-leaved monardella (*Monardella sinuata* ssp. *sinuata*)	–/1B.2	Annual herb	April–September	Sandy soils in chaparral, cismontane woodland, coastal dunes, and openings in coastal scrub habitats. Elevation range: 0–300 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Ojai navarretia (*Navarretia ojaiensis*)	–/1B.1	Annual herb	May–July	Openings in chaparral, coastal scrub, and valley and foothill grassland habitats. Elevation range: 275–620 meters.	HA	Although suitable habitat does exist within the BSA, the elevational range of the BSA is lower than the elevational range associated with all known occurrences of this species.
chaparral nolina (*Nolina cismontana*)	–/1B.2	Perennial evergreen shrub	(March) May–July	Chaparral and coastal scrub habitats in sandstone or gabbro soils. Elevation range: 140–1,275 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
Hubby's phacelia (*Phacelia hubbyi*)	–/4.2	Annual herb	April–July	Chaparral, coastal scrub, and valley and foothill grassland habitats in gravelly, rocky, and talus areas. Elevation range: 0–1,000 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.
south coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*)	–/3.2	Perennial herb	March–August	Chaparral, coastal dunes, coastal scrub, and coastal salt marshes and swamps in sandy and sometimes rocky soils. Elevation range: 5–300 meters.	HP	Suitable habitat is present in the coastal scrub and dune habitats within the BSA.
Michael's rein orchid (*Piperia michaelii*)	–/4.2	Perennial herb	April–August	Coastal bluff scrub, closed-cone coniferous forest, chaparral,	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
				cismontane woodland, coastal scrub, and lower montane coniferous forest habitats. Elevation range: 3–915 meters.		
white rabbit-tobacco (*Pseudognaphalium leucocephalum*)	–/2B.2	Perennial herb	(July) August–November (December)	Chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats in sandy and gravelly soils. Elevation range: 0–2,100 meters.	HP	Suitable habitat is present in the coastal scrub and riparian woodland habitats within the BSA.
Nuttall's scrub oak (*Quercus dumosa*)	–/1B.1	Perennial evergreen shrub	February–April (May–August)	Closed-cone coniferous forest, chaparral, and coastal scrub habitats in sandy soils and clay loam. Elevation range: 15–400 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
rocky mountain bulrush (*Schoenoplectiella saximontana*)	-/2B.1	Annual rhizomatous herb	(March-May) June–September (October)	Marshes and swamps (margins), and vernal pools. Elevation range: 45–720 meters.	HA	Although suitable habitats occur within the BSA, no extant occurrences of this species have been recorded in Ventura County.
chaparral ragwort (*Senecio aphanactis*)	–/2B.2	Annual herb	January–April (May)	Chaparral, cismontane woodland, and coastal scrub habitats, sometimes in alkaline areas. Elevation range: 15–800 meters.	HP	Suitable habitat is present in the coastal scrub habitats within the BSA.
broadlead pondweed (*Stuckenia striata*)	–/2B.3	Perennial rhizomatous herb	June–August	Marshes and swamps, notably near lakes, ponds, rivers, and drainage canals. Elevation range: -70–2,135 meters.	HA	Although suitable habitats occur within the BSA, no extant occurrences of this species have been

Common Name/Scientific Name	Status State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
						recorded in Ventura County.
woolly seablite (*Suaeda taxifolia*)	–/4.2	Perennial evergreen shrub	January–December	Coastal bluff scrub, coastal dunes, and the margins of coastal salt marshes and swamps. Elevation range: 0–50 meters.	HP	Suitable habitat is present in the coastal scrub and dune habitats within the BSA.
woven-spored lichen (*Texosporium sancti-jacobi*)	–/3	Crustose lichen (terricolous)	N/A	Openings in chaparral, small mammal pellets, and dead twigs; also, on *Selaginella* spp. Elevation range: 60–660 meters.	HP	Suitable habitat is present in the scrub habitats within the BSA.
Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*)	–/2B.2	Perennial rhizomatous herb	January–September	Meadows, seeps, and streams. Elevation range: 50–610 meters.	HA	Although suitable habitats occur within the BSA, no extant occurrences of this species have been recorded in Ventura County.
California screw-moss (*Tortula californica*)	–/1B.2	Moss	N/A	Chenopod scrub and valley and foothill grasslands in sandy soils. Elevation range: 10–1,460 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.

[a.] Status Codes
State
R = Rare

California Rare Plant Rank (CRPR)
1A = Plants presumed extinct in California
1B = Plants that are rare, threatened, or endangered in California and elsewhere
2 = Plants that are 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

[b.] Habitat Presence/Absence Codes
HP = Habitat is or may be present; the species may be present.
HA = No habitat present and no further work needed.

San Diego Marsh-Elder

San Diego marsh-elder was found within Laurel Sumac Scrub habitat on the south side of East Harbor Avenue. This area is within San Buenaventura State Beach, on the edge of the RPSA and well outside the project footprint (Sheet 11 of Figure 2.4.3-1 in Appendix I). These plants are within an ESHA and the jurisdiction of the City of Ventura LCP at the far western portion of the BSA.

Catalina Mariposa Lily

Catalina mariposa lily was detected in grassland and scrubland habitats along the Conejo Grade (Sheet 3 of Figure 2.4.3-1 in Appendix I). The species was also observed on the southbound side of US 101, along a hillside near the east end of the BSA. This area is within California Sagebrush–California Buckwheat Scrub and Curly Blue Grass–Squirreltail Patches habitat (Sheet 1 of Figure 2.4.3-1 in Appendix I). This species was \within the Conejo Natural Open Space, toward the eastern portion of the BSA.

Small-Flowered Morning-Glory

Small-flowered morning-glory was detected in grassland and scrubland habitats along the Conejo Grade (Sheet 3 of Figure 2.4.3-1 in Appendix I).

Blochman's Dudleya

Blochman's dudleya was detected in grassland and scrubland habitats along the Conejo Grade (Sheet 3 of Figure 2.4.3-1 in Appendix I).

Conejo Buckwheat

Conejo buckwheat was detected in grassland and scrubland habitats along the Conejo Grade (Sheet 3 of Figure 2.4.3-1 in Appendix I).

Suitable habitat is present in the RPSA for an additional 35 special-status species within the coastal scrub, coastal dune, freshwater marsh, cismontane woodland, riparian scrub, woodland, forest, and valley and needle grass grassland habitats. However, these species were not observed during the focused April and June special-status plant surveys and therefore are considered absent from the RPSA.

2.4.3.3 Environmental Consequences

Alternative 1: No-Build Alternative

If the project is not constructed, then no new or additional impacts on non-listed special-status plant species would occur, beyond those that would be expected from operation of the existing facility.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The direct and indirect impacts on non-listed special-status plant species that could occur during construction are described below. *Direct effects* are permanent or temporary impacts that could directly cause mortality or a permanent loss of habitat. Examples of permanent effects during construction include those related to grading,

construction staging, cut-and-fill work, and road widening. *Temporary effects* are impacts that could occur within the areas needed for construction of the project, including staging areas; these areas would be returned to original conditions with respect to topography and vegetation when construction is completed. *Indirect effects* are impacts that may give rise to delayed secondary effects, including a potential spread of invasive plants, increased dust during construction, and the degradation of habitat adjacent to the work area. Operation of the proposed project may contribute to long-term indirect effects and contribute to edge effects through the degradation of habitat adjacent to the new ROW, the spread of invasive plants from vehicle travel, and an increased risk of fire; however, these potential edge effects would not differ from the effects associated with existing conditions along the Caltrans ROW.

Temporary Impacts

Temporary indirect impacts on special-status plant species could result from construction-related dust, erosion, and runoff as well as the introduction of invasive species on disturbed soils. Increased dust during construction could decrease a plant's ability to photosynthesize, which could result in diminished reproduction of Catalina mariposa lily, small-flowered morning-glory, Blochman's dudleya, or Conejo buckwheat individuals. Construction equipment, vehicles, or imported materials could introduce and spread nonnative invasive plant species within the project area, which could outcompete special-status plants for resources such as water and space. In addition, suitable habitat could become monotypic, thereby reducing the quality and diversity of native vegetation communities on-site.

The 2019 rare plant surveys conducted for the NES indicate that 12 Catalina mariposa lily individuals occurred within the limits of disturbance along the Conejo Grade (Sheet 3 of Figure 2.4.3-1 in Appendix I). In addition, two distinct populations of Catalina mariposa lily were mapped along the Conejo Grade. Portions of the populations intersected the limits of disturbance, with the population along the southbound lanes containing approximately 300 individuals and the population along the northbound lanes containing approximately 200 individuals. No other mapped non-listed, special-status plants occur within the limits of disturbance, but plants are mapped either just outside of the limits of disturbance within the RPSA or outside of the RPSA limits entirely. Therefore, temporary direct and indirect impacts on at least 12 individuals and two distinct populations of Catalina mariposa lily could occur within the limits of disturbance. However, with implementation of avoidance and minimization measures **PS-1** through **PS-5** and **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*), all special-status plants and their suitable habitat would be mapped and avoided prior to and during construction, thereby reducing potential temporary and adverse impacts on rare plants.

Permanent Impacts

Build Alternatives 2 and 3 would permanently remove suitable habitat for non-listed special-status plant species as a result of project construction (see Table 2.4.1-4 in Section 2.4.1.3). Direct effects on Catalina mariposa lily, Blochman's dudleya, and Conejo buckwheat could include direct mortality of individual plants or plant injury as a result of crushing by construction vehicles or personnel. Although most of the individual

species were observed within the RPSA, but outside the project limits of disturbance, a few individuals were detected either within the project footprint or directly adjacent to it (Figure 2.4.3-1 in Appendix I); no individuals were observed within areas that would be permanently affected. Therefore, no permanent direct or indirect impacts on special-status plants would occur. To the extent feasible, construction activities would avoid Catalina mariposa lily, Blochman's dudleya, and Conejo buckwheat individuals. Clearing and grading activities could disturb and compress soils, potentially destroying seed banks and preventing or reducing future utilization of the area by the species. San Diego marsh-elder and small-flowered morning-glory occur well outside the project limits of disturbance and are not expected to be directly affected by the project as a result of trampling or collection (see Figure 2.4.3-1 in Appendix I). In addition, construction could increase the potential for fire in the area if vegetation clearing work is conducted during the fire season, which could directly and indirectly affect special-status plant species through habitat destruction. These effects could be both short and long term in nature. With implementation of avoidance and minimization measures **PS-1** through **PS-5** and **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*), potential permanent and adverse impacts on rare plants would be reduced.

2.4.3.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on plant species would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Avoidance and minimization measures **PS-1** through **PS-5**, below, would reduce the likelihood of direct impacts on any special-status plant species during construction and ensure that indirect impacts would be reduced to the maximum extent possible. Implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would minimize potential impacts on suitable habitat for special-status plant species adjacent to the project limits of disturbance.

PS-1: Rare Plants ESA Fencing. Prior to clearing or construction, ESA fencing will be installed around designated special-status plant population boundaries adjacent to the project footprint to designate ESAs to be avoided (see **NC-1**).

PS-2: Rare Plant Biological Monitoring. An authorized biologist will be present on-site, within or adjacent to suitable habitat, at the frequency necessary during construction to ensure that avoidance and minimization measures are in place, according to specifications, and monitor construction within the vicinity of the Catalina mariposa lily, small-flowered morning-glory, Blochman's dudleya, and Conejo buckwheat populations, thereby ensuring that avoidance and minimization measures

will be properly followed. The biological monitor will report any non-compliance within 24 hours to the resident engineer.

PS-3: Preconstruction Rare Plant Surveys. Before ground disturbance begins, a qualified botanist will survey all proposed construction and access areas for the presence of Catalina mariposa lily, small-flowered morning-glory, Blochman's dudleya, and Conejo buckwheat. Preconstruction surveys will occur during the appropriate season and in accordance with established protocols up to 1 year in advance of construction, provided that temporary construction easements (TCEs) have been granted for the construction areas. Surveys will be conducted in all construction areas that contain suitable habitat for special-status plant species. The surveys will document plant locations relative to the construction areas as well as avoidance measures, where feasible. If construction starts prior to the appropriate season, and preconstruction surveys are not feasible, then plant documentation regarding the avoidance measures and ESA fencing will rely on previous population locations.

PS-4: Mapping, Recording, and Avoidance of Rare Plants. Populations of Catalina mariposa lily, small-flowered morning-glory, Blochman's dudleya, and Conejo buckwheat will be clearly mapped and recorded, along with the approximate number of individuals in each population and their respective condition. To the maximum extent feasible, construction areas and access roads will be adjusted to avoid any loss of Catalina mariposa lily, small-flowered morning-glory, Blochman's dudleya, or Conejo buckwheat individuals as well as impacts on the habitats that support these species.

PS-5: Collection Restrictions. The intentional killing or collection of any plant or wildlife species will be prohibited.

2.4.4 Animal Species

2.4.4.1 Regulatory Setting

Many state and federal laws regulate impacts on wildlife. USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and 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 FESA or CESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.4.5, *Threatened and Endangered Species*. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act (NEPA)
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- CEQA
- Sections 1600–1603 of the CFG Code
- Sections 4150 and 4152 of the CFG Code

2.4.4.2 Affected Environment

Unless otherwise noted, the information in this section is based on the NES prepared for the project (Caltrans 2021a). References used in the NES are not carried over into this section. Detailed information on methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a).

In total, 102 species of wildlife were detected in the BSA from all project-related surveys, the majority of which were birds, followed in species richness by mammals and reptiles (more information available in the NES). Incidental wildlife observations were documented during the focused rare plant surveys and jurisdictional delineation of aquatic resources (100-foot BSA buffer), during the reconnaissance biological survey (250-foot BSA buffer), and during the protocol wildlife surveys (500-foot BSA buffer).

To comply with the provisions of various federal and state environmental statutes and EOs, potential impacts on natural resources of the region were investigated and documented. Development of a list of species and habitats within the project region was based on information compiled by USFWS, CNDDB, and current publications. The project site was field reviewed to identify animal species and their habitats. Detailed

information on methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a).

Birds frequently detected within the BSA included mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia*), Anna's hummingbird (*Calypte anna*), red-tailed hawk (*Buteo jamaicensis*), ash-throated flycatcher (*Myiarchus cinerascens*), Cassin's kingbird (*Tyrannus vociferans*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), northern rough-winged swallow (*Stelgidopteryx serripennis*), western scrub jay (*Aphelocoma californica*), Bewick's wren (*Thryomanes bewickii*), Wilson's warbler (*Cardellina pusilla*), California towhee (*Melozone crissalis*), and song sparrow (*Melospiza melodia*). These include species both uncommon and common to the region. Uncommon species, which are dependent on native vegetation communities, were observed only within the Santa Clara River and Calleguas Creek floodplains or the Conejo Grade portions of the BSA. Common species, which have adapted to areas with human-made habitats or disturbances, were detected throughout the BSA.

Mammals detected included desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), Virginia opossum, southern mule deer, and coyote. These species are common in the region.

Reptiles detected included San Diegan whiptail (*Aspidoscelis tigris stejnegeri*), western fence lizard (*Sceloporus occidentalis*), and western side-blotched lizard (*Uta stansburiana elegans*). All of these species are common to the region.

Four non-listed special-status wildlife species were detected in the BSA during field studies: northern harrier (*Circus cyaneus;* California Species of Concern [CSC]), white-tailed kite (*Elanus leucurus;* CSC), yellow-breasted chat (*Icteria virens*; CSC), and yellow warbler (*Setophaga petechia*; CSC).

A literature review determined that, given the regional location of the project, non-listed special-status species may occur within the BSA. Table 2.4.4-1 identifies the non-listed special-status animals that may be present and their protection status. The table was updated in April 2026, following new queries of the CNDDB, as well as USFWS and NOAA Fisheries databases in March and August 2026, to account for listing changes or new species potentially occurring in the project area. This is because prior species lists used for the NES had expired. As shown in Table 2.4.4-1, 20 non-listed special-status animal species have suitable habitat within the BSA: one fish, six reptiles, six birds, and seven mammals. Due to the presence of suitable habitat within the BSA, focused studies were performed for bats. The bat habitat assessment found that day roost features, including bridges, culverts, and overpasses, were present to potentially support non-listed special-status bat species. No other focused studies were performed for non-listed special-status animal species because no suitable habitat to support these species was observed (see NES for more information regarding habitat suitability for bats).

Special-Status Bats

Three special-status bats have the potential to occur in the BSA: pallid bat (*Antrozous pallidus*; CSC), western mastiff bat (*Eumops perotis*; CSC), and western red bat (*Lasiurus blossevillii*; CSC). Detailed descriptions of their habitat requirements are provided in Table 2.4.4-1. Many other species of bats have the potential to occur in the BSA, but have no special status. However, they would benefit from the protective measures identified in this section. CDFW has increased its requirements for projects to ensure that direct bat mortality does not occur, regardless of whether the species has special status.

Table 2.4.4-1. Non-Listed Special-Status Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name/ Scientific Name	Status State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
Fish				
arroyo chub (*Gila orcuttii*)	CSC	Occurs within fluctuating streams with cool to warm temperatures. Often found within slow-moving sections of streams with sandy or muddy bottoms. Native to streams of the Los Angeles Plain, including the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers, as well as Malibu Creek and San Juan Creek. Has been widely introduced to other watersheds throughout Southern California.	HP	**High.** There is suitable habitat within the BSA for this species, which is known to occur in downstream areas. Therefore, it is likely to occur within the BSA. It should be noted that all populations in Ventura County are considered to be introduced/translocated and not native to the region. However, they are still considered CSC populations.
Reptiles				
Southern California legless lizard (*Anniella stebbinsi*)	CSC	Occurs in sandy or loose loamy soils, typically under sparse vegetation in broadleaved upland forest, chaparral, coastal dune, or coastal scrub habitats. Found generally south of the Transverse Range, with a territory that extends to northwest Baja California.	HP	**High.** There is suitable habitat for this species within the BSA—specifically, in and around waterways. Furthermore, there are records for this species from areas in the BSA, including several records from areas of Calleguas Creek immediately south of US 101 from as recently as 2016 (CDFW 2020).
California glossy snake (*Arizona elegans occidentalis*)	CSC	This generalist species has been reported from a range of scrub and grassland habitats, often with loose or sandy soils. Patchily distributed from the eastern portion of San Francisco Bay, the southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges south to Baja California.	HP	**Low.** There is suitable habitat for this species throughout the naturally vegetated portions of the BSA. However, the general scarcity of this species indicates low potential for occurrence within the BSA.
coastal whiptail (*Aspidoscelis tigris stejnegeri*)	CSC	Occurs in a wide variety of habitats in coastal and inland valleys and foothills, including coastal sage scrub, sparse grassland, and	HP	**High.** There is suitable habitat for this species throughout the naturally vegetated areas in the BSA.

Common Name/ Scientific Name	**Status State[a]**	**Habitat Description**	**Habitat Present/ Absent[b]**	**Potential to Occur Rationale**
		riparian woodland, particularly in areas with sparse vegetation and open areas. Found from Ventura County to Baja California.		
coast horned lizard (*Phrynosoma blainvillii*)	CSC	Found in arid and semi-arid climates within chaparral and coastal sage scrub habitats, primarily below 2,000 feet above mean sea level (amsl). Critical factors are loose soils with a high sand content; an abundance of native ants or other insects, especially harvester ants (*Pogonomyrmex* spp.); and both sunny basking spots and dense cover for refuge.	HP	**Moderate.** This species could occur in the BSA wherever sage scrub habitats or natural waterways occur. A number of recorded sightings of this species are from areas outside the BSA, along the Santa Clara River or in the Santa Monica Mountains (CDFW 2020). Its status in the general BSA and surrounding area may be underrepresented.
two-striped gartersnake (*Thamnophis hammondii*)	CSC	Often occurs in water. Known to inhabit intermittent streams with rocky beds bordered by willow thickets or other dense vegetation. Will also inhabit large riverbeds if riparian vegetation is available. Even occurs in artificial impoundments if both aquatic vegetation and suitable prey (i.e., small amphibians and fish) are present.	HP	**Moderate.** There is one historic (1995) record of this species occurring immediately north of the BSA in Conejo Creek, which had experienced scouring (i.e., the snake may have been washed downstream) (CDFW 2020). Based on the presence of perennial water within the BSA, such as in Conejo Creek and its tributaries, and the species' relative rarity in the area, two-striped gartersnake has moderate potential for occurrence within the BSA.
south coast gartersnake (*Thamnophis sirtalis* pop. *1*)	CSC	Essential habitat factors include a permanent water source, topography with a low gradient, and dense, multi-storied riparian vegetation. Uses a wide variety of habitats, often near ponds, streams, wetlands, and marshes. Generally avoids swift water.	HP	**Moderate.** Based on the presence of perennial water within the BSA, such as in Conejo Creek and its tributaries, and the species' relative rarity in the area, south coast gartersnake has moderate potential for occurrence within the BSA.

Common Name/ Scientific Name	Status State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
Birds				
golden eagle (*Aquila chrysaetos*)	FP	Forages in grassland and open savannah habitats of many types. Tolerates considerable variation in topography and elevation. Prefers to hunt moderate-size prey, especially California ground squirrels (*Spermophilus beecheyi*) and rabbits, but will occasionally take larger prey, such as mule deer (*Odocoileus hemionus*) fawns. Nests on cliffs of all heights and occasionally in large trees in open areas, especially in rugged open habitats with canyons and escarpments. Very sensitive to human disturbance, especially near nest sites.	Nesting: HA Foraging: HP	**Absent (nesting)/Low (foraging).** There is no suitable nesting habitat for this species within the BSA. However, there is foraging habitat throughout the open agricultural fields within the BSA. The species has nesting records from areas in the Simi Hills and the Santa Monica Mountains, areas within approximately 6 miles of the BSA (CDFW 2020). Considering the presence of foraging habitat and the distance to the nearest known nesting areas, this species is still expected to have low potential for occurrence because of the lack of nesting habitat in the BSA.
northern harrier (*Circus cyaneus*)	CSC	Hunts low to the ground, mostly in open country. Nests on the ground in large undisturbed tracts with wetlands (e.g., at the edges of marshes, within emergent wetlands, at the edges of rivers and lakes) as well as grasslands with low, thick vegetation. Prey diversity is high, although small mammals are most commonly taken. It was formerly a fairly common breeder in much of coastal Southern California but is now nearly extirpated because of the loss of native open habitats, especially marshes. It remains fairly common in open country with low human disturbance during migration and in winter. Northern harrier is considered a CSC when nesting.	Nesting: HA Foraging: HP	**Absent (nesting)/Present (foraging).** There is no suitable nesting habitat within the BSA for this species; therefore, it is not expected to nest within the BSA. Foraging habitat is present within the BSA; this species was detected foraging during field surveys.

Common Name/ Scientific Name	**Status State[a]**	**Habitat Description**	**Habitat Present/ Absent[b]**	**Potential to Occur Rationale**
white-tailed kite (*Elanus leucurus*)	FP	Species hunts in open country. This strongly lowland species is apparently rare anywhere in California above 2,000 feet amsl. Nests are flimsy and located low in trees and large shrubs near foraging areas (e.g., savannahs and the edges between open habitat and woodland or forest areas). Diet is largely restricted to small mammals such as voles and mice.	Nesting: HA Foraging: HP	**Absent (nesting)/Present (foraging).** There is no suitable nesting habitat within the BSA for this species; therefore, it is not expected to nest within the BSA. This species was detected foraging during field surveys.
American peregrine falcon (*Falco peregrinus anatum*)	D	Occurs in a variety of habitats across North America, often near water. Typically nests on cliff faces and forages in open areas. Also nests in urban areas (e.g., on tall structures such as water towers and skyscrapers) and forages on local rock pigeon (*Columba livia*) populations.	Nesting: HP Foraging: HP	**High.** There is suitable nesting habitat wherever tall buildings are found in the BSA. Buildings such as the City National Bank building in Oxnard would provide perfect nesting opportunities for this species. This species has high potential with respect to nesting and foraging in the BSA.
yellow-breasted chat (*Icteria virens*)	CSC	Nests in low thickets in dense riparian habitats. Eats a variety of invertebrates. Considered a local and uncommon breeder across Southern California. The species is considered a CSC when nesting.	Nesting: HP Foraging: HP	**High (nesting)/Present (foraging).** Suitable nesting and foraging habitat occur throughout the BSA wherever dense riparian habitat is present. This species was detected during field surveys. It very likely nested within the BSA, given its presence throughout the 4 months of riparian bird surveys.
yellow warbler (*Setophaga petechia*)	CSC	Nests in the upper story of riparian habitats in Southern California. It is also a common, widespread migrant in spring and fall, occupying a wide variety of habitats at that time. The species is considered a CSC when nesting.	Nesting: HP Foraging: HP	**High (nesting)/Present (foraging).** Suitable nesting and foraging habitat occur throughout the BSA wherever tall riparian or eucalyptus trees are present. This species was detected during field surveys. It very likely nested within the BSA, given its presence throughout the 4 months of riparian bird surveys.

Common Name/ Scientific Name	Status State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
Mammals				
pallid bat (*Antrozous pallidus*)	CSC	Occurs throughout Southern California, from the coast to mixed-conifer forests, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Yearlong resident throughout most of its range. The species is not thought to migrate; therefore, 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	**Moderate.** Suitable foraging and roosting habitat throughout the BSA, particularly within the Conejo Grade portion of the project. This species has been detected within the adjacent Simi Hills (CDFW 2020).
Dulzura pocket mouse (*Chaetodipus californicus femoralis*)	CSC	Occupies a wide variety of habitats year-round within its range. These include montane hardwood, valley foothill hardwood-conifer, valley foothill hardwood, annual grassland, sagebrush, chamise-redshank and montane chaparral, and coastal scrub habitats. This species occurs in greatest abundance in habitats where grassland and chaparral are in proximity. Found primarily at moderate elevations.	HP	**Low.** Suitable habitat within the BSA is scarce; only a few areas have relatively undisturbed sage scrub and grassland habitats. The lack of recorded sightings within the BSA supports the determination that this species is unlikely to occur on-site.
Mexican long-tongued bat (*Choeronycteris mexicana*)	CSC	Feeds on nectar and pollen from night-blooming succulents, such as agave and columnar cacti. Roosts in the twilight areas of caves, mines, rock crevices, and abandoned buildings. Occasionally found in San Diego County, which is on the periphery of its range.	HA	**Absent.** The BSA is outside of the species' known distribution. A historic (1994) capture of one bat in Ventura County most likely involved a stray (CDFW 2020).
western mastiff bat (*Eumops perotis californicus*)	CSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodland, coastal scrub, grassland, and chaparral habitats. Roosts in the crevices of	HP	**Moderate.** Foraging and roosting habitat only. Suitable foraging habitat is present throughout the BSA, particularly within the Conejo Grade portion of the project. Marginally suitable roosting habitat is

Common Name/ Scientific Name	Status State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
		vertical cliff faces, high buildings, and tunnels. Travels widely when foraging.		available at buildings and bridges within the BSA; however, no tall cliff faces, the preferred roosting habitat for this species, are present. This species has been detected within the surrounding Simi Hills and Santa Monica Mountains (CDFW 2020).
western red bat (*Lasiurus blossevillii*)	CSC	Typically, a solitary bat. Roosts primarily in trees with dense canopies, often in edge habitats adjacent to streams or open fields, and in orchards in the Central Valley. Strongly associated with intact, mature riparian forests.	HP	**Moderate.** There is suitable roosting habitat for this species in the BSA wherever there is mature riparian habitat. Foraging habitat is present throughout the BSA, particularly along waterways and in agricultural areas. This species has been detected along waterways within the adjacent Santa Monica Mountains (CDFW 2020).
San Diego desert woodrat (*Neotoma lepida intermedia*)	CSC	Found in dry and/or sunny shrublands, especially areas with cacti and abundant rocks and crevices. Sage scrub communities are frequently occupied. Does not require a source of drinking water.	HP	**Moderate.** There is suitable habitat for this species in areas of relatively undisturbed scrub habitat within the BSA.
American badger (*Taxidea taxus*)	CSC	Associated with large grasslands and sparse sage scrub habitats. Most abundant in the dry, open stages of shrub, forest, and herbaceous habitats. Occupies large dens/burrows. Requires friable soils for digging dens.	HP	**Low.** There is suitable habitat for this species in the BSA wherever sage scrub or grassland habitat occurs. A recent (2013) recorded occurrence of an active badger den is from an area less than 1 mile south of the BSA in Calleguas Creek (CDFW 2020). However, this species is generally uncommon/rare in the region. Despite the nearby occurrence, it probably has only low potential to occur within the BSA.

[a.] Status Codes
State
D = Delisted
CSC = California Species of Concern
FP = Fully Protected

[b.] Habitat Presence/Absence Codes
HP = Habitat is or may be present; the species may be present.
HA = No habitat present, and no further work needed.

A bat habitat assessment was conducted in December 2019 at all bridges, crossings, and culverts larger than 5 feet in diameter within the BSA. Detailed information on methodology, field surveys, personnel, and site conditions can be found in the NES (Caltrans 2021a). The results of the assessment confirmed the presence of potential roosting habitat within structures throughout the BSA (Figure 2.4.4-2 in Appendix I). In addition, skirted palm trees extant throughout the BSA, particularly within developed areas, contain bat habitat for tree-dwelling species.

Sign of bat use (e.g., guano) was observed during field surveys within the BSA under the Santa Clara River Bridge and on the overhang of the Conejo Creek Bridge. Although no bat-roosting sign was detected at other structures with suitable roosting habitat, roosting bats could move into the area prior to construction.

Non-Listed Special-Status Wildlife Species

Suitable habitat that could support non-listed special-status wildlife species is present within the BSA, particularly within the native vegetation communities along the Conejo Grade and the riparian areas associated with large drainages and Alessandro Lagoon. Biological reconnaissance and focused surveys conducted from March through November 2019 and March through July 2020 resulted in the observation of four non-listed special-status wildlife species: white-tailed kite (fully protected [FP]), northern harrier (CSC), yellow warbler (CSC), and yellow-breasted chat (CSC). Both yellow warbler and yellow-breasted chat were observed within the riparian corridor of the Santa Clara River during 2020 field surveys; the species presumably nested on-site, based on its continued presence throughout 4 months of riparian bird surveys. In addition, juvenile yellow-breasted chats were observed within the Santa Clara River portion of the BSA (see Figure 2.4.5-3 in Appendix I).

One additional non-listed special-status species is known to occur within the BSA but was not observed during site visits and surveys: Southern California legless lizard (*Anniella stebbinsi*; CSC). The 11 remaining non-listed special-status species (i.e., arroyo chub [*Gila orcuttii*; CSC], California glossy snake [*Arizona elegans occidentalis*; CSC], coastal whiptail [*Aspidoscelis tigris stejnegeri*; CSC], coast horned lizard [*Phrynosoma blainvillii*; CSC], two-striped gartersnake [*Thamnophis hammondii*; CSC], south coast gartersnake [*Thamnophis sirtalis* pop. 1; CSC], golden eagle [*Aquila chrysaetos*; FP], American peregrine falcon [*Falco peregrinus anatum*; FP], Dulzura pocket mouse [*Chaetodipus californicus femoralis*; CSC], San Diego desert woodrat [*Neotoma lepida intermedia*; CSC], and American badger [CSC]) were not detected; however, the surveys were not focused on those species, which could move onto the site prior to construction. Non-listed special-status species with potential to occur within the BSA are discussed in Table 2.4.4-1.

Nesting Birds

Suitable nesting habitat for native bird species protected under the MBTA and CFG Code is present in the native riparian and scrub habitats along drainages, within the open space areas of the BSA, and on some bridge structures. Trees and shrubs within the developed portions of the BSA also provide suitable nesting habitat. During field

surveys for the project, nesting native birds or nesting behaviors (e.g., carrying nesting material, singing throughout the breeding season) were detected. The species included yellow warbler, yellow-breasted chat, Cooper's hawk, northern rough-winged swallow, American crow, California towhee, song sparrow, common yellowthroat (*Geothlypis trichas*), and bushtit (*Psaltriparus minimus*). Northern rough-winged swallow nests were detected at Mission Oaks Bridge, Santa Clara River Bridge, and Calleguas Creek Bridge during field surveys performed for the project. Nesting bird species with potential to occur within the BSA are discussed in Table 2.4.4-1.

2.4.4.3 Environmental Consequences

Alternative 1: No-Build Alternative

If the project is not constructed, then no new or additional impacts on non-listed special-status wildlife species would occur, beyond those that would be expected to occur from operation of the existing facility.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Special-Status Bats

Temporary Impacts

Bridge construction or the removal or trimming of suitable roost trees could harm roosting bats as a direct result of implementation of Build Alternative 2 or 3. Temporary indirect effects, such as noise, vibration, dust, night lighting, and human encroachment from construction, could disturb roosting bats should they be present within the BSA. In addition, construction could temporarily impede access to roost sites in vegetation or holes and crevices in bridges and culverts. Although project construction could temporarily limit potential roosting habitat within bridges, overcrossings, and culverts, other roosts would be available in the surrounding area. Furthermore, project work along the alignment would be in phases; therefore, not all potential roost structures would be lost at one time. In addition, all bridge work would be temporary. No bridges or other potential roosting structures would be permanently removed as a part of the project. Consequently, project construction would not displace bats from the area. With implementation of avoidance and minimization measures **AS-1** through **AS-4**, neither Build Alternative 2 nor 3 is expected to negatively affect bats or their roosting habitat.

Direct effects through construction could temporarily restrict access to roost sites in the holes and crevices of bridges, culverts, and vegetation. Implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would provide protection for potential bat habitat adjacent to the project footprint during construction and minimize temporary indirect and direct effects.

Permanent Impacts

Special-status bats have potential to occur within suitable habitat (e.g., skirted palm trees, culverts, bridges, overpasses) in the BSA. Permanent impacts could include the direct loss of roosting sites or mortality due to the removal of suitable habitat such as

palm trees or suitable concrete structures for roost habitat. In order to prevent permanent impacts, avoidance and minimization measures **AS-1** through **AS-4** are proposed to prevent special-status bats from being permanently and negatively affected by project activities.

Non-Listed Special-Status Wildlife and Nesting Bird Species

Temporary Impacts

Non-listed special-status wildlife and nesting bird species that may be temporarily affected include prior non-listed special-status species as well as foraging raptors such as golden eagle, white-tailed kite, northern harrier, and American peregrine falcon. Temporary impacts on arroyo chub could result from a reduction in water quality, changes in bed materials or channel contours/slopes, and increased siltation downstream, resulting in direct and indirect effects on both arroyo chub and its suitable habitat. For reptile species, indirect temporary impacts could result from the degradation of habitat through noise, dust, water pollution, human presence, and increased fire risk. Temporary indirect effects such as increased noise and human presence have the potential to affect the non-listed raptor species listed above as well as yellow warbler, yellow-breasted chat, and other commonly occurring bird species nesting in the area. The identified mammal species listed above could also experience temporary impacts resulting from construction noise, human presence, and increased risk of predation.

When surface water is present, suitable habitat for arroyo chub is present within the BSA portions of the Santa Clara River, Calleguas Creek, and Conejo Creek. Although no project construction would occur within or adjacent to the Santa Clara River channel, construction work would occur within the Calleguas Creek and Conejo Creek channels as a result of bridge expansion (e.g., expanded walls, piers, abutments). If water diversion/dewatering activities are necessary within drainages that support arroyo chub, then individuals could be temporarily trapped or prevented from leaving the affected work area. Project construction activities would also have the potential to temporarily decrease water quality, change bed materials or existing channel contours or slopes, and increase downstream siltation, resulting in temporary direct and indirect effects on both arroyo chub and its suitable habitat during construction. However, implementation of avoidance and minimization measures **AS-5** through **AS-9** would reduce impacts on arroyo chub, if present, under both Build Alternatives 2 and 3.

During construction of the project, potentially suitable habitat for Southern California legless lizard, California glossy snake, coast horned lizard, coastal whiptail, two-striped gartersnake, and south coast gartersnake would be removed (see Section 2.4.1, *Natural Communities*); however, any temporarily removed riparian or coastal scrub habitat would be restored to its original condition. Indirect impacts (e.g., degradation of habitat through noise, dust, water pollution, human presence, increased fire risks) on potential habitat adjacent to the project limits of disturbance could also occur during construction. Impacts on the aforementioned species, should they be present, are expected to be temporary under both Build Alternatives 2 and 3. Impacts would be avoided, minimized, and/or mitigated with implementation of measures **NC-1** through

NC-13 (Section 2.4.1, *Natural Communities*), **TE-4** (Section 2.4.5, *Threatened and Endangered Species*), and **AS-5** through **AS-9** and **AS-11** through **AS-14**.

Suitable habitat for foraging golden eagle, white-tailed kite, and northern harrier is present in the BSA, primarily within the open areas in the agricultural fields and along the Conejo Grade. No nesting habitat for these species is present. Given that construction would occur primarily along the roadway in areas with limited foraging capacity, the project would not substantially reduce foraging habitat for the species. Any foraging individuals would avoid the work area during construction. Therefore, substantial impacts on the species are not anticipated. Implementation of avoidance and minimization measure **AS-10** would ensure that impacts on golden eagle, white-tailed kite, and northern harrier, if present, would be minimal during construction under Build Alternatives 2 and 3.

Nesting and foraging habitat for American peregrine falcon occurs within urban areas of the BSA where tall buildings and rock pigeons are present. Suitable habitat for this species occurs outside the project's limits of disturbance; therefore, no direct impacts on American peregrine falcon are anticipated as a result of project construction. Although construction work may result in some indirect effects (e.g., increased noise, human presence), such effects would be expected to be minor because the species has adapted to living in an urban environment. In addition, implementation of avoidance and minimization measures **AS-10** through **AS-14**, including preconstruction nesting bird surveys and monitoring (measure **AS-10**), would ensure that potential impacts on nesting American peregrine falcon, if present, would not occur as a result of either Build Alternative 2 or 3.

Nesting habitat for yellow warbler and yellow-breasted chat is present within the riparian habitat associated with the Santa Clara River, Calleguas Creek, and Alessandro Lagoon. Temporary impacts on the species could occur if nesting occurs within or adjacent to the BSA. Impacts could include disturbance from construction noise and related activities, increased risk of predation, and degradation of suitable habitat. However, implementation of avoidance and minimization measures **AS-10** through **AS-14**, including preconstruction nesting bird surveys and monitoring (measure **AS-10**), would ensure that impacts on commonly occurring nesting bird species, including yellow warbler and yellow-breasted chat, if present, would not occur as a result of either Build Alternative 2 or 3.

Suitable habitat for American badger, Dulzura pocket mouse, and San Diego desert woodrat is present within the native vegetation communities in the BSA. As a result, temporary impacts on these species, if present, could occur. Project construction could result in the loss and degradation of suitable habitat, disturbance from construction activities, and increased risk of predation. However, implementation of avoidance and minimization measures **AS-5** through **AS-10** would ensure that impacts on these species, if present, would be minimal under both Build Alternatives 2 and 3. In addition, implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) and **AS-8** through **AS-11** would minimize potential indirect

impacts on non-listed special-status wildlife species, common nesting bird species, and their habitat adjacent to the project limits.

Permanent Impacts

Non-listed special-status wildlife species with potential to be permanently affected include fish species such as arroyo chub (i.e., direct effects through mortality due to water diversions or dewatering); reptile species, including Southern California legless lizard, California glossy snake, coast horned lizard, coastal whiptail, two-striped gartersnake, and south coast gartersnake (i.e., direct mortality due to vegetation clearing, grading, or water diversion or dewatering activities); mammal species, including American badger, Dulzura pocket mouse, and San Diego desert woodrat (i.e., direct effects, including mortality through vegetation clearing and grading); and bird species, including yellow warbler and yellow-breasted chat (i.e., direct effects, consisting of loss of nesting habitat or nest destruction). To prevent direct effects as a result of permanent impacts, avoidance and minimization measures **TE-4** (Section 2.4.5, *Threatened and Endangered Species*) and **AS-11** through **AS-14** would be implemented, thereby ensuring no direct mortality of special-status wildlife species. Implementation of avoidance and minimization measures **TE-4** (Section 2.4.5, *Threatened and Endangered Species*) and **AS-10** would ensure that direct mortality of passerine birds and raptors would not occur, nor would abandonment of nests with eggs and/or young. Construction would be in compliance with the MBTA and CFG Code.

2.4.4.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on animal species would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Special-Status Bats

Implementation of avoidance and minimization measures **AS-1** through **AS-4** would ensure that no direct take of bat species would occur. Implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would provide protection for potential bat habitat adjacent to the project footprint during construction.

AS-1: Bat Preconstruction Surveys. 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 used by bats for day roosting and/or night roosting, ascertain the level of bat foraging and roosting activity at each of these locations, and perform exit counts and visually determine the approximate

number of bats using the roosts. Acoustic monitoring will also be used during these surveys to identify the bat species present and determine an index of relative bat activity for that site on that specific evening.

AS-2: Bat Maternity Roost Preconstruction Surveys. A qualified bat biologist will survey the BSA prior to construction to assess the potential for maternity roosts in the BSA. The surveys may include a combination of structure and tree inspection, sampling, exit counts, and acoustic surveys.

AS-3: Tree Trimming and Removal Preconstruction Surveys and Restrictions. The removal of mature trees and snags will be minimized to the greatest extent practicable. Prior to tree removal or trimming, large trees and snags will be examined by a qualified bat biologist to ensure that no roosting bats are present. To avoid potential mortality to flightless young, palm-frond trimming, if necessary, will be conducted outside of the maternity season (i.e., April 1–August 31).

AS-4: Bat Maternity-Roost Management. If maternity sites are identified during the preconstruction bat habitat assessment, then no construction activities at that location will be allowed during the maternity season (i.e., April 1–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 the qualified bat biologist, in consultation with CDFW, either as soon as possible after the young have been weaned, outside of the maternity season, or as otherwise approved by the qualified bat biologist, in coordination with CDFW.

Non-Listed Special-Status Wildlife Species and Nesting Birds

Implementation of avoidance and minimization measures **TE-4** (Section 2.4.5, *Threatened and Endangered Species*) and **AS-5** through **AS-14** would ensure that direct mortality of special-status wildlife species would not occur. Implementation of avoidance and minimization measures **TE-4** (Section 2.4.5, *Threatened and Endangered Species*) and **AS-10** would ensure that direct mortality of passerine birds and raptors would not occur, nor would abandonment of nests with eggs and/or young. Construction would be in compliance with the MBTA and CFG Code. Implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) and **AS-5** through **AS-14**, as well as mitigation measure **NC-13** (Section 2.4.1, *Natural Communities*), would minimize potential indirect impacts on special-status wildlife species and their habitat adjacent to the project limits.

AS-5: Material Stockpiling Restrictions. No erodible materials will be deposited into watercourses or areas demarcated with ESA fencing. Vegetation, mud, silt, or debris material or pollutants from construction activities will not be stockpiled within stream channels or on adjacent banks or otherwise allowed to enter a watercourse.

AS-6: Portable Toilet Restrictions. All portable toilets will be placed away from any streams, storm drains, or drainage swales.

AS-7: Equipment Placement Restrictions. No equipment will be placed within a flowing stream or on directly adjacent banks.

AS-8: Aquatic Species Preconstruction Surveys. If construction activities are to occur within drainages containing water, then preconstruction surveys for special-status fish and aquatic wildlife species (e.g., arroyo chub, southwestern pond turtle, two-striped gartersnake, south coast gartersnake) will be performed within 30 days prior to the start of any construction work.

AS-9: Water Diversion and Dewatering Plan. If special-status fish or aquatic wildlife species are found to be present within the project work area during preconstruction surveys, then an isolated work area will be designated and a water diversion will be installed. Water diversion will be conducted outside of the fish spawning season (i.e., February 15–July 31) to the greatest extent feasible. If water diversion/dewatering activities are necessary within drainages that support suitable habitat for special-status fish and aquatic wildlife species, then a water diversion and dewatering plan will be required. The plan will include rescue/relocation of special-status species by a qualified biologist from an isolated dewatering area prior to water diversion or dewatering, screening of pump intakes (with details to be determined in the plan), and biological monitoring for special-status fish and aquatic wildlife during water diversion or dewatering. Any special-status fish or aquatic wildlife species within the diversion area will be relocated upstream or downstream of the work area by a qualified biologist prior to the start of any work within water. A combination of seining, dip netting, and hand capture will be used. Prior to activities that may involve handling any special-status species, the qualified biologist will ensure that all participants' hands are free of sunscreen, lotion, or insect repellent. Once construction work within the water is complete, exclusion nets will be removed. Construction work within drainages containing water will be minimized to the maximum extent feasible.

AS-10: Nesting Bird Preconstruction Surveys and Management. A nesting bird management plan will be drafted to provide a comprehensive approach for handling nesting birds prior to the commencement of construction. It will include the following items:

- If vegetation clearing is to occur during the avian nesting season (i.e., February 1–September 1), then the designated biologist will conduct a preconstruction survey of construction areas and adjacent habitat in the near vicinity no more than 72 hours prior to construction to identify the locations of avian nests. Should nests be found, an appropriate buffer will be established around each nest site by a qualified biologist/biological monitor until nesting is completed.
- If there is a lapse in construction activities longer than 7 days during the bird-breeding season, then nesting-bird habitat within the BSA will be resurveyed.
- Any bridges with swallow nesting habitat will be cleared of all swallow nests prior to any work conducted between February 1 and September 1. Swallow nests will be removed under the guidance of a qualified biologist prior to February 1, before

swallows return to the nesting site. The removal of swallow nests that are under construction must be repeated as frequently as necessary to prevent nest completion or until a nest-exclusion device is installed (e.g., netting or a similar mechanism that keeps swallows from building nests). Nest removal and exclusion-device installation will be monitored by a qualified biologist. Such exclusion efforts must be continued to keep the structures free of swallows, as well as swifts using bridge holes, until September 1 or completion of construction. All nest-exclusion techniques will be coordinated between resource agencies, as applicable.

AS-11: Sensitive Wildlife Preconstruction Clearance Surveys. Preconstruction clearance surveys for non-listed state special-status wildlife species will be performed within 48 hours prior to construction to flush the species (i.e., encourage them to move) from the construction footprint. No nesting birds will be flushed during the nesting season. Bats will not be flushed but will be protected as specified in measures **AS-1** through **AS-4**. Amphibians, reptiles, and burrowing wildlife will be relocated from the site of temporary or permanent impacts, as feasible, during preconstruction clearance surveys.

AS-12: Night Lighting Management. To the extent feasible, no nighttime work will be conducted in areas adjacent to suitable habitat for special-status wildlife species. If the work has to be performed during nighttime hours, then the lights will be shielded and/or directed away from the habitat to prevent light intrusion into the habitat area.

AS-13: Pet Restrictions. No pets will be allowed in, or adjacent to, the project site.

AS-14: Waste Management. To avoid attracting predators of special-status animal species, the project site will be kept clean of debris to the extent possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site.

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2.4.5 Threatened and Endangered Species

2.4.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is FESA (16 USC Section 1531, et seq.; see also 50 CFR Part 402). This act and later amendments provide for the conservation of endangered and threatened species as well as the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as FHWA (and the Department, as assigned), are required to consult with USFWS and NOAA Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions that would be 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 an action with the intent to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct."

California has enacted a law at the state level similar to FESA. CESA (CFG Code Section 2050, *et seq*.) emphasizes early consultation to avoid potential impacts on rare, endangered, and threatened species and develop appropriate planning to offset project-related losses of listed species and their essential habitats. CDFW is the agency responsible for implementing CESA. Section 2080 of the CFG Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the CFG Code as an action with the intent to "hunt, pursue, catch, capture, or kill or an attempt to hunt, pursue, catch, capture, or kill." CESA allows take that occurs incidental to 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, CDFW may also authorize impacts on CESA species by issuing a consistency determination under Section 2080.1 of the CFG 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 sovereign rights for purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, continental shelf fishery resources, and fishery resources in special areas.

2.4.5.2 Affected Environment

Unless otherwise noted, the information from this section is based on the NES (Caltrans 2021a) and biological assessment (BA) (Caltrans 2021b) prepared for the project. References used in the NES and BA are not carried over into this section.

Federal and Resource Agency Consultation

Federal Consultation

Informal consultation with USFWS for monarch butterfly and least Bell's vireo was concluded on July 15, 2021. USFWS concurred with Caltrans' determination of "may affect, not likely to adversely affect" for the project's impact on least Bell's vireo and provided recommended avoidance and minimization measures for monarch butterfly. No consultation with NOAA Fisheries was required for the project. Caltrans determined that the proposed project would have no effect on the remaining federally listed species and federally designated critical habitat included in the USFWS official species list (see Table 2.4.5-1). No further consultation for these species is anticipated.

Table 2.4.5-1. Federally and State-Listed or Candidate Species Potentially Affected by the Project

Common Name	Scientific Name	Status	Federal Determination	State Take Statement
Species				
marsh sandwort	*Arenaria paludicola*	FE/SE	No effect	Take will not occur
Braunton's milk-vetch	*Astragalus brauntonii*	FE	No effect	N/A
Ventura marsh milk-vetch	*Astragalus pycnostachyus* var. *lanosissimus*	FE/SE	No effect	Take will not occur
Nevin's barberry	*Berberis nevinii*	FE/SE	No effect	Take will not occur
salt marsh bird's-beak	*Cordylanthus maritimus* ssp. *maritimus*	FE/SE	No effect	Take will not occur
Agoura Hills dudleya	*Dudleya cymosa* ssp. *agourensis*	FT	No effect	N/A
marcescent dudleya	*Dudleya cymosa* ssp. *marcescens*	FT	No effect	N/A
Santa Monica Mountains dudleya	*Dudleya cymosa* ssp.*ovatifolia*	FT	No effect	N/A
Conejo dudleya	*Dudleya parva*	FT	No effect	N/A
Verity's dudleya	*Dudleya verityi*	FT	No effect	N/A
California Orcutt grass	*Orcuttia californica*	FE/SE	No effect	Take will not occur
Lyon's pentachaeta	*Pentachaeta lyonii*	FE/SE	No effect	Take will not occur
Gambel's watercress	*Rorippa gambelii*	FE/ST	No effect	Take will not occur
Crotch's bumble bee	*Bombus crotchii*	SC	N/A	Take will not occur
vernal pool fairy shrimp	*Branchinecta lynchi*	FT	No effect	N/A
monarch butterfly	*Danaus plexippus*	FC	May affect, not likely to adversely affect	N/A

Common Name	Scientific Name	Status	Federal Determination	State Take Statement
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	No effect	N/A
black abalone	*Haliotis cracherodii*	FE	No effect	N/A
white abalone	*Haliotis sorenseni*	FE	No effect	N/A
riverside fairy shrimp	*Streptocephalus woottoni*	FE	No effect	N/A
southern green sturgeon DPS	*Acipenser medirostris*	FT	No effect	N/A
Santa Ana sucker	*Catostomus santaanae*	FT	No effect	N/A
tidewater goby	*Eucyclogobius newberryi*	FE	No effect	N/A
unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	FE/SE	No effect	Take will not occur
Southern California steelhead DPS	*Oncorhynchus mykiss*	FE/SC	No effect	N/A
southwestern pond turtle	*Actinemys pallida*	FC	No effect	N/A
foothill yellow-legged frog, South Coast DPS	*Rana boylii* pop. *6*	FPE/SE	N/A	Take will not occur
California red-legged frog	*Rana draytonii*	FT	No effect	N/A
western spadefoot	*Spea hammondii*	FC	No effect	N/A
tricolored blackbird	*Agelaius tricolor*	ST	N/A	Take will not occur
burrowing owl	*Athene cunicularia*	SC	N/A	Take will not occur
western snowy plover	*Anarhynchus nivosus nivosus*	FT	No effect	N/A
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT/SE	No effect	Take will not occur
southwestern willow flycatcher	*Empidonax traillii extimus*	FE/SE	No effect	Take will not occur
California condor	*Gymnogyps californianus*	FE/SE	No effect	Take will not occur
California black rail	*Laterallus jamaicensis coturniculus*	ST	N/A	Take will not occur
Belding's savannah sparrow	*Passerculus sandwichensis beldingi*	SE	N/A	Take will not occur
coastal California gnatcatcher	*Polioptila californica californica*	FT	No effect	N/A
light-footed Ridgway's rail	*Rallus longirostris levipes*	FE/SE	No effect	Take will not occur
bank swallow	*Riparia riparia*	ST	N/A	Take will not occur
California least tern	*Sterna antillarum browni*	FE/SE	No effect	Take will not occur

Common Name	Scientific Name	Status	Federal Determination	State Take Statement
least Bell's vireo	*Vireo bellii pusillus*	FE/SE	May affect, not likely to adversely affect	Take will not occur
Mountain lion (Southern California/Central Coast ESU)	*Puma concolor*	SC	N/A	Take will not occur*
North Pacific loggerhead sea turtle	*Caretta caretta*	FE	No effect	N/A
East Pacific green sea turtle	*Chelonia mydas*	FT	No effect	N/A
leatherback sea turtle	*Dermochelys coriacea*	FE	No effect	N/A
olive ridley sea turtle	*Lepidochelys olivacea*	FE	No effect	N/A
Guadalupe fur seal	*Arctocephalus townsendii*	FT/ST	No effect	N/A
sei whale	*Balaenoptera borealis*	FE	No effect	N/A
blue whale	*Balaenoptera musculus*	FE	No effect	N/A
fin whale	*Balaenoptera physalus*	FE	No effect	N/A
North Pacific right whale	*Eubalaena japonica*	FE	No effect	N/A
humpback whale, Mexico DPS	*Megaptera novaeangliae*	FT	No effect	N/A
southern resident killer whale	*Orcinus orca*	FE	No effect	N/A
sperm whale	*Physeter macrocephalus*	FE	No effect	N/A
Critical Habitat				
Southern California steelhead DPS	N/A	CH	No effect	N/A
monarch butterfly proposed critical habitat	N/A	CH	No effect	N/A
southwestern willow flycatcher critical habitat	N/A	CH	No effect	N/A
western snowy plover critical habitat	N/A	CH	No effect	N/A

*With implementation of avoidance, minimization, and mitigation measures
CH = Critical Habitat; DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit; FC = Federal Candidate; FE = Federally Endangered; FT = Federally Threatened; N/A = Not Applicable; SC = State Candidate; SE = State Endangered; ST = State Threatened

The proposed project would not result in take of any state-listed species under CESA that is also federally listed and included in the USFWS and/or NOAA Fisheries lists for the project (i.e., marsh sandwort, Ventura marsh milk-vetch, salt marsh bird's-beak, Lyon's pentachaeta, Gambel's watercress, California Orcutt grass, southwestern willow flycatcher, California condor, light-footed clapper rail, California least tern, least Bell's vireo, Guadalupe fur seal). As such, no approval or authorization under CESA is expected to be required, and no coordination with CDFW on the proposed action is anticipated for these species.

An official USFWS species list was generated on July 7, 2020. During the drafting of this EIR/EA, more than 90 days had elapsed since the original USFWS official species list for the project was obtained; therefore, an updated list was generated on August 5, 2026 (Attachment I-1 in Appendix I). An updated CNDDB list was also generated because the data from the 2020 list included in the NES had expired (Attachment I-2 in Appendix I). The NOAA Fisheries Species List Tool was used to obtain an updated species list for coastal regions bordering the project area (Attachment I-3 in Appendix I).

A literature review determined that 55 federally and/or state-listed threatened or endangered species or candidates for listing may occur within the BSA. Thirty-five of the 55 threatened or endangered species identified in the literature review were determined to be absent because of a lack of suitable habitat. Potential habitat for the following 20 candidate, threatened, or endangered species was judged present within the BSA: marsh sandwort (*Arenaria paludicola*), Braunton's milk-vetch (*Astragalus brauntonii*), Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*), Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*), Conejo dudleya (*Dudleya abramsii* ssp. *parva*), Verity's dudleya (*Dudleya verityi*), Lyon's pentachaeta (*Pentachaeta lyonii*), Crotch's bumble bee (*Bombus crotchii*), monarch butterfly, steelhead (Southern California steelhead Distinct Population Segment [DPS]), southwestern pond turtle (*Actinemys pallida*), burrowing owl, western snowy plover, California least tern (*Sterna antillarum browni*), coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and mountain lion (Southern California/Central Coast Evolutionarily Significant Unit [ESU]). A literature review was performed for western snowy plover, mountain lion, and monarch butterfly to obtain more information on local occurrences and species' ranges within the study area. Focused surveys were conducted for federally and/or state-listed plant species; protocol surveys were conducted for burrowing owl, coastal California gnatcatcher, southwestern willow flycatcher, and least Bell's vireo, based on habitat suitability, as determined through the initial habitat assessments.

Study areas for the species were applied to the project limits of disturbance as follows: (1) a 500-foot buffer was used for protocol bird surveys, including burrowing owl, coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher; (2) a 250-foot buffer was used for the general reconnaissance survey and vegetation mapping; and (3) a 100-foot buffer was used for the focused plant surveys. Refer to Figure 2.4.1-1 for the limits of each study area. All other species with potential to occur within the BSA have no survey requirements. Detailed information on methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a).

Candidate, threatened, and endangered plant and animal species evaluated for the proposed project, as well as their habitat requirements, regulatory status, and potential for occurrence within the BSA, are listed in Table 2.4.5-2 and Table 2.4.5-3, respectively, and described in more detail in the NES and BA reports prepared for the project.

Based on a review of the USFWS critical habitat mapper; the official USFWS Information for Planning and Consultation (IPaC) list of proposed, threatened, and endangered species and critical habitats for the project; and the NOAA Fisheries Species List Tool, it was determined that USFWS-designated critical habitat for western snowy plover is present within the BSA but outside of the project footprint—specifically, at San Buenaventura State Beach, near the west end of the project alignment. NOAA Fisheries–designated critical habitat for the Southern California steelhead DPS and USFWS-designated critical habitat for southwestern willow flycatcher is present along the Santa Clara River portions of the BSA, adjacent to the project limits of disturbance. Critical habitat for these species passes under the bridge at the Santa Clara River; however, this area is not part of the project footprint, and no construction would occur within the Santa Clara River channel. Proposed critical habitat for monarch butterfly also occurs along the western portion of the BSA overlapping known and established overwintering sites.

Table 2.4.5-2. Listed Plant Species Potentially Occurring or Known to Occur in the Project Area

Common Name/ Scientific Name	Status Federal/ State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
marsh sandwort (*Arenaria paludicola*)	E/E/1B.1	Perennial stoloniferous herb	May–August	Freshwater or brackish marshes and swamps in sandy openings. Elevation range: 3–170 meters.	HP	**Absent.** Although suitable habitat is present in the BSA within the freshwater marshes, this species was not detected during 2019 focused rare plant surveys. There are no known extant records of occurrence for this species within the BSA (CDFW 2020).
Braunton's milk-vetch (*Astragalus brauntonii*)	E/–/1B.1	Perennial herb	January–August	Chaparral, coastal scrub, and valley and foothill grassland habitats in recently burned or disturbed areas, usually in sandstone with carbonate layers. Elevation range: 4–640 meters.	HP	**Absent.** Although suitable habitat is present in the BSA within the shrubland and grassland habitats, this species was not detected during 2019 focused rare plant surveys. There are no known extant records of occurrence for this species within the BSA (CDFW 2020).
Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*)	E/E/1B.1	Perennial herb	(June) August–October	Coastal dunes, coastal scrub, and the edges of coastal salt or brackish marshes and swamps. Elevation range: 1–35 meters.	HP	**Absent.** Although suitable habitat is present in the BSA within the coastal dune habitats, this species was not detected during 2019 focused rare plant surveys. There are no known extant records of occurrence for this species within the BSA (CDFW 2020).

Common Name/ Scientific Name	Status Federal/ State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
Nevin's barberry (*Berberis nevinii*)	E/E/1B.1	Perennial evergreen shrub	(February) March–June	Chaparral, cismontane woodland, coastal scrub, riparian scrub. Elevation range: 70-825 meters.	HA	This species was not detected during 2019 focused rare plant surveys. There are no known extant records of occurrence for this species within the BSA (CDFW 2020).
salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)	E/E/1B.2	Annual herb (hemiparasitic)	May–October (November)	Coastal dunes and coastal salt marshes and swamps. Elevation range: 0–30 meters.	HA	Suitable marsh habitat does not exist within the BSA. The freshwater marsh and dune habitat that is present within the BSA lacks the preferred edge habitat and coastal salt habitat where this species typically occurs.
Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*)	T/–/1B.2	Perennial herb	May–June	Chaparral and cismontane woodland habitats in rocky volcanic areas. Elevation range: 200–500 meters.	HP	**Absent.** Suitable habitat in the BSA is limited to shrubland and grassland habitats with rocky volcanic substrates adjacent to the Conejo Grade. This species was not detected during 2019 focused rare plant surveys, and there are no known extant records of occurrence for this species within the BSA (CDFW 2020).
marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*)	T/R/1B.2	Perennial herb	April–July	Chaparral habitats in rocky volcanic areas. Elevation range: 150–520 meters.	HP	**Absent.** Suitable habitat in the BSA is limited to woodland, shrubland, and grassland habitats with rocky volcanic substrates adjacent to the Conejo Grade. This species was not detected during 2019 focused rare plant surveys, and there are no known extant records of occurrence for this species within the BSA (CDFW 2020).

Common Name/ Scientific Name	Status Federal/ State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*)	T/–/1B.1	Perennial herb	March–June	Chaparral and coastal scrub in rocky volcanic or sedimentary areas. Elevation range: 150–1,675 meters.	HP	**Absent.** Suitable habitat in the BSA is limited to shrubland and grassland habitats with rocky volcanic substrates adjacent to the Conejo Grade. This species was not detected during 2019 focused rare plant surveys, and there are no known extant records of occurrence for this species within the BSA (CDFW 2020).
Conejo dudleya (*Dudleya parva*)	T/–/1B.2	Perennial herb	May–June	Coastal scrub, valley, and foothill grassland habitats in rocky or gravelly, clay, or volcanic areas. Elevation range: 60–450 meters.	HP	**Absent.** Suitable habitat in the BSA is limited to shrubland and grassland habitats with rocky volcanic and clay substrates adjacent the Conejo Grade. This species was not detected during 2019 focused rare plant surveys, and there are no known extant records of occurrence for this species within the BSA (CDFW 2020).
Verity's dudleya (*Dudleya verityi*)	T/–/1B.1	Perennial herb	May–June	Chaparral, cismontane woodland, and coastal scrub habitats in rocky volcanic areas. Elevation range: 60–120 meters.	HP	**Absent.** Suitable habitat in the BSA is limited to woodland, shrubland, and grassland habitats with rocky volcanic substrates adjacent the Conejo Grade. This species was not detected during 2019 focused rare plant surveys, and there are no known extant records of occurrence for this species within the BSA (CDFW 2020).

Common Name/ Scientific Name	Status Federal/ State/ CRPR[a]	Lifeform	Blooming Period	Habitat Description	Habitat Present/ Absent[b]	Rationale
California Orcutt grass (*Orcuttia californica*)	E/E/1B.1	Annual herb	April–August	Vernal pools. Elevation range: 15–660 meters.	HA	Suitable vernal pool habitat does not exist within the BSA.
Lyon's pentachaeta (*Pentachaeta lyonii*)	E/E/1B.1	Annual herb	(February) March–August	Openings of chaparral, coastal scrub, and valley and foothill grassland habitats in rocky clay areas. Elevation range: 30–690 meters.	HP	Suitable habitat is present in the coastal scrub and grassland habitats within the BSA.
Gambel's water cress (*Rorippa gambellii*)	E/T/1B.1	Perennial rhizomatous herb	April–October	Freshwater and brackish marshes and swamps. Elevation range: 5–330 meters.	HA	**Absent.** There are only four known extant populations of this species, all within San Luis Obispo County; historically, it has never occurred within Ventura County.

[a.] Status Codes

Federal

E = Federally listed, endangered

T = Federally listed, threatened

State

E = State listed, endangered

T = State listed, threatened

R = Rare

California Rare Plant Rank (CRPR)

1A = Plants that are presumed extinct in California

1B = Plants that are rare, threatened, or endangered in California and elsewhere

2 = Plants that are 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

[b.] Habitat Presence/Absence Codes

HP = Habitat is or may be present; the species may be present.

HA = No habitat present, and no further work needed.

Table 2.4.5-3. Listed Wildlife Species Potentially Occurring or Known to Occur in the Project Area

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
Invertebrates				
Crotch bumble bee (*Bombus crotchii*)	–/CE	Generally inhabits grasslands and scrublands and nests underground. In the winter, this species probably inhabits soft, disturbed soil or winters under leaf litter or other loose debris. Uses plants in the genera *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum.*	HP	**Low.** Suitable habitat for this species is present within the Conejo Grade portions of the BSA but outside the project footprint. However, it is unlikely to occur because it is relatively rare and has limited distribution. It was recently designated as a candidate for listing under CESA. This species has been reported along the coast within the Santa Monica Mountains and at McGrath State Beach (CDFW 2020).
vernal pool fairy shrimp (*Branchinecta lynchi*)	T/–	Restricted to seasonal vernal pools. Vernal pool fairy shrimp prefer pools with cool water and low to moderate levels of dissolved solids; such pools are unpredictable and often short lived.	HA	**Absent.** There is no suitable habitat for this species within the BSA because no vernal pools are present, and none were found during a habitat analysis of the corridor.
monarch butterfly (*Danaus plexippus*)	C/–	Migratory species, with over-wintering populations in California. Over-winters primarily in large trees within wind-protected groves, including *Eucalyptus* spp., Monterey pine (*Pinus radiata*), and cypress (*Cupressus macrocarpa*) groves, at sites that are cool (but above freezing), sheltered from wind, near a moisture source, and exposed to filtered sunlight. Winter roost sites are within the immediate vicinity of the coast, extending from northern Mendocino to Baja California, Mexico.	HP CH	**Present.** There are several known over-wintering roosts within the BSA. The local population of this species has been declining annually; it plummeted in 2018 (Xerces Society 2020). However, this species is still likely to be on-site within the BSA, although it may occur in reduced numbers. Proposed critical habitat is present within the BSA but outside the project footprint.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
quino checkerspot butterfly (*Euphydryas editha quino*)	E/–	Habitat associations seem to be tied to both host plant species and topography. Larvae feed on *Plantago erecta*, *Plantago patagonia*, *Antirrhinum coulterianum*, *Cordylanthus rigidus* (and possibly other *Plantago* species), *Collinsia concolor*, and *Castilleja exserta*. Adults feed on mostly small annuals and often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops. Habitat components have been found in association with, but not restricted to, vernal pools, sage scrub, chaparral, native and nonnative grassland, and open oak and juniper woodland communities. The key component seems to be open-canopied habitats.	HA	**Absent.** The only known locality for this species in the region is considered extirpated. This species is not expected to occur within the BSA or the general region.
black abalone (*Haliotis cracherodii*)	E/–	Occurs in marine coastal waters on rocky substrates in intertidal and shallow subtidal reefs (to about 18 feet deep) along the coast. Typically occurs in habitats with complex surfaces and deep crevices that provide shelter for juveniles and adults.	HA	**Absent.** There is no marine habitat for this species within the BSA.
white abalone (*Haliotis sorenseni*)	E/–	Occurs in marine coastal waters on rocky substrates alongside sand channels, which tend to accumulate the algae they eat. They are usually found at depths of 50 to 180 feet, making them the deepest living abalone species.	HA	**Absent.** There is no marine habitat for this species within the BSA.
Riverside fairy shrimp (*Streptocephalus woottoni*)	E/–	Restricted to deep seasonal vernal pools, vernal pool–like ephemeral ponds, and stock ponds and other human-modified depressions. Species prefers warmwater pools that have low to moderate levels of dissolved solids, are less predictable, and	HA	**Absent.** There is no suitable habitat for this species within the BSA. No vernal pools are present, and none were found during a habitat analysis of the corridor.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
		remain filled for extended periods of time. Basins that support this species are typically dry a portion of the year but usually filled by late fall, winter, or spring; such basins may persist. All known habitat lies within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation.		
Fish				
green sturgeon, Southern DPS (*Acipenser medirostris*)	T/–	Green sturgeon are anadromous fish found along the coast, from Alaska to Mexico. However, they are most commonly found north of Point Conception; this is where abundance increases. The Southern DPS consists of coastal and Central Valley populations south of the Eel River, with the only known spawning population occurring in the Sacramento River.	HA	**Absent.** The BSA is outside the known range of green sturgeon.
Santa Ana sucker (*Catostomus santaanae*)	T/–	Occurs in stream channels with a mosaic of loose sand, gravel, cobbles, and boulder substrates in riffles, runs, pools, and shallow sandy stream margins with cool running water. Historical range included the Santa Clara, Los Angeles, San Gabriel, and Santa Ana River drainage systems in Southern California.	HA	**Absent.** The Santa Clara River population of Santa Ana sucker is not included in the Endangered Species Act listing for the species. Suckers that occur downstream of approximately the Piru dry gap in the Santa Clara River hybridized with Owens suckers (Moyle 2002). Although the current population status of hybridized suckers is unknown at the project site, it is not a federally protected population.
tidewater goby (*Eucyclogobius newberryi*)	E/–	Occurs in lagoons of shallow coastal streams. Prefer salinities below 10 parts per thousand (ppt).	HA	**Absent.** Although this species is known to occur within estuaries of the Santa Clara River and Calleguas Creek, suitable habitat does not exist within the BSA. The species is not documented and is considered absent within the upstream portions of these rivers, including within the BSA.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*)	E/E, FP	Found in slow-moving streams with clear, well-oxygenated water as well as associated pools and eddies. Needs areas with dense vegetation or debris for cover and food. Prefers clean water with low turbidity and temperatures no greater than approximately 75°F (24°C). Uses eddies and vegetated banks for refugia in larger streams with high flows.	HA	**Absent.** The BSA is outside the known range for unarmored threespine stickleback, which are known to occur only in the upper Santa Clara River watershed (east of Interstate 5) (Moyle 2002).
steelhead, Southern California Coast DPS (*Oncorhynchus mykiss*)	E/CE	An anadromous salmonid with physiological tolerance of warm waters in Southern California and changing flow conditions in streams. Populations are known from the Ventura River and Santa Clara River watersheds.	HP CH	**Present.** There is suitable habitat for this species within the BSA. It is known to occur within the Santa Clara River, which is designated critical habitat. As such, it is considered present within the Santa Clara River portion of the BSA. Steelhead habitat within the BSA is considered primarily migratory habitat (Becker et al. 2010; Boughton et al. 2006). The species is not expected to engage in rearing young or be present over summer within the BSA because of the lack of perennial water.
Amphibians				
foothill yellow-legged frog, South Coast DPS (*Rana boylii* pop. *6*)	PE/E	Occurs in the Klamath Mountains; Cascade, north and south Coast, and Transverse Ranges; and Sierra Nevada up to approximately 6,000 feet. Found in creeks or rivers in woodland, forest, mixed-chaparral, and wet-meadow habitats with rock and gravel substrates and low overhanging vegetation along the edges. Usually found near riffles with nearby rocks and sunny banks.	HA	**Absent.** The BSA is outside the current known distribution range of this species. It has been extirpated from the region.
California red-legged frog (*Rana draytonii*)	T/CSC	Inhabits quiet pools in streams as well as marshes and ponds in areas up to about 4,920 feet in elevation. Disperses through	HA	**Absent.** There is no suitable habitat for this species within the BSA; it is presumed absent. The BSA lacks the deep,

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
		riparian communities up to 1 mile under wet conditions. Prefers shorelines with extensive vegetation. Probably very vulnerable to the introduction of exotic competitors such as bullfrogs (*Rana catesbeiana*), crayfish, and nonnative fish.		permanent pools that this species requires for breeding and post-breeding occupancy.
western spadefoot (*Spea hammondii*)	C/CSC	Found primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools and seasonal ponds are essential for breeding and egg laying. Occurs at elevations ranging from sea level to 4,500 feet.	HA	**Absent.** There is no suitable habitat within the BSA for this species; therefore, it is presumed absent. The BSA lacks vernal pools or seasonal ponds for breeding.
Reptiles				
southwestern pond turtle (*Actinemys pallida*)	C/CSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet in elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat for egg-laying.	HP	**Present**. There is suitable habitat for this species in select areas of the BSA that support prolonged aquatic habitat. There are several records of this species in or near the BSA, including in Conejo Creek and at isolated ponds.
North Pacific loggerhead sea turtle (*Caretta caretta*)	E/–	Found throughout the world's marine ecosystems—specifically, the temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans. The most common species of sea turtle in coastal U.S. waters. Nests on sandy beaches; only known Pacific nesting location is in Japan.	HA	**Absent.** There is no marine habitat for this species within the BSA. The BSA is outside the species' nesting range.
East Pacific green sea turtle (*Chelonia mydas*)	T/–	Occurs throughout the world's oceans, primarily nearshore coastal marine communities. Migrates between nearshore foraging grounds and nesting beaches in the tropics and sub-tropics. Breeding takes place in spring and summer. Nesting locations found in the Hawaiian Islands as well as Pacific island territories of the U.S.	HA	**Absent.** There is no marine habitat for this species within the BSA. The BSA is outside the species' nesting range.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
leatherback sea turtle (*Dermochelys coriacea*)	E/–	Found in the Atlantic, Pacific, and Indian Oceans. Within U.S. waters, found in the western and eastern Pacific and northwest Atlantic. Highly migratory turtle species. Documented traveling 3,700 miles between foraging grounds and nesting sites in tropical regions.	HA	**Absent.** There is no marine habitat for this species within the BSA. The BSA is outside the species' nesting range.
olive ridley sea turtle (*Lepidochelys olivacea*)	E/–	Most abundant sea turtle in the world. Found in the southern Atlantic, Pacific, and Indian Oceans. Prefers warmer ocean waters. Nesting grounds are beaches in tropical and sub-tropical regions throughout the world. Nesting season occurs from June through December. Females come ashore and nest all at once in an event called "arribada."	HA	**Absent.** There is no marine habitat for this species within the BSA. The BSA is outside the species' nesting range.
Birds				
tricolored blackbird (*Agelaius tricolor*)	–/T, CSC	Occurs in open country in western Oregon and California and northwestern Baja California. Breeds near fresh water, preferably in emergent wetlands with tall, dense cattails (*Typha* spp.) or tules (*Scirpus* spp.) but also in thickets of willow (*Salix* spp.), blackberry (*Rubus* spp.), wild rose (*Rosa* spp.), and tall herbs and forages in grassland and cropland habitats. For breeding sites, requires open, accessible water; flooded vegetation; and suitable foraging space for prey (i.e., insects).	Nesting: HA Foraging: HP	**Absent (nesting)/Low (foraging).** There is no suitable nesting habitat for this species within the BSA. The species typically nests in freshwater marshes and uses adjacent agricultural lands; therefore, it is presumed absent. Although foraging habitat is present, the lack of nesting habitat makes this species unlikely to occur.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
burrowing owl (*Athene cunicularia*)	-/C, CSC	Inhabits open, dry, and level or nearly level grassland, prairie, desert-floor, or shrubland habitats. All areas should be considered potential habitat if shrub cover is below 30 percent. In coastal Southern California, a substantial number of birds is found in microhabitats that have been highly altered by man, including flood-control and irrigation basins, dikes, and banks; abandoned fields surrounded by agriculture; and road cuts and road margins. There is a strong association between burrowing owls and burrowing mammals, especially ground squirrels (*Spermophilus* spp.), which also occupy man-made niches (e.g., banks and ditches, piles of broken concrete, even abandoned structures). The species is a candidate species for listing at burrowing sites and some wintering sites.	Nesting: HP Foraging: HP	**Absent.** Although there is suitable nesting and foraging habitat within the BSA, focused surveys conducted in 2019 were negative for this species, which is considered absent from the BSA.
western snowy plover (*Anarhynchus nivosus nivosus*)	T/CSC	Requires open, relatively flat areas with little or no vegetation. This includes undisturbed sandy beaches, salt flats, the shores of large alkali lakes, playas, dredge spoils, salt pond levees, and river bars. Sandy, gravelly, or friable soils are needed for nesting. Winter distribution, which is more coastal, includes sandy marine and estuarine shores as well as sewage treatment ponds and agricultural wastewater sites. The species is considered a CSC when nesting.	Nesting: HP Foraging: HP CH	**Present.** Although no surveys were conducted as part of this project, email communications with California State Parks biologist Brooke Sheridan on October 15, 2019, revealed that this species nests and roosts on San Buenaventura State Beach within the BSA and is present year-round, especially in the stretch between San Jon Road and San Pedro Street. Designated critical habitat is present within the BSA but outside the project footprint.

