State Route 118 Widening Project

VENTURA COUNTY, CALIFORNIA
DISTRICT 7-VEN-118 (PM T18.2/R26.9)
DISTRICT 7-VEN-23 (PM R10.9/R11.4)
31610/0715000195

Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment

Prepared by 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 December 23, 2016 and executed by FHWA and Caltrans.

October 2017
For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Cesar Moreno, 100 South Main Street, MS 16-A, Los Angeles, CA 90012, (213) 897-0697, or use the California Relay Service TTY number, 711, or 1 (800) 735-2922.
Widen State Route 118 from Los Angeles Ave. to 0.4 mile west of Tapo Canyon Rd., and widen State Route 23 from Los Angeles Ave. to 0.8 mile north of Tierra Rejada Rd. in Ventura County.

INITIAL STUDY with PROPOSED MITIGATED NEGATIVE DECLARATION and ENVIRONMENTAL ASSESSMENT

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

THE STATE OF CALIFORNIA
Department of Transportation

Oct 10, 2017
Date of Approval

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PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description
The California Department of Transportation (Caltrans), in cooperation with the Ventura County Transportation Commission (VCTC), is proposing to widen State Route 118 (SR-118) from Los Angeles Ave. to 0.4 mile west of Tapo Canyon Rd., and to widen State Route 23 (SR-23) from Los Angeles Ave. to 0.8 mile north of Tierra Rejada Rd. in the County of Ventura. The project proposes to add one to two additional mixed-flow lanes by paving the median and widening 11 to 12 structures within the project limits. In addition, the project proposes to install a median barrier and construct soundwalls.

Determination
This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the Department’s intent to adopt a MND for this project. This does not mean that the Department’s decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

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

The proposed project would have no effect on wild and scenic rivers, farmland, timberland, coastal zone, land use, community character and cohesion, environmental justice, relocations and real property acquisition, visual/aesthetics, cultural resources, hydrology, floodplains, mineral resources.

In addition, the proposed project would have less than significant effects to utilities/emergency services, traffic and transportation, water quality, geology/soils/seismic/topography, paleontology, geology, hazardous waste/materials, air quality, and biological resources.

With incorporation of mitigation measures, the proposed project would have less than significant effects related to noise.

______________________________  _______________________
RONALD KOSINSKI                  Date
Deputy District Director
Division of Environmental Planning, District 7
California Department of Transportation
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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), in cooperation with the Ventura County Transportation Commission (VCTC), is proposing this project to widen State Route 118 (SR-118) from Los Angeles Ave. to 0.4 mile west of Tapo Canyon Rd., and widen State Route 23 (SR-23) from Los Angeles Ave. to 0.8 mile north of Tierra Rejada Rd., in the County of Ventura (See Figure 1). The project proposes to add one to two additional mixed-flow lanes by paving the median, and by widening 11 to 12 structures within the project limits. In addition, the project proposes to install median barrier and construct soundwalls throughout the project limits. Property acquisition would not be required as all proposed work would be constructed within the existing SR-118 and SR-23 facilities.

There are three alternatives under consideration, including the No Build Alternative and two Build Alternatives. There would be no changes made to the existing SR-118 and SR-23 facilities under the No Build Alternative.

Alternative 2 proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tapo Canyon Rd., plus 1 additional mixed-flow lane between Collins Drive and Madera Rd., on SR-118. This alternative also proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tierra Rejada Rd on SR-23. Twelve structures would be widened as part of Alternative 2, including the Arroyo Simi Overhead, which spans the Arroyo Simi. The estimated capital cost for Alternative 2 is $173,000,000.

Alternative 3 proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tapo Canyon Rd on SR-118. This alternative also proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tierra Rejada Rd. on SR-23. Eleven structures would be widened as part of Alternative 3, excluding the Arroyo Simi Overhead. The estimated capital cost for Alternative 3 is $129,000,000.

Caltrans is the lead agency for the proposed project under the National Environmental Policy Act (NEPA) and under the California Environmental Quality Act (CEQA). California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Caltrans entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with the Federal Highway Administration (FHWA). The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016 for a term of five years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.
The proposed project is identified in the Southern California Association of Governments (SCAG) 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). A request for an amendment has been submitted to amend the proposed project into the SCAG 2016 RTP/SCS.

The project was adopted into Federal Transportation Improvement Program (FTIP) through Amendment #15-14, approved on November 20, 2015. The project Federal ID is VEN131202. The funds programmed under the FTIP amendment were provided from VCTC savings under the Surface Transportation Program for $3,000,000, which is being used to fund the current phase of the project. No other federal funding is available at this time to continue with the next phases of the project.

**Existing Facilities**

State Route 118 (SR-118) is an east/west corridor that provides scenic, commuter and commercial travel through an urban, as well as rural corridor, in Ventura and Los Angeles Counties. The route is a state conventional highway/freeway divided facility, extending from Route 126 to Route 210, and is a subset of the National Highway System. The route has two distinguishable sections, which connect at the intersection with SR-23 in the City of Moorpark.

The western section of SR-118 from Route 126 in Saticoy to the intersection of Los Angeles Avenue and Spring Rd. in the City of Moorpark is a conventional highway, traveling mostly through rural areas of Ventura County. Los Angeles Avenue in the City of Moorpark, between Spring Rd. and the east junction of State Route 23 (SR-23), is a break in route for SR-118.

The eastern section of SR-118 is considered a freeway from the east junction at SR-23 to Route 210 in San Fernando. The SR-118 Freeway initially travels north from the SR-23 junction, but quickly turns east, passing near Moorpark College, before entering the Simi Valley city limits. This eastern portion of SR-118 was originally named the Simi Valley-San Fernando Valley Freeway before it was designated as the Ronald Reagan Freeway in 1994. Within the project limits, SR-118 is a 4-lane to 6-lane freeway with center median varying from 52 to 94 feet. The east section of the freeway facility, from Tapo Canyon Rd. to the Los Angeles County Line, was widened from three to four lanes in each direction in 2011.

State Route 23 (SR-23) is a north/south corridor that that originates in the city of Malibu (Los Angeles County) at SR-1, Pacific Coast Highway (PCH) and terminates in the city of Fillmore (Ventura County) at SR-126. Commuters from Fillmore and Moorpark use this route to access the 118 and the 101. It also provides recreational access to the beach and the Santa Monica Mountains. The portion of this route from U.S. 101 to SR-126 is part of the California Freeway and Expressway System. SR-23 is part of the National Highway System (NHS) from the LA/VEN county line (PM 0.0) to Broadway Rd. (PM 15.54) north of the Moorpark city limits. Within the project limits, Route 23 is a 4-lane freeway with center median varying from 66 feet to 68 feet.
Figure 1 Vicinity Map

Legend
- Project Location
1.2 Purpose and Need

1.2.1 Purpose
The purpose of the project is to provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes. Currently several segments of this roadway are operating at near or over capacity with a Level of Service (LOS) of “E” or “F” during peak periods. The LOS is a letter designation that describes a range of operating conditions on a particular type of facility, with LOS A representing the best operating conditions and LOS F representing the worst. Each LOS represents a range of operating conditions and the driver’s perception of those conditions. Levels E and F typically are considered to be unsatisfactory.

1.2.2 Need
The need for the proposed project is based on an assessment of the existing and future transportation demand in the project area compared to available capacity. For both directions of SR-118 within the study area, and due to the traffic demand exceeding the roadway capacity during the AM and PM peak hours, motorists are experiencing considerable delay in travel time. Backups onto the mainline are creating a rippling effect of downgrading the operations of the on and off-ramps, resulting in unfavorable weaving and maneuvering for traffic connecting to or exiting off the mainline, adding to motorists’ frustration, and consequently, a higher accident rate and a demise to the safety level of service for this corridor. The implementation of either of the two Build Alternatives could be expected to improve the operational capacity, and consequently the safety service level, for SR-118 and SR-23 within and beyond the project limits.

Traffic demand generated along the SR-118 corridor comes mainly from residential and commercial developments, in addition to the through traffic traveling between Routes 101, 405, 210 and 5 to the communities of Oxnard, Moorpark Simi Valley, Los Angeles and beyond at the eastern end of the study area. A lane drop (i.e, one less lane) from 0.8 mile north of Tierra Rejada on SR-23 to the downstream of the Madera Rd. on-ramp on SR-118 creates a critical five-mile long bottleneck on mainline SR-118 through this 2-lane stretch of the freeway. As a result, delay in travel time during peak periods, especially the PM hours between 3 and 7 PM, has increased by about 10-25 minutes per vehicle. Accordingly, and due to the expected increase in traffic demand due to ambient growth and/or planned developments within the neighboring communities and beyond, the No Build Alternative would result in large segments SR-118 operating at a LOS "F2/3" during peak, and sometimes off-peak periods by the design year 2040. In addition to the segments within the project limits, this poor operational performance would negatively influence other segments that are outside the project limits.

Regional Population/Traffic Forecasts
Ventura County consists of 10 cities and a number of unincorporated communities. The majority of the county’s population resides in the cities. The County’s ten cities lie in the southern portion of the county with the majority of the population residing close to one of the three east-west corridors: U.S. Route 101, State Route (SR) 118 and SR 23, and SR 126.

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1 County of Ventura, September 2015. 2015 Ventura County Multi-Hazard Mitigation Plan.
2 Ventura County Transportation Commission, August 2013. Ventura County Comprehensive Transportation Plan.
### Figure 2 Levels of Service for Freeways

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Flow Conditions</th>
<th>Operating Speed (mph)</th>
<th>Technical Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td><img src="image" alt="Flow Condition A" /></td>
<td>70</td>
<td>Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. <em>No delays</em></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><img src="image" alt="Flow Condition B" /></td>
<td>70</td>
<td>Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. <em>No delays</em></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><img src="image" alt="Flow Condition C" /></td>
<td>67</td>
<td>Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. <em>Minimal delays</em></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><img src="image" alt="Flow Condition D" /></td>
<td>62</td>
<td>Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. <em>Minimal delays</em></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td><img src="image" alt="Flow Condition E" /></td>
<td>53</td>
<td>Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. <em>Significant delays</em></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td><img src="image" alt="Flow Condition F" /></td>
<td>&lt;53</td>
<td>Very congested traffic with traffic jams, especially in areas where vehicles have to merge. <em>Considerable delays</em></td>
</tr>
</tbody>
</table>
The California Department of Finance (DOF) now estimates that Ventura County’s population is just over 856,000 making it the thirteenth largest county in the State.³ Ventura County’s modest growth rate is projected to follow historic trends and remain approximately one percent (1%) or less per year.⁴ From July 2015 to July 2016, the most recent period for which there is data, the county’s population growth rate was 0.28 percent about a third of the state average of 0.75 percent.⁵ According to the Regional Transportation Plan/Sustainable Communities Strategy Growth Forecast 2012, Ventura County is projected to have approximately 954,000 people by 2035, which is an increase of about 131,000 people during the forecast period⁶. According to the California Department of Finance population projections, Ventura County’s population would exceed 1,000,000 by 2055.⁷

Compared to the rapid growth of the previous decade 1990-2000, Moorpark has continued to experience population growth although at a slower pace, increasing approximately 10.9% from 2000 to 2012 to an estimated population of 34,826.⁸ The current population of nearly 36,000 is expected to increase by 21 percent in the next 10 to 15 years, resulting in approximately 7,000 additional residents.⁹ The city of Simi Valley, with an estimated population of 126,733 (as of January 2014) is the third largest of Ventura County’s 10 cities. According to forecasts provided by the Southern California Association of Governments (SCAG), Simi Valley is expected to grow only moderately over the next ten years.¹⁰

**Future Traffic Conditions**

Based on Caltrans' published data, the Average Annual Daily Traffic (AADT) for 2009, 2010, and 2014 for the project segment of SR-118 were 104,500, 105,300, and 112,500 respectively. Accordingly, the average annual calculated ambient growth rate for this route would be approximately 1.53%. The current 2016 average peak and non-peak hourly demand per lane could be estimated at approximately 1,930 and 1,610 vehicles per hour per lane (vphpl). Consequently, and considering a maximum lane capacity of 2200~2300 vphpl, and based upon a vehicle/capacity (V/C) analysis, this segment of SR-118 is currently operating at a LOS “E/F” and “C/D” during peak and non-peak periods. Moreover, the average 2040 AADT for this route could be forecasted to reach about 157,500. Therefore, under the current configuration, and based upon a V/C analysis. The mainline could be expected to operate at a LOS “F2/3” with a per lane demand exceeding 2800 vphpl during peak periods by the design year 2040. The proposed project would increase the capacity of various segments of the study corridor by about 33%~100%, and hence, would result in operating LOS “C/D” during peak periods in design year 2040.

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³ Ventura County Transportation Commission, June 2016. Budget Fiscal Year 2016/2017 Ventura County, CA.
⁴ Ventura County Transportation Commission, June 2016. Budget Fiscal Year 2016/2017 Ventura County, CA.
⁷ Ventura County Transportation Commission, August 2013. Ventura County Comprehensive Transportation Plan.
⁸ City of Moorpark General Plan - Housing Element 2014 - 2021
¹⁰ City of Simi Valley General Plan – Chapter 4: Housing State Route 118 Widening Project
### Table 1 Existing/Future Traffic Volumes and Level of Service

<table>
<thead>
<tr>
<th>Route</th>
<th>From (PM)</th>
<th>To (PM)</th>
<th>Existing (2014)</th>
<th>Forecast (2040) Without Project</th>
<th>Forecast (2040) With Project</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>ADT</td>
<td>LOS</td>
<td>ADT</td>
</tr>
<tr>
<td>118</td>
<td>Los Angeles Ave (T18.2)</td>
<td>Princeton Ave (T19.1)</td>
<td>77,000</td>
<td>E</td>
<td>92,300</td>
</tr>
<tr>
<td>118</td>
<td>Princeton Ave (T19.1)</td>
<td>Collins Dr (T20.0)</td>
<td>82,000</td>
<td>E</td>
<td>97,100</td>
</tr>
<tr>
<td>118</td>
<td>Collins Dr (T20.0)</td>
<td>Madera Rd (R23.0)</td>
<td>78,000</td>
<td>E</td>
<td>92,400</td>
</tr>
<tr>
<td>118</td>
<td>Madera Rd (R23.0)</td>
<td>First St (R23.8)</td>
<td>95,000</td>
<td>D</td>
<td>112,700</td>
</tr>
<tr>
<td>118</td>
<td>First St (R23.8)</td>
<td>Erringer Rd (R24.8)</td>
<td>110,000</td>
<td>E</td>
<td>124,700</td>
</tr>
<tr>
<td>118</td>
<td>Erringer Rd (R24.8)</td>
<td>Sycamore Dr (R25.8)</td>
<td>124,000</td>
<td>F0</td>
<td>135,500</td>
</tr>
<tr>
<td>118</td>
<td>Sycamore Dr (R25.8)</td>
<td>Tapo Canyon Rd (R27.3)</td>
<td>128,000</td>
<td>F0</td>
<td>136,700</td>
</tr>
</tbody>
</table>
CHAPTER 1: PROPOSED PROJECT

Existing Land Use

The existing land use pattern in Ventura County has been shaped by growth policies focused primarily on, “channeling growth into cities; on maintaining a physical separation between those urbanized cities; and, to some extent, on protecting farmland.” Cities face a variety of growth limitations, such as the lack of vacant buildable land, insufficient infrastructure and resources, and legal constraints, such as the need for a popular vote to approve building projects.

The first of these policies traces its genesis to 1965, when the Local Agency Formation Commission (a county agency with the power to approve or deny proposed annexations, creation of special districts, incorporations of cities, and mergers of districts or cities) proposed a network of greenbelts separating Ventura County cities. The concept was codified in 1969 with the Guidelines for Orderly Development, a set of binding policies adopted by the county and its cities, which directed that urban growth in Ventura County take place (with few exceptions) inside the boundaries of incorporated cities. The guidelines were incorporated into the land use policies of the County General Plan in 1988. Historically, Ventura County has not accommodated much development in unincorporated areas due to the long-standing Guidelines for Orderly Development, which direct most development into cities. This countywide policy has historically preserved open spaces and agricultural land within the unincorporated area, and the 2016 renewal of SOAR will continue to preserve these lands.

The project limits pass mostly through the cities of Moorpark and Simi Valley. A short segment near the SR-23 southern project limits passes through unincorporated Ventura County. The area within the County of Ventura jurisdiction consists of open space, located east of SR-23 and north of the Tierra Rejada Golf Club.

Moorpark

Land uses adjacent to SR-118 and SR-23 in the City of Moorpark represent a mixture of Specific Plan/Planned Development, Open Space/Recreation, Industrial, Commercial, Residential, and Public Facilities/Institutions.

The Carlsberg Specific Plan Area is located west of SR-23 from Tierra Rejada Rd. to Los Angeles Ave. This approved and largely constructed specific plan area is located on approximately 500 acres in the southeastern portion of the city. The plan includes 534 single-family homes on both sides of Miller Parkway, north of Tierra Rejada Rd. The Serenata community located within the Carlsberg Specific Plan Area is composed of several neighborhoods including the Alterra, Belfiori, Loreto, Toscana, and Serenata gated homes communities built from 2000 – 2003.

The northerly portion of the site, along Los Angeles Avenue, consists of 40 acres for commercial use, which includes the 29 acre Moorpark Marketplace. South of the Moorpark Marketplace,
there are 33 acres for office / business park use, currently being developed as the Patriot Commerce Center. 16

North of the Los Angeles Ave., there are light industrial use, medium industrial use and rural residential areas in the vicinity of the Arroyo Simi Overhead. The Virginia Colony neighborhood is located to the east of the Arroyo Simi Overhead and the Marlborough Country North, Villa Heights, and Terrace View neighborhoods are located to the east along Princeton Ave.

The Campus Park West, Campus Park East, Varsity Park South, Varsity Park Village, Varsity Park Estates, and Parkside residential communities are located north of SR-118 in the vicinity of Princeton Ave. and Collins Dr. The Villa Del Arroyo community is located south of SR-118 and east of Collins Dr., near the eastern end of the Moorpark city limits.

**Simi Valley**

Land uses adjacent to the SR-118 freeway corridor in the City of Simi Valley represent a mixture of Public/Semi-Public/Open Space, Sanitary Landfill, Commercial, Industrial, and Residential uses. Portions of the City’s Sphere of Influence (SOI) are also adjacent to SR-118, near the City’s western limits. Land uses within the City’s SOI in the vicinity of the freeway corridor include the Simi Valley Landfill and Recycling Center (SVLRC), which is located north of SR-118 and west of the Madera Rd. interchange. The area surrounding the SVLRC, and the area adjacent to SR-118 near the City’s western limits is comprised entirely of Open Spaces uses. Most of the City’s industrial development is located within the West End Specific Plan, which is primarily located west of First Street, north and south of the 118 Freeway.17

Commercial uses are also located on either side of SR-118, between Madera Rd. and First St. Commercial uses throughout the rest of the corridor are located in the vicinity of the SR-118 interchanges with Erringer Rd., Sycamore Dr., and Tapo Canyon Rd. The primary regional shopping center in the community is the recently constructed Simi Valley Town Center located within northwest Simi Valley north of the Ronald Reagan Freeway (118) and east of First Street.18 In addition to the Simi Valley Town Center, larger commercial developments in Simi Valley include the Mountain Gate Plaza, Royal Plaza Shopping Center, Simi at the Plaza (Walmart, Office Depot, Home Depot), the El Paseo Simi, the Tapo Plaza Shopping Center, and the Simi Valley Civic Center Plaza at the intersection of Alamo Street and Tapo Canyon Rds.. 19

Other commercial uses include commercial strip centers, with shops and businesses located to the rear of parcels along the street corridor with expanses of parking lots along the front. Examples of commercial strip centers are located along Los Angeles Avenue, Tapo Street, portions of Cochran Street, and portions of Alamo Street. 20 Residential neighborhoods and complexes, including Greenbrook, Sycamore Shades, Le Parc, and Meadowood, are interspersed between commercial corridors on either side of SR-118.