Common Name/ Scientific Name	**Status Federal/ State[a]**	**Habitat Description**	**Habitat Present/ Absent[b]**	**Potential to Occur Rationale**
western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	T/E	Breeds and nests in extensive stands of dense, mature cottonwood/willow riparian forests along the broad lower flood bottoms of larger river systems at scattered locales in western North America. Requires large stands of riparian woodland for nesting sites, typically in excess of 300 feet in width and 25 acres in area.	Nesting: HA Foraging: HP	**Absent (nesting)/Low (migrating).** There is no suitable nesting habitat for this species within the BSA. The BSA lacks the expansive, mature cottonwood-willow forests that this species prefers. However, this species could pass through the area during migration and occur in riparian areas within the BSA while moving through the area.
southwestern willow flycatcher (*Empidonax traillii extimus*)	E/E	Highly restricted distribution in Southern California as a breeder. Occupies extensive riparian forests, wet meadows, and lower montane riparian habitats, primarily below 4,000 feet amsl. Occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows (*Baccharis* spp.), arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.), Russian olive (*Eleagnus* spp.), or other plant species are present, often with a scattered overstory of cottonwood (*Populus* spp.).	Nesting: HP Foraging: HP CH	**Absent (nesting)/Low (migrating).** Although suitable riparian habitat is present within the BSA, the species is known only upstream of the BSA in the Santa Clara River near Santa Paula (CDFW 2020). It was not detected during 2020 protocol surveys and is not expected to nest within the BSA. However, it could still occur within the BSA as a transient species during migration, particularly in riparian areas. Designated critical habitat is present within the BSA.
California condor (*Gymnogyps californianus*)	E/E, FP	Occurs in semi-arid mountainous areas in California, including Big Sur, Pinnacles National Park, the Coast Ranges, southern Sierra Nevada, Tehachapi Mountains, and Transverse 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 on cliffside ledges or in cavities in large trees and snags.	Nesting: HA Foraging: HP	**Absent (nesting)/Low (foraging).** There is no suitable nesting habitat within the BSA; the BSA lacks the caves and cliff faces in which this species nests. Therefore, the species is not expected to nest within the BSA. Although condors are known to occur in the region (e.g., areas around Lake Piru or at the Sespe Condor Sanctuary), actual occurrences close to the coast seem to be rare or even nonexistent (CDFW 2020).
California black rail	–/T, FP	Found in salt marshes, freshwater marshes, and wet meadows. Requires a non-	Nesting: HA	**Absent.** This species has been extirpated from most of coastal Southern California,

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
(*Laterallus jamaicensis coturniculus*)		fluctuating water depth of about 1 inch and dense vegetation for nesting. Most California populations, especially in the southern part of the state, are nonmigratory; the associated habitat types are used for breeding, foraging, and over-wintering. In tidal areas, the species requires a dense cover of upland vegetation. This provides protection from predators when rails must leave the marsh habitats during high tides.	Foraging: HA	with only remnant populations in Orange, Riverside, and Imperial Counties; it is not known to occur in Ventura County (CDFW 2020). This species is considered to be absent from the BSA.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	–/E	Inhabits coastal salt marshes from Santa Barbara to San Diego County. Nests in tall, dense vegetation within large marsh fragments, especially pickleweed-dominated coastal saltmarshes.	Nesting: HA Foraging: HA	**Absent.** Although there is habitat in the general area, particularly in estuaries, there is no nesting or foraging habitat within the BSA, which lacks the coastal saltmarsh habitat in which this species resides year-round. Therefore, it is considered to be absent from the BSA.
coastal California gnatcatcher (*Polioptila californica californica*)	T/CSC	Year-round obligate and permanent resident of coastal sage scrub vegetation on mesas, along 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 habitats.	Nesting: HP Foraging: HP	**Absent.** Although there is suitable habitat within the BSA, this species was not detected during 2020 protocol surveys.
light-footed Ridgway's rail (*Rallus obsoletus levipes*)	E/E, FP	Resides in Southern California coastal salt marshes, lagoons, and their maritime environs—specifically, areas dominated by cordgrass (*Spartina* spp.), with some pickleweed (*Salicornia* spp.). Some freshwater use.	Nesting: HA Foraging: HA	**Absent.** Although this species occurs in the general project vicinity (i.e., along the coast), there is no suitable marsh habitat within the BSA to support the species. It is considered absent from the BSA.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
bank swallow (*Riparia riparia*)	–/T	Historically, this species bred interruptedly along the entire coast of California as well as the Central Valley and Great Basin portions of the state. Nests in colonies along streams, rivers, ponds, and lakes and at the ocean on vertical banks and cliffs with fine-textured or sandy soils. Currently, the species breeds only in Northern California, primarily in the Sacramento Valley and the far northeastern portions of the state, with a few colonies in the coastal counties from Monterey through Del Norte. This species is an uncommon to fairly common migrant in spring and fall at the Salton Sea and large lakes and wetlands in desert regions. It is a rare migrant elsewhere in California.	Nesting: HA Foraging: HP	**Absent (nesting)/Low (migrating).** The BSA is outside the breeding range for this species, which has been completely extirpated from the entire Southern California region (CDFW 2020). However, this species is an uncommon transient migrant during spring and fall and may briefly show up over bodies of water in the BSA while passing through the area.
California least tern (*Sternula antillarum browni*)	E/E, FP	Nests on sandy upper ocean beaches, open barren sites, and occasionally mudflats. Forages on adjacent surf line, estuaries, or the open ocean. Colonies are located near the ocean shoreline (within 0.5 mile), typically on nearly flat, loose sandy substrates with lightly scattered short vegetation and debris, although some colonies have been located on hard-packed surfaces, even unused asphalt. Colony sites must provide access to the shoreline for juveniles and must be relatively free of predators or the colony may abandon breeding efforts before completion.	Nesting: HP Roosting: HP	**Absent.** Although there is suitable roosting habitat within the BSA, a personal communication with California State Parks biologist Brooke Sheridan on October 15, 2019, revealed that this species has no current nesting records on San Buenaventura State Beach. Therefore, although individuals may occasionally show up along the beach, based on current status and distribution data, this species is not expected to nest within the BSA. Without a nearby known nesting location, the species is not expected to roost within the BSA.
least Bell's vireo (*Vireo bellii pusillus*)	E/E	Found as a summer resident in Southern California, an area where it inhabits low riparian growth in the vicinity of water or dry river bottoms below 2,000 feet amsl. The species selects dense vegetation located low in the riparian zone for nesting, most	Nesting: HP Foraging: HP	**Present.** Suitable foraging and nesting habitat is found in the riparian habitats along the Santa Clara River and Calleguas Creek portions of the BSA. This species was detected within the Santa Clara River during 2020 protocol surveys. It

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
		frequently 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.		presumably nested on-site, based on its continued presence throughout the 4 months of least Bell's vireo surveys and observations of juveniles within the BSA.
Mammals				
Guadalupe fur seal (*Arctocephalus townsendii*)	T, MMPA/T, FP	Found in marine intertidal zones, splash zone communities, and protected deepwater coastal communities. Breeds on Isla de Guadalupe off the coast of Mexico. Occasionally found on San Miguel, San Nicolas, and San Clemente Islands. Prefers shallow nearshore island water, with cool and sheltered rocky areas for haul-out habitat.	HA	**Absent.** There is no marine habitat or suitable sandy beach haul-out habitat for this species within the BSA.
Sei whale (*Balaenoptera borealis*)	E, MMPA/–	Found in subtropical, temperate, and subpolar waters throughout the world. However, prefers temperate waters. Feeding usually takes place at dawn. Typical prey species include plankton, small fish, and cephalopods. Breeding grounds are unknown, but breeding behavior generally occurs in winter at lower altitudes.	HA	**Absent.** There is no marine habitat for this species within the BSA.
blue whale (*Balaenoptera musculus*)	E, MMPA/–	Occurs in all the world's oceans, except the Arctic. These "filter feeders" feed almost entirely on krill and are the largest of all whales. Blue whales migrate long distances, spending winters near the equator and summers in polar waters while foraging. Reproductive behavior occurs during the winter months.	HA	**Absent.** There is no marine habitat for this species within the BSA.

Common Name/ Scientific Name	**Status Federal/ State[a]**	**Habitat Description**	**Habitat Present/ Absent[b]**	**Potential to Occur Rationale**
fin whale (*Balaenoptera physalus*)	E, MMPA/–	Found throughout the world's major oceans, primarily in deep offshore waters. Range extends from temperate to polar latitudes. Less abundant in tropical regions. Spends summers feeding in the Arctic and Antarctic, then heads toward tropical waters in the winter for breeding (specific breeding grounds unknown).	HA	**Absent.** There is no marine habitat for this species within the BSA.
North Pacific right whale (*Eubalaena japonica*)	E, MMPA/–	Rarest of whale species. Found mostly in the North Pacific and Bering Sea. Migratory patterns and specific breeding grounds are unknown, but nursery areas have been observed in shallow coastal waters.	HA	**Absent.** There is no marine habitat for this species within the BSA.
humpback whale, Mexico DPS (*Megaptera novaeangliae*)	T, MMPA/–	Found in oceans throughout the world. Migratory species, sometimes swimming 5,000 miles between feeding and breeding grounds. Winter breeding grounds are found in tropical regions, while summer feeding occurs in colder areas. Prefers waters close to shore.	HA	**Absent.** There is no marine habitat for this species within the BSA.
southern resident killer whale (*Orcinus orca*)	E, MMPA/–	Top marine predator found in the world's oceans. The southern resident occurs most often in the Pacific Northwest but has been documented from central California to southeast Alaska. Spends spring and fall in or near the inland waterways of Washington.	HA	**Absent.** There is no marine habitat for this species within the BSA.
sperm whale (*Physeter macrocephalus*)	E, MMPA/–	Found in oceans throughout the world. Prefers deep areas for foraging. Population's location depends on food availability and other conditions (e.g., those that support breeding). Migratory patterns and breeding/feeding sites vary. These sites are not well understood.	HA	**Absent.** There is no marine habitat for this species within the BSA.

Common Name/ Scientific Name	Status Federal/ State[a]	Habitat Description	Habitat Present/ Absent[b]	Potential to Occur Rationale
mountain lion (Southern California/Central Coast ESU) (*Puma concolor*)	–/C, CSC	Mountain lions require large areas of relatively undisturbed habitat with adequate connectivity, thereby allowing adult dispersal and gene flow. Their large home ranges encompass heterogenous habitats that often include pine forests, riparian and oak woodlands, streams, chaparral, and grasslands, although they are also known to occur in desert habitats. The Southern California/Central Coast ESU encompasses populations in the Santa Ana Mountains, eastern Peninsular Range, San Gabriel/San Bernardino Mountains, and Central Coast, including Central Coast South (Santa Monica Mountains) and Central Coast North (Santa Cruz Mountains).	HP	**Present.** Mountain lions occur within the Santa Monica Mountains. They are known to occur within the BSA, including the project area, and have crossed US 101 (Riley pers. comm.).

[a.] Status Codes

Federal

E = Federally listed, endangered
T = Federally listed, threatened
C = Federal candidate for listing
PE = Federally proposed as endangered
MMPA = Marine Mammal Protection Act

State

E = State listed, endangered
T = State listed, threatened
C = State candidate for listing
CSC = California Species of Concern
FP = Fully protected

[b.] Habitat Presence/Absence Codes

CH = Designated critical habitat for the species overlaps with the project.
HP = Habitat is or may be present; the species may be present.
HA = No habitat present, and no further work needed.

Survey Results

Listed Plants

Suitable habitat for marsh sandwort, Braunton's milk-vetch, Ventura milk-vetch, Agoura Hills dudleya, Santa Monica Mountains dudleya, Lyon's pentachaeta, marcescent dudleya, Verity's dudleya, and Conejo dudleya occurs within the BSA (Table 2.4.5-2). Botanical focused surveys conducted within the RPSA between April and June 2019 were negative for the aforementioned listed plants. Therefore, these listed plants are considered absent from the BSA. Additional detail regarding listed plant survey methodology and results can be found in the NES (Caltrans 2021a).

Listed Animals

Burrowing Owl

Detailed information on methodology, field surveys, personnel, and site conditions can be found in the NES prepared for the project (Caltrans 2021a). Following the habitat assessment and burrowing owl survey, four subsequent protocol burrowing owl surveys were conducted from April to July 2019 in areas of the BSA that contained suitable burrows (Figure 2.4.4-1 in Appendix I). No burrowing owls, or their sign, were observed. No burrowing owl were documented within the BSA. Because neither burrowing owl nor its sign was observed during protocol surveys, it is considered absent from the BSA.

Crotch's Bumble Bee

Potentially suitable habitat conditions for Crotch's bumble bee are present in the BSA. Focused surveys for Crotch's bumble bee were not performed for the project. This species has been reported at multiple locations in the Santa Monica Mountains, with the closest records of occurrence reported in 2008 approximately 8 miles south of the BSA, within Encinal Canyon in the Santa Monica Mountains, and in 2012 approximately 3 miles south of the BSA, at McGrath State Beach.

Monarch Butterfly

Potentially suitable habitat conditions for foraging adult and migrating monarch butterflies is present in the BSA within the native grassland, scrubland, and riparian habitat portions of the BSA. The host plant used for breeding, narrow-leaf milkweed [*Asclepias fascicularis*]), was documented within the BSA. Focused surveys for monarch breeding habitat were not performed for the project (see Section 2.5 in the NES for details).

Suitable over-wintering habitat conditions for monarch butterfly are present in the eucalyptus tree groves within the western portion of the BSA. Although eucalyptus tree groves are also present within the eastern portion of the project alignment, the area is too far inland and outside of the wintering range for this species, which remains close to the coast.

Based on annual count surveys performed by the Xerces Society, portions of the BSA outside the project limits of disturbance are assumed to be occupied by monarch butterfly; no focused surveys for this species were conducted for this project. Proposed critical habitat for monarch butterfly occurs near the western portion of the BSA.

However, work activities within or near the proposed critical habitat areas are limited to the medians of the northbound and southbound sections of US-101. As such, project-related construction activities would not remove or affect any of the eucalyptus tree groves present within the proposed critical habitat areas.

Southern California Steelhead

In the BSA, potentially suitable habitat for steelhead is limited to the Santa Clara River. The project limits of disturbance do not contain critical habitat for steelhead, although critical habitat for this species passes under the bridge at the Santa Clara River. However, no construction would occur within the Santa Clara River channel. The HOV lane under Build Alternative 3 would be added to the existing bridge without bridge widening. Based on the known range of steelhead, the BSA is assumed to be occupied by this species; no focused surveys for steelhead were conducted for this project.

Southwestern Pond Turtle

Suitable habitat occurs in select areas of the BSA that support prolonged aquatic habitat, primarily associated with Conjeo Creek and several isolated ponds where occurrence records exist in the vicinity, and additionally within suitable upland habitat for nesting purposes. Based on the known records of southwestern pond turtle in the BSA as indicated by the literature review, the BSA is assumed to be occupied by southwestern pond turtle; no focused surveys for this species were conducted for this project, and the species was not incidentally observed during prior fieldwork and surveys.

Western Snowy Plover

Suitable habitat conditions for western snowy plover are present in the open, sandy beaches along the Pacific Ocean portion of the BSA but outside the project footprint. The BSA contains 2.42 acres of federally designated critical habitat for western snowy plover, all of which is outside the project limits of disturbance.

Based on the known range of western snowy plover, as indicated by both the literature review and personal communication with a California State Parks biologist, the BSA is assumed to be occupied by western snowy plover; no focused surveys for this species were conducted for this project.

California Least Tern

Suitable habitat conditions for California least tern are present in the open sandy beaches along the Pacific Ocean portion of the BSA, outside the project footprint. However, the local nesting population of California least tern currently occurs at McGrath State Beach, approximately 3.5 miles south of the BSA; there are no current nesting records for this species within the San Buenaventura State Beach area. Therefore, although individuals may occasionally forage or roost along the beach portion of the BSA, based on current status and distribution data, California least tern is not expected to nest within the BSA.

Based on the known range of California least tern, as indicated by both the literature review and personal communication with a California State Parks biologist, the BSA is

assumed to be occupied by California least tern; no focused surveys for this species were conducted for this project.

Coastal California Gnatcatcher

Potentially suitable habitat for coastal California gnatcatcher is present within the BSA. However, no coastal California gnatcatchers were detected during protocol surveys conducted between April and May 2020 (see Figure 2.4.5-2 in Appendix I). In addition, no critical habitat for coastal California gnatcatcher occurs within the BSA.

Because coastal California gnatcatcher was not observed within the BSA and suitable habitat within the BSA is of marginal quality, coastal California gnatcatcher is considered absent from the BSA.

Southwestern Willow Flycatcher

Suitable habitat conditions for southwestern willow flycatcher are present within the Goodding's Willow–Red Willow Riparian Woodland, Sandbar Willow Thickets, and Mulefat Thickets along the Santa Clara River. The BSA contains 20.81 acres of federally designated critical habitat for southwestern willow flycatcher along the Santa Clara River, all of which is outside the project limits of disturbance. Critical habitat for this species passes under the Santa Clara River Bridge. However, this area is not a part of the project footprint because no bridge widening is proposed and no construction would occur within the Santa Clara River channel; the addition of an HOV/express bus lane would be done on the existing bridge, without any lane additions or bridge widening.

Southwestern willow flycatcher was not detected during protocol surveys conducted between May and July 2020. As such, this species is considered absent from the BSA. Additional details are provided in the riparian bird protocol survey report for the project and can be found in the NES (Caltrans 2021a).

Least Bell's Vireo

Suitable habitat conditions for least Bell's vireo are present within the Goodding's Willow–Red Willow Riparian Woodland, Sandbar Willow Thickets, and Mulefat Thickets along the Santa Clara River and Calleguas Creek. Four territories were mapped and tracked during the April through July 2020 protocol surveys, three within the Santa Clara River riparian bird study area (i.e., project limits of disturbance plus 500-foot buffer) and one within Calleguas Creek but outside the riparian bird study area.

The three least Bell's vireo territories in the Santa Clara River riparian corridor were within Sandbar Willow Thickets and Mulefat Thickets. Of these, one was confirmed to have bred successfully; an adult was observed feeding a fledgling. The other two territories had probable nesting. No least Bell's vireo individuals or signs of nesting were detected within the riparian bird study area for Calleguas Creek. However, one territory was anecdotally observed within Calleguas Creek approximately 1,700 feet upstream of the BSA.

No critical habitat for least Bell's vireo occurs within the BSA.

Mountain Lion

Based on the literature review performed for mountain lion in the project region, the BSA occurs within the known range for the species, and modeled predicted habitat for the species is present (see Figure 2.4.5-4 in Appendix I). Habitat with a suitability rank of "medium" is present within the Conejo Grade portion of the BSA; predicted habitat with a rank of "high" is present both north and south of US 101. Patches of predicted habitat with a "medium" or "high" rank are present along the Santa Clara River. Predicted habitat with a "low" rank occurs within the lowlands west of the Conejo Grade, within the agricultural areas of Camarillo and Oxnard. No protocol surveys for mountain lion were conducted as part of the initial biological survey work for the NES.

Detailed information regarding mountain lion movement, based on National Park Service data, is provided in the wildlife connectivity assessment report (Appendix G of the NES) (Caltrans 2021a).

The BSA also contains identified connectivity corridors and wildlife linkages that could be used by mountain lion (e.g., Missing Linkages, California Essential Habitat Connectivity [Landscape Blocks and Essential Connectivity Areas], Terrestrial Connectivity – Areas of Conservation Emphasis, South Coast Missing Linkages, Ventura County Habitat Connectivity, and Ventura County Greenbelts) (see Section 2.4.1 for details). The Conejo Grade linkage is identified as a landscape linkage that provides movement habitat for mountain lion, which is considered a key species (i.e., species used as a connectivity indicator) for this linkage.

Based on the known range for the species, documented sightings, and the suitable habitat and linkages present within the BSA, mountain lion is expected to occur within the BSA and project region.

2.4.5.3 Environmental Consequences

Alternative 1: No-Build Alternative

If the project is not constructed, there would be no new or additional impacts on candidate, threatened, or endangered species, beyond those that would be expected to occur from operation of the existing facility.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Determinations regarding impacts on federally and state-listed candidate, threatened, and endangered species are based on the habitat evaluations and focused studies performed for the project. Build Alternatives 2 and 3 "may affect, but are not likely to adversely affect" monarch butterfly and least Bell's vireo with direct removal of suitable habitat. The proposed project would have no effect on the remaining federally listed species and federally designated critical habitats included in the USFWS official species list.

Table 2.4.5-1 provides the FESA effects findings and CESA take statements for each federally and/or state-listed or candidate species. The project impacts (direct and indirect) on individual species and their critical habitat are described below.

Listed Plants

Temporary Impacts

Neither build alternative is expected to temporarily affect the species.

Permanent Impacts

Because marsh sandwort, Braunton's milk-vetch, Ventura marsh milk-vetch, salt marsh bird's-beak, Conejo dudleya, marcescent dudleya, Santa Monica Mountains dudleya, Verity's dudleya, Lyon's pentachaeta, Gambel's watercress, and California Orcutt grass are considered absent from the BSA, neither build alternative is expected to permanently affect these species.

Burrowing Owl

Temporary Impacts

Burrowing owl was not observed during protocol surveys within the BSA. However, burrowing owls can be transitory and can occupy areas in the future that were not occupied. Should burrowing owls colonize areas prior to construction that were deemed previously unoccupied, direct mortality could occur as a result of project construction. Therefore, biological training prior to construction (measure **TE-4**) and preconstruction surveys (measure **TE-1)** prior to ground-disturbing activities that follow protocol survey conditions would ensure that owls would be accounted for prior to construction. In addition, burrowing owls that may be found during preconstruction surveys during the breeding season would be avoided with an appropriate buffer, as determined through coordination with CDFW; passive relocation during the non-breeding season may be required should owls be documented on the project site. Following implementation of these avoidance measures, the project would have no impacts on burrowing owl.

Should burrowing owls colonize previously unoccupied areas before or during construction, implementation of avoidance and minimization measures **NC-1** through **NC-5**, as well as **NC-9** through **NC-12** (Section 2.4.1, *Natural Communities*), would minimize potential temporary impacts on burrowing owl adjacent to the project limits of disturbance, including indirect effects such as increased noise, dust, or increased risk of predation.

Permanent Impacts

Burrowing owl was not observed during protocol surveys within the BSA. As a result, the project is not anticipated to have permanent impacts on burrowing owl, such as direct effects that include mortality, destruction of nesting habitat, and loss of suitable foraging grounds. However, should burrowing owl subsequently inhabit the BSA before or during construction, then implementation of avoidance and minimization measures **TE-1** through **TE-3** would ensure that permanent impacts on the species would not occur.

Crotch's Bumble Bee

Temporary Impacts

Build Alternatives 2 and 3 would result in temporary impacts on suitable grassland and scrubland habitat (i.e., Curly Blue Grass–Squirreltail Patches, Giant Wild Rye Grasslands, Needle Grass-Melic Grass Grasslands, California Brittle Brush–Ashy Buckwheat Scrub, Disturbed California Brittle Brush–Ashy Buckwheat Scrub, Coast Prickly Pear Scrub, Lemonade Berry Scrub) that could support Crotch's bumble bee due to widening of US 101, site access, and activity in temporary work areas. Temporary impacts on suitable Crotch's bumble bee habitat as a result of Build Alternatives 2 and 3 are shown in Table 2.4.1-4 (Section 2.4.1, *Natural Communities*). Determinations regarding temporary impacts are based on conservative preliminary design estimates, which allow flexibility within temporary construction work areas during the final design phase of the project. Actual temporary impacts on suitable Crotch's bumble bee habitat may be refined during the plans, specifications, and estimate phase of the project and may be lower than described in this report.

Project construction and vegetation clearing could result in detrimental effects on Crotch's bumble bee individuals, should they be present. The species could be indirectly disturbed by construction-related activities involving heavy equipment that produces noise and vibration. If construction occurs during the breeding season, it could disturb breeding behavior, resulting in negative impacts on reproduction. Other potential direct impacts include the compaction of soil due to construction vehicles, which may decrease the availability of friable soils for burrow creation.

Build Alternatives 2 and 3 could also have temporary indirect impacts on Crotch's bumble bee individuals within the BSA, but outside the project footprint, should this species be present. Indirect impacts, which are considered minor, would be related to dust, erosion, the introduction of invasive species in disturbed soils, roadway runoff, and increased fire risks.

Although there is suitable habitat for Crotch's bumble bee within the BSA, the portions of habitat that would be temporarily affected as a result of project construction are relatively disturbed because of their location along the edge of US 101 and, therefore, unlikely to support Crotch's bumble bee. Consequently, impacts on the species, should it be present, are expected to be limited. Potential temporary impacts would be minimized through implementation of measures **TE-4** through **TE-6**, which involve biological training, preconstruction surveys, and fencing of suitable habitat areas for Crotch's bumble bee. Implementation of avoidance and minimization measures **NC-1** through **NC-5** as well as **NC-9** through **NC-12** (Section 2.4.1, *Natural Communities*) would minimize potential impacts on suitable Crotch's bumble bee habitat adjacent to the project limits of disturbance.

Permanent Impacts

Build Alternatives 2 and 3 would result in permanent impacts on suitable grassland and scrubland habitat (i.e., Giant Wild Rye Grasslands, California Brittle Brush–Ashy Buckwheat Scrub, Disturbed California Brittle Brush–Ashy Buckwheat Scrub, Coast

Prickly Pear Scrub, Lemonade Berry Scrub) that could support Crotch's bumble bee due to widening of US 101. Permanent impacts on suitable Crotch's bumble bee habitat as a result of Build Alternatives 2 and 3 are shown in Table 2.4.1-4 (Section 2.4.1, *Natural Communities*).

Project construction and vegetation clearing could result in direct mortality or injury for Crotch's bumble bee individuals, should they be present. Nesting colonies or over-wintering queens could be crushed or entombed in underground burrows. If construction occurs during the breeding season, it could disturb breeding behavior, resulting in negative impacts on reproduction.

Although there is suitable habitat for Crotch's bumble bee within the BSA, the portions of habitat that would be permanently removed as a result of project construction are relatively disturbed because of their location along the edge of US 101 and, therefore, unlikely to support Crotch's bumble bee. Consequently, impacts on this species, should it be present, are expected to be limited. Potential permanent impacts would be minimized through implementation of measures **TE-4** through **TE-6**, which involve biological training, preconstruction surveys, and fencing of suitable habitat areas for Crotch's bumble bee. Implementation of avoidance and minimization measures **NC-1** through **NC-5** as well as **NC-9** through **NC-12** (Section 2.4.1, *Natural Communities*) would minimize potential impacts on suitable Crotch's bumble bee habitat adjacent to the project limits of disturbance.

Monarch Butterfly

Temporary Impacts

Native grassland and scrubland habitat along the edge of US 101 would be temporarily disturbed as part of the project. Should nectar sources (i.e., nectar-bearing flowering herbs and shrubs) or milkweed host plants be present within these areas, then direct temporary impacts on suitable habitat for breeding, foraging, and/or migrating monarch butterfly would occur as a result of either Build Alternative 2 or 3. Should milkweed be present within the proposed work area, then direct impacts on monarch breeding habitat could occur.

Direct effects on breeding, foraging, or migrating monarch butterfly individuals could occur as a result of project construction. Depending on the time of year when construction is performed, all stages of the monarch butterfly life cycle associated with breeding could be affected. Construction activities could also increase the potential for fire in the area, which could temporarily directly and indirectly affect monarch butterfly individuals through habitat degradation.

Potential indirect effects on potentially suitable foraging and/or breeding habitat for monarch butterfly individuals along US 101 may include edge effects and degradation of habitat from litter, fire, the introduction of invasive plant species, erosion, sedimentation, chemical spills during construction, and dust and pollutants from vehicles and machinery. However, avoidance and minimization measures **TE-4** and **TE-7** through **TE-8**, and mitigation **TE-9,** would be implemented to preserve milkweed host plants to the maximum extent feasible and ensure that any direct impacts on monarch butterfly or

suitable foraging and/or breeding habitat would be offset. Milkweed plants would be removed only between November and January, allowing the plants to develop and set seed. This would also avoid the monarch butterfly breeding season and potential take of eggs or larvae. In addition, disturbed suitable habitat would be revegetated with a planting palette that would include nectar sources and milkweed, thereby increasing the amount of available foraging and breeding habitat for monarch butterfly within the project area because only scattered individuals of milkweed are currently present. In addition, avoidance and minimization measures **TE-7** and **TE-8** and mitigation measure **TE-9** would be implemented to avoid and minimize and address potential temporary indirect impacts on potentially suitable foraging and/or breeding habitat for monarch butterfly adjacent to the project limits of disturbance.

Temporary indirect effects as a result of construction activities on over-wintering habitat adjacent to the project work area would be avoided because construction work within this portion of the alignment would occur only within the median, with the southbound lanes of US 101 separating the project work area from suitable over-wintering habitat. In addition, avoidance and minimization measures **NC-1** through **NC-5**, **NC-9** through **NC-12**, and mitigation measure **NC-13** (Section 2.4.1, *Natural Communities*) would be implemented to avoid potential temporary indirect impacts on suitable over-wintering habitat for monarch butterfly within the surrounding area.

Temporary indirect effects as a result of construction activities near the proposed critical habitat adjacent to the project would be avoided because construction work within this portion of the project alignment would only occur within the existing median, with the southbound lanes of US 101 separating the project work area and proposed critical habitat. In addition, avoidance and minimization measures (**NC-1** through **NC-5**, **NC-9** through **NC-12**, and mitigation measure **NC-13**) (Section 2.4.1, *Natural Communities*) would be implemented to avoid and offset potential indirect impacts on suitable overwintering habitat (which overlaps the proposed critical habitat areas) for monarch butterfly occurring within the surrounding area.

Permanent Impacts

Native grassland and scrubland habitat along the edge of US 101 would be permanently removed as part of the project (Figure 2.4.5-1 in Appendix I). Should nectar sources (i.e., nectar-bearing flowering herbs and shrubs) or milkweed host plants be present within these areas, then direct permanent impacts on suitable habitat for breeding, foraging, and/or migrating monarch butterfly would occur as a result of either Build Alternative 2 or 3. Milkweed was not detected within the project limits of disturbance during field surveys in 2019 or 2020; however, focused surveys for monarch breeding habitat were not performed. Should milkweed be present within the proposed permanent impact area, then direct impacts on monarch breeding habitat could occur.

Direct effects on breeding, foraging, or migrating monarch butterfly individuals could occur as a result of project construction. If monarch butterfly individuals are present within the project work area, then construction equipment, machinery, and vehicles, as well as vegetation clearing, could cause individuals to be struck or crushed, leading to injury or mortality. Depending on the time of year when construction is performed, all

stages of the monarch butterfly life cycle associated with breeding could be affected. For example, fire could kill monarch butterfly eggs or larvae or destroy suitable foraging and/or breeding habitat.

Avoidance and minimization measures **TE-4** and **TE-7** through **TE-8**, and mitigation measure **TE-9**, would be implemented to preserve milkweed host plants to the maximum extent feasible and ensure that any direct permanent impacts on monarch butterfly or suitable foraging and/or breeding habitat would be offset. Milkweed plants would be removed only between November and January, allowing the plants to develop and set seed. This would also avoid the monarch butterfly breeding season and potential take of eggs or larvae.

No over-wintering sites for monarch butterfly are present within the project's limits of disturbance. Project work within the portion of the alignment that contains suitable tree groves that could support monarch butterfly roosting would be restricted to the median of the northbound and southbound lanes of US 101 (Figure 2.4.5-1 in Appendix I). As such, project-related construction activities would not remove any of the eucalyptus tree groves within the project area, and no direct effects on over-wintering monarch butterfly would occur as a result of project construction.

Project construction activities could result in minor direct and indirect impacts on proposed critical habitat for monarch butterfly located along the edge of US 101; therefore, implementation of avoidance and minimization measures, as listed above, would ensure that any direct impacts on monarch butterfly or its suitable foraging and/or breeding habitat are offset, and the project would require planting of nectaring sources and milkweed to increase the amount of available foraging and breeding habitat within the project area.

Because the project would result in minor direct permanent impacts on potentially suitable foraging and/or breeding habitat for monarch butterfly along the edge of US 101, it would implement avoidance and minimization measures **TE-4** and **TE-7** through **TE-8**, and mitigation measure **TE-9,** to ensure that any direct impacts on monarch butterfly or its suitable foraging and/or breeding habitat would be offset; it would also plant nectar sources and milkweed to increase the amount of available foraging and breeding habitat within the project area. It is Caltrans' determination that the project "may affect, but is not likely to adversely affect" monarch butterfly.

Southern California Steelhead

Temporary Impacts

Alternative 2 proposes to convert one of the general-purpose traffic lanes to an HOV lane, resulting in five general-purpose lanes and one HOV lane in each direction on the Santa Clara River Bridge. Alternative 3 proposes to restripe the Santa Clara River Bridge to include six general-purpose lanes and one HOV lane in each direction. Under Alternatives 2 and 3, all work would be limited to the existing bridge and consist of only restriping; no bridge widening or work within the river channel would occur. Therefore, no temporary direct or indirect impacts on steelhead or its critical habitat are anticipated under either Build Alternative 2 or 3.

Permanent Impacts

Although steelhead has the potential to occur, and critical habitat for this species is present within the Santa Clara River portion of the BSA, the Santa Clara River Bridge would not be replaced or widened as a part of the project. Alternative 2 proposes to convert one of the general-purpose traffic lanes to an HOV lane, resulting in five general-purpose lanes and one HOV lane in each direction on the Santa Clara River Bridge. Alternative 3 proposes to restripe the Santa Clara River Bridge to include six general-purpose lanes and one HOV lane in each direction. Under Alternatives 2 and 3, all work would be limited to the existing bridge and consist of only restriping; no bridge widening or work within the river channel would occur. Therefore, no permanent direct or indirect impacts on steelhead or its critical habitat are anticipated under either Build Alternative 2 or 3.

Operation of the bridge and highway would not result in any relevant changes to river volumes, flow regimes, point sources, or the quality of upland water (e.g., stormwater flows). The project would implement permanent BMP measures **WQ-1** and **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*) to avoid and/or minimize water quality impacts during operation of the project, including those associated with bridge and highway surface flows at the Santa Clara River Bridge.

Because the project would not result in any permanent impacts on steelhead or its critical habitat, it is Caltrans' determination that the project would have no effect on steelhead or its critical habitat.

Southwestern Pond Turtle

Temporary Impacts

Temporary direct impacts that could affect both riparian and upland habitat that southwestern pond turtle utilizes include construction work area clearing and grubbing, incidental disturbances within construction areas, equipment staging, and temporary construction access routes. Sensitive native riparian, coastal scrub, and grassland habitat would be temporarily removed and/or disturbed along Conejo Grade due to outside widening; however, any temporarily removed riparian or coastal scrub habitat would be restored to its original condition. Indirect impacts (e.g., degradation of habitat through noise, dust, water pollution, human presence, increased fire risks) on pond turtle habitat adjacent to the project limits of disturbance could also occur during construction. Impacts on southwestern pond turtle, should it be present, are expected to be temporary under both Build Alternatives 2 and 3. Impacts would be avoided, minimized, and/or mitigated with implementation of measures **NC-1** through **NC-13** (Section 2.4.1, *Natural Communities*), **TE-4**, **AS-5** through **AS-9,** and **AS-11** through **AS-14** (Section 2.4.4, *Animal Species*).

Permanent Impacts

Southwestern pond turtle has the potential to be permanently affected by direct effects, including mortality due to vegetation clearing, grading, or water diversion or dewatering activities under Build Alternatives 2 and 3. To prevent direct effects as a result of permanent impacts, avoidance and minimization measures **TE-4**, **AS-5** through **AS-9**,

and **AS-11** through **AS-14** (Section 2.4.4, *Animal Species*) would be implemented, thereby ensuring no direct mortality of southwestern pond turtle.

Western Snowy Plover

Temporary Impacts

No temporary direct impacts on western snowy plover or its critical habitat are anticipated as a result of either Build Alternative 2 or 3. Avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would be implemented to avoid indirect impacts (e.g., increased dust and fire risks resulting from construction activities) on western snowy plover as well as suitable and critical habitat occurring within the surrounding area.

Permanent Impacts

Western snowy plover does not have the potential to occur, and no critical habitat is present within the project limits of disturbance. Project work within this portion of the alignment for both Build Alternatives 2 and 3 would be restricted to widening within the median of the northbound and southbound lanes of US 101. In addition, suitable coastal beach habitat and critical habitat for western snowy plover is separated from the project work area by Harbor Drive, which runs parallel to US 101. Therefore, no permanent direct impacts on western snowy plover or its critical habitat are anticipated as a result of either Build Alternative 2 or 3.

Because the project would not result in any permanent direct impacts on western snowy plover or its critical habitat and would avoid indirect impacts on suitable occupied habitat and critical habitat, it is Caltrans' determination that the project would have no effect on western snowy plover or its critical habitat.

California Least Tern

Temporary Impacts

Project work within this portion of the alignment for both Build Alternatives 2 and 3 would be restricted to widening within the median of the northbound and southbound lanes of US 101. In addition, suitable coastal beach habitat for California least tern is separated from the project work area by Harbor Drive, which runs parallel to US 101. Therefore, no direct impacts on this species are anticipated as a result of either Build Alternative 2 or 3. Avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would be implemented to avoid indirect impacts (e.g., increased dust and fire risks resulting from construction activities) on California least tern as well as suitable habitat occurring within the surrounding area.

Because the project would not result in any temporary direct impacts on California least tern and would avoid indirect impacts on suitable habitat, it is Caltrans' determination that the project would have no effect on California least tern.

Permanent Impacts

Because the project would not result in any permanent direct impacts on California least tern and would avoid permanent indirect impacts on suitable habitat through

implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*), it is Caltrans' determination that the project would have no effect on California least tern.

Coastal California Gnatcatcher

Temporary Impacts

Because coastal California gnatcatcher is considered absent from the BSA, neither Build Alternative 2 nor 3 is expected to affect this species, and no temporary impacts would occur.

Permanent Impacts

Because coastal California gnatcatcher is considered absent from the BSA, neither Build Alternative 2 nor 3 is expected to affect this species, and no permanent impacts would occur.

Caltrans has determined the project would have no effect on coastal California gnatcatcher.

Southwestern Willow Flycatcher

Temporary Impacts

Southwestern willow flycatcher is considered absent from the BSA, and the project would not result in any direct or indirect temporary impacts on the species or its critical habitat.

Permanent Impacts

Because southwestern willow flycatcher is considered absent from the BSA, neither Build Alternative 2 nor 3 is expected to affect this species, and no permanent impacts would occur.

Although designated critical habitat for this species occurs within the Santa Clara River portion of the BSA, the Santa Clara River Bridge would not be replaced or widened as a part of the project. Alternative 2 proposes to convert one of the general-purpose traffic lanes to an HOV lane, resulting in five general-purpose lanes and one HOV lane in each direction on the Santa Clara River Bridge. Alternative 3 proposes to restripe the Santa Clara River Bridge to include six general-purpose lanes and one HOV lane in each direction. Under Alternatives 2 and 3, all work would be limited to the bridge and would consist only of restriping; no bridge widening or work within the river channel would occur. Therefore, no direct or indirect impacts on southwestern willow flycatcher or its critical habitat are anticipated under either Build Alternative 2 or 3.

Operation of the bridge and highway would not result in any relevant changes to river volumes, flow regimes, point sources, or the quality of upland water (e.g., stormwater flows). The project would implement permanent BMP measures **WQ-1** and **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*) to avoid and/or minimize water quality impacts during operation of the project, including those associated with bridge and highway surface flows at the Santa Clara River Bridge.

Because southwestern willow flycatcher is considered absent from the BSA, and the project would not result in any direct or indirect impacts on its critical habitat, it is Caltrans' determination that the project would have no effect on southwestern willow flycatcher or its critical habitat.

Least Bell's Vireo

Temporary Impacts

Alternative 2 proposes to convert one of the general-purpose traffic lanes to an HOV lane, resulting in five general-purpose lanes and one HOV lane in each direction on the Santa Clara River Bridge. Alternative 3 proposes to restripe the Santa Clara River Bridge to include six general-purpose lanes and one HOV lane in each direction. Under Alternatives 2 and 3, all work would be limited to the bridge and consist only of lane restriping. No bridge widening or work within the river channel would be performed, and no visual or audible impacts would occur as a result of restriping the highway lanes. Therefore, no direct temporary impacts on least Bell's vireo or its occupied, suitable habitat within the Santa Clara River are anticipated as a result of the project under either Build Alternative 2 or 3, and no protection measures are needed for the Santa Clara River portion of the BSA. Avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would be implemented to avoid indirect impacts (e.g., a potential decrease in water quality due to erosion or runoff resulting from restriping) on occupied suitable habitat for least Bell's vireo adjacent to the project limits of disturbance in the Santa Clara River under Build Alternative 3.

Least Bell's vireo was not detected within or near the Calleguas Creek portion of the BSA throughout the 4 months of 2020 protocol surveys performed during the breeding season. In addition, this species is not known to nest within this portion of Calleguas Creek. As such, no direct temporary impacts on any least Bell's vireo individuals are anticipated as a result of construction work at the Calleguas Creek portion of the project area under either Build Alternative 2 or 3.

Potentially suitable riparian habitat for least Bell's vireo would be temporarily disturbed as a result of adding an HOV/express bus lane and modifying the bridge at Calleguas Creek (e.g., expanding nosing walls, piers, abutments) as a part of Build Alternatives 2 and 3. However, the riparian habitat in this area is marginal to low-quality habitat with respect to supporting breeding least Bell's vireo. This species is not expected to use the area. Temporary impacts on riparian habitats are provided in Table 2.4.1-4 (Section 2.4.1.3, *Environmental Consequences*).

Potential indirect impacts on unoccupied, potentially suitable riparian habitat for least Bell's vireo within the Calleguas Creek drainage may include edge effects or the degradation of riparian habitat and water quality from litter, fire, the introduction of invasive plant species, erosion, sedimentation, chemical spills during construction, or dust and pollutants associated with vehicles and machinery.

Temporarily disturbed unoccupied riparian habitats would be replaced in kind following completion of construction (see Section 2.4.1.2). Indirect construction impacts as a result of the project are expected to be minor and would be further reduced with

implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*); preconstruction surveys for least Bell's vireo prior to vegetation clearing in suitable habitat would occur as described in avoidance and minimization measure **TE-10**.

Permanent Impacts

Alternative 2 proposes to convert one of the general purpose traffic lanes to an HOV lane, resulting in five general-purpose lanes and one HOV lane in each direction on the Santa Clara River Bridge. Alternative 3 proposes to restripe the Santa Clara River Bridge to include six general-purpose lanes and one HOV lane in each direction. Under Alternatives 2 and 3, all work would be limited to the bridge and consist only of lane restriping. No bridge widening or work within the river channel would be performed, and no visual or audible impacts would occur as a result of restriping the highway lanes. Therefore, no direct permanent impacts on least Bell's vireo or its occupied, suitable habitat within the Santa Clara River drainage are anticipated as a result of the project under either Build Alternative 2 or 3, and no protection measures are needed for the Santa Clara River portion of the BSA.

Least Bell's vireo was not detected within or near the Calleguas Creek portion of the BSA throughout the 4 months of 2020 protocol surveys performed during the breeding season. In addition, this species is not known to nest within this portion of Calleguas Creek. Although the species was anecdotally detected upstream, no fledglings or signs of successful nesting were observed. The riparian habitat present within the BSA is marginal to low-quality habitat; therefore, the project area is not expected to be used by birds dispersing from upstream. As such, no direct permanent impacts on any least Bell's vireo individuals are anticipated as a result of construction work at the Calleguas Creek portion of the project area under either Build Alternative 2 or 3.

Potentially suitable riparian habitat for least Bell's vireo would be permanently removed as a result of adding an HOV/express bus lane and modifying the bridge at Calleguas Creek (e.g., expanding nosing walls, piers, abutments) as a part of Build Alternatives 2 and 3. However, the riparian habitat in this area is marginal to low-quality habitat with respect to supporting breeding least Bell's vireo. This species is not expected to use the area. Permanent impacts on riparian habitats are provided in Table 2.4.1-4 (Section 2.4.1, *Natural Communities*).

Operation of the expanded bridge and roadway is not expected to result in any relevant changes related to foraging or nesting for least Bell's vireo individuals or their habitat. Because individuals that use the area are already acclimated to traffic noise and other road disturbances, no appreciable increases in impacts from operation are anticipated. Project operation would not contribute to an increased risk related to the degradation of riparian habitat or overall water quality (see Section 2.4.1, *Natural Communities*).

Because the project would not directly affect least Bell's vireo within the Santa Clara River, and the species was determined to be absent from the BSA portions of Calleguas Creek, no direct permanent impacts on least Bell's vireo would occur as a result of Build Alternative 2 or 3. Riparian habitats that would be permanently removed within

Calleguas Creek are not occupied by least Bell's vireo. In addition, permanent impacts on unoccupied riparian habitats would be minor (0.05 acre for Build Alternative 2 and 0.01 acre for Build Alternative 3) and would be mitigated. Because the project is not expected to directly affect least Bell's vireo or its occupied habitat, and indirect impacts are expected to be minor, it is Caltrans' determination that the project "may affect, but is not likely to adversely affect" least Bell's vireo.

Mountain Lion

Temporary Impacts

Implementation of Build Alternatives 2 and 3 would result in temporary disturbance of suitable habitat for mountain lion (see Table 2.4.1-4 in Section 2.4.1, *Natural Communities*). However, this impact is expected to be minimal because the habitat that would be removed is located along US 101 and unlikely to be occupied or used by mountain lion.

Project construction activities could also temporarily affect mountain lion within the BSA because of increased noise or the presence of equipment and construction personnel, which may temporarily deter mountain lion movement in the project area. Implementation of measures **NC-1** through **NC-5**, **NC-9**, **NC-10, NC-14** through **NC-24** (Section 2.4.1, *Natural Communities*), and **AS-12** through **AS-14** (Section 2.4.4, *Animal Species*) would reduce the temporary impact potential for mountain lion and suitable habitat they could use.

Permanent Impacts

Implementation of Build Alternatives 2 and 3 would permanently affect mountain lion within the BSA and project region. The addition of an HOV/express bus lane would both widen US 101 and increase traffic along the highway, thereby increasing wildlife/vehicle collision risks for mountain lions, which are already documented as experiencing wildlife/vehicle collisions within the Conejo Grade.

The expansion of bridges and culverts as a result of US 101 widening would lengthen existing crossing structures (i.e., reduce the openness), including the Conejo Grade box culvert within the Conejo Grade linkage, thereby reducing their function and value (see Section 2.4.1, *Natural Communities*, for a discussion of project-related impacts on wildlife connectivity and crossings). If the expansion of crossings creates a barrier effect for mountain lion, then habitat fragmentation within the region could be further increased.

The project would also result in permanent removal of suitable habitat for mountain lion (see Table 2.4.1-4 in Section 2.4.1, *Natural Communities*). However, this impact is expected to be minimal because the habitat that would be removed is located along US 101 and unlikely to be occupied or used by mountain lion.

To offset project impacts on mountain lion, as well as impacts on wildlife connectivity and linkages, a wildlife collaring and tracking study is currently being conducted in partnership with the National Park Service to identify wildlife crossing patterns and locations where the project could improve wildlife connectivity (mitigation

measure **TE-11**). The study uses global positioning system collaring to radio track multiple species and remote cameras in existing crossing points and areas in the vicinity of the freeway to monitor wildlife use. Based on the findings of the study, the Ventura County Transportation Commission (VCTC) would work with Caltrans and National Park Service to determine if the project would require a wildlife crossing and, if so, where the best location along the project alignment would be and what type of crossing would be appropriate. VCTC applied for and received the sustainable communities competitive grant from the Caltrans Sustainable Transportation Planning Grant Program in October 2021. The application was approved on March 22, 2022. The study is anticipated to be completed during the Project Approval and Environmental Document (PA&ED) phase of the project. Any pertinent measures associated with the study, which may include avoidance, minimization, and/or mitigation measures, will be included in the final Environmental Impact Report/Environmental Assessment for the project.

With improvements in wildlife connectivity in the project area, along with implementation of avoidance and minimization measures to help offset impacts from project construction and the lengthening of existing crossings (Section 2.4.1, *Natural Communities*, **NC-1** through **NC-5**, **NC-9**, **NC-10,** and **NC-14** through **NC-24**; Section 2.4.4, *Animal Species*, **AS-12** through **AS-14**), no substantial impacts on mountain lion are likely to occur as a result of either Build Alternative 2 or 3, and no take is anticipated.

2.4.5.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts on threatened and/or endangered species would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Burrowing Owl

Although no burrowing owls were observed within the BSA, they could subsequently inhabit areas in the BSA that were previously determined to be unoccupied. Avoidance and minimization measures **TE-1** through **TE-4**, below, would ensure that no direct mortality of burrowing owls would occur during construction, should this species be present. Implementation of avoidance and minimization measures **NC-1** through **NC-5**, as well as **NC-9** through **NC-12** (Section 2.4.1, *Natural Communities*), would minimize potential impacts on burrowing owl adjacent to the project limits of disturbance.

TE-1: Burrowing Owl Preconstruction Surveys. To determine if burrowing owls are occupying the project limits or adjacent areas prior to construction, a take avoidance survey following CDFW protocol (2012) will be conducted no more than 14 days prior to

initiating ground-disturbing activities. In addition, any time lapses between project activities will trigger subsequent take-avoidance surveys. The survey will be conducted from civil twilight to 10:00 a.m. or 2 hours before sunset until evening civil twilight within areas providing suitable habitat for burrowing owl. The survey will include the proposed project limits and a 300-foot buffer if performed between February 15 and August 31 (nesting season) and a 100-foot buffer if conducted outside of the nesting season. If burrowing owls are present within 300 feet of project activities during the breeding season or within 100 feet of project activities outside of the nesting season, then measure **TE-2** or **TE-3** will be implemented, as applicable.

TE-2: Burrowing Owl Nesting Season Avoidance. If burrowing owls are found during preconstruction take-avoidance surveys within the nesting season (see measure **TE-1**), then the burrowing owls will be fully avoided by establishing an appropriate buffer in coordination with CDFW.

TE-3: Burrowing Owl Passive Relocation. If burrowing owls are found during preconstruction take-avoidance surveys outside of the nesting season (see measure **TE-1**), then passive relocation by a qualified avian biologist will be conducted, in coordination with CDFW, once it has been confirmed that pairing activities have not begun. If the burrowing owl is found to be paired and exhibiting potential nesting behavior, then construction disturbance will not occur within a designated buffer, as determined in coordination with CDFW, of the active burrow(s) until it is confirmed by the avian biologist that the pair is not nesting and that young are not present or, if present, are independently foraging.

TE-4: Biological Training. A biological resource information program will be developed for all construction personnel and implemented prior to construction. At a minimum, the program will include the following topics: (1) the biology, conservation, and legal status of federally and state-listed species, candidate species, and special-status species occurring or potentially occurring within the project site; (2) responsibilities of the biological monitor; (3) delineation and flagging of adjacent habitat; (4) limitations on the movement of those employed on the site, including the ingress and egress of equipment and personnel, to designated construction zones (personnel will not be allowed access to adjacent sensitive habitats); (5) on-site pet prohibitions; (6) use of trash containers for disposal and removal of trash; and (7) project features designed to reduce impacts on listed species and habitat and promote continued successful occupation of adjacent habitat areas. Supporting materials will be provided to all construction personnel during the training program.

Crotch's Bumble Bee

Avoidance and minimization measures **TE-4**, and **TE-5** and **TE-6**, below, would reduce the likelihood of direct mortality for Crotch's bumble bee individuals, should they be present, during construction and ensure that indirect impacts would be reduced to the maximum extent possible. Implementation of avoidance and minimization measures **NC-1** through **NC-5** as well as **NC-9** through **NC-12** (Section 2.4.1, *Natural Communities*) would minimize potential impacts on suitable Crotch's bumble bee habitat adjacent to the project limits of disturbance.

TE-5: Crotch's Bumble Bee Preconstruction Surveys and Management. If project work is to occur during the active Crotch's bumble bee season (late February to early October) or during the blooming season for flowering plants that support Crotch's bumble bee, then preconstruction surveys will be performed prior to the start of any project construction or ground disturbance to ensure that Crotch's bumble bee is not active within the project area. If this species is detected, then consultation with CDFW will be required.

TE-6: Crotch's Bumble Bee Environmentally Sensitive Area Fencing. Prior to clearing or construction, ESA fencing will be installed around all habitat that contains suitable soils and/or areas with annual flowering plants that support Crotch's bumble bee adjacent to the project footprint to designate ESAs to be avoided (see measure **NC-1**).

Monarch Butterfly

To ensure that no direct impacts on monarch butterfly occur as a result of Build Alternative 2 or 3, avoidance and minimization measures **TE-4** and **TE-7** through **TE-8**, and mitigation measure **TE-9,** would be implemented. Avoidance and minimization measures **NC-1** through **NC-5**, **NC-9** through **NC-12**, and mitigation measure **NC-13** (Section 2.4.1, *Natural Communities*) would be implemented to avoid any potential indirect impacts on suitable habitat for monarch butterfly occurring within the BSA but outside the project limits of disturbance.

TE-7: Monarch Breeding Habitat Preconstruction Surveys and Environmentally Sensitive Area Fencing. Preconstruction surveys will be performed to identify areas where milkweed, the host plant of monarch butterfly, is present within the project limits of disturbance. Any individual milkweed that is found will be flagged and demarcated as an ESA to be avoided, to the maximum extent feasible. Any milkweed plants within the project work that cannot be avoided will be relocated to the edge of the ROW and outside of the project impact area.

TE-8: Monarch Breeding Habitat-Removal Restrictions. To avoid potential impacts on milkweed and immature stages of monarch butterfly, vegetation removal of milkweed will occur between November and January to avoid the monarch butterfly breeding season, following completion of the blooming period for milkweed and prior to the start of new milkweed growth.

TE-9: Monarch Breeding Habitat-Revegetation Plan. Milkweed species, along with other pollinator plant species, will be included in the plant palette for revegetation in disturbed areas (see measures **NC-12** and **NC-13**) with suitable habitat for monarch butterfly to offset any direct impacts.

Southern California Steelhead

In the BSA, potentially suitable habitat for steelhead is limited to the Santa Clara River. All work would be limited to the existing Santa Clara River Bridge and consist of only restriping; no bridge widening or work within the river channel would occur. The project would implement permanent BMP measures **WQ-1** and **WQ-5** (Section 2.3.2, *Water*

Quality and Stormwater Runoff) to avoid and/or minimize water quality impacts during operation of the project, including those associated with bridge and highway surface flows at the Santa Clara River Bridge.

Southwestern Pond Turtle

Impacts on southwestern pond turtle and its suitable habitat are expected to be temporary under both Build Alternatives 2 and 3. Impacts would be avoided, minimized, and/or mitigated with implementation of measures **NC-1** through **NC-13** (Section 2.4.1, *Natural Communities*), **TE-4**, **AS-5** through **AS-9,** and **AS-11** through **AS-14** (Section 2.4.4, *Animal Species*).

To prevent direct effects as a result of permanent impacts, avoidance and minimization measures **TE-4**, **AS-5** through **AS-9**, and **AS-11** through **AS-14** (Section 2.4.4, *Animal Species*) would be implemented, thereby ensuring no direct mortality of southwestern pond turtle.

Western Snowy Plover

Avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would be implemented to avoid indirect impacts (e.g., increased dust and fire risks resulting from construction activities) on western snowy plover as well as suitable and critical habitat occurring within the surrounding area.

California Least Tern

Avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities)* would be implemented to avoid indirect impacts (e.g., increased dust and fire risks resulting from construction activities) on California least tern as well as suitable habitat occurring within the surrounding area.

Coastal California Gnatcatcher

Because coastal California gnatcatcher is considered absent from the BSA and no critical habitat for coastal California gnatcatcher occurs within the BSA, neither Build Alternative 2 nor 3 is expected to affect this species or its critical habitat; therefore, no avoidance, minimization, or mitigation measures are required.

Southwestern Willow Flycatcher

Southwestern willow flycatcher is considered absent from the BSA. Suitable habitat conditions for southwestern willow flycatcher are present within the Goodding's Willow–Red Willow Riparian Woodland, Sandbar Willow Thickets, and Mulefat Thickets along the Santa Clara River. However, all work would be limited to the existing Santa Clara River Bridge and consist of only restriping; no bridge widening or work within the river channel would occur. The project would implement permanent BMP measures **WQ-1** and **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*) to avoid and/or minimize water quality impacts during operation of the project, including those associated with bridge and highway surface flows at the Santa Clara River Bridge.

Least Bell's Vireo

Avoidance and minimization measure **TE-10**, below, would reduce the likelihood of direct mortality for least Bell's vireo during construction and ensure that indirect impacts would be reduced to the maximum extent possible. Implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would minimize potential impacts on suitable least Bell's vireo habitat adjacent to the project limits.

TE-10: Least Bell's Vireo Preconstruction Surveys and Management. If the clearing of riparian vegetation occurs during the active breeding season for least Bell's vireo (March 15–September 15), then a qualified biologist will conduct preconstruction surveys within 3 days prior to vegetation removal within suitable habitat to identify the locations of any individual least Bell's vireo. If nesting activities or active nests are discovered within the project impact area, then a buffer zone will be clearly marked by the biologist, and no construction activities will occur within the buffer zone until the young have fledged or the nest is no longer active. Alternatively, conditions of the biological opinion will be implemented for active nests. If take of an active nest were to occur, then Section 2081 consultation with CDFW will be required.

Mountain Lion

Avoidance and minimization measures **NC-1** through **NC-5**, **NC-9**, and **NC-10** (Section 2.4.1, *Natural Communities*); and **AS-12** through **AS-14** (Section 2.4.4, *Animal Species*); and mitigation measure **TE-11**, below, would be incorporated to avoid and minimize impacts on mountain lion and their potentially suitable habitat. Avoidance and minimization measures **NC-14** through **NC-24** (Section 2.4.1, *Natural Communities*) would additionally reduce project impacts and improve connectivity at wildlife crossings within the BSA.

TE-11: Wildlife Collaring and Tracking Study. A wildlife collaring and tracking study, conducted in partnership with National Park Service to identify wildlife-crossing patterns and locations where the project can improve wildlife connectivity, is anticipated to be completed during the PA&ED phase of the project. Any pertinent measures associated with the study, which may include avoidance, minimization, and/or mitigation measures, will be included in the final Environmental Impact Report/Environmental Assessment for the project.

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2.4.6 Invasive Species

2.4.6.1 Regulatory Setting

On February 3, 1999, President Clinton signed EO 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999, directs 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.

2.4.6.2 Affected Environment

Unless otherwise noted, the information from this section is based on the NES prepared for the project (Caltrans 2021a). References used in the NES are not carried over in this section.

Nonnative invasive plants invade natural communities throughout California. Furthermore, they outcompete and displace the native plants that many native wildlife species depend on for food and cover. Invasive plants are a leading cause in the decline in the number of native plants and animals and a factor in FESA/CESA listings. They also increase the dangers associated with wildfires and flooding and diminish the amount of productive rangeland and timberland.

Nonnative invasive animal species compete with native wildlife for limited resources. The potential exists for such species to displace, remove resources for, or consume native wildlife. This can lead to population declines and potential extinction for both native plants and animals, lower biodiversity, and altered habitats for considerable periods of time.

During the field surveys conducted for the project, 61 nonnative and/or invasive plant species were observed within the project area, and seven nonnative and/or invasive wildlife species were observed within the project area (see Table 2.4.6-1 and Table 2.4.6-2).

Table 2.4.6-1. Cal-IPC Classified Invasive Species Observed within the BSA

Scientific Name	Common Name	Cal-IPC Rating
Ailanthus altissima	tree of heaven	Moderate
Arundo donax	giant reed	High
Asphodelus fistulosus	onionweed	Moderate
Atriplex semibaccata	Australian saltbush	Moderate

Scientific Name	**Common Name**	**Cal-IPC Rating**
Avena barbata	slender wild oat	Moderate
Avena fatua	wild oat	Moderate
Bassia hyssopifolia	fivehorn smotherweed	Limited
Brachypodium distachyon	purple false brome	Moderate
Brassica nigra	black mustard	Moderate
Bromus diandrus	ripgut brome	Moderate
Bromus hordeaceus	soft brome	Limited
Cakile maritima	European searocket	Limited
Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	Moderate
Carpobrotus edulis	hottentot fig	High
Centaurea melitensis	tocalote	Moderate
Cirsium vulgare	bull thistle	Moderate
Conium maculatum	poison hemlock	Moderate
Cortaderia jubata	purple pampas grass	High
Cotoneaster lacteus	late cotoneaster	Moderate
Cynodon dactylon	Bermuda grass	Moderate
Delairea odorata	cape-ivy	High
Descurainia sophia	wise tansymustard	Limited
Ehrharta erecta	panic veldt grass	Moderate
Erodium cicutarium	redstem filaree	Limited
Eucalyptus globulus	blue gum	Limited
Festuca arundinacea	tall fescue	Moderate
Festuca myuros	rattail fescue	Moderate
Festuca perennis	rye grass	Moderate
Foeniculum vulgare	fennel	High
Gazania linearis	treasureflower/gazania	Moderate
Geranium dissectum	cutleaf geranium	Limited
Glebionis coronaria	crown daisy	Limited
Hedera canariensis	Canary Islands ivy	High
Hedera helix	English ivy	High
Hirschfeldia incana	shortpod mustard	Moderate
Hordeum murinum ssp. *leporinum*	hare barley	Moderate
Hypochaeris radicata	rough cat's-ear	Moderate
Lepidium latifolium	perennial pepper-grass	High
Lobularia maritima	sweet alyssum	Limited
Lythrum hyssopifolia	grass poly	Limited

Scientific Name	Common Name	Cal-IPC Rating
Marrubium vulgare	horehound	Limited
Medicago polymorpha	California burclover	Limited
Mesembryanthemum crystallinum	crystalline iceplant	Moderate
Mesembryanthemum nodiflorum	slender-leaved iceplant	Limited
Myoporum laetum	ngaio tree	Moderate
Nicotiana glauca	tree tobacco	Moderate
Pennisetum setaceum	African fountain grass	Moderate
Plantago lanceolata	English plantain	Limited
Polypogon monspeliensis	rabbit foot beard grass	Limited
Raphanus sativus	radish	Limited
Ricinus communis	castorbean	Limited
Rumex crispus	curly dock	Limited
Salsola tragus	prickly Russian thistle	Limited
Schinus molle	Peruvian pepper tree	Limited
Schinus terebinthifolius	Brazilian pepper tree	Moderate
Schismus barbatus	Mediterranean schismus	Limited
Silybum marianum	blessed milkthistle	Limited
Sisymbrium irio	London rocket	Limited
Tamarix ramosissima	hairy tamarix	High
Tribulus terrestris	puncturevine	Limited
Washingtonia robusta	Mexican fan palm	Moderate

Table 2.4.6-2. Invasive Wildlife Species

Scientific Name	Common Name
Columba livia	rock pigeon
Lonchura punctulata	nutmeg mannikin
Molothrus ater	brown-headed cowbird
Passer domesticus	house sparrow
Streptopelia decaocto	Eurasian collared-dove
Sturnus vulgaris	European starling
Didelphis virginiana	Virginia opossum

2.4.6.3 Environmental Consequences

Invasive plant and animal species are known for their propensity to invade and negatively affect natural ecosystems. Seeds of invasive plant species can be transported to natural open spaces through a variety of mechanisms (e.g., wind, wildlife,

vehicles, imported soils, landscaping). Furthermore, recurring fires can encourage the establishment of colonial invasive species, as can some forms of routine land disturbance (e.g., discing, cutting fire breaks). Invasive plant species can have profound impacts on native vegetation communities by removing or diminishing the value of the required habitat for native plants and animals. Invasive animal species may dominate habitat that would otherwise be available to native species. Furthermore, they may prey on native species, which can have substantial effects on native wildlife populations. Therefore, the need exists to identify and recommend measures to avoid and/or reduce any further transport of invasive species into natural open spaces.

Alternative 1: No-Build Alternative

If the project is not constructed, there would be no new or additional impacts related to the introduction of invasive species within open spaces, beyond those that would be expected to occur from operation of the existing facility.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Build Alternatives 2 and 3 are expected to disturb the ground and remove both native and nonnative vegetation. During construction, vehicles may transport invasive plant species to the BSA from past work sites or move them between current work sites within the project limits of disturbance. Furthermore, post-construction bare ground could serve as a breeding area for invasive plant species. Therefore, the potential exists for adverse effects on natural open spaces from the introduction of invasive species. Although the potential impacts could be severe, with implementation of avoidance and minimization measure **NC-11** (Section 2.4.1, *Natural Communities*), the potential indirect impacts on biological resources from the introduction of invasive species during construction would be expected to be minimal under either Build Alternative 2 or 3.

In compliance with the EO regarding invasive species, EO 13112, and guidance from FHWA, project landscaping and erosion-control measures would not rely on the use of species that have been listed as invasive. None of the species on the Cal-IPC list of invasive species is used by Caltrans for erosion control or landscaping. Furthermore, all equipment and materials would be inspected for the presence of invasive species and, if necessary, cleaned. In areas of particular sensitivity, extra precautions would be taken if invasive species are found in or next to construction areas. These include, in addition to inspecting and cleaning construction equipment, implementing eradication strategies should an invasion occur.

2.4.6.4 Avoidance, Minimization, and/or Mitigation Measures

Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to invasive species would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

To ensure that the project would not introduce invasive species to open spaces within the BSA, avoidance and minimization measure **NC-11** (Section 2.4.1, *Natural Communities*) would be implemented for Build Alternative 2 or 3.

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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 May 27, 2022, and executed by FHWA and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require 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 Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the 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.

3.2 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In accordance with CEQA Guidelines Section 15126.6(c)(2), an "environmentally superior alternative" must be identified among the alternatives analyzed in the EIR. The environmentally superior alternative is the alternative found to have an overall environmental advantage based on the impact analysis in the EIR. If the environmentally superior alternative is the "no project" alternative, also known as the No-Build Alternative, the EIR must identify an environmentally superior alternative among the proposed build alternatives.

For the US 101 Improvement Project, the No-Build Alternative would maintain existing conditions and would avoid the construction-related impacts to environmental resources that are associated with the build alternatives. Compared to the proposed build alternatives, which include several features that would impact environmental resources, the No-Build Alternative would be the environmentally superior alternative. However, traffic operations would continue to deteriorate on the existing US 101 because the proposed improvements under the build alternatives would not occur. In addition, the No-Build would not meet the basic project objectives.

Determining which of the build alternatives is environmentally superior can involve judgment and depends on many factors. An evaluation of concerns that have the greatest potential to result in long-term, significant impacts must be conducted. Areas of concern may include, but are not limited to, visual, biological, and cultural resources, and traffic, geology, noise, and public recreation. Pursuant to CEQA Guidelines Section 15126.6(b), discussion of alternatives with potential for avoiding or substantially lessening the significant impacts should be considered even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.

As indicated in Table 3.3.1-1, for several resources Alternatives 2 and 3 have similar potential for effects (e.g., utilities, hazardous waste/materials, air quality); however, there are some key differences related to the more sensitive resources located within the project area. Based on the sensitivity associated with these resources, the analysis indicates that Alternative 2 would be the environmentally superior alternative. The key factors are listed below:

- **Farmlands** – Alternatives 2 and 3 would require approximately 2.87 acres and 3.49 acres of temporary construction easement (TCE) impacts on farmlands, respectively. In addition, Alternatives 2 and 3 would require approximately 3.13 acres and 3.69 acres of permanent conversion of farmlands to non-farmland use, respectively.

- **Water Quality and Stormwater Runoff** – Alternatives 2 and 3 would increase impervious surface areas by approximately 78 acres and 84 acres, respectively.

- **Relocations and Real Property Acquisition** – Alternative 2 would require TCE impacts on 143 parcels and permanent partial acquisition of 14 parcels. In

comparison, Alternative 3 would require TCE impacts on 147 parcels and permanent partial acquisition of 19 parcels.

- **Parks and Recreational Facilities** – Alternatives 2 and 3 would both have impacts to the Camarillo Grove Park, a Section 4(f) resource. However, Alternative 2 would have approximately 2,939 square feet of TCE impacts to the park. In comparison, Alternative 3 would have approximately 6,723 square feet of TCE impacts and 5,049 square feet of permanent acquisition of the park. The permanent partial acquisition on the park would be subject to the conversion requirements of Section 6(f)(3).

As indicated above, Alternative 2 is the environmentally superior alternative.

Table 3.3.1-1. Comparison of Project Alternatives

Resource Area	Alternative 2 Level of Impact	Alternative 3 Level of Impact	Environmentally Superior Alternative for Resource Area
Aesthetics	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.
Agriculture and Forest Resources	LTS	LTS	Alternative 2 because it would have less temporary and permanent impacts on farmlands than Alternative 3.
Air Quality	SU	SU	None. Alternatives 2 and 3 would have similar impacts.
Biological Resources	LTS/M	LTS/M	None. Alternatives 2 and 3 would have similar impacts.
Cultural Resources	SU	SU	None. Alternatives 2 and 3 would have similar impacts.
Energy	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.
Geology and Soils	LTS/M	LTS/M	None. Alternatives 2 and 3 would have similar impacts.
Greenhouse Gas Emissions	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.
Hazards and Hazardous Materials	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.
Hydrology and Water Quality	LTS	LTS	Alternative 2 because the increase in impervious surface areas would be less than Alternative 3.
Land Use and Planning	NI	NI	None. Alternatives 2 and 3 would have similar impacts.
Mineral Resources	NI	NI	None. Alternatives 2 and 3 would have similar impacts.
Noise	LTS/M	LTS/M	Alternative 3 because the number of modeled receivers and representative dwelling units that are predicted to exceed the existing modeled noise levels by 12 dB or more would be less than Alternative 2.
Population and Housing	LTS	LTS	Alternative 2 because it would have less temporary and permanent impacts on the number of affected parcels than Alternative 3.

Resource Area	Alternative 2 Level of Impact	Alternative 3 Level of Impact	Environmentally Superior Alternative for Resource Area
Public Services	LTS	LTS	Alternative 2 because it would have fewer impacts on Camarillo Grove Park than Alternative 3.
Recreation	NI	NI	None. Alternatives 2 and 3 would have similar impacts.
Transportation	SU	SU	None. Alternatives 2 and 3 would have similar impacts.
Tribal Cultural Resources	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.
Utilities and Service Systems	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.
Wildfire	LTS	LTS	None. Alternatives 2 and 3 would have similar impacts.

dB = decibel; NI = no impact; LTS = less-than-significant impact; LTS w/M = less than significant with mitigation incorporated; SU = significant and unavoidable impact

3.3 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to GHG emissions reduction and climate change research and policy. Research published by the Intergovernmental Panel on Climate Change and other scientists over recent decades has shown an accelerated rate of climatological changes over the past 150 years, attributed to GHG emissions generated from the production and use of fossil fuels.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historical flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, "mitigation" involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

3.3.1 Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), refer to Caltrans' Standard Environmental Reference (SER), Chapter 16, Climate Change.

3.3.2 Environmental Setting

The proposed project is in an urban area of Ventura County with a well-developed road and street network. The project area is adjacent to commercial, industrial, open space, residential, and other land uses. US 101 experiences severe peak-hour traffic congestion under current conditions. The proposed project area is in a region with a Mediterranean climate with hot, dry summers and mild, wet winters. Vegetation types near the project area include a moderate urban tree canopy with landscaped medians and park areas, in addition to agricultural areas and chapparal vegetation in the less developed sections of the project area. The proposed project area includes relatively flat terrain with gentle slopes toward nearby waterways, except along the Conejo Grade, which traverses mountainous topography to connect the cities of the Conejo Valley to the cities of the Oxnard Plain. Additionally, as the proposed project approaches its western terminus in the City of Ventura, US 101 traverses a low-lying region at risk of flooding and sea level rise (SLR).

3.3.2.1 GHG Inventories

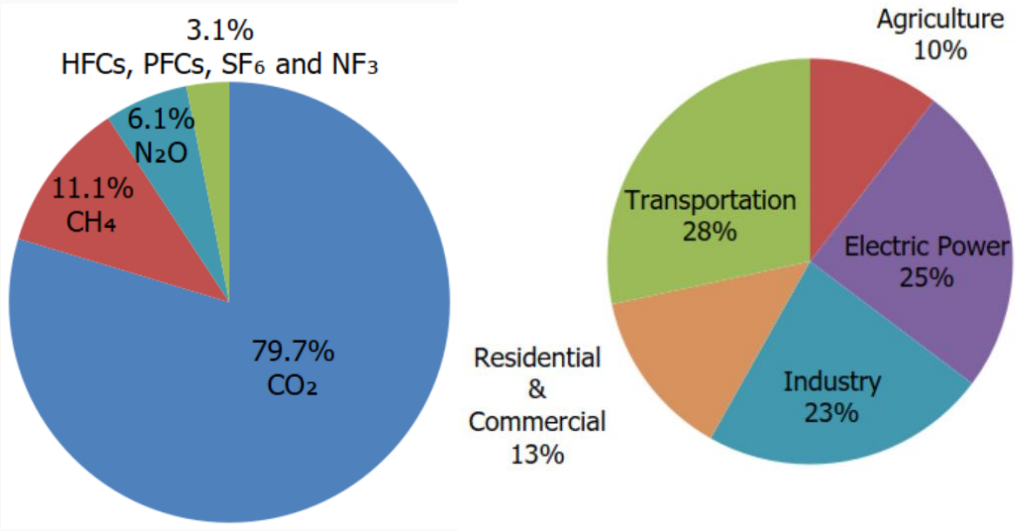
A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting greenhouse gas (GHG) emissions nationwide, and the ARB does so for the state of California, as required by California Health and Safety Code Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. Environmental Protection Agency (U.S. EPA) to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2022 were 5,489.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 15 percent of total U.S. emissions in 2022 [U.S. EPA 2024a].) While total GHG emissions in 2022 were 17 percent below 2005 levels, they increased by 1 percent over 2021 levels. Of these, 80 percent were carbon dioxide (CO_2), 11 percent were methane (CH_4), and 6 percent were nitrous oxide (N_2O); the balance consisted of fluorinated gases. From 1990 to 2022, CO_2 emissions decreased by only 2 percent (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28 percent in 2022 and continues to be the largest contributing sector (Figure 3.3-1). Transportation activities accounted for 37 percent of U.S. CO_2 emissions from fossil fuel combustion in 2022. This is a decrease of 0.5 percent from 2021 (U.S. EPA 2024a, 2024b).

Figure 3.3-1. U.S. 2022 Greenhouse Gas Emissions

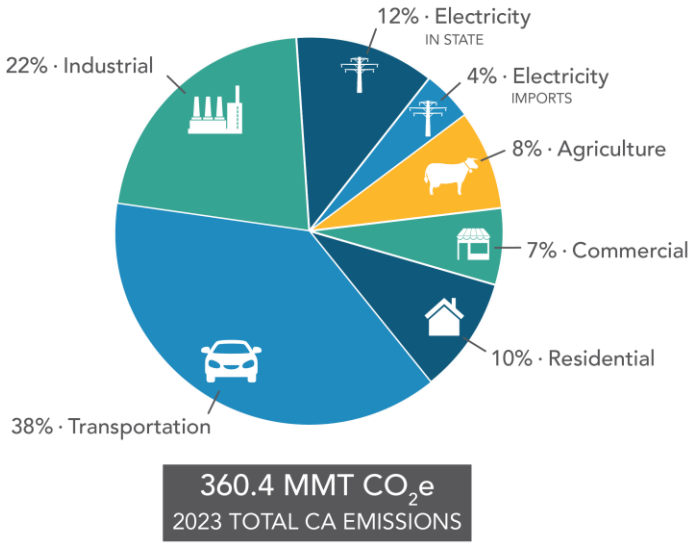


Source: U.S. EPA 2024b.