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16 https://www.moorparkca.gov/190/Specific-Plans
17 Simi Valley General Plan EIR Volume I (Section 4.10) – Land Use/Planning
18 Simi Valley General Plan EIR Volume I (Section 4.10) – Land Use/Planning
19 City of Simi Valley Department of Environmental Services, June 2012. Simi Valley General Plan Environmental Impact Report.
20 City of Simi Valley Department of Environmental Services, June 2012. Simi Valley General Plan Environmental Impact Report.
Future Land Use

**Moorpark**

The Land Use Element of Moorpark's General Plan sets forth policies for guiding local development. These policies, together with zoning regulations, establish the location and type of residential development that may occur. A comprehensive update to the Land Use Element was adopted in May 1992, and several significant amendments have been adopted since that time. These include conversion of about 2,071 acres of rural residential designated land to higher residential densities and open space; including the Country Club Estates, Meridian Hills, Pacific Communities, Birdsall and Essex residential developments. There have been adoptions or substantial amendments of three Specific Plans (Carlsberg, Downtown and Moorpark Highlands) and the approval of a voter-initiated City Urban Restriction Boundary (CURB). As larger Specific Plan areas and remaining large vacant parcels in the community are gradually built out, the remaining development in Moorpark will shift to smaller infill locations.  

**Simi Valley**

Several areas have been identified by the City of Simi Valley as areas that could potentially change in the future. These portions of the City include areas that are vacant, those that offer opportunities for infill and intensification, and those with economically or physically obsolete development. Through the General Plan update and Zoning Amendment, the City significantly expanded the potential for recycling to higher intensity uses in these areas by creating a Mixed Use overlay that allows mixed use development up to 35 units per acre and a new Very High Density Residential category that also allows up to 35 units per acre.

**Growth Management/Control Ordinances**

The Ventura County Board of Supervisors originally adopted the Guidelines for Orderly Development in 1969, which all of the cities, the County and Local Agency Formation Commission (LAFCO) then revised and adopted in 1996. These guidelines encourage urban development to occur within the incorporated cities or through annexation of land within a city’s sphere of influence. Outside a city’s sphere of influence development is directed to existing communities already designated in the County’s general plan. These guidelines have been highly effective at preventing urban sprawl and maintaining open space between cities within Ventura County.

**Save Our Open Space and Agricultural Resources (SOAR)**

SOAR initiatives are voter approved amendments to a city’s or the County’s general plan that require a simple majority of voters in that plan’s area to approve changes in specified land use categories. Typically, SOAR initiatives focus on protecting open space, agriculture, rural and park lands. SOAR initiatives have passed in Ventura County and in most of the cities. Associated with SOAR is City Urban Restriction Urban Boundary (CURB), a companion initiative that creates an urban boundary line around a city. CURB also requires a simple
majority of voters in that plan’s area to allow “urbanization” of land outside of the CURB boundary.

Collectively, the Guidelines for Orderly Development and SOAR initiatives have largely contained urban development within city boundaries, preserving large expanses of agriculture and/or open space that contribute to a suburban or rural character throughout the County. This approach resulted in development of a transportation system that addresses localized needs within city boundaries but less connectivity between cities. In November 2016, the voters of Ventura County and eight of the County’s ten cities renewed the SOAR ordinances and extended their provisions through 2050.

Moorpark SOAR Ordinance

The Moorpark SOAR ordinance was approved by voters in 1999 and requires voter approval to expand urban development beyond Moorpark’s city limits into agricultural or open space areas. An extension of the Moorpark SOAR Ordinance until 2050 was adopted by a majority of the voters, voting on the proposed ordinance, on November 8, 2016.

Simi Valley City Urban Restriction Boundary (CURB)

In November 1988, the electorate of Simi Valley adopted an urban growth boundary line named the Simi Valley Urban Restriction Boundary (Simi Valley CURB line) to protect existing agricultural, open-space, viewsheds, wildlife areas, and watershed land surrounding the community from the impact of development and to limit urban sprawl.

The City of Simi Valley must restrict urban services (except temporary mutual assistance with other jurisdictions) and urbanization of uses of land to areas within the Simi Valley CURB. Urbanized uses of land are defined as any development that would require establishment of a new community sewer systems or the significant extension of existing community sewer systems, the creation of residential lots less than 10 acres, or establishment of non-agriculture or mineral-related commercial or industrial uses. Exceptions to this include completing roadways identified in the 1988 General Plan Circulation Element and construction of public potable water facilities, public schools, public parks, and other government facilities.

Simi Valley Measure N

In 2004, City voters approved a measure that limits the number of residential building permits that can be issued by the City to 292 per year through 2012. Measure N, which was approved by City voters on November 6, 2012, extends the 292-unit restriction through 2022.
Modal Interrelationships and System Linkages

The portion of SR-118 from Route 126 to Route 405 is a Terminal Access route. Terminal Access (TA) routes are portions of State or local highways that Caltrans or a local government granted access to Surface Transportation Assistance Act (STAA) trucks. An STAA truck is, in many cases, longer than a “California Legal” truck, and may operate only on specific highways in California. The purpose of TA routes is to allow STAA trucks to (1) travel between National Network routes, (2) reach a truck’s operating facility, or (3) reach a facility where freight originates, terminates, or is handled in the transportation process.

California Legal (CA Legal) trucks can travel on STAA, CA Legal, and CA Legal Advisory routes. CA Legal trucks have access to the entire State highway system except where prohibited. California statutes limit the overall length of a tractor semi-trailer combination to 65 feet for truck operation on all highways in California unless National Network provisions apply.

SR-23 is a California Legal Advisory Route from Route 1 to 101 and from Shekell Rd. to Route 126. From Routes 101 to 118, it is a part of the National Network. From Route 118 to Shekell Rd. it is a part of the California Legal Network.

The Port of Hueneme in Ventura County specializes in the import and export of automobiles, fresh fruit and produce and serves as the primary support facility for the offshore oil industry. In 2014, two-way trade activities through the Port of Hueneme were valued at nearly $9.2 billion and generated $1.1 billion in economic activities in the immediate region.28 Port of Hueneme in Ventura County is also positioned to grow as a preferred port for specialized cargo such as automobiles, break bulk and military cargo. This growth will place further demands on marine terminal facilities, highway connections and rail intermodal terminals. 29

Amtrak and the Southern Regional Rail Authority (Metrolink) operate/maintain adjacent stations in Moorpark (270) and Simi Valley (600 total parking spaces). Simi Valley Transit provides four local fixed routes within the city limits. Two routes utilize SR-118, including Route B from Madera Rd. to Collins Dr., and Route C from Topanga Canyon Blvd. to Kuehner Blvd. The City of Moorpark operates shuttle bus loop within the city limits. The Ventura Intercity Service Authority (VISTA) operates an express bus between Moorpark and Thousand Oaks. There are seven Park and Ride facilities (five State and two private lots) along SR-118 in the Simi Valley/Moorpark corridor, totaling 463 parking spaces.

1.3 Independent Utility and Logical Termini

The proposed project termini are logical, extending from Los Angeles Ave. to 0.4 mile west of Tapo Canyon Rd. on SR-118, and extending from Los Angeles Ave. to 0.8 mile north of Tierra Rejada Rd. on SR-23. The proposed project would address the transportation deficiencies between the two endpoints and future projected congestion affecting the movement of traffic and goods between these routes. The project is a regional-scale transportation corridor that would facilitate multimodal movement, as well as improve traffic continuity. A lane drop (i.e, one less

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29 Southern California Association of Governments, April 2016. The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.
State Route 118 Widening Project

CHAPTER 1: PROPOSED PROJECT

State Route 118 (SR-118) creates a critical five-mile long bottleneck on mainline SR-118 through this 4-lane stretch of the freeway. The proposed improvements within this stretch would address the bottleneck. Within the project limits, SR-118 is a 4-lane to 6-lane freeway. Widening of the east section from a 6-lane to 8-lane freeway between Tapo Canyon Road and the Los Angeles County Line, was completed in 2011. The proposed improvements from Madera Rd. to 0.4 mile west of Tapo Canyon Rd. would address the expected increase in traffic demand due to ambient growth and/or planned developments within Simi Valley and beyond. The implementation of either of the two Build Alternatives could be expected to improve the operational capacity, and consequently the safety service level, for SR-118 within and beyond the project limits even if no additional transportation improvements are made in the area. As such, the proposed project has independent utility, as it does not rely on other projects to address the identified need. Furthermore, the proposed project would not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

1.4 Project Description

This section describes the proposed action and the project alternatives that were developed to meet the identified purpose and need of the project, while avoiding or minimizing environmental impacts.

The project proposes to widen State Route 118 (SR-118) from Los Angeles Ave. to 0.4 mile west of Tapo Canyon Rd., and from Los Angeles Ave. to 0.8 mile north of Tierra Rejada Rd. on State Route 23 (SR-23) in the County of Ventura. The project proposes to add one to two additional mixed-flow lanes by paving the median, and by widening 11 to 12 structures within the project limits. In addition, the project proposes to install median barrier, and construct soundwalls.

Fill slopes are to be created at the undercrossing structures which are to be widened toward the median. All slopes under structures will be slope paved. The project will create new and modify slopes. Slope rounding is used to reduce concentrated flow, which will be collected in stabilized drains. Since additional impervious area will be added to the freeway, existing drainage systems will need to be modified to accommodate the increased flow of water from the freeway. All disturbed slopes, where the sound walls foundations are located, will be reconstructed to match the existing slopes. Disturbed soil surfaces will be protected with slope paving, new planting, and mulches. The landscape that is disturbed due to construction will be replaced following Caltrans Policy and procedure.

All proposed project components would occur within the existing SR-118 and SR-23 facilities. The primary areas of impact are the median area, the area beneath and between the freeway undercrossings, and areas beneath the Arroyo Simi Overhead where new columns are required for the connector widening.

Within the project limits, SR-118 is a 4-lane to 6-lane freeway with 4 to 6 standard 12-foot lanes, 5 to 12-foot shoulders, and a 12 to 30-foot paved/dirt median. Widening of the east section of this freeway facility from three to four lanes in each direction, between Tapo Canyon Rd. and the Los Angeles County Line, was completed in 2011. The purpose of the project is to provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes.
The need for the proposed project is based on an assessment of the existing and future transportation demand in the project area compared to available capacity.

### 1.5 Alternatives

There are three alternatives under consideration, including the No-Build Alternative and two Build Alternatives. After the public circulation period, all comments will be considered, and Caltrans will select a preferred alternative and make the final determination of the project’s effect on the environment. Under the California CEQA, if no unmitigable significant adverse impacts are identified, Caltrans will prepare a Negative Declaration (ND) or Mitigated ND. Similarly, if a determination is made that the proposed action does not significantly impact the environment, Caltrans, as assigned by the Federal Highway Administration (FHWA), will issue a Finding of No Significant Impact (FONSI) in accordance with the NEPA.

**Alternative 1 (No Build Alternative)**

There would be no changes made to the existing SR-118 and SR-23 facilities under the No Build Alternative. No action would be taken to improve the operational capacity of SR-118 within the project limits. The No Build Alternative would result in large segments SR-118 operating at a LOS "F2/3" during peak, and sometimes off-peak periods by the design year 2040. In addition to the segments within the project limits, this poor operational performance would negatively influence other segments that are outside the project limits.

**Alternative 2**

Alternative 2 proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tapo Canyon Rd., plus 1 additional mixed-flow lane between Collins Drive and Madera Rd., on SR-118. This alternative also proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tierra Rejada Rd on SR-23. Twelve structures would be widened as part of Alternative 2, including the Arroyo Simi Overhead, which spans the Arroyo Simi. The estimated capital cost for Alternative 2 is $173,000,000.

**Alternative 3**

Alternative 3 proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tapo Canyon Rd on SR-118. This alternative also proposes the addition of 1 mixed-flow lane between Los Angeles Avenue and Tierra Rejada Rd. on SR-23. Eleven structures would be widened as part of Alternative 3, excluding the Arroyo Simi Overhead. The estimated capital cost for Alternative 3 is $129,000,000.

### 1.6 Common Features of the Build Alternatives

Several features of the proposed project are identical among the Build Alternatives. These features are identified and discussed as follows:

- Property acquisition would not be required as all proposed project components would occur within the existing SR-118 and SR-23 facilities.
State Route 23

- Pave the median from 0.8 mile north of Tierra Rejada Rd. to Los Angeles Ave. and add 1 mixed-flow lane in each direction.

State Route 118

- Pave the median from Princeton Ave. to Collins Dr. and add 1 mixed-flow lane in each direction.
- Pave the median from Madera Rd. to 0.4 mile west of Tapo Canyon Rd. and add 1 mixed-flow lane in each direction.
- Construct soundwalls and median barrier.
- Widen eleven structures listed in Table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Structure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Princeton Ave. Under-crossing (UC)</td>
</tr>
<tr>
<td>2</td>
<td>Alamos Canyon Rd. UC</td>
</tr>
<tr>
<td>3</td>
<td>Madera Rd. UC</td>
</tr>
<tr>
<td>4</td>
<td>Caldwell Ave. UC</td>
</tr>
<tr>
<td>5</td>
<td>Erringer Rd. UC</td>
</tr>
<tr>
<td>6</td>
<td>Dry Canyon Channel</td>
</tr>
<tr>
<td>7</td>
<td>Sycamore Dr. UC</td>
</tr>
<tr>
<td>8</td>
<td>Galena Ave. UC</td>
</tr>
<tr>
<td>9</td>
<td>Sequoia Ave. UC</td>
</tr>
<tr>
<td>10</td>
<td>Arroyo Del Tapo Channel</td>
</tr>
<tr>
<td>11</td>
<td>Los Angeles Ave. UC</td>
</tr>
</tbody>
</table>
1.7 Unique Features of Build Alternatives

**Alternative 2 (1 to 2 Mixed-Flow Lanes & Widen Arroyo Simi Overhead)**

- Widen Arroyo Simi Overhead and add 1 mixed-flow lane in each direction
- Pave median from Collins Dr. to Madera Rd. on SR-118 and add 2 mixed-flow lanes in each direction

**Alternative 3 (1 Mixed-Flow Lane & Restripe Arroyo Simi Overhead)**

- Restripe Arroyo Simi Overhead from two to three non-standard lanes in each direction.
- Pave median from Collins Dr. to Madera Rd. on SR-118 and add 1 mixed-flow lane in each direction.

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

Transportation Demand Management (TDM) focuses on regional means of reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. A typical activity would be providing funds to regional agencies that are actively promoting ridesharing, maintaining rideshare databases, and providing limited rideshare services to employers and individuals. Transportation System Management (TSM) strategies consist of actions that would increase the efficiency of existing facilities by increasing the number of through trips a facility can carry without increasing the number of through lanes. At this time, the project area does not meet the criteria for TDM and Mass Transit Alternatives because population in the project area is less than 200,000. Also, TSM alternatives are usually only relevant in urban areas with populations over 200,000. Therefore, a TSM alternative was considered for this project, but not carried forward.
Figure 3 Project Location
Construction Staging

The project sponsor, VCTC, has not yet determined how and when it will be able to fund the design and construction phases of this project. As the current funding capacity of VCTC for highway projects is limited, this project will likely be done in three phases as funds become available.

Alternative 2 would be constructed in 3 phases. Phase 1 would consist of widening the structures listed in Table 2, constructing the median and soundwalls for the eastbound portion of the freeway, and restriping the eastbound Arroyo Simi OH to add an additional lane on the structure. Phase 2 would consist of constructing the median and soundwalls for the westbound portion of the freeway, and restriping the westbound Arroyo Simi OH to add an additional lane on the structure. Phase 3 would consist of widening the eastbound and westbound Arroyo Simi OH structures.

Alternative 3 would be constructed in 2 phases. Phase 1 would consist of widening the structures listed in Table 2, constructing the median and soundwalls for the eastbound portion of the freeway, and restriping the eastbound Arroyo Simi OH to add an additional lane on the structure. Phase 2 would consist of constructing the median and soundwalls for the westbound portion of the freeway, and restriping the westbound Arroyo Simi OH to add an additional lane on the structure. Alternative 3 would not include widening of the Arroyo Simi OH structures.

Table 3 Construction Activities and Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement and Award of Contract</td>
<td>2022</td>
</tr>
<tr>
<td>Construction First Phase (EB improvements)</td>
<td>2025</td>
</tr>
<tr>
<td>Construction Second Phase (WB improvements)</td>
<td>2030</td>
</tr>
<tr>
<td>Construction Third Phase (Bridge Widening without additional capacity)</td>
<td>2035</td>
</tr>
</tbody>
</table>
Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction.

### Table 4 Permits and Approvals

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Highway Administration</td>
<td>Air Quality Conformity Determination</td>
</tr>
<tr>
<td>United States Army Corps of Engineers</td>
<td>Nationwide Permit (NWP) under Section 404 of the Clean Water Act</td>
</tr>
<tr>
<td>State Water Resources Control Board</td>
<td>National Pollutant Discharge Elimination System (NPDES) Construction General Permit No. CAS000002, and NPDES Caltrans Statewide Permit No. CAS000003</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>1602 Lake or Streambed Alteration Agreement</td>
</tr>
<tr>
<td>Regional Water Quality Control Board</td>
<td>Section 401 Water Quality Certification</td>
</tr>
<tr>
<td>Federal Emergency Management Agency (FEMA)</td>
<td>Conditional Letter of Map Revision</td>
</tr>
<tr>
<td>Ventura County Watershed Protection District</td>
<td>Watercourse and Encroachment Permit</td>
</tr>
<tr>
<td>Union Pacific Railroad Company (UPRR) and Metrolink (SCRRA)</td>
<td>Memorandum of Understanding (MOU) and a Construction and Maintenance Agreement between Caltrans and UPRR/SCRRA.</td>
</tr>
</tbody>
</table>
Chapter 2 Affect ed Environment, Environmental Consequences, and Avoidance, Minimization and Mitigation Measures

Chapter 2 describes the existing affected environment for the study area. The affected environment is the base environmental condition on which environmental effects of the Build Alternatives are evaluated in this Initial Study/Environmental Assessment (IS/EA). The sections in Chapter 2 include the regulatory setting applicable to the environmental topic, the methodology of impact analysis, a description of the affected environment, environmental effects resulting from the Build and No Build alternatives, and measures to avoid, minimize, or mitigate adverse impacts of the Build Alternatives.

The Build Alternatives would have the same effects on nearly all resource areas. Unless specifically stated otherwise in the sections that follow, the Build Alternatives would have substantially similar effects.

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.

**Coastal Zone**- There will be no effect on coastal resources because the project is not located within the coastal zone.

**Wild and Scenic Rivers**- There will be no effect on wild and scenic river resources because the project is not located within any wild and scenic river.

**Farmland/Timberlands**- There will be no effect on farmland and timberlands resources because the project is not located within farmland and timberland.

**Relocations and Real Property Acquisition**- This project will not relocate or displace residential and non-residential (commercial businesses, industrial, manufacturing businesses or agricultural/farmland).

**Visual/Aesthetics**- Neither those using the highway, those adjacent to the highway or residents next to the highway will be negatively impacted. Proposed soundwalls will not visually affect those adjacent to the highway because existing mature trees will screen much of these structures. For those using the highway, the use of borrowed landscape in the background will lessen the visual impact of these structures. Also, there are areas within the project limits that have existing soundwalls and any additional soundwalls will blend into the highway features. The proposed widening will not incur any negative impacts.

**Hydrology and Floodplain**- There will be no change to the geometry upstream or downstream for streams within the project area (Arroyo Simi, Alamos Canyon Creek, and Brea Canyon Creek). The total runoff of these streams is unchanged for a 100-year storm event. The floodplain adheres to the zoning laws in its development. The development thus far suggests that there is no incompatibility in the floodplain that will adversely affect the proposed widening.
2.1 Human Environment

2.1.1 Land Use and Planning

The forthcoming discussion presents existing and future land use in the project study area, the proposed project’s consistency with State, regional, and local plans and program, and the impact the proposed project may have on parks and recreation.

Affected Environment

Ventura County and the ten cities within the County have collaborated in land use decision-making since 1969 when in cooperation with the Local Agency Formation Commission (LAFCO) a landmark set of county-wide policies entitled the “Guidelines For Orderly Development” were adopted. These policies clarified the relationship between the County and the cities regarding land use planning. These guidelines have resulted in confining urban development within cities’ boundaries, which are much better equipped to deliver urban services.  