State GHG Inventory

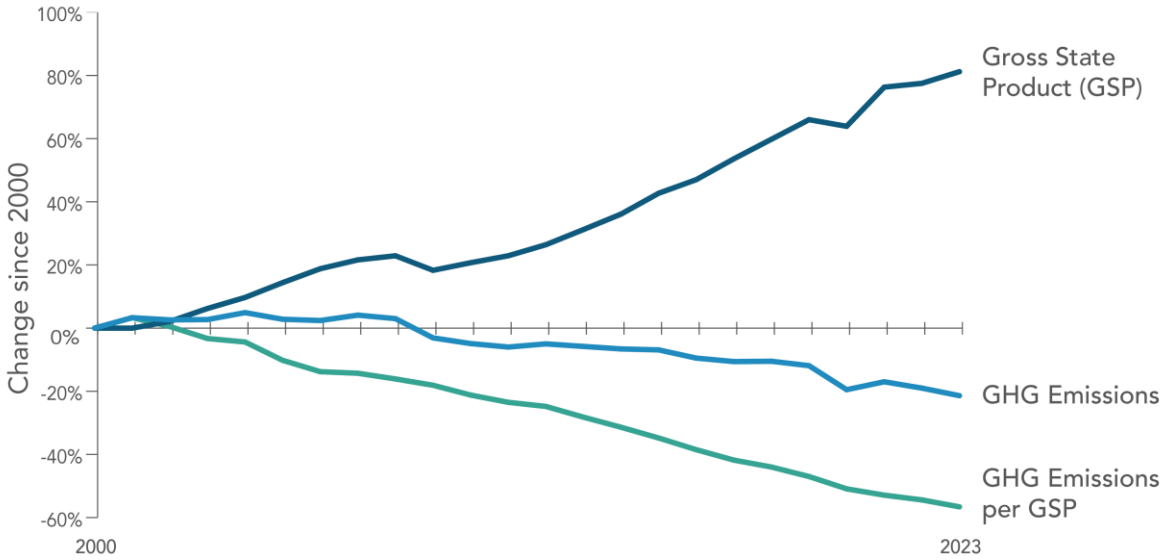
The California Air Resources Board (ARB) collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 3.3-2). Overall statewide GHG emissions declined from 2000 to 2021 despite growth in population and state economic output (Figure 3.3-3) (ARB 2026).

Figure 3.3-2. California 2023 Greenhouse Gas Emissions by Economic Sector



Source: ARB 2026.

Figure 3.3-3. Change in California Gross State Product and GHG Emissions since 2000



Source: ARB 2026.

Assembly Bill (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, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in Executive Order B-30-15 and Senate Bill (SB) 32. The *2022 Scoping Plan for Achieving Carbon Neutrality*, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022).

Ventura County 2015 GHG Inventory

A GHG inventory was prepared for the County of Ventura's (County's) General Plan Update using a baseline year of 2015. The GHG inventory focused on community-wide emissions from residents and businesses operating within the unincorporated area and was organized by sector. The inventory included sources within each sector that are under some degree of jurisdictional control by the County, in accordance with established GHG accounting protocols and state guidance. A 2015 baseline year was selected, given the availability of data in 2016, the year in which the inventorying process began. Community-wide GHG emissions for the unincorporated area in 2015 totaled approximately 1,939,238 metric tons (MT) of CO_2e. The GHG emissions sectors

and the contribution of each sector to total emissions are shown Table 3.3.2-1 (County of Ventura 2020).

Table 3.3.2-1. 2015 Greenhouse Gas Emissions in Unincorporated Ventura County

Sector	CO_2e Emissions (metric tons/year)	Percent of Total
Transportation	692,753	35.7
Building Energy	322,048	16.6
Solid Waste	333,167	17.2
Stationary Sources	317,222	16.4
Agricultural	260,849	13.5
Water and Wastewater	13,148	0.7
Off-road Equipment	52	< 0.1
Total	1,939,238	100

Source: County of Ventura 2020.
Sectors may not add to totals because of rounding.

3.3.2.2 Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375)*, California Air Resources Board sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percentage reduction in passenger vehicle GHG emissions per person, based on 2005 levels.

The proposed project is within the Southern California Association of Governments' (SCAG's) jurisdiction. SCAG's 2024–2050 RTP/SCS titled *Connect SoCal 2024* is a long-range plan that guides transportation development for the region's growth to 2050. Because the proposed project is included in the RTP/SCS for SCAG, its impacts on travel behavior and GHG emissions have been incorporated into the region's modeling and are part of the calculated reductions used to demonstrate compliance with the 19-percent-per-capita GHG reduction target by 2035 (ARB 2022). It should be noted that the SCAG planning region comprises Imperial, Orange, San Bernardino, and Riverside Counties in addition to Ventura County, and that targets apply in the region as a whole and to all GHG emission sources, not individual counties or transportation alone.

The Ventura County Board of Supervisors adopted the *Ventura County 2040 General Plan* on September 15, 2020, which established a Climate Action Plan (CAP) for the county. Appendix B to the *Ventura County 2040 General Plan*, titled *Climate Change/Climate Action Plan*, addresses GHGs in the project area and is the applicable CAP for the project. The CAP serves as a tool to implement the goals and policies, or the various elements of the general plan related to GHG emissions. It provides a list of specific actions that will reduce countywide GHG emissions consistent with the

reduction targets of AB 32. Relevant regional plans and GHG reduction policies/strategies are summarized in Table 3.3.2-2 below.

Table 3.3.2-2. Applicable Local and Regional Greenhouse Gas Reduction or Climate Action Plans, Policies, and Strategies

GHG Reduction or Climate Action Plan	GHG Reduction Policies or Strategies
SCAG 2024–2050 RTP/SCS	The 2024–2050 RTP/SCS, or *Connect SoCal 2024*, includes goals, strategies, programs, and projects that will help the SCAG region in reducing its GHG emissions. The SCS prepared as part of *Connect SoCal 2024* complies with the emission reduction targets established by ARB and meets the requirements of SB 375 by achieving GHG emission reductions at 8% below 2005 per capita emissions levels by 2020 and 19% below 2005 per capita emissions levels by 2035. The RTP/SCS includes the following policies. Several are directly tied to supporting related GHG reductions, while others support the broader goals of Connect SoCal: • Policy 7: Encourage and support the implementation of projects, both physical and digital, that facilitate multimodal connectivity, prioritize transit and shared mobility, and result in improved mobility, accessibility and safety. • Policy 13: Prioritize transportation investments that increase travel time reliability, including build-out of the regional express lanes network. • Policy 51: Reduce hazardous air pollutants and greenhouse gas emissions and improve air quality throughout the region through planning and implementation efforts. • Policy 52: Support investments that reduce hazardous air pollutants and greenhouse gas emissions.
Ventura County 2040 General Plan: Climate Action Plan (CAP)	The Ventura County 2040 General Plan CAP established a 2015 emission baseline of 1.9 $MMTCO_2e$. The transportation sector is responsible for approximately 692,753 $MTCO_2e$, or 35.7 percent, of the total 2015 baseline. The CAP includes the following applicable transportation-related policies that would help to reduce GHG emissions to meet the County's emission targets for 2030, 2040, and 2050: • **CTM-2.2**: The County shall plan a roadway system that has adequate capacity and is designed to provide reasonable and safe use by vehicles, public transportation, bicycles and pedestrians with minimum delay pursuant to LOS standards described in Policy CMT-1.2. The road system should follow Federal Highway Administration (FHWA) classification. • **CTM-2.4**: The County shall strive to provide safe operating conditions for all appropriate modes and uses of County roadways. • **CTM-2.6**: The County shall work with Caltrans, Southern California Association of Governments (SCAG), Ventura County Transportation Commission (VCTC), and cities in the county to plan, develop, and maintain regional transportation facilities and services, and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved. • **CTM-2.7**: The County shall coordinate with Ventura County Transportation Commission (VCTC) to implement and update the

GHG Reduction or Climate Action Plan	GHG Reduction Policies or Strategies
	Congestion Management Program (CMP). The County shall also encourage consideration of multimodal performance measures as part of future updates to the CMP. • **CTM-2.8**: For those portions of the County's Regional Road Network currently not designated as part of the Congestion Management Program (CMP), the County shall coordinate with Ventura County Transportation Commission (VCTC) to formally designate applicable County maintained roadways as part of the CMP. • **CTM-4.1** The County shall work with Caltrans and Ventura County Transportation Commission (VCTC) to reduce VMT by: o facilitating the efficient use of existing transportation facilities; o striving to provide viable modal choices that make driving alone an option rather than a necessity; o supporting variable work schedules to reduce peak period VMT; and o providing more direct routes for pedestrians and bicyclists. • **CTM-4.3**: The County shall work with a broad range of agencies (e.g., Caltrans, Ventura County Transportation Commission (VCTC), Amtrak, Ventura County Air Pollution Control District, public transportation providers and shared mobility vendors) to encourage and support programs that increase vehicle occupancy including the provision of traveler information, shuttles, and preferential parking for carpools/vanpools. • **CTM-6.3**: As part of new roadway planning and design as part of discretionary development, the County shall promote the use of permeable paving and other passive drainage features such as bio-swales to prevent flooding, particularly in urban areas. • **CTM-D**: The County shall continue to coordinate across its own agencies as well as with cities in Ventura and Los Angeles Counties and Caltrans to identify needed improvements to the Regional Road Network. This will include identification of funds available and needed for County and cities inter-city road-building purposes to construct improvements. • **PFS-C**: The County shall conduct, and periodically update, Climate Change Impacts Monitoring reports to map locations of communication, energy, public service, transportation facilities, and infrastructure that are vulnerable to rising sea levels and coastal flooding.

Sources: SCAG 2024; County of Ventura 2020.
CAAP = Clean Air Action Plan; $MTCO_2e$ = metric tons of carbon dioxide equivalent; LOS = level of service; $MMTCO_2e$ = million metric tons of carbon dioxide equivalent; VMT = vehicle miles traveled

3.3.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are carbon dioxide (CO_2), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. CO_2 emissions are a product of gasoline or diesel fuel in internal combustion engines, along with

relatively small amounts of methane and nitrous oxide. Additionally, the transportation sector emits a minor amount of hydrofluorocarbon emissions, which are related to refrigeration and air conditioning systems used in vehicles.

GHGs vary in their ability to trap heat in the atmosphere, a characteristic known as global warming potential. CO_2 is the most significant GHG due to its abundance and impact, and thus, the amounts of other gases are expressed relative to CO_2 using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned as a value of 1, and the global warming potential of other gases is assigned as multiples of CO_2. Both operational and construction emissions associated with the proposed project are analyzed in the sections below and emission values, if required, are expressed in CO_2e to provide a standardized measure of their impact.

The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (*Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 512). 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).

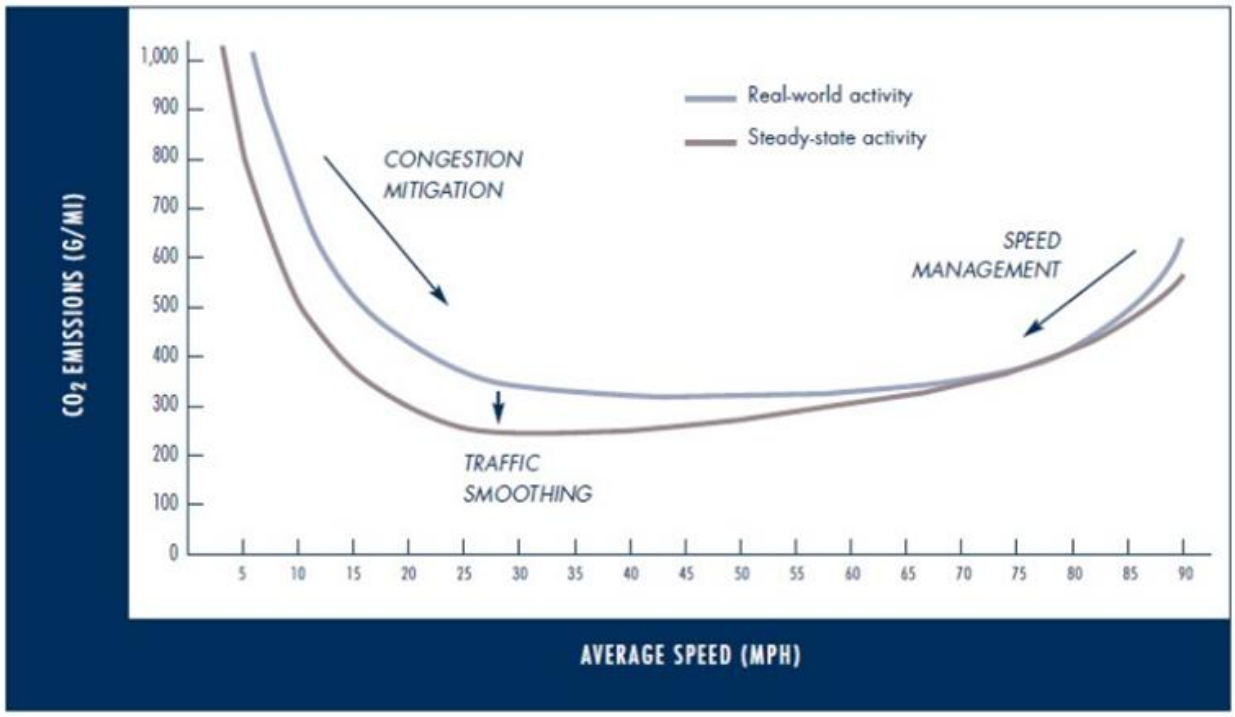
To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

3.3.3.1 Operational Emissions

The National GHG Inventory for 2022 reported that 80 percent of all U.S. GHG emissions in 2022 consisted of CO_2, and fossil fuel combustion for transportation accounted for 35 percent of those CO_2 emissions. Most (37 percent) transportation-related CO_2 was from operating light-duty trucks, 23 percent from medium- and heavy-duty trucks and buses, and 20 percent from passenger cars. The remainder of emissions came from other modes and off-road sources (U.S. EPA 2024a). Because CO_2 emissions represent the greatest percentage of GHG emissions, it has been selected as a proxy for the following analysis for potential climate change impacts.

The highest levels of CO_2 from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0–25 miles per hour. See Figure 3.3-4 below. To the extent that a project enhances operational efficiency and improves travel times in high-congestion travel corridors, GHG emissions, particularly CO_2, may be reduced, provided that improved travel times do not induce additional vehicle miles traveled (VMT).

Figure 3.3-4. Possible Use of Traffic Operation Strategies in Reducing On-Road Carbon Dioxide Emissions



Source: Barth and Boriboonsomsin 2010

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 through fleet mix and improving efficiency by reducing carbon footprints through the use of new pavement technologies. To be most effective, all four strategies should be pursued concurrently.

The project is listed in the SCAG 2024–2050 RTP/SCS under project ID number 5160001. The 2024–2050 RTP/SCS was approved by FHWA on May 10, 2024. Implementation of the 2024–2050 RTP/SCS would result in a 19-percent reduction per capita by 2035. This would meet the State's mandated reductions for the SCAG region, which are 8 percent by 2020 and 19 percent by 2035. The project build alternatives directly support the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and congestion. This strategy contributes to overall GHG reduction efforts regarding mobile sources within the SCAG region.

The project proposes to widen US 101 in order to add a high-occupancy vehicle (HOV)/Express Bus Lane in each direction, with design variations. The objective of the project is to reduce traffic congestion, improve traffic operations, and accommodate future traffic volumes forecasted in the project area. Level of service (LOS) is a letter designation system that describes the range of operating conditions of a particular roadway, with LOS A representing the best operating conditions and LOS F

representing the worst; in general, LOS E and LOS F are considered unacceptable. The existing peak-hour LOS in the project corridor varies from C (vehicle operating speed greater than 54 miles per hour) to F (vehicle operating speed less than 29 miles per hour). Congestion within the project region has increased by about 45 percent since 1990 and is anticipated to increase further. Due to the projected population growth for Ventura County—currently estimated at approximately 1 percent annually—it is anticipated that traffic demand would continue to increase, and LOS would continue to degrade along US 101 affecting traffic operations. However, under the proposed project, mainline traffic flow would improve under the project build alternatives and would have a negligible effect on surface street and intersection traffic volumes.

The proposed project would increase the VMT within the project corridor; however, VMT would not increase by a substantial amount. The build alternatives would only increase VMT by roughly 0.23 percent (Alternative 2) and 0.44 percent (Alternative 3) in the 2060 Horizon Year when compared to the No-Build Alternative. While some GHG emissions during the construction period would be unavoidable, the increase in operational GHG emissions would be less than significant.

3.3.3.2 Quantitative Analysis

The regional VMT data for the Baseline/Existing, No-Build Alternative, and build alternatives, along with the CT-EMFAC2021 emission rates, were used to calculate the CO_2 emissions for the Existing (2018), 2040 Opening Year, 2045 RTP/SCS Horizon Year, and 2060 Horizon Year conditions. The results of the modeling are summarized in Table 3.3.3-1. As shown in Table 3.3.3-1, the future year No-Build Alternative and build alternative conditions have lower GHG emissions than the Existing\Baseline condition. When compared to the No-Build condition, build alternative GHG emissions are modeled to be marginally higher than the No-Build Alternative GHG emissions.

Table 3.3.3-1. Modeled Annual CO_2e Emissions and Vehicle Miles Traveled, by Alternative

Alternative	CO_2e Emissions (Metric Tons)	Annual Vehicle Miles Traveled[a]
Total Construction Emissions	32,037	N/A
2018 Existing/Baseline	1,886,199	4,793,223,775
2040 Opening Year		
Alternative 1 No-Build	1,414,265	5,384,878,901
Increase from Existing	(471,933.8)	591,655,126
Alternative 2	1,417,546	5,397,369,513
Increase from Existing	(468,653.3)	604,145,738
Increase from No-Build	3,280.5	12,490,612
Alternative 3	1,423,712	5,420,848,921
Increase from Existing	(462,486.8)	627,625,146
Increase from No-Build	9,447.0	35,970,020
2045 RTP/SCS Horizon Year		
Alternative 1 No-Build	1,387,263	5,425,265,537

Alternative	CO_2e Emissions (Metric Tons)	Annual Vehicle Miles Traveled[a]
Increase from Existing	(498,936.3)	632,041,762
Alternative 2	1,390,480	5,437,849,492
Increase from Existing	(495,718.6)	644,625,717
Increase from No-Build	3,217.8	12,583,955
Alternative 3	1,396,529	5,461,505,176
Increase from Existing	(489,669.7)	668,281,401
Increase from No-Build	9,266.6	36,239,639
2060 Horizon Year		
Alternative 1 No-Build	1,408,101	5,546,425,445
Increase from Existing	(478,098.4)	753,201,670
Alternative 2	1,411,367	5,559,290,470
Increase from Existing	(474,832.3)	766,066,695
Increase from No-Build	3,266.1	12,865,025
Alternative 3	1,417,506	5,583,474,288
Increase from Existing	(468,692.6)	790,250,513
Increase from No-Build	6,139.7	24,183,818

Emissions modeled using CT-EMFAC2021. See modeling outputs provided in the Air Quality Report (Caltrans 2025a).

[a.] Annual VMT values derived from daily VMT values multiplied by 347, per ARB methodology (ARB 2008).

N/A = not applicable

Although CT-EMFAC has a rigorous scientific foundation and has been vetted through multiple stakeholder reviews, its emission rates are based on tailpipe emissions test data. The numbers are estimates of CO_2 emissions and do not necessarily reflect the actual CO_2 emissions. The model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence CO_2 emissions. To account for CO_2 emissions, ARB's GHG inventory follows the International Panel on Climate Change guideline (IPCC 2007) by assuming complete fuel combustion, while still using EMFAC data to calculate CH_4 and N_2O emissions. Although EMission FACtors (EMFAC) is currently the best available tool for use in calculating GHG emissions, the CO_2 numbers provided are useful only for a comparison of alternatives.

ARB developed the EMFAC model to facilitate preparation of statewide and regional mobile-source emissions inventories. The model generates emissions rates that can be multiplied by vehicle activity data from all motor vehicles, from passenger cars to heavy-duty trucks, operating on highways, freeways, and local roads in California. EMFAC has a rigorous scientific foundation, has been approved by U.S. EPA, and has been vetted through multiple stakeholder reviews. Caltrans developed CT-EMFAC based on data derived from ARB's EMFAC model and ancillary datasets to estimate project-level emissions from on-road mobile sources.

EMFAC's GHG emission rates are based on tailpipe emissions test data and the model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence the amount of emissions generated by a vehicle. GHG emissions

quantified using CT-EMFAC are therefore estimates and may not reflect actual on-road emissions. Nevertheless, modeling estimated GHG emissions with EMFAC or CT-EMFAC remains the most precise means of estimating future GHG emissions. While CT-EMFAC is currently the best available tool for calculating GHG emissions from mobile sources, it is important to note that the GHG results are only useful for a comparison of alternatives.

3.3.3.3 Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities. The table below summarizes estimated construction-related GHG emissions in metric tons per year.

Table 3.3.3-2. Construction-related CO_2e Emissions by Alternative

Year	Build Alternatives 2 and 3
2028	940
2029	2,122
2030	5,011
2031	1,084
2032	2,227
2033	4,880
2034	1,078
2035	2,174
2036	4,732
2037	1,074
2038	2,135
2039	4,572
Total	**32,037**

Source: Construction emissions modeling conducted by ICF.
Note: Units for alternatives are in Metric Tons of CO_2e (carbon dioxide equivalent). Totals may not add due to rounding.

Construction emissions were estimated for the proposed project using default equipment inventories provided in the Sacramento Metropolitan Air Quality Management District’s Road Construction Emissions Model Version 9.0, project

construction scheduling information provided by the project engineer, and emissions factors from the EMFAC2021 and OFFROAD models.

Project construction is anticipated to span approximately 12 years, from 2028 to 2040, but construction would be phased to occur over four 3-year construction periods. Overall project construction emissions of GHGs would be approximately 8,071 MT CO_2e over phase 1, approximately 8,188 MT CO_2e over phase 2, approximately 7,982 MT CO_2e over phase 3, and approximately 7,795 MT CO_2e over phase 4. Overall construction emissions would total approximately 32,037 MT CO_2e over the 12-year construction duration. As both build alternatives have the same construction duration, the same post miles (PMs), and a similar number of structures to be replaced and widened, the differences in construction activity are negligible. Therefore, the construction emissions are applicable to both build alternatives.

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7-1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations that reduce construction vehicle emissions also help reduce GHG emissions. For example, Ventura County Air Pollution Control District (VCAPCD) Rule 55 is intended to reduce the amount of particulate matter in the ambient air resulting from anthropogenic fugitive dust sources by requiring projects to prevent, reduce, or mitigate fugitive dust emissions. All construction activity sources of fugitive dust are required to implement control measures indicated in VCAPCD Rule 55.

3.3.3.4 Plan Consistency

ARB Scoping Plan

In accordance with AB 32, ARB developed the scoping plan to outline the state's strategy to achieve 1990-level emissions by 2020. Since adoption of the 2008, 2017, and 2022 scoping plans, state agencies have adopted programs identified in the scoping plan, and the legislature has passed additional legislation to achieve the GHG reduction targets. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard and changes in corporate average fuel economy (CAFE) standards (e.g., Pavley I and 2017–2025 CAFE standards). These statewide measures are applicable uniformly throughout the state, and all future on-road vehicles would be in compliance. Therefore, the proposed project would be consistent with the statewide measures to help reduce GHG emissions (Low Carbon Fuel Standard and CAFE standards) and would not conflict with the scoping plan.

SCAG's 2024–2050 Regional Transportation Plan/Sustainable Communities Strategies

SCAG's 2024–2050 RTP/SCS is a regional growth-management strategy that targets per capita GHG reductions from passenger vehicles and light-duty trucks in the Southern California region. The 2024–2050 RTP/SCS incorporates local land use

projections and circulation networks in city and county general plans. The projected regional development pattern, including locations of land uses and residential densities included in local general plans, when integrated with the proposed regional transportation network identified in the 2024–2050 RTP/SCS, would reduce per-capita vehicular travel-related GHG emissions and achieve the GHG reduction per-capita targets for the SCAG region of 8 percent per capita from 2005 GHG emission levels by 2020 and 19 percent per capita from 2005 GHG emission levels by 2035. The strategies, programs, and projects outlined in the 2024–2050 RTP/SCS are projected to result in GHG emissions reductions in the SCAG region that meet or exceed these targets. The proposed project is included in the 2024–2050 SCAG RTP/SCS under project number 5160001. Therefore, the proposed project is consistent with SCAG's 2024–2050 RTP/SCS.

County of Ventura General Plan/Climate Action Plan

The County developed an integrated approach to addressing climate change in the general plan by incorporating related policies and programs throughout the general plan elements, such that the general plan will also serve as the County's CAP. The goal of the County's CAP is to reduce future GHG emissions within the county for the buildout years of 2030, 2040, and 2050, consistent with the long-term state GHG reduction goals, including AB 32 and SB 32. The proposed project is in compliance with the following policies and programs:

- **CTM-2.2:** The County shall plan a roadway system that has adequate capacity and is designed to provide reasonable and safe use by vehicles, public transportation, bicycles and pedestrians with minimum delay pursuant to LOS standards described in Policy CMT-1.2. The road system should follow Federal Highway Administration (FHWA) classification.

- **CTM-2.4:** The County shall strive to provide safe operating conditions for all appropriate modes and uses of County roadways.

- **CTM-2.6:** The County shall work with Caltrans, Southern California Association of Governments (SCAG), Ventura County Transportation Commission (VCTC), and cities in the county to plan, develop, and maintain regional transportation facilities and services, and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved.

- **CTM-2.7:** The County shall coordinate with Ventura County Transportation Commission (VCTC) to implement and update the Congestion Management Program (CMP). The County shall also encourage consideration of multimodal performance measures as part of future updates to the CMP.

- **CTM-2.8:** For those portions of the County's Regional Road Network currently not designated as part of the Congestion Management Program (CMP), the County shall coordinate with Ventura County Transportation Commission (VCTC)

to formally designate applicable County maintained roadways as part of the CMP.

- **CTM-4.1:** The County shall work with Caltrans and Ventura County Transportation Commission (VCTC) to reduce VMT by:
    - facilitating the efficient use of existing transportation facilities;
    - striving to provide viable modal choices that make driving alone an option rather than a necessity;
    - supporting variable work schedules to reduce peak period VMT; and
    - providing more direct routes for pedestrians and bicyclists.
- **CTM-4.3:** The County shall work with a broad range of agencies (e.g., Caltrans, Ventura County Transportation Commission (VCTC), Amtrak, Ventura County Air Pollution Control District, public transportation providers and shared mobility vendors) to encourage and support programs that increase vehicle occupancy including the provision of traveler information, shuttles, and preferential parking for carpools/vanpools.
- **CTM-6.3:** As part of new roadway planning and design as part of discretionary development, the County shall promote the use of permeable paving and other passive drainage features such as bio-swales to prevent flooding, particularly in urban areas.
- **CTM-D:** The County shall continue to coordinate across its own agencies as well as with cities in Ventura and Los Angeles Counties and Caltrans to identify needed improvements to the Regional Road Network. This will include identification of funds available and needed for County and cities inter-city road-building purposes to construct improvements.
- **PFS-C:** The County shall conduct, and periodically update, Climate Change Impacts Monitoring reports to map locations of communication, energy, public service, transportation facilities, and infrastructure that are vulnerable to rising sea levels and coastal flooding.

As shown above, the proposed project would be consistent with the applicable policies and programs found within the County's CAP, which is the County's roadmap for achieving the reduction targets required under the Scoping Plan and SB 32. Therefore, the project would not conflict with the Scoping Plan and thus would be consistent with the long-term goal of AB 32 and SB 32.

3.3.3.5 CEQA Conclusion

Although the proposed project would result in GHG emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions compared with the 2018 Existing/Baseline conditions; refer to Table 3.3.3-1. Compared to the No-Build conditions, build alternative GHG emissions are modeled to be marginally higher than No-Build Alternative GHG emissions.

The proposed project is identified in SCAG's 2024–2050 RTP/SCS under project number 5160001. The project build alternatives directly support the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and congestion. This strategy contributes to overall GHG reduction efforts regarding mobile sources within the SCAG region. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. Furthermore, the proposed project would implement construction and operational minimization measures, which, while not quantified, may help reduce GHG emissions. Therefore, because there is a reduction in future emissions compared to existing emissions, there is evidence of substantial progress in reducing emissions and the impact may be considered less than significant.

Caltrans and VCTC are firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

3.3.4 Greenhouse Gas Reduction Strategies

3.3.4.1 Statewide Efforts

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Additionally, Caltrans has enacted policies and initiatives to reduce GHG emissions in transportation to reach the state's climate goals. For a full list of statewide and Caltrans GHG reduction strategies, refer to SER, Chapter 16, Climate Change.

3.3.4.2 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. The PDT has reviewed the *GHG Reduction Measures Toolbox for Internal Use in Caltrans Project Development* (Caltrans 2021k) and confirmed that GHG reduction measures **GHG-1** through **GHG-12** are applicable to the project.

- **GHG-1:** Truck trips will be scheduled outside of peak morning and evening commute hours.
- **GHG-2:** To reduce the need for transport of earthen materials, the cut and fill quantities will be balanced on site.

- **GHG-3:** To minimize the cut and fill quantities, the alternatives have been designed to match the existing grade as much as possible.
- **GHG-4:** Recycled water will be used and/or the use of potable water will be minimized during construction.
- **GHG-5:** Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- **GHG-6:** Use alternative fuels such as renewable diesel for construction equipment.
- **GHG-7:** Salvage rebar from demolished concrete and process waste to create usable fill.
- **GHG-8:** Maximize the use of recycled materials (tire rubber for example).
- **GHG-9:** Water-efficient technologies such as drought-tolerant landscaping, drip irrigation with moisture sensors, and water-saving fixtures will be used.
- **GHG-10:** Project features that minimize the need for irrigation and nonnative plants will be selected.
- **GHG-11:** Replace lighting with ultra-reflective sign materials that are illuminated by headlights to reduce energy used by electric lighting.
- **GHG-12:** Conduct workshops/advertising to promote use of mass transportation and carpooling.

3.3.5 Adaptation

While reducing GHG emissions is crucial in combating climate change, it is only one part of the solution. Caltrans must proactively plan for the impact of climate change on California's transportation infrastructure. This involves modifying and protecting facilities to reduce potential damage and build resilience against future climate-related challenges.

Caltrans has conducted District Climate Change Vulnerability Assessments to identify segments of the State Highway System that are vulnerable to climate change impacts, such as sea level rise, increased temperatures, and extreme weather events. These assessments help prioritize areas for adaptation efforts and inform the development of strategies to enhance the resilience of critical infrastructure.

Additionally, Caltrans periodically prepares a Sustainability Roadmap, which outlines the agency's strategic plans and progress reports aimed at achieving state sustainability goals. The roadmap is a two-year progress report on several important milestones

achieved by Caltrans while implementing Executive Orders B-16-12, B-18-12, and the adaptation planning process of Executive Orders B-30-15, N-19-19, and N-82-20.

Refer to SER, Chapter 16, Climate Change for additional information regarding federal, state, and Caltrans adaptation efforts.

3.3.5.1 Project Adaptation Analysis

The Climate Risk Assessment Report and Transportation Planning Scoping Information Sheet are not available for the project. The Project Study Report-Project Development Support, which served as the Project Initiation Document for the project, does not identify whether temperature, precipitation/flooding, or wildfire are relevant risks for the project area that would require adaptive changes in project design or maintenance practices. Therefore, the adaptation analysis below assesses whether the project area may be subject to these climate change effects.

Sea-Level Rise

While a majority of the project corridor is outside the coastal zone and not in an area subject to SLR, a portion of the project, close to PM 30.9 near the City of Ventura, is subject to SLR. Figure 3.3-5 depicts the proposed project area that stands to be affected by SLR. Figure 3.3-6 depicts the entire proposed project area. In Figure 3.3-5 and Figure 3.3-6, areas hydrologically connected to potential sea level rise are depicted in shades of blue, while the low-lying areas considered hydrologically “unconnected” from SLR but still at risk of flooding are shown in green. On Figure 3.3-5, the proposed project alignment is shown in yellow, while on Figure 3.3-6, the project alignment is shown in red.

Figure 3.3-5. Proposed Project Alignment and Areas Subject to 10 Feet of Sea Level Rise

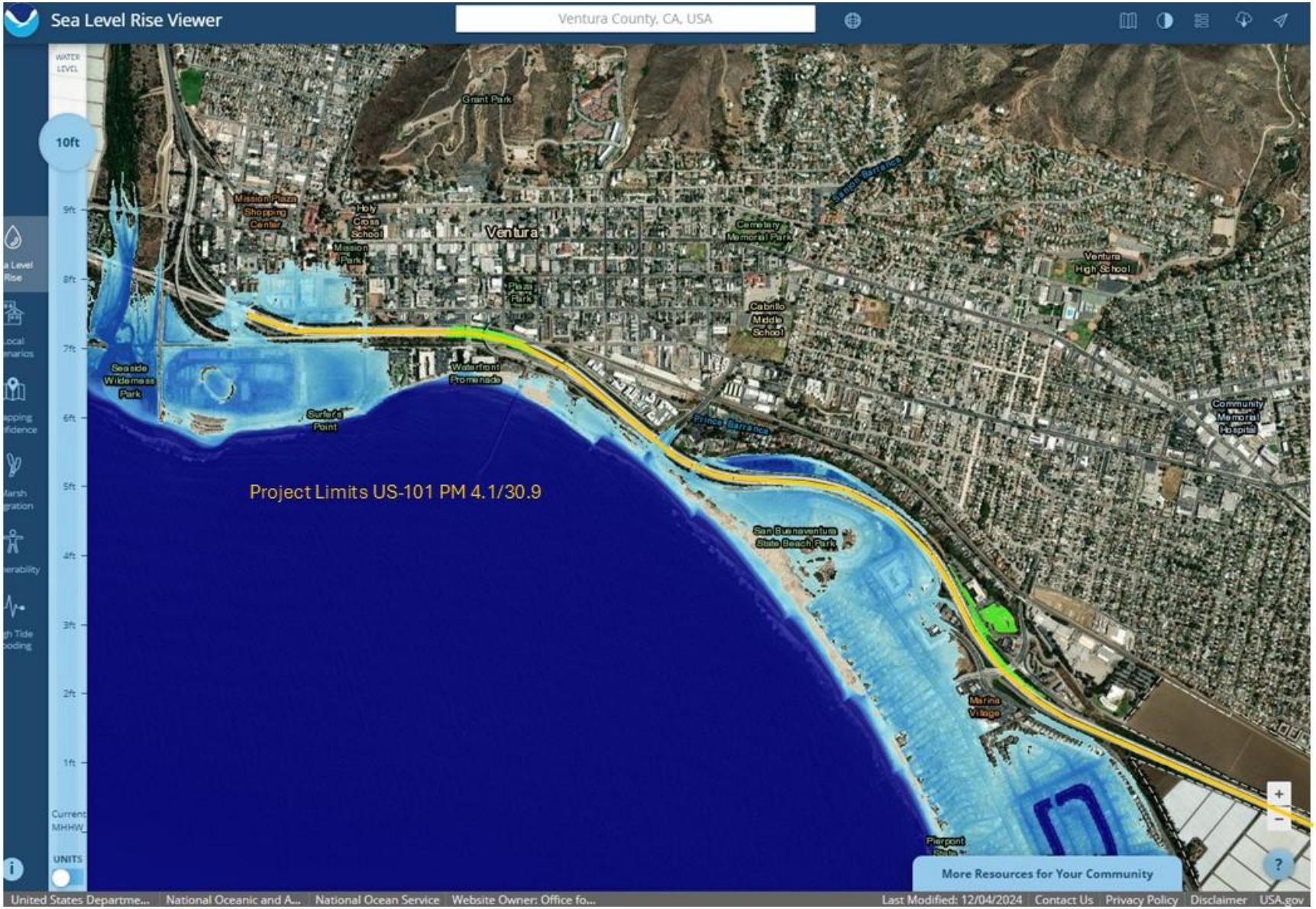
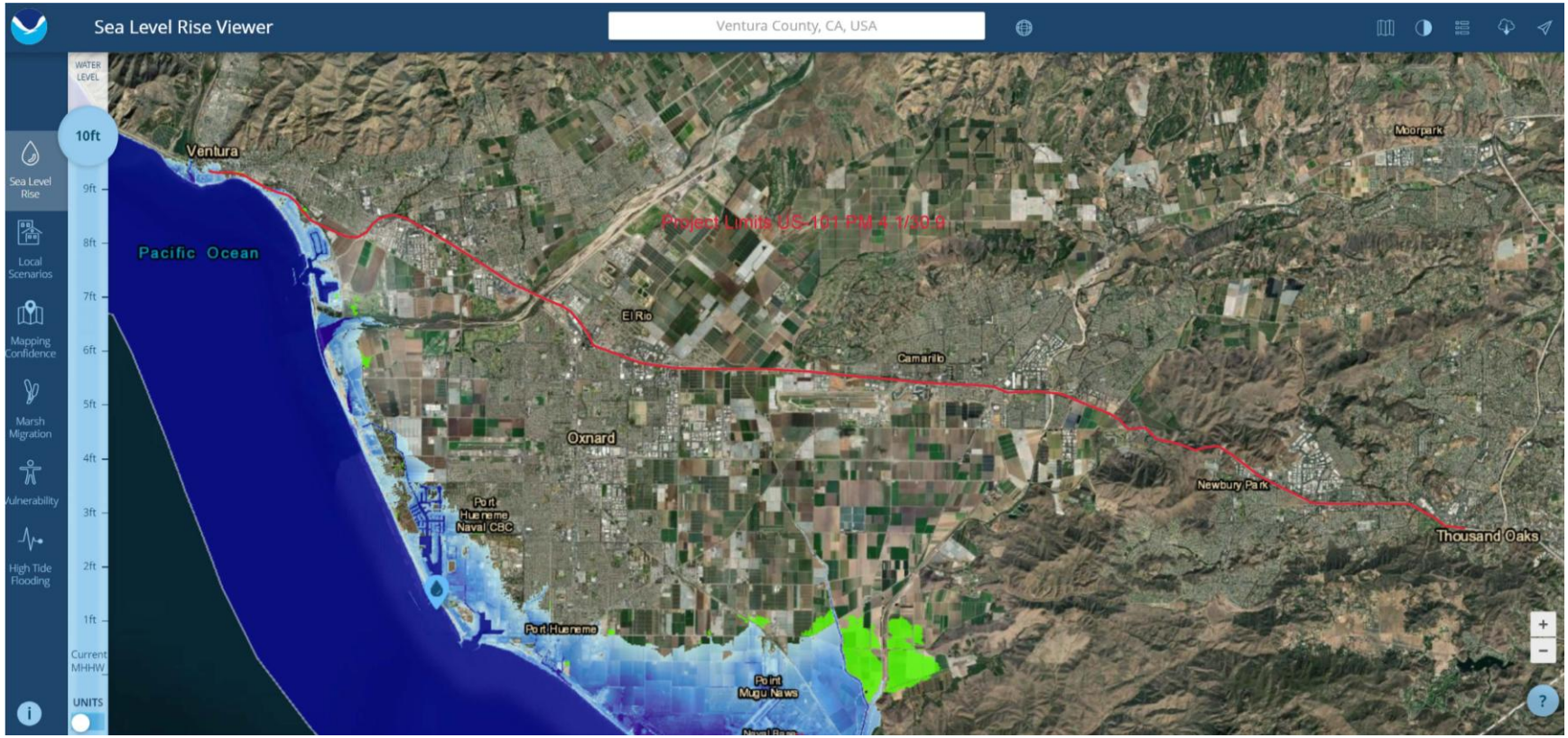


Figure 3.3-6. Proposed Project Alignment and Areas Subject to 10 Feet of Sea Level Rise



Estimates of SLR have been developed for California by various agencies and research institutions. Table 3.3.5-1 reflects median values of sea level scenarios at the nearest tide gauge to the project area, which is in Santa Barbara. The sea level scenarios are provided in feet for each decade from 2020 to 2150, using the year 2000 as the baseline. The estimates in Table 3.3.5-1 were developed by a scientific panel for the *State of California Sea-Level Rise Guidance: 2024 Science & Policy Update*, an effort led by the Ocean Protection Council (OPC) (OPC 2024). These projections were developed based on global and local factors that drive SLR such as thermal expansion of ocean water, glacial ice melt, and the expected amount of vertical land movement. The median values (i.e., 50th percentile) for SLR are provided in Table 3.3.5-1 for four SLR scenarios. Specific details of the emissions and confidence levels associated with each SLR scenario are available in the *State of California Sea-Level Rise Guidance: 2024 Science & Policy Update* (OPC 2024). The four scenarios include:

- Intermediate Low (reasonable lower bound for the most likely range of SLR by 2100)
- Intermediate (reasonable upper bound for the most likely range of SLR by 2100)
- Intermediate High (higher emissions and lower confidence than Intermediate scenario)
- High (higher emissions and lower confidence than Intermediate High scenario)

Table 3.3.5-1. Sea Level Scenarios for Santa Barbara (feet)

Year	Intermediate Low	Intermediate	Intermediate High	High
2020	0.2	0.2	0.2	0.2
2030	0.3	0.3	0.3	0.4
2040	0.4	0.4	0.5	0.6
2050	0.5	0.6	0.9	1.1
2060	0.6	0.9	1.4	1.8
2070	0.7	1.2	2.0	2.7
2080	0.9	1.6	2.8	3.8
2090	1.1	2.1	3.5	5.0
2100	1.2	2.8	4.5	6.3
2110	1.4	3.4	5.3	7.5
2120	1.5	4.0	6.0	8.6
2130	1.7	4.4	6.6	9.5
2140	1.9	4.9	7.1	10.4
2150	2.0	5.5	7.6	11.3

Source: OPC 2024.

The years included in Table 3.3.5-1 span the Opening Year (2040) and Design Year (2060) of the project in addition to future years extending to 2150. Figure 3.3-7 through Figure 3.3-17, below, show the impacts of SLR, with water levels starting from the

current mean higher high water[1] level and increasing in 1-foot increments to 10 feet of SLR. On Figure 3.3-7 through Figure 3.3-17, the proposed project alignment is shown in yellow, areas hydrologically connected to potential SLR are depicted in shades of blue, while the low-lying areas considered hydrologically "unconnected" from SLR but still at risk of flooding are shown in green. Additionally, Figure 3.3-18 through Figure 3.3-26 show the increases of average SLR from the average current level to average SLR of 5 meters (16.4 feet), as reported by the U.S. Geological Survey (USGS) Coastal Storm Modeling System (CoSMoS) and provided by the Caltrans Environmental GIS Viewer (Caltrans 2025c). Figure 3.3-22 through Figure 3.3-26 provide an additional source to illustrate the potential SLR risks to the project. SLR is displayed in these figures using varying colors, as designated by the Caltrans Environmental GIS Viewer.

[1] Mean higher high water is defined as the average of the higher high water height of each tidal day observed over the National Tidal Datum Epoch (approximately 19 years) and excludes wind-driven tides (OPC 2024).

Figure 3.3-7. Proposed Project Alignment and Areas Subject to 0 Feet of Sea Level Rise

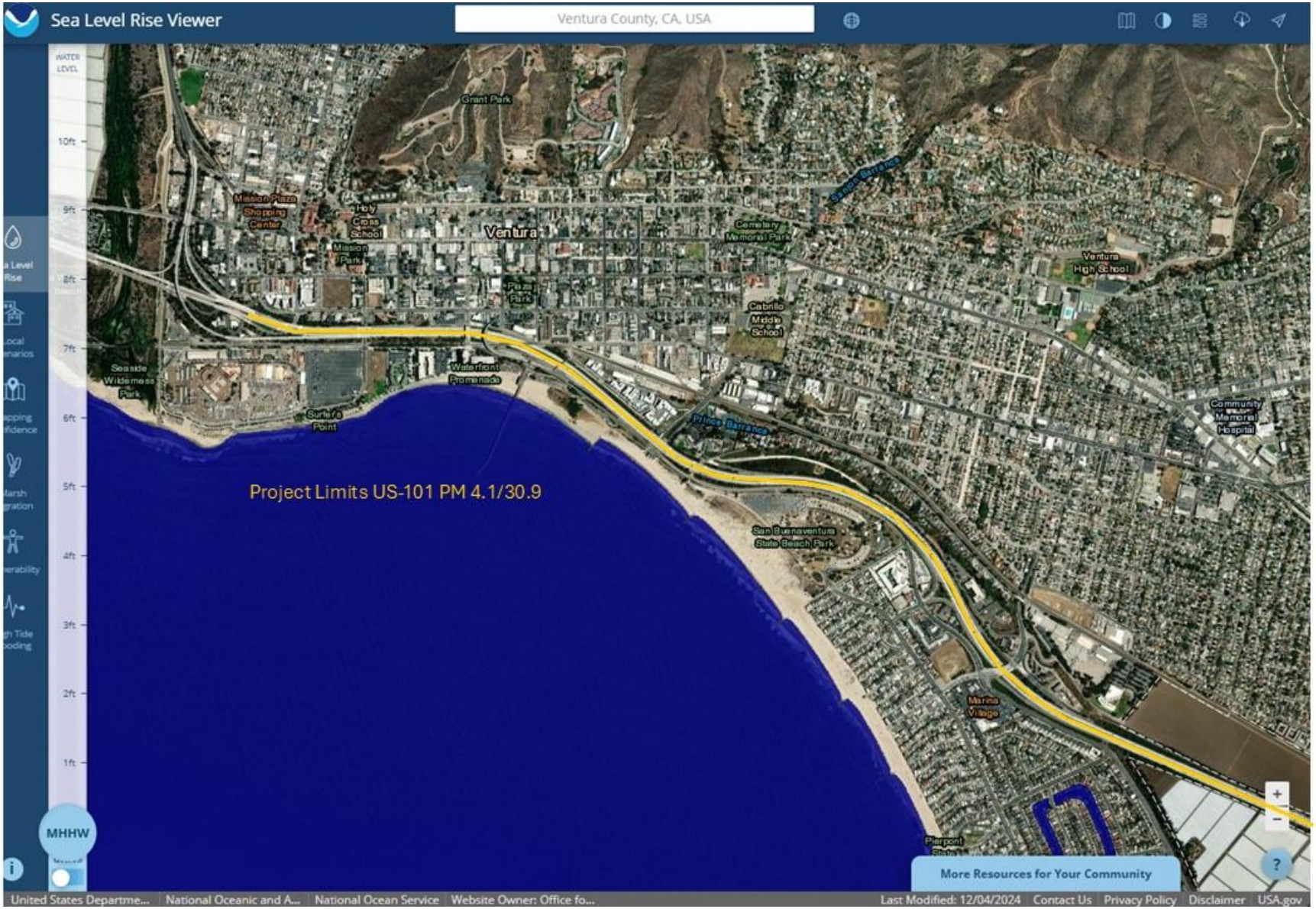


Figure 3.3-8. Proposed Project Alignment and Areas Subject to 1 Foot of Sea Level Rise

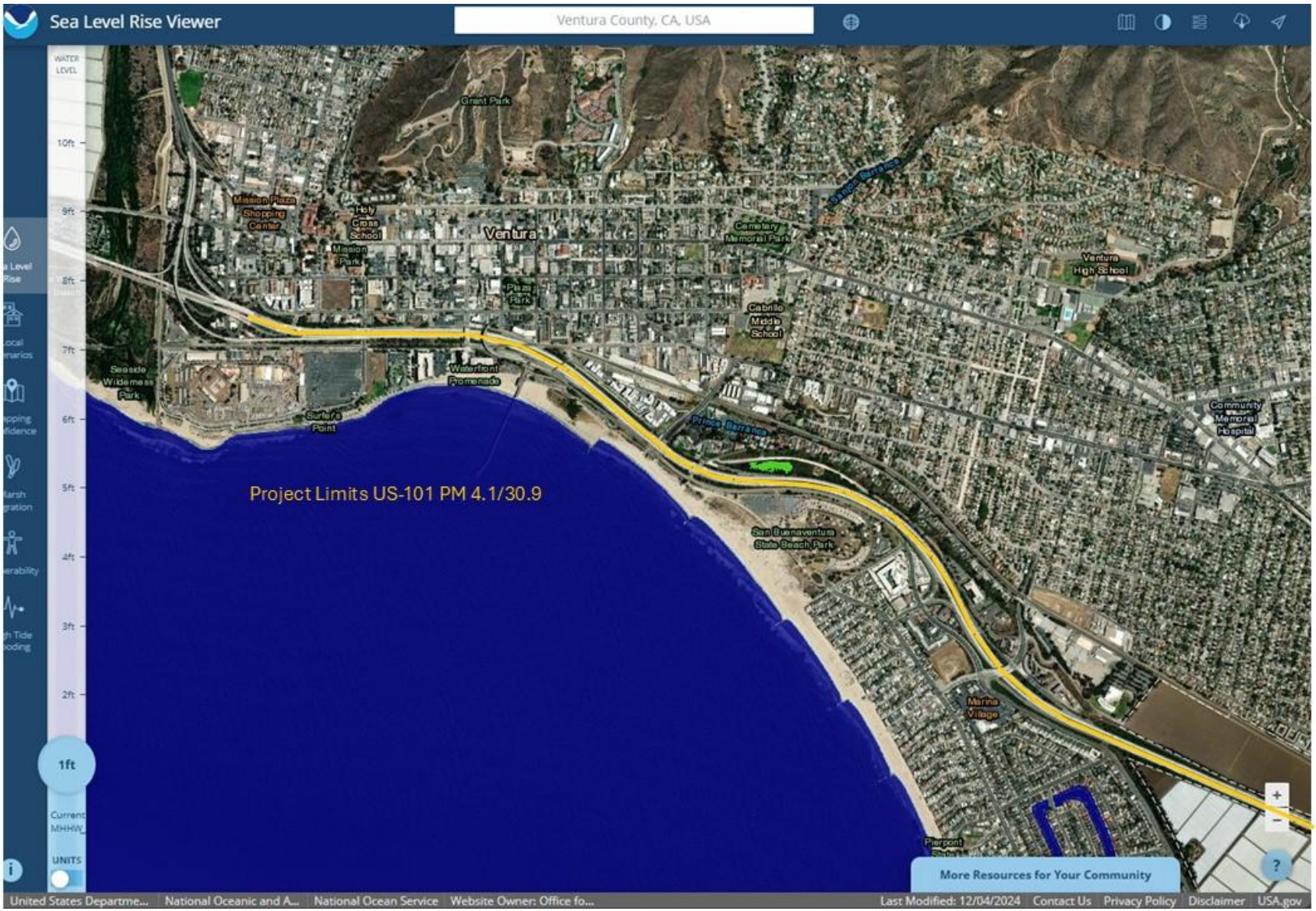


Figure 3.3-9. Proposed Project Alignment and Areas Subject to 2 Feet of Sea Level Rise

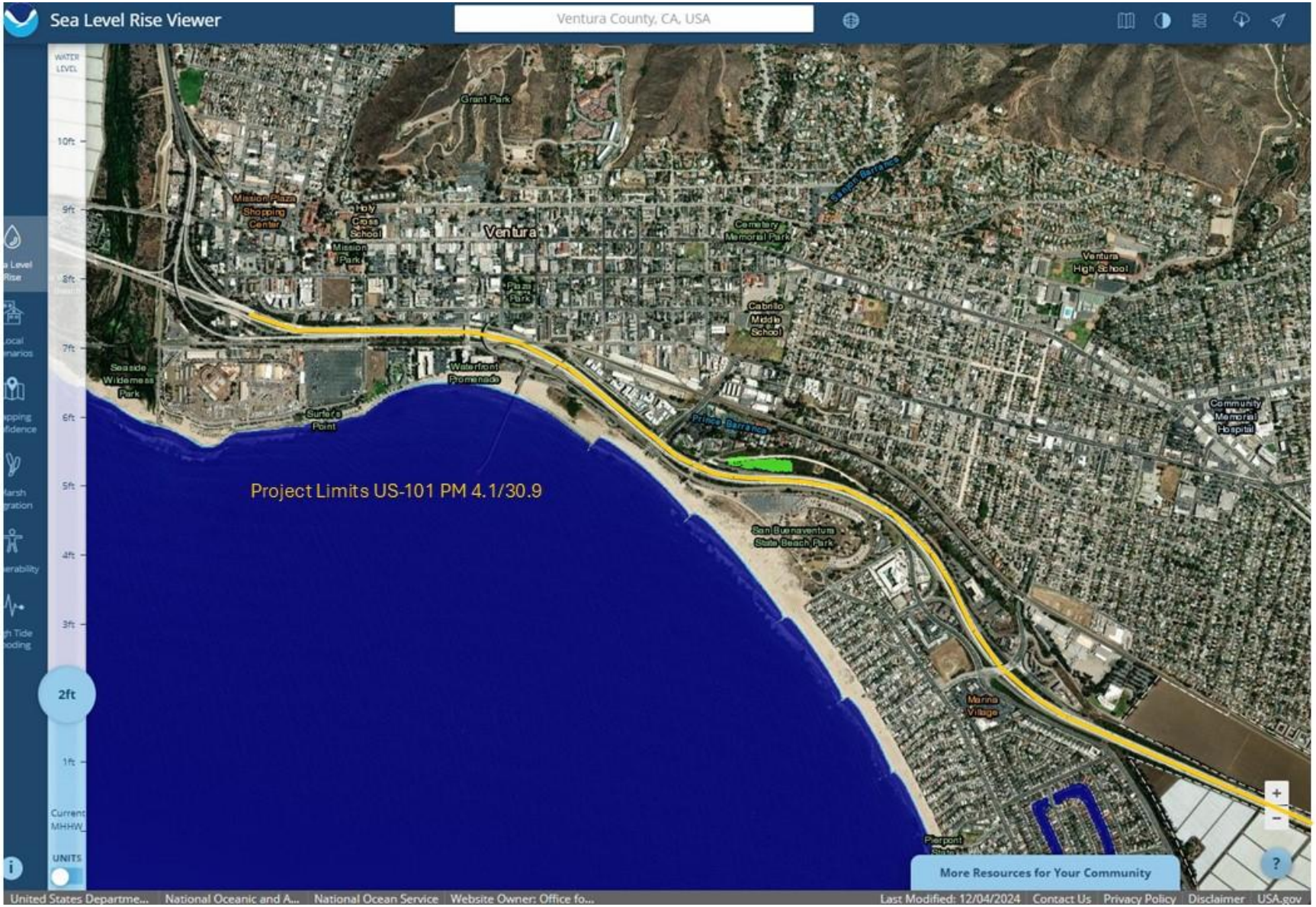


Figure 3.3-10. Proposed Project Alignment and Areas Subject to 3 Feet of Sea Level Rise

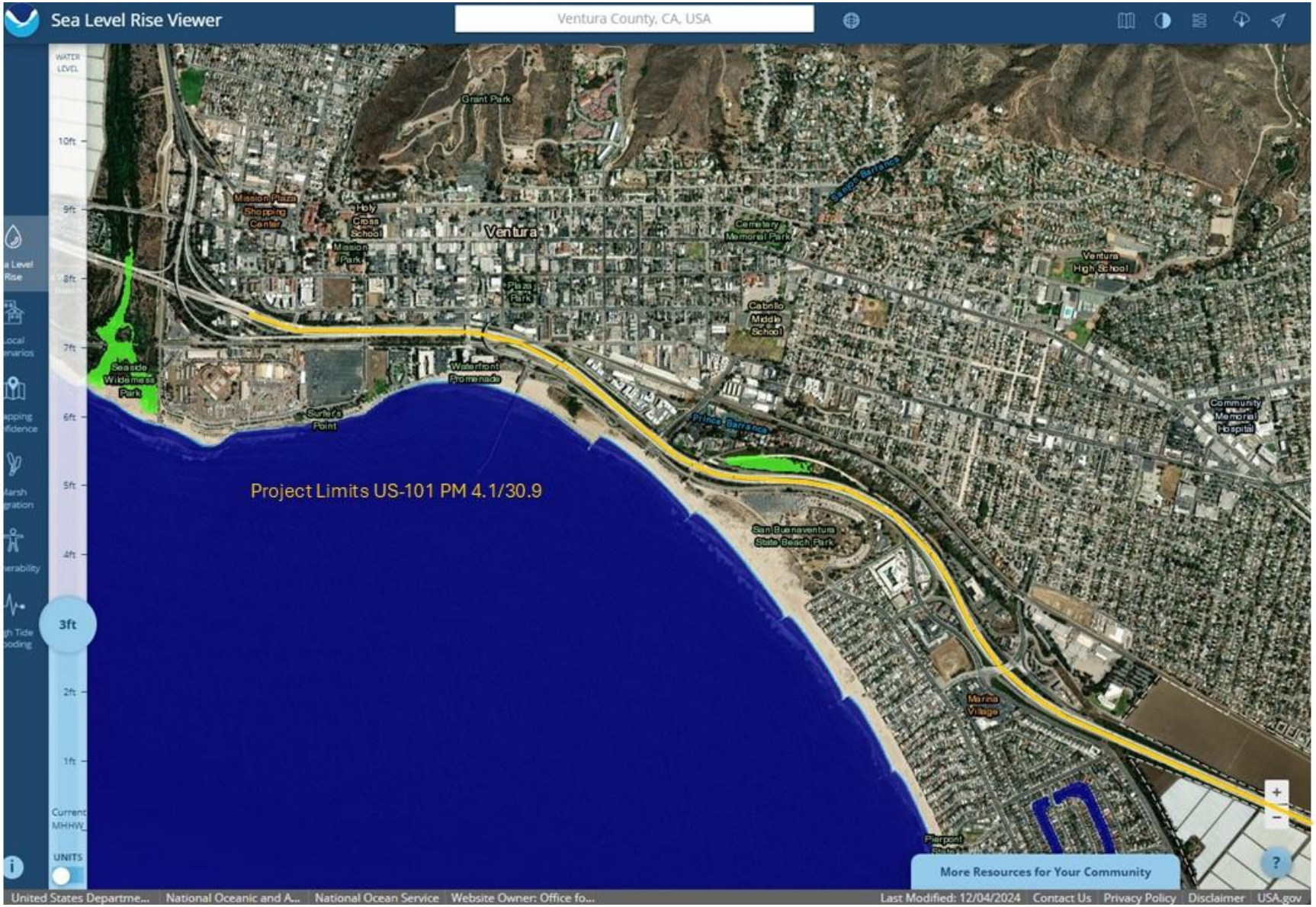


Figure 3.3-11. Proposed Project Alignment and Areas Subject to 4 Feet of Sea Level Rise

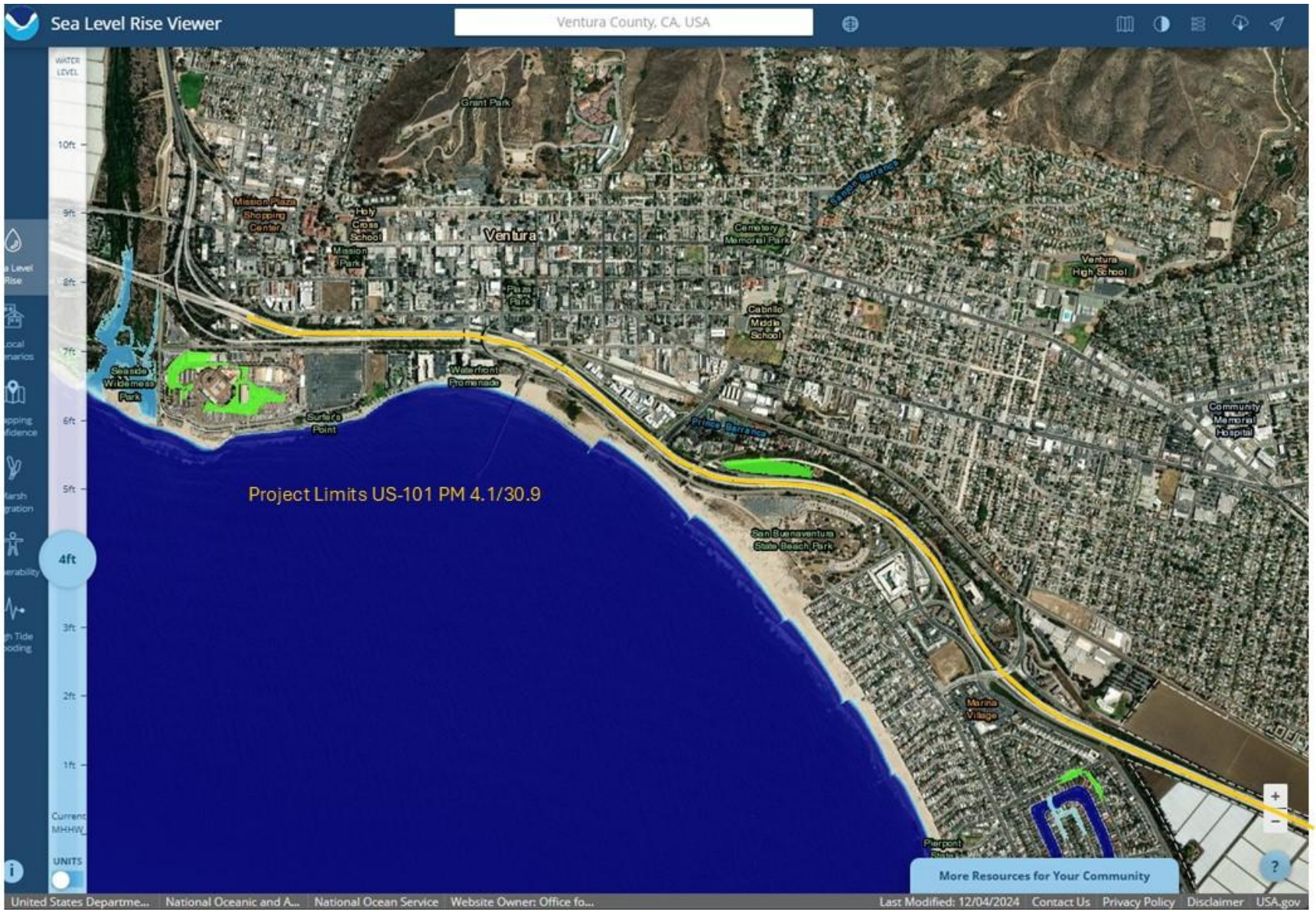


Figure 3.3-12. Proposed Project Alignment and Areas Subject to 5 Feet of Sea Level Rise

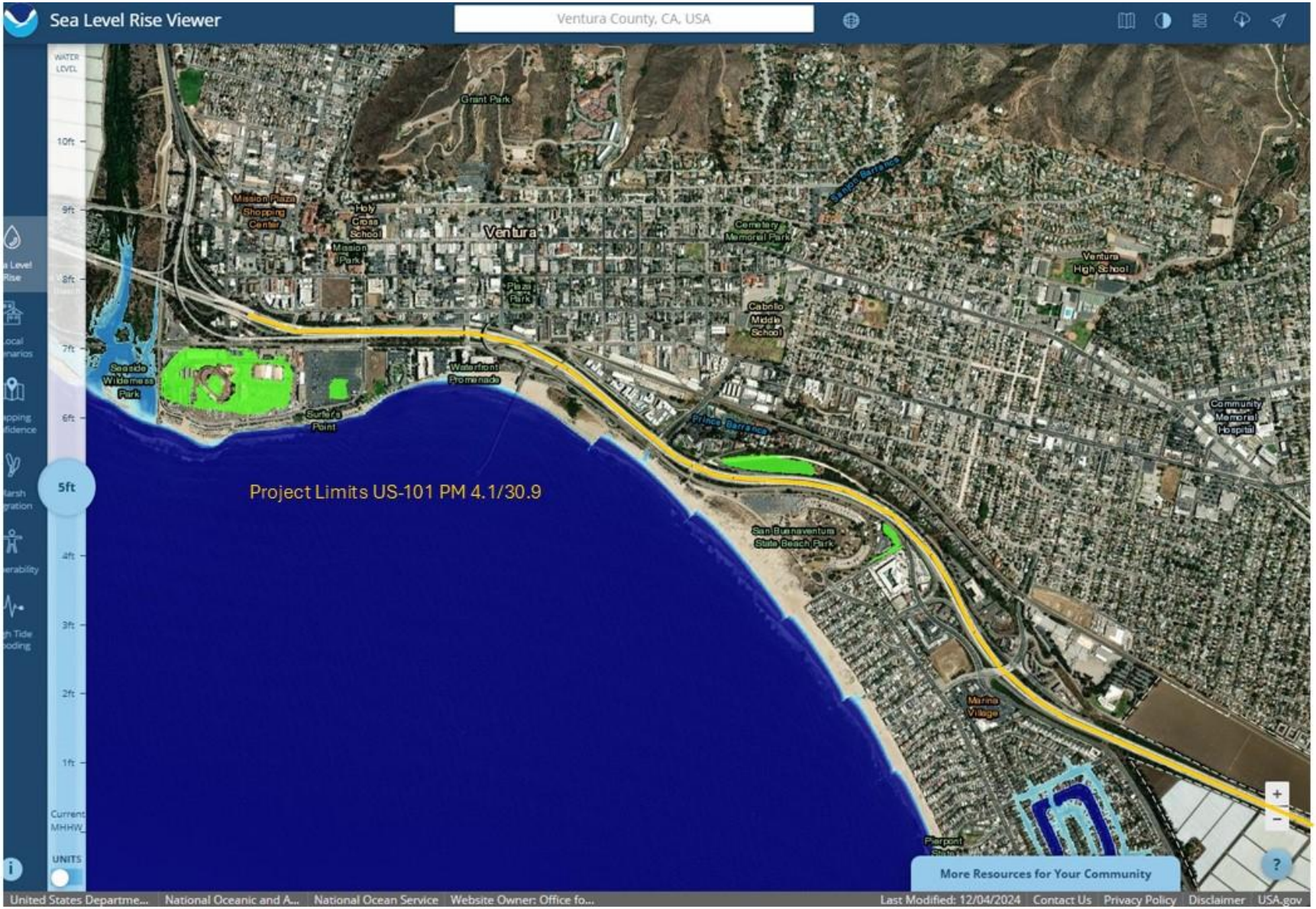


Figure 3.3-13. Proposed Project Alignment and Areas Subject to 6 Feet of Sea Level Rise

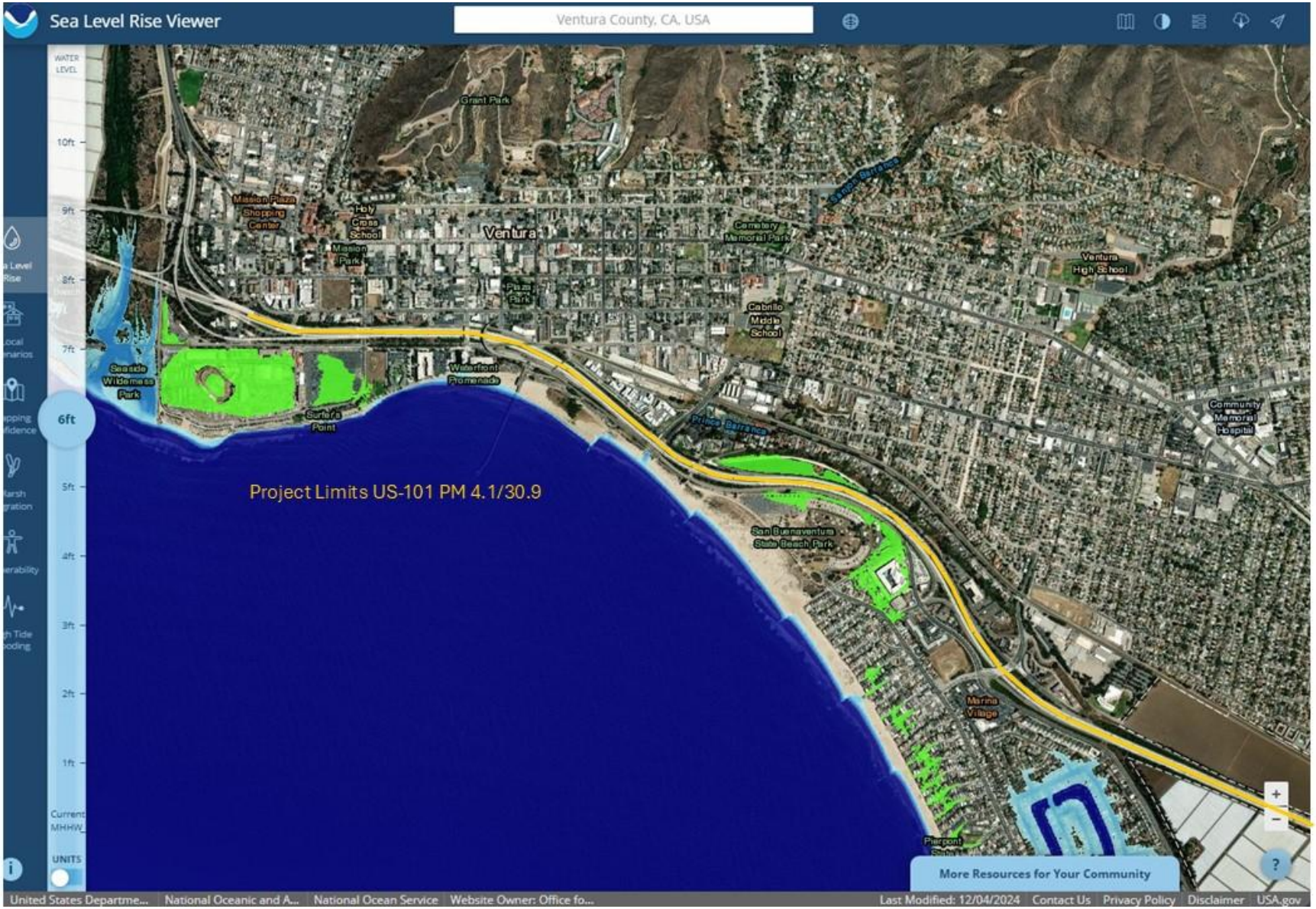


Figure 3.3-14. Proposed Project Alignment and Areas Subject to 7 Feet of Sea Level Rise

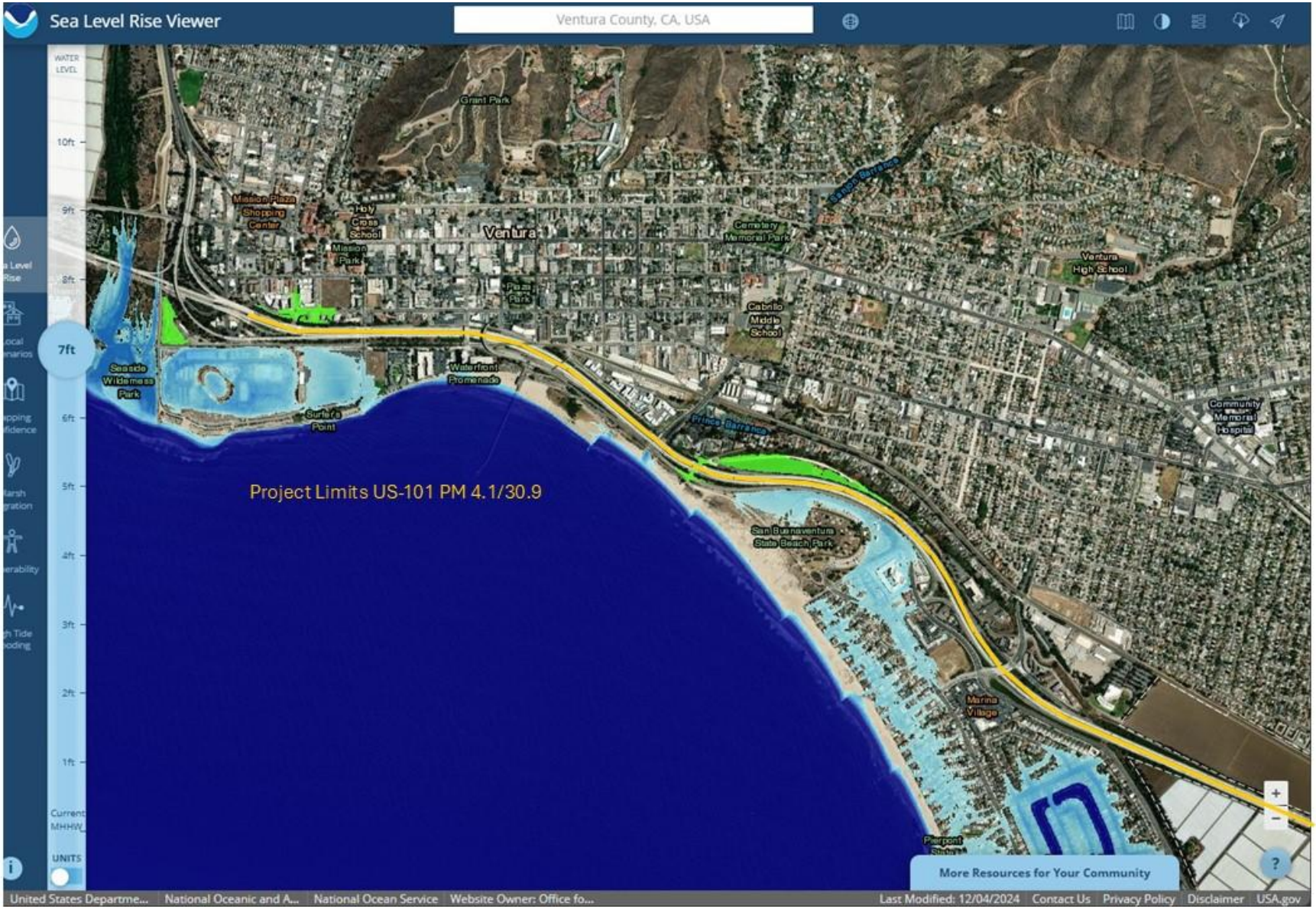


Figure 3.3-15. Proposed Project Alignment and Areas Subject to 8 Feet of Sea Level Rise