The project limits pass mostly through the cities of Moorpark and Simi Valley. A short segment near the SR-23 southern project limits passes through unincorporated Ventura County. The area within the County of Ventura jurisdiction consists of open space, located east of SR-23 and north of the Tierra Rejada Golf Club.

EXISTING LAND USE

Moorpark

Land uses adjacent to SR-118 and SR-23 in the City of Moorpark represent a mixture of Specific Plan/Planned Development, Open Space/Recreation, Industrial, Commercial, Residential, and Public Facilities/Institutions.

The Carlsberg Specific Plan Area is located west of SR-23 from Tierra Rejada Rd. to Los Angeles Ave. This approved and largely constructed specific plan area is located on approximately 500 acres in the southeastern portion of the city. The plan includes 534 single-family homes on both sides of Miller Parkway, north of Tierra Rejada Rd. The Serenata community located within the Carlsberg Specific Plan Area is composed of several neighborhoods including the Alterra, Belfiori, Loreto, Toscana, and Serenata gated homes communities built from 2000–2003. The northerly portion of the site, along Los Angeles Avenue, consists of 40 acres for commercial use, which includes the 29 acre Moorpark Marketplace. South of the Moorpark Marketplace, there are 33 acres for office / business park use, currently being developed as the Patriot Commerce Center. North of Los Angeles Ave., there are light industrial use, medium industrial use and rural residential areas in the vicinity of the Arroyo Simi Overhead. The Virginia Colony neighborhood is located to the east of the Arroyo Simi Overhead and the Marlborough Country North, Villa Heights, and Terrace View neighborhoods are located to the east along Princeton Ave.

31 https://www.moorparkca.gov/190/Specific-Plans
The Campus Park West, Campus Park East, Varsity Park South, Varsity Park Village, Varsity Park Estates, and Parkside residential communities are located north of SR-118 in the vicinity of Princeton Ave. and Collins Dr. The Villa Del Arroyo community is located south of SR-118 and east of Collins Dr., near the eastern end of the Moorpark city limits.

**Figure 4 Moorpark Land Use**

Simi Valley

Land uses adjacent to the SR-118 freeway corridor in the City of Simi Valley represent a mixture of Public/Semi-Public/Open Space, Sanitary Landfill, Commercial, Industrial, and Residential uses. Portions of the City’s Sphere of Influence (SOI) are also adjacent to SR-118, near the City’s western limits. Land uses within the City’s SOI in the vicinity of the freeway corridor include the Simi Valley Landfill and Recycling Center (SVLRC), which is located north of SR-118 and west of the Madera Rd. interchange. The area surrounding the SVLRC, and the area adjacent to SR-118 near the City’s western limits is comprised entirely of open space. Most of the City’s industrial development is located within the West End Specific Plan, which is primarily located west of First Street, north and south of the 118 Freeway. The primary regional shopping center in the community is the Simi Valley Town Center located north of SR and east of First Street. Commercial uses are also found south of SR-118, between Madera Rd. and First St. Commercial uses throughout the rest of the corridor are in the vicinity of the SR-118 interchanges with Erringer Rd., Sycamore Dr., and Tapo Canyon Rd. Residential neighborhoods and complexes, including Greenbrook, Sycamore Shades, Le Parc, and Meadowood, are interspersed between commercial corridors on either side of SR-118.

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32 Simi Valley General Plan EIR Volume I (Section 4.10) – Land Use/Planning
State Route 118 Widening Project
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES

Figure 5 Simi Valley Land Use

Simi Valley Study Area (West)

Land Use
- Hydrography
- Automotive Industrial
- Business Park
- Civic Center
- Commercial Office
- Commercial Planned Development
- Roadway
- Light Industrial
- Open Space
- Regional Commercial Center
- Residential Estate
- Residential High Density
- Residential Low Density
- Residential Medium Density
- Residential Moderate Density
- Residential Very High Density
- Sub-Regional Retail
- Water Storage Facility

Simi Valley Project Study Area
Land Use
- California Department of Transportation, District 7, Los Angeles
- Source: City of Simi Valley Zoning Data, May 2017
- Map Created by Savannah Speerstra, Division of Environmental Planning, July 2017
Figure 6 Simi Valley Land Use

Simi Valley Study Area (East)
FUTURE LAND USE

The Ventura County General Plan indicates that a greenbelt agreement should be considered by the County and the appropriate cities between Moorpark and Simi Valley north of Highway 118.

Moorpark

The Land Use Element of Moorpark’s General Plan sets forth policies for guiding local development. These policies, together with zoning regulations, establish the location and type of residential development that may occur. A comprehensive update to the Land Use Element was adopted in May 1992, and several significant amendments have been adopted since that time. These include conversion of about 2,071 acres of rural residential designated land to higher residential densities and open space; including the Country Club Estates, Meridian Hills, Pacific Communities, Birdsall and Essex residential developments. There have been adoptions or substantial amendments of three Specific Plans (Carlsberg, Downtown and Moorpark Highlands) and the approval of a voter-initiated City Urban Restriction Boundary (CURB). As larger Specific Plan areas and remaining large vacant parcels in the community are gradually built out, the remaining development in Moorpark will shift to smaller infill locations.33

Simi Valley

Though the City is anticipated to experience continued population growth, the supply of land available for development has been substantially exhausted with limited undeveloped land remaining outside of the hillsides surrounding Simi Valley. Several areas have been identified by the City of Simi Valley as areas that could potentially change in the future. These portions of the City include areas that are vacant, those that offer opportunities for infill and intensification, and those with economically or physically obsolete development. Through the General Plan update and Zoning Amendment, the City significantly expanded the potential for recycling to higher intensity uses in these areas by creating a Mixed Use overlay that allows mixed use development up to 35 units per acre and a new Very High Density Residential category that also allows up to 35 units per acre.

Consistency with State, Regional, and Local Plans and Programs

The following are relevant State, regional, and local plans and programs:

Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The Southern California Associations of Governments (SCAG) is mandated by the federal government to develop regional plans for transportation, growth management, hazardous waste management, and air quality. On April 7, 2016, SCAG’s Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The

33 City of Moorpark General Plan - Housing Element 2014 - 2021
The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) approved the 2016 RTP/SCS on June 1, 2016. The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The Plan charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. Projects being constructed within the SCAG region must be listed in the RTP/SCS. The goals shown in Table 5 were adopted by SCAG in the 2016 RTP/SCS are relevant to the proposed project.

Table 5 2016 RTP/SCS Goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Goal 2: Maximize mobility and accessibility for all people and goods in the region.</td>
<td><strong>Consistent</strong>: Based on the operational and safety record of the project segment of SR-118 including an above-average percentage of large size trucks utilizing it, as well as considerable existing and future traffic demand, the need arose to improve both the operational and safety levels of service to all its current and future users by the year 2040. The proposed project would increase the capacity of various segments of the study corridor by about 33%-100%, and hence, would result in operating LOS “C/D” during peak periods in design year 2040. Improvements as a result of the proposed project would serve to provide an acceptable route alternative and a viable option for traffic moving between the northern and western parts of Ventura County and connecting to the southern and eastern parts of Los Angeles County.</td>
</tr>
<tr>
<td>2 Goal 3: Ensure travel safety and reliability for all people and goods in the region.</td>
<td><strong>Consistent</strong>: Improving the level of service for any given roadway would usually yield a considerable upgrade to it overall safety performance. The implementation of either of the two Build Alternatives for this project could be expected to improve the operational capacity, and consequently the safety service level, for SR-118 within and beyond the limits of the proposed improvements. Alongside the proposed operational improvements resulting from adding capacity to the roadway, safety enhancements in the form of new median barriers, soundwalls, improving mainline and ramp vehicle maneuvering through better weaving and merging, and eliminating or minimizing delays in travel time and consequently diminishing motorists’ frustration would also be associated with the proposed project.</td>
</tr>
</tbody>
</table>
| 3 Goal 4: Preserve and ensure a sustainable regional transportation system. | **Consistent**: Long-term sustainability principles as an organizing framework guides Caltrans in decisions and business practices that support statewide sustainability goals including, but not limited to:  
• Chapter 488, Statutes of 2006 (AB32) Global Warming Solutions Act and California’s Climate Change Scoping Plan requiring statewide reductions in greenhouse gas (GHG) emissions.  
• Chapter 728, Statutes of 2008 (SB 375) Communities and Climate Protection Act requiring sustainable community strategies to integrate land use and transportation planning in regional transportation plans.  
• Chapter 585, Statutes of 2009 (SB 391) California Transportation Plan updates requiring the plan to address GHG emission reductions to 1990 levels by 2020 and 80% reduction of 1990 levels by 2050.  
• Chapter 386, Statutes of 2013 (SB 743) California Environmental Quality Act guideline updates furthering the development of a multimodal transportation system to provide an alternative for evaluating transportation impacts to promote reductions in GHG emissions and diversity of land uses.  
With these and other mandates and state policy, Caltrans develops and maintains our transportation system in a way that contributes to resiliency in the natural and built environments to improve the quality of life, provide access to necessities, and support a vibrant California. |
| 4 Goal 5: Maximize the productivity of our transportation system. | **Consistent**: The need for the proposed project is based on an assessment of the existing and future transportation demand in the project area compared to available capacity. For both directions of SR-118 within the study area, and due to the traffic demand exceeding the roadway capacity, especially during the AM and PM peak hours, motorists are experiencing considerable delay in travel time. The proposed project would increase the capacity of various segments of the study corridor by about 33%-100%, and hence, would result in operating LOS “C/D” during peak periods in design year 2040. |
The Regional Transportation Improvement Program is the region’s part derivative of the State Transportation Improvement Program and identifies projects, which are needed to improve regional transportation. Each regional transportation-planning agency prepares a Regional Transportation Improvement Plan, consisting of projects to be funded through the State Transportation Improvement Plan. The Regional Transportation Improvement Plan helps prioritize projects for the program. Regional Transportation Improvement Plans must be approved by the California Transportation Commission.

Environmental Consequences

No Build Alternative
If the proposed project were not built, there would be no alterations or improvements to the existing facility, thereby posing no changes to the existing environment and requiring no alteration of existing lands. Therefore, this alternative would present no potential impacts on land usage. The No Build Alternative will not be consistent with all the State, Regional, and Local Plans and Programs listed in the previous section.

Build Alternatives
The proposed project is a roadway improvement project that would provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes in the project study area. All proposed project components would occur within existing infrastructure and neither property acquisition nor use would occur on lands that are currently adjacent to freeway facilities; therefore, no conversion of land use is required. Construction of the proposed project would not result in adverse effects on land use in the project area. Construction activities would not permanently disrupt existing land uses or result in new land uses or incompatible development. The Build Alternatives will be consistent with all the State, regional, and local plans and programs listed in the previous section.

Cumulative Impacts
Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections, as well as impacts for other projects in the study area, would each be minimized or mitigated and would, therefore, not have a cumulative impact to humans or the physical environment.

Avoidance, Minimization and Mitigation Measures
Since the proposed project would not result in any impacts to land uses, no avoidance, minimization, or mitigation measures are required.

34 Ventura County Transportation Commission, October 2007. Ventura Countywide Bicycle Master Plan.
35 Ventura County Transportation Commission, October 2007. Ventura Countywide Bicycle Master Plan.
### 2.1.1.1 Parks and Recreational Facilities

**Affected Environment**
Table 6, as well as Figures 7 and 8 show the public and privately owned parks and recreation facilities in the study area within 0.5 mile of the proposed project.

**Table 6 Parks and Recreational Facilities**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Address</th>
<th>Amenities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atherwood Park</td>
<td>2271 Alamo St., Simi Valley</td>
<td>Drinking Fountain, Park Benches, Picnic Tables (8), Pre-teen Play Area, Tot Lot, Turf Area</td>
</tr>
<tr>
<td>Rancho Tapo Community Park &amp; Veterans Plaza</td>
<td>3700 Avenida Simi, Simi Valley</td>
<td>Barbecues, Basketball Courts, Bleachers, Bocce Ball Courts, Drinking Fountains, Fitness Circuit, Park Benches, Picnic Tables (14), Pickle Ball Courts, Tennis Courts, Tot Lot, Turf Area, Veterans Memorial, Walking Trail, Pre-Teen Play Area, Restrooms, Splash Pad, Softball Diamond, Pavilions</td>
</tr>
<tr>
<td>Happy Camp Canyon Regional Park</td>
<td>15100 Happy Camp Canyon Road, Moorpark</td>
<td>Restrooms, 12.5 miles of trails Hiking, Equestrian, Biking, Drinking Fountains</td>
</tr>
<tr>
<td>Campus Canyon Park</td>
<td>6400 Harvard Street, Moorpark</td>
<td>Ball Fields, Barbecues, Basketball Court, Multipurpose Fields, Playground, Restrooms</td>
</tr>
<tr>
<td>Virginia Colony Park</td>
<td>14507 Condor Drive, Moorpark</td>
<td>Barbecues, Picnic Table, Playground</td>
</tr>
<tr>
<td>Miller Park</td>
<td>4530 Miller Parkway, Moorpark</td>
<td>Barbecues, Basketball Court, Picnic Pavilion, Playground, Restrooms</td>
</tr>
<tr>
<td>College View Park</td>
<td>15400 Campus Park Drive, Moorpark</td>
<td>Barbecues, Basketball Court, Picnic Pavilion, Playground, Restrooms</td>
</tr>
<tr>
<td>Campus Park</td>
<td>6400 Harvard Street, Moorpark</td>
<td>Barbecues, Basketball Court, Playground, Restrooms</td>
</tr>
<tr>
<td>Oak Park</td>
<td>901 Quimsa Drive, Simi Valley</td>
<td>General Restrooms, Water, Picnic Tables, Barbecues, Fire Rings, Park Host On-site Activities, Playground, Horseshoe Pits, Volleyball Court, Basketball Court, Picnic, Party Facility, Camping, Campsite Parking</td>
</tr>
<tr>
<td>Sequoia Park</td>
<td>2150 Tracy Ave, Simi Valley</td>
<td>Barbecues, Disc Golf Course, Park Benches, Picnic Tables (4), Pre-Teen Play Area, Tot Lot, Walking Path</td>
</tr>
<tr>
<td>Sycamore Ridge Private Park</td>
<td>South of SR-118 between Sequoia Ave. and Galena Ave.</td>
<td>Playground, Park Benches, Turf Area, Tennis Courts</td>
</tr>
</tbody>
</table>
Figure 7 Moorpark and County of Ventura Park Locations
Figure 8 Simi Valley Park Locations
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

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Bicycle travel is accommodated in the study area with three Class 2 (i.e., Princeton Ave., Collins Dr., and Galena Ave.) and four Class 3 facilities (Erringer Rd., Sycamore Dr., Sequoia Ave., and Tapo Canyon Rd.) crossing perpendicular, as well as one Class 1 facility running parallel between Sycamore Dr. and Sequoia Ave. to the SR-118 freeway corridor. Class 1 Bikeways provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians, with cross-flow by motorists minimized. Class 2 Bikeways provide a striped lane for one-way bike travel on a street or highway. Class 3 Bikeways provide for shared use by pedestrian or motor vehicle traffic.

**Table 7 Bicycle Facilities**

<table>
<thead>
<tr>
<th>Bicycle Facility Type</th>
<th>Name</th>
<th>Northern Limit</th>
<th>Southern Limit</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Princeton Ave.</td>
<td>Campus Park Dr.</td>
<td>Condor Dr.</td>
<td>0.59</td>
</tr>
<tr>
<td>2</td>
<td>Collins Dr.</td>
<td>University Dr.</td>
<td>Arroyo Dr.</td>
<td>1.13</td>
</tr>
<tr>
<td>1</td>
<td>Path parallel to</td>
<td>Sequoia Ave.</td>
<td>Sycamore Dr.</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>118 freeway</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Erringer Rd.</td>
<td>Alamo St.</td>
<td>Cochran St.</td>
<td>0.39</td>
</tr>
<tr>
<td>3</td>
<td>Sycamore Dr.</td>
<td>SR-118</td>
<td>Alamo St.</td>
<td>0.27</td>
</tr>
<tr>
<td>2</td>
<td>Galena Ave.</td>
<td>Alamo St.</td>
<td>Cochran St.</td>
<td>0.39</td>
</tr>
<tr>
<td>3</td>
<td>Sequoia Ave.</td>
<td>Copperfield St.</td>
<td>Los Angeles Ave.</td>
<td>0.62</td>
</tr>
<tr>
<td>3</td>
<td>Tapo Canyon Rd.</td>
<td>SR-118</td>
<td>Cochran St.</td>
<td>0.26</td>
</tr>
</tbody>
</table>

**Environmental Consequences**

**No Build Alternative**

The No Build Alternative would have no impacts on parks or other recreational facilities.

**Build Alternatives**

The proposed project is a roadway improvement project that would provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes in the project study area. All proposed project components would occur within existing infrastructure and right-of-way and would not occur on parks or recreational facilities that are currently adjacent to freeway facilities.
There are two steps in determining whether Section 4(f) applies to a federal transportation project: 1) the project must involve a resource that is protected by the provisions of Section 4(f), and 2) that there is a “use” of that resource. Protected resources include publicly-owned public parks. “Recreational areas” include formal and informal facilities, including after-school public use of school playgrounds and recreational facilities.

23 CFR 774.17 defines “use” in three ways:

- When land from a Section 4(f) resource is permanently incorporated into a transportation facility or project (actual use);
- When there is a temporary occupancy of Section 4(f) resource that does not meet the five criteria of temporary use; and
- When there is constructive use of the Section 4(f) resource.

As indicated previously, land from identified Section 4(f) resources would not be permanently incorporated into a transportation facility as a result of the Build Alternatives. Furthermore, neither of the Build Alternative would result in a temporary occupancy of Section 4(f) resources

Constructive use (23 CFR 774.15) involves the evaluation of indirect or “proximity impacts” to a 4(f) resource. No actual use or “take” is involved. A constructive use occurs when the project’s proximity impacts are so severe that the protected activities, features or attributes that qualify the resource for protection under Section 4(f) are “substantially impaired.” Substantial impairment occurs only when the protected activities, features or attributes are substantially diminished by the proposed project.

Constructive use could include a variety of impacts to the resource depending on the reasons that the property is protected under Section 4(f) and the severity of the project impacts on those particular qualities. The Federal Highway Administration (FHWA) has determined that constructive use may occur when:

- The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f), such as enjoyment of an urban park where serenity and quiet are significant attributes.

A summary of the Traffic Noise Analysis as it relates to these facilities is discussed below.

1) Atherwood Elementary School is located behind an existing 14 feet high soundwall along the westbound SR-118 between Atherwood Avenue and east of the storm drainage channel. Site C3 represents an area of frequent human use (children playground). No traffic noise impact has been identified at this school under both Build Alternatives.

2) Mayfair Park is located along eastbound SR-118 between First St. and Erringer Rd. Site E3 represents an area of frequent human use (one bench and basketball court). Based on the noise analysis, noise impacts have been predicted to occur at this park under both Build Alternatives. The projected noise level for both Build Alternatives would be 68 dBA. The projected noise
level increase at this location for both Build Alternatives is 2 dBA. Noise abatement has been considered in the form of soundwalls.

3) College View Park is located on the northeast corner of VEN-118 and Collins Dr. Site F2 represents an area of frequent human use (picnic area). Based on the noise analysis, no traffic noise impacts have been predicted to occur at this park due to the project. Therefore, no noise abatement has been considered.

4) Oak Park is located along eastbound SR-118 between Collins Dr. and Alamos Canyon Rd. Site F6 represents an area of frequent human use (picnic area). Based on the noise analysis, no traffic noise impacts have been predicted to occur at this park due to the project. Therefore, no noise abatement has been considered.