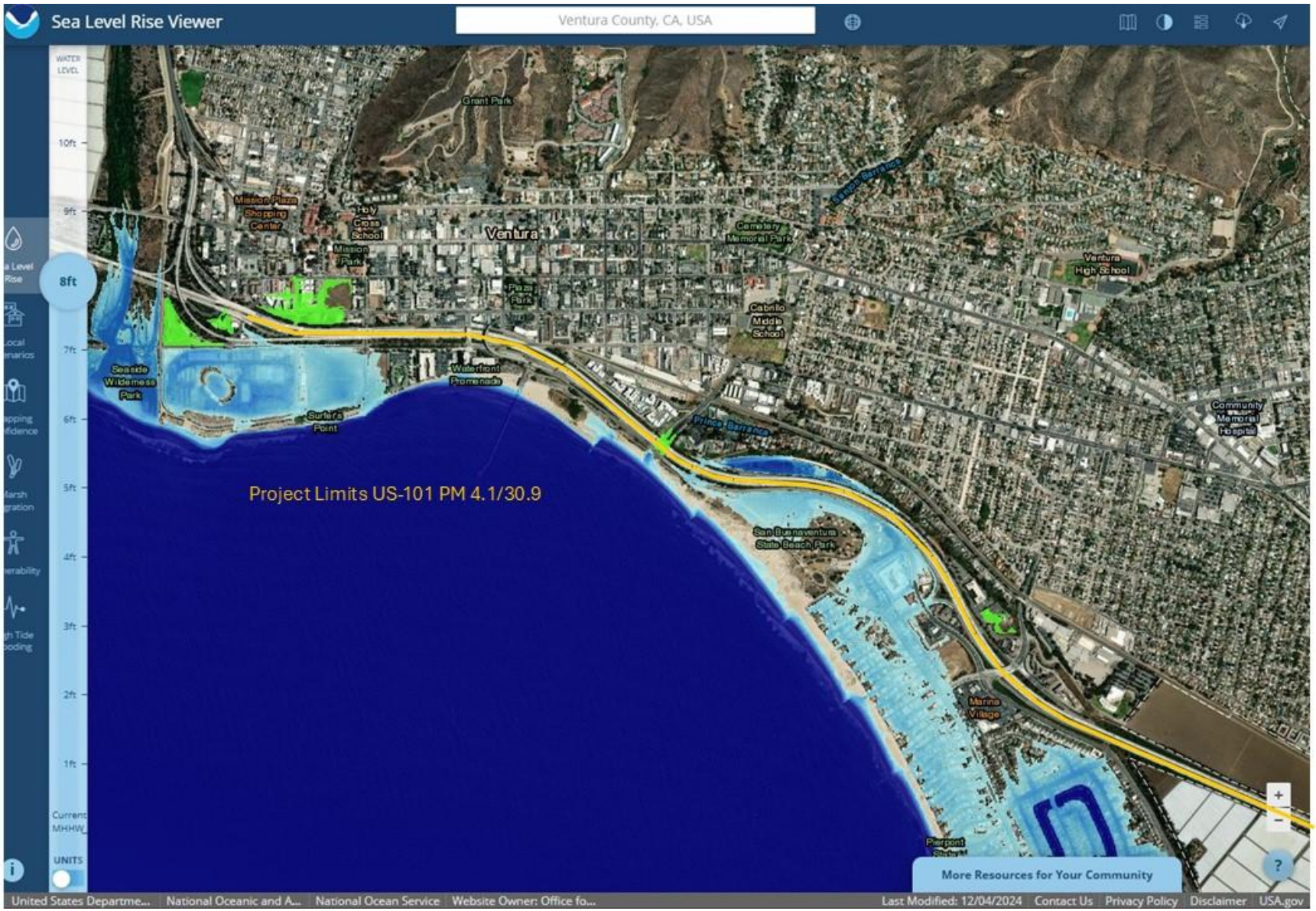


Figure 3.3-16. Proposed Project Alignment and Areas Subject to 9 Feet of Sea Level Rise

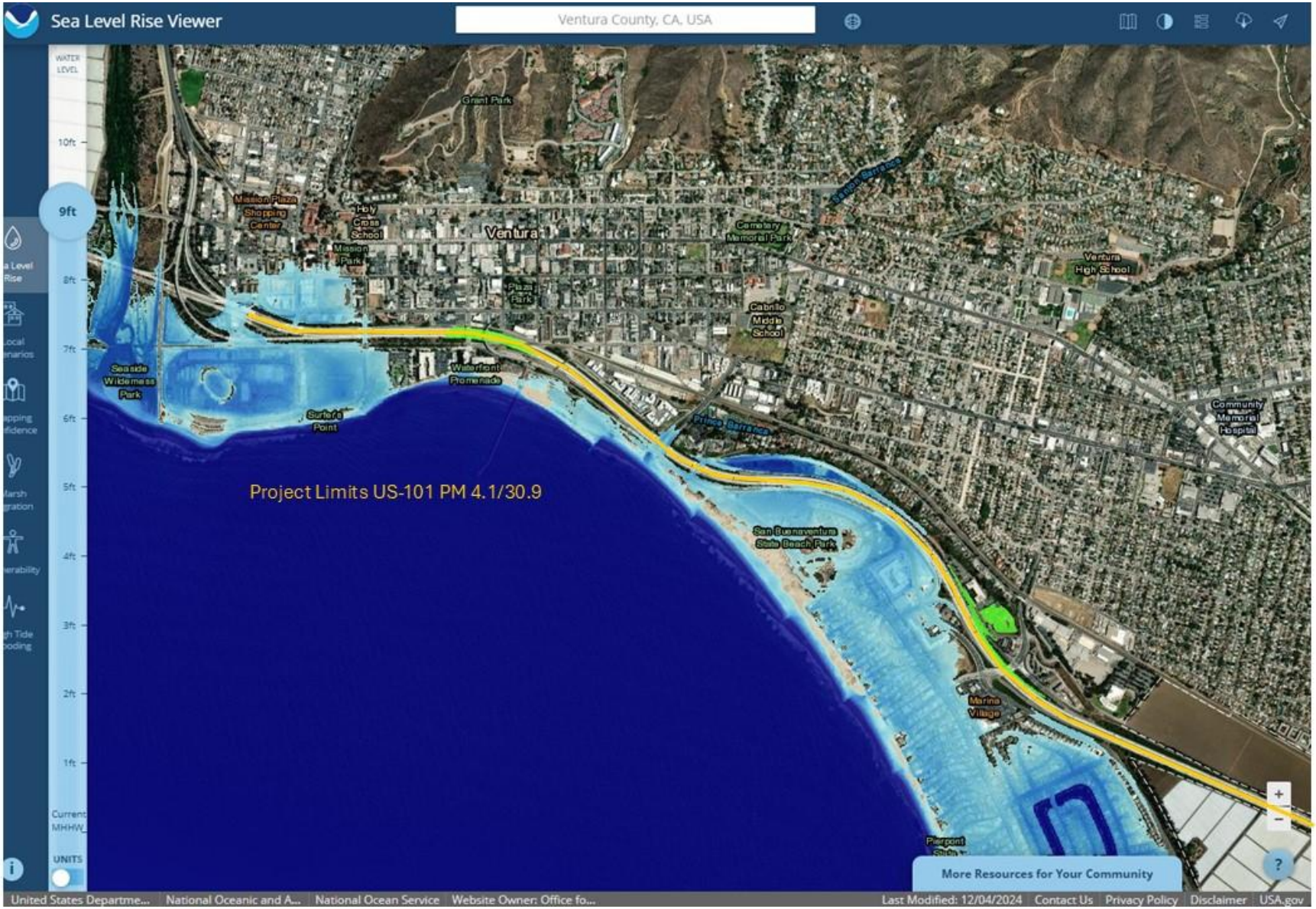


Figure 3.3-17. Proposed Project Alignment and Areas Subject to 10 Feet of Sea Level Rise

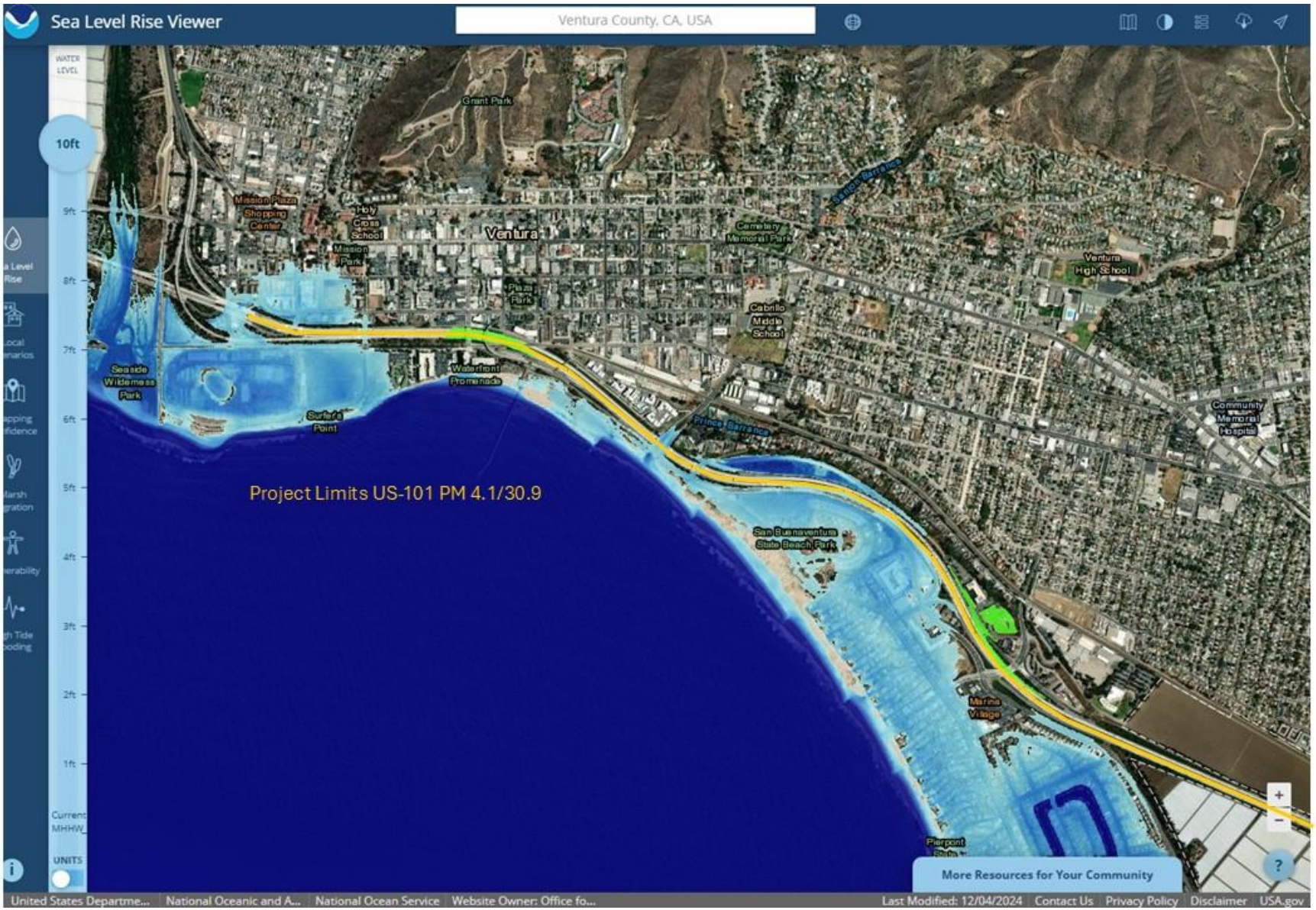


Figure 3.3-18. Proposed Project Alignment and Areas Subject to 0 Feet of Sea Level Rise

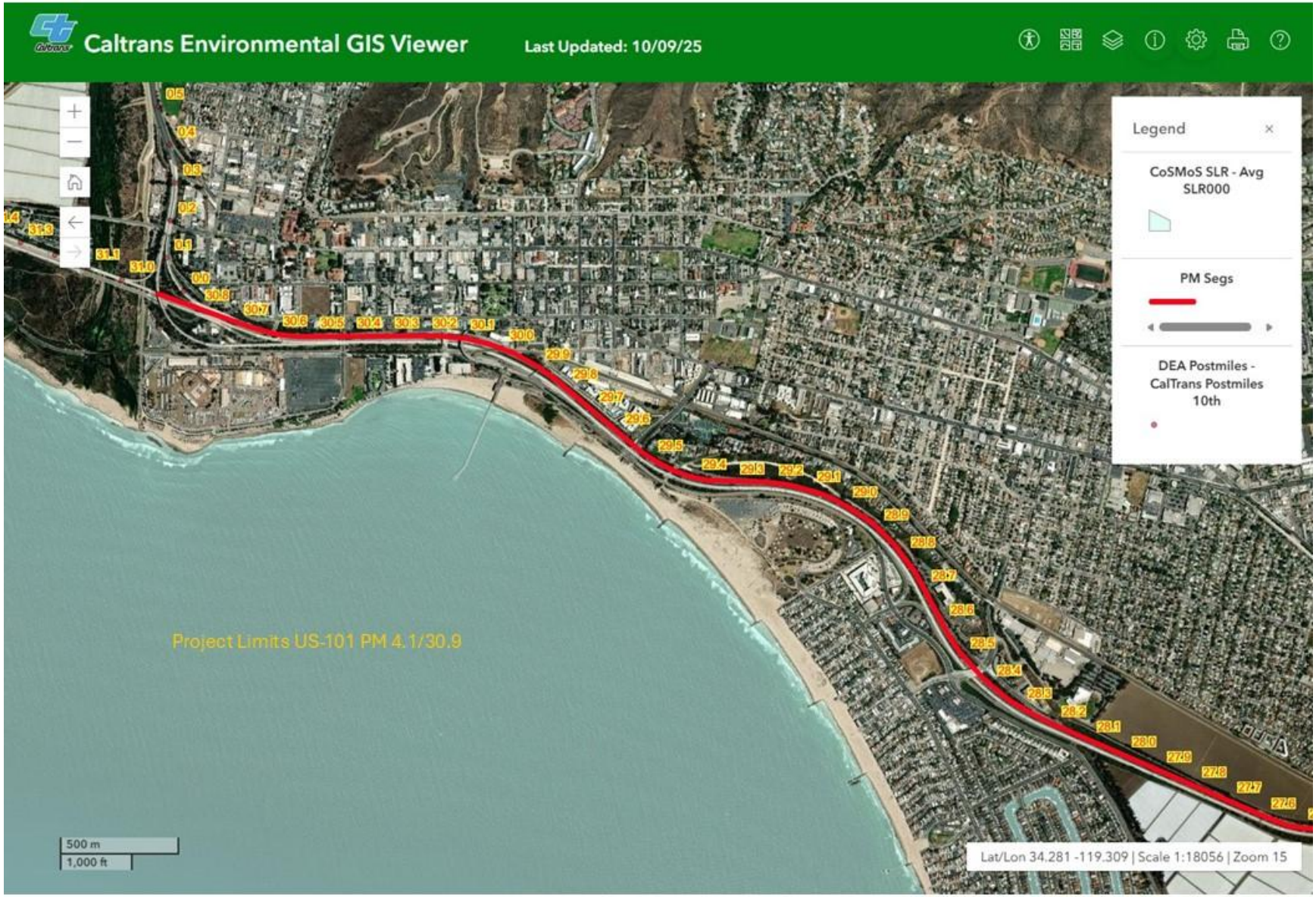


Figure 3.3-19. Proposed Project Alignment and Areas Subject to 0.82 Foot (0.25 Meter) of Sea Level Rise

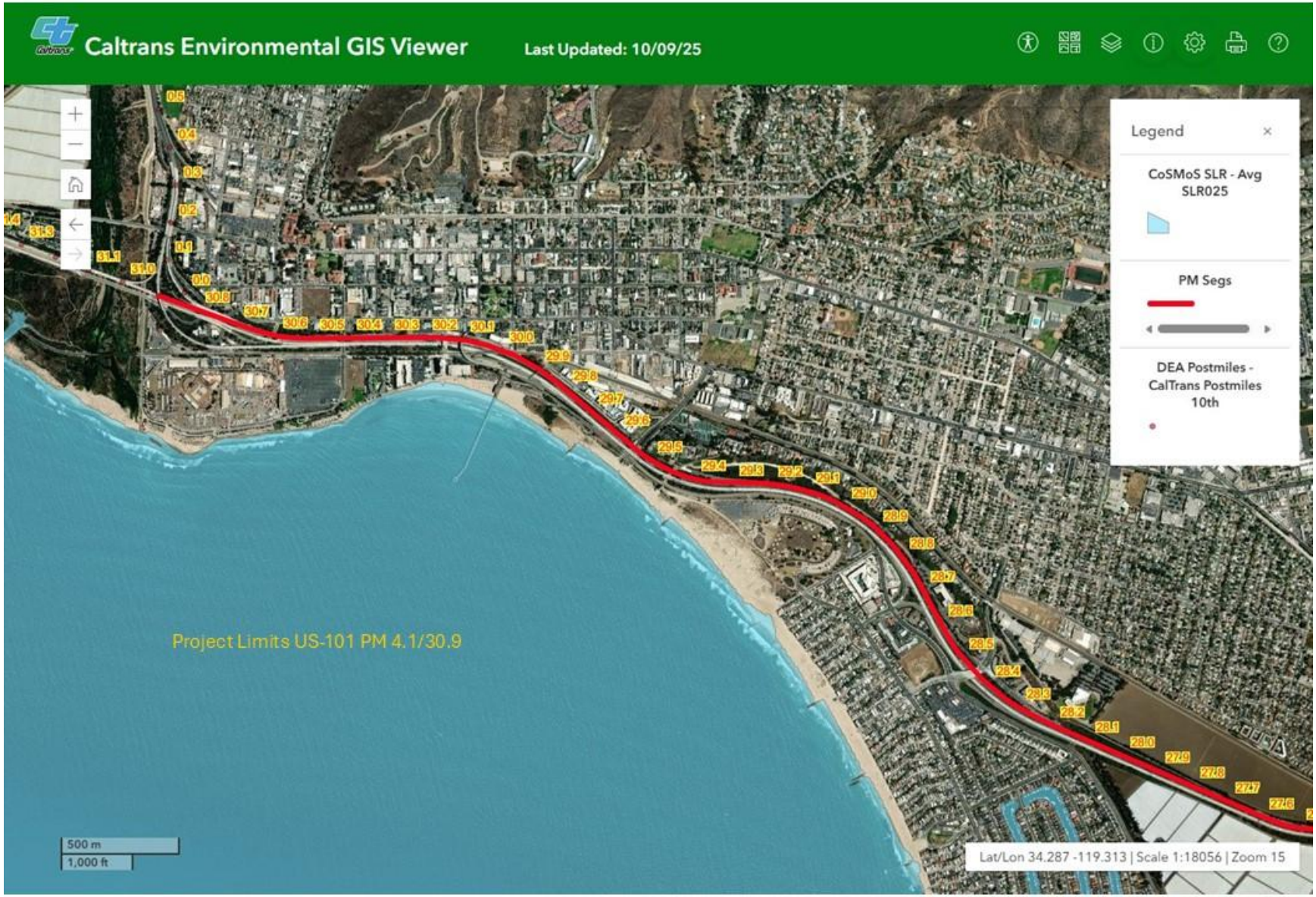


Figure 3.3-20. Proposed Project Alignment and Areas Subject to 1.64 Feet (0.50 Meter) of Sea Level Rise

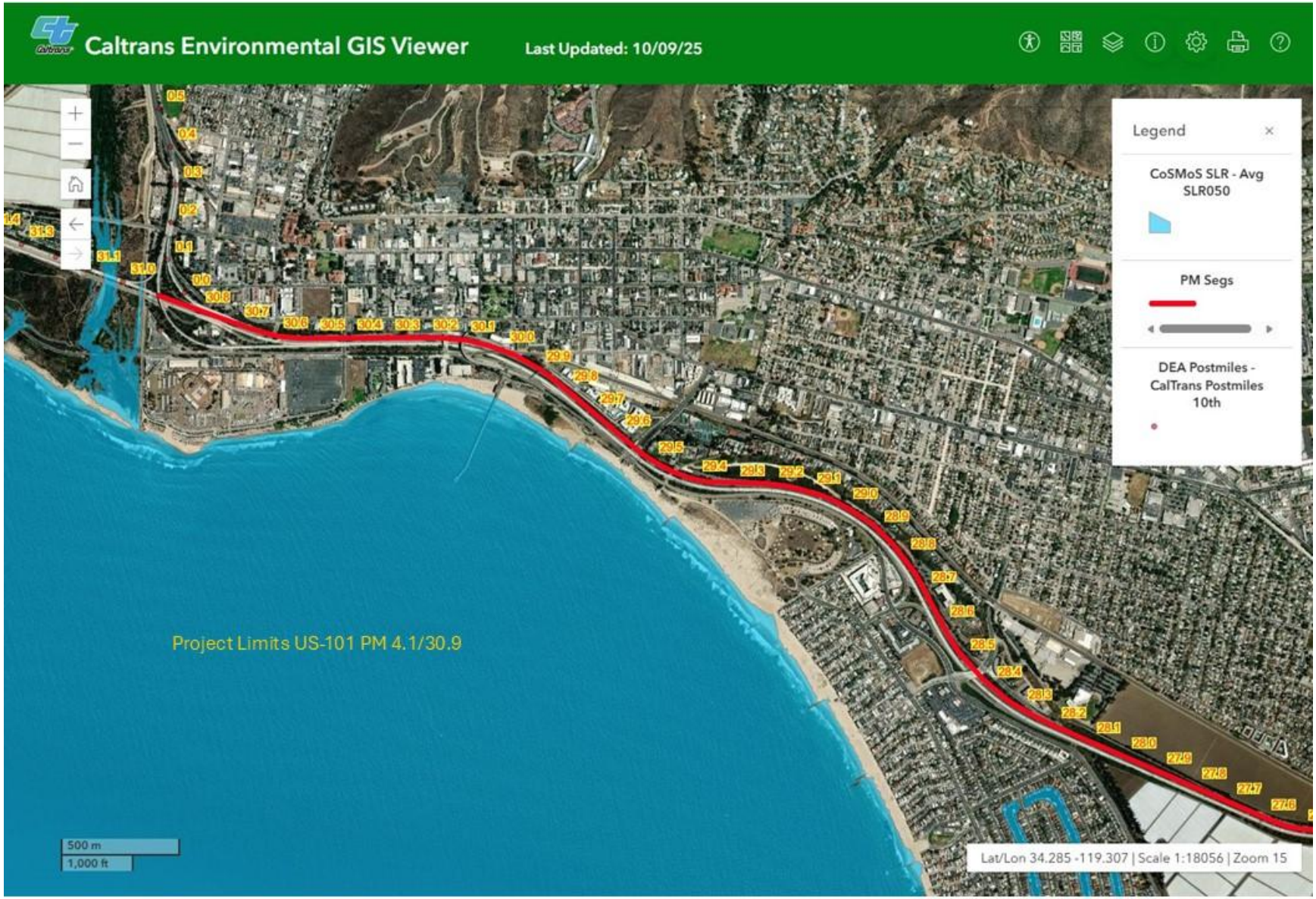


Figure 3.3-21. Proposed Project Alignment and Areas Subject to 2.46 Feet (0.75 Meter) of Sea Level Rise

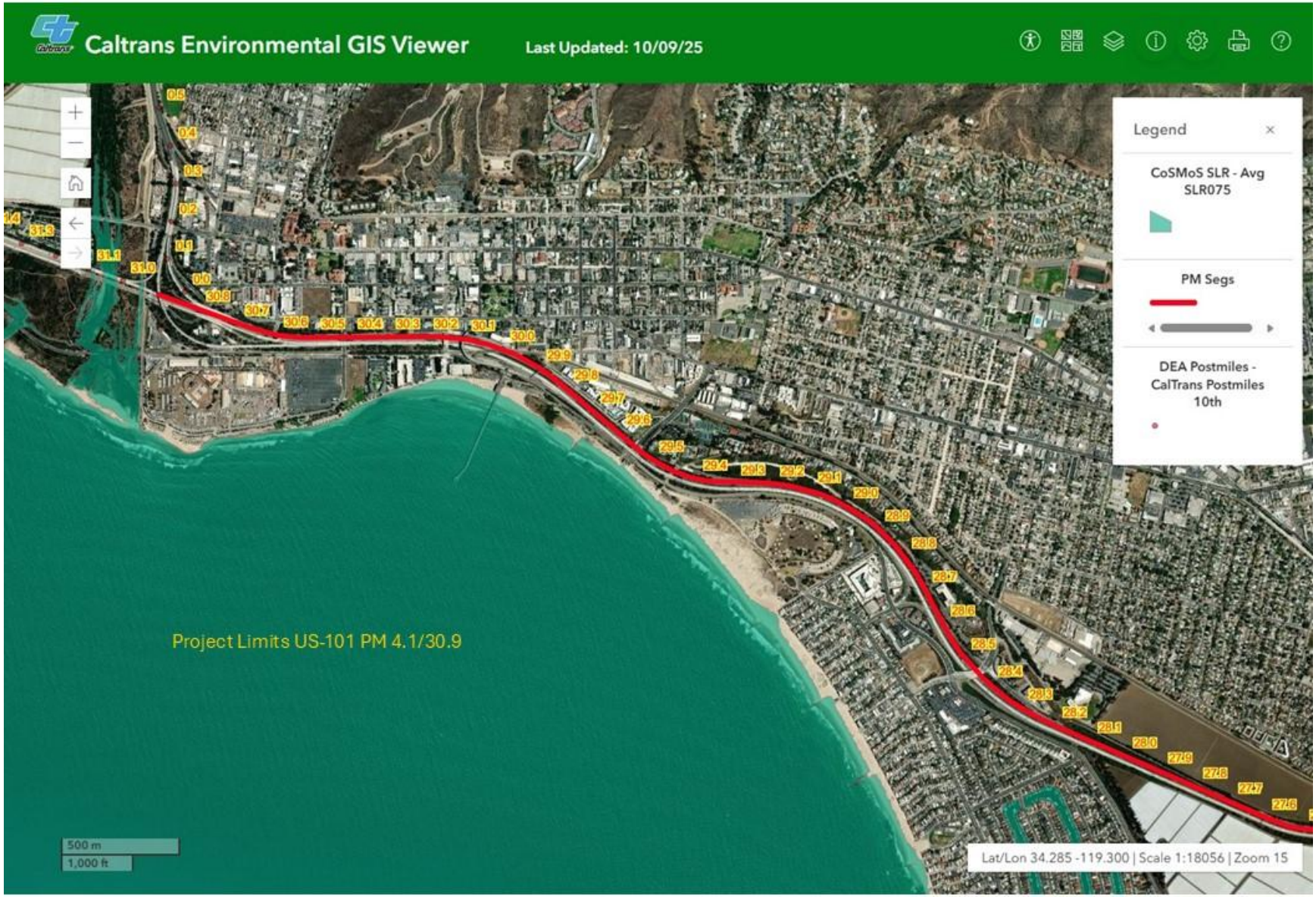


Figure 3.3-22. Proposed Project Alignment and Areas Subject to 3.28 Feet (1.00 Meter) of Sea Level Rise

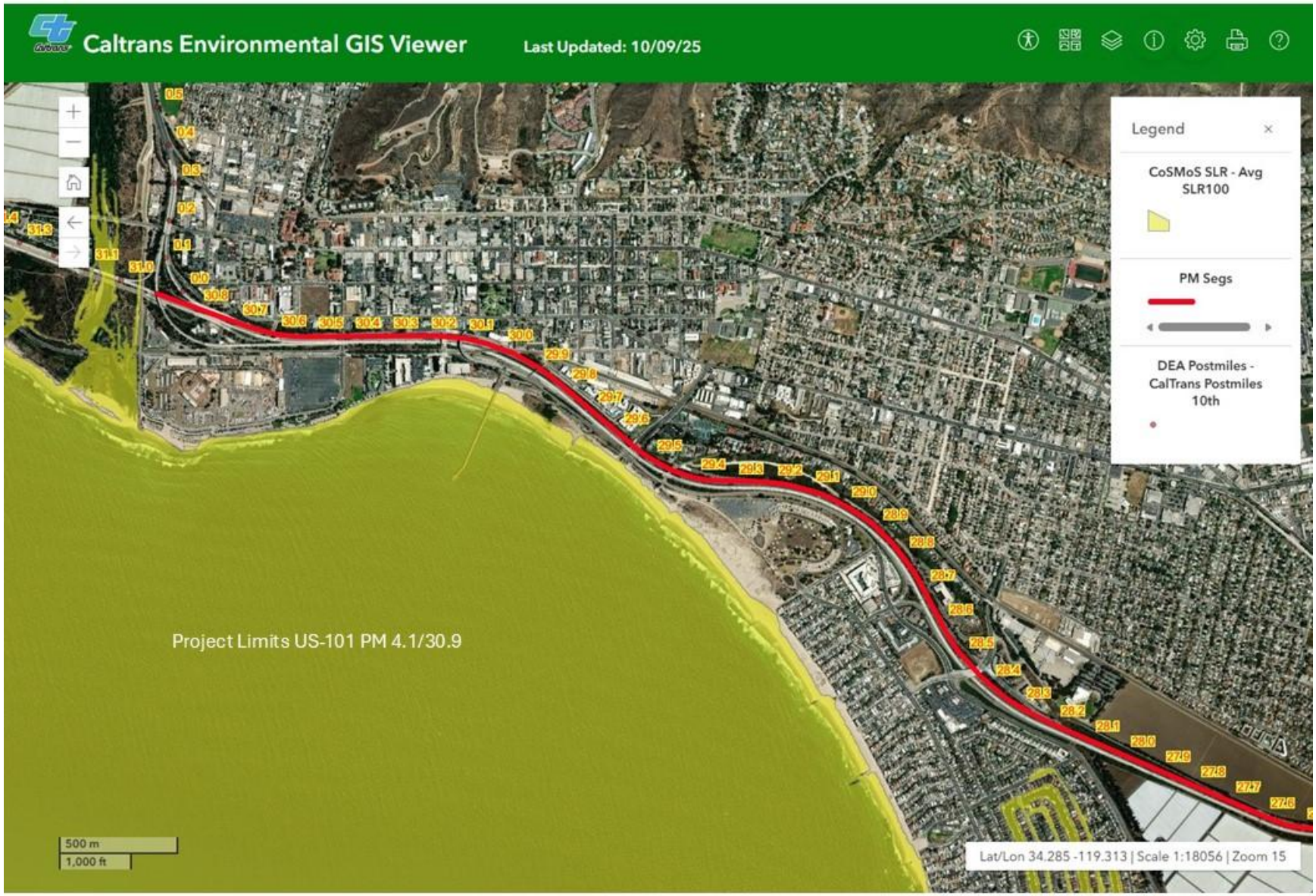


Figure 3.3-23. Proposed Project Alignment and Areas Subject to 4.92 Feet (1.50 Meters) of Sea Level Rise

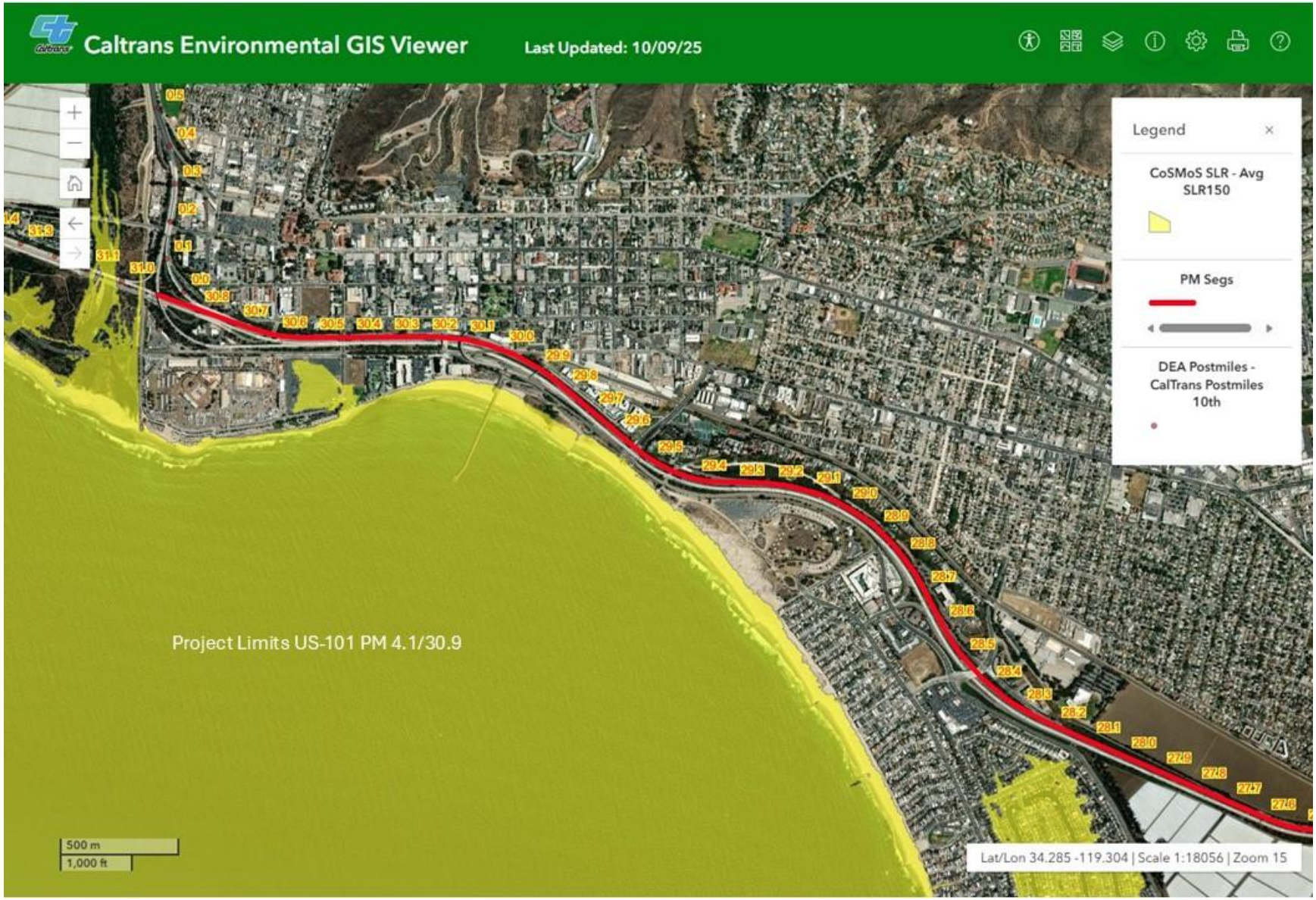


Figure 3.3-24. Proposed Project Alignment and Areas Subject to 6.56 Feet (2.00 Meters) of Sea Level Rise

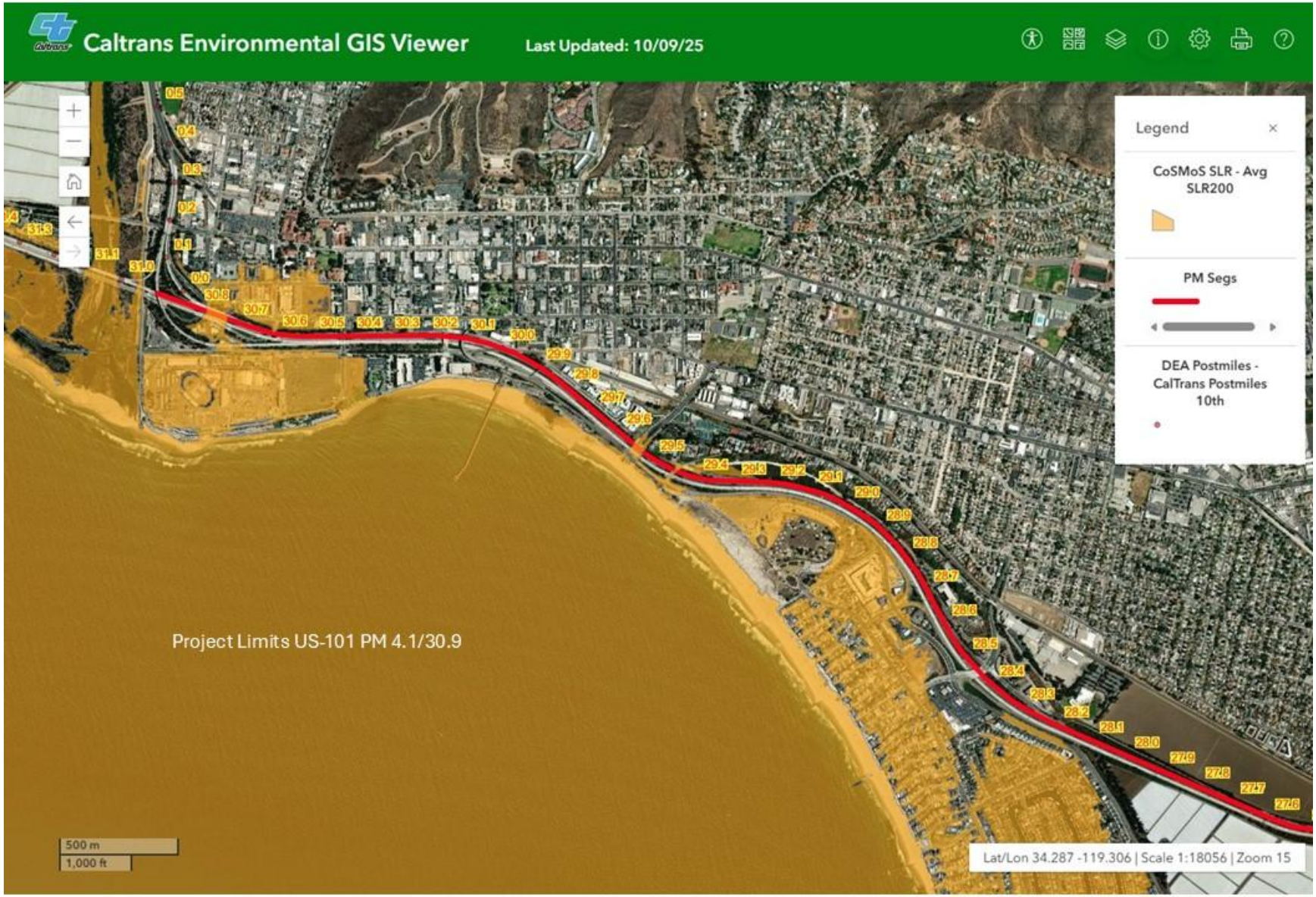
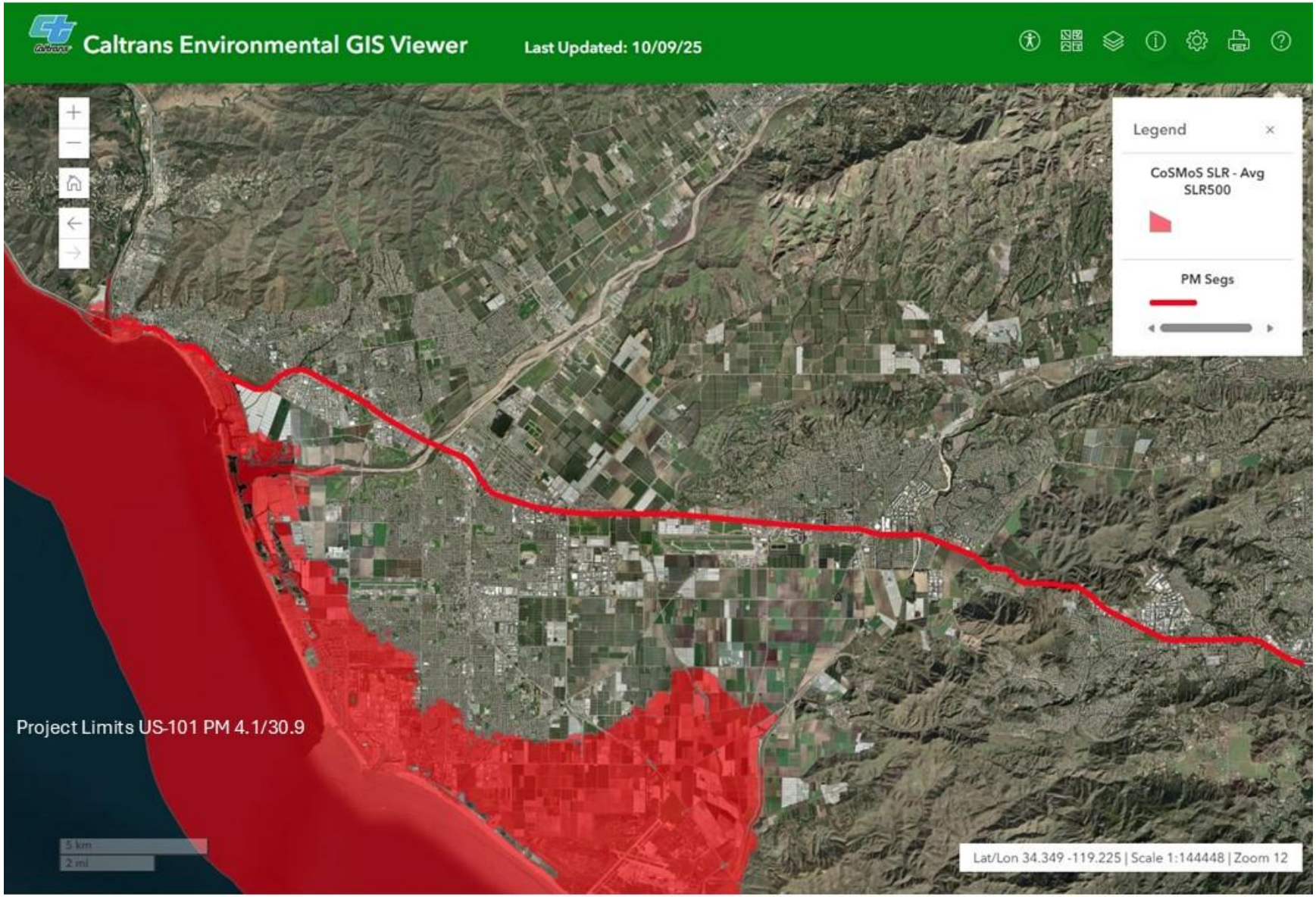


Figure 3.3-25. Proposed Project Alignment and Areas Subject to 16.40 Feet (5.00 Meters) of Sea Level Rise



Figure 3.3-26. Proposed Project Alignment and Areas Subject to 16.40 Feet (5.00 Meters) of Sea Level Rise



OPC provides that the most cautionary approach, when feasible, is to evaluate Intermediate, Intermediate-High, and High scenarios to assess a spectrum of potential impacts, consequences, and responses. The Intermediate-Low scenario provides a reasonable estimate of the lower bound for the most likely SLR by 2100; however, assuming 3 degrees Celsius of warming in 2100, there is an 82 percent chance of exceeding the Intermediate-Low scenario in 2100. Therefore, to ensure precautionary SLR planning and projects that protect public health and safety, the environment, critical infrastructure, and public access, OPC does not recommend the Intermediate-Low scenario for planning or projects. For planning or projects with medium to high risk aversion, OPC recommends that it may be appropriate to use the Intermediate-High scenario as the highest scenario included in risk analyses. Additionally, OPC considers the High scenario to be sufficiently precautionary for even the most risk-averse applications (OPC 2024).

Based on the CoSMoS storm model developed by USGS, an analysis of the State Highway System was conducted for the Caltrans District 7 Climate Change Vulnerability Assessment. This analysis considered three CoSMoS SLR increments: 0.5 meter (1.64 feet), 1 meter (3.28 feet), and 1.75 meters (5.74 feet). These increments cover the likely (66 percent) probability SLR range and the low (0.5 percent) probability SLR range. The analysis also considered the effects from an annual storm event (a storm that happens on average once a year). This annual storm event was used to identify when the initial effects of SLR may begin to affect the Caltrans District 7 State Highway System. Based on these projections, the portion of the project area along the US 101 corridor is projected to be affected by SLR and storm surge impacts at 0.5, 1, and 1.75 meters. While only a small percentage of the proposed project area is expected to be affected by SLR, the affected area is projected to face impacts under 0.5 meter (1.64 feet) of SLR, which is within the most likely range of SLR scenarios by 2100 (Caltrans 2019).

The project area affected by SLR would have portions of exposed roadway; however, the portion of the project corridor affected by SLR would be in an area that may be inundated with seawater. Therefore, any bridges in that area are at risk of being damaged. Rising groundwater tables may inundate supports that were not built to accommodate saturated soil conditions, leading to erosion of soils and loss of stability. Higher water levels also mean there would be greater forces on the bridge during normal tidal processes and especially during storm surges, which would increase scour effects on bridge support structures. Bridge approaches may also be damaged during storms, and surges and waves may loosen or damage portions of the bridge, requiring repairs.

While Ventura County is expected to experience up to 1.36 meters (4.46 feet) of coastal erosion by 2100 due to SLR (County of Ventura 2020), the project area affected by SLR is not expected to experience the impacts from cliff retreat under the conditions of 0.5-, 1-, or 1.75-meter increase in SLR.

In accordance with the requirements of SB 379 (2015), codified in Government Code Section 65302(g)(4), climate change adaptation and resilience must be addressed in the safety element of all general plans in California. The County adopted the Ventura

County 2040 General Plan on September 15, 2020. The general plan outlines mitigation measures that the County plans to incorporate in order to reduce impacts from climate change, such as SLR. The County found that it will face elevated groundwater levels and salinity intrusion due to SLR, placing roadway bridge supports at risk.

Listed below are the policies and climate adaptation measures the County has adopted to mitigate impacts from SLR that are relevant to the proposed project:

- Public Facilities, Services, and Infrastructure Element:
    - **PFS-6.3 Climate Change Impacts on Flood Control and Drainage Facilities – Capacity.** The County shall monitor projected climate change impacts, and coordinate with local, regional, state, and federal agencies to identify existing and potential projected impacts and develop strategies to maintain and improve flood control facilities accordingly.
    - **PFS-6.4 Climate Change Impacts on Flood Control and Drainage Facilities – Retention.** The County shall coordinate with local, regional, state, and federal agencies to identify existing and potential infrastructure improvements to increase water retention to respond to drought conditions.
    - **PFS-C Sea Level Impacts Monitoring.** The County shall conduct, and periodically update, Climate Change Impacts Monitoring reports to map locations of communication, energy, public service, transportation facilities, and infrastructure that are vulnerable to rising sea levels and coastal flooding.
    - **PFS-D Sea Level Adaptation Response.** Based on findings from the Climate Change Impacts Monitoring reports, in cases where existing County facilities are found to be vulnerable to sea-level rise or coastal flooding, the County shall identify funding and create an action plan to protect, accommodate, or manage the retreat of County facilities to areas of higher elevation or reduced flood exposure. For facilities operated by other entities, the County shall work with these entities create an action plan to protect, to protect, accommodate, or manage the retreat of their facilities to areas of higher elevation or reduced flood exposure.
- Conservation and Open Space Element:
    - **COS-2.2 Beach Nourishment.** The County shall support activities that trap or add sand through beach nourishment, dune restoration, and other adaptation strategies to enhance or create beaches in areas susceptible to sea-level rise and coastal flooding. (MPSP)
    - **COS-2.10 Saltwater Intrusion.** The County shall work with Federal, State, and local jurisdictions, agencies, and organizations to monitor saltwater intrusion and take proactive steps to reduce intrusion, including: working to maintain and restore coastal wetlands buffers; enhancing groundwater

management to prevent excessive pumping in order to restore groundwater levels needed to reduce saltwater intrusion; and implementing mitigation measures to prevent saltwater intrusion into estuaries and groundwater basins including, but not limited to, implementation of reactive barriers and use of pumps to divert saltwater.

- Hazards and Safety Element
    - **HAZ-3.1 Sea Level Rise Planning and Adaptation.** The County shall continue to actively plan for sea level rise by using the best available science to analyze critical vulnerabilities, identify measures to conserve coastal resources, minimize impacts on residents and businesses, maintain public services, and strengthen resiliency.
    - **HAZ-3.2 County Infrastructure Projects and Sea Level Rise.** Initiated infrastructure projects sited along or seaward of Highway 101, such as bridges and levees, that will provide 100 years or more of service, shall be planned with the potential to be easily modified to accommodate 100-years of projected sea level rise in accordance with the H++ extreme risk aversion sea level rise scenario.

As explained in the general plan, the County plans to implement climate adaptation measures to mitigate the impacts of SLR. Policy HAZ-3.2 highlights that bridges and levees along US 101 would be built with the potential to easily be modified to accommodate the extreme risk aversion SLR scenario. Additionally, by implementing policies to improve drainage, manage flooding, monitor impacts on infrastructure from SLR, reduce coastal flooding through beach nourishment, mitigate saltwater intrusion, and continually plan for impacts from SLR, the County would reduce harm and impacts on infrastructure from SLR along the project corridor.

The following measure, **SLR-1**, would be implemented in the project to ensure compliance with Policy HAZ-3.2:

- **SLR-1:** During final design, structural engineers will ensure the proposed bridge widenings and bridge replacements are designed in compliance with Ventura County General Plan, Policy Haz-3.2 County Infrastructure Projects and Sea Level Rise.

Precipitation and Flooding

According to the Federal Emergency Management Agency Flood Insurance Rate Map, parts of the project area are within the 1 percent Annual Chance Flood Hazard, Regulatory Floodway, 0.2 percent Annual Chance Flood Hazard, and Area with Reduced Risk Due to Levee zones. Map number 06111C0743F closest to US 101 PM 30.9 is in a zone with a reduced risk due to levees. Map numbers 06111C0765E, 06111C0910E, and 06111C0902F include portions of the project area in a 0.2 percent Annual Chance Flood Hazard zone. Around the Santa Clara River, map number 06111C0902F shows that the area that includes project area falls under the 1 percent

Annual Chance Flood Hazard zone, regulatory floodway zone, and reduced risk due to levee zones.

Based on the Caltrans District 7 Climate Change Vulnerability Assessment maps, the proposed project is projected to experience an increase in precipitation in the 100-year storm precipitation, a metric used in highway design, under the business-as-usual climate change scenario. The 100-year storm precipitation in the project area is expected to increase by up to 5.3 percent in 2025, 6.6 percent by 2055, but by only up to 6.1 percent by 2085 (Caltrans 2019). This indicates heavier rainfall during storm events. The project area transverses the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura. However, the cities of Ventura and Thousand Oaks receive the most rainfall and are expected to experience the highest-percentage increases in rainfall under future predictions. Average annual rainfall in Ventura is about 16 inches; the wettest month is February, with 4.1 inches of rain on average (bestplaces.net 2025a). Thousand Oaks receives an average annual rainfall of 17 inches; the wettest month is February with 4.5 inches of rain (bestplaces.net 2025b). Accordingly, even an approximately 6.1 percent increase of precipitation in the flood hazard area would amount to approximate 1.0 inch of rain. Drainage facilities would be modified as needed to accommodate additional runoff from the auxiliary lanes. It is expected that the project would be adapted to the anticipated changes in storm precipitation under climate change. It is not expected the project would exacerbate flooding risks or other related hazards with implementation of measure **SLR-2**.

The following measure, **SLR-2**, would be implemented in the project to ensure further drainage investigations are conducted during final design:

- **SLR-2:** During final design, further drainage investigations will be conducted, including how the project could be adapted to anticipated changes in storm precipitation under climate change.

Wildfire

Based on the California Department of Forestry and Fire Protection (CAL FIRE) Fire Hazard Severity Zones Map for Ventura County, a majority of the project is within a Local Responsibility Area (LRA). However, a small portion of the project between the cities of Camarillo and Thousand Oaks is surrounded by a Very High Fire Hazard Severity Zone in a State Responsibility Area (SRA). The Caltrans District 7 Climate Change Vulnerability Assessment mapping of wildfire risk shows that portion of the project area as exposed roadway in an area of medium wildfire concern in 2025 and 2055; in 2085, a majority of the project area is in an area with medium wildfire concern, while a small portion is in a high-concern area. All other areas of the project are outside a Very High Fire Hazard Severity Zone. The project is not in an area designated as a High or Very High Fire Hazard Severity Zone in an SRA.

The project would not require the installation or maintenance of infrastructure that would be vulnerable to fire. Caltrans standard specifications mandate fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction. Accordingly, the project would be adapted and resilient to future wildfire.

Furthermore, the project is not expected to worsen conditions for wildfires and other related hazards. Caltrans would control vegetation and associated fire risks within the project corridor through its Vegetation Management Program, which includes assorted methods for keeping vegetation in check, including weed control and brush control, which reduce wildfire fuel along the roadway (Caltrans 2025d).

Temperature

Based on the Caltrans District 7 Climate Change Vulnerability Assessment Map (Caltrans 2019), the absolute minimum air temperature in project area would increase by 0.0–1.9 degrees Fahrenheit by 2025, up to 2.0–3.9 degrees Fahrenheit by 2055, and by up to 6.0–7.9 degrees Fahrenheit by 2085. The average maximum temperature over 7 consecutive days in the project area would increase by up to 2.0–3.9 degrees Fahrenheit by 2025, up to 4.0–5.9 degrees Fahrenheit by 2055, and by up to 8.0–9.9 degrees Fahrenheit by 2085. Therefore, the overall minimum and maximum temperatures of the day in the project area are projected to continue to increase from 2022 to 2085. The coldest month in Ventura County is December, and the average lowest temperature is 43 degrees Fahrenheit. The hottest month in Ventura County is August, and the average highest temperature is 83 degrees Fahrenheit (bestplaces.net 2025c). Accordingly, a 10-degree-Fahrenheit increase in the absolute minimum air temperature and 10-degree-Fahrenheit increase in the average maximum temperature over 7 consecutive days in the project area could increase the annual low or minimum temperature to 53 degrees Fahrenheit, and the annual high or maximum temperature to 93 degrees Fahrenheit.

Temperature is projected to increase throughout Ventura County and throughout the project area. Temperature can affect pavement performance, and changes in temperature can cause blowups, buckling, and rutting, affecting the pavement's roadway life. FHWA's Long-Term Pavement Performance program shows that 36 percent of total damage to flexible pavements and 24 percent of total damage to rigid pavements is caused by environmental factors. Pavements are designed based on the typical historical climatic conditions for the project area. However, as weather changes occur due to climate change, historical climatic conditions may no longer be as indicative of future environmental conditions. Change in temperature should be considered when choosing pavement materials and designing the foundation of retaining and bridge joints, especially in regard to ground moisture conditions.

The project would primarily include sliver widenings where the new widened areas would be matched with the existing pavement. Structural design elements such as the foundations or retaining and bridge joints would be further investigated during final design, as described in measure **SLR-3**. The project is not expected to worsen heat-related hazards with implementation of measure **SLR-3**.

- **SLR-3:** During final design, structural engineers will investigate bridge foundations and retaining and bridge joints, and will consider changes in temperature and ground moisture conditions when designing the structures.

3.4 SENATE BILL 743/INDUCED DEMAND ANALYSIS

3.4.1 Regulatory Setting

Senate Bill 743 (2013) amended CEQA to allow the Governor's Office of Planning and Research to develop new guidelines under CEQA establishing alternative metrics to levels of service for the analysis of transportation impacts. On December 28th, 2018, the Office of Administrative Law approved the amendments to the CEQA Guidelines including changes related to Senate Bill 743. The amended CEQA Guidelines add a new section on determining the significance of transportation impacts, and generally specify VMT as the most appropriate measure of transportation impacts. In 2020, Caltrans prepared guidance documents for the implementation of Senate Bill 743 and adopted VMT as the CEQA transportation metric. These documents, the "Transportation Analysis Framework" and "Transportation Analysis under CEQA," along with other information can be found on the Caltrans Senate Bill 743 website.

3.4.2 Affected Environment

This section is based on the Traffic Operations Analysis Report (Caltrans 2021a) prepared for the project.

For this project, a VMT analysis was performed to assess the potential effects the project alternatives may have on regional VMT. As discussed in Section 2.1.10, *Transportation*, the VMT study area included a sub-region generally bounded by State Route (SR) 1 and SR 118 on the northern and southern ends of the sub-region. The county line acts as a natural eastern and southeastern boundary for the VMT analysis. East/west travel between Ventura and Los Angeles counties is captured with the analysis of US 101 and US 118. The VMT study area extends well beyond the construction limits of the project—particularly to the east and southeast—to capture projected changes in VMT on parallel routes. As shown on Figure 2.1.10-5 (Section 2.1.10, *Transportation*), the VMT study area includes most of southern Ventura County and the jurisdictions of Thousand Oaks, Camarillo, Oxnard, Ventura, Moorpark, Simi Valley, and Port Hueneme.

For this project, the travel demand model developed for Ventura County (Ventura County Traffic Model [VCTM]) was used to estimate the daily VMT for the sub-region for different vehicle classes. The analysis shows the estimated daily VMT within the sub-region for existing conditions (2018) to be approximately 14 million, with the majority of the VMT on freeways at approximately 6.7 million (see Table 2.1.10-9 in Section 2.1.10, *Transportation*).

California aims to achieve substantial VMT reductions to meet its climate goals, including carbon neutrality by 2045. To achieve this, the State must reduce VMT per capita from 24.6 miles per day in 2019 to 18.4 miles by 2030 (a 25 percent reduction) and to 17.2 miles per day by 2045 (a 30 percent reduction). These VMT reduction goals are outlined in ARB's 2022 Scoping Plan and are supported by state policies like SB

375, the Sustainable Communities and Climate Protection Act, which encourages regional transportation, housing, and land use planning to reduce GHG emissions.

Planning documents relevant to the project regarding VMT reduction include the following.

3.4.2.1 Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans CAP; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

3.4.2.2 County of Ventura General Plan/Climate Action Plan

The County developed an integrated approach to addressing climate change in the general plan by incorporating related policies and programs throughout the general plan elements, such that the general plan would also serve as the County's CAP. The goal of the County's CAP is to reduce future GHG emissions within the county for the buildout years of 2030, 2040, and 2050, consistent with the long-term state GHG reduction goals, including AB 32 and SB 32. The following goals and policies to reduce VMT in Ventura County are relevant to the project:

- **CTM-4.1 Reduced Vehicle Miles Traveled.** The County shall work with Caltrans and Ventura County Transportation Commission (VCTC) to reduce VMT by:
    - Facilitating the efficient use of existing transportation facilities;
    - Striving to provide viable modal choices that make driving alone an option rather than a necessity;
    - Supporting variable work schedules to reduce peak period VMT; and
    - Providing more direct routes for pedestrians and bicyclists.
- **CTM-4.2 Alternative Transportation.** The County shall encourage bicycling, walking, public transportation, and other forms of alternative transportation to reduce Vehicle Miles Traveled (VMT), traffic congestion, and greenhouse gas emissions.

3.4.2.3 Ventura County CEQA Vehicle Miles Traveled Adaptive Mitigation Program

The Ventura County CEQA Vehicle Miles Traveled Adaptive Mitigation Program (AMP) was developed by SCAG, the Ventura Council of Governments, and VCTC to assist in VMT assessment and reduction strategies to streamline the CEQA process in Ventura County. The VMT AMP provides a simplified mitigation program to avoid, assess and mitigate VMT impacts, with a focus on affordable housing development. The program provides guidance and serves as a tool for lead agencies and housing developers to assess and mitigate VMT, providing a mechanism to apply VMT mitigation measures to reduce VMT impacts. The VMT AMP provides VMT reduction strategies and recognizes that the most effective means of reducing VMT is providing convenient, safe, and accessible bicycle, pedestrian, and transit network improvements, providing a mix of land use types in close proximity, and providing a range of housing options near places of work. The VMT AMP was adopted by VCTC in May 2023.

3.4.2.4 US 101 Communities Connected Multimodal Corridor Study

The US 101 Communities Connected Multimodal Corridor Study was developed by VCTC, SCAG, and Caltrans in 2020 to identify how best to improve the overall corridor mobility along US 101 while balancing safety and environmental considerations. The study serves as the roadmap for future multimodal corridor planning within and surrounding the US 101 corridor. Improvement projects recommended in the study are eligible for new transportation funding from the State of California. Performance measures that helped guide the evaluation of the proposed projects listed in the study include reduction of VMT in the corridor, maximization of person throughput, safety, accessibility, economic opportunities, reduction in GHG emissions and criteria pollutants, and efficient land uses. The US 101 Improvement Project is included in the study.

3.4.3 Environmental Consequences

In 2020, Caltrans released the *Transportation Analysis Framework for Evaluating Transportation Impacts of State Highway System Projects* (TAF). In this guidance, Caltrans suggested using either the National Center for Sustainable Transportation induced demand calculator or the travel demand model. For this project, both the National Center for Sustainable Transportation induced demand calculator and the travel demand model were evaluated, and it was determined that the travel demand model developed for Ventura County, VCTM, more appropriately captured the VMT changes for this corridor-based project. Specifically, the elasticity factor better reflected the local land use characteristics of Ventura County instead of using a state average. The elasticity factor accounts for induced travel demand due to land use changes and is used in the model to project VMT change. In addition, the VCTM captured differences between general purpose and proposed HOV lanes, and changes in VMT on parallel routes to reflect the true effect of the proposed US 101 improvement.

The analysis did not include all existing and future roadways in the study area. This is because all travel demand models include some degree of random error arising from the cumulative effect of rounding and other slight imperfections in each of the millions of calculations performed during each model run. Additionally, regional models do not provide reasonable accuracy down to the micro level, for example local streets below the "collector" classification. Therefore, the local circulations are typically not coded in the models to prevent skewing the results, which can inaccurately represent the true effects of the project.

Per the TAF, if a travel demand model is used, it must meet the criteria listed in the checklist included in *Table 4 – Checklist for Evaluating Adequacy of Travel Demand Models for Estimating Induced Travel* of the TAF. The VCTM was evaluated and found to meet the criteria listed in the TAF Table 4 checklist.

Table 3.4.3-1 summarizes projected daily and annual VMT for the No-Build Alternative and build alternatives per the VCTM. Under Opening Year (2040) conditions for Alternatives 2 and 3, the total daily and annual VMT are projected to be approximately 16,000,000 and 5,000,000,000, respectively. When compared to the No-Build Alternative, total daily and annual VMT under Alternatives 2 and 3 are projected to increase by approximately 106,000 and 37,000,000, respectively, a 0.7 percent increase.

Under Design Year (2060) conditions for Alternatives 2 and 3, the total daily and annual VMT are projected to be approximately 16,000,000 and 6,000,000,000, respectively. When compared to the No-Build Alternative, total daily and annual VMT under Alternatives 2 and 3 are projected to increase by approximately 109,000 and 38,000,000, respectively, a 0.7 percent increase.

Table 3.4.3-1. Daily and Annual Vehicle Miles Traveled Estimates within the Study Area

Analysis Year	Daily VMT[a]	Total Increase and % Change in Daily VMT from Alternative 1 (No-Build)	Annual VMT[a]	Total Increase and % Change in Annual VMT from Alternative 1 (No-Build)
Existing Conditions (2018)	13,813,325	-	4,793,223,775	-
Opening Year (2040)				
Alternative 1 (No-Build)	15,518,383	-	5,384,878,901	-
Alternatives 2 and 3	15,624,133	105,750 (0.7%)	5,421,574,151	36,695,250 (0.7%)
Design Year (2060)				
Alternative 1 (No-Build)	15,983,935	-	5,546,425,445	-
Alternatives 2 and 3	16,092,857	108,922 (0.7%)	5,584,221,379	37,795,934 (0.7%)

Source: Caltrans 2021a.

[a] The total VMT for Alternatives 2 and 3 includes an elasticity factor. The elasticity factor accounts for induced travel demand due to land use changes and is used in the model to project VMT change. Refer

to the Traffic Operations Analysis Report (Caltrans 2021a) for details on how the elasticity factor was determined for this project.

The addition of an HOV/express bus lane in both directions along US 101 under Alternatives 2 and 3 is anticipated to result in additional VMT from the No-Build condition in Opening Year (2040) and Design Year (2060). VCTC has identified 27 strategies to mitigate the forecasted VMT increase from the project, as listed in Table 3.4.3-2. The proposed VMT reduction strategies were sourced from VCTC's Solutions for Congested Corridors Program, US 101 Communities Connected Multimodal Corridor Study, VCTC Comprehensive Transportation Plan, and City and County Capital Improvement Programs, which include planned but unfunded projects. Additional potential measures were developed in partnership with Gold Coast Transit District and VCTC's transit program.

The proposed VMT reduction strategies include bike/pedestrian projects, implementation of electric vehicle charging stations at train stations, development of affordable workforce housing in high-quality transit areas, transit/mobility hubs including park-and-ride lots and mobility-as-a-service, transit/vanpool programs, and bicycle marketing programs such as bike share and bike training programs. Mobility-as-a-service integrates various transportation modes, such as public transit, car sharing, bike sharing, and ride-hailing, into a single seamless integrated service. The US 101 Improvement Project would also serve as a VMT reduction strategy since the VCTC bus service would directly use the HOV lanes and result in improved travel times for users.

Implementation of the proposed VMT reduction strategies is projected to reduce VMT by 36,811,495, as shown in Table 3.4.3-2, which is more than the anticipated VMT that would be induced by the project in Opening Year (2040) conditions (estimated VMT of 36,695,250; see Table 3.4.3-1). Despite the estimated VMT reduction being above the anticipated VMT induced by the project, there is much uncertainty associated with the estimated VMT reductions. The uncertainty relates to both funding sources and the actual reductions that may ultimately be realized by implementing several of the strategies.

Table 3.4.3-2. Proposed Vehicle Miles Traveled Reduction Strategies

Project Name	Cost	VMT Reduction	Cost per VMT	Project Type	Lead Agency
Bike / Pedestrian Projects from the US 101 Communities Connected Multimodal Corridor Study					
Springdale Drive, Camarillo	$2,322,000	639,521	$3.63	Capital	Camarillo
Central Avenue, Camarillo	$695,000	54,479	$12.76	Capital	Camarillo
Hemlock Street Pedestrian	$1,700,000	274,130	$6.20	Capital	Ventura
Wooley Road Pedestrian Improvements, Oxnard	$2,400,000	1,727,713	$1.39	Capital	Oxnard
Ventura Road Class IV Bike Path, Oxnard	$4,000,000	1,101,725	$3.63	Capital	Oxnard
Gainsborough Road Improvements, Thousand Oaks	$650,000	264,761	$2.46	Capital	Thousand Oaks
Sidewalk Corridors Improvements, Thousand Oaks	$6,594,617	1,270,714	$5.19	Capital	Thousand Oaks
Additional Unidentified	$10,000,000	2,313,449	$4.32	Capital	Various
SCCP Application Projects from the US 101 Communities Connected Multimodal Corridor Study					
Oxnard / Camarillo Double-Tracking, Camarillo Station Tunnel	$87,500,000	5,211,940	$16.79	Capital	LOSSAN
Santa Paula Branch Line Bike Trail East Ventura Station/Saticoy	$27,133,000	5,565,533	$4.88	Capital	Ventura
Charging Stations at East Ventura, Oxnard and Camarillo stations	$600,000	1,041,000	$0.58	Capital	VCTC
Development of Affordable Workforce Housing in High Transit Areas	$14,000,000*	1,704,464	$8.21	Capital	VCTC
Mobility Hubs					
Borchard Park-and-Ride, Thousand Oaks	$500,000	733,905	$0.68	Capital	Thousand Oaks
Las Posas Park-and-Ride, Camarillo	$503,650	154,762	$3.25	Capital	Camarillo
Ventura Ave / Santa Clara, Ventura	$500,000	554,853	$0.90	Capital	Ventura
Camarillo Station	$500,000	1,055,227	$0.47	Capital	Camarillo
Oxnard Station	$500,000	548,607	$0.91	Capital	Oxnard
East Ventura Station	$500,000	248,105	$2.02	Capital	Ventura
Ventura County Government Center	$500,000	356,369	$1.40	Capital	Ventura County
Mobility As A Service	TBD*	TBD	TBD	Capital	VCTC
Transit / Vanpool Programs					
Vanpool Pilot Program	$3,000,000*	347,000	$8.65	Operations	VCTC
Increased VCTC Intercity 101 Express Bus Service With 2+ or 3+ HOV	$20,316,642	2,146,542	$9.46	Operations	VCTC
Increased GCTD Line 6 Service	$28,250,000	1,960,550	$14.41	Operations	GCTD

Project Name	Cost	VMT Reduction	Cost per VMT	Project Type	Lead Agency
Bicycle Marketing Program					
Bike Share Program	$2,000,000*	1,388,000	$1.44	Operations	VCTC
Bike Training Programs at School / Community Centers	TBD	TBD	TBD	Operations	VCTC
Corridor Transit Capital Improvements					
Oxnard Station Second Platform	$11,500,000	1,735,000	$6.63	Capital	Oxnard
Transit Stop & Station Improvements and Grant Program	$14,500,000*	4,413,493	$3.29	Capital	VCTC
Grand Total	$240,664,909	36,811,495	$6.54		

* Scalable Funding: These actions can be scaled to different levels, unlike distinct capital transportation projects.
GCTD = Gold Coast Transit District; LOSSAN = Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency; SCCP = Solutions for Congested Corridors Program; TBD = to be determined

Funding for the VMT reduction strategies is dependent on future commitments of State Transportation Improvement Program County Share funds and/or Surface Transportation Block Grant Program and Congestion Mitigation and Air Quality Improvement Program funds apportioned to the region. In addition, strategies requiring ongoing operations funds would likely require approval of a county transportation sales tax or, alternatively, substitute capital mitigations would need to be found.

In January 2024, VCTC provided the draft VMT reduction strategies table (Table 3.4.3-2) to ten different agencies and organizations that provided a written expression of support. These ten entities included all six local jurisdictions with responsibility for implementing the transportation projects plus five housing organizations that could play a role in using housing mitigation funds to develop housing in high quality transit areas, including Ventura County Housing Trust Fund. The five housing organizations were Habitat for Humanity, Many Mansions, People's Self-Help Housing, and Housing Opportunities Made Easier.

CEQA clearance for the VMT reduction strategies would be obtained separately for the individual projects. In the unexpected event that some projects prove infeasible, VCTC is committed to providing an equivalent amount of funding to other projects that can mitigate an equivalent amount of VMT. The VMT AMP contains a large list of potential VMT reduction strategies along with their estimated VMT reduction and cost providing many already identified options to choose from should some of the committed measures be infeasible. Given that the estimated construction completion year of the project is 2040, it is anticipated all of the proposed VMT reduction strategies would be in place at that time to offset the VMT increase by the project.

Due to the uncertainty of funding and the actual VMT reductions for these VMT reduction strategies, there is a potential that VMT impacts would remain significant and unavoidable. During final design, VCTC would further investigate proposed strategies and funding resources to reduce forecasted VMT increases from the project and would update the project's list of VMT reduction strategies accordingly, as described in measure **VMT-1**.

3.4.4 Avoidance, Minimization, and/or Mitigation Measures

3.4.4.1 Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to VMT related to the project would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

3.4.4.2 Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

- **VMT-1:** During final design, VCTC will further investigate proposed strategies and funding resources to reduce forecasted VMT increases from the project and will update the project's list of VMT reduction strategies, accordingly.

3.5 WILDFIRE

3.5.1 Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high fire hazard severity zones.

3.5.2 Affected Environment

Wildfires can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects would vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

The project area traverses the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura, through Ventura County, from approximately SR 23 to SR 33. Land uses adjacent to the project limits include residential, commercial, light industrial, and agricultural use.

The CAL FIRE Fire Hazard Severity Zones mapping tool shows the project area runs through Moderate, High, and Very High Fire Hazard Severity Zones, as shown on Figure 3.5-1. The Very High Fire Hazard Severity Zones within the project corridor are mostly concentrated within the Conejo Grade area. There is a Moderate Fire Hazard Severity Zone within the project corridor between South Las Posas Road and Central Avenue. There are Moderate and High Fire Hazard Severity Zones between approximately SR 1 and Johnson Drive. At the westernmost portion of the project corridor, there are Moderate, High, and Very High Fire Hazard Severity Zones.

Based on the CAL FIRE Fire Hazard Severity Zones Map for Ventura County, a majority of the project is within an LRA (CAL FIRE 2025). However, a small portion of the project between Camarillo and Thousand Oaks is surrounded by a Very High Fire Hazard Severity Zone in an SRA (CAL FIRE 2024). The Caltrans District 7 Climate Change Vulnerability Assessment mapping of wildfire risk shows that portion of the project area as exposed roadway in an area of medium wildfire concern in 2025 and 2055; in 2085, a majority of the project area is in an area with medium wildfire concern, while a small portion is in a high concern area. All other areas of the project are outside a Very High Fire Hazard Severity Zone. The project is not in an area designated as a High or Very High Fire Hazard Severity Zone in an SRA.

Figure 3.5-1. Fire Hazard Severity Zones

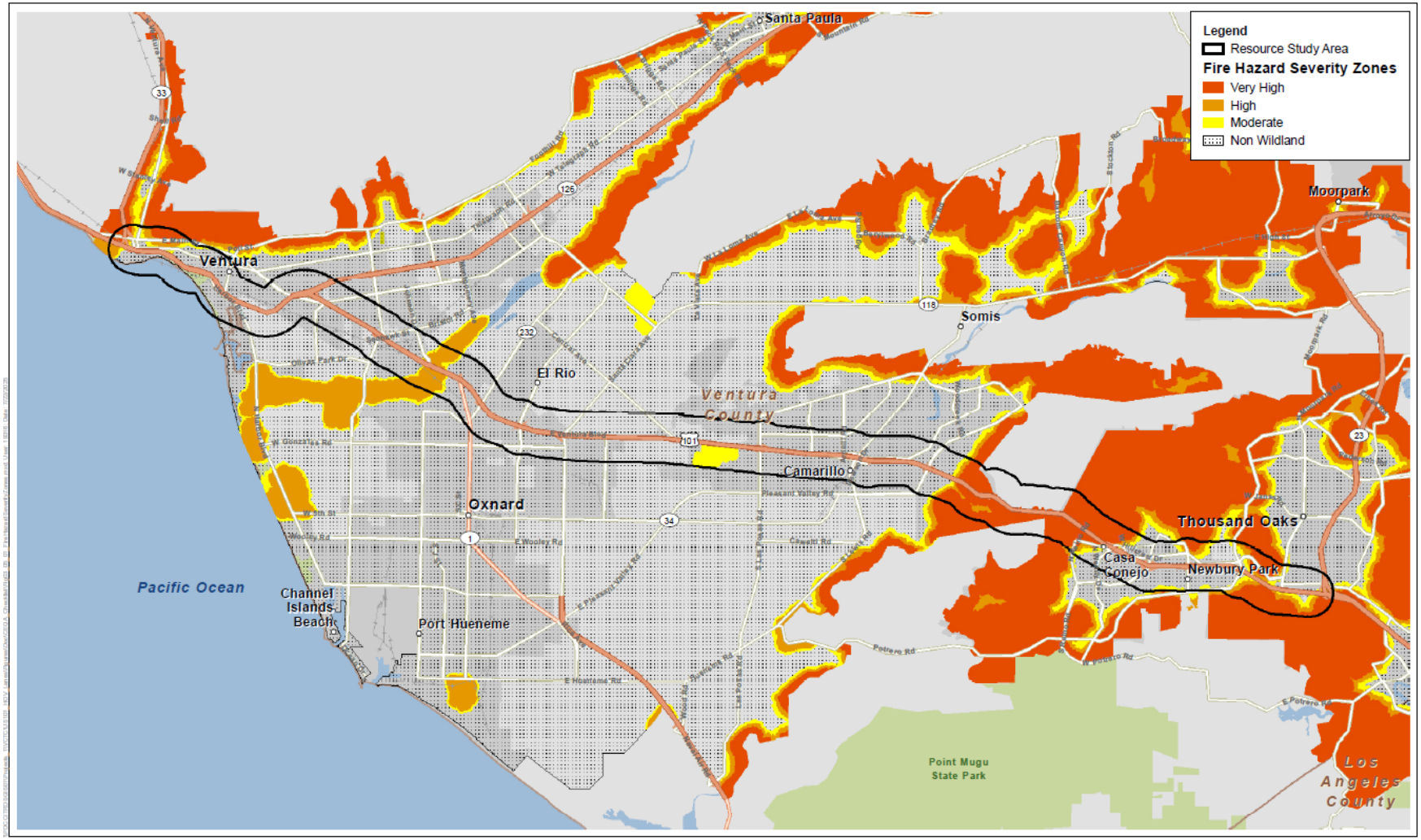


Figure 3.5-1
Fire Hazard Severity Zones
US 101 Improvement Project

3.5.3 Environmental Consequences

3.5.3.1 Alternative 1: No-Build Alternative

Under the No-Build Alternative, the project would not be implemented. None of the improvements proposed under the build alternatives would be constructed under the No-Build Alternative. As a result, the No-Build Alternative does not introduce new elements to the highway that would exacerbate the current wildfire risks in the project corridor

3.5.3.2 Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

Temporary Impacts

Emergency Access and Response

As shown on Figure 3.5-1, the Very High Fire Hazard Severity Zones within the project corridor are mostly concentrated within the Conejo Grade area between Camarillo and Thousand Oaks. In addition, at the westernmost portion of the project corridor, a Very High Fire Hazard Severity Zone is near the project corridor in Ventura (Figure 3.5-1). The project area traverses the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura, through Ventura County. The county and all four cities the project traverses have Emergency Operations Plans (County of Ventura 2021; City of Thousand Oaks 2020; City of Camarillo 2021; City of Oxnard 2021a; City of Ventura 2021), which provide guidelines for emergency response planning, preparation, training, and execution throughout their jurisdictions.