5) Campus Park is located behind an existing 10 feet high soundwall along the westbound SR-118 between Penn Street and Harvard Street. Site G3 represents an area of frequent human use (picnic area) and it was determined to have traffic noise impacts under both alternatives. The projected noise level for both Build Alternatives would be 67dBA. The projected noise level increase at this location for both Build Alternatives is 1 dBA. The results of TNM modeling indicated that increasing the existing 10 feet soundwall to a maximum height of 16 feet provides only 1-2 dBA noise reduction, which does not satisfy the minimum of 5 dBA noise reduction for acoustical feasibility and 7 dBA noise reduction to at least one receiver for reasonableness.

6) Miller Park is located along southbound SR-23. Site I3 represents an area of frequent human use (sitting area). Based on the noise analysis, no traffic noise impacts have been predicted to occur at this park due to the project. Therefore, no noise abatement has been considered.

The FHWA has determined that a constructive use does not occur when the projected traffic noise levels of the proposed highway project on noise-sensitive Section 4(f) activities do not exceed the FHWA noise abatement criteria (NAC) described in 23 CFR 772, or if the projected noise levels exceed the NAC but the increase is barely perceptible (3 dBA or less).

Projected noise levels associated with both Build Alternatives would not exceed the NAC at Campus Park. Furthermore, the projected noise level increase for both Build Alternatives at this location, as well as Mayfair Park, would be 3 dBA or less. Therefore, the proposed project would not result in a constructive use.

Furthermore, the proposed project will not affect facilities that are protected by the Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409). The Park Preservation Act prohibits local and State agencies from acquiring any property that 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.
Cumulative Impacts

There are no cumulative projects identified that are anticipated to impact the park and recreational facilities in the vicinity of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

Since the proposed project would not result in any impacts to land uses, no avoidance, minimization, or mitigation measures are required.

2.1.2 Growth

Regulatory Setting

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

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

Affected Environment

The existing land use pattern in Ventura County has been shaped by growth policies focused primarily on, “channeling growth into cities; on maintaining a physical separation between those urbanized cities; and, to some extent, on protecting farmland.” Ventura County and the ten cities within the County have collaborated in land use decision-making since 1969 when in cooperation with the Local Agency Formation Commission (LAFCO) a landmark set of county-wide policies entitled the “Guidelines For Orderly Development” were adopted. These policies clarified the relationship between the County and the cities regarding land use planning. These guidelines have resulted in confining urban development within cities’ boundaries, which are much better equipped to deliver urban services.

Between 1995 and 2000, Ventura County voters passed a series of growth-control measures, known as the Save Open-Space and Agricultural Resources (SOAR) initiatives. Smart Growth advocates credit these SOAR measures with adding another layer of protection to several previous county-wide actions to assist in the retention of the semi-rural character of the area and to help promote higher density mixed use redevelopment within the urban boundaries.

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36 Southern California Studies Center, University of Southern California and Solimar Research Group, December 2003. Recent Growth Trends and Future Growth Policy Choices for Ventura County.
38 Gail Osherenko, Jeff Onsted, Keith Clarke, Noelle Boucquey, and Kristin N. Hart. *Retaining California’s*
measures lock in current land-use policies and require voter approval for conversion of additional agricultural or open space land to urban use. In effect, the supply of land planned and/or used for commercial, industrial, and residential development at the time of SOAR’s enactment is “locked-in” through 2020 unless a majority of voters approves a change to and urban-growth boundary and/or conversion of non-urban land to urban use.39

SOAR initiatives have passed in Ventura County and in most of the cities. Associated with SOAR is City Urban Restriction Urban Boundary (CURB), a companion initiative that creates an urban boundary line around a city. CURB also requires a simple majority of voters in that plan’s area to allow “urbanization” of land outside of the CURB boundary. Collectively, the Guidelines for Orderly Development and SOAR initiatives have largely contained urban development within city boundaries, preserving large expanses of agriculture and/or open space that contribute to a suburban or rural character throughout the County.40 In November 2016, the voters of Ventura County and eight of the County’s ten cities renewed the SOAR ordinances and extended their provisions through 2050.41

The cities of Moorpark and Simi Valley have both approved Save Our Open Space and Agricultural Resources (SOAR) measures which define and limit where growth can occur and require voter approval of any development outside those areas.

Moorpark

The Land Use Element of Moorpark’s General Plan sets forth policies for guiding local development. These policies, together with zoning regulations, establish the location and type of residential development that may occur. A comprehensive update to the Land Use Element was adopted in May 1992, and several amendments have been adopted since that time. These include conversion of about 2,071 acres of rural residential designated land to higher residential densities and open space; including the Country Club Estates, Meridian Hills, Pacific Communities, Birdalls and Essex residential developments. There have been adoptions or substantial amendments of three Specific Plans (Carlsberg, Downtown and Moorpark Highlands) and the approval of a voter-initiated City Urban Restriction Boundary (CURB). As larger Specific Plan areas and remaining large vacant parcels in the community are gradually built out, the remaining development in Moorpark will shift to smaller infill locations.42

Strong growth in the Southern California economy during the first half of this decade fostered increased residential development in Specific Plan areas and other areas around the city’s perimeter.43 The City sphere of influence is coterminous with City boundaries. The General Plan Land Use Element does not identify land uses outside current City boundaries. It therefore appears that the City does not anticipate annexation of area outside its current sphere of influence.

Coastal Agricultural Land Through Economic Incentives, Regulation, and Purchase
Ocean and Coastal Policy
Center, Marine Science Institute. University of California, Santa Barbara.
40 Ventura County Transportation Commission, August 2013. Ventura County Comprehensive Transportation Plan.
41 County of Ventura, March 2017. Ventura County 2040 General Plan Update.
42 City of Moorpark General Plan - Housing Element 2014 - 2021
43 City of Moorpark General Plan - Housing Element 2014 - 2021
to accommodate future development under the City’s current General Plan. In addition, the City Urban Restriction Boundary (CURB) is generally coterminous with the City boundaries and sphere of influence, with the exception of a 56-acre parcel in the eastern part of the City that is located within the City and sphere of influence but outside the CURB.44

North Park Village would have been a master-planned community unlike any Ventura County had seen in years. With 1,500 upscale homes, 180 affordable units and 70,000 square feet of retail and commercial space, it would have added about 6,000 residents to the unincorporated portion of the county. But the $1 billion project was rejected by voters in 2006 for the second time in seven years. Opponents said that the development — which would have annexed county land to get around city growth-control laws — would make the Moorpark community lose its small-town character.45

In September 2015, the City Council considered a potential expansion of 185 acres to the city limits. The council voted unanimously to maintain the city limits.46 The Moorpark SOAR ordinance was approved by voters in 1999 and requires voter approval to expand urban development beyond Moorpark’s city limits into agricultural or open space areas.47 An extension of the Moorpark Soar Ordinance until 2050 was adopted by a majority of the voters, voting on the proposed ordinance, on November 8, 2016.

Simi Valley

According to forecasts provided by the Southern California Association of Governments (SCAG), Simi Valley is expected to grow only moderately over the next ten years.48 Though the City is anticipated to experience continued population growth, the supply of land available for development has been substantially exhausted with limited undeveloped land remaining outside of the hillsides surrounding Simi Valley. The hillside open space areas surrounding the community are expected to remain substantially unchanged as development in these areas is regulated through the City’s Hillside Performance Standards, which are designed to preserve the natural resources surrounding the community. 49 In accommodating this growth the Land Use Plan encourages substantial infill development within the existing footprint of the community's built environment, and limited new development in the hillsides and canyons surrounding the City.

48 City of Simi Valley General Plan – Chapter 4: Housing.
49 City of Simi Valley Department of Environmental Services, June 2012. Simi Valley General Plan Environmental Impact Report.
In 2004, City voters approved a measure that limits the number of residential building permits that can be issued by the City to 292 per year through 2012. Measure N, which was approved by City voters on November 6, 2012, extends the 292-unit restriction through 2022.\(^{50}\)

Based upon the current General Plan designations, there is limited acreage of vacant property available for commercial and industrial development. Although several small parcels are available in the City for development, few large parcels remain for large users (either industrial or commercial). Staff estimates there is approximately 350 acres of undeveloped and vacant industrial and commercial zoned properties in Simi Valley.

With respect to industrial development, large vacant and unapproved parcels include 25.5 acres in the Tapo Canyon Business Park and 36.4 acres located east of Madera Rd. between the Union Pacific Railroad and Easy St. An additional 73 acres west of the western terminus of Cochran St. is vacant and unimproved, and 121 acres south of the Arroyo Simi at the western City limits remain vacant. However, these 194 acres (73 acres and 121 acres) would require a significant capital investment to bring the properties to a development ready level. Additionally, these parcels may contain environmentally sensitive areas that would limit development. Of the remaining properties, one parcel is 9 acres (which is shovel ready), and all others are 5 acres or less. While these smaller parcels can meet the smaller users’ needs, companies seeking larger parcels/buildings will be forced to look at other communities. With respect to commercial land for retail use, few development opportunities are available. All remaining vacant parcels are less than five acres. Without the rezoning of property, Simi Valley’s ability to attract large retail development is limited to the use of existing commercial property.\(^{51}\)

As Simi Valley is almost fully built out, the land use policies focus on how population and employment growth can be managed to preserve the qualities that distinguish the City’s diverse neighborhoods, business districts, and open spaces. The policies recognize that most of the City will be conserved for its existing type and densities of land use, and provide direction for their long-term maintenance. At the same time, the policies also recognize that change will occur in specifically targeted locations that (a) have been previously planned to accept growth, (b) enable existing commercial centers and business districts to sustain or enhance their economic vitality and evolve in response to a changing market, and (c) meet legislative mandates as well as an expressed community desire for more sustainable forms of development that reduce reliance on the automobile, consume less energy and water, and produce less pollution and greenhouse gas emissions. In these locations, policies provide for contextual infill that builds upon existing development and is sensitive to its environmental setting.\(^{52}\)

Several areas have been identified by the City as areas that could potentially change in the future.\(^{53}\) All of the Opportunity Areas, with the exception of the Parker Ranch Expansion Area, are located in developed areas of the City. These areas are served with infrastructure and services. However, as intensification of these areas occurs as envisioned in the General Plan,

\(^{50}\) Ventura Local Agency Formation Commission, November 2012. Municipal Service Reviews, Nine Ventura County Cities.
\(^{51}\) City of Simi Valley, 2014. City of Simi Valley Economic Development Program.
\(^{52}\) City of Simi Valley, June 2012. City of Simi Valley General Plan.
\(^{53}\) City of Simi Valley, June 2012. City of Simi Valley General Plan.
improvements and/or expansion to the existing infrastructure and services will be required. In addition, the City charges development fees to provide for parks and recreation facilities, fire services, flood control facilities, traffic improvements, schools, and water and sewer facilities. During the implementation of General Plan 2030, the City will work to focus higher density developments and mixed-use projects in areas adjacent to transit stations, along transit corridors and commercial corridors, near job centers, and in other appropriate areas throughout the City.