During construction, temporary lane closures and detours may result in short-term effects on emergency response and evacuation along and in the vicinity of the surrounding project area. This could result in increased travel times for emergency service providers. However, during construction, measure **TR-1** (see Section 2.2.10, *Transportation*) would be implemented to minimize these obstructions, which would provide continued emergency access to the project area and nearby properties. Emergency service providers would be notified in advance prior to any lane closures, interruptions on emergency service routes, or changes to traffic control. The project is not expected to cause a substantial increase in emergency response times during construction and would not substantially impair an adopted emergency response plan or emergency evacuation plan.

Wildfire Risk

Generally, transportation projects, particularly those on existing alignments such as the US 101, are considered unlikely to exacerbate wildfire risks. The project would not install any infrastructure, such as new power lines or other utilities, that could exacerbate existing wildfire risk. However, the project would likely require relocation of utilities such as telecommunications, electrical, natural gas, water, and sewer lines. During final design, a final determination would be made as to which of the identified

utilities would be protected in place or would need to be relocated in consultation with the utility owner/provider and plans for the relocations would be incorporated in the final project design. The relocation of utilities would be coordinated between the affected agencies and utility providers as described in measure **UTIL-2** (see Section 2.2.9, *Utilities/Emergency Services*).

During construction, implementation of measure **NC-9** (see Section 2.4.1, *Natural Communities*) would require appropriate firefighting equipment and a water tender to be available on the project site when construction activities are conducted during the fire season. The project would also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a Fire Prevention Plan. With implementation of measures **UTIL-2** and **NC-9** and compliance with Caltrans Standard Specifications Section 7-1.02M(2), the project would avoid or minimize the risk of fires during construction activities.

Post-Fire Slope Failure and Flood Risk

Topographical and slope conditions throughout the project vicinity vary, with more prominent slopes located along the easternmost portion of the project, along the Conejo Grade. The project is also within the California Geological Survey Landslide Zone, where it is predominantly in the Conejo pass steep grade area. The project would require substantial grading with several major cut-and-fill slopes to accommodate the widened roadway shoulders and ramps. Retaining walls are proposed throughout the project corridor, as discussed in Section 2.3.3, *Geology/Soils/Seismic/Topography*. During the final design phase, potential landslides, slope stability, cut-and-fill slopes, and retaining walls would be further investigated (measures **GEO-1** and **GEO-2**; see Section 2.3.3, *Geology/Soils/Seismic/Topography*), and the project would be designed and constructed based on the recommendations from the geotechnical report and foundation reports (measure **GEO-3**, see Section 2.3.3, *Geology/Soils/Seismic/ Topography*).

The project proposes to widen five bridges that would encroach the 1-percent probability base flood (100-year floodplain) associated with Conejo Creek, Calleguas Creek, Arroyo Conejo, South Branch Arroyo Conejo, and Beardsley Wash. In addition, bridge and/or roadway widening near four drainages would encroach the 1-percent probability base flood (100-year floodplain); these drainages are Camarillo Hills Drain, Crestview Drain, El Rio Drain, and Moon Ditch. Implementation of the project would not increase the risk of flooding because it would not increase the base flood elevation. Therefore, there would be no substantial flood-related risks to life or property associated with implementation of the project. In addition, measures **HYD-1** through **HYD-4** (see Section 2.3.1, *Hydrology and Floodplain*) would be implemented to avoid or minimize impacts on floodplains and hydrology, which would include scheduling construction work during the dry season to the maximum extent possible (measure **HYD-1**), remapping floodplains (measure **HYD-2**), regrading floodplain infields to restore storage volume (measure **HYD-3**), and remodeling drainages to evaluate design alternatives to minimize floodplain encroachment (measure **HYD-4**). A floodplain encroachment permit from the Ventura County Flood Control District would also be required.

Implementation of **GEO-1** through **GEO-3** and **HYD-1** through **HYD-4** would avoid or minimize the project's potential to result in downslope or downstream flooding or landslides. In addition, implementation of erosion control measures and other best management practices (BMPs) would avoid or minimize the project's potential to result in downslope or downstream flooding or landslides. These measures include compliance with National Pollutant Discharge Elimination System (NPDES) permits (measures **WQ-2** and **WQ-4**; see Section 2.3.2, *Water Quality and Stormwater Runoff*), preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include construction site BMPs (measures **WQ-3** and **NC-8**; see Section 2.3.2, *Water Quality and Stormwater Runoff*, and Section 2.3.1, *Natural Communities*), and implementation of permanent BMPs (measures **WQ-1** and **WQ-5**; see Section 2.3.2, *Water Quality and Stormwater Runoff*).

Permanent Impacts

The project is not expected to introduce any new structures or operations that would worsen the risk of wildfire. The project would not alter the alignment of US 101. Implementation of the project would have potential benefits in lessening wildfire risk by widening the existing alignment of US 101. By increasing the width of the existing roadway, the project would be contributing to a more effective firebreak through the reduction of vegetation adjacent to the roadside and providing additional areas for emergency response vehicle staging. In addition, with implementation of additional lanes on US 101, the project would have the potential to improve travel time and decrease emergency response times during operation. Operation of the project would not exacerbate the current wildfire risks in the project corridor.

3.5.4 Avoidance, Minimization, and/or Mitigation Measures

3.5.4.1 Alternative 1: No-Build Alternative

The No-Build Alternative would maintain current US 101 configurations within the resource study area. Under the No-Build Alternative, the project would not be constructed, and no impacts related to wildfires would occur. Therefore, Alternative 1 would not require avoidance, minimization, and/or mitigation measures.

3.5.4.2 Alternative 2: Add an HOV/Express Bus Lane in Each Direction, and Alternative 3: Add an HOV/Express Bus Lane in Each Direction with Design Variations

The project would comply with Caltrans Standard Specifications Section 7-1.02M(2) and would implement the following measures to avoid or minimize the risk of wildfires: **TR-1** (see Section 2.2.10, *Transportation*), **UTIL-2** (Section 2.2.9, *Utilities/Emergency Services*), **NC-8** and **NC-9** (Section 2.4.1, *Natural Communities*), **GEO-1** through **GEO-3** (Section 2.3.3, *Geology/Soils/Seismic/Topography*), **HYD-1** through **HYD-4** (Section 2.3.1, *Hydrology and Floodplain*), and **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*).

3.6 CUMULATIVE IMPACTS

3.6.1 Regulatory Setting

Under CEQA (Guidelines Section 15355), “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects 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.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts.

3.6.2 Methodology

The cumulative impact analysis methodology utilized was based on the six-step process set forth in the Caltrans interim guidance on cumulative impact analysis under CEQA (May 2025). The six-step process is as follows:

- Determine which environmental resources to include in the cumulative impact analysis.
- Determine resource study area.
- Describe the existing cumulative condition.
- Discuss whether the project’s impacts are cumulatively considerable.
- If the project’s contribution is cumulatively considerable, discuss any additional proposed mitigation for Caltrans’ contribution to cumulative condition.

- State post-mitigation conclusion (if additional mitigation was added to address cumulative impacts).

3.6.3 Resources Excluded from Cumulative Impacts Analysis

CEQA requires analysis of potential environmental impacts that are individually limited but cumulatively considerable. CEQA does not require an analysis of incremental effects that are not cumulatively considerable, nor is there a requirement to discuss impacts that do not result in part from the project evaluated.

The following resources are excluded from the cumulative impacts analysis for the reasons provided below:

- **Mineral Resources:** The Ventura County 2040 General Plan, Chapter 8, Natural Resources (County of Ventura 2020), shows a portion of the project alignment within the Oxnard area to be within Mineral Resource Zones (MRZs) 2, 3, and 4, which are areas that contain mineral resources (MRZ-2), areas that may qualify as mineral resources (MRZ-3), and areas where geologic information does not rule out either the presence or absence of mineral resources (MRZ-4). As discussed in Section 2.3.3, *Geology/Soils/Seismic/Topography*, it is not anticipated the project would encounter mineral resources because the project is within an existing urbanized transportation corridor.

- **Population and Housing:** The potential for growth-related impacts resulting from the project was considered in the context of the first-cut screening analysis approach, as demonstrated in Section 2.2.6, *Growth.* That analysis determined there would be no project-related growth and no further growth analysis was required. The project would not require any full acquisition of residential or non-residential properties. There would be no relocation or displacement of people, and the project would not necessitate the need to construct replacement housing.

- **Utilities and Service Systems:** The proposed project would improve an existing transportation facility and would not require new or expanded water or waste facilities. Utilities within the project area include water, sewer, telecom, crude oil, electrical, and gas. As discussed in Section 2.2.9, *Utilities/Emergency Services*, both build alternatives would protect in place, restore, or relocate any utilities that are in conflict with the project. The project would utilize a local landfill with sufficient capacity to serve its solid waste disposal needs during construction.

- **Wildfire**: The project would not alter the alignment of US 101 and would not install any infrastructure, such as new power lines or other utilities, that could exacerbate existing wildfire risk. The project would also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a Fire Prevention Plan. The project would not exacerbate the current wildfire risks in the project corridor.

3.6.4 Resources Evaluated for Cumulative Impacts Analysis

Table 3.6.4-1 identifies the resources that are included in the cumulative impacts analysis, the reason why they are included, and the resource study area that is used in the analysis.

Table 3.6.4-1. Resources Evaluated for Cumulative Impacts Analysis

Resource Area	Reason Included in Cumulative Analysis	Resource Study Area
Aesthetics	Temporary and permanent impacts on visual and aesthetic resources	Viewshed of the US 101 corridor
Agricultural Resources	Temporary and permanent impacts on farmlands	All farmland resources within Ventura County
Air Quality	Temporary impacts on air quality during construction and permanent criteria pollutant emission impacts during operations	South Central Coast Air Basin
Biological Resources	Temporary and permanent impacts on natural communities, wetlands and other waters, plants, animals, and listed species.	Within 0.50 mile of project limits
Cultural Resources	Temporary and permanent impacts on cultural resources	Area of potential effect
Energy	Energy consumption during construction and operation	State of California
Geology and Soils	Temporary and permanent impacts on soils and geologic conditions; potential for encountering unanticipated discovery of paleontological resources during construction	Regional and local geology
Greenhouse Gas Emissions	Permanent increase in operational GHG emissions	South Central Coast Air Basin
Hazards and Hazardous Materials	Potential to encounter expected and unexpected contaminants during construction-related soil disturbance activities	US 101 transportation corridor and adjacent areas
Hydrology and Water Quality	Temporary and permanent impacts on hydrology, floodplains, and water quality	Buenaventura, Calleguas, Oxnard, Santa Clara – Calleguas, and Ventura River Hydrologic Units
Land Use and Planning	Temporary and permanent impacts on land uses from TCEs and partial permanent right-of-way acquisition	US 101 corridor and the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura and unincorporated areas of Ventura County
Noise	Temporary and permanent impacts from noise during construction and operation	US 101 transportation corridor and adjacent areas
Public Services	Temporary and permanent impacts on public services	Within 0.50 mile of project limits
Recreation	Temporary and permanent impacts on parks	Within 0.50 mile of project limits

Resource Area	Reason Included in Cumulative Analysis	Resource Study Area
Transportation	Temporary impacts on traffic and circulation	SCAG region
Tribal Cultural Resources	Potential to encounter archaeological site and unanticipated cultural materials and human remains during construction activities	Tribal lands in the Southern California region

The planned, completed, and proposed projects considered in this analysis are presented in Table 3.6.4-2. In general, most of the projects listed are infill projects, and the listed transportation projects would improve existing facilities rather than construct new facilities.

Table 3.6.4-2. Planned, Completed, and Proposed Projects in the Project Vicinity

Project Name	Location	Project Description	Status	Potential Environmental Impacts
Camino Real Business Park Specific Plan	Located within the City of Oxnard with frontage along US 101.	The Camino Real Business Park Specific Plan is a planned commercial and industrial development containing a mixture of industrial, research and development, office and commercial uses.	Plan approved May 2008. Some developments under this plan are approved, others are still undergoing review.	An EIR was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (October 2007) include: • Agriculture and Forestry Resources • Air Quality • Hydrology/Water Quality • Land Use/Planning • Utilities/Service Systems • Transportation
River Park Specific Plan	The northern edge of the City of Oxnard, in southern Ventura County, located north of US 101 between Vineyard Avenue (SR 232) and the Santa Clara River.	The River Park Specific Plan would regulate the use and development of land within an approximate 700-acre area. Various land uses are proposed within the Specific Plan Area including residential, commercial, public facilities, and open space uses.	Plan approved in 2002. Some developments under this plan are approved or have already been constructed; others are still undergoing review. The Panorama River Park Apartments (2700 and 2750 North Ventura Road, Oxnard) were constructed in 2025.	An EIR was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Agriculture and Forestry • Air Quality • Biological Resources • Cultural Resources • Geology/Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Noise • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities/Service Systems
Sakioka Farms Specific Plan	The northeastern area of the City of Oxnard immediately south of US 101 and immediately east of Rice Avenue.	The Sakioka Farms Specific Plan envisions the phased development of a master planned industrial/business park that may also include residential units and a park.	Approved June 2012. Some developments under this plan are approved and completed; others are still undergoing review.	An EIR was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (September 2010) include: • Aesthetics • Agriculture and Forestry Resources • Air Quality

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Biological Resources • Cultural Resources • Geology/Soils • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Mineral Resources • Noise • Population/Housing • Public Services • Recreation • Utilities/Service Systems • Transportation • Growth • Cumulative Impacts
Oxnard Village Specific Plan (previously the Wagon Wheel Specific Plan)	Near the northwestern edge of the City of Oxnard, bordered by US 101 to the north and Oxnard Boulevard to the east.	When completed the site would feature 1,500 residential dwelling units, 50,000 square feet of "Main Street" retail, and 7.4 acres of parks and open space.	Approved in 2008. Under construction.	An EIR was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (May 2008) include: • Aesthetics • Agriculture and Forestry Resources • Air Quality • Biological Resources • Cultural Resources • Hydrology/Water Quality • Geology/Soils • Hazards and Hazardous Materials • Land Use/Planning • Mineral Resources • Noise • Population/Housing • Public Services • Recreation • Utilities/Service Systems • Transportation

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Growth • Cumulative Impacts
Lockwood I Senior Apartments	2151 Lockwood Street, Oxnard.	When completed the site would feature 173 all-affordable senior living apartments.	Under construction; estimated completion in 2026.	Environmental document unavailable.
Lockwood III Apartments	2151 Lockwood Street, Oxnard.	When completed the site would feature 234 apartments on a 5.17-acre site.	Approved in 2024.	An Initial Study/Mitigated Negative Declaration (March 2024) was prepared. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Cultural Resources • Energy • Geology/Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Mineral Resources • Noise • Population/Housing • Public Services • Recreation • Transportation • Utilities/Service Systems • Wildfire
Rio Urbana Project	2714 East Vineyard Avenue, Oxnard.	Project involves 167 residential units and a 15,000-square-foot office building.	Under construction.	An Initial Study/Mitigated Negative Declaration (July 2019) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Energy • Geology/Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Mineral Resources • Noise • Population/Housing • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities/Service Systems
City of Ventura Downtown Specific Plan	The Downtown Specific Plan area covers approximately 514 acres in the City of Ventura and is bounded by the Pacific Ocean to the south; the foothills to the north, the Ventura River and Hwy 33 to the west, and Sanjon Barranca to the east.	The Downtown Specific Plan lays out a strategy for the continued revitalization of the City of Ventura's cultural and commercial core through implementation of planning goals.	Adopted March 2007. Some developments under this plan are approved and completed; others are still undergoing review.	An EIR was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (July 2006) include: • Air Quality • Cultural Resources • Land Use/Planning • Public Services • Transportation
Street Resurfacing	On North Bank Drive, from Ventura Boulevard to Johnson Drive, and on Valentine Road, from Telephone	The projects consisted of resurfacing various streets in the City of Ventura. The projects included cold milling, pavement repairs, manhole and valve cover adjustments to grade, traffic loop replacement, as well	Completed in 2025.	None. Notice of Exemption filed on August 2, 2024.

Project Name	Location	Project Description	Status	Potential Environmental Impacts
	Road to Palma Drive.	as sidewalk and curb repairs, and access ramps upgrades where needed. Landscape and beautification opportunities were also considered as part of these projects.		
Fire Station No. 7	Alessandro Drive and Seaward Avenue, Ventura.	A fire station is proposed for the city-owned lot at the corner of Alessandro Drive and Seaward Avenue. Phase I of the project would be the preparation of the site by the removal of four abandoned steel water storage tanks, associated piping, interfering sections of asphalt paving and berms, asbestos abatement, and lead containment.	Not yet under construction.	None. Notice of Exemption filed on March 11, 2024.
California Street Northbound Off-Ramp Relocation Project	US 101/California Street, Ventura.	This project would relocate the existing US 101 northbound off-ramp at California Street to Oak Street and replace/extend the California Street Overcrossing to relieve traffic congestion and improve traffic flow, improve bicycle and pedestrian access and circulation, address structural deficiencies of the overcrossing, and improve connection between the downtown business district and the	Public circulation of the draft Initial Study with Proposed Negative Declaration/Environmental Assessment was completed on August 10, 2026.	A draft IS with Proposed Negative Declaration/EA (June 2026) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Geology and Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology and Water Quality • Noise • Public Services • Transportation • Tribal Cultural Resources

Project Name	Location	Project Description	Status	Potential Environmental Impacts
		oceanfront area. This project is identified in the Downtown Specific Plan.		• Utilities and Service Systems • Wildfire
Olivas Park Specific Plan	Located in the southeastern portion of the City of Ventura, adjacent to the Santa Clara River.	The Olivas Park Specific Plan provides the City of Ventura with a planning document to direct the orderly development of the approximately 139-acre property known as the Olivas Park Drive Extension Area. The Specific Plan provides an infrastructure plan and a conceptual land use plan to ensure that this area of the city is developed in a manner consistent with the goals, objectives, principles, and policies of the City of Ventura General Plan.	Adopted December 2019. Development is in progress.	An EIR was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (August 2013) include: • Aesthetics • Agriculture and Forestry Resources • Air Quality • Biological Resources • Greenhouse Gas Emissions • Hydrology/Water Quality • Hazards and Hazardous Materials • Land Use/Planning • Utilities/Service Systems • Transportation • Growth
Victoria Avenue Corridor Plan & Development Code	The 286-acre Victoria Avenue corridor planning area extends for approximately 1.25 miles from US 101 on the south to State Route 126 on the north in the City of Ventura.	Actions in this plan, along with the new Development Code, would call for revitalizing this corridor by redesigning the current array of single-use shopping centers and retail parcels with a mix of building types, uses, and public and private frontages.	Adopted April 2009. Development is in progress.	An IS/MND was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (December 2008) include: • Agriculture and Forestry Resources • Air Quality • Biological Resources • Cultural Resources • Geology/Soils • Hydrology/Water Quality • Hazards and Hazardous Materials • Land Use/Planning • Mineral Resources • Noise • Population/Housing • Public Services

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Recreation • Utilities/Service Systems • Recreation • Transportation • Wildfire • Cumulative Impacts
Sewerline Replacement – US 101 at Northbank Drive	City of Ventura, under US 101 from Northbank Drive to Auto Center Drive.	This project would refurbish 550 linear feet of 15-inch sewerline under US 101 from Northbank Drive to Auto Center Drive. The project would also construct a 60-linear-foot segment of new 15-inch sewer between existing manholes to improve flow capacity from existing sewer on Northbank Drive. A spiral wound slip lining is considered to be the preferred method for refurbishing pipe under US 101. Rehabilitation or replacement of the manholes within the project limits would also be completed.	Funding not yet identified.	Environmental document unavailable.
Anacapa Courts Mixed-Use Project	City of Ventura.	Project involves construction of a four-story, mixed-use building with approximately 3,850 square feet of street-level commercial space; a 41-space, street-level parking garage; and 24 residential condominium units.	Environmental document approved February 2020. Not yet under construction.	An Initial Study/Mitigated Negative Declaration (February 2020) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Energy • Geology/Soils

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Noise • Population/Housing • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities/Service Systems • Wildfire
Thousand Oaks Boulevard Specific Plan	The Specific Plan covers an area of approximately 342 gross acres in the core of the City of Thousand Oaks; the Plan generally follows the boundaries of the Thousand Oaks Boulevard Business Improvement District and extends along Thousand Oaks Boulevard roughly from Conejo Boulevard/Moorpark Road in the west to Duesenberg Drive in the east.	The purpose of the Thousand Oaks Boulevard Specific Plan is to create a unique and identifiable commercial corridor for Thousand Oaks that is an economically viable, self-sustainable, and pedestrian-friendly destination.	Adopted November 2011, amended August 2016. Timing is categorized generally into short-term (0 to 3 years) and mid-term (3 to 7 years).	An EIR was prepared for the project but is unavailable online for review. Project issues listed on CEQAnet (May 2011) include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Energy • Geology/Soils • Greenhouse Gas Emissions • Hydrology/Water Quality • Hazards and Hazardous Materials • Land Use/Planning • Noise • Population/Housing • Public Services • Recreation • Utilities/Service Systems • Transportation • Tribal Cultural Resources • Growth • Cumulative Impacts

Project Name	Location	Project Description	Status	Potential Environmental Impacts
Project CI5682	Hillcrest Drive and The Oaks Mall, Thousand Oaks.	The project would convert existing Travel Lane #3 (outside lane) to Class IV bike lanes on Hillcrest Drive between Lynn Road and Moorpark Road in both directions. The project would also install a new sidewalk and curb ramps on the north side of Hillcrest Drive between Lynn Road and McCloud Avenue.	Not yet under construction.	Environmental document unavailable.
Project CI5390	Los Robles Greens Golf Course, Thousand Oaks.	Potential projects include tee box leveling, cart path refurbishment, netting repairs, equipment replacements, on-going irrigation system repairs/upgrades, and general building repairs and renovations throughout the coming 5 years.	Not yet under construction.	Environmental document unavailable.
Downtown Thousand Oaks Project	Eastern portion of the City of Thousand Oaks, approximately 0.7-mile east of the State Route 23 and US 101 interchange.	Redevelopment of downtown Thousand Oaks to create a pedestrian-oriented downtown that would include constructing new mixed-use residential, a hotel, commercial, office, and entertainment uses; partial reconstruction of the existing City Hall; development of a park plaza, outdoor amphitheater, new roadways; and reconfiguration of utilities.	Not yet under construction.	An EIR (March 2026) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Energy • Geology/Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Noise

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Population/Housing • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities • Wildfire
Rancho Road Sidewalk and Bike Lanes	The west side of Rancho Road between Thousand Oaks Boulevard and Haaland Drive in Thousand Oaks.	The project provided a direct path between Thousand Oaks Boulevard and the Thousand Oaks Transportation Center.	Completed 2022.	Environmental document unavailable.
Central Avenue Bike Lane Project (ST-5102)	Approximately 0.34-mile segment of Central Avenue between the City of Camarillo/Caltrans right of way to the south and the City of Camarillo/County of Ventura right of way to the north, located in Camarillo, CA.	Construct Class II bicycle lanes and a Class I bicycle and pedestrian path along approximately 0.34 mile of Central Avenue. The City of Camarillo received $5.3 million in grant funding for construction of the project.	Design/engineering to be completed in 2026. Construction anticipated from 2026 to 2028.	An Initial Study/Mitigated Negative Declaration (September 2025) was prepared. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Agriculture and Forestry Resources • Air Quality • Biological Resources • Cultural Resources • Energy • Geology/Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Noise • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities/Service Systems

Project Name	Location	Project Description	Status	Potential Environmental Impacts
IPD-412M(1), CUP-442, and TT-6123 for Camarillo Investment, LLC	Southwest corner of US 101 and Springville Drive, Camarillo, CA.	Develop 665,775 square feet consisting of two automotive dealerships, five industrial buildings, and a 4,625 square-foot car wash.	The Notice of Determination was approved in 2026.	An EIR was prepared for the project but is unavailable online for review.
Adolfo Road from Eastern Terminus to Camarillo Springs Road/US 101	City of Camarillo.	Extend Adolfo Road easterly to Camarillo Springs Rd/US 101 (two-lane undivided road).	Not yet under construction.	Environmental document unavailable.
Metrolink Undercrossing	City of Camarillo at North Lewis Road, adjacent to US 101.	Construct pedestrian tunnel at Metrolink station to improve access between two parking lots and improve train operations by utilizing both platforms. An SB 1 Transit Capital Grant was awarded to LOSSAN/VCTC for a large group of projects in the region, including both the Metrolink undercrossing and double-tracking west of Camarillo, which would increase the level of train service through the county.	Statutory Exemption (November 2023). Not yet under construction.	None.
Springville Bike Path Phase 1	City of Camarillo, adjacent to northbound US 101, connecting bikeways on Ponderosa Drive to Camarillo city limit near Central Avenue.	Construct bike path from Central Avenue to Springville Drive, approximately 1 mile.	Completed in 2024.	A Final Supplemental Environmental Impact Report (October 2020) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Agriculture and Forestry Resources • Air Quality • Biological Resources • Cultural Resources

Project Name	Location	Project Description	Status	Potential Environmental Impacts
				• Geology and Soils • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Minerals • Noise • Population/Housing • Public Services • Recreation • Transportation • Utilities/Service Systems
Springville Bike Path Phase 2	City of Camarillo, adjacent to northbound US 101 between Las Posas Road and Springville Drive.	Construct bike path from Las Posas Road to Springville Drive, approximately 1 mile.	Design/engineering to be completed in 2027/2028. Construction anticipated from 2029 to 2030.	A Final Supplemental Environmental Impact Report (October 2020) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Agriculture and Forestry Resources • Air Quality • Biological Resources • Cultural Resources • Geology/Soils • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Minerals • Noise • Population/Housing • Public Services • Recreation • Transportation • Utilities/Service Systems
Daily Drive/101 Freeway	City of Camarillo, Daily Drive between Calle La Roda and Rosewood Avenue.	Implementation of 2009 SSMP recommendation (existing sewer reaching design capacity) to	Completed.	Environmental document unavailable.

Project Name	Location	Project Description	Status	Potential Environmental Impacts
Sewer Improvements		design/construct 1,800 feet of 18-inch sewer pipeline along Daily Drive between Calle La Roda and Rosewood Avenue and an additional 1,000 feet of 24-inch sewer pipeline under US 101.		
Lennar at Cortona (Residential: RPD-195 /TT-5671M(3), Lennar Homes)	City of Camarillo, northwest corner of US 101 and Springville Drive.	Project involves 159 single family units on 22.87 acres (APN 157-0-020-220).	Under construction.	A Final Supplemental Environmental Impact Report (October 2020) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Agriculture and Forestry Resources • Air Quality • Biological Resources • Cultural Resources • Geology/Soils • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Mineral Resources • Noise • Population/Housing • Public Services • Recreation • Transportation • Utilities/Service Systems
T-5671-1 Rancho	City of Camarillo, southeast corner of Ponderosa Drive and Springville Drive.	Project involves 386 condominium units, 50 units mixed use rental, 163 rental apartments, 104 senior affordable apartments, and 122 single-family homes.	Under construction.	Environmental document unavailable.

Project Name	Location	Project Description	Status	Potential Environmental Impacts
Costco Wholesale (CPD-226M(5) and CUP-422)	431 W. Ventura Boulevard, Camarillo (northeast corner of Ventura Boulevard and Springville).	New 163,397-square-foot retail warehouse and free-standing fuel facility on about 20 acres. Construction of the 32-pump self-service gas station was completed in May 2026 and is currently in operation. Construction of the retail warehouse is projected to open in Fall 2026.	Gas station completed in May 2026. Retail warehouse under construction and projected to be completed in Fall 2026.	An Initial Study/Mitigated Negative Declaration (December 2023) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Energy • Geology/Soils • Greenhouse Gas Emissions • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Noise • Population/Housing • Public Services • Transportation • Tribal Cultural Resources • Utilities/Service Systems
Camarillo Hotel and Conference Center (CPD-246/CUP-384 T.M. Mian)	City of Camarillo, southeast corner of Ventura Boulevard and Las Posas Road.	Hotel & conference center site consisting of 280 rooms; 18,783-square-foot conference center, pre-function and two boardrooms; 10,450 square feet of retail space; 15,500 square feet of restaurant and parking.	Under construction.	A Draft Environmental Impact Report (October 2017) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Hazards and Hazardous Materials
US 101 Improvements Early Action Project (ST-5058)	City of Camarillo, US 101.	Coordinate with VCTC's US 101 Improvements Project to investigate possible early action projects in the city of Camarillo that can help	Not yet under construction.	Environmental document unavailable.

Project Name	Location	Project Description	Status	Potential Environmental Impacts
		reduce congestion on the freeway.		
Camarillo Ruiz Apartment Community (Residential: RPD-201)	City of Camarillo, southeast corner of Verdugo Way and Camino Ruiz.	High-density residential apartment community at the southeast corner of Verdugo Way and Camino Ruiz.	Under construction.	A Draft Environmental Impact Report (June 2020) was prepared for the project. Environmental resources that may potentially be impacted by the project include: • Aesthetics • Air Quality • Biological Resources • Cultural Resources • Geology/Soils • Greenhouse Gases • Hazards and Hazardous Materials • Hydrology/Water Quality • Land Use/Planning • Noise • Population/Housing • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities/Service Systems
IPD-391M(1) / CUP-423	City of Camarillo, southeastern Corner of Camino Carillo and Camino Ruiz.	Multi-tenant industrial warehouse building.	Not yet under construction.	Environmental document unavailable.
State Route 23 Pavement Rehabilitation Project	In Ventura County, from US 101 to SR 118.	The SR 23 project replaced pavement from US 101 to SR 118, providing a service life of 40 years. The on- and off-ramps, connectors, and adjacent shoulders were also rehabilitated, and slabs were replaced along the inner lane in both	Completed in fall 2023.	None. Notice of Exemption filed on February 16, 2023.

Project Name	Location	Project Description	Status	Potential Environmental Impacts
		directions where needed. Existing curbs ramps were upgraded where necessary (36 locations) to comply with the Americans with Disabilities Act, and approach slabs and bridge rails were replaced at select locations (five locations).		

Sources: Caltrans 2026c; California Governor's Office of Land Use and Climate Innovation 2006, 2007, 2008a, 2008b, 2010, 2011, 2013, 2023; City of Camarillo 2017, 2020a, 2020b, 2023, 2025, 2026; City of Oxnard 2001, 2019, 2021b, 2024; City of Thousand Oaks 2026; City of Ventura 2020, 2023a, 2023b, 2024; Ventura County Transportation Commission 2023.
APN = Assessor's Parcel Number; LOSSAN = Los Angeles – San Diego – San Luis Obispo Rail Corridor Agency; SSMP = Sewer System Management Plan

3.6.4.1 Aesthetics

Resource Study Area and Current Conditions

The RSA for cumulative impacts to visual and aesthetic resources is the four visual assessment units along the project corridor, as described in Section 2.2.11, *Visual/Aesthetics*, which is considered to be the area visible by viewers from, and adjacent to, the limits of the US 101 Improvement Project.

The project is located on US 101 in Ventura County, California, between SR 23 and SR 33. The existing highway corridor is dominated by travel lanes, on- and off-ramps, signage, guard rails, noise walls, and other transportation-related elements. Land uses within the project corridor consist primarily of urban residential, commercial, and industrial uses, as well as agricultural land uses and natural open spaces associated with the Santa Clara River and the Conejo Grade. Views of the highway from adjacent land uses are generally blocked or obscured by existing vegetation and land cover (e.g., buildings, fences, signs, walls). Approximately 3.5 miles of the project limits along US 101 lie within the coastal zone, beginning at the northern terminus of the project and extending approximately to the Arundell Avenue/Channel Drive overcrossing. Scenic views of San Buenaventura State Beach, Ventura Beach, the Ventura Pier, and the ocean may be visible from points along US 101 within the project corridor. Natural elements such as adjacent hillsides and distant mountains are visible outside of the highway corridor along the Conejo Grade and may be considered scenic. There are no officially designated State Scenic Highways within any portion of the project area or vicinity; however, the US 101 is eligible for designation as a California State Scenic Highway within the project limits. Overall, the project is located within an existing transportation facility in primarily an urbanized environment. The existing cumulative condition for aesthetics within the RSA is considered moderately acute.

Project Impacts

Temporary visual impacts are anticipated during the construction period of the project. Temporary impacts will include the presence of construction equipment and materials, construction staging areas, temporary roadside barriers, and construction and detour signage within the area of the project limits, as well as construction activities, such as truck hauling, excavation activity, and the removal of existing mature landscape.

Temporary impacts on visual resources under Alternatives 2 and 3 will be minimized through implementation of measures **VIA-1** through **VIA-6**, identified in Section 2.2.11, *Visual/Aesthetics*, which will include implementation of a Project Corridor Aesthetics Master Plan, and ensuring design elements comply with the guidelines of the County of Ventura, City of Ventura, City of Oxnard, City of Camarillo, and City of Thousand Oaks aesthetic recommendations.

Alternatives 2 and 3 would add visual elements to the existing highway corridor including new pavement, lane striping, median dividers, and roadway shoulders. Alternatives 2 and 3 would also add new noise walls, modify existing bridge structures, and implement one new bridge structure to accommodate the new HOV/Express Bus

Lane in each direction. These highway elements are incremental visual changes and would be compatible with the existing visual quality and character of the highway.

Within the coastal zone segment, most of the planned modifications within this segment of the freeway would involve restriping and expanding the existing lanes toward the center median, leaving the shoulder areas outside the current roadway unchanged. Only about 1 mile of this segment, from near the Ventura Pier parking lot to the southern boundary of San Buenaventura State Beach, offers direct shoreline views, including beaches, recreation areas, and ocean vistas. While the addition of lanes will introduce more human-made elements, the primary scenic features of the coastal zone to the west would remain unaffected. Because most modifications occur within the existing roadway, views from beach areas east toward US 101 would experience few changes. Overall, the visual impact on travelers and nearby coastal areas would be minimal, resulting in a neutral effect on the coastal zone's visual environment.

Changes as a result of the project, under Alternatives 2 and 3, would be consistent with the transportation nature and views from the highways, and would not alter the existing visual character and quality of the project limits. The overall visual impacts of the project under Alternatives 2 and 3 would be moderately low for both highway users and highway neighbors because the change to the visual resources and views are minor and consistent with the existing setting. The project would not result in cumulatively considerable impacts to visual resources.

Potential Cumulative Impacts

Several of the foreseeable projects listed in Table 3.6.4-2 appear to occur within the project's viewshed. Future planned transportation projects, such as the Central Avenue Bike Lane and the California Street Northbound Off-Ramp Relocation Project (as described in Table 3.6.4-2), are located within the vicinity of the US 101 Improvement Project. Both of these projects would contribute to the corridor's visual changes. However, similar to the US 101 Improvement Project, the two planned transportation projects would be required to incorporate measures to lessen the visual impacts and would be required to comply with local municipal and Caltrans design elements and landscaping guidelines.

The US 101 Improvement Project would not result in cumulatively considerable impacts to visual resources. As previously discussed, the project would implement measures **VIA-1** through **VIA-6**, which are expected to reduce or avoid temporary visual impacts during the construction phase and therefore, its contribution to the cumulative visual condition. The project's incremental visual changes would be compatible with the existing visual quality and character of the highway. The US 101 Improvement Project, when added with past, current, and probable future projects, is not expected to significantly alter the visual landscape, degrade the visual quality of the project corridor, or negatively impact highway users and highway neighbors. Therefore, construction and operation of the US 101 Improvement Project, when combined with impacts to aesthetic resources generated by past, current, and probable future projects, would not result in a significant cumulative impact, and the incremental contribution of the US 101

Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.2 Agricultural Resources

Resource Study Area and Current Conditions

The RSA for cumulative impacts to agricultural resources is Ventura County. Agriculture is an activity of economic and cultural significance for Ventura County. Ventura County is currently experiencing a decrease in acreage of agricultural land. Between 2004 and 2016, land designated as Prime Farmland decreased by 6,216 acres, or 13.17 percent, and land designated as Farmland of Statewide Importance decreased by 1,987 acres, or 5.68 percent (County of Ventura 2020). In the US 101 Improvement Project area, 87,148 acres of land are irrigated, with an average farm size of 131 acres. Approximately 2,305 acres of farmland within the US 101 Improvement Project area are currently in Williamson Act contracts. Therefore, the existing cumulative condition for agricultural resources within the RSA is acute.

Project Impacts

The US 101 Improvement Project would have temporary and permanent impacts on Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Williamson Act lands. The temporary use of parcels required for construction of the Build Alternatives would not inhibit use of the remaining portion of the parcels for agricultural purposes during construction or in the future. Any areas disturbed by TCEs would be restored to pre-project conditions.

Although Caltrans has not adopted thresholds of significance, the project's impacts on Important Farmlands with direct conversions to non-farmland use by the US 101 Improvement Project are mostly along the edge of roadways or surrounded by existing urban uses (e.g., commercial or residential). The affected acreage on parcels zoned for agricultural use would be small compared to the overall size of the parcels. The farmland conversion would not conflict with existing zoning for agricultural use because the Build Alternatives would not inhibit use of the remaining portion of the parcels for agricultural purposes. The project's impact area on Important Farmlands is below the significant farmland impact threshold per the Ventura County Initial Study Assessment Guidelines for Important Farmland. No agricultural parcels would be bisected by the project during the operation phase.

Potential Cumulative Impacts

The Central Avenue Bike Lane, as described in Table 3.6.4-2, is located within the vicinity of the US 101 Improvement Project. According to the IS/MND for the Central Avenue Bike Lane Project, a TCE would be required during construction from a parcel designated as Farmland of Statewide Importance. The Central Avenue Bike Lane Project IS/MND identified the TCE impact as a less than significant impact on agricultural resources because only a sliver of the parcel would be impacted, and the project would not inhibit overall agricultural uses elsewhere on the property. The River Park Specific Plan, described in Table 3.6.4-2, includes 155 acres of agricultural land

designated as Prime Farmland in the southern portion of the Specific Plan Area. Implementation of the River Park Specific Plan would convert this agricultural land to urban use; however, per the EIR for the River Park Specific Plan, this area has been designated for urban use since 1986 in the City's General Plan. Implementation of the River Park Specific Plan would have an unavoidable significant impact on agricultural resources, per the River Park Specific Plan EIR, but it would be consistent with the City's General Plan. Many of the other projects listed in Table 3.6.4-2, such as the Anacapa Courts Mixed-Use Project and the Rio Urbana Project, are infill development projects and would not contribute to the cumulative decline in agricultural resources within the RSA.

As previously discussed, farmland impacts under the Build Alternatives for the US 101 Improvement Project would be small. The farmland conversion area does not meet the County's significant farmland impact threshold and would not conflict with existing zoning for agricultural use. If other planned projects, such as those listed in Table 3.6.4-2, were to result in impacts to agricultural resources above the County's significant farmland impact threshold, those projects would be required to implement mitigation measures. Therefore, construction and operation of the US 101 Improvement Project, when combined with impacts to agricultural resources generated by past, current, and probable future projects, would not result in a significant cumulative impact, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.3 Air Quality

Resource Study Area and Current Conditions

The RSA for cumulative impacts to air quality is the South Central Coast Air Basin (SCCAB). The SCCAB encompasses San Luis Obispo, Santa Barbara, and Ventura Counties. The SCCAB is designated as nonattainment for state and federal ozone (O_3) standards and nonattainment for state particulate matter standards. Regional air quality is influenced predominantly by mobile-source emissions associated with freeway travel, including emissions of reactive organic gases (ROG), nitrogen oxides (NO_X), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$).

The US 101 Improvement Project is listed in SCAG's 2024-2050 RTP/SCS as RTP ID 5160001. SCAG's 2024–2050 RTP/SCS Final Program Environmental Impact Report (PEIR) (SCAG 2023), which include the project as part of its build alternative, assessed the cumulative impacts of the Regional Transportation Plan/Sustainability Communities Strategy. These documents, including the air quality cumulative impact analysis contained in Section 3.3 of the PEIR, are applicable to the US 101 Improvement Project and are hereby incorporated by reference into this Environmental Impact Report/Environmental Assessment and can be found on SCAG's website at: https://scag.ca.gov/.

The SCAG 2024–2050 RTP/SCS PEIR evaluates the cumulative operational emissions associated with regional transportation improvements and land use growth and concludes that long-term regional air quality impacts would remain significant and unavoidable, even with implementation of transportation system management strategies, cleaner vehicle technologies, and adopted air quality plans. The SCAG PEIR specifically identifies increased VMT as a key contributor to continued emissions of O_3 precursors and particulate matter at the regional level. Therefore, the existing cumulative condition for air quality within the RSA is acute.

Project Impacts

Consistent with the RTP/SCS growth assumptions, the US 101 Improvement Project would contribute to incremental operational emissions that add to the acute cumulative condition of air quality within the RSA. Caltrans will implement feasible strategies to reduce criteria air pollutant emissions during construction of the US 101 Improvement Project. The US 101 Improvement Project would incorporate measures **AQ-1** through **AQ-4**, which would help reduce construction emissions to avoid and/or minimize impacts related to air quality.

The regional emission analyses for the US 101 Improvement Project indicates PM_{10} emissions will increase under all future years for the No-Build Alternative and build alternatives compared to the Existing (2018) conditions. The increase in total regional particulate matter emissions is due to the re-entrained road dust that is directly proportional to the increase in VMT. Operational impacts related to the increase in VMT would be addressed through implementation of measure **VMT-1**. However, due to the uncertainty of funding and the actual VMT reductions for these VMT reduction strategies, there is a potential that VMT impacts would remain significant and unavoidable. Therefore, the US 101 Improvement Project's air quality impacts would remain significant and unavoidable under CEQA.

Potential Cumulative Impacts

As stated in the SCAG 2024–2050 RTP/SCS PEIR, which is relevant to the cumulative condition and conclusions for the US 101 Improvement Project:

At the regional level, construction criteria pollutant emissions vary year to year and may be similar to existing or greater or less, often depending on the economy. At the regional level, operational criteria pollutant emissions would be mostly reduced compared to existing conditions. In years 2030, 2040, and 2050, when compared to existing conditions, on-road mobile source emissions would generally decrease, with the exception of PM10 emissions in Riverside County, despite increasing traffic. On-road mobile source particulate matter emissions would remain the same or decrease from existing conditions in the other counties. Within the SCAB (which is likely indicative of the region as a whole), SCAQMD indicates that total pollutant emissions are being reduced through at least 2050, except for SOx and PM2.5, which are expected to remain approximately the same. [Page 3.3-48 of the PEIR].

Because mobile source emissions of particulate matter may increase (on-road mobile source PM10 emissions would increase in Imperial and Riverside Counties), largely as a result of increased total VMT, the Plan could contribute to an air quality violation. Further, there is the potential for individual projects to exceed local standards during construction and/or operation for several pollutants. Therefore, this impact is considered to be significant. [Page 3.3-59 of the PEIR].

Per the SCAG PEIR, overall, air quality impacts for the region would be significant and unavoidable. Any increase in air pollutant emissions would result in a cumulatively considerable impact. Therefore, the US 101 Improvement Project's air quality impacts, when added with other past, current, and probable future projects, would be cumulatively considerable and would contribute to already identified significant cumulative air quality impacts under CEQA.

3.6.4.4 Biological Resources

Resource Study Area and Current Conditions

The RSA for cumulative impacts to biological resources is the project limits for the US 101 Improvement Project plus a 0.5-mile buffer. The biological study area and jurisdictional areas for the US 101 Improvement Project extends approximately 250 feet and 100 feet from the project limits, respectively. However, the cumulative analysis takes a more conservative approach by analyzing potentially cumulatively considerable impacts within half a mile from the project limits.

The RSA occurs in the South Coast subregion of the Southwestern California region and within the California Floristic Province. The natural vegetation of the subregion consists primarily of chaparral, sage scrub, annual grasslands, woodland, riparian scrub, and forest. The RSA is composed primarily of highly developed lands associated with the existing right-of-way, with agricultural lands throughout the Oxnard Plain and Santa Clara River Valley and pockets of natural habitat primarily in the eastern half of the project, especially in the Conejo Grade. The US 101 corridor runs alongside primarily residential, commercial, industrial, and recreational developments. Naturally growing upland habitat is primarily confined to the Conejo Grade and to pockets of open space in the eastern half of the project, where less development is present. Historically, the Conejo Grade, as well as the Santa Clara River and other major drainages, supported substantial regional wildlife movement within the RSA. However, development of US 101 bisecting these areas, as well as development of the vast majority of the floodplain and lowlands, has severely limited the amount of regional movement throughout the RSA. Therefore, the existing cumulative condition for biological resources in the RSA is not acute.

Project Impacts

Temporary direct and indirect impacts may be caused by construction activities (e.g., dust, increased fire risk, chemical spills, sedimentation, littering) on sensitive natural communities, wetlands, and plant and animal species that are adjacent to the US 101 Improvement Project limits of disturbance, which could lead to temporary degradation of

those communities and species. However, these impacts are expected to be greatly reduced with implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*), **AS-1** through **AS-4** (Section 2.4.4, *Animal Species*), **PS-1** through **PS-5** (Section 2.4.3, *Plant Species*), **TE-1** through **TE-9** and **TE-11** (Section 2.4.5, *Threatened and Endangered Species*), **WQ-1** and **WQ-5** (Section 2.4.2, *Water Quality and Stormwater Runoff*), and **WET-1** and **WET-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*).

Permanent impacts to sensitive natural communities and jurisdictional resources, including riparian habitats and wetlands, would be replaced at a minimum ratio of 1:1 (mitigation measures **NC-13**, Section 2.4.1, *Natural Communities* and **WET-3**, Section 2.4.2, *Wetlands and Other Waters*). Permanent impacts on plant and animal species would occur from construction activities but would be avoided or minimized with implementation of measures **TE-4**, and **AS-5** through **AS-15** (see Section 2.4.4, *Animal Species*)

Widening of the US 101 through the Conejo Grade will further increase the barrier effect the highway has on habitat connectivity and wildlife movement in this linkage. In addition, some functional loss would occur with widening of the existing Conejo Grade culvert (i.e., loss of structure openness), which is the only structure in the Conejo Grade that may facilitate safe wildlife movement across the highway. Because connectivity in this linkage is already highly constrained by the existing US 101, these impacts would be substantially adverse. Measures **TE-11** (Section 2.4.5, *Threatened and Endangered Species*) and **NC-14** through **NC-24** (Section 2.4.1, *Natural Communities*) would be implemented to reduce impacts on wildlife movement corridors.

Potential Cumulative Impacts

Several planned projects listed in Table 3.6.4-2 would have less than significant impacts to biological resources with mitigation incorporated, including the River Park Specific Plan and Downtown Thousand Oaks Project. The River Park Specific Plan covers an area of approximately 700-acre, located north of US 101 between Vineyard Avenue (SR 232) and the Santa Clara River. The Final EIR for the River Park Specific Plan included measures to mitigate potential impacts to native bird species nesting during construction, new lighting near natural habitat in the Santa Clara River, and the use of invasive non-native plant species in landscaping. The mitigation measures included preconstruction nesting bird surveys, lighting to be designed and oriented to prevent spillage or glare adjacent to the Santa Clara River, and landscaping plans and provisions to prevent invasive plant species from invading into native plant communities. Per the River Park Specific Plan Final EIR, implementation of the mitigation measures would reduce impacts to less than significant and there would be no unavoidable significant impacts to biological resources. The Downtown Thousand Oaks Project would entail redevelopment of downtown Thousand Oaks to be pedestrian-oriented and would include mixed-use development and partial reconstruction of City Hall. Mitigation measures identified in the Downtown Thousand Oaks Project Draft EIR include pre-construction surveys for birds and Crotch’s bumble bee, special-status bat species habitat assessment and emergence surveys, and compliance with a tree protection

plan. Implementation of these mitigation measures would reduce impacts to biological resources to less than significant. Similar to the River Park Specific Plan and Downtown Thousand Oaks Project, other projects listed in Table 3.6.4-2 would be required to implement avoidance, minimization, and/or mitigation measures to address impacts on biological resources.

As previously discussed, the US 101 Improvement Project would include avoidance, minimization and mitigation measures to address impacts on biological resources. Impacts to sensitive natural communities and jurisdictional resources, including riparian habitats and wetlands, would be replaced at a minimum ratio of 1:1 (mitigation measures **NC-13**, Section 2.4.1, *Natural Communities* and **WET-3**, Section 2.4.2, *Wetlands and Other Waters*). Therefore, the US 101 Improvement Project, when added to other past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on biological resources, and the incremental contribution of the Build Alternatives to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.5 Cultural Resources

Resource Study Area and Current Conditions

The RSA for cumulative impacts on cultural resources is the Area of Potential Effects (APE) boundary that was utilized to analyze impacts to cultural resources for the US 101 Improvement Project. The APE is generally limited to areas associated with ground-disturbing activities. The APE includes a maximum height of 130-feet above the existing grade based on proposed construction equipment to be used for pile driving and 120-feet below grade for pile work at certain bridge-widening locations.

US 101 is a historically important travel route that has undergone successive phases of development and modification beginning in the early 20th century and continuing to the present. Past and ongoing transportation and urban development projects within the corridor have resulted in disturbance, treatment, or loss of cultural resources, which have been addressed on a project-by-project basis through avoidance, documentation, data recovery, and other mitigation measures. Despite extensive prior disturbance, cultural resources continue to be encountered within the US 101 corridor due to the depth, complexity, and long duration of human occupation and use. The buried site sensitivity analysis conducted for the US 101 Improvement Project indicates that 12,392 acres (64 percent) of the RSA have sediments with the potential to contain buried archaeological sites. The existing cumulative condition for cultural resources within the RSA is considered moderately acute.

Project Impacts

There are 11 historical resources within the APE: one archaeological site and ten historic built-environment properties. The archaeological site, CA-VEN-223, would be protected with the implementation of avoidance and minimization measures **CR-3** through **CR-4** (Section 2.2.12, *Cultural Resources*), which would include establishing an environmentally sensitive area (ESA) and archaeological monitoring of ground

disturbance. In addition, it is possible previously undocumented cultural materials or previously undocumented human remains could be unearthed during site preparation, grading, or excavation activities for the project (Alternatives 2 and 3). Those potential effects would be avoided or minimized through standard project measures **CR-1** and **CR-2**. The US 101 Improvement Project would include mitigation measures **CR-5**, **CR-6**, and/or **CR-7** to reduce impacts to less than significant for three historical resources: the Pierpont Inn District, Main Building, and Mattie Gleichmann House. Six additional historical resources would have a less than significant finding because the changes are small enough that they would not result in a substantial adverse change in the resources' significance.

The US 101 Improvement Project would have a significant impact on one historical resource, the Adolfo Camarillo Heritage Grove, due to project impacts on eucalyptus trees that would result in the resource's loss of historical significance. Mitigation measures will be forthcoming, but measure **CR-MM-1** (Section 2.2.12, *Cultural Resources*) provides suggested measures to reduce impacts and includes (but is not limited to) tree replacement, preparation of an arborist report, update of the National Register of Historic Places nomination form for the adjacent Camarillo Ranch property, and/or interpretive materials. However, even after implementation of mitigation, impacts to the Adolfo Camarillo Heritage Grove would remain significant and unavoidable. While the resource would not be completely eliminated, the project would destroy an important example of early California history due to a loss of its ability to convey its historical significance.

Potential Cumulative Impacts

According to the IS/MND for the Anacapa Courts Mixed-Use Project, construction impacts associated with the project have the potential to result in significant impacts to cultural resources. The IS/MND for the Central Avenue Bike Lane Project also determined the potential for significant impacts to cultural resources during construction. However, the Anacapa Courts Mixed-Use Project and Central Avenue Bike Lane Project would implement mitigation measures to reduce impacts to a less than significant level. These measures would include preservation in place, archaeological monitoring, and guidelines/procedures in the event of the discovery of human remains. Additionally, if other projects listed in Table 3.6.4-2 were determined to result in potentially significant impacts related to cultural resources, those projects would also be required to implement mitigation measures.

As previously discussed, the US 101 Improvement Project would have significant and unavoidable impacts on the Adolfo Camarillo Heritage Grove even after mitigation is implemented because there would still be a loss in the historical significance of the resource. Therefore, the US 101 Improvement Project, when added with other past, current, and reasonably foreseeable projects, would result in a significant cumulative impact on cultural resources, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would be cumulatively considerable under CEQA.

3.6.4.6 Energy

Resource Study Area and Current Conditions

The RSA for cumulative impacts on energy is the State of California. Transportation energy is the energy consumed to move people and goods from place to place. Energy consumption in California continues to be dominated by growth in passenger vehicles, where almost 40 percent of all energy consumed in the state is used for transportation and is the largest sector in energy consumption(Caltrans 2022). California is the largest consumer of transportation fuels in the nation; more than 24.5 billion gallons of gasoline, diesel, and jet fuels are consumed each year. California's population is estimated to exceed 45 million by 2053 (California Department of Finance, 2021), which would result in substantial increases in transportation fuel demand for the state. The existing cumulative condition for energy within the RSA is considered moderately acute.

Project Impacts

Short-term construction impacts include energy consumed by on and off-road vehicles and construction equipment. As discussed in Section 2.3.8, *Energy*, measure **EN-1** would be implemented to help conserve energy. This would include using recycled materials—including removed asphalt concrete pavement—where feasible during construction. Measure **EN-1** would be consistent with State and local policies to reduce energy consumption. Measure **TR-1** (Section 2.2.10, *Transportation*) would require a Transportation Management Plan (TMP) to be developed for the US 101 Improvement Project, which would include temporary traffic control devices that would reduce gasoline consumption by limiting traffic congestion and reducing the length of detours.

Long-term changes in energy use are due to the changes in volumes, speeds, and fuel economy of vehicles traveling in the region. Under the US 101 Improvement Project, there would be direct energy use from vehicles operating on regional roadways. Direct energy consumption under the US 101 Improvement Project would decrease as compared to Existing (2018) conditions. Regionally, it is expected that less fuel-efficient vehicles would be replaced by later-model, more fuel-efficient vehicles over time. Additionally, the travel time improvements achieved by reduced congestion under either build alternative is anticipated to enhance operational productivity and associated energy efficiency. With implementation of avoidance and minimization measure **EN-2** (Section 2.3.8, *Energy*), light fixtures and traffic signals will be replaced or installed with highly efficient light-emitting diodes.

Potential Cumulative Impacts

Similar to the US 101 Improvement Project, projects listed in Table 3.6.4-2 would also require energy use. The Central Avenue Bike Lane Project would require energy use during construction for construction vehicles, worker vehicles and equipment that would require the use of fuel (gasoline and diesel) and electricity to operate. Energy use during the construction phase for the Central Avenue Bike Lane Project would be temporary and the project would be required to comply with CARB regulations and the County's Air Pollution Control District guidelines. Energy use for the Central Avenue Bike Lane Project during the operation phase would pertain to maintenance of the

roadway and for existing street lighting and traffic signals along Central Avenue. Development projects listed in Table 3.6.4-2, including the Anacapa Courts Mixed-Use Project, Rio Urbana Project, and Downtown Thousand Oaks Project, would also be required to comply with California Building Code Title 24 which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources. No projects listed in Table 3.6.4-2 would require mitigation measures to minimize impacts on energy use.

The US 101 Improvement Project would improve traffic flow during peak travel demand periods. As discussed in Section 2.2.10, *Transportation*, both Alternative 2 and Alternative 3 would result in operational improvements in average travel time, traffic density, vehicle-hours of delay, and travel speed compared to the No-Build Alternative in 2040 and 2060. As vehicles traveling at free-flow speeds are more fuel efficient, operational improvements that smooth traffic flow and decrease traffic congestion, such as those of the build alternatives, improve vehicle fuel economies. This in turn results in a more efficient use of energy. Ultimately, the travel time improvements achieved by reduced congestion under either build alternative will enhance operational productivity and associated energy efficiency. Therefore, direct energy use associated with project operation would not result in wasteful, inefficient, or unnecessary consumption of energy. Therefore, the US 101 Improvement Project, when added with other past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on energy, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.7 Geology and Soils

Resource Study Area and Current Conditions

The RSA for cumulative impacts on geology and soils is the regional and local geology. The US 101 Improvement Project is within a seismically active region subject to future moderate to strong seismic ground shaking and potential ground surface rupture due to active and potentially active faults that traverse the US 101 Improvement Project corridor. The liquefaction potential can also be considered high in some areas along the project alignment where relatively loose alluvial soil below groundwater is present. Additionally, expansive soils have caused considerable damage in Ventura County, especially in the city of Thousand Oaks. The US 101 Improvement Project corridor is also within the steep grade of the Conejo Pass, which has medium to high landslide susceptibility.

Geologic mapping and geotechnical studies indicate the US 101 Improvement Project footprint is underlain, in part, by geologic units with high paleontological sensitivity. In addition, the US 101 Improvement Project area is also within the Coastal Zone boundary and is underlain by paralic deposits of the Sea Cliff marine terrace. The paleontological importance of the paralic deposits of the Sea Cliff marine terrace is classified in the County's Coastal Zoning Ordinance as having moderate paleontological

importance. The existing cumulative condition for geology and soils within the RSA is considered moderately acute.

Project Impacts

Construction activities for the US 101 Improvement Project, such as grading and cut-and-fill slopes, would disturb soil and alter existing landforms. Temporary impacts would include soil compaction and an increased possibility of soil erosion. The US 101 Improvement Project would include implementation of measures **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*) to reduce potential erosion impacts during construction and operation.

Because there is potential for liquefaction at the US 101 Improvement Project area, there may be associated liquefaction-induced seismic settlement which may result in settlement of the bridge and proposed retaining wall structures. There is potential for moderate to strong seismic ground shaking and ground surface fault ruptures within the US 101 Improvement Project alignment. The potential for expansive soils, liquefaction effects on structures, landslides and slope instability, liquefaction, seismic settlement, and lateral spreading will be further investigated during the final design phase of the US 101 Improvement Project (measures **GEO-1** and **GEO-2** [Section 2.3.3, *Geology and Soils*]). The US 101 Improvement Project will also be designed and constructed in accordance with the recommendations from the geotechnical report and foundation reports (measure **GEO-3** [Section 2.3.3, *Geology and Soils*]). The US 101 Improvement Project would not exacerbate existing geological conditions.

Construction of the US 101 Improvement Project could potentially directly affect paleontological resources within the limits of disturbance. A Paleontological Mitigation Plan will be prepared for the project during final design, as described in mitigation measure **PAL-1** (Section 2.3.4, *Paleontology*) to minimize impacts on paleontological resources are reduced in the unlikely event that they are discovered during the construction phase.

Potential Cumulative Impacts

Similar to the US 101 Improvement Project, all of the projects listed in Table 3.6.4-2 would be required to be designed and built in accordance with current standards, including seismic design standards, and would include consideration of liquefaction potential, settlement, landslide, and scour in the design of foundation and retaining systems, and structure/facilities within or nearby landslide prone areas. In addition, projects listed in Table 3.6.4-2 would also be required to implement mitigation measures if there is a potential for the project to encounter paleontological resources, such as the Anacapa Courts Mixed-Use Project. The IS/MND for the Anacapa Courts Mixed-Use Project had identified potential for significant impacts to paleontological resources and would implement mitigation in the form of paleontological monitoring during construction to reduce impacts to less than significant.

Therefore, the US 101 Improvement Project, when added with other past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on

geology, soils, or paleontological resources, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.8 Greenhouse Gas Emissions

Greenhouse Gas analysis is, by its nature, cumulative. No individual project is of sufficient size to be the sole reason for climate change. Instead, climate change is the result of millions of activities that emit greenhouse gases. The analysis of the project's greenhouse gas emissions is within the context of statewide efforts to minimize the impacts of climate change. See Section 3.3, *Climate Change*, for the discussion of cumulative impacts and GHG measures for the US 101 Improvement Project.

3.6.4.9 Hazards and Hazardous Materials

Resource Study Area and Current Conditions

The RSA for cumulative impacts on hazards and hazardous materials is the project limits for the US 101 Improvement Project and adjacent areas. Impacts related to hazards and hazardous materials would generally be a concern for properties located immediately adjacent to the project limits.

The Phase 1 Environmental Site Assessment (ESA)/Initial Site Assessment (ISA) (April 2021) prepared for the US 101 Improvement Project (Caltrans 2021) identified 16 hazardous material release sites located within and adjacent to the project limits, as listed in Table 2.3.5-1 and shown in Figure 2.3.5-1. These sites are known to have soil and/or groundwater contamination. Two of these sites are collectively known as the TFX Aviation Facility and are undergoing groundwater remediation activities. Although the groundwater contamination plume from the TFX Aviation Facility had migrated beneath the project limits, the project is not expected to encounter groundwater contamination because construction within this area would only require minimal excavation activities. The remaining 14 sites are either up-gradient, down-gradient, or cross-gradient from the project site, but do not extend into the US 101 corridor right of way, proposed property acquisitions, or TCE areas. Taking into consideration the environmental history of the sites, their regulatory status, and their location in relation to the proposed project, the likelihood for the proposed project to be affected by these sites is considered low. The existing cumulative condition for hazards and hazardous materials within the RSA is considered moderately acute.

Project Impacts

As discussed above and in Section 2.3.5, *Hazardous Waste/Materials*, there are 16 hazardous material release sites within and adjacent to the project limits. These sites were evaluated and found to pose a low risk to construction activities. However, construction could come across other potentially hazardous materials, including:

- Asbestos-containing materials or lead-based paint in buildings or bridge structures

- Aerially deposited lead in soil within Caltrans right-of-way
- Traffic striping or pavement markings that may contain lead
- Soil or groundwater contamination from historical oil wells
- Treated wood used in wooden guardrails or roadway sign posts
- Pesticides or herbicides in soils from agricultural uses
- Use of hazardous materials such as fuels, oils, grease, solvents, and paint and generation of hazardous waste during construction
- Previously unknown or unexpected contamination

During the Plans, Specifications, and Estimates phase, hazardous materials sampling activities would be conducted to determine the presence or absence of contaminants (measures **HW-4** through **HW-7** and **HW-9**).

If any hazardous materials or waste are encountered during construction, they would be safely managed and disposed of following strict federal, state, and local laws. These rules are designed to protect construction workers, nearby communities, and the environment. Relevant agencies include environmental protection authorities, transportation agencies, and local fire and hazardous materials departments.

In addition, specific safety and environmental protection measures identified in this report (measures **WQ-3**, **HW-1** through **HW-3**, **HW-8**, and **HW-10**) would be implemented during construction to reduce risks. These measures include procedures for safely handling contaminated materials, responding to spills, and preventing pollutants from entering waterways.

Once the project is completed and in operation, routine maintenance activities—such as repaving or repainting roadway markings—would continue to follow all applicable regulations for handling and disposing of potentially hazardous materials.

Potential Cumulative Impacts

Several planned projects listed in Table 3.6.4-2 would have less than significant impacts associated with hazards and hazardous materials with mitigation incorporated, including the following projects within the RSA: River Park Specific Plan, Springville Bike Path Phase 1 and Phase 2, Lennar at Cortona, Costco, and Camarillo Hotel and Conference Center. All of these projects had identified mitigation measures pertaining to further site investigation, such as a Phase I or Phase II Environmental Site Assessment, to confirm absence or presence of site contamination to determine remediation activities, proper handling and disposal requirements. The EIR for the River Park Specific Plan identified the potential need for further site investigation pertaining to abandoned oil wells, sumps, and oil fields. The EIR for the River Park Specific Plan also identified the potential for

buildings to contain asbestos and lead-based paint. Construction of the 32-pump self-service gas station for Costco in Camarillo was completed in May 2026. Although the gas station is currently in operation, construction of the retail warehouse is projected to open in Fall 2026. The IS/MND for the Costco project had identified a low potential for the site to contain contaminated soils from historic farming activities, such as pesticides, herbicides, and farm chemicals, as well as asbestos from irrigation lines and a standpipe. Mitigation measures identified by the IS/MND for the Costco project required soil sampling for farm-related chemicals and asbestos. Other mitigation measures required by the IS/MND for Costco included obtaining approval from the City for all building plans and any electronic equipment to be operated onsite which might interfere with airport operations. The EIR for the Camarillo Hotel and Conference Center required soil sampling activities for organochlorine pesticides prior to issuance of grading permits for the project.

The US 101 Improvement Project would contribute incrementally to the use and presence of hazardous materials in the cumulative setting, primarily during construction. However, similar to the projects listed in Table 3.6.4-2, the US 101 Improvement Project would be required to comply with applicable regulations, implementation of standard hazardous materials handling and spill prevention measures, and adherence to roadway and emergency response design standards. Therefore, the US 101 Improvement Project, when added with other past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact associated with hazards or hazardous materials, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.10 Hydrology and Water Quality

Resource Study Area and Current Conditions

The RSA for cumulative impacts on hydrology and water quality is the Buenaventura, Calleguas, Oxnard, Santa Clara – Calleguas, and Ventura River Hydrologic Units to account for the US 101 corridor and downstream drainage systems and receiving waters that collect stormwater runoff from the project area.

The US 101 Improvement Project crosses 16 floodplains, including 100-year floodplains. There are also seven impaired water bodies that would receive direct discharges from the project: Sanjon Barranca Creek, Arundell Barranca, Santa Clara River Reach 1 (Estuary to Highway 101 Bridge), Calleguas Creek Reach 5, Calleguas Creek Reach 6, Calleguas Creek Reach 9B, Calleguas Creek Reach 13. The existing cumulative condition for hydrology and water quality within the RSA is considered moderately acute.

Project Impacts

Potential impacts on hydrology and water quality under the US 101 Improvement Project are discussed below.

Hydrology

Construction activities would occur within the 1 percent (100-year floodplain) and 0.2 percent (500-year floodplain) annual chance flood hazard zones. During construction, there would be temporary effects in these flood-prone areas, particularly at locations where the highway crosses drainage channels. As specified in measure **HYD-1** (Section 2.3.1, *Hydrology and Floodplain*), to the maximum extent possible, construction activities would occur during the dry season. In the event of heavy rain conditions, the construction site manager would move all construction equipment outside of the 1 percent Annual Chance Special Flood Hazard Area Zones within the project area.

Alternatives 2 and 3 propose highway improvements that would require encroachments within 100-year floodplains in the project area as part of the project improvements. The proposed encroachments would not result in substantial impacts on the natural and beneficial floodplain values or substantial change in flood risk or damage. Once construction is completed, the project would not change the base flood elevation or cause the redirection or impediment of flood flows. With implementation of measure **HYD-2** (Section 2.3.1, *Hydrology and Floodplain*), the floodplain will be remapped during the Plans, Specifications, and Estimates phase of the project via the Conditional Letter of Map Revision/Letter of Map Revision process. With implementation of measure **HYD-3** (Section 2.3.1, *Hydrology and Floodplain*), floodplain infields will be regraded to restore the storage volume lost during construction. With implementation of measure **HYD-4** (Section 2.3.1, *Hydrology and Floodplain*), Nyland Drain, Beardsley Wash, and Moon Ditch will be remodeled to minimize floodplain encroachment. With implementation of measure **HYD-2** through **HYD-4**, the project would not impede or redirect flood flows.

Water Quality

The project would result in approximately 174 acres of disturbed soil during construction and up to 84 acres of new impervious surface area. The increase in impervious areas is expected to result in increased pollutant build up and wash off. A greater volume and rate of stormwater runoff could cause or contribute to erosion and off-site pollutant transport.

To address these concerns, the project would implement measures **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*), which would include temporary and permanent protection measures to reduce pollutants from runoff and would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. The project would also not result in substantial erosion or siltation on or off site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site, or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff.

Potential Cumulative Impacts

Many of these projects listed in Table 3.6.4-2, similar to the proposed US 101 Improvement Project, involve construction activities within flood-prone areas and contribute to increased impervious surfaces and stormwater runoff. Some of these projects would have less than significant impacts on hydrology and water quality with mitigation incorporated, including the following projects within the RSA: Rio Urbana, Central Avenue Bike Lane Project, Springville Bike Path Phase 1 and Phase 2, Lennar at Cortona, and Costco. All of these projects had identified mitigation measures pertaining to compliance with existing requirements and regulations to protect municipal water supply systems and/or receiving water bodies. The Rio Urbana Project would include a connection to the municipal water supply system to provide portable water to residential and office development uses within the project area. The Rio Urbana Project would be required to comply with the City of Oxnard Municipal Code Chapter 22: Water and the City's Urban Water Management Plan. The Central Avenue Bike Lane Project would result in a permanent increase of approximately 11,000 square feet of impervious surface area and would be required to comply with the Ventura County Stormwater Permit and with the City of Camarillo's MS4 Permit, which requires post-construction stormwater quality mitigation measures. For the Costco project, the IS/MND identified the following as mitigation measures to reduce impacts on hydrology and water quality to less than significant: compliance with the Construction General Permit, implementation of construction BMPs and a SWPPP, inspection of construction equipment and vehicles for leaks, and compliance with the City of Camarillo's Municipal Stormwater Permit and related stormwater quality mitigation requirements pertaining to the detention, treatment, and/or discharge of stormwater. The EIR for the Springville Specific Plan, which covers the Springville Bike Path Phase 1 and Phase 2 and Lennar at Cortona projects, would require preparation of site-specific hydrological reports to insure pre- and post-peak runoff flows remain the same.

For the River Park Specific Plan, the EIR states stormwater generated onsite and offsite would be collected and treated by detention basins, dry swales, and centrifugal separators before being discharged to the Santa Clara River via existing drain outlets or to mine pits, depending on existing drainage patterns and the magnitude of the storm event. However, the EIR found that although the project would maintain or improve existing water quality, the proposed measures would not be able to reduce the concentrations of pollutants to levels below the threshold of significance that were used in the water quality analysis and therefore, all potential impacts could not be reduced to less than significant. Since the approval of the Final EIR, major drainage improvements and the water quality control treatment system for the River Park Specific Plan have been implemented.

When considered together with other past, present, and reasonably foreseeable projects in the area, the US 101 Improvement Project would contribute to an overall increase in paved surfaces and stormwater runoff. However, like this project, all other listed projects would be required to follow strict federal, state, and local water quality regulations and obtain appropriate stormwater permits. These rules are designed to limit pollution and protect waterways, even as development occurs. Because the US 101

Improvement Project and other nearby projects must comply with the same water quality laws and stormwater controls, the combined effect would not result in a significant increase in water pollution. In addition, with careful construction planning and flood-protection measures in place, the US 101 Improvement Project would not increase flood risks on its own or in combination with other projects. Therefore, the US 101 Improvement Project, when added with past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on hydrology and water quality, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.11 Land Use and Planning

Resource Study Area and Current Conditions

The RSA for cumulative impacts on land use and planning is the US 101 corridor and surrounding jurisdictions through which the project would pass (cities of Thousand Oaks, Camarillo, Oxnard, and Ventura and unincorporated areas of Ventura County). The area is characterized by a mix of land uses, including residential neighborhoods, commercial and industrial development, public facilities, open space, and transportation infrastructure. Land uses along the corridor are guided by the County of Ventura General Plan, the SCAG RTP/SCS, and city general plans from the surrounding jurisdictions. The existing cumulative condition for land use and planning within the RSA is not considered acute.

Project Impacts

The US 101 Improvement Project would result in direct temporary impacts on existing land uses where TCEs would be required. With implementation of measures **LU-1** and **LU-2** (see Section 2.2.3, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs)*, which would minimize impacts on land uses and restore TCE impacted areas to their original conditions or similar conditions where feasible, impacts during construction would be minimized. The US 101 Improvement Project would also result in direct permanent impacts on existing land uses where partial acquisitions would be required. Under the US 101 Improvement Project, there would be land use changes on small portions or slivers of some parcels (i.e., changing from industrial/commercial uses, agricultural operations, and open space to transportation-related land uses). However, the affected acreage on these parcels generally would be small compared to the overall size of the parcels and current land uses would continue to operate on the remainder of the parcels.

The US 101 Improvement Project is intended to improve traffic operations and person-throughput within an existing freeway corridor. As discussed in Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*, Alternatives 2 and 3 are consistent with adopted goals and policies of all applicable federal, state, regional, and local plans and programs. During operation, the US 101 Improvement Project would function as part of the existing freeway system and would not divide established communities, isolate land uses, or substantially interfere with access to homes, businesses, or public facilities.

Potential Cumulative Impacts

No significant impacts associated with land use and planning were identified for any of the projects listed in Table 3.6.4-2 that had available environmental documents for review, which are: the River Park Specific Plan, Lockwood III Apartments, Rio Urbana Project, Anacapa Courts Mixed-Use Project, Downtown Thousand Oaks Project, Central Avenue Bike Lane, Springville Bike Path Phase I and Phase 2, Lennar at Cortona, Costco, Camarillo Hotel and Conference Center, and Camarillo Ruiz Apartment Community. The remaining projects listed in Table 3.6.4-2 would be required to conduct an environmental review and implement measures to reduce land use impacts where applicable. Therefore, the US 101 Improvement Project, when added with past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on land use and planning, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.12 Noise

Resource Study Area and Current Conditions

The RSA for cumulative impacts to noise is the project limits for the US 101 Improvement Project and adjacent areas. The ambient noise environment along the project alignment and in surrounding land uses is generally defined by traffic along US 101 and surface streets. Other noise sources include activities associated with the existing land uses in the project area including residential, commercial, hotels, hospitals, schools, and active sports area that also contribute to the ambient noise in the area. Field investigations were conducted in November and December 2020 for the US 101 Improvement Project to identify land uses that could be subject to traffic noise impacts from the project and to take noise measurements for use in evaluating the existing noise environment and calibrating the traffic noise model. The US 101 Improvement Project is considered a Type I project under 23 CFR 772 because the proposed construction would add capacity through a high-occupancy vehicle/express bus lane, thereby triggering the requirement for noise analysis. There are sensitive noise receptors within the RSA. For the purpose of this noise analysis, the study area was divided into 50 separate noise analysis areas. The existing cumulative condition for noise within the RSA is considered moderately acute.

Project Impacts

Construction activities associated with the US 101 Improvement Project would temporarily increase the ambient noise levels in the project limits. Project construction noise would be short term and intermittent and would comply with applicable noise-related local, state, and federal regulations. As discussed in Section 2.3.7, *Noise and Vibration*, measure **N-1**, which stipulates adherence to Caltrans Standard Specifications Section 14-8.02 (Noise Control); and measure **N-2**, which requires implementation of control measures to minimize noise disturbances at sensitive area during construction, such as all equipment will have sound-control devices no less effective than those provided on the original equipment, would be implemented.

Vibration associated with construction activities would temporarily increase the vibration levels within the project limits. Based on the distance and the type of building surrounding the area where piles would be driven, levels of vibration may be perceptible; however, they are not predicted to be significant under both build alternatives. Additionally, measure **N-3** (Section 2.3.7, *Noise and Vibration*) would be implemented to minimize construction vibration, including restricting the time when vibration-intensive equipment or activities can be used.

As discussed in Section 3.7.13, *Noise*, if the design of the project would result in an increase of 12 dB or more (when the design-build condition noise level is compared to the existing conditions), an impact would be considered significant and would require feasible mitigation to be considered. The project is predicted to exceed the existing modeled noise levels by 12 dB or more at four NAAs. As described in measure **N-1: Noise Abatement** (Section 2.3.7, *Noise and Vibration*), the project will incorporate noise abatement in the form of noise barriers. If the noise barriers outlined as part of the NEPA analysis are not included as abatement, then the noise barriers proposed for demolition will be redesigned as replace-in-kind barriers at their existing locations as mitigation (mitigation measure **N-MM-1** [Section 3.7.13, *Noise*]). Predicted noise levels would not exceed 12 dB relative to the existing conditions with the inclusion of replace-in-kind barriers in their existing locations.

Potential Cumulative Impacts

A number of the individual projects described in Table 3.6.4-2 may be under construction simultaneously with the US 101 Improvement Project. Depending on construction schedules and the location of other projects being constructed, generation of noise impacts during construction may result in cumulatively considerable short-term increases in noise. However, each project would be responsible for following applicable noise ordinances during construction, thereby reducing the noise impacts. In summary, for the US 101 Improvement Project, construction noise would be temporary and regulated, and operational noise increases would be subject to established noise standards. Therefore, the US 101 Improvement Project, when added with past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on noise, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.13 Public Services

Resource Study Area and Current Conditions

The RSA for cumulative impacts to public services is the project limits for the US 101 Improvement Project plus a 0.5-mile buffer. Public services in the RSA include fire protection, police services, emergency medical services, schools, parks, and other public facilities that serve communities along the US 101 corridor. These services are provided by local cities and the County. Existing service levels are influenced by population, land use patterns, and transportation conditions within the region. The existing cumulative condition for public services within the RSA is not considered acute.

Project Impacts

Construction of the US 101 Improvement Project would require temporary lane closures, ramp closures, rerouting of traffic, and other activities that could affect response times for fire, law enforcement, and emergency service providers. Construction activities could also result in traffic and circulation impacts on nearby schools, parks, and recreational facilities. With incorporation of measure **TR-1** (Section 2.2.10, *Transportation*), temporary direct impacts during construction on public services would be minimized by providing alternative routes and access points to maintain continuous access.

During operation, the project would not introduce new land uses or population growth that would increase demand for fire, police, or emergency medical services. Improvements to traffic operations along US 101 could also support more reliable emergency vehicle access along the corridor. The proposed project would not result in new housing or population growth and therefore would not increase demand or impede access to schools.

The project would have temporary and permanent impacts to park resources, which are further discussed in Section 3.6.4.14, *Recreation.*

Potential Cumulative Impacts

The US 101 Improvement Project would not result in substantial increase in demand for emergency services (e.g. fire protection, police services, emergency medical services) or the need for new or expanded facilities (e.g. schools, parks, and other public facilities). Therefore, the US 101 Improvement Project, when added with past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on public services, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.14 Recreation

Resource Study Area and Current Conditions

The RSA for cumulative impacts to recreational resources is the project limits for the US 101 Improvement Project plus a 0.5-mile buffer. There are 25 existing public parks and recreational resources within the RSA, including 23 public parks and two public trails and bike paths. Refer to Table 2.2.4-1 in Section 2.2.4, *Parks and Recreational Facilities* for details on the amenities of each resource and the location relative to the US 101 Improvement Project. The existing cumulative condition for recreational resources within the RSA is not considered acute.

Project Impacts

The US 101 Improvement Project, under Alternatives 2 and 3, would require a TCE at Los Robles Greens Golf Course, Camarillo Grove Park, and Walnut Grove Park. In addition, under Alternative 3, permanent acquisition of 5,049 square feet from Camarillo Grove Park would also be required.

The TCE impact areas would not affect any of the park amenities and access will be maintained. During construction, exhaust, dust, and intermittent increase in noise and vibration could result in temporary indirect impacts on users of recreational facilities. These temporary indirect impacts would be addressed with implementation of measures **AQ-1** through **AQ-4** (Section 2.3.6, *Air Quality*) and **N-1** through **N-3** (Section 2.3.7, *Noise and Vibration*). In addition, measures **LU-1** and **LU-2** (Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*) would also be implemented to minimize impacts on land uses, including restoring any removed fencing and replanting vegetation that is disturbed by construction activities.

The small permanent right-of-way acquisition at Camarillo Grove Park would not affect recreational features or diminish the recreational value or usability of the remaining park area. In addition, the permanent partial acquisition on the park would be subject to the conversion requirements of Section 6(f)(3).

Potential Cumulative Impacts

No significant impacts associated with recreational facilities were identified for any of the projects listed in Table 3.6.4-2 that had available environmental documents for review, which are: the River Park Specific Plan, Lockwood III Apartments, Rio Urbana Project, Anacapa Courts Mixed-Use Project, Downtown Thousand Oaks Project, Central Avenue Bike Lane, Springville Bike Path Phase I and Phase 2, Lennar at Cortona, Costco, Camarillo Hotel and Conference Center, and Camarillo Ruiz Apartment Community. The remaining projects listed in Table 3.6.4-2 are mostly infill development project and would be required to follow federal, state, and local guidelines regarding protection of recreational resources. Therefore, the US 101 Improvement Project, when added with past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on recreational resources, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.6.4.15 Transportation

Resource Study Area and Current Conditions

The RSA for cumulative impacts on transportation is the SCAG region.

The US 101 Improvement Project is listed in SCAG's 2024-2050 RTP/SCS as RTP ID 5160001. SCAG's 2024–2050 RTP/SCS Final Program Environmental Impact Report (PEIR) (SCAG 2023), which includes the project as part of its build alternative, assessed the cumulative impacts of the Regional Transportation Plan/Sustainability Communities Strategy. These documents, including the transportation cumulative impact analysis contained in Section 3.17 of the PEIR, are applicable to the US 101 Improvement Project and are hereby incorporated by reference into this Environmental Impact Report/Environmental Assessment and can be found on SCAG's website at: https://scag.ca.gov/.

The SCAG region is expected to experience continued population, employment, and housing growth through the planning horizon of the *Connect SoCal 2024 RTP/SCS*. To accommodate this growth, the RTP/SCS includes a comprehensive multimodal transportation investment program consisting of highway improvements, transit expansion, active transportation facilities, transportation demand management strategies, and land use policies intended to reduce reliance on single-occupant vehicle travel.

Despite these strategies, the RTP/SCS acknowledges that total regional travel demand and traffic volumes will remain high due to projected growth. While per-capita VMT reductions are anticipated, overall increases in travel activity are expected to continue placing pressure on the regional freeway and arterial network, particularly on major north-south corridors such as US 101.

Within the project limits for the US 101 Improvement Project, US 101 traverses developed and undeveloped areas of the cities of Thousand Oaks, Camarillo, Oxnard, and Ventura and unincorporated areas of Ventura County. Regionally, US 101 connects Ventura County's communities and the neighboring counties. Most importantly, US 101 serves as the main corridor for access throughout Ventura County. It is a critical part of the local mobility and economic well-being of the county, and it serves as the Main Street for the county, providing connection for all in the area. Currently, there are no HOV lanes along the project corridor. US 101 experiences congestion during peak travel periods because traffic volume exceeds freeway capacity. Due to the projected population growth for Ventura County, it is anticipated that the forecasted traffic demands will adversely affect traffic operations along the freeway mainline, as discussed in Section 2.2.10, *Transportation*. The existing cumulative condition for transportation within the RSA is considered acute.

Project Impacts

Construction of the US 101 Improvement Project would occur in phases and is anticipated to have an approximate duration of 12 years. No long-term closures of the freeway mainline are expected to be required. All mainline lanes would be maintained throughout all construction stages. Minimal overnight closures would be required of US 101 for the partial removal of the Borchard Road overcrossing as well as the Pleasant Valley Road overcrossing, along with installation and removal of the required falsework. The project may also periodically affect bicycle and pedestrian facilities during construction; therefore, they may require temporary detours and closures. With incorporation of standard project measure **TR-1** (Section 2.2.10, *Transportation*), construction related traffic and circulation impacts, as well as impacts on pedestrian and bicycle facilities, would be avoided or minimized with implementation of a project TMP.

The US 101 Improvement Project would add freeway lane capacity intended to improve person-throughput and reliability. However, capacity-enhancing freeway projects can induce additional vehicle travel over time by lowering travel costs, shifting trips to peak periods, and encouraging longer or more frequent trips. As a result, the project would

increase daily and annual VMT by 0.7 percent under Opening Year (2040) and Design Year (2060) conditions when compared to the No-Build Alternative.

As discussed in Section 3.4, *Senate Bill 743/Induced Demand Analysis*, VCTC has identified 27 strategies to mitigate the forecasted VMT increase from the project, as listed in Table 3.4.3-2 (mitigation measure **VMT-1**, Section 3.4.4, *Senate Bill 743/Induced Demand Analysis*). Implementation of the proposed VMT reduction strategies is projected to reduce VMT by more than the anticipated VMT that would be induced by the project in Opening Year (2040) conditions. Despite the estimated VMT reduction being above the anticipated VMT induced by the project, there is much uncertainty associated with the estimated VMT reductions. The uncertainty relates to both funding sources and the actual reductions that may ultimately be realized by implementing several of the strategies; therefore, potential VMT impacts may remain significant and unavoidable and result in the project conflicting with State CEQA Guidelines Section 15064.3, subdivision (b).

Potential Cumulative Impacts

Numerous past, present, and reasonably foreseeable future development and infrastructure projects throughout the SCAG region, including those listed in Table 3.6.4-2, could cumulatively increase travel demand. While the RTP/SCS forecasts reductions in per-capita VMT, total VMT is projected to remain substantial and increase over time due to population and employment growth. When combined with other regional transportation projects and land use growth, the US 101 Improvement Project's incremental VMT increase would contribute to cumulative transportation impacts at the regional level. Although the SCAG 2024 RTP/SCS demonstrates that regional per-capita VMT and GHG targets may be met if all planned strategies are fully implemented, total VMT and traffic volumes remain high and are expected to increase. In addition, as previously discussed, potential VMT impacts by the US 101 Improvement may remain significant and unavoidable even with implementation of VMT mitigation measures that have been identified for the project. This is similar to the findings of the SCAG PEIR.

As stated in the SCAG 2024–2050 RTP/SCS PEIR, which is relevant to the cumulative condition and conclusions for the US 101 Improvement Project:

Despite the benefits shown by implementing the Plan [2024-2050 RTP/SCS], the Plan would result in an increase in total regional VMT and may not support achievement of the state's VMT reduction goals which could be inconsistent with CEQA Guidelines Section 15064.3(b). Therefore, this impact is considered significant and mitigation measures are required. [Page 3.17-50 of the PEIR].

While the mitigation measures will reduce the impacts related to conflicts or inconsistencies with CEQA Guidelines Section 15064.3(b), due to the regional nature of the analysis, unknown site conditions and project specific-details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be significant and unavoidable even with mitigation. [Page 3.17-51 of the PEIR].

Because the Plan, in and of itself, would result in significant adverse environmental impacts with respect to transportation, these impacts would add to the environmental impacts of other cumulative or related projects. [Page 3.17-54 of the PEIR].

In summary, the US 101 Improvement Project would incrementally increase VMT and traffic volumes due to added freeway capacity and induced demand, thereby contributing to cumulatively significant transportation impacts. Therefore, the US 101 Improvement project, in combination with past, present, and reasonably foreseeable projects, could result in cumulatively considerable impacts under CEQA related to VMT.

3.6.4.16 Tribal Cultural Resources

Resource Study Area and Current Conditions

The RSA for cumulative impacts to tribal cultural resources consists of tribal lands in the southern California region. The existing cumulative condition for tribal cultural resources within the RSA is considered moderately acute.

Project Impacts

The US 101 Improvement Project is located largely within an existing transportation corridor that has been previously disturbed by roadway construction and maintenance. No tribal cultural resources were identified through the Sacred Lands File search at the Native American Heritage Commission (NAHC) nor through consultation with Native American tribes for the project. Therefore, no tribal cultural resources are anticipated to be located in the APE.

As previously discussed, one archaeological site, CA-VEN-222, was identified within the APE. The project will protect this resource by implementing measures **CR-3** through **CR-4** (Section 2.2.12, *Cultural Resources*), which would include establishing an environmentally sensitive area (ESA). In addition, it is possible previously undocumented cultural materials, tribal cultural resources, or human remains could be unearthed during site preparation, grading, or excavation activities for the project. Those potential effects would be avoided or minimized through implementation of measures **CR-1** and **CR-2** (Section 2.2.12, *Cultural Resources*). Measure **CR-1** is for the unanticipated discovery of cultural materials and measure **CR-2** is for the unanticipated discovery of human remains.

Potential Cumulative Impacts

Several planned projects listed in Table 3.6.4-2 would have less than significant impacts on tribal cultural resources with mitigation incorporated, including the following projects within the RSA: the River Park Specific Plan, Rio Urbana, Downtown Thousand Oaks, Central Avenue Bike Lane, Costco, and Camarillo Ruiz Apartment. Mitigation measures proposed by these projects to protect tribal cultural resources include Native American monitors and guidelines/procedures in the event of the discovery of human remains.

As previously discussed, no tribal cultural resources are anticipated to be located in the APE for the US 101 Improvement Project. In addition, all projects subject to CEQA are

required to evaluate impacts on tribal cultural resources and to consult with tribes as appropriate. These requirements are intended to avoid or reduce impacts on tribal cultural resources and to ensure that such resources are treated respectfully and in accordance with tribal preferences.

Given the highly developed nature of the project corridor, the implementation of project-specific avoidance and protection measures, and the regulatory framework that applies to all cumulative projects, the US 101 Improvement Project would not contribute substantially to cumulative impacts on tribal cultural resources. Therefore, the US 101 Improvement Project, when added with past, current, and reasonably foreseeable projects, would not result in a significant cumulative impact on tribal cultural resources, and the incremental contribution of the US 101 Improvement Project to the existing cumulative condition would not be cumulatively considerable under CEQA.

3.7 CEQA ENVIRONMENTAL CHECKLIST

3.7.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.7.1.1 CEQA Significance Determinations for Aesthetics

The potential for the project to result in impacts related to aesthetics was assessed in the *Visual Impact Assessment* (Caltrans 2021c). The results are summarized in the discussion provided in Section 2.2.11, *Visual/Aesthetics* in this EIR/EA. The following discussion is based on those analyses.

a) No Impact

The project is located on US 101 in Ventura County, California, between SR 23 and SR 33. The existing highway corridor is dominated by travel lanes, on- and off-ramps, signage, guard rails, noise walls, and other transportation-related elements. Land uses within the project corridor consist primarily of urban residential, commercial, and industrial uses, as well as agricultural land uses and natural open spaces associated with the Santa Clara River and the Conejo Grade. Views of the highway from adjacent land uses are generally blocked or obscured by existing vegetation and land cover (e.g., buildings, fences, signs, walls). Scenic views of San Buenaventura State Beach, Ventura Beach, the Ventura Pier, and the ocean may be visible from points along US 101 within the project corridor. Natural elements such as adjacent hillsides and distant mountains are visible outside of the highway corridor along the Conejo Grade and may be considered scenic.

Project components under Alternatives 2 and 3 would be designed and implemented in a manner consistent with the existing visual character and quality of the area and would not diminish visual resources. Construction of project components would primarily occur within existing Caltrans right-of-way, resulting in similar conditions to the existing US 101 corridor. The project would implement HOV lanes, providing enhanced HOV connectivity within the region, and would feature a similar design and scale to the existing HOV lanes located north of the project limits.

As discussed in Section 2.2.11, *Visual/Aesthetics*, approximately 3.5 linear miles of the project corridor are within the coastal zone and have views of the seascape from the highway. Most of the planned modifications within this segment of the freeway would involve restriping and expanding the existing lanes toward the center median, leaving the shoulder areas outside the current roadway unchanged. Only about 1 mile of this segment, from near the Ventura Pier parking lot to the southern boundary of San Buenaventura State Beach, offers direct shoreline views, including beaches, recreation areas, and ocean vistas. While the addition of lanes would introduce more human-made elements, the primary scenic features of the coastal zone to the west would remain unaffected. Because most modifications would occur within the existing roadway, views from beach areas east toward US 101 would experience few changes. Overall, the visual impact on travelers and nearby coastal areas would be minimal, resulting in a neutral effect on the coastal zone's visual environment. The project would not have a substantial adverse effect on a scenic vista.

b) No Impact

According to the Caltrans Statewide List of Eligible and Officially Designated State Scenic Highways (October 2025), US 101 is eligible for designation as a California State Scenic Highway within the project limits. As discussed in Response 3.7.1(a), the primary scenic features of the coastal zone to the west would remain unaffected by the project. The project would not substantially damage scenic resources within a State scenic highway.

c) Less than Significant Impact

During construction, travelers may experience minor short-term visual impacts from the presence of construction equipment. Viewsheds containing identified visual resources are not expected to be affected by implementation of the project because the visual character and quality associated with project elements would be consistent with those already present in the existing highway visual context, and, in most cases, the activity and awareness of viewers would not change. Highway user viewer response would be low, and a less congested highway system may have an overall beneficial impact. Alternatives 2 and 3 would not substantially change the existing views of or from US 101. Measures **VIA-1** through **VIA-6** (Section 2.2.11, *Visual/Aesthetics*) would avoid or minimize visual impacts associated with the project and would include aesthetic treatments to be applied to new retaining walls, noise walls, and bridges to match existing walls and bridges in coordination with the District Landscape Architect. The design of the project would be consistent with Caltrans highway landscape and design policies/BMPs. Impacts would be less than significant.

d) Less than Significant Impact

The project is expected to require nighttime construction, in addition to night security lighting of staging areas, which would result in visual impacts for highway travelers from increased glare. In addition, multiple residential areas adjacent to the project corridor may be affected by new sources of light or glare during construction. The impacts from construction of the project would be temporary and would not affect visual resources long term. Nighttime work near residential, open space, or other sensitive areas will be minimized whenever possible. Construction lighting will be directed toward work areas and will utilize full box cutoff light shields to minimize light spill to adjacent areas (measure **VIA-5**, Section 2.2.11, *Visual/Aesthetics*). Impacts would be less than significant.

3.7.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

3.7.2.1 CEQA Significance Determinations for Agriculture and Forest Resources

The potential for the project to result in impacts related to agriculture and forest resources was assessed in the *Community Impact Assessment* (Caltrans 2026a). The results are summarized in the discussion provided in Section 2.2.5, *Farmlands*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

As discussed in Section 2.2.5, *Farmlands*, Alternatives 2 and 3 would permanently convert Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to

non-farmland use. Alternative 2 would convert approximately 2.85 acres of Important Farmlands to non-farmland uses, consisting of 1.04 acres of Prime and Unique Farmland and 1.81 acres of Statewide and Local Important Farmland. Alternative 3 would convert approximately 2.70 acres of Important Farmlands to non-farmland uses, consisting of 0.89 acre of Prime and Unique Farmland and 1.28 acres of Statewide and Local Important Farmland.

The areas of farmlands with direct conversions by the proposed project are mostly along the edge of roadways or surrounded by existing urban uses (e.g., commercial or residential). According to the Ventura County Initial Study Assessment Guidelines (ISAG) (County of Ventura 2025), a project may have a significant impact if it would result in exceeding ISAG's Important Farmland acreage loss thresholds. ISAG's Important Farmland impact thresholds range between the loss of 5 acres and 40 acres, depending on the general plan land use designation and the Important Farmland category. The project's impact on approximately 2.85 acres of Important Farmland under Alternative 2 and approximately 2.70 acres of Important Farmland under Alternative 3 are below ISAG's impact thresholds. In addition, the farmland acquisition would not affect the ability of the remaining portions of the parcels to be used for farming. Measure **RW-1** (Section 2.2.8, *Relocations and Real Property Acquisition*) will be implemented to minimize potential farmland impacts under the build alternatives. Impacts would be less than significant.

b) Less than Significant Impact

The proposed project would result in permanent conversion of lands protected under the Ventura County Land Conversion Act, also known as the Williamson Act. Approximately 0.28 acre of open space protected under the Williamson Act (Assessor's Parcel Number [APN] 163018005) would be converted to non-farmland uses under Alternative 2. Approximately 0.92 acre of open space protected under the Williamson Act (0.84 acre from APN 163018005 and 0.08 acre from APN 163018009) would be converted to non-farmland uses under Alternative 3. The areas of farmlands with direct conversions by the proposed project are mostly along the edge of roadways or surrounded by existing urban uses (e.g., commercial or residential). In addition, the farmland acquisition would not affect the ability of the remaining portions of the parcels to be used for farming. Measure **RW-1** (Section 2.2.8, *Relocations and Real Property Acquisition*) will be implemented to minimize potential farmland impacts under the build alternatives. Impacts would be less than significant.

c, d) No Impact

There are no forest or timberlands within the project limits. Therefore, the project does not currently use land being managed or used for forest land or timberland. No impact would occur.

e) Less than Significant Impact

As discussed in Response 3.7.1(a)(b), permanent partial acquisition of farmland parcels would be required for the project. The areas of farmlands with direct conversions by the proposed project are mostly along the edge of roadways or surrounded by existing

urban uses (e.g., commercial or residential). The farmland acquisition would not affect the ability of the remaining portions of the parcels to be used for farming. Measure **RW-1** (Section 2.2.8, *Relocations and Real Property Acquisition*) will be implemented to minimize potential farmland impacts under the build alternatives. Impacts would be less than significant.

3.7.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) 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?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.7.3.1 CEQA Significance Determinations for Air Quality

The potential for the project to result in impacts related to air quality was assessed in the *Air Quality Report* (Caltrans 2025a). The results are summarized in the discussion provided in Section 2.3.6, *Air Quality*, in this EIR/EA. The following discussion is based on those analyses.

a) No Impact

The proposed project is in the Ventura County portion of the SCCAB, which is under the jurisdiction of VCAPCD and ARB. VCAPCD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which SCCAB is in nonattainment. VCAPCD's most recent plan to achieve air quality standards is the 2022 Air Quality Management Plan (AQMP).

The 2022 Ventura County AQMP was adopted by VCAPCD on December 13, 2022. The 2022 AQMP presents a combined state and local control strategies for attaining the 2015 federal 8-hour ambient air quality standard for O_3, the only federal clean air standard Ventura County does not meet, by the statutory compliance deadline of August 3, 2027. 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 and transportation plans used in the formulation of the AQMP are considered to be consistent with the AQMP. The governing transportation planning documents

relevant to the project area are the SCAG 2024–2050 RTP/SCS and the SCAG 2025 Federal Transportation Improvement Program (FTIP).

A project would conflict with or obstruct implementation of a regional air quality plan if it would be inconsistent with the growth assumptions of the plan. The proposed project is listed in SCAG's 2024–2050 RTP/SCS under project number 5160001. On May 10, 2024, FHWA found that the SCAG 2024–2050 RTP conformed to the State Implementation Plan. The project is also included in the SCAG financially constrained 2025 FTIP under project number VEN131201, Amendment 25-24, approved by FHWA on May 26, 2026. The design concept and scope of the proposed project are consistent with the project description in the 2024–2050 RTP/SCS, 2025 FTIP Amendment 25-24, and the open-to-traffic assumptions of the most recent SCAG regional emissions analysis. Because the proposed project is included as proposed in both the SCAG 2024–2050 RTP/SCS and the 2025 FTIP, which were found to conform to the State Implementation Plan responsible for attaining and maintaining compliance with air quality standards, the proposed project would not conflict with or obstruct implementation of an air quality plan and no impact would occur.

b) Significant and Unavoidable Impact

The Ventura County portion of the SCCAB is in nonattainment for the federal eight-hour O_3 standard and is in attainment or unclassified for all other criteria pollutants and their precursors. With respect to the state standards, the Ventura County portion of the SCCAB is in nonattainment for the 1-hour and 8-hour O_3 and respirable particulate matter (PM_{10}) standard and is in attainment for all other standards.

According to the Ventura County Air Quality Assessment Guidelines (County of Ventura 2003), significance thresholds have been defined for O_3 based on emission levels of ROG and NO_X. As discussed in Section 2.3.6, *Air Quality*, and shown in Table 2.3.6-11, the No-Build Alternative and build alternatives would result in a decrease of ROG and NO_X in the 2040 Opening Year, 2045 RTP/SCS Horizon Year, and 2060 Horizon Year, as compared to existing conditions. PM_{10} emissions will increase under all future years for the No-Build Alternative and build alternatives compared to the Existing (2018) conditions. In the 2040 Opening Year, 2045 RTP/SCS Horizon Year, and 2060 Horizon Year, the build alternatives would result in an increase of regional PM_{10} emissions by a maximum of 36 pounds per day, an increase of 3.7 percent, as compared to the No-Build. When compared to the Existing (2018) conditions, the project alternatives would increase the regional PM_{10} emissions by up to 934 pounds per day. The increase in total regional particulate matter emissions is due to the re-entrained road dust that is directly proportional to the increase in VMT. Therefore, implementation of the proposed project could result in a cumulatively considerable net increase of PM_{10}, which the region is designated as nonattainment under state air quality standards. Impacts would be significant and unavoidable.

c) Significant and Unavoidable Impact

Construction

The sensitive receptors within or adjacent to the project limits are residential, educational, and open space and recreation uses. The project may result in temporary, short-term, construction-related increases in pollutant concentrations specifically associated with construction equipment emissions and fugitive dust. Implementation of VCAPCD Rules and Caltrans Standard Construction Specifications—which are provided in measures **AQ-1** through **AQ-4** in Section 2.3.6, *Air Quality*—would avoid or minimize potential short-term air quality impacts on sensitive receptors. Therefore, construction-related air quality impacts on sensitive receptors are considered less than significant.

Operation

As discussed in Section 2.3.6, *Air Quality*, and shown in Table 2.3.6-11, implementation of the project would result in substantial reductions in ROG, CO, and NO_X emissions under the build alternatives when compared to the Existing (2018) conditions. PM_{10} emissions will increase under all future years for the No-Build Alternative and build alternatives compared to the Existing (2018) conditions. $PM_{2.5}$ emissions will increase under 2060 Horizon Year conditions but decrease under both 2040 Opening Year and 2045 RTP/SCS Horizon Year conditions. The increase in total regional particulate matter emissions is due to the re-entrained road dust that is directly proportional to the increase in VMT. As described in Section 2.3.6, *Air Quality*, Table 2.3.6-12, mobile source air toxic emissions for the No-Build Alternative and build alternatives would be less than under Existing (2018) conditions due to the improvement in engine emissions technologies, as well as the retirement of older vehicles. Pursuant to California Health and Safety Code Section 39657(b), the mobile source air toxic pollutants in Table 2.3.6-12 are additionally regulated as toxic air contaminants under the California Clean Air Act. Therefore, toxic air contaminant emissions under all future years for the No-Build Alternative and build alternatives would be less than under Existing (2018) conditions.

As described in Section 2.3.6, *Air Quality,* the No-Build Alternative and build alternatives would result in increases in particulate matter emissions along all of the roadway segments when compared to Existing (2018) conditions. As the project area is currently in nonattainment for the State PM_{10} standards, a quantitative screening level dispersion analysis was conducted to determine the local emission concentrations for the Existing (2018) and future 2040 Opening Year, 2045 RTP/SCS Horizon Year, and 2060 Horizon Year No-Build Alternative and build alternative conditions. Findings from the dispersion analysis found in the 2040 Opening Year, 2045 RTP/SCS Horizon Year, and 2060 Horizon Year, the build alternatives would increase 24-hour PM_{10} concentrations by a maximum of 4.3 micrograms per cubic meter compared to Existing (2018) conditions at nearby sensitive receptors. Under the same analysis conditions for annual PM_{10} concentrations, the build alternatives would increase annual PM_{10} concentrations by a maximum of 0.7 microgram per cubic meter compared to Existing (2018) conditions. For comparison, the background 24-hour and annual PM_{10} concentrations are 107 micrograms per cubic meter and 22.7 micrograms per cubic meter, respectively. As the build alternatives would result in increases in PM_{10} concentrations at nearby sensitive

receptors, operation-related air quality impacts on sensitive receptors are significant and unavoidable.

d) Less than Significant Impact

The project may result in temporary, short-term, construction-related increases in objectionable odors. Implementation of VCAPCD Rules and Caltrans Standard Construction Specifications—which are provided in measures **AQ-1** through **AQ-4** in Section 2.3.6, *Air Quality*—would minimize this potential short-term impact. Therefore, implementation of the proposed project would not result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people. Impacts would be less than significant.

3.7.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☐	☐	☒

3.7.4.1 CEQA Significance Determinations for Biological Resources

The potential for the project to result in impacts related to biological resources was assessed in the *Natural Environmental Study* (Caltrans 2021d) and the *Biological Assessment* (Caltrans 2021e). The results are summarized in the discussion provided in Section 2.4, *Biological Environment*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant with Mitigation Incorporated

Non-listed Special-Status Species

Temporary direct and indirect impacts could occur on at least 12 individuals and two distinct populations of Catalina mariposa lily during project construction. With

implementation of measure **PS-1** (Section 2.4.3, *Plant Species*), ESA fencing will be installed around special-status plant population boundaries. As required by measure **PS-2**, monitoring will occur within the vicinity of special-status plant species populations during project construction. Measure **PS-3** would require a preconstruction survey to determine presence of special-status plant species within the project limits of disturbance. With implementation of measure **PS-4**, special-status plant species in the project vicinity will be mapped and recorded. Measure **PS-5** will prohibit the intentional killing or collection of any plant species. Additionally, measures **NC-1** through **NC-12** would be implemented to avoid and minimize potential impacts on suitable habitat for special-status plant species adjacent to the project limits of disturbance. Therefore, with implementation of avoidance and minimization measures **PS-1** through **PS-5** (Section 2.4.3, *Plant Species*) and **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*), the project would have a less-than-significant impact on non-listed special-status plant species.

Temporary indirect effects, such as noise, vibration, dust, night lighting, and human encroachment from construction, could disturb bats. Permanent impacts could include the direct loss of roosting sites or mortality due to removal of suitable habitat like palm trees or suitable concrete structures for roost habitat. Implementation of measures **AS-1** through **AS-4** (Section 2.4.4, *Animal Species*) would reduce the potential for direct take of bat species. Implementation of measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would also provide protection for bats adjacent to the project footprint during construction. With implementation of avoidance and minimization measures **AS-1** through **AS-14**, **TE-4** (Section 2.4.5, *Threatened and Endangered Species*), and **NC-1** through **NC-12**, the project would not result in a substantial adverse effect on any bats.

Permanent impacts on non-listed special-status wildlife could occur from water diversions or dewatering (potentially affecting arroyo chub), vegetation clearing and grading (potentially affecting non-listed special-status birds, amphibians, and reptiles as described in Section 2.4.4, *Animal Species*), loss of bird nesting habitat, or bird nest destruction. Implementation of measures **TE-4** and **AS-5** through **AS-14** (Section 2.4.4, *Animal Species*) would reduce the potential for direct mortality of non-listed special-status wildlife species. With implementation of these avoidance and minimization measures, the project would not result in a substantial adverse effect on non-listed special-status wildlife.

Federally or State-listed Species

No permanent or temporary impacts on coastal California gnatcatcher and southwestern willow flycatcher are anticipated due to their lack of presence in the Biological Study Area (BSA). No direct impacts on California least tern and western snowy plover are anticipated, as their suitable coastal beach habitat is separated from the project limits by Harbor Drive, which runs parallel to US 101. Therefore, no direct impacts on these species are anticipated as a result of either Alternatives 2 or 3. Avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*) would be implemented to avoid and minimize indirect impacts (e.g., increased dust and fire risks resulting from construction activities) on California least

tern and western snowy plover, as well as suitable habitat occurring within the surrounding area. With implementation of avoidance and minimization measure **TE-4** (Section 2.4.5, *Threatened and Endangered Species*), biological training will be developed for all construction personnel and implemented prior to construction. There would be no substantial adverse impacts on federally or state-listed species.

No construction would occur within the Santa Clara River channel under either of the build alternatives. Therefore, no permanent direct or indirect impacts on steelhead and least Bell's vireo or their critical habitat in or near the Santa Clara River are anticipated. Potentially suitable riparian habitat for least Bell's vireo would be permanently removed or temporarily disturbed as a result of adding an HOV/express bus lane and modifying the bridge at Calleguas Creek (e.g., expanding nosing walls, piers, abutments) under Alternatives 2 and 3. However, protocol survey results for least Bell's vireo confirmed that the riparian habitat in this area is marginal to low-quality habitat and would not support breeding least Bell's vireo, and the species is not expected to use this area. Implementation of avoidance and minimization measures **NC-1** through **NC-12** would minimize potential indirect impacts on suitable least Bell's vireo habitat, and measure **TE-7** would ensure pre-construction surveys for least Bell's vireo are conducted and that appropriate avoidance buffers are established should any nesting individuals occur within the project impact area.

With implementation of mitigation measure **WET-3**, a compensatory mitigation plan will be developed and include a minimum ratio of 1:1 for permanent impacts on jurisdictional resources. Measures **WQ-1** and **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*) would be implemented to avoid and/or minimize water quality impacts during operation of the project, including those associated with bridge and highway surface flows at the Santa Clara River Bridge.

Candidate and Proposed for Listing Species

Burrowing owl (state candidate for listing) was not detected during protocol surveys within the BSA, yet this species could potentially recolonize areas that were not previously used prior to project construction. To avoid and minimize impacts, measures **TE-1** through **TE-4** would be implemented and are further described in Section 2.3.5 (*Threatened and Endangered Species*). No mitigation measures are required specific to this species, and the project is not anticipated to result in significant adverse impacts on burrowing owl following avoidance and minimization measure implementation.

The build alternatives would result in temporary impacts on 6.64 acres and permanent impacts on 2.11 acres of shrubland upland communities that could support the state candidate species, Crotch's bumble bee, and federally proposed for threatened status monarch butterfly. Impacts on Crotch's bumble bee would be minimized through implementation of measures **TE-4** through **TE-6** (Section 2.4.5, *Threatened and Endangered Species*) involving biological training, preconstruction surveys, and fencing of suitable habitat areas for Crotch's bumble bee. Measures **TE-4**, **TE-7**, and **TE-8** (Section 2.4.5, *Threatened and Endangered Species*) would be implemented to minimize impacts on monarch butterfly through the preservation of milkweed host plants to the maximum extent feasible. To ensure that any direct impacts on monarch butterfly

suitable foraging and/or breeding habitat are offset, mitigation measure **TE-9** (Monarch Breeding Habitat-Revegetation Plan) would be implemented to establish a revegetation plan for milkweed species following construction. Implementation of avoidance and minimization measures **NC-1** through **NC-5** and **NC-9** through **NC-12** (Section 2.4.1, *Natural Communities*) would avoid and minimize potential impacts on suitable Crotch's bumble bee and monarch butterfly habitat adjacent to the project limits of disturbance. mitigation measure **NC-13** (Section 2.4.1, *Natural Communities*) would be implemented to compensate for any removed suitable habitat for monarch butterfly within the BSA and would be replaced at a 1:1 ratio through on-site restoration. Therefore, impacts on Crotch's bumble bee would be less than significant with avoidance and minimization measure implementation, and impacts on monarch butterfly would be less than significant with incorporated avoidance and minimization measures as well as mitigation (**TE-9**, **NC-13**).

Southwestern pond turtle (federally proposed for threatened listing) and its habitat could experience temporary or permanent impacts (e.g., direct mortality resulting from construction). Sensitive native coastal scrub and grassland habitat would be temporarily removed or disturbed along Conejo Grade due to outside widening; however, any temporarily removed riparian or coastal scrub habitat would be restored to its original condition. Indirect impacts (e.g., degradation of habitat through noise, dust, water pollution, human presence, increased fire risks) on pond turtle habitat adjacent to the project limits of disturbance could also occur during construction. Impacts on southwestern pond turtle would be avoided and minimized with implementation of measures **NC-1** through **NC-13** (Section 2.4.1, *Natural Communities*), **TE-4** (Section 2.4.5, *Threatened and Endangered Species*), **AS-5** through **AS-9,** and **AS-11** through **AS-14** (Section 2.4.4, *Animal Species*). Therefore, impacts on southwestern pond turtle would be less than significant with avoidance and minimization measure implementation.

Project construction activities could also temporarily affect the state candidate species, mountain lion, within the BSA due to increased noise or the presence of equipment and construction personnel, which may temporarily deter mountain lion movement in the project area. The addition of an HOV/express bus lane would both widen US 101 and increase traffic along the highway, thereby increasing wildlife-vehicle collision risks for mountain lions. Measures **NC-1** through **NC-5**, **NC-9**, and **NC-10** (Section 2.4.1, *Natural Communities*), **AS-12** through **AS-14** (Section 2.4.4, *Animal Species*), and **TE-11** (Section 2.4.5, *Threatened and Endangered Species*) would be incorporated to avoid and minimize impacts on mountain lion and their potentially suitable habitat within the BSA.

With implementation of the above-described measures, substantial adverse effects on federally and state-listed species, candidate, sensitive, or special-status species would be reduced to less-than-significant levels.

For monarch butterfly (federally proposed for threatened listing), avoidance and minimization measures as well as mitigation measures would be required to reduce impacts to less-than-significant levels.

b) Less than Significant with Mitigation Incorporated

As detailed in Section 2.4.1, *Natural Communities*, there are eight Sensitive Natural Communities that would be affected under the build alternatives (see Table 2.4.1-4). Based on the current design, it is anticipated that there would be 1.74 acres of temporary impacts on herbaceous upland communities, 0.34 acre of temporary impacts on riparian communities, and 6.64 acres of temporary impacts on shrubland upland communities (a total of 8.72 acres of temporary impacts) for both Alternatives 2 and 3. It is anticipated that there would be 0.01 acre of permanent impacts on riparian communities and 2.12 acres of permanent impacts on shrubland upland communities for both Alternatives 2 and 3. Project impacts on sensitive natural communities of concern are further detailed as follows.

Herbaceous Upland Communities:

- Curly Blue Grass–Squirreltail Patches: 0.09 acre of temporary impacts
- Giant Wild Rye Grasslands: 1.65 acres of temporary impacts

Riparian Communities:

- Goodding's Willow-Red Willow Riparian Woodland: 0.01 acre of permanent impacts, 0.25 acre of temporary impacts
- Sandbar Willow Thickets: 0.09 acre of temporary impacts

Shrubland Upland Communities:

- California Brittle Brush–Ashy Buckwheat Scrub: 0.82 acre of permanent impacts, 3.56 acres of temporary impacts
- California Brittle Brush–Ashy Buckwheat Scrub, Disturbed: 0.63 acre of permanent impacts, 1.71 acres of temporary impacts
- Coast Prickly Pear Scrub: 0.66 acre of permanent impacts, 1.19 acres of temporary impacts
- Lemonade Berry Scrub: 0.18 acre of temporary impacts

Temporary indirect impacts may be caused by construction activities (e.g., dust, increased fire risk, chemical spills, sedimentation, littering) on sensitive natural communities that are adjacent to the project limits of disturbance, which could lead to temporary degradation of those communities. The use of construction equipment at the edge of the project limits of disturbance could also damage adjacent native vegetation through airborne sedimentation, for example. However, these impacts are expected to be greatly reduced with implementation of avoidance and minimization measures **NC-1** through **NC-12** (Section 2.4.1, *Natural Communities*), which would require designation of ESAs, preconstruction surveys, biological monitoring, BMPs, weed abatement plan, and post-construction revegetation. With implementation of mitigation measure **NC-13**

(Section 2.4.1, *Natural Communities*), permanent and temporary impacts on sensitive natural communities will be replaced at a 1:1 ratio through on-site, in-kind restoration.

Alternatives 2 and 3 would directly and permanently remove sensitive natural communities. permanent impacts from the construction of an additional HOV/express bus lane in each direction of US 101, as well as auxiliary lanes, shoulders, retaining walls, and bridge expansion at Calleguas Creek (i.e., expanded nosing walls, piers, and abutments), may include the removal of existing vegetation and encroachment into the plant community that may have permanent effects. Modification of Arroyo Calleguas Bridge would result in permanent shading that could directly affect riparian habitats. Once the proposed project is constructed, there could be indirect impacts in the form of habitat degradation through risk of fire, air pollution, litter, and noise. However, operation of either build alternative is not expected to differ substantially from current conditions and would not pose an increase in risk. The wider roadbed would create a less-permeable surface and, thus, could alter surface flows into storm drain facilities and riparian/riverine features.

Drainage design and proposed water quality BMPs, as identified in measures **WQ-1** and **WQ-5** (Section 2.4.2, *Water Quality and Stormwater Runoff*), would reduce the amount of roadway pollutants entering riparian/riverine resources and federal- and state-jurisdictional water features. With implementation of avoidance and minimization measures **WET-1** and **WET-2**, disturbance to riparian habitat would be minimized to a less-than-significant level. With implementation of mitigation measure **WET-3** (Section 2.4.2, *Wetlands and Other Waters*), permanent impacts on jurisdictional resources (1.27 acres of California Department of Fish and Wildlife [CDFW] jurisdictional limits), which include riparian habitats under CDFW vegetated streambed, will be mitigated at a minimum 1:1 ratio through the use of an agency-approved mitigation bank, in-lieu fee provider, permittee-responsible mitigation site, or any other agency-approved mitigation provider.

Impacts on natural communities of concern could be substantially adverse because these natural communities of concern are rapidly declining throughout the region and provide habitat for many of the special-status species discussed in Response 3.7.4(a), above. The measures in Section 2.4.1, *Natural Communities,* Section 2.4.2, *Water Quality and Stormwater Runoff*, and Section 2.4.2, *Wetlands and Other Waters* are intended to address the substantial adverse effects on sensitive natural communities. Therefore, impacts would be less than significant with avoidance, minimization, and mitigation measures incorporated.

c) Less than Significant with Mitigation Incorporated

As detailed in Section 2.4.2, *Wetlands and Other Waters*, the build alternatives would result in direct and indirect impacts on U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdictional Waters of the U.S., including wetlands. The impacts on wetlands are the same under Alternatives 2 and 3. Project impacts on jurisdictional wetlands are as follows:

- Temporary impacts on 0.51 acre of USACE/RWQCB wetland Waters of the U.S. and permanent impacts on 0.05 acre of USACE/RWQCB wetland Waters of the U.S.

This is a substantial adverse effect due to the quality of aquatic resources and declining health of wetlands remaining in Ventura County. Direct temporary adverse effects on wetlands could result from construction activities, including grading, excavating, soil stockpiling, or other earth-disturbing activities. The use of construction equipment, machinery, and vehicles within wetlands could alter hydrologic conditions or remove soil, vegetation, or other resources, leading to decreased quality or loss of resources. Clearing and grading activities, as well as elevation modifications, could disturb and compact soils and affect hydrologic conditions. Indirect adverse effects could include the introduction of nonnative species, erosion, sedimentation, chemical spills, and alteration of downstream hydrologic, vegetative, and/or soil conditions. Measures **WET-1** and **WET-2** (Section 2.4.2, *Wetlands and Other Waters*) will be implemented to minimize and avoid disturbance to wetlands during construction. With implementation of measures **NC-6** through **NC-8** (Section 2.4.1, *Natural Communities*), hydrologic connectivity within drainages will be maintained during construction, construction equipment will be stored away from jurisdictional waters to the greatest extent feasible, and a SWPPP will be developed and implemented during construction. Therefore, the temporary impacts on wetlands would be less than significant with avoidance and minimization measures incorporated.

Direct permanent impacts on potential USACE and RWQCB jurisdictional wetlands would occur under Alternatives 2 and 3 as a result of adding an HOV/express bus lane and expanding the bridges at Calleguas Creek, Conejo Creek, Beardsley Wash, San Jon Creek, and Arroyo Creek (e.g., expanding nosing walls, piers, abutments). With implementation of mitigation measure **WET-3** (Section 2.4.2, *Wetlands and Other Waters*), a compensatory mitigation plan will be developed during the permitting phase of the project and will include a minimum ratio of 1:1 for permanent impacts on jurisdictional resources including wetlands. Therefore, the permanent impacts on wetlands would be less than significant with mitigation.

d) Less than significant with Mitigation Incorporated

As detailed in the *Corridors and Linkages* subsection of Section 2.3.1, *Natural Communities*, the proposed project would temporarily and permanently affect existing wildlife movement corridors, wildlife movement, and wildlife crossings within the BSA and project region, including increased habitat fragmentation, reduced structural openness of crossings, and increased noise and light disturbances. The area has a high level of regional wildlife movement and migration within the BSA, particularly the Conejo Grade portion of the project. Widening of US 101 through the Conejo Grade will further increase the barrier effect the highway has on habitat connectivity and wildlife movement in this linkage. In addition, some functional loss would occur with widening of the existing Conejo Grade culvert (i.e., loss of structure openness), which is the only structure in the Conejo Grade that may facilitate safe wildlife movement across the highway. Because connectivity in this linkage is already highly constrained by the

existing US 101, these impacts would be substantially adverse. A wildlife and collaring tracking study is currently being conducted in partnership with the National Park Service (measure **TE-11**, Section 2.4.5, *Threatened and Endangered Species*). The study includes collection and analysis of data on wildlife movement and distribution relative to the freeway and crossings. The study uses GPS collaring to radio track multiple species and remote cameras in existing crossing points and areas in the vicinity of the freeway to monitor wildlife use. It is anticipated the study will be completed during the Project Approval and Environmental Document phase of the project. Any pertinent measures associated with the study, which may include avoidance, minimization, and/or mitigation measures, will be included in the final Environmental Impact Report/Environmental Assessment for the project. Measures **NC-14** through **NC-24** (Section 2.4.1, *Natural Communities*) would also be implemented to reduce impacts on wildlife movement corridors. Therefore, the impact would be less than significant with mitigation incorporated.

Trees, shrubs, and structures are present throughout the project site that could provide suitable habitat for nesting birds, including raptors, protected by the Migratory Bird Treaty Act or California Fish and Game Code Sections 1797.5, 1920.5, 1930, 1932, and 1932.5. The proposed project has the potential to affect active native resident and/or migratory bird nests if, and to the extent that, those trees and shrubs are trimmed or removed, or the structures are demolished, during the avian nesting season and they contain nests. Construction could also occur adjacent to active nests causing nest failures or abandonment. With implementation of measure **AS-10** (Section 2.4.4, *Animal Species*), a Nesting Bird Management Plan will be prepared prior to construction to avoid and minimize impacts to nesting birds. Therefore, the impact would be less than significant.

The Santa Clara River Bridge would not be widened as a part of either Alternatives 2 or 3, and no changes to the grade or river are proposed that would affect fish or wildlife movement or connectivity at this linkage. Therefore, the project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant following implementation of avoidance and minimization measures.

e) Less than Significant with Mitigation Incorporated

As detailed in the *Local Regulations* subsections of Section 2.4.1, *Natural Communities,* in Chapter 2, the proposed project would not conflict with local policies and ordinances protecting biological resources, including for protected trees (under the Ventura County Tree Protection Ordinance, City of Ventura Tree Protection Ordinance, City of Thousand Tree Preservation and Protection Ordinances, City of Oxnard Landscape Standards, and City of Camarillo Tree Protection) and wildlife crossings (per Ventura County Habitat Connectivity and Wildlife Corridor Ordinance 4537). Implementation of measure **NC-25** (Section 2.4.1, *Natural Communities*) would require compliance with any applicable local tree policies and/or ordinances, as well as any general plan or municipal codes that pertain to protected trees.

The build alternatives would not affect any Conejo Open Space Conservation Agency–designated Natural Open Space Areas and no temporary construction or encroachment within designated conservation areas would occur; therefore, the project would not conflict with the Conejo Open Space Conservation Agency's *Rules and Regulations Ordinance Manual* (January 2020). Refer to Section 2.4.1, *Natural Communities*, for additional details.

As detailed in the *California Coastal Act* subsections of Section 2.4.1, *Natural Communities*, the western portion of the BSA is within the California coastal zone under the jurisdiction of the Ventura County Local Coastal Program (LCP) and City of Ventura LCP. No impacts on coastal lands under the jurisdiction of the Ventura County LCP would occur, but the project would be performing actions that are considered development activities by the California Coastal Commission (CCC) (e.g., construction, grading, placement of fill or other materials) within areas containing sensitive coastal resources within lands under the jurisdiction of the City of Ventura LCP. Mitigation for these direct impacts would not conflict with the local policies and LCP requirements for project work within these areas. Direct impacts on CCC Environmentally Sensitive Habitat Areas will be mitigated as a part of permitting for impacts on aquatic resource features that are jurisdictional under USACE, RWQCB, CDFW, and CCC (**WET-3**, Section 2.4.2, *Wetlands and Other Waters*). This will involve mitigation for permanent impacts on jurisdictional resources at a minimum ratio of 1:1 through a compensatory mitigation plan using an agency-approved mitigation bank, in-lieu fee provider, permittee-responsible mitigation site, or any other agency-approved mitigation provider. ESA fencing will be erected around all Environmentally Sensitive Habitat Areas adjacent to the project; a CCC required 100-foot buffer between development and wetlands would be applied, where applicable; and avoidance and minimization measures will be implemented to reduce any indirect impacts that may occur on adjacent sensitive coastal habitat. No further action for Environmentally Sensitive Habitat Areas is necessary. A Coastal Development Permit will be required from the City of Ventura LCP. In addition to mitigation measure **WET-3**, measures **NC-1** through **NC-11** (Section 2.4.1, *Natural Communities*) and **AS-8** through **AS-10** (Section 2.4.4, *Animal Species*) would be implemented to avoid and minimize impacts on sensitive coastal resources. Impacts would be less than significant with mitigation.

f) No Impact

As described in Section 2.4.1, *Natural Communities*, the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.7.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

3.7.5.1 CEQA Significance Determinations for Cultural Resources

The potential for the project to result in impacts related to cultural resources was assessed in the *Historic Properties Survey Report* (Caltrans 2024a), *Archaeological Survey Report* (Caltrans 2024b), *Historic Resources Evaluation Report* (Caltrans 2024c), and *Finding of Adverse Effect* (Caltrans 2025b).

a) Significant and Unavoidable Impact

There are 11 historical resources within the APE, as listed in Table 3.7.5-1. The results of the records search, consultation, and field surveys resulted in two previously listed California Register of Historical Resources (CRHR) properties, eight newly determined CRHR eligible properties, and one CEQA historical resource only property. The CRHR-listed and -eligible properties and CEQA historical resource are outlined below.

Table 3.7.5-1. Historical Resources within or Adjacent to the APE

Name	Location	Eligibility Status
Firestone Tire and Service Station	500 E. Thompson Boulevard, Ventura	CRHR eligible under Criteria C/3
Pierpont Inn District	550 Sanjon Road, Ventura	CRHR eligible as a historic district under Criteria A/1
Pierpont Inn, Main Building	550 Sanjon Road, Ventura	CRHR eligible under Criteria A/1
Pierpont Inn, Mattie Gleichmann House	550 Sanjon Road, Ventura	CRHR eligible under Criteria C/3
Griffin Brothers Funeral Chapel	1075 E. Daily Drive, Camarillo	CRHR eligible under Criteria C/3
Pleasant Valley Baptist Church	2315 Ventura Boulevard, Camarillo	CRHR listed under Criterion 3
Cawelti Building	2633 Ventura Boulevard, Camarillo	CRHR eligible under Criteria A/1
Adolfo Camarillo Heritage Grove	North of U.S. 101 and east of Lewis Road in Camarillo	CRHR listed under Criterion 2

Name	Location	Eligibility Status
Timber Schoolhouse and Auditorium	1872 Newbury Road, Thousand Oak	CRHR eligible under Criteria A/1
Leibole & Kaufman Building	584 Thousand Oaks Boulevard, Thousand Oaks	CRHR eligible under Criteria C/3
Hunt Olive Tree	600 W. Hillcrest Drive, Thousand Oaks	Locally designated as Ventura County Landmark No. 64; CEQA locally designated historical resource

Source: Caltrans 2025b.

The project would have no effect on one historical resource, a less-than-significant impact on six historical resources, a less-than-significant impact with mitigation for three historical resources, and a significant impact on one historical resource. The project would have no impacts on the Hunt Olive Tree, a locally designated historical resource, because the historical resource is too far from project construction work. The less than significant finding for six historical resources is due to changes small enough that they would not result in a substantial adverse change in the resources' significance.

The three historical resources that would have a less-than-significant impact with mitigation incorporated are the Pierpont Inn District, Main Building, and Mattie Gleichmann House. One historical resource that would have a significant impact is the Adolfo Camarillo Heritage Grove. Reasons are explained in detail below.

Pierpont Inn District

The project would require soundwall construction, which would cause a substantial adverse change in the significance of the historical resource by blocking contributive views from the property to the Pacific Ocean and its contributors. In addition, the project would include bridge widening adjacent to the Pierpont Inn District that has the potential to cause a substantial adverse change in the significance of the historical resource and its contributors by damaging the contributive Mattie Gleichmann House through vibrations. The project would have three mitigation measures: installation of partially transparent soundwall at this location, thereby ensuring that the view remains visible (measure **CR-5**); use of cast-in-drilled-hole piles and a slurry displacement method or implementation of pile cushioning to lessen vibrational effects (measure **CR-6**); and preparation of an Adjacent Structure Monitoring Plan to conduct vibration monitoring at the Mattie Gleichmann House (measure **CR-7**), all of which would bring the impacts to less-than-significant levels with mitigation incorporated for this location.

Pierpont Inn, Main Building

The project would require soundwall construction, which would cause a substantial adverse change in the significance of the historical resource by blocking contributive views from the property to the Pacific Ocean. A mitigation measure would be applied to install a partially transparent soundwall at this location, thereby ensuring that the view remains visible (measure **CR-5**), which will bring the impacts to less-than-significant levels with mitigation incorporated for this location.

Pierpont Inn, Mattie Gleichmann House
The project would require bridge widening adjacent to the Pierpont Inn District, which has the potential to cause substantial adverse change to the historical resource by causing vibrational damage. The project would have two mitigation measures: the use of cast-in-drilled-hole piles and a slurry displacement method or implementation of pile cushioning to lessen vibrational effects (measure **CR-6**) and preparation of an Adjacent Structure Monitoring Plan to conduct vibration monitoring (measure **CR-7**), which would bring the impacts to less-than-significant levels with mitigation incorporated for this location.

Adolfo Camarillo Heritage Grove
The project would cause substantial adverse change in the significance of the historical resource because the project would require removal of eight eucalyptus trees and relocation of two eucalyptus trees at the eastern end of the southern row of eucalyptus trees that would alter all character-defining features of the Adolfo Camarillo Heritage Grove, including its double row of eucalyptus trees, traversable pathway between the rows, and proximity to and relationship with the Camarillo Ranch property to the north. Impacts of the project would result in the resource's loss of historical significance. Therefore, the project would result in a significant and unavoidable impact on the Adolfo Camarillo Heritage Grove and would have a substantial adverse change in the significance of this historical resource. Mitigation measures will be forthcoming, but measure **CR-MM-1** provides suggested mitigation measures to reduce impacts and includes (but is not limited to) tree replacement, preparation of an arborist report, update of the National Register of Historic Places nomination form for the adjacent Camarillo Ranch property, and/or interpretive materials.

b), c) Less than Significant Impact

There is one archaeological resource, which is considered a CEQA archaeological resource (CA-VEN-223), within the project APE that is a precontact habitation site, originally recorded as spanning both sides (north and south) of US 101. The project would have less-than-significant impacts on the archaeological site (CA-VEN-223) because the site would be avoided and protected in place using an ESA (measure **CR-3**). In addition, archaeological monitoring of ground disturbance within 200 feet of the ESA will be conducted to minimize impacts as much as feasible (measure **CR-4**). Impacts would be less than significant.

No human remains are known to exist within the APE. Therefore, construction of the project would not result in impacts on known human remains. It is possible previously undocumented cultural materials or previously undocumented human remains could be unearthed during site preparation, grading, or excavation activities for the project (Alternatives 2 and 3). Those potential effects would be avoided or minimized through standard project measures **CR-1** and **CR-2** (Section 2.2.12, *Cultural Resources*). If cultural materials are discovered during construction, measure **CR-1** will be implemented. If human remains are discovered, measure **CR-2** will be implemented. With the implementation of measures **CR-1** through **CR-4**, impacts would be less than significant.

3.7.6 Energy

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.7.6.1 CEQA Significance Determinations for Energy

The potential for the project to result in impacts related to energy was assessed in the *Energy Technical Report* (Caltrans 2022a), *Traffic Operations Analysis Report* (Caltrans 2021a), *Air Quality Report* (Caltrans 2025a), and *Draft Project Report* (Caltrans 2026b). The results are summarized in the discussion Section 2.3.8, *Energy*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

As discussed in Section 2.3.8, *Energy*, implementation of the build alternatives is expected to affect the use of energy resources in the study area during short-term construction and long-term operations. Energy consumption from construction activities would occur at different rates throughout the construction phases. Project construction would utilize equipment such as crawler tractors, excavators, graders, rollers, rubber-tired loaders, scrapers, rough terrain forklifts, and paving equipment. The direct energy required to construct the proposed project under either build alternative would be approximately 423 billion BTUs over the course of the approximately 12-year construction period. Although construction would result in a short-term increase in energy use, construction design features would help conserve energy. The construction contractors would also be required to comply with state regulations, including the In-Use Off-Road Diesel-Fueled Fleets Regulation, which requires construction equipment to use renewable diesel fuel beginning in 2024. With implementation of measure **EN-1** (Section 2.3.8, *Energy*), energy conservation features including but not limited to recycling existing asphalt concrete pavements, will be investigated during final design of the project. Measure **TR-1** (Section 2.2.10, *Transportation*) would require a Transportation Management Plan (TMP) to be developed for the project to address potential traffic and circulation impacts during the construction phase. The TMP would include temporary traffic control devices that would reduce gasoline consumption by limiting traffic congestion and reducing the length of detours. In addition, the project would implement Caltrans Standard Specifications 6-1.03, Local Materials; 14-9, Air Quality; and 14-10, Solid Waste Disposal and Recycling, which may reduce diesel fuel consumption by promoting the use of local materials, requiring compliance with

applicable air pollution control rules and regulations, and recycling non-hazardous waste and excess materials to the extent practicable. Therefore, project construction would not result in the inefficient, wasteful, or unnecessary consumption of energy and impacts would be less than significant.

Long-term changes in energy use are due to the changes in volumes, speeds, and fuel economy of vehicles traveling in the region. Under the build alternatives, there would be direct energy use from vehicles operating on regional roadways. The No-Build Alternative and build alternatives would have higher regional VMT under all future years compared to Existing (2018) conditions. However, as described in Section 2.3.8, *Energy* (see Table 2.3.8-4), direct energy consumption under the No-Build Alternative and build alternatives would decrease during Opening Year (2040), RTP/SCS Horizon Year (2045), and Horizon Year (2060) conditions compared to Existing (2018) conditions. This disparity of decreased energy consumption and increased VMT is attributed to fleet turnover, as older, less fuel-efficient vehicles are replaced by later-model, more fuel-efficient vehicles over time. These later-model replacement vehicles would also include hybrid and all-electric vehicles. As such, energy consumption under Build Alternatives 2 and 3 would decrease during Opening Year (2040), RTP/SCS Horizon Year (2045), and Horizon Year (2060) conditions compared to Existing (2018) conditions. Additionally, the travel time improvements achieved by reduced congestion under either build alternative will enhance operational productivity and associated energy efficiency. With implementation of avoidance and minimization measure **EN-2** (Section 2.3.8, *Energy*), light fixtures and traffic signals will be replaced or installed with highly efficient light-emitting diodes. Therefore, project operation would not result in the inefficient, wasteful, or unnecessary consumption of energy and impacts would be less than significant.

The proposed improvements associated with Build Alternatives 2 and 3 would require increased levels of periodic maintenance, which could increase indirect energy consumption. Indirect energy consumption would be from the energy needs of vehicles and equipment used for routine maintenance such as vegetation management, sweeping, restriping, and pavement preservation activities. The total indirect energy impacts would not be substantial at the regional level, and the total project impact on regional energy supplies would be minor. Therefore, indirect energy consumption of the project would not result in the inefficient, wasteful, or unnecessary consumption of energy and impacts would be less than significant.

b) No Impact

The project is identified in SCAG's 2024–2050 RTP/SCS under project number 5160001. The build alternatives directly support the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and congestion. The project is also included in the SCAG financially constrained 2025 FTIP under project number VEN131201. Therefore, the build alternatives are consistent with the goals of SCAG's 2024–2050 RTP/SCS and do not conflict with a state or local plan for renewable energy or energy efficiency. No impact would occur. The build alternatives would implement transportation improvements that would not conflict with or obstruct statewide and local energy and energy efficiency efforts. As described in Response

3.7.6(a) above, implementation of the build alternatives would involve short-term increases in energy consumption from construction activities. Long-term operations would involve increased energy consumption from vehicles on the roadway relative to Alternative 1 (No-Build Alternative), but energy consumption per vehicle mile traveled would be substantially lower than under existing conditions. More efficient vehicle technologies using improved fuels would be able to use the alignment under the build alternatives. Standard project measures incorporated into the project would meet or exceed the measures recommended in the SCAG 2024–2050 PEIR that incorporate Best Available Control Technology to be employed during project design, construction, and operation. As described in Response 3.7.6(a), these measures include measures **EN-1** and **EN-2** (Section 2.3.8, *Energy*). Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and no impact would occur.

3.7.7 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

3.7.7.1 CEQA Significance Determinations for Geology and Soils

The potential for the project to result in impacts related to geology and soils was assessed in the *Preliminary Geotechnical Design Report* (Caltrans 2020a) and the *Structure Preliminary Geotechnical Reports* (SPGRs) (Caltrans 2020b, 2021f) prepared for 31 separate bridge widenings and retaining walls analyzed for the project. The results are summarized in the discussion provided in Section 2.3.3,

Geology/Soils/Seismic/Topography, in this EIR/EA. The following discussion is based on those analyses.

a-i, a-ii) Less than Significant Impact

The project is in the highly seismic Southern California region within the influence areas of several fault systems. Multiple faults traverse the project alignment: the Sycamore Canyon fault, Bailey fault, Simi-Santa Rosa Fault Zone, and Oak Ridge fault. The project is also within California Geological Survey Alquist-Priolo Earthquake Fault Zones. There is potential for moderate to strong seismic ground shaking and ground surface fault ruptures within the project alignment. During final design, the project would include a geotechnical exploration program and evaluation (measure **GEO-1**), exploratory soil borings (measure **GEO-2**), and preparation of a geotechnical design report and foundation reports (measure **GEO-3**). Implementation of recommendations from the reports and adherence to applicable federal, state, and local seismic codes; the Caltrans Highway Design Manual; and the Caltrans seismic design criteria for structures are sufficient to avoid and/or minimize impacts related to surface fault rupture. Therefore, impacts are considered less than significant.

a-iii) Less than Significant Impact

Most of the project alignment is within a California Geological Survey–designated liquefaction zone (see Figure 2.3.3-2). The liquefaction potential can be considered high in some areas along the project alignment where presence of relatively loose alluvial soil below groundwater is present. Because there is potential for liquefaction at the site, there may be associated liquefaction-induced seismic settlement which may result in settlement of the bridge and proposed retaining wall structures. The potential for liquefaction effects on structures would be further investigated during the final design phase (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, impacts are considered less than significant.

a-iv) Less than Significant Impact

The project alignment is within the California Geological Survey Landslide Zone (as shown on Figure 2.3.3-2), predominantly along the steep grade of the Conejo Pass. In this area, the slopes of the existing roadway alignment are cut at gradients steeper than 45 degrees due to the presence of hard volcanic rock. This area has medium to high landslide susceptibility. The potential for landslides and slope instability that could affect the project's proposed structures and embankments will be further investigated during the final design phase. Measures **GEO-1** and **GEO-2** will be implemented, and the project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, impacts are considered less than significant.

b) Less than Significant Impact

Construction activities for the proposed project under Alternatives 2 and 3, such as grading and cut-and-fill slopes, would disturb soil and alter existing landforms. Temporary impacts would include soil compaction and an increased possibility of soil

erosion. Exposed soils would be particularly prone to erosion during construction of the proposed project under Alternatives 2 and 3, especially during heavy rains. Erosion impacts related to water quality are evaluated in Section 2.3.2, *Water Quality and Stormwater Runoff*. With the inclusion of measures **WQ-1** through **WQ-5**, which include compliance with NPDES permits and implementation of temporary and permanent BMPs, as described in Section 2.3.2, *Water Quality and Stormwater Runoff*, impacts during construction and operation related to erosion would be considered less than significant.

c) Less than Significant Impact

Most of the project alignment is within a liquefaction zone, as shown on Figure 2.3.3-2. The liquefaction potential can be considered high in some areas along the project alignment where presence of relatively loose alluvial soil below groundwater is present. In these areas, the potential for liquefaction, seismic settlement, and lateral spreading should be anticipated and accounted for in the design and construction of embankments, widened bridges, and retaining walls. The potential for liquefaction, seismic settlement, and lateral spreading will be further investigated during the final design phase (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, impacts are considered less than significant.

d) Less than Significant Impact

Expansive soils are scattered throughout Ventura County and their potential impact on structures is limited to just a few developed areas (i.e., portions of the Ojai Valley, the Camarillo Hills, and areas around the community of Moorpark). Expansive soils in these developed areas present a low threat. Expansive soils will be further evaluated during site-specific geotechnical investigation associated with the final design phase.

Although it is unlikely that expansive soils would be encountered in the project corridor, this cannot be conclusively determined without a site-specific subsurface investigation. During the final design phase, expansive soils will be further investigated (measures **GEO-1** and **GEO-2**), and the project will be designed and constructed in accordance with the recommendations from the geotechnical report and foundation reports (measure **GEO-3**). Therefore, impacts are considered less than significant.

e) No Impact

The project would not include septic tanks, sewer, or alternative wastewater disposal systems, or other facilities where such facilities would be required. There would be no impact.

f) Less than Significant with Mitigation Incorporated

As described in Section 2.3.4, *Paleontology*, earth-moving activities during construction of the project could potentially directly affect paleontological resources within the limits of disturbance. Excavations within the project area that affect geologic units with high paleontological sensitivity, including Holocene- to Pleistocene-age older alluvium,

Pleistocene-age Saugus Formation, early Pliocene-age Las Posas Sand, middle Mioceneage detrital sediments of Lindero Canyon, conglomerate, middle Miocene-age Monterey Formation, and early to middle Miocene-age lower Topanga Formation, micaceous clay shale, and arkosic sandstone, may well result in an adverse direct impact on scientifically important paleontological resources. Additionally, within the coastal zone boundary that overlaps with the project alignment, there are paralic deposits of the Sea Cliff marine terrace and is classified in the County's Coastal Zoning Ordinance as having moderate paleontological importance. It is anticipated that areas with paralic deposits of the Sea Cliff marine terrace have moderate paleontological importance and project excavation activities within such areas may also result in potential impacts on scientifically important paleontological resources.

Due to the potential for project construction to affect these geological units and deposits and any resources harbored within, a paleontological mitigation plan shall be prepared by a qualified paleontologist during final design and implemented during ground-disturbing activities in order to lessen potential impacts on significant paleontological resources (mitigation measure **PAL-1,** Section 2.3.4, *Paleontology*). With implementation of mitigation measure **PAL-1**, impacts would be less than significant for paleontological resources.

3.7.8 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?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

3.7.8.1 CEQA Significance Determinations for Greenhouse Gas Emissions

The potential for the project to result in impacts related to GHG emissions was assessed in the *Air Quality Report* (Caltrans 2025a). The results are summarized in the discussion provided in Section 2.3.6, *Air Quality*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

Construction Emissions

Construction GHG emissions would result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase. Project construction would involve crawler tractors, excavators, graders, rollers, rubber-tired loaders, scrapers, rough terrain forklifts, and paving equipment, among other types of construction equipment. Construction GHG emissions were calculated for each of the four construction phases using the Sacramento Metropolitan Air Quality Management District Roadway Construction Emissions Model[2] and estimated to total approximately 32,037 MT over the course of the approximately 12-year construction period from 2028 to 2040. Construction-related emissions are presented in Section 2.3.6, *Air Quality*, Tables 2.3.6-5 through 2.3.6-8. These construction GHG emissions are typical for the project type and construction equipment use. As both alternatives have the same construction duration, the same PMs, and a similar number of structures to be replaced and widened, the differences in construction activity are negligible. Therefore, the modeled construction emissions are applicable to both build alternatives. VCAPCD and the County have not adopted construction GHG emission thresholds. Although construction GHG emission thresholds are absent, the project would incorporate measures **GHG-1** through **GHG-8** (Section 3.3.4, *Greenhouse Gas Reduction Strategies*) to help reduce construction GHG emissions. In addition, GHG emissions would be temporary during the construction phase and would be spread out in four phases and along the 26-mile

[2] The Sacramento Metropolitan Air Quality Management District Roadway Construction Emissions Model is recommended by Caltrans for the quantification of expected construction-related GHG emissions related to the proposed project.

project corridor. With implementation of measures **GHG-1** through **GHG-8**, construction of the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, a less-than-significant impact would occur.

Operations Emissions

The regional VMT data for the Baseline/Existing, No-Build, and Alternatives 2 and 3 conditions, along with the EMFAC2021 emission rates, were used to calculate the CO_2 emissions for the Existing (2018), 2040 Opening Year, 2045 RTP/SCS Horizon Year, and 2060 Horizon Year conditions. The results of the modeling are included in the *Air Quality Report* (Caltrans 2025a). The future year No-Build and Build conditions are lower than the Existing\Baseline condition. When compared to the No-Build condition, Alternatives 2 and 3 GHG emissions are modeled to be marginally higher than the No-Build Alternative GHG. Therefore, because there is a reduction in future emissions compared to existing emissions, there is evidence of substantial progress in reducing emissions. Additionally, measures **GHG-9** through **GHG-12** (Section 3.3.4, *Greenhouse Gas Reduction Strategies*) will be implemented to reduce operational GHG emissions. Therefore, operation of the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Consequently, a less-than-significant impact would occur.

b) No Impact

The build alternatives directly support the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and congestion. Reducing vehicle delay and congestion will help minimize idling GHG emissions, as well as lower the time traffic spends at a lower vehicle speed where GHG emissions are higher. Therefore, this strategy contributes to overall GHG reduction efforts regarding mobile sources within the SCAG region. Furthermore, the project would be consistent with the County's CAP and thus the state's AB 32, AB 1279, and SB 32 goals. Therefore, the proposed project does not conflict with an applicable plan, policy, or regulation that has been adopted to reduce GHG emissions.

3.7.9 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.7.9.1 CEQA Significance Determinations for Hazards and Hazardous Materials

The potential for the project to result in impacts related to hazards and hazardous materials was assessed in the *Initial Site Assessment* (Caltrans 2021g). The results are summarized in the discussion provided in Section 2.3.5, *Hazardous Waste/Materials*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

Construction

Construction of the project would involve the routine transport, use, and disposal of hazardous materials such as solvents, paints, oils, grease, and fuels. Applicable local, State, and federal regulations for the use, storage, handling, transport, and disposal of

routine hazardous waste and materials shall be followed, such as those discussed in Section 2.3.5, *Hazardous Waste/Materials*.

Although materials such as solvents, paints, oils, grease, and fuels would be transported, used, and disposed of during construction, this would be a temporary occurrence. It is expected that any spills or releases involving such materials would be small, localized, and cleaned up as they occur, in compliance with standard practices for handling such materials. In addition, a SWPPP must be implemented during project construction for coverage under the Construction General Permit, in accordance with the requirements of the State Water Resources Control Board. The SWPPP requires implementation of BMPs for hazardous materials storage and soil stockpiles, inspections, maintenance, employee training, and the containment of releases to prevent runoff to stormwater collection systems or waterways. Therefore, with implementation of standard construction practices and applicable regulations along with the preparation of a project-specific SWPPP (measures **WQ-1** through **WQ-3**), construction of the project would not create a significant hazard for the public or the environment through the routine transport, use, or disposal of hazardous materials during construction. This impact would be less than significant.

Operation
During operation of the project, roadway maintenance could involve small amounts of hazardous materials. These could include common materials such as cleaners, paints, adhesives, and solvents. Such materials are considered common and would not be stored on site or used in quantities that would result in a significant release. Any spills involving these materials would be small, localized, and cleaned up as they occur. Applicable local, State, and federal regulations for the use, storage, handling, transport, and disposal of routine hazardous waste and materials shall be followed. This impact would be less than significant.

Applicable local, State, and federal regulations for the use, storage, handling, transport, and disposal of routine hazardous waste and materials shall be followed. Therefore, the project would not create a significant hazard to the public or the environment through the routine, transport, use or disposal of hazardous materials. Impacts would be less than significant.

b) Less than Significant Impact
Through excavation, demolition, and other construction activities, the project has the potential to encounter the following hazardous materials/waste during construction activities:

- Low potential for the project to encounter groundwater contamination associated with the TFX Aviation Facility that is currently undergoing remediation activities

- Asbestos-containing materials and lead-based paint associated with building and bridge structures that would be disturbed or require demolition activities by the project

- Aerially deposited lead in soils within US 101 from the historical use of leaded gasoline
- Lead chromate from paint used for traffic striping and pavement markings
- Soil and groundwater impacted with petroleum hydrocarbons from historical oil wells
- Treated wood waste from wooden guardrail posts and wooden posts supporting roadway signs
- Pesticides and herbicides in soils related to farming activities

In addition, there is a potential for the discovery of unknown hazardous materials and site contamination during project construction activities. For example, construction workers may encounter abandoned underground storage tanks or soil contamination during site excavation activities.

The project would not create a significant hazard to the public or the environment through any reasonably foreseeable upset or accident conditions involving the release of hazardous materials. The project would implement measures **HW-1** through **HW-11** (Section 2.3.5, *Hazardous Waste/Materials*), which would require further testing and properly handling of expected and unexpected hazardous waste and materials. Impacts would be less than significant.

c) Less than Significant Impact

As shown on Figure 2.2.7-2 (Section 2.2.7, *Community Character and Cohesion*), there are educational facilities of various types, including public and private facilities within 0.25 mile of the project limits, including Conejo Valley High School, Environmental Academy of Research Technology and Earth Sciences, Ventura County Special Education, and Adolfo Camarillo High school. No schools are known to be planned within 0.25 mile of the project limits. As discussed in Response 3.7.9(a) above, routine hazardous materials such as paint, solvents, and fuel are expected to be used, handled, stored, disposed of, and transported during construction and operation of the project in accordance with applicable local, State, and federal regulations, such as those discussed in Section 2.3.5, *Hazardous Waste/Materials*. Impacts are considered less than significant.

d) Less than Significant Impact

The project-specific *Initial Site Assessment* identified the following sites below to be listed on the Cortese list; however, they are not considered to be recognized environmental conditions, as they are closed case sites and would have a low potential to affect the project. Impacts would be less than significant.

- Mobil Station, 501 Las Posas Avenue, Camarillo, CA, 1,100 feet north of the project

- Imation, 350 South Lewis Road, Camarillo, CA, 1,900 feet southwest of the project

- Former Texaco Gas Station, 3025 Santa Clara Road, Oxnard, CA (Rice Avenue interchange), within the existing US 101 right-of-way

- Former Paymard Mobil Gas Station, 2505 E. Ventura Boulevard, Oxnard, CA, within the existing US 101 right-of-way

e) No Impact

This project is not within an airport land use plan or in immediate proximity to a public or private airport. Therefore, no impact would occur.

f) Less than Significant Impact

During construction, temporary lane closures and detours may result in short-term effects on emergency response and evacuation along and in the vicinity of the surrounding project area. To ensure that construction of the project would not physically interfere with emergency response plans adopted by the Cities of Thousand Oaks, Camarillo, Oxnard, and Ventura, and the County of Ventura, measure **TR-1** (Section 2.2.10, *Transportation*) would be implemented. Measure **TR-1** requires the preparation and implementation of a TMP and shall consider construction and alternative route strategies in the event that portions of roadways within the project limits are restricted during certain construction activities. In addition, the project shall comply with the Cities of Thousand Oaks, Camarillo, Oxnard, and Ventura and the County's Emergency Operations Plans, which address extraordinary emergency situations. All emergency procedures shall be consistent with local, State, and federal guidelines during project construction and operation. Impacts are considered less than significant.

g) Less than Significant Impact

As discussed in Section 3.5, *Wildfire*, the Very High Fire Hazard Severity Zones within the project corridor are mostly concentrated within the Conejo Grade area between Camarillo and Thousand Oaks. In addition, at the westernmost portion of the project corridor, a Very High Fire Hazard Severity Zone is located near the project corridor in Ventura. However, the project is within the active US 101 transportation corridor, which predominantly consists of urban, developed, and disturbed environments. Generally, transportation projects, particularly those on existing alignments, are considered unlikely to exacerbate wildfire risks or post-fire flooding/landslides. The project will comply with Caltrans Standard Specifications Section 7-1.02M(2) and will implement the following measures to avoid or minimize the risk of wildfires: **TR-1** (Section 2.1.10, *Transportation*), **UTIL-2** (Section 2.1.11, *Utilities/Emergency Services*), **NC-8** and **NC-9** (Section 2.3.1, *Natural Communities*), **GEO-1** through **GEO-3** (Section 2.3.3, *Geology/Soils/Seismic/Topography*), **HYD-1** through **HYD-4** (Section 2.3.1, *Hydrology and Floodplain*), and **WQ-1** through **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*).

The project is anticipated to be constructed primarily within the existing State right-of-way and would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Impacts are considered less than significant.

3.7.10 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 or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) 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; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.7.10.1 CEQA Significance Determinations for Hydrology and Water Quality

The potential for the project to result in impacts related to hydrology and water quality was assessed in the *Water Quality Assessment Report* (Caltrans 2021h), the *Location Hydraulics Study, Volumes 1-7* (Caltrans 2020c through 2020i), and the *Summary Floodplain Encroachment Reports* (Caltrans 2021i). The results are summarized in the discussion provided in Section 2.3.1, *Hydrology and Floodplains*, and Section 2.3.2, *Water Quality and Stormwater Runoff*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

As discussed in Section 2.3.2, *Water Quality and Stormwater Runoff*, the total disturbed soil area for the project, under Alternatives 2 and 3, would be approximately 174 acres. The project, under either build alternative, has the potential to result in temporary impacts on water quality during construction activities, such as demolition and roadway construction. Grading and other earth-moving activities can cause an increase in soil erosion, sediments, and other pollutants from entering receiving water bodies. However, the project would be required to comply with the Caltrans NPDES Statewide Stormwater Permit and NPDES Construction General Permit (measures **WQ-1** and **WQ-2**, as specified in Section 2.3.2, *Water Quality and Stormwater Runoff*). The project would also be required to prepare a SWPPP and implement temporary BMPs including erosion and sediment control BMPs during construction (measures **WQ-2** and **WQ-3**, as specified in Section 2.3.2, *Water Quality and Stormwater Runoff*).

During construction, groundwater removal may be required when roadway or structure widening occurs in a channel. Dewatering could result in the release of unsuitable and untreated water if discharged directly to the environment. Water diversion would also have the potential to affect water quality, especially during installation and removal of the diversion system. To minimize potential water quality impacts, dewatering involving groundwater as well as non-stormwater would be subject to the requirements of the Los Angeles RWQCB. A dewatering permit would be required (measure **WQ-4**), as would dewatering BMPs. The amount of dewatering, however, is likely to be relatively small.

The project also has the potential to result in permanent impacts on water quality due to an increase in impervious surface areas of approximately 78 acres under Alternative 2, and approximately 84 acres under Alternative 3, which would increase surface runoff and additional pollutants from entering water resources. However, design pollution prevention BMPs and treatment control BMPs would be implemented to address the increase in impervious surfaces by stabilizing soils and capturing and treating the additional runoff before it enters water channels (measures **WQ-1** and **WQ-5**, as specified in Section 2.3.2, *Water Quality and Stormwater Runoff*). Design pollution prevention BMPs under consideration to minimize water quality impacts include adjusting and stabilizing existing drainage features (e.g., ditches, dikes, berms, swales), slope/surface protection systems, and concentrated flow conveyance systems, along with preserving existing vegetation. Treatment BMPs may include infiltration devices, biofiltration swales, biofiltration strips, gross-solids removal devices, and Austin Vault sand filters.

With implementation of measures **WQ-1** through **WQ-5** in Section 2.3.2, *Water Quality and Stormwater Runoff*, the project is not anticipated to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, impacts are considered less than significant.

b) Less than Significant Impact

The project is within the Santa Clara River Valley Groundwater Basin, Conejo Valley Basin, and Thousand Oaks Basin. Within these groundwater basins, the project is within

the following groundwater subbasins: Lower Ventura River Subbasin, Mound Subbasin, and Oxnard Plain Forebay Subbasin. Dewatering is expected to be required during project construction; however, any groundwater dewatering is projected to be minimal. The project would be required to obtain a dewatering permit, comply with all waste discharge requirements set by the Los Angeles RWQCB, and implement dewatering BMPs (measure **WQ-4**, specified in Section 2.3.2, *Water Quality and Stormwater Runoff*). The project would not use groundwater during operation, because it is a transportation project and would not cause additional growth or need for additional groundwater supply. As a result, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede substantial groundwater management of a basin. Impacts would be less than significant.

c-i), c-ii), and c-iii) Less than Significant Impact

The project would widen five bridges that would encroach upon the area with a 1 percent probability of the base flood (100-year floodplain): Conejo Creek, Calleguas Creek, Arroyo Conejo, South Branch Arroyo Conejo, and Beardsley Wash. In addition, bridge and/or roadway widening near four drainages would also encroach upon the area with a 1 percent probability of the base flood (100-year floodplain): Camarillo Hills Drain, Crestview Drain, El Rio Drain, and Moon Ditch. The project would not affect hydraulics or floodplains at seven floodplain crossings because the bridge and drainage structures at these locations would not be altered: Lewis Road Drain, Wood Creek (Las Posas Estates Drain), Santa Clara River, Arundell Barranca, Barlow Barranca, Telephone Drain, and Miles Road Drainage.

During construction, there would be some temporary impacts on the floodplain crossings due to construction activities. As discussed in Response 3.7.10(a), the project shall be required to comply with the NPDES Construction General Permit and develop a SWPPP to address potential sources of pollution, which may affect water quality including sediment erosion and siltation (measures **WQ-1** through **WQ-3**, as specified in Section 2.3.2, *Water Quality and Stormwater Runoff*). As specified in standard project measure **HYD-1**, to the maximum extent possible, construction activities would occur during the dry season. In the event of heavy rain, the construction site manager would move all construction equipment outside of the Special Flood Hazard Areas with a 1 percent annual chance of a flood event within the project area.

The project also has the potential to result in permanent impacts on water quality due to an increase in impervious surface areas of approximately 78 acres under Alternative 2, and approximately 84 acres under Alternative 3, which would increase surface runoff and additional pollutants from entering water resources. As discussed in Response 3.7.10(a), design pollution prevention BMPs and treatment BMPs would be implemented as part of the project (measures **WQ-1** and **WQ-5**, as specified in Section 2.3.2, *Water Quality and Stormwater Runoff*).

Therefore, the project would not result in substantial erosion or siltation on or off site or substantial increase in the rate or amount of surface water runoff in a manner that would

result in flooding on or off site. In addition, the project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

c-iv) Less than Significant Impact

Although the project would require encroachment within 100-year floodplains in the project area as part of project improvements, it would not increase the base floodplain elevations and it would not impede or redirect flood flows. The Federal Emergency Management Agency–designated 1-percent annual chance (100-year) floodplains would remain within the current respective channels and drainages with the proposed conditions, and the improvements are considered to be low risk, as discussed in Section 2.3.1, *Hydrology and Floodplains*. Measures to avoid and minimize impacts on floodplains would include **HYD-1** through **HYD-4** (Section 2.3.1, *Hydrology and Floodplains*). **HYD-2** would entail remapping floodplains through the Conditional Letter of Map Revision/Letter of Map Revision process, **HYD-3** would regrade floodplain infields in order to restore storage volume, and **HYD-4** would entail remodeling drainages (Nyland Drain, Beardsley Wash, and Moon Ditch) to evaluate design alternatives to minimize floodplain encroachments. A floodplain encroachment permit from the Ventura County Flood Control District will also be required.

Therefore, the project would not impede or redirect flood flows and impacts would be less than significant.

d) Less than Significant Impact

A portion of the project area is within the coastal zone (from the northern terminus of the project to the approximate location of the Arundell Avenue/Channel Drive overcrossing), including four proposed bridge widening locations between PM 29.45 and PM 30.59 and two proposed retaining wall structures (RWs 1577R and 1582R between PM 30.48 and PM 30.66). In addition, as previously discussed, portions of the project area are within 100-year floodplains. Some of the project's proposed bridge widening areas and retaining walls are near tsunami inundation zones or within inundation zones and flood hazard zones associated with dam failure (see Table 2.3.3-1 in Section 2.3.3, *Geology/Soils/Seismic/Topography*). These areas could be subjected to tsunami inundation, scour, and flood hazards. The SPGRs (Caltrans 2020b, 2021g) include preliminary foundation recommendations for the proposed bridge widening areas and retaining walls, as summarized in Table 2.3.3-1. More detailed information on the different foundation types considered for the proposed bridge widening areas and retaining walls can be found in the SPGRs (Caltrans 2020b, 2021g). The potential for tsunami inundation, scour, and flood hazards will be further investigated during the final design phase. The project will be designed and constructed in accordance with recommendations from the geotechnical report and foundation reports (measure **GEO-3**, as specified in Section 2.3.3, *Geology/Soils/Seismic/Topography*).

A seiche is a wave generated by disturbance or ground oscillation within a lake or large enclosed body of water. The majority of the project alignment is not in proximity to any

large open water body. The risk associated with seiche for such areas is considered nonexistent. However, proposed retaining wall RW 745L at Bridge No. 52-0428 (PM 14.8) would be within approximately 570 feet of a lake northeast of the site. The potential for seiche is considered low for proposed retaining wall RW 745L (Caltrans 2020b).

The project would not result in any flood, tsunami, or seiche hazards that are substantially different from existing conditions. The project does not include the permanent storage of any hazardous waste and materials within the project limits and, therefore, risk of release of pollutants due to project inundation from flood, tsunami, or seiche hazards is not applicable to the project. Impacts are considered less than significant.

e) Less than Significant Impact

As previously discussed in Response 3.7.10(a), the project would result in a disturbed soil area of approximately 174 acres. In addition, construction of the project would result in approximately 78 acres of new impervious area under Alternative 2 and approximately 84 acres under Alternative 3. Project construction would require compliance with the Los Angeles RWQCB Basin Plan (SWRCB 2014) and the Caltrans NPDES Statewide Stormwater Permit and NPDES Construction General Permit (measure **WQ-1** and **WQ-2**, as specified in Section 2.3.2, *Water Quality and Stormwater Runoff*), which requires compliance with State and federal water quality regulations regarding construction and operational water quality discharge. The project would not conflict with or obstruct the implementation of any applicable water quality control plans or groundwater management plans. Impacts are considered less than significant.

3.7.11 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

3.7.11.1 CEQA Significance Determinations for Land Use and Planning

The potential for the project to result in impacts related to land use and planning was assessed in the *Community Impact Assessment* (Caltrans 2026a). The results are summarized in the discussion provided in Sections 2.2.1, *Land Use*, and 2.2.7, *Community Character and Cohesion*, in this EIR/EA. The following discussion is based on those analyses.

a) No Impact

As described in Section 2.2.1, *Land Use*, the build alternatives would modify an existing transportation corridor. Changes to the existing corridor would primarily occur in or adjacent to the existing transportation facility right-of-way. Therefore, the project would not physically divide an established community and no impact would occur.

b) No Impact

As summarized in Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*, the project (Alternatives 2 and 3) is consistent with adopted goals and policies of all applicable federal, state, regional, and local plans and programs. The Ventura County General Plan outlines the goals, policies, and programs of the region and the proposed project is accounted for within the Ventura County General Plan. The proposed project is part of the corridor effort to meet the future demands for growth and land use in the area. Therefore, it is consistent with the land use plan, policies, or regulations and would not cause a significant environmental impact due to the aforementioned reason.

3.7.12 Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.7.12.1 CEQA Significance Determinations for Mineral Resources

The potential for the project to result in impacts related to minerals was assessed in Section 2.3.3, *Geology/Soils/Seismic/Topography*, in this EIR/EA. The following discussion is based on that analysis.

a), b) No Impact

A review of the USGS Mineral Resources Online Spatial Data was conducted (USGS 2024); no known mineral resources were identified within the project area. However, the Ventura County 2040 General Plan, Chapter 8, Natural Resources (County of Ventura 2020), shows a portion of the project alignment in the Oxnard area to be within MRZs 2, 3, and 4. These are areas that contain mineral resources (MRZ-2), areas that may qualify as mineral resources (MRZ-3), and areas where geologic information does not rule out either the presence or absence of mineral resources (MRZ-4). It is not anticipated that the project would encounter mineral resources because the project is within an existing, urbanized transportation corridor.

3.7.13 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

3.7.13.1 CEQA Significance Determinations for Noise

The potential for the project to result in impacts related to noise was assessed in the NSR (Caltrans 2022b) and the *Noise Abatement Decision Report* (Caltrans 2022c). The following discussion is based on those analyses.

As discussed in the NSR (Caltrans 2022b), an investigation of the project area was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed build alternatives. Land uses in the project area consist primarily of single-family and multifamily residential, places of worship, park, recreational areas, golf courses, schools, retail and restaurants/bars and hotels, commercial buildings, and undeveloped/agricultural land.

Based on the *Caltrans Traffic Noise Analysis Protocol* (Protocol) (Caltrans 2020j), all developed land uses are considered. However, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this CEQA impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards of single-family homes and private or community outdoor use areas at multifamily residences (such as decks and balconies), places of worship, schools, parks, playgrounds/basketball court, and outdoor seating/dining areas.

The project area was divided into 50 separate Noise Analysis Areas (NAAs). A brief description of these NAAs is included in Section 2.3.7, *Noise and Vibration*, and a more detailed description is included in the NSR (Caltrans 2022b).

Under CEQA, the baseline (existing) noise level is compared to the build noise level. The assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level. The comparison between the baseline and build condition is used to determine if the project is predicted to result in a substantial increase in overall noise levels. The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dBA or more. The Protocol states, "The significance of noise impacts under CEQA is determined by the Project Development Team based on the project-related increase in noise and other project-specific conditions." Based on discussions with the Project Development Team, which included the project applicant (VCTC), the engineering design team, and Caltrans, it was determined that a 12 dB increase was appropriate for the purposes of this project. It is based on the concept that a 10 dB increase in noise is generally perceived as doubling of noise (Caltrans 2020j). Therefore, if the design of the project would result in an increase of 12 dB or more (when the design-build condition noise level is compared to the existing conditions), an impact would be considered significant and would require feasible mitigation to be considered.

a) Less than Significant with mitigation incorporated

Construction

Construction activities related to development of the project (both Alternatives 2 and 3) would occur over approximately 12 years. Construction activities are expected to cause short-term elevated noise levels at land uses surrounding the project alignment. Construction-related noise would occur with the inclusion and use of construction equipment such as concrete mixers, bulldozers, backhoes, and heavy trucks. As discussed in Section 2.3.7, *Noise and Vibration,* the project would be required to comply with Caltrans Standard Specifications (2023) for noise control. According to the requirements of the specifications, construction noise cannot exceed 86 dBA, maximum sound level, at 50 feet from the job site activities between 9:00 p.m. and 6:00 a.m. (measure **N-1**, Section 2.3.7, *Noise and Vibration*).

In addition, measure **N-2** (Section 2.3.7, *Noise and Vibration*) outlines procedures that would be implemented to minimize potential noise disturbances at sensitive areas during construction. With inclusion of avoidance and minimization measures **N-1** and **N-2**, impacts from construction would be considered less than significant.

Operation

Alternative 2: Add an HOV/Express Bus Lane in Each Direction

There are 34 modeled receivers, representing 81 equivalent dwelling units, within the Alternative 2 project alignment that are predicted to exceed the existing modeled noise levels by 12 dB or more. The predicted worst-hour exterior traffic noise levels at these receivers range from 48 to 70 dBA hourly equivalent sound level ($L_{eq[h]}$) under existing conditions. The predicted worst-hour exterior traffic noise levels at these receivers

range from 62 to 80 dBA $L_{eq(h)}$ under Alternative 2 Design-Year Build conditions. A more detailed description of these receivers is included below.

NAA 5: There are three modeled receivers (M05.33, M05.35, and M05.37), representing two equivalent dwelling units, within NAA 5. It should be noted that M05.33 was modeled as a measurement-only location and is not representative of an outdoor use area. The predicted worst-hour exterior traffic noise levels at receiver M05.35 and M05.37 are predicted to be 70 and 61 dBA $L_{eq(h)}$ under existing conditions, respectively, with an existing soundwall in place. The predicted worst-hour exterior traffic noise levels range from 82 to 74 dBA $L_{eq(h)}$ under Design-Year Build conditions, which represents an increase of 12 and 13 dB, respectively.

Large increases in predicted noise levels under the Design-Year Build conditions relative to the existing conditions are due to the widening of the southbound mainline, which would be associated with the demolition of an existing noise barrier to accommodate improvements to the ramp/mainline. An analysis of a noise barrier system (S261/S281) at the edge of shoulder was prepared to determine if feasible abatement (providing 5 dB worth of insertion loss) was possible and is discussed in detail in Section 2.3.7, *Noise and Vibration*. The analysis indicates that the noise barrier would reduce Design-Year Build condition noise levels by 5 to 12 dB at barrier heights ranging between 8 and 18 feet. Therefore, with the design of noise barrier system S261/S281, the Design-Year Build condition noise levels would be reduced below 12 dB.

An existing barrier would be demolished as part of the project due to widening of the US 101 mainline. The height of this barrier ranges from 5 to 16 feet along the southbound edge of shoulder from STA287+10 through STA276+09. Should barrier system S261/S281 not be feasible or reasonable under NEPA, the existing barrier, as described above, would be redesigned as a replace-in-kind barrier with the same specifications (height, length, and location) as mitigation. Based on the height of the barrier (5 to 16 feet) and the location relative to the modeled receivers, future design-year noise levels—with inclusion of replace-in-kind soundwall—are predicted to decrease by approximately 12 dB, which would result in impacts being mitigated to a less-than-significant level. Therefore, under CEQA, noise impacts would be less than significant with mitigation incorporated.

NAA 8: There are 28 modeled receivers (M08.07, M08.09 through M08.11, M08.13, M08.15, M08.18, M08.19, M08.21, M08.22, M08.24, M08.26 through M08.31, M08.34, M08.35, M08.37, M08.40, M08.41, M08.43. M08.46, M08.53, M08.54, M08.59 and M08.60), representing 75 equivalent dwelling units, within NAA 8. It should be noted that M08.13 and M08.59 were modeled as measurement-only locations and are not representative of an outdoor use area. The calculated worst-hour exterior traffic noise levels at modeled receivers are predicted to range between 54 and 64 dBA $L_{eq(h)}$ under existing conditions, respectively, with an existing soundwall in place. The calculated worst-hour exterior traffic noise levels are predicted to range from 67 to 77 dBA $L_{eq(h)}$ under Design-Year Build conditions, which represents an increase of 12 to 14 dB.

An existing barrier would be demolished as part of the project due to widening of the US 101 mainline. This barrier is 12 feet high and located along the northbound edge of shoulder from STA298+07 through STA329+27. Should barrier system S314/S330 not be feasible or reasonable under NEPA, the existing barrier, as described above, would be redesigned as a replace-in-kind barrier with the same specifications (height, length, and location) as mitigation. Based on the height of the barrier (12 feet) and the location relative to the modeled receivers, future design-year noise levels—with inclusion of replace-in-kind soundwall—are predicted to decrease by approximately 8 to 10 dB, which would result in impacts being mitigated to a less-than-significant level. Therefore, under CEQA, noise impacts would be less than significant with mitigation incorporated.

NAA 17: There are two modeled receivers (M17.16 and IE17.01), representing one equivalent dwelling unit, within NAA 17. It should be noted that M17.16 was modeled as a measurement-only location and is not representative of an outdoor use area. IE17.01 is an interior measurement, which represents the interior of a church along the alignment. The calculated worst-hour exterior traffic noise level at the modeled receiver is predicted to be 48 dBA $L_{eq(h)}$ under existing conditions, with an existing soundwall in place. The calculated worst-hour exterior traffic noise level is predicted to be 62 dBA $L_{eq(h)}$ under Design-Year Build conditions, which represents an increase of 14 dB.

Large increases in predicted noise levels under the Design-Year Build conditions relative to the existing conditions are due to the widening of the southbound mainline, which would be associated with the demolition of an existing noise barrier to accommodate improvements to the mainline. An analysis of a noise barrier (S657) at the edge of shoulder was prepared to determine if feasible abatement (providing 5 dB worth of insertion loss) was possible and is discussed in detail in Section 2.3.7, *Noise and Vibration*. The analysis indicates the noise barrier would reduce Design-Year Build condition noise levels by 10 to 16 dB at barrier heights ranging between 8 and 18 feet. Therefore, with the design of noise barrier S657, the Design-Year Build condition noise levels would be reduced below 12 dB.

An existing barrier would be demolished as part of the project due to widening of the US 101 mainline. This barrier is 10.5 feet high and located along the southbound edge of shoulder from STA637+05 through STA648+09. Should barrier S657 not be feasible or reasonable under NEPA, the existing barrier, as described above, would be redesigned as a replace-in-kind barrier with the same specifications (height, length, and location) as mitigation. Based on the height of the barrier (10.5 feet) and the location relative to the modeled receivers, future design-year noise levels—with inclusion of replace-in-kind soundwall—are predicted to decrease by approximately 12 to 13 dB, which would result in impacts being mitigated to a less-than-significant level. Therefore, under CEQA, noise impacts would be less than significant with mitigation incorporated.

NAA 20: There is one modeled receiver (M20.17), representing one equivalent dwelling unit, within NAA 20. The calculated worst-hour exterior traffic noise levels at the modeled receiver are predicted to be 66 dBA $L_{eq(h)}$ under existing conditions with an existing soundwall in place. The calculated worst-hour exterior traffic noise level is

predicted to be 78 dBA $L_{eq(h)}$ under Design-Year Build conditions, which represents an increase of 12 dB.

Large increases in predicted noise levels under the Design-Year Build conditions relative to the existing conditions are due to the widening of the northbound mainline, which would be associated with the demolition of an existing noise barrier to accommodate improvements to the mainline. An analysis of a noise barrier system (S714/S720/S726/S736) at the edge of shoulder was prepared to determine if feasible abatement (providing 5 dB worth of insertion loss) was possible and is discussed in detail in Section 2.3.7, *Noise and Vibration*. The analysis indicates that the noise barrier would reduce Design-Year Build condition noise levels by 6 to 13 dB at barrier heights ranging between 8 and 18 feet. Therefore, with the design of noise barrier system S714/S720/S726/S736, the Design-Year Build condition noise levels would be reduced below 12 dB.

An existing barrier would be demolished as part of the project due to widening of the US 101 mainline. This barrier is 11 feet high and located along the northbound edge of shoulder from STA717+22 through STA723+51. Should barrier system S714/S720/S726/S736 not be feasible or reasonable under NEPA, the existing barrier, as described above, would be redesigned as a replace-in-kind barrier with the same specifications (height, length, and location) as mitigation. Based on the height of the barrier (11 feet) and the location relative to the modeled receivers, future design-year noise levels—with inclusion of replace-in-kind soundwall—are predicted to decrease by approximately 7 to 10 dB, which would result in impacts being mitigated to a less-than-significant level. Therefore, under CEQA, noise impacts would be less than significant with mitigation incorporated.

Noise levels are not predicted to increase by 12 dB or more at any other receivers within any other NAAs.

Noise impacts are considered less than significant with mitigation incorporated under Alternative 2.

N-MM-1: Based on the findings of the NEPA analysis and the feasibility and reasonableness determination, if the walls outlined as part of the NEPA analysis are not included as abatement, then the following existing walls will be redesigned as replace-in-kind barriers at their existing locations:

- Southbound edge of shoulder from STA287+10 through STA276+09, with barrier heights ranging from 5 to 16 feet,
- Northbound edge of shoulder from STA298+07 through STA329+07, with a barrier height of 12 feet,
- Southbound edge of shoulder from STA637+05 through STA648+09, with a barrier height of 10.5 feet, and

- Northbound edge of shoulder from STA717+22 through STA723+51, with a barrier height of 11 feet.

Alternative 3: Add an HOV/Express Bus Lane in Each Direction, with Design Variations

There are 31 modeled receivers, representing 68 equivalent dwelling units, within the Alternative 3 project alignment that are predicted to exceed the existing modeled noise levels by 12 dB or more. The predicted worst-hour exterior traffic noise levels at these receivers range from 48 to 68 dBA $L_{eq(h)}$ under existing conditions. The predicted worst-hour exterior traffic noise levels at these receivers range from 62 to 75 dBA $L_{eq(h)}$ under Build Alternative 3 Design-Year Build conditions.

The modeled receivers under Alternative 3 are the same modeled receivers as those under Alternative 2. Since noise levels under existing conditions and Design-Year Build conditions are similar between Alternatives 2 and 3 for the same modeled receivers, mitigation measure **N-MM-1** identified under Alternative 2 would also be the same for Alternative 3.

b) Less than Significant Impact

Any groundborne noise or vibration would be limited to the construction period and would be short in duration. The project would include typical construction activities using typical construction equipment (e.g., bull dozers, jack hammers, rollers) and non-standard construction activities, such as pile driving, along the existing roadway alignment and within the Caltrans right-of-way. Based on the *Caltrans Transportation and Construction Vibration Guidance Manual* (Caltrans 2020b), the typical type of construction equipment (rollers and bull dozers) produces a peak particle velocity (PPV) of 0.210 inch per second (in/sec) and 0.089 in/sec, respectively, at a reference distance of 25 feet (FTA 2018). The Caltrans manual references the damage potential for buildings extremely susceptible to vibration damage at 0.10 PPV in/sec (from Continuous/Frequent Intermittent Sources) with levels for newer residential structures being 0.5 PPV in/sec. Under both build alternatives, the closest structure is approximately 50 feet from the closest location where piles would be driven. This location (M02.07) is a commercial structure and therefore would fall under the modern industrial/commercial buildings classification 0.5 PPV in/sec. The reference distance for an impact pile driver based on the Caltrans manual at a distance of 25 feet is 0.65 PPV in/sec. At a distance of 50 feet (at the Sanjon road overcrossing), the vibration level would attenuate to a level of 0.30 PPV in/sec based on the vibration equation referenced in the Caltrans manual:

$$(PPV_{ref} \times (25/D)^{\wedge N} \times (E_{equip}/E_{ref})^{\wedge 0.5})$$

- PPF_{ref} is the reference level of vibration at a distance of 25 feet (0.65 PPV in/sec),
- D is the distance (75 feet),
- E_{equip} is the reference energy for the pile driver, 36,000 foot-pounds

- E_{ref} is the rated energy of the equipment to be used; in this case it is assumed that the energy will be the same, 36,000 foot-pounds, and

- N is value related to the vibration attenuation rate through ground, in this case 1.1, which is the suggested value based on the Caltrans manual.

Based on the distance and the type of building surrounding the area where piles would be driven, levels of vibration may be perceptible; however, they are not predicted to be significant under both build alternatives. Additionally, measure **N-3** would be implemented to minimize construction vibration impacts to the greatest extent possible and would include vibration monitoring.

With respect to operations, the project does not involve changes that would be expected to result in noticeable increases in groundborne vibration or groundborne noise levels from use or maintenance of the roadway. Once the project is completed, long-term increases in noise levels from use or maintenance of the roadway would be less than significant.

c) No Impact

The closest airport is Camarillo Airport approximately 1,700 feet south of the US 101 alignment. The project would not result in exposure of people residing or working in the area to excessive noise levels, as the project would not design or develop any residences within the project area.

3.7.14 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 unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.7.14.1 CEQA Significance Determinations for Population and Housing

The potential for the project to result in impacts related to population and housing was assessed in the *Community Impact Assessment* (Caltrans 2026a) and *Relocation Impact Memo* (Caltrans 2021j). The results are summarized in the discussion provided in Sections 2.2.6, *Growth*, and 2.2.8, *Relocations and Real Property Acquisitions*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

The potential of growth-related impacts resulting from the project was considered in the context of the first-cut screening analysis approach, as demonstrated in Section 2.2.6, *Growth*. That analysis determined that the project would generate additional short-term employment opportunities during construction, which would be filled by local residents. Long-term substantial population growth associated with project construction is not anticipated. The project also would not establish new homes or provide any new access into areas that previously had no access, which could prompt development. The project proposes improvements to existing roads and freeways that would result in capacity enhancements in response to expected demand, which is already been identified in the 2025 FTIP Amendment 25-24 (FTIP ID VEN131201) and SCAG's 2024–2050 RTP/SCS (Project ID 5160001). Operation of the project would not result in additional substantial growth over the growth already identified in SCAG's 2024–2050 RTP/SCS.

While the project would include the construction of additional transportation infrastructure (i.e., noise barriers, retaining walls, and bridge widening), the construction activity would be contained within the US 101 Caltrans right-of-way.

Projected population growth would occur in the resource study area with or without the improvements associated with the project. In addition, potential indirect growth has already been captured at the local and regional levels through inclusion of the project in SCAG's 2024-2050 RTP/SCS list of projects. Therefore, construction or operation of the

project would not induce substantial unplanned population growth, either directly or indirectly. The impact is considered less than significant.

b) No Impact

As described in Section 2.2.8, *Relocations and Real Property Acquisitions*, the project would result in partial acquisitions of 14 parcels under Alternative 2 and 19 parcels under Alternative 3. Permanent partial acquisitions would be required on commercial, industrial, agricultural, open space and recreation, vacant, and other miscellaneous type properties.

The project would be improving existing transportation infrastructure. No displacements requiring relocation of residential uses or construction of housing would occur. Therefore, because the project would not displace existing housing or people or require the acquisition of any residential units, there would be no impact.

3.7.15 Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

3.7.15.1 CEQA Significance Determinations for Public Services

The potential for the project to result in impacts related to public services was assessed in the *Community Impact Assessment* (Caltrans 2026a) and *Traffic Operations Analysis Report* (Caltrans 2021a). The results are summarized in the discussion provided in Section 2.2.4, *Parks and Recreational Facilities*, Section 2.2.9, *Utilities/Emergency Services*, Section 2.2.10, *Transportation*, and Appendix A, *Section 4(f)*, in this EIR/EA. The following discussion is based on those analyses.

a), b) Less than Significant Impact

Construction of the project would result in temporary impacts on traffic circulation including emergency services associated with fire and police protection. Those impacts would be addressed by measure **TR-1** (Section 2.2.10, *Transportation*) during construction. The TMP would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas. In the long term, the project would improve the operation of the freeway facilities. These improvements in traffic flow are likely to improve emergency response times within the project limits. The impacts of both construction and operation of the project on the delivery of emergency services would be less than significant.

c) Less than Significant Impact

As discussed in Response 3.7.9(c), there are educational facilities within 0.25 mile of the projects. A TMP (measure **TR-1**, Section 2.2.10, *Transportation*) would minimize direct temporary impacts on traffic and circulation within the resource study area and maintain continuous access and connectivity throughout construction activities. The potential impacts on schools as a result of the project would be less than significant.

d) Less than Significant Impact

As described in Section 2.2.4 *Parks and Recreational Facilities*, the project would result in impacts on parks. Alternatives 2 would require a TCE of 5,180 square feet at Los Robles Greens Golf Course, a TCE of 2,939 square feet at Camarillo Grove Park, and a TCE of 5,500 square feet at Walnut Grove Park. Alternative 3 would result in the same TCE impacts on Los Robles Greens Golf Course and Walnut Grove Park as Alternative 2. In addition, Alternative 3 would require a TCE of 6,723 square feet and permanent acquisition of 5,049 square feet from Camarillo Grove Park.

Because facilities and amenities in Los Robles Greens Golf Course and Camarillo Grove Park would not be directly affected during project construction and operation, as discussed in Section 2.2.4, *Parks and Recreational Facilities*, recreational users would be able to continue to utilize these recreational resources. Therefore, there would not be a need for new or additional recreational facilities in order to maintain acceptable service ratios for parks.

During construction, the project may result in a temporary increase in travel times for the public in accessing local parks and recreation facilities, but access would be maintained throughout the duration of construction via the transportation management strategies in the TMP (measure **TR-1**, Section 2.2.10, *Transportation*).

The potential impacts on parks as a result of the project would be less than significant.

e) Less than Significant Impact

The project would not result in the permanent conversion of land use or in temporary closures of any community facilities. The project may result in temporary delays in travel time to and from community facilities but these would be minimized with measure **TR-1** (Section 2.2.10, *Transportation*). The project would not result in permanent impacts on any community facilities. Therefore, impacts on other public facilities would be less than significant.

3.7.16 Recreation

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.7.16.1 CEQA Significance Determinations for Recreation

The potential for the project to result in impacts related to recreational resources was assessed in the *Community Impact Assessment* (Caltrans 2026a), the results of which are summarized in the discussion provided in Section 2.2.3, *Parks and Recreational Facilities*, in this EIR/EA. The following discussion is based on those analyses.

a) No Impact

No residential component or other use that would cause a direct or indirect increase in population is planned; therefore, no direct or indirect demand on neighborhood/regional parks or recreational facilities would occur. Consequently, implementation of the project would not result in a substantial physical deterioration of a recreational facility. No impacts would occur.

b) No Impact

The project consists of improvements to existing roadways. As previously stated, no residential component or other use that would cause a direct or indirect increase in population is planned. Therefore, no development or expansion of recreational facilities is required. No impact would occur.

3.7.17 Transportation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.7.17.1 CEQA Significance Determinations for Transportation

The potential for the project to result in impacts related to transportation was assessed in the *Traffic Operations Analysis Report* (Caltrans 2021a). The results are summarized in the discussion provided in Section 2.2.10, *Transportation*, in this EIR/EA. The following discussion is based on those analyses.

a) No Impact

The proposed project is listed in the 2024–2050 RTP/SCS (Project ID 5160001) and in the 2025 FTIP Amendment 25-24 (FTIP ID VEN131201). As described in Table 2.2.2-1 in Section 2.2.2, *Consistency with Federal, State, Tribal, Regional, and Local Plans and Programs*, Alternatives 2 and 3 would be consistent with several goals and policies that call for improved traffic and circulation. Therefore, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b) Significant and Unavoidable Impact

SB 743 was signed into law in 2013 with the intent to better align CEQA practices with statewide sustainability goals related to efficient land use, greater multimodal transportation choices, and GHG and traffic-related air pollution reductions while balancing the needs of congestion management and safety. SB 743 changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on VMT to analyze transportation impacts. Under SB 743, any increase of VMT would be considered a significant and unavoidable impact if it cannot be mitigated. Caltrans, as the CEQA lead agency, is required to implement SB 743 for transportation projects.

As discussed in Section 3.4, *Senate Bill 743/Induced Demand Analysis*, under Opening Year (2040) conditions for Alternatives 2 and 3, the total daily and annual VMT is projected to be approximately 16,000,000 and 5,000,000,000, respectively. When compared to the No-Build Alternative, total daily and annual VMT under Alternatives 2 and 3 is projected to increase by approximately 106,000 and 37,000,000, respectively, a 0.7 percent increase.

Under Design Year (2060) conditions for Alternatives 2 and 3, the total daily and annual VMT are projected to be approximately 16,000,000 and 6,000,000,000, respectively. When compared to the No-Build Alternative, total daily and annual VMT under Alternatives 2 and 3 is projected to increase by approximately 109,000 and 38,000,000, respectively, a 0.7 percent increase.

The addition of an HOV/Express Bus Lane in both directions along US 101 under Alternatives 2 and 3 is anticipated to result in additional VMT from the No-Build condition in Opening Year (2040) and Design Year (2060). VCTC has identified 27 strategies to mitigate the forecasted VMT increase from the project, as listed in Table 3.4.3-2 (mitigation measure **VMT-1**; Section 3.4.4*, Senate Bill 743/Induced Demand Analysis*). Implementation of the proposed VMT reduction strategies is projected to reduce VMT by 36,811,495, as shown in Table 3.4.3-2, which is more than the anticipated VMT that would be induced by the project in Opening Year (2040) conditions (estimated VMT of 36,695,250; see Table 3.4.3-1). Despite the estimated VMT reduction being above the anticipated VMT induced by the project, there is much uncertainty associated with the estimated VMT reductions. The uncertainty relates to both funding sources and the actual reductions that may ultimately be realized by implementing several of the strategies and, therefore, potential VMT impacts may remain significant and unavoidable and result in the project conflicting with State CEQA Guidelines Section 15064.3, subdivision (b).

c) No Impact

The project proposes to construct an HOV lane in each direction from Moorpark Road in Thousand Oaks to SR 33 in Ventura, with limited design exceptions and auxiliary lanes where operationally beneficial. The design exceptions would not increase any hazards or hazardous situations and the project would not include hazardous design features or incompatible uses.

d) Less than Significant Impact

As described earlier in Response 3.7.9(f) and Responses 3.7.15(a) and (b), construction of the project is expected to result in temporary impacts on traffic circulation, which could affect emergency service vehicles. Measure **TR-1** (Section 2.2.10, *Transportation*) would be implemented during construction to ensure that impacts are avoided and/or minimized. The TMP shall specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas. In the long term, the project is expected to improve the operation of the freeway facilities. These improvements in traffic flow are likely to improve emergency response times within the

project limits. The impacts of both construction and operation of the project on the delivery of emergency services and emergency access would be less than significant.

3.7.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

The potential for the project to result in impacts related to tribal cultural resources was assessed in the *Historic Properties Survey Report* (Caltrans 2024a), *Archaeological Survey Report* (Caltrans 2024b), *Historic Resources Evaluation Report* (Caltrans 2024c), and *Finding of Adverse Effect* (Caltrans 2025b). The results are summarized in the discussion provided in Section 2.2.12, *Cultural Resources*, in this EIR/EA. The following discussion is based on those analyses.

3.7.18.1 CEQA Significance Determinations for Tribal Cultural Resources

a), b) Less than Significant Impact

Project archaeologists sent a letter to the NAHC on November 19, 2018, requesting a search of the Sacred Lands File. The NAHC responded on December 5, 2018, stating that a search of the Sacred Lands Files for the proposed project yielded negative results. The NAHC also provided a list of Native American contacts for the project area. Caltrans sent outreach letters to seven Native American contacts by mail on April 29, 2019. See Chapter 4, *Comments and Coordination*, for a full summary of Native American consultation completed for the project.

No tribal cultural resources were identified through the Sacred Lands File search at the NAHC or through consultation with Native American tribes for the project. Therefore, no tribal cultural resources are anticipated to be in the APE.

There is one archaeological resource, which is considered a CEQA archaeological resource (CA-VEN-223), within the project APE that is a precontact habitation site,

originally recorded as spanning both sides (north and south) of US 101. The project would have less-than-significant impacts on the archaeological site (CA-VEN-223) because the site would be avoided and protected in place using an ESA (measure **CR-3**). In addition, archaeological monitoring of ground disturbance within 200 feet of the ESA will be conducted to minimize impacts as much as feasible (measure **CR-4**). Impacts would be less than significant.

Although a low potential for intact resources across the project has been determined, in general, it is possible that previously undocumented cultural materials, tribal cultural resources, or human remains may be unearthed during site preparation, grading, or excavation for the project. Those potential effects would be avoided or minimized through measures **CR-1** and **CR-2** (Section 2.2.12, *Cultural Resources*, for full measure text); therefore, less-than-significant impacts are anticipated related to tribal cultural resources.

3.7.19 Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

3.7.19.1 CEQA Significance Determinations for Utilities and Service Systems

The potential for the project to result in impacts related to utilities and service systems was assessed in the *Community Impact Assessment* (Caltrans 2026a). The results are summarized in the discussion provided in Section 2.2.9, *Utilities/Emergency Services*, in this EIR/EA. The following discussion is based on those analyses.

a) Less than Significant Impact

The proposed project would improve an existing transportation facility. As discussed in Section 2.2.9, *Utilities/Emergency Services*, both build alternatives would protect in place, restore, or relocate any utilities that are in conflict with the project. Utilities within the project area include water, sewer, telecom, crude oil, electrical, and gas. This utility work may extend over several years, and some parts of the utility work would be conducted in coordination with the construction contractor. Potential impacts associated with relocation of utilities would be assumed to be adjacent to the US 101 right-of-way lands. Implementation of measure **UTIL-2** (Section 2.2.9, *Utilities/Emergency Services*) would reduce community impacts that could result from temporary disruption of utilities

by requiring coordination with utility service providers and the public during construction. Impacts would be less than significant.

b) Less than Significant Impact

The use of water during construction would be limited to water trucked to the site for dust control. The amount of water used during construction would be minimal. Operation of the project is not expected to result in an increased demand for water used for landscape irrigation. As a result, the project would not require the water districts serving the project to provide new or expanded facilities to meet the need for water during construction and operation of the project. Therefore, the impact would be less than significant.

c) No Impact

The proposed project involves improvements to an existing transportation facility and would not generate wastewater. No impact would occur.

d) and e) No Impact

The project would require the use of a local landfill, if applicable, to dispose of demolition materials during construction. The use of local landfills would be temporary during construction. It is Caltrans' policy to recycle materials whenever possible. The project would be served by a landfill with sufficient capacity to serve its solid waste disposal needs during construction; therefore, there would be no impact. The project would be in compliance with all federal, state, and local solid waste statutes and regulations; therefore, there would be no impact.

3.7.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

3.7.20.1 CEQA Significance Determinations for Wildfire

The potential for the project to result in impacts related to wildfire was assessed in Section 3.5, *Wildfire*. The following discussion is based on that analysis.

a) Less than Significant Impact

The project area traverses the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura, through Ventura County. The county and all four cities the project traverses have Emergency Operations Plans, which provide guidelines for emergency response planning, preparation, training, and execution throughout their jurisdictions.

US 101 would remain in operation throughout the duration of construction activities, and the TMP (measure **TR-1**, Section 2.1.10, *Transportation*) would minimize any construction-related delays, provide detours as needed, and require coordination with California Highway Patrol and local law enforcement agencies. The project would not impair or physically interfere with implementation of applicable emergency response, from construction through long-term operations. No potential evacuation routes would be impeded or disrupted during project construction and operation. The project is not expected to cause a substantial increase in emergency response times during construction, especially with measure **TR-1**. Impacts would be less than significant.

b), c) Less than Significant Impact

Generally, transportation projects, particularly those on existing alignments such as US 101, are considered unlikely to exacerbate wildfire risks. The project would not install any infrastructure, such as new power lines or other utilities, that could exacerbate existing wildfire risk. However, the project would likely require relocation of utilities such as telecommunications, electrical, natural gas, water, and sewer lines. During final design, a final determination would be made as to which of the identified utilities would be protected in place or would need to be relocated in consultation with the utility owner/provider and plans for the relocations would be incorporated in the final project design. The relocation of utilities would be coordinated between the affected agencies and utility providers as described in measure **UTIL-2** (Section 2.2.9, *Utilities/Emergency Services*).

During construction, implementation of measure **NC-9** (Section 2.3.1, *Natural Communities*) would require appropriate firefighting equipment and a water tender to be available on the project site when construction activities are conducted during the fire season. The project will also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a Fire Prevention Plan. With implementation of measures **UTIL-2** and **NC-9** and compliance with Caltrans Standard Specifications Section 7-1.02M(2), the project would avoid or minimize the risk of fires during construction activities. Impacts would be less than significant.

d) Less than Significant Impact

Topographical and slope conditions throughout the project vicinity vary, with more prominent slopes along the easternmost portion of the project, along the Conejo Grade. The project is also within the California Geological Survey Landslide Zone, where it is predominantly in the Conejo pass steep grade area. The project would require substantial grading with several major cut-and-fill slopes to accommodate the widened roadway shoulders and ramps. Retaining walls are proposed throughout the project corridor, as discussed in Section 2.3.3, *Geology/Soils/Seismic/Topography*. During the final design phase, potential landslides, slope stability, cut-and-fill slopes, and retaining walls will be further investigated (measures **GEO-1** and **GEO-2**, Section 2.3.3, *Geology/Soils/Seismic/Topography*), and the project will be designed and constructed based on the recommendations from the geotechnical report and foundation reports (measure **GEO-3**, Section 2.3.3, *Geology/Soils/Seismic/Topography*).

The project proposes to widen five bridges that would encroach the 1 percent probability base flood (100-year floodplain) associated with Conejo Creek, Calleguas Creek, Arroyo Conejo, South Branch Arroyo Conejo, and Beardsley Wash. In addition, bridge and/or roadway widening near four drainages would also encroach the 1 percent probability base flood (100-year floodplain); these drainages are Camarillo Hills Drain, Crestview Drain, El Rio Drain, and Moon Ditch. Implementation of the project would not increase the risk of flooding because it would not increase the base flood elevation. Therefore, there would be no substantial flood-related risks to life or property associated with implementation of the project. In addition, measures **HYD-1** through **HYD-4**

(Section 2.3.1, *Hydrology and Floodplain*) would be implemented to avoid or minimize impacts on floodplains and hydrology, which would include scheduling construction work during the dry season to the maximum extent possible (measure **HYD-1**), remapping floodplains (measure **HYD-2**), regrading floodplain infields to restore storage volume (measure **HYD-3**), and remodeling drainages to evaluate design alternatives to minimize floodplain encroachment (measure **HYD-4**).

Implementation of **GEO-1** through **GEO-3** and **HYD-1** through **HYD-4** would avoid or minimize the project's potential to result in downslope or downstream flooding or landslides. In addition, implementation of erosion control measures and other BMPs would avoid or minimize the project's potential to result in downslope or downstream flooding or landslides. These measures include compliance with NPDES permits (measures **WQ-2** and **WQ-4**, Section 2.3.2, *Water Quality and Stormwater Runoff*), preparation and implementation of a SWPPP, which would include construction site BMPs (measures **WQ-3** and **NC-8** (Section 2.3.2, *Water Quality and Stormwater Runoff* and Section 2.4.1, *Natural Communities*), and implementation of permanent BMPs (measures **WQ-1** and **WQ-5**) (Section 2.3.2, *Water Quality and Stormwater Runoff*). Impacts would be less than significant.

3.7.21 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 substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

3.7.21.1 CEQA Significance Determinations for Mandatory Findings of Significance

a) Significant and Unavoidable Impact

As described in Section 2.4, *Biological Environment*, the build alternatives would not significantly 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, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. Project impacts on wetlands would be less than significant through implementation of the biological measures described in Section 2.4.2, *Wetlands and Other Waters* (avoidance and minimization measures **NC-6** through **NC-8**, **AS-5** through **AS-7**, and **WET-1** and **WET-2**, and mitigation measure **WET-3**).

Impacts of the project on the eucalyptus trees at the Adolfo Camarillo Heritage Grove would result in the resource's loss of historical significance. Mitigation measures will be forthcoming, but measure **CR-MM-1** (Section 2.2.12, *Cultural Resources*) provides suggested measures to reduce impacts and includes (but is not limited to) tree

replacement, preparation of an arborist report, update of the National Register of Historic Places nomination form for the adjacent Camarillo Ranch property, and/or interpretive materials. However, implemented mitigation will still result in a significant and unavoidable impact. While the resource would not be completely eliminated, the project would destroy an important example of early California history due to a loss of its ability to convey its historical significance.

b) Significant and Unavoidable Impact

As described in detail in Section 3.6, *Cumulative Impacts*, the build alternatives, when combined with impacts from other past, current, and probable future projects, would contribute to cumulative impacts related to cultural resources, air quality, and transportation.

The project would require the removal and relocation of eucalyptus trees at the Adolfo Camarillo Heritage Grove, a historical resource. While the project would include implementation of measure **CR-MM-1**, project impacts on the Adolfo Camarillo Heritage Grove would still be significant and result in the resource's loss of historical significance. Therefore, implementation of the proposed project could result in cumulatively considerable impacts on cultural resources. Impacts would be significant and unavoidable.

The regional emission analyses presented in Table 2.3.6-11 (Section 2.3.6, *Air Quality*) indicates PM_{10} emissions will increase under all future years for the No-Build Alternative and build alternatives compared to the Existing (2018) conditions. The increase in total regional particulate matter emissions is due to the re-entrained road dust that is directly proportional to the increase in VMT. Therefore, implementation of the proposed project could result in a cumulatively considerable net increase in regional PM_{10} emissions and PM_{10} concentrations at nearby sensitive receptors, for which the region is designated as nonattainment under state air quality standards. Impacts would be significant and unavoidable.

These cumulative impacts stem primarily from the increase in VMT. When compared to the No-Build Alternative, total daily and annual VMT under Alternatives 2 and 3 are projected to increase by approximately 0.7 percent under both Opening Year (2040) and Design Year (2060) conditions. VMT reduction strategies have been identified for the project (mitigation measure **VMT-1**, Section 3.4*, Senate Bill 743/Induced Demand Analysis*). However, because there is uncertainty in both funding sources and the actual VMT reductions that may ultimately be realized, there is a potential VMT impacts would remain significant and unavoidable. Therefore, implementation of the proposed project could result in a cumulatively considerable net increase in VMT. Impacts would be significant and unavoidable. Additional information on cumulative impacts can be found in Section 3.6, *Cumulative Impacts.*

The build alternatives would not contribute to cumulative adverse impacts during both construction and operation related to aesthetics, agricultural and forest resources, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning,

mineral resources, noise, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, and wildfire.

c) Significant and Unavoidable Impact

The concept of HOV and Express Bus Lanes proposed under Alternatives 2 and 3 has already been introduced along major highways in the SCAG region, and public acceptance of those improvements does not suggest that implementation of the aforementioned build alternatives would result in an additional substantial adverse effect on human beings.

The proposed build alternatives would result in unavoidable significant impacts related to air quality due to increases in regional PM_{10} emissions and PM_{10} concentrations at nearby sensitive receptors under all future years, cultural resources due to project impacts on the Adolfo Camarillo Heritage Grove that would result in the resource's loss of historical significance, and transportation from the increase in VMT in all future years. Based on the analysis of potential mitigation for these impacts provided in Chapter 3, there is no feasible mitigation to avoid or reduce these impacts while still achieving the project goals and objectives. Therefore, the project would have direct and indirect adverse impacts on human beings that cannot be mitigated to a level below significance.

Chapter 4 Comments and Coordination

4.1 INTRODUCTION

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, Project Development Team meetings, tribal consultation, and consultation with interested parties. This chapter summarizes the results of the California Department of Transportation's (Caltrans') efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.2 PUBLIC SCOPING

4.2.1 Scoping Process

The scoping period was held for a 38-day period between March 29, 2019, and May 6, 2019. The purpose of the scoping period was to inform the public about the project and to provide the opportunity for public engagement and input through questions and written comments about the project.

The California Environmental Quality Act (CEQA) scoping process for the project was initiated with the preparation and distribution of a Notice of Preparation (NOP) of an Environmental Impact Report/Environmental Assessment. The NOP was posted to the State Clearinghouse on March 29, 2019, beginning the required 30-day review period under CEQA. The State Clearinghouse number assigned was SCH No. 2019039165. A copy of the NOP that was filed with the State Clearinghouse is included at the end of this chapter (refer to Figure 4-1).

The NOP was submitted to the following public agencies:

- California Coastal Commission
- Office of Historic Preservation
- California Department of Fish and Wildlife, South Coast Region 5
- California Department of Parks and Recreation
- Native American Heritage Commission

- California Public Utilities Commission
- California State Lands Commission
- California Highway Patrol
- Air Resources Board, Transportation Projects
- State Water Resources Control Board
- Department of Toxic Substances Control
- Los Angeles Regional Water Quality Control Board, Region 4

In addition to publication of the NOP, the Ventura County Transportation Commission (VCTC) and Caltrans conducted extensive public notification ahead of the formal public scoping meetings. Meeting notifications, advertisements, project updates, handouts, and supplemental materials were provided in both English and Spanish during the public outreach process; this included bilingual comment cards to solicit valuable feedback from meeting participants. These public notification efforts included the following:

- **Project Website**: A project-specific website was established on April 12, 2019, for convenient public access and outreach (http://www.ourfuture101.org/) (refer to Figure 4-2 at the end of this chapter). The project website provided information on the project, including project overview and objectives, project development process, current conditions, project purpose, project timeline, frequently asked questions, and notice of the scoping meetings. It also included an online form for submitting public comments.
- **Mail Notification**: More than 73,500 postcards were mailed to owners and occupants of every property within 1 mile of the US 101 Improvement Project corridor. In addition to the postcards sent within the 1-mile radius, postcards were sent to 203 stakeholder contacts. All postcards were sent in English and Spanish. A copy of the mailed postcard is provided at the end of this chapter (refer to Figure 4-3).
- **Postcard Postings**: Postcards were dropped at each venue location and City Hall, City Manager's office, and City Public Information Office on April 10, 2019 (refer to Figure 4-3). Cities along the corridor were encouraged to distribute meeting information to their constituents via eblasts, e-newsletters, and websites. The following cities confirmed posting information:
  - City of Camarillo (also posted on digital marquee board)
  - City of Ventura

- **Publications/Advertisements**: Scoping notices were published in 4 local and 15 electronic newspapers. Examples of the notices published in the local and electronic newspapers are provided at the end of this chapter (refer to Figure 4-4 and Figure 4-5).
  - *Santa Paula Times* (English): Notice published April 5, 2019
  - *Ventura County Reporter* (English): Notice published April 4, 2019
  - *Vida* (Spanish): Notice published April 4, 2019
  - *Acorn* (English): Notice published April 4, 2019
  - *Camarillo Acorn* (English): Notice published April 4, 2019
  - *Moorpark Acorn* (English): Notice published April 4, 2019
  - *Simi Valley Acorn* (English): Notice published April 4, 2019
  - *The Fillmore Gazette* (English): Notice published April 4, 2019
  - *Thousand Oaks Acorn* (English): Notice published April 4, 2019
  - *Pacific Coast Business Times* (English): Notice published April 5, 2019
  - *Tri-County Sentry* (English): Notice published April 5, 2019
  - *VC Star* (English): Notice published April 5, 2019
  - *CLU Echo* (English): Notice published April 9, 2019
  - *Moorpark Student Voice* (English): Notice published April 5, 2019
  - *Ojai Valley News* (English): Notice published April 5, 2019
  - The *VC Star, VC Reporter, Pacific Business Times*, and *Acorn* ran print pieces of the scoping notice.
- **Email Notification**: Email notifications were sent out to 203 interested parties on April 12, 2019 (refer to Figure 4-6). All emails and form submissions that went through the project website received an automatic email response with the date and location of each public scoping meeting.
- **Press Release**: A press release was sent to all partner cities and the media outlets listed below on April 11, 2019. A copy of the press release is provided at the end of this chapter (refer to Figure 4-7).
  - KCLU Radio
  - Cumulus Media
  - Gold Coast Broadcasting
  - KADYTV.com
  - *Los Angeles Daily News*
  - *Los Angeles Times*
  - KEYT (Channel 3)

- Macaroni Kid (Camarillo, Oxnard, Ventura)
- *Citizens Journal*
- *The Voice*

- **Instagram "@ourfuture101"**: Posting started on April 11, 2019. A total of six social media postings, leading up to and through the scoping meeting dates, were completed. Partner cities and VCTC shared, posted, and re-posted on their social media platforms. A copy of the Instagram postings is provided at the end of this chapter (refer to Figure 4-8).

4.2.2 Scoping Meetings

A total of four formal public scoping meetings were held in Ventura, Oxnard, Thousand Oaks, and Camarillo and attended by 158 participants overall, including 151 members of the general public and 7 elected officials, as shown in Table 4-1. These meetings were held with an open-house format that included a presentation by the project team. The meetings included 19 project poster boards, and comment cards and pocket cards were provided for attendees at the welcome and sign-in tables. The attendance number reflects the number of participants who signed in; however, some attendees may not have signed in.

The public outreach process was designed to ensure that public and project interested parties had the opportunity to be involved throughout the development process. Two Spanish interpreters (to assist Spanish-speaking attendees) and one court reporter were present at each public scoping meeting location. In addition, one camera operator was in attendance, filming the presentation at the Thousand Oaks location.

Table 4-1. Public Scoping Meetings

#	Date and Time	Public Scoping Venue	Attendance	Comment Cards Received
1	Tuesday, April 16, 2019: 6:00–8:00 p.m.	Ventura City Hall, Community Room	31 (30 general public, 1 elected official)	11
2	Wednesday, April 17, 2019: 6:00–8:00 p.m.	Oxnard Performing Arts Center, Ventura Room	23 (23 general public)	6
3	Thursday, April 18, 2019: 6:00–8:00 p.m.	Thousand Oaks Civic Arts Center, Founders Room	30 (28 general public, 2 elected officials)	11
4	Monday, April 22, 2019: 6:00–8:00 p.m.	Camarillo Library, Community Room	74 (70 general public, 4 elected officials)	22

4.2.3 Scoping Comments

The public expressed a wide range of concerns in the written and spoken comments. The primary feedback received involved (1) concerns about adding high-occupancy vehicle (HOV) lanes that would actually increase traffic; (2) the public's desire for rapid

transit or alternative modes of transportation, instead of HOV lanes; (3) environmental concerns regarding air quality, noise, and biological impacts; and (4) questions about how the project would be funded. Table 4-2 provides a summary of the concerns of the public received at each public scoping meeting. Although no official responses were developed, the comments were reviewed and considered by the Project Development Team as it conducted technical studies and advanced development of the environmental document. Please refer to the Scoping Summary Report dated June 21, 2019, for the formal scoping details and public scoping comments that were received for the project.

Table 4-2. Comment Topics Specified by the General Public

Public Scoping Meeting #	Location	General Public Comment Topics
1	Ventura City Hall, Community Room	Transportation/traffic, funding, biological resources, noise, agriculture, cultural resources, hydrology
2	Oxnard Performing Arts Center, Ventura Room	Transportation/traffic, general comments
3	Thousand Oaks Civic Arts Center, Founders Room	Transportation/traffic, funding, aesthetics
4	Camarillo Library, Community Room	Transportation/traffic, noise, air quality, general comments, funding

4.3 NATIVE AMERICAN GROUP, GOVERNMENT AGENCY, AND OTHER INTERESTED PARTY CONSULTATION

Consultation with a number of Native American groups, government agencies, and other interested parties was conducted in compliance with Section 106 of the National Historic Preservation Act and Assembly Bill 52, as discussed further below.

4.3.1 Native American Groups

The California Native American Heritage Commission (NAHC) was contacted about the proposed project on November 19, 2018. The NAHC responded on December 5, 2018, with the results of its Sacred Lands File (SLF) search. The NAHC also provided a list of Native American contacts for the project area. The SLF search for the proposed project yielded negative results. However, the NAHC response noted that the absence of specific site information in the SLF does not preclude the presence of cultural resources in any project area and that other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Caltrans sent outreach letters to seven Native American contacts by mail on August 3, 2017, as follows:

- Eleanor Arrellanes, Barbareño/Ventureño Band of Mission Indians
- Raudel Joe Banuelos, Jr., Barbareño/Ventureño Band of Mission Indians
- Patrick Tumamait, Barbareño/Ventureño Band of Mission Indians
- Kenneth Kahn, Santa Ynez Band of the Chumash Indians
- Mia Lopez, Coastal Band of Chumash Nation
- Julie Tumamait-Stenslie, Barbareño/Ventureño Band of Mission Indians
- Gariel Altamirano, Coastal Band of the Chumash Nation

The outreach letters contained a project description and project map. Follow-up phone calls to the individuals were made on January 20 and 21, 2021. When Ms. Julie Tumamait-Stenslie, chairperson of the Barbareño/Ventureño Band of Mission Indians, was contacted, she stated that she did not have any specific information about the project area; she indicated that her brother, Patrick Tumamait, should be contacted for information. ICF contacted Mr. Tumamait, who offered to show the project team the Native American resources of which he was aware. On May 21, 2019, Caltrans and ICF archaeologists met with Mr. Tumamait and visited several sites in or near the project area, including previously recorded sites in the study area. Consultation efforts between Caltrans and Native American groups are ongoing.

Table 4-3 includes a summary of the consultation with Native American groups.

Table 4-3. Section 106/Assembly Bill 52 Consultation/Communication Log: Native American Groups

Date	From Whom/ Persons Involved	To Whom/Persons Involved	Topic
11-19-2018	ICF	NAHC	SLF search request
12-06-2018	NAHC	ICF	Email with response letter dated December 6, 2018. The SLF search was negative for tribal cultural resources. A list of Native American representatives was provided for further contact.
04-29-2019	Caltrans	1. Ms. Eleanor Arrellanes, Barbareño/Ventureño Band of Mission Indians 2. Mr. Raudel Joe Banuelos, Jr., Barbareño/Ventureño Band of Mission Indians 3. Kenneth Kahn, Chairperson, Santa Ynez Band of Chumash Indians 4. Ms. Mia Lopez, Coastal Band of the Chumash Nation 5. Ms. Julie Lynn Tumamait-Stenslie, Chairperson, Barbareño/Ventureño Band of Mission Indians 6. Mr. Patrick Tumamait, Barbareño/Ventureño Band of Mission Indians 7. Chief Mark Steven Vigil, San Luis Obispo County Coastal Chumash Council	Consultation letter and request for information regarding any cultural resources or sacred lands that may be of concern as a result of the proposed project. Letters sent via certified mail.
05-08-2019	Mr. Patrick Tumamait, Barbareño/ Ventureño Band of Mission Indians	Stephen Bryne, ICF	Telephone call from Patrick Tumamait. Mr. Tumamait stated that he has knowledge of several sites at the west end of the project and other sites close to the project. Mr. Tumamait offered to show Mr. Bryne and Mr. Kay these sites. Mr. Tumamait mentioned two sites near downtown Ventura, one site near the Santa Clara River and one site near Thousand Oaks.

Date	From Whom/ Persons Involved	To Whom/Persons Involved	Topic
05-14-2019	Mr. Freddy Romero, Santa Ynez Band of Chumash Indians	Stephen Bryne, ICF	Mr. Romero left a voicemail for Mr. Bryne, who returned the call. Mr. Romero asked if Ms. Julie Tumamait-Stenslie had been contacted for the project and was told that Ms. Tumamait-Stenslie had been contacted. Mr. Romero stated that the Santa Ynez Band of Chumash Indians would defer to Ms. Tumamait-Stenslie for this project. Mr. Romero said that the tribe would like to be kept informed of any changes or updates to the project.
05-14-2019	Mr. Patrick Tumamait, Barbareño/ Ventureño Band of Mission Indians	Stephen Bryne, ICF	Mr. Bryne called Mr. Tumamait regarding a planned field visit. Mr. Tumamait said that Tuesday, May 21, 2019, at 2:30 p.m. would be best for a meeting. The meeting was planned for US 101 and Rice Road at the Del Taco. Mr. Tumamait would like to visit four locations; however, the site farthest to the east in Thousand Oaks may be out of the project area.
05-21-2019	Mr. Patrick Tumamait, Barbareño/ Ventureño Band of Mission Indians	Dustin Kay, Caltrans Stephen Bryne and Shane Sparks, ICF	Mr. Kay, Mr. Bryne, and Mr. Sparks met with Mr. Tumamait and visited a number of site locations that Mr. Tumamait is aware of in or near the project. Stops were made at (1) CA-VEN-223 and -224, (2) CA-VEN-1304, (3) the Santa Clara River south of US 101 where Mr. Tumamait monitored for the Level (3) Fiber Optic project, (4) CA-VEN-480, and (5) CA-VEN-3. In addition to the above, Mr. Tumamait expressed concern for the San Jon Barranca area, indicating that this area is sensitive for prehistoric cultural resources.
01-20-2021	ICF	Mr. Patrick Tumamait, Barbareño/Ventureño Band of Mission Indians	Telephone call to Patrick Tumamait to let him know that the project is still active and ask if there is any additional information he would like to add to the record. Mr. Tumamait stated that there is no supplementary information; however, he is still interested in being a part of the project. He is especially concerned with the area that he showed Mr. Bryne and Mr. Sparks on the previous site visit.

Date	From Whom/ Persons Involved	To Whom/Persons Involved	Topic
01-20-2021	ICF	Mia Lopez, Coastal Band of the Chumash Nation	Telephone call to Ms. Lopez, requesting any information that she or the tribe would like to convey regarding the project. Ms. Lopez informed ICF that she was unaware of the project and requested a copy of the certified letter that was sent out in April of 2019. Ms. Lopez is aware that the time has lapsed for proper response; she would like an opportunity to review the project and will contact Mr. Bryne if she has any pertinent information to add.
01-21-2021	ICF	Email copy of the April 2019 certified letter to: 1. Ms. Maniza Sullivan: CBCNTribalChair@gmail.com 2. Ms. Mia Lopez: Mialopez2424@gmail.com	Emailed SLF letter of intent to the Coastal Band of the Chumash Nation tribal chair, Ms. Maniza Sullivan, and their director of the Cultural Department, Ms. Mia Lopez.

4.3.2 Government Agencies

Letters containing the project description and project map were also sent to the following local government agencies between March 12 and 15, 2021:

- Joe Vacca, Director of Community Development, City of Camarillo Planning Division
- Scott Kolwitz, Planning Manager, City of Oxnard Planning Department
- Steve Kearns, Planning Division Manager, City of Thousand Oaks Planning Division
- Dillan Murray, Program Planner, City of Ventura Cultural Heritage Board
- Jared Rosengren, Senior Planner, City of Ventura Planning Department

Follow-up outreach was conducted on August 10, August 17, August 20, and October 17, 2021; September 1, September 2, and October 6, 2022; and August 29, 2023. To date, all recipients have responded.

Table 4-4 includes a summary of the consultation with government agencies.

4.3.3 Other Interested Parties

Letters containing the project description and project map were sent to the following local historical societies and historic preservation groups between March 12 and 15, 2021:

- David Schlangen, President, Camarillo Ranch Foundation
- Beverly Folkes, Board Member, Chumash Indian Museum
- Pam Pond, President, Conejo Valley Historical Society
- Gary Blum, Site Manager, Heritage Square
- Joy Todd, President, Pleasant Valley Historical Society
- Stephen Schafer, President, San Buenaventura Conservancy
- Richard and Anita Londgren, Co-Directors, Scandinavian American Cultural and Historical Foundation
- George Yu, President, Ventura County Chinese American Historical Society
- Gayle Wolcott, President, Ventura County Genealogical Society
- Deya Terrafranca, Research Library and Archives Director, Ventura County Museum
- Derek Poultney, Executive Director, Ventura Land Trust

Follow-up outreach was conducted on August 10, August 17, August 20, and October 17, 2021; September 1, September 2, October 6, and October 7, 2022; and August 29, 2023. To date, all recipients have responded. The Pleasant Valley Historical Society requested to be a consulting party.

Table 4-5 includes a summary of the consultation with interested parties associated with local historical societies and historic preservation groups.

On July 24, 2024, due to the adverse effect on the Adolfo Camarillo Heritage Grove, an additional consultation letter was sent to the Camarillo Ranch Foundation, City of Camarillo Planning Division, City of Ventura Resource Management Agency, and Pleasant Valley Historical Society. Architectural historians on behalf of Caltrans conducted follow-up outreach on August 23 and 30, 2024. To date, all recipients but the Camarillo Ranch Foundation have responded to the follow-up consultation effort. As discussed above, the Pleasant Valley Historical Society had already requested to be consulting party. In addition, the City of Camarillo Planning Division and the San Buenaventura Conservancy for Preservation, through the County of Ventura Resource Management Agency, requested to be a consulting party. The County of Ventura Resource Management Agency's Cultural Heritage Board provided recommended mitigation measures for the adverse effect.

Table 4-6 includes a summary of the follow-up consultation with interested parties associated with the Adolfo Camarillo Heritage Grove.

Table 4-4. Section 106/Assembly Bill 52 Consultation/Communication Log: Government Agencies

Agency or Group	Contact and Title, Contact Information	Letter Sent	Results
City of Camarillo Planning Division	Joe Vacca, Director of Community Development, 601 Carmen Drive Camarillo, CA 93010 Phone: 805-388-5360 Email: planning@cityofcamarillo.org John Novi's contact information: Phone: 805-388-5361; 310-621-1624 Email: jnovi@cityofcamarillo.org Paul McClaren's contact information: Phone: 805-288-5365 Email: pmcclaren@cityofcamarillo.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	John Novi, senior planner, responded by email on April 15, 2021. Mr. Novi provided a list of historic sites adjacent to US 101 in Camarillo: • Saint Mary Magdalen Chapel at 2532 Ventura Boulevard • Chapel City Church at 2315 Ventura Boulevard • Griffin Family Funeral Chapel at 1075 East Daily Drive • Ventura County Boy Scouts of America at 509 East Daily Drive • Historic Eucalyptus Grove, north of US 101, south of Mission Oaks Boulevard, and west of Flynn Road on-/off-ramp • J.F. Lewis and Sons Building at 2433 Ventura Boulevard The Chapel City Church (also known as the Pleasant Valley Baptist Church) and the Historic Eucalyptus Grove (also known as the Adolfo Camarillo Heritage Grove) were previously determined NRHP eligible under Criterion C and Criterion B, respectively. The proposed project evaluated the Griffin Family Funeral Chapel and the Wendell P. Daily Residence, which are on the same parcel. Both were found eligible as a result of this study. The other buildings listed above are outside of the project APE. Mr. Novi was informed by email of the status of the resources he identified on May 20 and October 6, 2022. On August 29, 2023, Mr. Novi was contacted by email regarding the adverse effects on the Adolfo Camarillo Heritage Grove. Paul McClaren, senior planner with the City of Camarillo, responded by email on August 30, 2023. He stated that the City of Camarillo would like to be a consulting party.

Agency or Group	Contact and Title, Contact Information	Letter Sent	Results
City of Oxnard Planning Department	Scott Kolwitz, Planning Manager, 214 South C Street, Oxnard, CA 93030 Phone: 805-385-3919 Email: scott.kolwitz@oxnard.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Scott Kolwitz responded by email on March 16, 2021. Mr. Kolwitz stated that he received the email and would respond by the date requested. Mr. Kolwitz responded by email on April 3, 2021, and provided information on the Santa Clara Chapel, a potentially eligible resource. Mr. Kolwitz also provided contact information for two other team members in case questions arose. The Santa Clara Chapel was evaluated for the NRHP and CRHR for the proposed project. It was found ineligible. Moreover, as a religious and moved property, it would additionally have to meet Special Criterion Consideration A and Special Criterion Consideration B. Mr. Kolwitz was informed of the status of the Santa Clara Chapel on May 20, 2022, by email. No additional communication or correspondence with Mr. Kolwitz has occurred, and he did not request to be a consulting party.
City of Thousand Oaks Planning Division	Steve Kearns, Planning Division Manager, 2100 East Thousand Oaks Boulevard, Thousand Oaks, CA 91362 Phone: 805-449-2315 Email: skearns@toaks.org Anna Huber's contact information: Phone: 805-449-2329 Email: AHuber@toaks.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Anna Huber, Conejo Open Space Conservancy agent, responded by email on April 9, 2021. Ms. Huber stated that the Ventura County Museum would be a good group to contact for information and also indicated that the City of Thousand Oaks General Plan, Chapter 5, would provide information on cultural resources. The Ventura County Museum was included in the consultation. Chapter 5 was reviewed. All properties listed are outside of the APE except for the Timber School, which the proposed project evaluated. It was found eligible for the NRHP and CRHR under Criteria A/1 for its association with education in the Conejo Valley. It is also a designated Thousand Oaks landmark. Ms. Huber was informed of the status of the Timber School on May 20, 2022, by email. No additional communication or correspondence with Ms. Huber has occurred, and she did not request to be a consulting party.

Agency or Group	Contact and Title, Contact Information	Letter Sent	Results
City of Ventura	Dillan Murray, Program Planner, Cultural Heritage Board, 800 South Victoria Avenue, L-1740, Ventura, CA 93009 Phone: 805-654-5042 Email: Dillan.Murray@ventura.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Dillan Murray responded by email on March 12, 2021. Mr. Murray noted that he received the letter. No additional communication or correspondence with Mr. Murray has occurred, and he did not request to be a consulting party.
City of Ventura Planning Department	Jared Rosengren, Senior Planner, 800 South Victoria Avenue, Ventura, CA 93009 Phone: 805-654-7869 Email: Jrosengren@cityofventura.ca.gov	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Jared Rosengren responded by email on August 16, 2021. Mr. Rosengren asked that any approved project provide conditions regarding pre-construction training, inadvertent archaeological discoveries, and the discovery of human remains. The email was shared with the consulting archaeologists. Mr. Rosengren was informed of the status on May 20, 2022, by email. No additional communication or correspondence with Mr. Rosengren has occurred, and he did not request to be a consulting party.

APE = Area of Potential Effects; CRHR = California Register of Historical Resources; NRHP = National Register of Historic Places

Table 4-5. Section 106/Assembly Bill 52 Consultation/Communication Log: Other Interested Parties

Agency or Group	Contact and Title, Contact Information	Letter Sent	Follow-Up 1	Follow-Up 2	Follow-Up 3	Follow-Up 4	Results
Camarillo Ranch Foundation	David Schlangen, President, 201 Camarillo Ranch Road, Camarillo, CA 93012 Phone: 805-389-8182 Email: dschlangen93010@yahoo.com and info@camarilloranch.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	N/A	N/A	N/A	N/A	David Schlangen responded by email on March 31, 2021. Mr. Schlangen stated that there is a eucalyptus tree windbreak along US 101 associated with the Adolfo Camarillo Heritage Grove and his nearby ranch and expressed concern that it may be affected by the proposed project. The Adolfo Camarillo Heritage Grove was previously determined eligible for the NRHP under Criterion B. Mr. Schlangen was notified of this update status on May 20, 2022, and October 6, 2022, by email. On August 29, 2023, Mr. Schlangen was contacted by email regarding the adverse effect on the Adolfo Camarillo Heritage Grove. To date, no additional communication or correspondence with Mr. Schlangen has occurred, and he did not request to be a consulting party. However, this may change given the adverse effect on the Adolfo Camarillo Heritage Grove.
Chumash Indian Museum	Beverly Folkes, Board Member, 3290 Lang Ranch Parkway, Thousand Oaks, CA 91362 Phone: 805-492-8076 Email: Visit@chumashmuseum.org; info@chumashmuseum.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	Follow-up telephone call made August 17, 2021; voicemail left	Follow-up telephone call made October 17, 2021; voicemail left	Follow-up email sent September 1, 2022	Barbara Tejada, board chair, responded by email on September 4, 2022. Ms. Tejeda stated the museum does not typically review projects like the proposed project but that local tribes should be consulted. In accordance with Section 106 and CEQA, Caltrans and VCTC are conducting tribal consultation. Information was forwarded to the consulting archaeologists to confirm that the Barbareño/Ventureño Band of Mission Indians had been included in the process. Ms. Tejeda was informed of this status by email on September 6, 2022. No additional communication or correspondence with Ms. Tejeda has occurred, and she did not request to be a consulting party. On September 16, 2022, Ms. Folkes responded by telephone, stating that the area generally has high sensitivity with respect to archaeology. She did not identify any specific areas or known cultural resources in or near the APE. She also stated that she was available if any questions arose. No additional communication or correspondence with Ms. Folkes has occurred, and she did not request to be a consulting party.
Conejo Valley Historical Society	Pam Pond, President, 51 South Ventu Park Road, Newbury Park, CA 91320 Phone: 805-498-9441 Email: stagecoach@stagecoachmuseum.org Jana Goldsworthy's contact information: Phone: 805-402-3809 Email: director@stagecoachinmuseum.com Neil Scribner, Board Member and Architect, 805-376-1756 Carol Anderson, Archivist, 805-497-4866	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	Follow-up telephone call made October 17, 2021; voicemail left	Follow-up email sent September 1, 2022, but the email was returned as non-deliverable on September 1, 2022	Follow-up email sent September 2, 2022, to another staff member whose email was available	Jana Goldsworthy, director of the museum, responded by telephone on September 2, 2022. Ms. Goldsworthy noted that she forwarded the email to Pam Pond, the president, for response. A follow-up call was made to Pam Pond on October 6, 2022; a voicemail was left. Ms. Pond responded by phone on October 6, 2022. She suggested that we reach out to board member Neil Scribner and museum archivist Carol Anderson. Mr. Scribner was called on October 6, 2022, but his mailbox was not set up to receive voicemail. A call was made on October 11, 2021, and the same issue occurred. Ms. Anderson was called twice on October 6, 2022, but the call disconnected before reaching voicemail each time. Ms. Anderson was called on October 11, 2021, and a voicemail was left. Ms. Anderson responded by email on October 11, 2022. She provided information on the historical marker within the Ventu Park/US 101 interchange that commemorates the original site of the Stagecoach Inn, a California Historical Landmark and NRHP-listed property outside the APE. She identified several locations for the marker's potential relocation in the vicinity. On January 18, 2023, Ms. Anderson provided additional information by email. She stated that she identified a new location for the marker's potential relocation in the vicinity.

Agency or Group	Contact and Title, Contact Information	Letter Sent	Follow-Up 1	Follow-Up 2	Follow-Up 3	Follow-Up 4	Results
							On January 19, 2023, Mr. Scribner responded by telephone and left a voicemail. He called to check in on the status of the project and ask if any additional information could be provided. Architectural historians responded to both Ms. Anderson and Mr. Scribner on January 20, 2023, confirming receipt of their communications. During a phone call with Mr. Scribner, he seconded Ms. Anderson's information about wanting to relocate the marker to a nearby, but more visible, location. He would like to coordinate with Caltrans about its relocation, if applicable. No additional correspondence with Ms. Pond, Mr. Scribner, or Ms. Anderson has occurred, and no one requested to be a consulting party.
Heritage Square	Gary Blum, Site Manager, 715 South A Street, Oxnard, CA 93030 Phone: 805-147-0197; 805-402-0016 Email: Garyaths@aol.com	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	N/A	N/A	N/A	Gary Blum responded by email on August 11, 2021. He stated that Heritage Square had no concerns about the proposed project. No additional communication or correspondence with Mr. Blum has occurred, and he did not request to be a consulting party.
Pleasant Valley Historical Society	Joy Todd, President, 720 Las Posas Road, Camarillo, CA 93010 Phone: 805-482-3660 Email: pvhs@pvhsonline.org and pvhbill@gmail.com Bob Burrow's contact information: Phone: 805-501-3584; 805-482-0179 Email: pvhs@pvhsonline.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	N/A	N/A	N/A	N/A	Bob Burrow, board member and past president, responded by a letter sent through USPS on April 15, 2021. Mr. Burrow stated the importance of the travel corridor, formerly El Camino Real, and noted that the founders of the region planted eucalyptus trees and canary palms along the road. He noted that, if widening occurs, there may be an impact on extant trees. He also indicated that the society would like to be informed as the project continues and that the society had resources that may be useful for research. The Adolfo Camarillo Heritage Grove was previously determined eligible for the NRHP under Criterion B. US 101 is exempt from evaluation in accordance with the 2008 Interstate Highway Exemption. Mr. Burrow was notified of this status on May 20 and October 6, 2022, by email. Consulting architectural historians communicated with Bill and Joy Todd regarding society files on several properties. In particular, they reviewed the file on the Scholle House and Griffin Family Funeral Chapel/W.P. Daily House in Camarillo. On August 29, 2023, the society was contacted by email regarding the adverse effects on the Adolfo Camarillo Heritage Grove. The email was undelivered; a follow-up email was sent to Joy and Bill Todd. On August 29, 2023, Bill and Joy Todd responded. They expressed concern about the adverse effect and are interested in being a consulting party.
San Buenaventura Conservancy	Stephen Schafer, President, P.O. Box 23263, Ventura, CA 93002 Phone: 415-857-HAER Email: schaf@west.net	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	N/A	N/A	N/A	N/A	Stephen Schafer responded by email on March 18, 2021. Mr. Schafer stated that the conservancy did not have any comments but that the conservancy would like to be updated if there are any changes to the proposed project. No additional communication or correspondence with Mr. Schafer has occurred, and he did not request to be a consulting party.
Scandinavian American Cultural and Historical Foundation	Richard and Anita Londgren, Co-Directors, 26 Faculty Street, Thousand Oaks, CA 91360 Phone: 805-241-0391 Email: scancenter@callutheran.edu	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	Follow-up phone call made August 17, 2021; voicemail left	Follow-up email sent September 1, 2022	Follow-up phone call made October 6, 2022; voicemail left	Anita Londgren responded via telephone on October 7, 2022. Ms. Londgren did not provide information regarding cultural resources in or near the APE. She did not request to be a consulting party. No additional communication or correspondence with Ms. Londgren has occurred.

Agency or Group	Contact and Title, Contact Information	Letter Sent	Follow-Up 1	Follow-Up 2	Follow-Up 3	Follow-Up 4	Results
Ventura County Chinese American Historical Society	George Yu, President, P.O. Box 806, Camarillo, CA 93011 Phone: N/A Email: yugeorge7@gmail.com	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	N/A	N/A	N/A	George Yu responded by email on August 11, 2021. Mr. Yu provided a Word document that included information on Chinese and Chinese Americans in Ventura, along with the names of the society's historians should any questions arise. No additional communication or correspondence with Mr. Yu has occurred, and he did not request to be a consulting party.
Ventura County Genealogical Society	Gayle Wolcott, President, P.O. Box 24608, Ventura, CA 93002 Phone: N/A Email: gfwolcott@gmail.com	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	Follow-up email sent August 25, 2021	N/A	N/A	Gayle Wolcott responded by email on August 30, 2021. Ms. Wolcott did not provide information regarding cultural resources in or near the APE. Furthermore, she stated that the society "has no opposition" [to the project] regarding [cultural resources] adjacent to the project." No additional communication or correspondence with Ms. Wolcott has occurred, and she did not request to be a consulting party.
Ventura County Museum	Deya Terrafranca, Research Library and Archives Director, 926 Railroad Avenue, Santa Paula, CA 93060 Phone: 805-653-0323, ext. 320 Email: dterrafranca@venturamuseum.org	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	N/A	N/A	N/A	N/A	Deya Terrafranca responded by email on March 11, 2021. Ms. Terrafranca stated that the Ventura County Museum does not have any specific knowledge regarding cultural resources in Ventura County but that their collections were available for review, if needed. No additional communication or correspondence with Ms. Terrafranca has occurred, and she did not request to be a consulting party.
Ventura Land Trust	Derek Poultney, Executive Director, 3451 Foothill Road, Suite 201, Ventura, CA 93003 Email: derek@venturalandtrust.org Phone: 805-643-8044	Letters sent March 12, 2021, by e-mail and March 15, 2021, by certified mail	Follow-up email sent August 10, 2021	Follow-up phone call made August 25, 2021; voicemail left	N/A	N/A	Derek Poultney responded by email on September 2, 2021. Mr. Poultney stated that the Ventura Land Trust does not know of any cultural resources within land it owns or manages. No additional communication or correspondence with Mr. Poultney has occurred, and he did not request to be a consulting party.

APE = Area of Potential Effects; CRHR = California Register of Historical Resources; N/A = not applicable; NRHP = National Register of Historic Places; USPS = U.S. Postal Service

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Table 4-6. Section 106/Assembly Bill 52 Consultation/Communication Log: Adolfo Camarillo Heritage Grove

Agency or Group	Contact and Title, Contact Information	Letter Sent	Follow-Up	Results
Camarillo Ranch Foundation	Chris Valenzuela, President, 201 Camarillo Ranch Road, Camarillo, CA 93012 Phone: 805-389-8182 Email: info@camarilloranch.org	July 24, 2024: certified mail	August 23, 2024: follow-up email August 30, 2024: follow-up phone call; left voicemail	No response received as of November 13, 2024.
County of Ventura Resource Management Agency	Dillan Murray, Program Planner, Cultural Heritage Board, 800 S. Victoria Avenue, Ventura, CA 93009 Phone: 805-654-2494 Email: Dillan.Murray@ventura.org	July 24, 2024: certified mail	N/A	August 1, 2024: Dillan Murray notified ICF that the Ventura County CHB would discuss the matter at its next meeting. August 26, 2024: Adolfo Camarillo Heritage Grove and US 101 Improvement Project discussed at regular meeting of CHB. Dillan Murray notified ICF that the San Buenaventura Conservancy for Preservation submitted a comment on the issue in advance of the meeting and provided a copy of the comment. In that comment letter, the San Buenaventura Conservancy requested to be a consulting party. Sarah Baker, ICF, attended the meeting and spoke on behalf of VCTC. August 28, 2024: Dillan Murray sent ICF an official comment letter from the County of Ventura Resource Management Agency CHB detailing the project and the CHB's recommended mitigation for the project. December 18, 2024: Molly Iker-Johnson emailed Dillan Murray on behalf of Caltrans to suggest, per CHB Recommendation #3 in the letter Mr. Murray provided in August, a proposed mitigation measure to recommend amending the existing NRHP nomination for the Camarillo Ranch property to include the Adolfo Camarillo Heritage Grove. Dillan responded, agreeing that this suggestion would address CHB Recommendation #3.

Agency or Group	Contact and Title, Contact Information	Letter Sent	Follow-Up	Results
City of Camarillo Planning Division	Paul McClaren, Senior Planner, 601 Carmen Drive, Camarillo, CA 93010 Phone: 805-388-5365 Email: pmcclaren@cityofcamarillo.org	July 24, 2024: certified mail	August 23, 2024: Follow-up email to David Sanchez	August 30, 2024: Spoke with planner Brett McMahon, informed assigned planner is Paul McClaren, given updated contact information, and asked to reach out to him directly. Contact log information updated accordingly and follow-up email sent to Paul McClaren. Paul McClaren responded, noting that after discussing the issue with several City of Camarillo departments, he anticipated providing comments within 2 weeks. September 6, 2024: Molly Iker-Johnson responded on behalf of Caltrans, acknowledging receipt of the previous email and providing an alternative point of contact at ICF for the month of September. September 26, 2024: Paul McClaren noted that the City Manager's office may provide the comment letter after review. Molly Iker-Johnson responded on Caltrans' behalf, acknowledging receipt of the email. October 9, 2024: David Sanchez responded by email, noting that the City of Camarillo is still crafting its response. Molly Iker-Johnson acknowledged receipt of the email on Caltrans' behalf. November 5, 2024: David Sanchez submitted a formal comment letter by email. The comment letter details the project and the City of Camarillo's recommended mitigation measures for the project.
Pleasant Valley Historical Society	Joy Todd, President, P.O. Box 570, Camarillo, CA 93011-0570 Phone: 805-482-3660 Email: pvhbill@gmail.com	July 24, 2024: certified mail	August 23, 2024: Follow-up email	August 23, 2024: Joy Todd responded, noting that the group had forwarded its letter to the Camarillo Ranch Foundation and that, although the trees are historic, progress takes over and at least some trees will remain. No further concerns raised.

APE = Area of Potential Effects; CHB = Cultural Heritage Board; CRHR = California Register of Historical Resources; N/A = not applicable; NRHP = National Register of Historic Places

4.4 STATE HISTORIC PRESERVATION OFFICER COORDINATION

Pursuant to Stipulation VIII.C.6 of the Section 106 Programmatic Agreement, Caltrans requested concurrence from the State Historic Preservation Officer (SHPO) on the determinations of eligibility findings for the US 101 Improvement Project on June 10, 2024. Following a review of the documentation submitted, SHPO concurred on July 18, 2024, on the eligibility determinations. The letter from SHPO is included at the end of this chapter (refer to Figure 4-9).

4.5 SECTION 4(F)/6(F) COORDINATION

Coordination efforts were conducted with the Pleasant Valley Recreation and Park District to discuss the project plans and partial property acquisition at the Camarillo Grove Park. A letter was sent on January 15, 2024, to the Pleasant Valley Recreation and Park District to request a meeting. A virtual conference call was held on January 29, 2025. The letter and virtual conference call included discussions of the need for replacement land to account for the anticipated partial acquisition of park land. An in-person meeting with the Pleasant Valley Recreation and Park District was held on July 1, 2026 to discuss potential viable replacement property options.

Coordination with the City of Camarillo was also conducted to discuss project design options at the Adolfo Camarillo Heritage Grove, a Section 4(f) resource. A meeting with the City of Camarillo was conducted on January 17, 2024, and a follow-up meeting was conducted on June 19, 2024.

Coordination with the officials with jurisdiction for parks and recreational facilities and the Adolfo Camarillo Heritage Grove is ongoing. Documentation of coordination, agreements, and letters of concurrence would be included within the final Section 4(f) evaluation in Appendix A.

4.6 FEDERAL AND NON-FEDERAL RESOURCE AND LOCAL AGENCY CONSULTATION ON LISTED SPECIES

As discussed in Section 2.4.5, *Threatened and Endangered Species,* the following coordination with federal and non-federal resource and local agencies regarding listed species for this project has occurred to inform them of where listed species have been documented in relation to the project area. No consultation with the California Department of Fish and Wildlife (CDFW) is required for Section 2081 or 2080.1.

- **United States Fish and Wildlife Service**
    - On June 4, 2021, Caltrans sent a letter to the U.S. Fish and Wildlife Service (USFWS) requesting concurrence that the project “May Affect, Not Likely to Adversely Affect” least Bell’s vireo and monarch butterfly. Caltrans received a

concurrence letter from USFWS on July 15, 2021. USFWS consultation letters are provided in Appendix I of this EIR/EA.

- **California State Parks**
  - Email communications on October 15, 2019, with California State Parks biologist Brooke Sheridan regarding western snowy plover reports within San Buenaventura State Beach.
- **California Department of Fish and Wildlife**
  - Email communications on May 4 and 18, 2020, with CDFW biologist Chris Dellith regarding least Bell's vireo breeding records along Calleguas Creek.
  - Chris Dellith (CDFW) joined ICF biologist Peter Gaede on a least Bell's vireo protocol survey performed within the Calleguas Creek portion of the Biological Study Area on May 30, 2020.
- **Ventura County Watershed Protection District**
  - Email communications on September 22, 2020, with Angela Bonfiglio Allen (Ventura County Watershed Protection District) regarding least Bell's vireo detections along Calleguas Creek in the vicinity of Upland Road.

Figure 4-1. Notice of Preparation (Sheet 1 of 8)

SCH NO. _____

NOTICE OF PREPARATION

To: _____

From: California Dept. of Transportation
100 S. Main St. MS 16A
Los Angeles, CA 90012

Subject: **Notice of Preparation of a Draft Environmental Impact Report**
Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Title: US 101 Improvement Project

Project Location: Ventura County

Project Description: The California Department of Transportation (Caltrans), in coordination with the Ventura County Transportation Commission (VCTC), is proposing capacity and operational improvements along US Highway 101 (US 101), between State Route 23 and State Route 33, from postmile (PM) 4.1 to 30.9. This is to inform you that the California Department of Transportation will be the lead agency and will prepare an environmental impact report for the Project described below. Your participation as a responsible agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed Project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the Project.

A more detailed Project description, location map, and the potential environmental effects are contained in the attached materials.

A copy of the Initial Study (___is) (_x_is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to ___Susan Tse_____ Telephone _(213) 897-1821__ at the address shown above. Please supply us with the name for a contact person in your agency.

Date March 14, 2019 Signature Randell Iwasaki
Title Deputy District Director

Figure 4-1. Notice of Preparation (Sheet 2 of 8)

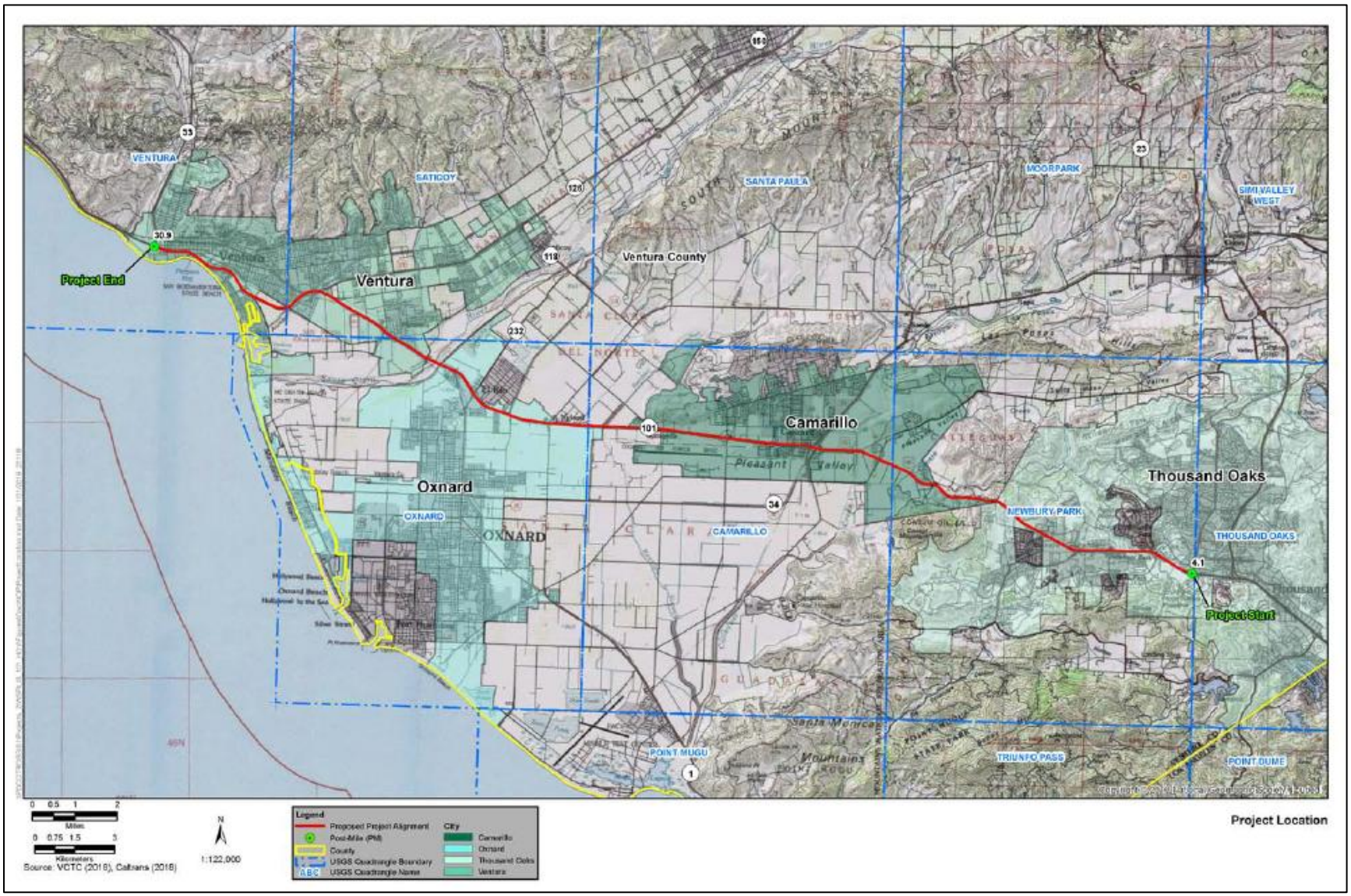


Figure 4-1. Notice of Preparation (Sheet 3 of 8)

Project Description

The California Department of Transportation (Caltrans), in coordination with the Ventura County Transportation Commission (VCTC), is proposing capacity and operational improvements along US Highway 101 (US 101) from postmile (PM) 4.1 to 30.9. The Project area includes the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura in Ventura County, from approximately State Route 23 to State Route 33. The existing US 101 within the proposed Project corridor consists primarily of three 12-foot-wide general purpose lanes in each direction, with 12-foot-wide auxiliary lanes at certain locations. The Project proposes to widen US 101 in order to add through lanes in each direction, as well as potential auxiliary lanes.

Purpose
The purpose of the proposed Project is to:

- Reduce existing congestion
- Improve traffic operations
- Accommodate future traffic volumes forecasted in this area

Need
US 101 within the proposed Project limits consists solely of general purpose lanes in both directions. Currently, during peak hours, the level of service (LOS) varies from F (vehicle operating speed less than 29 miles per hour) to C (vehicle operating speed greater than 54 miles per hour). The LOS is a letter designation that describes a range of operating conditions of a particular roadway, with LOS A representing the best operating conditions and LOS F representing the worst. LOS E and F are generally considered unacceptable.

Congestion within the Project region has increased by about 45% since 1990 and is anticipated to increase further. Due to the projected population growth for Ventura County, currently estimated at approximately 1% annually, it is anticipated that traffic demand will continue to increase and LOS will continue to degrade along US 101.

Alternatives
There are four alternatives under consideration, including the No-Build Alternative. Additionally, auxiliary lanes would be included as design options for each alternative, when beneficial.

- Alternative 1 - No-Build Alternative
- Alternative 2 - Addition of one non-standard HOV lanes in each direction
- Alternative 3 - Addition of one standard HOV lane in each direction
- Alternative 4 - Addition of two standard HOV lanes in each direction

Alternative 1: No-Build Alternative
Environmental review must consider the effects of not implementing the proposed Project. The No-Build Alternative provides a baseline for comparing the impacts associated with the build alternatives. The No-Build Alternative would maintain the existing US 101. If no action is taken, the LOS throughout the Project corridor would remain at a level that is unacceptable to users of the facility. Adverse effects of the No-Build Alternative would lead to an inability to meet the purpose and need for the Project, and are expected to result in deteriorating LOS, traffic delays, and possible delays in emergency response times. This approach is inconsistent with the Caltrans' goal of providing an efficient mobility system.

Alternative 2: Addition of one non-standard HOV lane in each direction
Alternative 2 proposes the addition of a non-standard HOV lane in each direction. Alternative 2 would utilize the existing median as well as the inside and outside shoulders to widen the roadway. In order to minimize impacts related to right of way, the lanes and shoulder would have non-standard widths at various locations along the corridor. However, some widening beyond the

Figure 4-1. Notice of Preparation (Sheet 4 of 8)

existing State-owned right of way would be required for this alternative to accommodate sight distance and roadway curvature. The widening needed is anticipated to be approximately 4 feet, with the resulting outside shoulder width being a minimum of 4 feet.

Alternative 2 would also modify on-ramps to accommodate HOV lanes and ramp metering, where appropriate. The resulting on-ramps would have standard lane widths and shoulder configurations. This alternative would also require the modification, reconstruction, and/or relocation of some bridge and over-crossing facilities.

Alternative 3: Addition of one standard HOV lane in each direction
Alternative 3 proposes the addition of one standard HOV lane and standard outside/inside shoulders in each direction. The roadway would be widened approximately 16 feet in each direction. In order to accommodate the roadway widening, right of way acquisition would be required at some locations within the Project area. The resulting Project would have standard 12-foot general purpose lanes and one HOV lane, as well as 10-foot-wide outside shoulders.

Similar to Alternative 2, this alternative would modify the existing on-ramps at some locations, where required. Additionally, Alternative 3 would require the widening of some bridge and overcrossings to accommodate the proposed HOV lanes.

Alternative 4: Addition of two standard HOV lanes in each direction
Alternative 4 proposes the addition of two standard HOV lanes and standard outside/inside shoulders in each direction. The roadway would be widened approximately 28 feet in each direction. In order to accommodate the roadway widening, right of way acquisition would be required within the Project area. The resulting Project would have standard 12-foot general purpose lanes and two HOV lanes, as well as 10-foot-wide outside shoulders.

This alternative would modify the existing on-ramps at some locations, where required. Additionally, Alternative 4 would require the widening of some bridge and overcrossings to accommodate the proposed HOV lanes.

Figure 4-1. Notice of Preparation (Sheet 5 of 8)

Potential Environmental Effects:

A Preliminary Environmental Analysis Report was prepared by Caltans in 2013, which identified areas of potential concern with the implementation of the proposed Project. Resources that have the potential to be affected are discussed below.

***Aesthetics*:** Due to the widening of the existing highway, some impacts on visual resources may occur with the addition of retaining walls and the removal of trees and rock outcroppings. The addition of retaining walls could have the potential to limit the view of the surrounding landforms from the existing roadway. Potential impacts on the viewshed will be analyzed as part of the Visual Impact Assessment that is prepared in support of the environmental document.

***Agriculture*:** No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is located within the Project area. However, some farmland exists within the Project corridor and may be affected by right of way acquisition for the proposed widening activities. Farmland acquisition will follow all applicable local, state, and federal policies protecting farmlands. Additionally, all property acquisition would conform with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Properties potentially affected, as well as the applicable zoning, will be identified and addressed in the environmental document.

Air Quality: The Project is currently identified in the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy for the project approvals and environmental document phase only. The proposed Project would need to be included in the Federal Transportation Improvement Program as the Project progresses. The proposed Project is within the South Central Coast Air Basin, which is a nonattainment area for federal and state standards for ozone and is a nonattainment area for the state standard for particulate matter 10 microns or less in diameter (PM_{10}). An Air Quality Report will be performed in support of the environmental document.

***Biological Resources*:** Riparian habitat, sensitive natural communities, jurisdictional waters, and listed species are known to occur within and adjacent to the Project area. A Natural Environment Study, as well as a Jurisdictional Delineation, will be prepared in support of the environmental document. Additionally, coordination with United States Army Corps of Engineers, California Regional Water Quality Control Board, United States Fish and Wildlife Service, and California Department of Fish and Wildlife will take place during the preparation of the environmental document.

Due to the potential need to widen bridges, impacts on roosting bats and maternal colonies and nesting birds may occur. The potential for impacts on bats and nesting birds will be studied as part of the preparation of the environmental document. Additionally, due to the need to widen the existing roadway, impacts on wildlife movement may occur. A detailed wildlife corridor study will be prepared in support of the environmental document.

***Cultural Resources*:** The proposed Project has potential to affect historic and archaeological resources. Cultural resources within the Project area will be identified and analyzed during the preparation of the environmental document, with the preparation of a Historic Property Survey Report, Archaeological Survey Report, and Historic Resource Evaluation Report. These documents will be reviewed by the State Historic Preservation Officer to ensure compliance with laws and regulations related to cultural resources.

Geology and Soils: The proposed Project will require the preparation of a geotechnical report. This report will analyze geologic, soil, and seismic conditions in the vicinity of the proposed Project. The geotechnical report will be prepared in support of the environmental document.

Figure 4-1. Notice of Preparation (Sheet 6 of 8)

Greenhouse Gas (GHG) Emissions: Project construction activities and roadway operations would generate GHG emissions, which will be quantified using approved methods. Estimated emissions from each of the alternatives will be compared to determine the potential for impacts related to climate change. The GHG emissions analysis will be conducted as part of the Air Quality Report prepared in support of the environmental document.

Hazards and Hazardous Materials: The proposed Project area is a major highway corridor, with routine truck traffic potentially containing hazardous materials. This would not change with implementation of the proposed Project. A complete screening of the potential hazards associated with the proposed Project will be developed in support of the environmental document.

The proposed Project may require right of way acquisition to accommodate the widening of the highway. A complete screening of the hazards associated with the proposed Project will be developed during the preparation of the environmental document, through the development of an Initial Site Assessment. Any properties that will be acquired will be subject to a Phase I or II Site investigation.

Hydrology and Water Quality: Due to the potential need to widen the roadway, the proposed Project has the potential to affect drainages and drainage patterns within the Project area. Potential impacts on drainages will be analyzed in the environmental document. Additionally, widening the roadway would increase the amount of impervious surface area within the Project area, increasing the amount of runoff. Increases in runoff would require that Best Management Practices (BMP) be considered for the Project to treat runoff. Any BMPs that are identified for incorporation into the proposed Project will be discussed in the environmental document.

Land Use and Planning: The proposed Project is located along an existing highway facility. As such, widening the roadway is not anticipated to create a new division to an established community. The Project's consistency with the appropriate local and general plans will be discussed in the environmental document.

Mineral Resources: The proposed Project is not anticipated to affect mineral resources.

Noise: During construction, the Project may generate ground borne vibration and noise. The proposed Project will also require the preparation of a Noise Study Report (NSR) to identify potential noise impacts, as part of the development of the environmental document. If the NSR shows that there is a potential for the Project to cause noise levels that exceed regulated thresholds, a Noise Abatement Decision Report (NADR) will be prepared. Any potential abatement measures will be discussed within the NADR. Local ordinances related to noise, as well as those from other agencies, will be discussed in the environmental document.

Population and Housing: Some property acquisitions may be required to accommodate the proposed widening activities. All property acquisition would conform with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Properties potentially affected will be identified and addressed in the environmental document.

Public Services: The proposed Project has the potential to affect public services in the Project area. Impacts related to public services will be analyzed in the Community Impact Analysis prepared in support of the environmental document.

Recreation: Some property acquisitions may be required to accommodate the proposed widening activities, which may affect recreational resources. Impacts related to recreation will be analyzed in the Community Impact Analysis prepared in support of the environmental document.

Figure 4-1. Notice of Preparation (Sheet 7 of 8)

Transportation and Traffic: The proposed Project is projected to reduce congestion and improve traffic operations. A Traffic Operations Analysis Report will be prepared in support of the environmental document. The proposed Project could result in changes in circulation patterns and vehicle miles traveled (VMT) in the region, which will be discussed in the Traffic Operations Analysis Report and the environmental document.

Tribal Cultural Resources: Some property acquisitions may be required to accommodate the proposed widening activities, which may affect tribal cultural resources. A comprehensive outreach program to tribal representatives will be conducted in support of the environmental document.

Utilities and Service Systems: Some utility relocations may be required to accommodate the widening of the roadway. Close coordination with the respective utility owners will be needed throughout the development of the Project. Utilities potentially affected will be identified during the preparation of the environmental document.

Scoping Process

Caltrans, in coordination with VCTC, will be holding public scoping meetings at the following dates and locations:

Ventura City Hall - Community Room
501 Poli St, Ventura, CA 93001
April 16th, 2019 6:00-8:00 PM

Oxnard Performing Arts Center – Ventura Room
800 Hobson Way, Oxnard, CA 93030
April 17th, 2019 6:00-8:00 PM

Thousand Oaks Civic Arts Center – Founders Room
2100 Thousand Oaks Blvd, Thousand Oaks, CA 91362
April 18th, 2019 6:00-8:00 PM.

Camarillo Library – Community Room
4101 Las Posas Rd, Camarillo, CA 93010
April 22nd, 2019 6:00-8:00 PM

As part of the scoping process, the public is encouraged to attend and submit comments and concerns about the proposed Project. A Notice of Scoping will appear in the following newspapers: The Ventura Star, Thousand Oaks Acorn, Camarillo Acorn, Ventura County Reporter, Breeze and Vida. Information about this Project can also be found at the following website: ourfuture101.org

Responsible and Trustee Agencies will receive a copy of the Notice of Preparation by mail. The current list of Trustee and Responsible Agencies is as follows:

United States Army Corps of Engineers
United States Environmental Protection Agency
United States Fish and Wildlife Service
California Department of Fish and Wildlife
California Coastal Commission
Los Angeles Regional Water Quality Control Board
State Historic Preservation Officer
Union Pacific Railroad
Public Utilities Commission

Figure 4-1. Notice of Preparation (Sheet 8 of 8)

This list is not final. As the scoping process progresses and interested parties come forward, this list will be amended.

Figure 4-2. Project Website

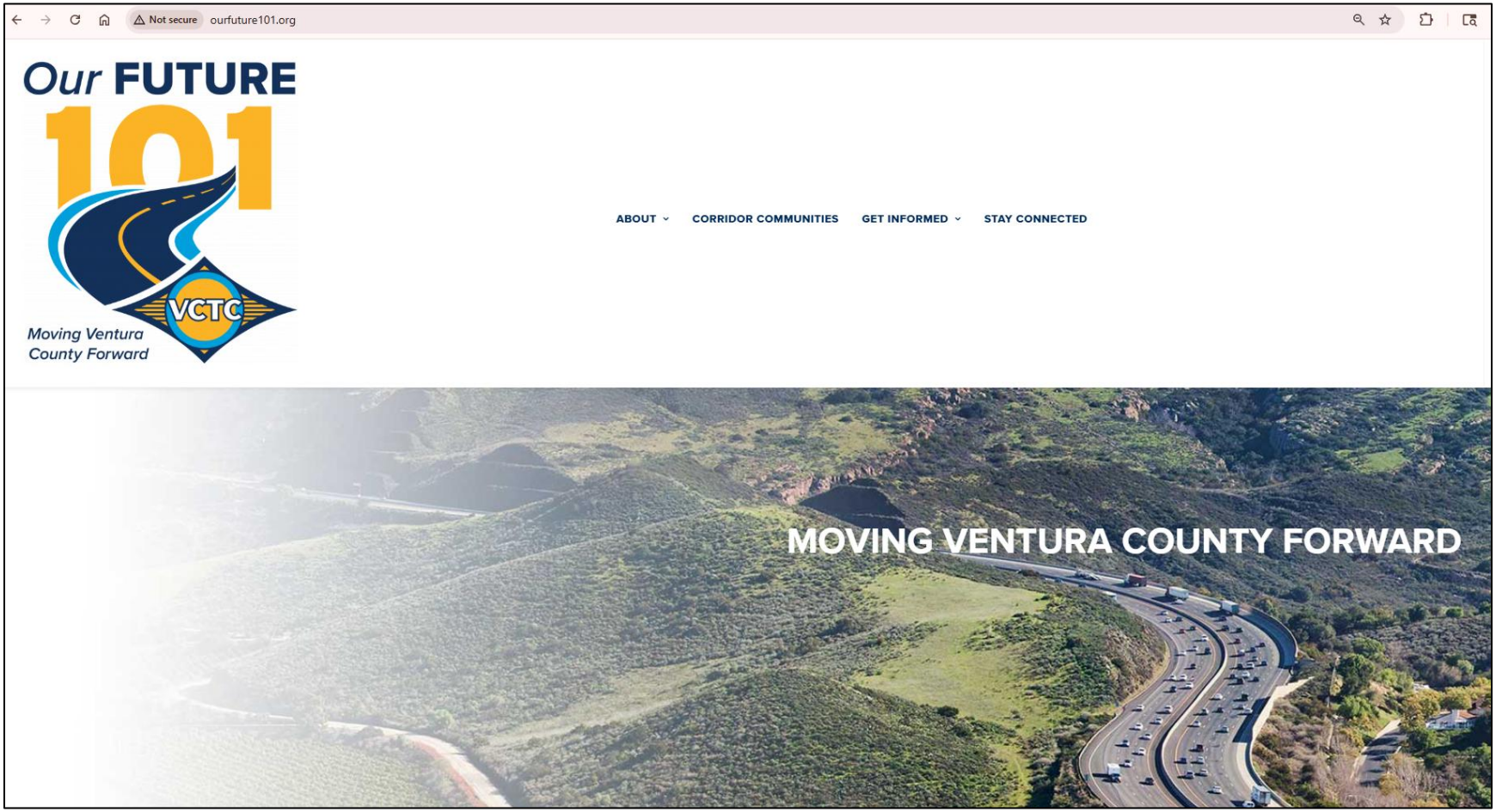


Figure 4-3. Postcard Mail Notification and Postings (Sheet 1 of 2)

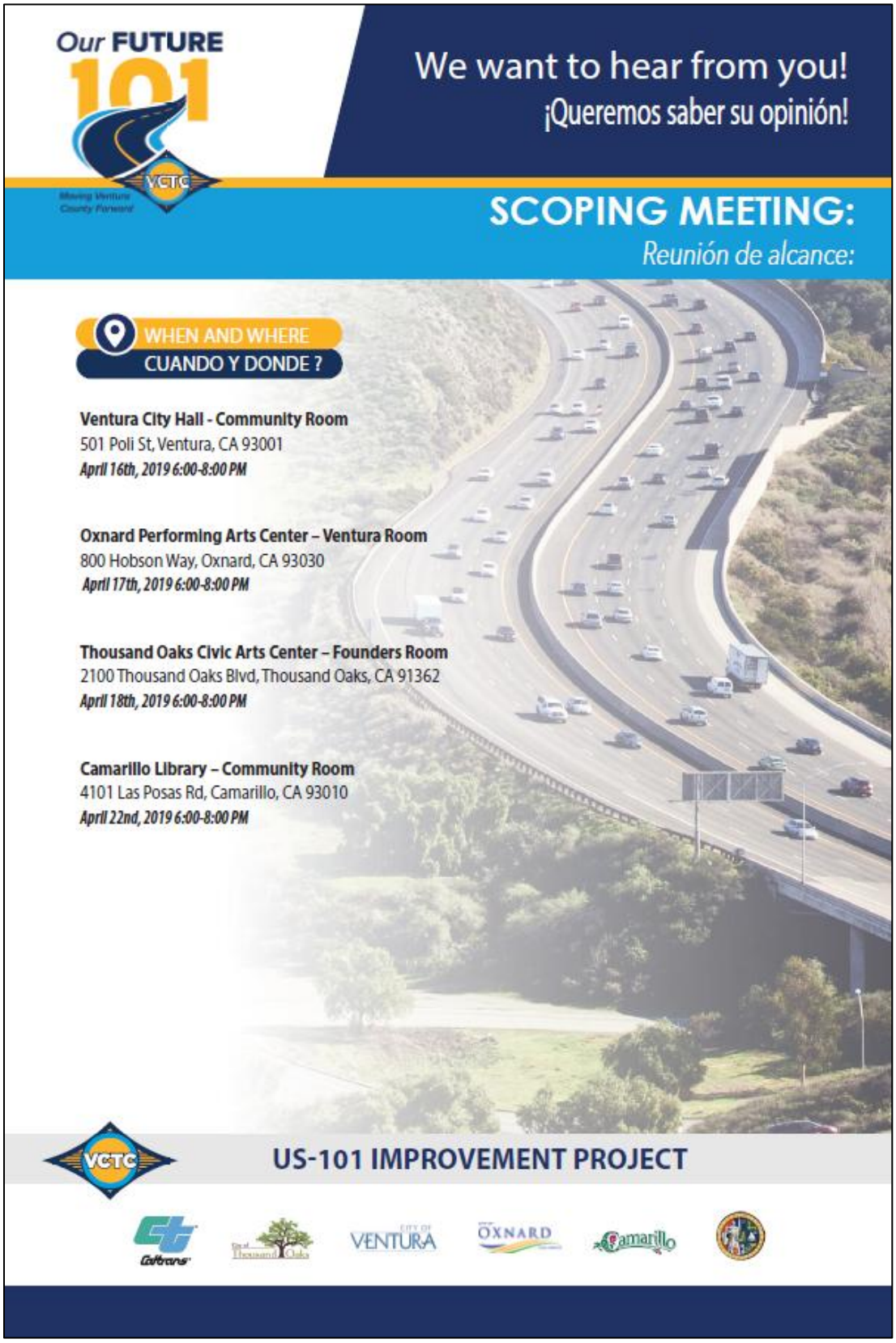


Figure 4-3. Postcard Mail Notification and Postings (Sheet 2 of 2)

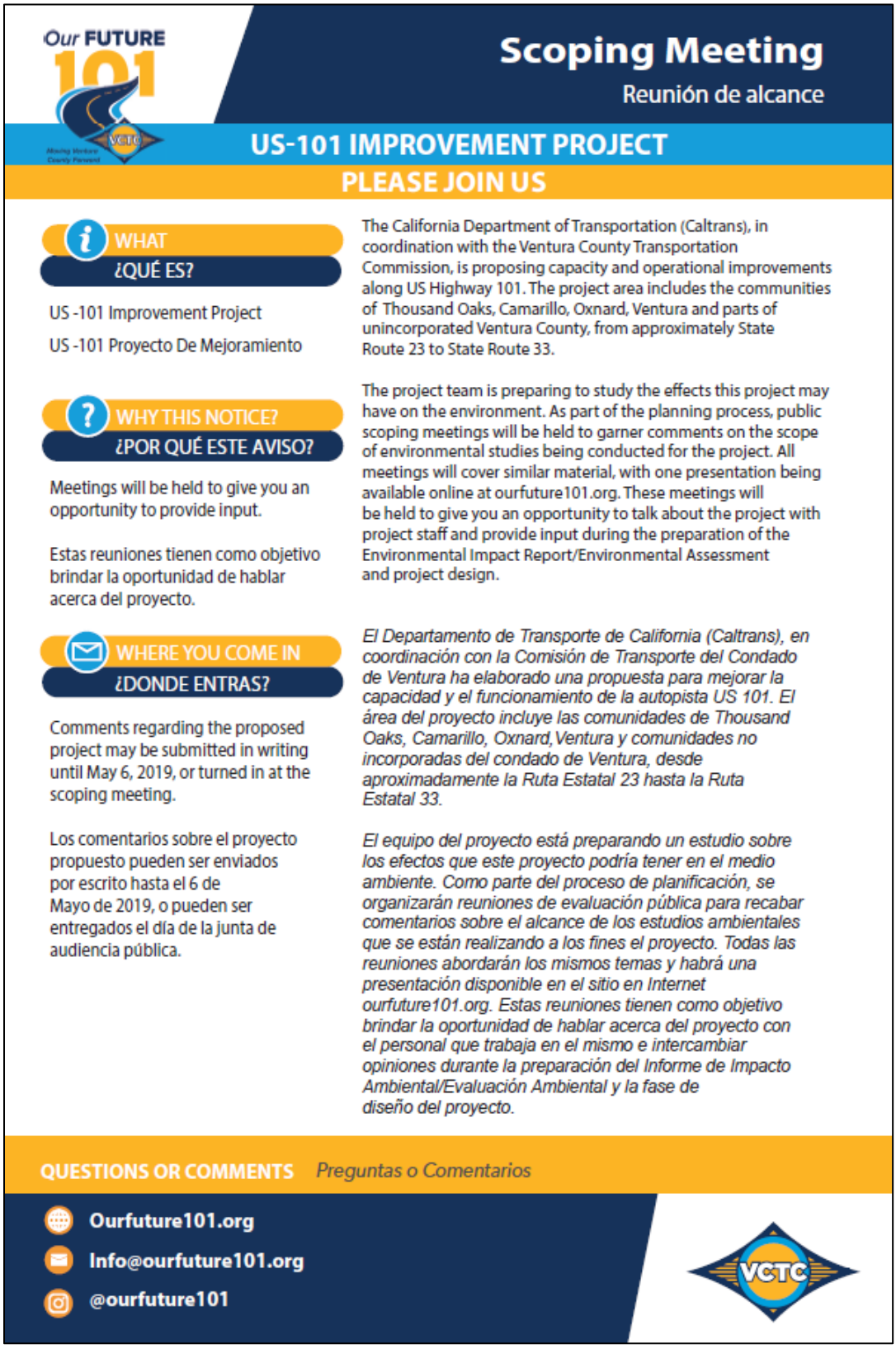
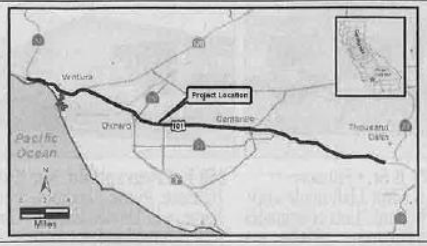


Figure 4-4. Publication of Santa Paula Times Newspaper Ad

PUBLIC NOTICE

Notice of Preparation (NOP) for a Draft Environmental Impact Report/Environmental Assessment For the US 101 Improvement Project

US 101 Improvement Project Location



WHAT'S BEING PLANNED

The California Department of Transportation (Caltrans), in coordination with the Ventura County Transportation Commission (VCTC), is proposing capacity and operational improvements along US Highway 101 (US 101) from postmile (PM) 4.1 to 30.9. The Project area includes the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura in Ventura County, from approximately State Route 23 to State Route 33. The existing US 101 within the proposed Project corridor consists primarily of three 12-foot-wide general purpose lanes in each direction, with 12-foot-wide auxiliary lanes at certain locations. The Project proposes to widen US 101 in order to add through lanes in each direction, as well as potential auxiliary lanes. The project will require the preparation of environmental studies under both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

There are four alternatives under consideration, including the No-Build Alternative. Additionally, auxiliary lanes would be included as design options for each alternative, when beneficial.

- Alternative 1 - No-Build Alternative
- Alternative 2 - Addition of one non-standard HOV lanes in each direction
- Alternative 3 - Addition of one standard HOV lane in each direction
- Alternative 4 - Addition of two standard HOV lanes in each direction

WHY THIS AD?

Caltrans is preparing to study the effects this project may have on the environment. As part of the planning process, a public scoping meeting will be held to garner comments on the scope of environmental studies being conducted for the project. Four scoping meetings are planned; in the Cities of Oxnard, Ventura, Camarillo and Thousand Oaks. Scoping meetings will be held Tuesday April 16th, 2019 in the City of Ventura; Wednesday April 17th, 2019 in the City of Oxnard; Thursday April 18th, 2019 in the City of Thousand Oaks; and Monday April 22nd, 2019 in the City of Camarillo. All meetings will cover similar material, with one presentation being available online.

Public scoping meetings will be held to give you an opportunity to talk about the project with project staff and provide input during the preparation of the Environmental Impact Report/Environmental Analysis and project design.

WHERE YOU COME IN

Do you have concerns about this project? Do you have information that should be included? Your comments will be part of the public record. If you wish to make a comment during public scoping regarding the proposed project in general, you may submit your written comments until May 6th, 2019 to:

Susan Tse, Senior Environmental Planner
California Department of Transportation
Division of Environmental Planning
100 S. Main St. MS 16A
Los Angeles, CA 90012
or via email to: info@ourfuture101.org

Please use "US 101 Improvement Project" in the subject line. Comments regarding the project may be submitted in person at any of the public scoping meetings.

WHEN AND WHERE

Public scoping meetings will be held on:

- **Ventura City Hall** - Community Room
  501 Poli St, Ventura, CA 93001
  April 16th, 2019 6:00-8:00 PM
- **Camarillo Library** – Community Room
  4101 Las Posas Rd, Camarillo, CA 93010
  April 22nd, 2019 6:00-8:00 PM

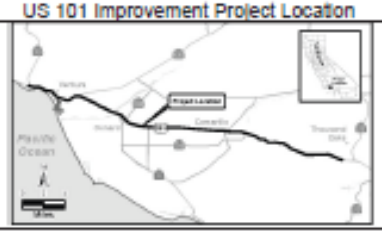
Figure 4-5. Publication of Ventura County Reporter Electronic Newspaper Ad

LEGAL

PUBLIC NOTICE

Notice of Preparation (NOP) for a Draft Environmental Impact Report/Environmental Assessment For the US 101 Improvement Project

US 101 Improvement Project Location



WHAT'S BEING PLANNED

The California Department of Transportation (Caltrans), in coordination with the Ventura County Transportation Commission (VCTC), is proposing capacity and operational improvements along US Highway 101 (US 101) from postmile (PM) 4.1 to 30.9. The Project area includes the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura in Ventura County, from approximately State Route 23 to State Route 33. The existing US 101 within the proposed Project corridor consists primarily of three 12-foot-wide general purpose lanes in each direction, with 12-foot-wide auxiliary lanes at certain locations. The Project proposes to widen US 101 in order to add through lanes in each direction, as well as potential auxiliary lanes. The project will require the preparation of environmentalstudies under both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

There are four alternatives under consideration, including the No-Build Alternative. Additionally, auxiliary lanes would be included as design options for each alternative, when beneficial.

- Alternative 1 - No-Build Alternative
- Alternative 2 - Addition of one non-standard HOV lanes in each direction
- Alternative 3 - Addition of one standard HOV lane in each direction
- Alternative 4 - Addition of two standard HOV lanes in each direction

WHY THIS AD?

Caltrans is preparing to study the effects this project may have on the environment. As part of the planning process, a public scoping meeting will be held to garner comments on the scope of environmental studies being conducted for the project. Four scoping meetings are planned; in the Cities of Oxnard, Ventura, Camarillo and Thousand Oaks. Scoping meetings will be held Tuesday April 16th, 2019 in the City of Ventura; Wednesday April 17th, 2019 in the City of Oxnard; Thursday April 18th, 2019 in the City of Thousand Oaks; and Monday April 22nd, 2019 in the City of Camarillo. All meetings will cover similar material, with one presentation being available online.

Public scoping meetings will be held to give you an opportunity to talk about the project with project staff and provide input during the preparation of the Environmental Impact Report/Environmental Analysis and project design.

WHERE YOU COME IN

Do you have concerns about this project? Do you have information that should be included? Your comments will be part of the public record. If you wish to make a comment during public scoping regarding the proposed project in general, you may submit your written comments until May 6th, 2019 to:

Susan Tse, Senior Environmental Planner
California Department of Transportation
Division of Environmental Planning
100 S. Main St. MS 16A
Los Angeles, CA 90012
or via email to: info@ourfuture101.org

Please use "US 101 Improvement Project" in the subject line. Comments regarding the project may be submitted in person at any of the public scoping meetings.

WHEN AND WHERE

Public scoping meetings will be held on:

- **Ventura City Hall** - Community Room
  501 Poli St, Ventura, CA 93001
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  April 17th, 2019 6:00-8:00 PM
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  4101 Las Posas Rd, Camarillo, CA 93010
  April 22nd, 2019 6:00-8:00 PM
- **Thousand Oaks Civic Arts Center** – Founders Room
  2100 Thousand Oaks Blvd, Thousand Oaks, CA 91362
  April 18th, 2019 6:00-8:00 PM

CONTACT

Individuals who require special accommodation (American Sign Language interpreter, accessible seating, documentation in alternate formats, etc.) are requested to contact at least three days prior to the public hearing date, the District 7 Office of Public Affairs at (213) 897-9092, or TDD users may contact the California Relay Service at 1-800-735-2929 (TTY to Voice), 1-800-735-2922 (Voice to TTY), 1-800-854-7784 (Free or to Speech to Speech), or dial 711.

PN 0713000249

April 4, 2019 — VCR — 25

Figure 4-6. Email Notification

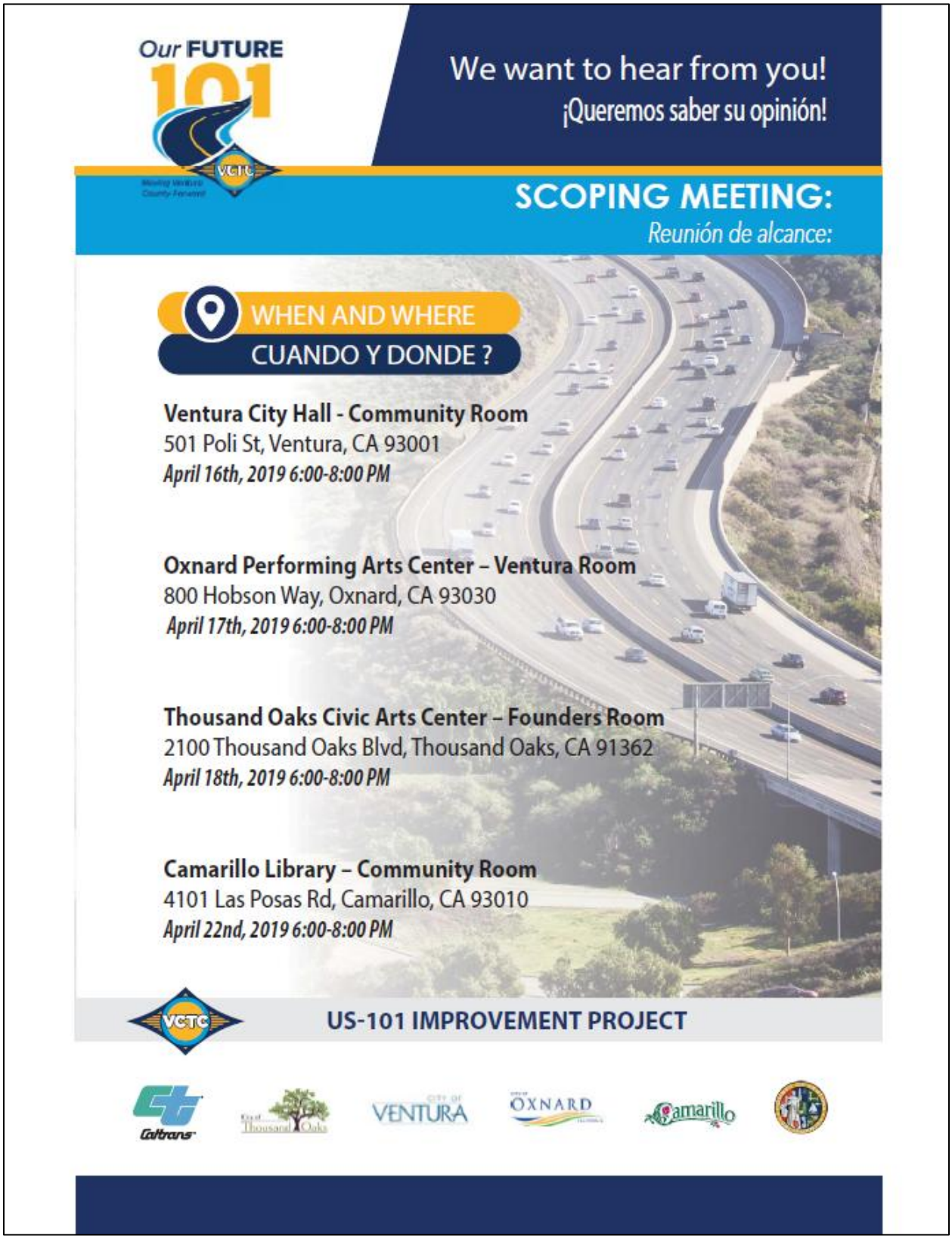


Figure 4-7. Press Release

FOR IMMEDIATE RELEASE

Susan Tse
Senior Environmental Planner
California Department of Transportation, Division of Environmental Planning
Email : info@Ourfuture101.org
Web : Ourfuture101.org

US-101 IMPROVEMENT PROJECT SCOPING MEETINGS
Community Members Invited to Discuss the Project and Provide Feedback

The California Department of Transportation (Caltrans), in coordination with the Ventura County Transportation Commission (VCTC), is proposing capacity and operational improvements along US Highway 101. The project area includes the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura in Ventura County, from approximately State Route 23 to State Route 33. The project team is preparing to study the effects this project may have on the environment. As part of the planning process, public scoping meetings will be held to garner comments on the scope of environmental studies being conducted for the project.

Currently, US-101 consists primarily of three 12-foot-wide general-purpose lanes in each direction, with 12-foot-wide auxiliary lanes at certain locations. The Project proposes to widen US-101 and add through lanes in each direction, as well as potential auxiliary lanes. The Project will require the preparation of environmental studies under both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

Four alternatives are being considered, including a No-Build Alternative, with auxiliary lanes to be included as design options for each alternative, when beneficial.

All meetings will cover similar material, with one presentation being provided at all meetings and then made available through the project website, ourfuture101.org, after the conclusion of the final meeting. These meetings will be held to give stakeholders an opportunity to talk about the project with project staff and provide input during the preparation of the Environmental Impact Report/Environmental Assessment and project design.

The following public scoping meetings have been scheduled:

Tuesday, April 16, 2019 – 6:00-8:00 PM
Ventura City Hall – Community Room
501 Poli St., Ventura, CA 93001

Wednesday, April 17, 2019 – 6:00-8:00 PM
Oxnard Performing Arts Center – Ventura Room
800 Hobson Way, Oxnard, CA 93030

Thursday, April 18, 2019 – 6:00-8:00 PM
Thousand Oaks Civic Arts Center – Founders Room
2100 Thousand Oaks Blvd., Thousand Oaks, CA 91362

Monday, April 22, 2019 – 6:00-8:00 PM
Camarillo Library – Community Room
4101 Las Posas Rd., Camarillo, CA 93010

Stay connected to receive up-to-date information on the project by going to ourfuture101.org and registering for updates.

Figure 4-8. Instagram Posts (Sheet 1 of 2)

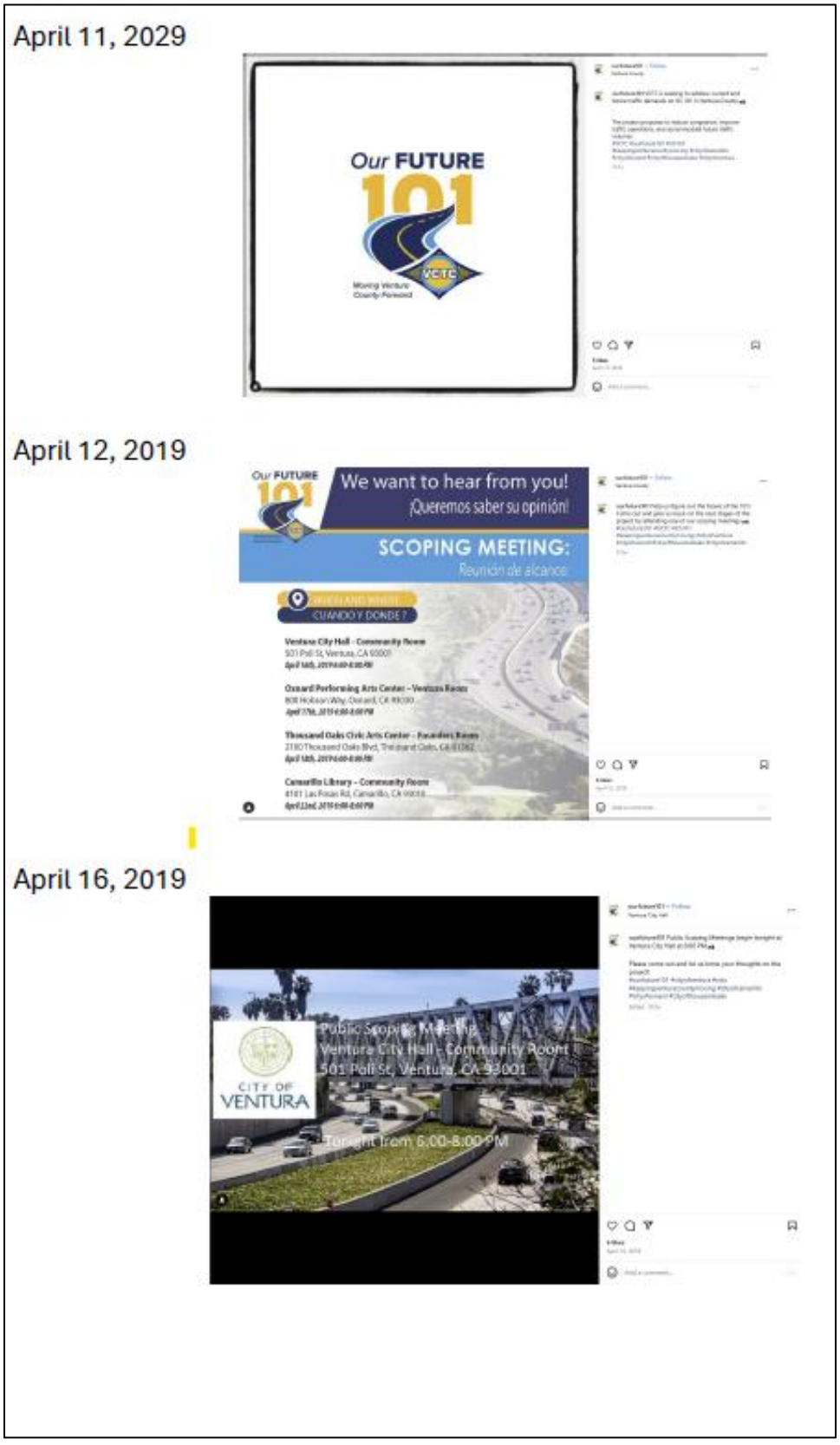


Figure 4-8. Instagram Posts (Sheet 2 of 2)

April 17, 2019



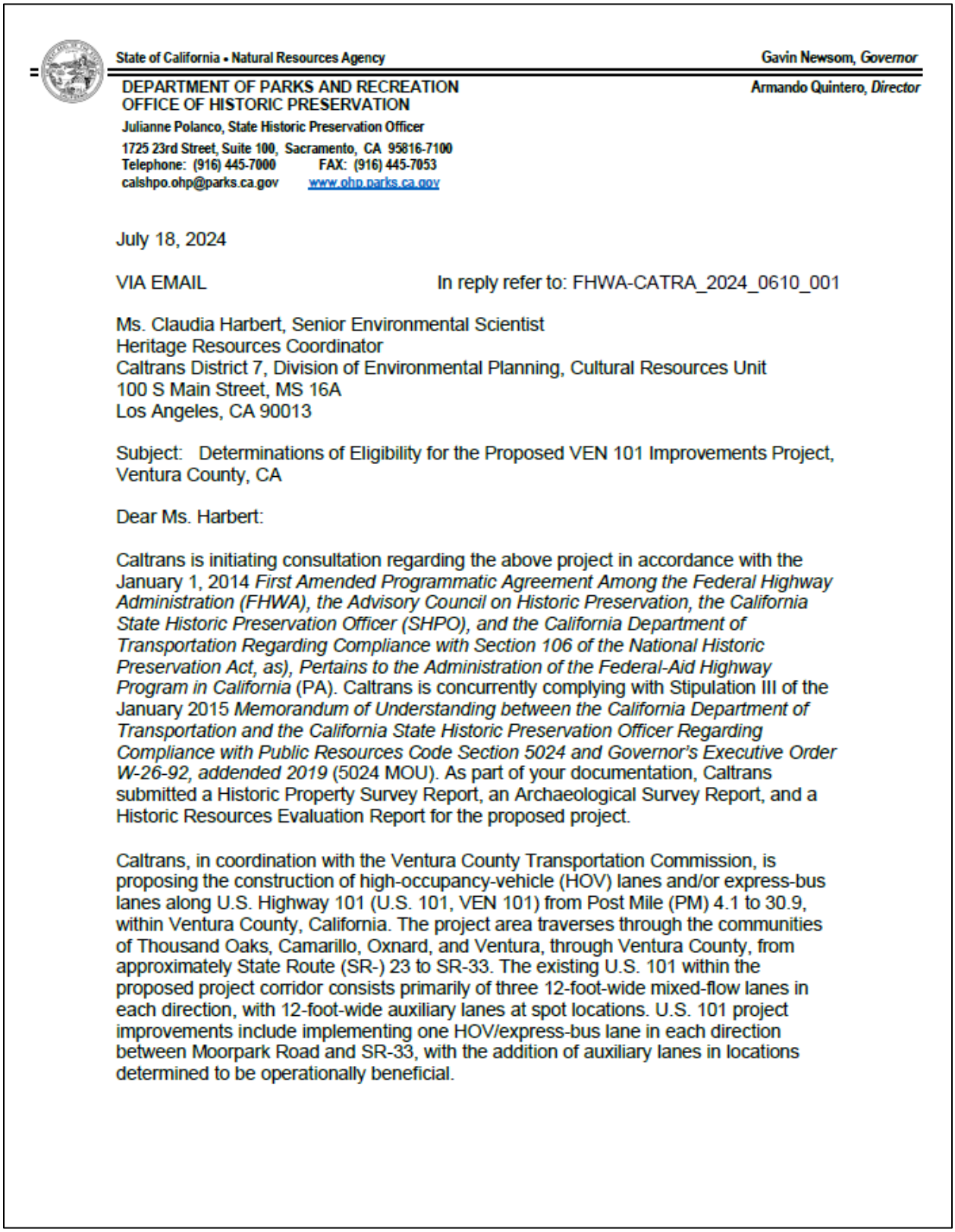
April 1, 2019



April 22, 2019



Figure 4-9. SHPO Concurrence Letter (Sheet 1 of 8)



State of California • Natural Resources Agency — Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION — Armando Quintero, *Director*
OFFICE OF HISTORIC PRESERVATION

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

July 18, 2024

VIA EMAIL — In reply refer to: FHWA-CATRA_2024_0610_001

Ms. Claudia Harbert, Senior Environmental Scientist
Heritage Resources Coordinator
Caltrans District 7, Division of Environmental Planning, Cultural Resources Unit
100 S Main Street, MS 16A
Los Angeles, CA 90013

Subject: Determinations of Eligibility for the Proposed VEN 101 Improvements Project, Ventura County, CA

Dear Ms. Harbert:

Caltrans is initiating consultation regarding the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as), Pertains to the Administration of the Federal-Aid Highway Program in California* (PA). Caltrans is concurrently complying with Stipulation III of the January 2015 *Memorandum of Understanding between the California Department of Transportation and the California State Historic Preservation Officer Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92, addended 2019* (5024 MOU). As part of your documentation, Caltrans submitted a Historic Property Survey Report, an Archaeological Survey Report, and a Historic Resources Evaluation Report for the proposed project.

Caltrans, in coordination with the Ventura County Transportation Commission, is proposing the construction of high-occupancy-vehicle (HOV) lanes and/or express-bus lanes along U.S. Highway 101 (U.S. 101, VEN 101) from Post Mile (PM) 4.1 to 30.9, within Ventura County, California. The project area traverses through the communities of Thousand Oaks, Camarillo, Oxnard, and Ventura, through Ventura County, from approximately State Route (SR-) 23 to SR-33. The existing U.S. 101 within the proposed project corridor consists primarily of three 12-foot-wide mixed-flow lanes in each direction, with 12-foot-wide auxiliary lanes at spot locations. U.S. 101 project improvements include implementing one HOV/express-bus lane in each direction between Moorpark Road and SR-33, with the addition of auxiliary lanes in locations determined to be operationally beneficial.

Figure 4-9. SHPO Concurrence Letter (Sheet 2 of 8)

Ms. Harbert
July 18, 2024
Page 2 of 8

FHWA-CATRA_2024_0610_001

Pursuant to Stipulation VIII.C.6 of the Section 106 PA, Caltrans requests concurrence that the following properties are not eligible for the National Register of Historic Places (NRHP):

Name	Address/ Location	Community
Southern Pacific Railroad Coast Line, Southern Pacific Railroad/Union Pacific Railroad	N/A	Multiple from San Francisco to Los Angeles via the coast (Ventura and Camarillo in APE)
Caltrans Regional Office	157 S. Garden Street	Ventura
Auto Repair Shop	54 E. Thompson Boulevard	Ventura
Restaurant	204 E. Thompson Boulevard	Ventura
Multi-Family Residence	138 E. Thompson Boulevard	Ventura
Single-Family Residence	223 S. Olive Street	Ventura
Multi-Family Residence (apartment)	558–570 E. Thompson Boulevard	Ventura
Commercial Property	536 E. Thompson Boulevard	Ventura
Sawyer College-Ventura	470 E. Thompson Boulevard	Ventura
Commercial Property	230 S. Olive Street	Ventura
Best Western Ventura/Plus Inn of Ventura	708 E. Thompson Boulevard	Ventura
Ventura Vagabond Inn	756 E. Thompson Boulevard	Ventura
Single-Family Residence	1491 Vista Del Mar Drive	Ventura
Jr. Lifeguard Office	901 San Pedro Street	Ventura
Barlow Barranca	N/A	Ventura
Single-Family Residence	2001 Alessandro Drive	Ventura

Figure 4-9. SHPO Concurrence Letter (Sheet 3 of 8)

Ms. Harbert
July 18, 2024
Page 3 of 8

FHWA-CATRA_2024_0610_001

Name	Address/ Location	Community
SCE 66-kV Colonia-Santa Clara Subtransmission Line	N/A	Camarillo and Saticoy
Office Building	2300 Alessandro Drive	Ventura
Commercial Property	785 S. Seaward Avenue	Ventura
Buenaventura Gardens	3700 Dean Drive	Ventura
Single-Family Residence	4516 Telephone Road	Ventura
Trailer Park/ Manufactured Home	4499 Copland Drive	Ventura
Tradewinds Apartment Building	3500–3574 Preble Avenue	Ventura
Crescentwood Apartments	3374 Armada Drive	Ventura
Casa Mia Apartments	820 Empire Avenue	Ventura
Empire Palms Apartments	893 Empire Way	Ventura
Golf N' Stuff	5555 Walker Street	Ventura
Trailer Park/ Manufactured Home	2040 Park Drive	Ventura
Humble Mobile Co./Rent-It	2299 S. Victoria Avenue	Ventura
Victoria Motel and Little Loop's Restaurant	2350 S. Victoria Avenue	Ventura
Commercial Property	2423 Alameda Avenue	Ventura
Commercial Property	2521–2525 Grand Avenue	Ventura
Commercial Property	5892 Valentine Road	Ventura
Multiple-Family Property	6155 Inez Street	Ventura

Figure 4-9. SHPO Concurrence Letter (Sheet 4 of 8)

Ms. Harbert
July 18, 2024
Page 4 of 8

FHWA-CATRA_2024_0610_001

Name	Address/ Location	Community
Auto Repair Shop	6353 Ventura Boulevard	Ventura
Commercial Property	6417 Ventura Boulevard	Ventura
Korb's Trading Post	6587 Ventura Boulevard	Ventura
Commercial Property	3060 Sherwin Avenue	Ventura
Jasper's Chalet	6635 Ventura Boulevard	Ventura
Auto Service Repair	6663–6665 Ventura Boulevard	Ventura
Moon Ditch	N/A	Ventura
Beardsley Wash	N/A	Unincorporated Ventura County
Auto Repair Shop	625 Ventura Boulevard	Oxnard
Auto Repair Shop	2444–2446 Balboa Street	Oxnard
Commercial Property	701 Ventura Boulevard	Oxnard
Multi-Family Residence (apartments)	443 Occidental Drive	Oxnard
Royal Duke Mobile Home Estates	1101 Ventura Boulevard	Oxnard
Santa Clara Parish and Chapel	1333 Ventura Boulevard	Oxnard
William and Evelyn McGrath House	788 N. Wood Road	Camarillo
Commercial Property	2965 Ventura Boulevard	Oxnard
Sunshine Manor Trailer Park	2725 Ventura Boulevard	Oxnard
Dieter's Motors	2681 Ventura Boulevard	Oxnard

Figure 4-9. SHPO Concurrence Letter (Sheet 5 of 8)

Ms. Harbert
July 18, 2024
Page 5 of 8

FHWA-CATRA_2024_0610_001

Name	Address/ Location	Community
Single-Family Property	2861 Ventura Boulevard	Oxnard
Commercial Property	2691 Ventura Boulevard/32241 Nyeland Avenue	Oxnard
Commercial Property	2875–2877 Ventura Boulevard	Oxnard
Commercial Property	2905 Ventura Boulevard	Oxnard
Noble Equipment Sales	2927 Ventura Boulevard	Oxnard
Commercial Building	2929 Ventura Boulevard	Oxnard
Commercial Property	2981 Ventura Boulevard	Oxnard
Santa Claus Statue	2801 Ventura Boulevard	Oxnard
Single-Family Residence and Agriculture	505 Wood Road	Camarillo
Camarillo Auto Agency	1326 Del Norte Road	Camarillo
Single-Family Residence	3964 Ventura Boulevard	Camarillo
Commercial Property	916 Ventura Boulevard	Camarillo
Power Machinery Center	3450 Camino Avenue	Camarillo
Dial Security and Communications	760 W. Ventura Boulevard	Camarillo
Denny's Restaurant	1659 E. Daily Drive	Camarillo
Camarillo Self Service	1480 E. Daily Drive	Camarillo
Multi-Family Residence	2036 E. Daily Drive	Camarillo
Restaurant	2071 Ventura Boulevard	Camarillo

Figure 4-9. SHPO Concurrence Letter (Sheet 6 of 8)

Ms. Harbert
July 18, 2024
Page 6 of 8

FHWA-CATRA_2024_0610_001

Name	Address/ Location	Community
Multi-Family Residence (apartments)	1700 E. Ventura Boulevard	Camarillo
Multi-Family Residence (apartments)	1720 Ventura Boulevard	Camarillo
Multi-Family Residence (apartments)	1740 Ventura Boulevard	Camarillo
Commercial Property	1770–1780 Ventura Boulevard	Camarillo
Multi-Family Residence (apartments)	1750 Ventura Boulevard	Camarillo
Commercial Property	1760 Ventura Boulevard	Camarillo
Ranch Boy Coffee Shop	2123 Ventura Boulevard	Camarillo
Commercial Property	1840 Ventura Boulevard	Camarillo
Commercial Property	2165 Ventura Boulevard	Camarillo
Ottavio's Italian Restaurant	1620 Ventura Boulevard	Camarillo
Old Town Cigars	2171 Ventura Boulevard	Camarillo
Art's Liquor Store	1904 Ventura Boulevard	Camarillo
Commercial Property	1912 Ventura Boulevard	Camarillo
Luminous Skincare	2193 Ventura Boulevard	Camarillo
Commercial Property	2207–2215 Ventura Boulevard	Camarillo
Commercial Property	1936 Ventura Boulevard	Camarillo
Commercial Property	1938–1940 Ventura Boulevard	Camarillo
Multi-Family Residence	34 Colonia Place	Camarillo

Figure 4-9. SHPO Concurrence Letter (Sheet 7 of 8)

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Name	Address/ Location	Community
Bank of A. Levy, Branch Location	2245–2291 Ventura Boulevard	Camarillo
American Legion Post #741	7 Veterans Way	Camarillo
Commercial Property	90 Camarillo Street	Camarillo
Single-Family Residence	2823 Petit Street	Camarillo
Ventura County Fire Department Station No. 35	2500 W. Hillcrest Drive	Thousand Oaks
Hunt Olive Tree	600 W. Hillcrest Drive, northwest corner of the parcel.	Thousand Oaks
South Branch Arroyo Conejo	N/A	Thousand Oaks
Commercial Property	1536 Newbury Road	Thousand Oaks
Elms Plaza Mobile Home Park	1262 Newbury Road	Thousand Oaks
Howard Johnson Motor Lodge	75 W. Thousand Oaks Boulevard	Thousand Oaks
Thousand Oaks Plaza	90–100 E. Thousand Oaks Boulevard	Thousand Oaks
Conejo Self Service	528 E. Thousand Oaks Boulevard	Thousand Oaks
Lombard Medical Building	268 Lombard Street	Thousand Oaks
Office Building	386 Lombard Street	Thousand Oaks
Commercial Property	75 Long Court	Thousand Oaks
SCE 220-kV Moorpark-Ormond Beach Subtransmission Corridor	N/A	Oxnard, Thousand Oaks, and Moorpark (Thousand Oaks in APE)

Figure 4-9. SHPO Concurrence Letter (Sheet 8 of 8)

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Caltrans also determined the following properties to be eligible for the NRHP for the following reasons and pursuant to Stipulation VIII.C.6 of the Section 106 PA is requesting concurrence:

- Firestone Tire and Service Station, 500 E Thompson Boulevard, Ventura – eligible at the local level of significance under Criterion C as an excellent example of Zig Zag Moderne architecture and as the work of local master architect Harold E. Burket.
- Pierpont Inn District, 500 Sanjon Road, Ventura – eligible at the local level of under Criterion A as an example of a seaside hotel's adaptation to Ventura's evolving automotive landscape. The period of significance is 1910-1966. The following buildings are contributors to the district:
  - West Wing
  - Main Building – also determined individually eligible under Criterion A for its important association with the early development of Ventura
  - East Wing
  - Mattie Gleishmann House – also determined individually eligible under Criterion C as an excellent example of the Mid-Century Modern style.
  - Bluff House
  - Cottage 1
  - Cottage 2
- Griffin Brothers Funeral Chapel, 1075 E Daily Drive, Camarillo – eligible at the local level under Criterion C as an excellent example of Neo-Spanish Eclectic architecture
- Cawelti Building, 2633 Ventura Boulevard, Camarillo – eligible at the local level under Criterion A for its association with the early development of Camarillo. The period of significance is 1917-1947.
- Timber School House and Auditorium, 1872 Newbury Road, Thousand Oaks – eligible under Criterion A as an example of early education development in Conejo Valley. It is also the oldest extant school building in Conejo Valley. The period of significance is 1924-1948.
- Leibole & Kaufman Building, 584 Thousand Oaks Boulevard, Thousand Oaks – eligible under Criterion C as a significant example of high style Mid-Century Modern architecture.

Based on review of the submitted documentation, I concur with the above determinations.

If you have any questions, please contact Natalie Lindquist at natalie.lindquist@parks.ca.gov .

Sincerely,

Julianne Polanco
State Historic Preservation Officer

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6.6 PROPERTY OWNERS/OCCUPANTS

Refer to Appendix J for the distribution list for property owners and occupants.

Chapter 7 References

7.1 SUMMARY

Iteris. 2020. *US 101 Communities Connected Study Report*. Available: https://www.goventura.org/wp-content/uploads/2020/12/VCTC_US-101_CC_Final_Report_12-4-20.pdf. December 4.

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7.2 CHAPTER 1, PROPOSED PROJECT

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7.5 CHAPTER 4, COMMENTS AND COORDINATION

No references cited.

7.6 CHAPTER 5, LIST OF PREPARERS

No references cited.

7.7 CHAPTER 6, DISTRIBUTION LIST

No references cited.