**Environmental Consequences**

**No Build Alternative**

Under the No Build Alternative, existing conditions would remain, and no growth-related impacts would occur.

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54 City of Simi Valley, June 2012. City of Simi Valley General Plan.
55 City of Simi Valley, June 2012. City of Simi Valley General Plan.
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Build Alternatives

The Federal Highway Administration (FHWA), Caltrans, and the United States Environmental Protection Agency (EPA) developed the Guidance for Preparers for Growth-Related, Indirect Impact Analyses to assist Caltrans’ staff responsible for preparing environmental documents pursuant to NEPA and CEQA. According to the aforementioned guidance, there is a continuum of transportation projects that range from those having little likelihood of growth-related impacts to those having a high likelihood. The guidance describes a “first cut” screening process to determine where a proposed project lies in the continuum.

In the past, there was often uncertainty about whether to characterize growth-related impacts as “inducing growth” or “accommodating growth.” The guidance steers clear of this debate, focusing instead on whether and how transportation projects “influence” growth. Some transportation projects will have no influence, others will have a moderate influence, and still others will greatly influence growth.

In California, projects are rarely designed to encourage or facilitate growth. Most Caltrans capacity-increasing projects are proposed as a response to traffic congestion that results from growth that has already occurred or will soon occur, rather than attracting new growth to an area that otherwise would not receive it. From this perspective, growth causes the project—the project is not designed to cause growth.

The proposed project is a transportation project which would not directly induce substantial population growth in the study area. All proposed project components would occur within existing infrastructure and right-of-way. The purpose of the proposed project is to provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes. The need for the proposed project is based on an assessment of the existing and future transportation demand in the project area compared to available capacity.

Based on the operational and capacity improvements, both Build Alternatives would potentially change accessibility in the study area. While highway improvements in general have the ability to enhance accessibility within local communities, neither of the Build Alternatives would accommodate new access points to and/or from the study area that would result in growth pressures in areas where such access does not presently exist. As a result, the project would not provide access to areas previously inaccessible or improve access in ways that would foster local development beyond that which is already planned in the County of Ventura, City of Moorpark and City of Simi Valley General Plans. Growth in the study area would be based largely on market conditions. The proposed project would not change any existing constraints on growth. With or without the project, growth within the regional area would continue to be limited by geographic and legal/regulatory factors that currently limit opportunities for unplanned growth in the study area. As a result of these factors, no new areas of development would be opened, and no existing access patterns would be altered.

Highly restrictive land use controls and growth management policies have created an unfavorable environment for development in the study area, limiting the availability of undeveloped land. These development constraints have shaped the current land use pattern in the study area and will be the primary influence on the rate, type, and amount of growth for the
foreseeable future. As a result, the Build Alternatives are not expected to affect growth in or adjacent to the study area. Therefore, the proposed project would not indirectly induce substantial growth, and would not result in growth-related effects.

**Cumulative Impacts**

Because no growth impacts are expected to occur as a result of the project, cumulative impacts are not expected to occur.

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

The proposed project is not expected to result in growth-related effects. Therefore, no avoidance, minimization, and/or mitigation measures are proposed.

**2.1.3 Community Impacts**

**2.1.3.1 Community Character and Cohesion**

*Regulatory Setting*

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

**Affected Environment**

The study area for the proposed project is comprised of areas within the cities of Moorpark and Simi Valley that are located either directly adjacent to the SR-118 and SR-23 facilities project improvements, where direct impacts would occur, or where indirect impacts may occur. The study area also includes areas within unincorporated Ventura County that are located east of SR-23 near the southern end of the project limits.

**Ventura County**

Ventura County, located immediately northwest of Los Angeles County, has historically served as a bedroom community for the San Fernando and San Gabriel Valleys. With the growth of its technology corridor – which stretches along Highway 101 from Woodland Hills to Camarillo – the county evolved into a jobs center of its own, becoming an established hub for the information
technology and biotechnology industries. In addition, Ventura County also has a strong labor market presence in healthcare, financial services, defense, and agriculture.\textsuperscript{56}

Currently, there are about 321,000 jobs in Ventura County.\textsuperscript{57} Nonfarm employment has been experiencing consecutive positive year-over-year growth since 2011 with an average annual growth rate of 1.3 percent from 2011 through 2016. Ventura County added 22,780 nonfarm jobs from its lowest point in 2010 (275,500 jobs) through 2016. However, it has yet to reach its prerecession peak, still remaining short by more than 1,000 jobs. Looking ahead, nonfarm employment in Ventura County is forecast to reach and surpass prerecession peak employment in 2017 and 2018, with 302,700 jobs and 307,920 nonfarm jobs respectively.\textsuperscript{58}

The County is home to Naval Base Ventura County and to the Port of Hueneme, a deep water facility that provides port of entry and foreign trade zone status.\textsuperscript{59} The Port of Hueneme in Ventura County specializes in the import and export of automobiles, fresh fruit and produce and serves as the primary support facility for the offshore oil industry. In 2014, two-way trade activities through the Port of Hueneme were valued at nearly $9.2 billion and generated $1.1 billion in economic activities in the immediate region.\textsuperscript{60}

While Ventura County decisively rebounded from the Great Recession, overall economic growth has been fading in recent years, California Economic Forecast data shows. Hotel occupancy is at record levels, averaging 80 percent in 2016. There are more than 11,000 approved units in the entitlement pipeline, but there are few projects that are moving forward at this time, according to the report. Although the vacancy rate for Ventura County office space is at its lowest level since the peak of the Great Recession, it’s still higher at 15.9 percent than any other Southern California or tri-county community.\textsuperscript{61}

**Moorpark**

Nestled among the rolling hills in eastern Ventura County, Moorpark incorporated as a city in 1983.\textsuperscript{62} The Moorpark community was notable originally for its agriculture and historical character. However, as a function of regional growth trends, low land costs, and Moorpark's proximity to employment centers in the Los Angeles area, development pressure resulted in the urbanization of much of the City's large open space area and agricultural lands. While under urbanizing pressure, the City maintained a low-profile suburban rural character by continuing a pattern of low density, single family housing in a setting of surrounding rolling hillsides. The

\textsuperscript{59} County of Ventura Community Development Division, May 2015. Ventura County Consolidated Plan.
\textsuperscript{60} Southern California Association of Governments, April 2016. The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.
\textsuperscript{62} City of Moorpark General Plan - Housing Element 2014 - 2021
majority of the City's development has occurred in the low-lying valley floor areas generally surrounding the Arroyo Simi.  

Compared to the rapid growth of the previous decade 1990-2000, Moorpark has continued to experience population growth although at a slower pace, increasing approximately 10.9% from 2000 to 2012 to an estimated population of 34,826. The current population of nearly 36,000 is expected to increase by 21 percent in the next 10 to 15 years, resulting in approximately 7,000 additional residents. 

Strong growth in the Southern California economy during the first half of this decade fostered increased residential development in Specific Plan areas and other areas around the city’s perimeter. Since 1998, about 2,240 homes have been built in Moorpark, although housing development decreased significantly through 2013. Due to its predominantly residential nature, Moorpark serves as a bedroom community for larger employment centers throughout Ventura County as well as northwest Los Angeles County, which is readily accessible via the Ventura Freeway (SR-101), the Ronald Reagan Freeway (SR-118) and SR-23. Moorpark has been slow to bounce back from the recession, as the slew of empty storefronts dotting its major thoroughfare, Los Angeles Avenue, and its downtown area, High Street, are proof positive. In addition to the economic downturn, the rise of online retail and the city’s low daytime population have prompted several big-name stores – including Staples, the Do-It Center, Big Lots and Fresh & Easy to close up shop in Moorpark over the last few years.

The 150 acre Moorpark College Campus is located near the 118 freeway at Collins Drive and Campus Park Drive. The campus is at the eastern edge of the city of Moorpark. The Moorpark College service area comprises the eastern portions of Ventura County, more specifically, the Conejo Valley, Thousand Oaks, Simi Valley, and Moorpark. The College serves approximately 13,000 students and the growth in enrollment projected for the next ten years is modest, estimated at 15,000.

Simi Valley

The city of Simi Valley, with an estimated population of 126,733 (as of January 2014) is the third largest of Ventura County’s 10 cities. Occupying an area of approximately 42 square miles, it is located in Southeast Ventura County, adjacent to the northwestern perimeter of the San

63 City of Moorpark General Plan – Land Use Element
64 City of Moorpark General Plan - Housing Element 2014 - 2021
66 City of Moorpark General Plan - Housing Element 2014 - 2021
68 City of Moorpark General Plan - Housing Element 2014 - 2021
71 http://californiacommunitycolleges.cccco.edu/collegeDetails.aspx?collegeID=681&txt=Moorpark%20College
Fernando Valley. The City was incorporated in 1969 with approximately 10,000 residents. The character of Simi Valley changed dramatically in the late 1970’s and early 1980’s when the City of Simi Valley began attracting major businesses and industry. Prior to this time, the City was primarily a bedroom community serving the San Fernando Valley and Los Angeles basin areas. The City has two general areas of development: the historic valley floor and the more recently developed hillside, canyon, and specific plan areas.

Early development in Simi Valley was agricultural in nature with a variety of orchard crops and cattle grazing utilizing much of the valley floor. Later on as the City became more urbanized, development on the valley floor was characterized by a continuous pattern of suburban development dominated by one and two-story buildings, schools, housing, shopping centers, community facilities and places of employment, interspersed with parks. However, as growth has continued in the community, available vacant land on the valley floor became more limited, and some outward expansion of residential growth into nearby hillside areas has occurred.

Simi Valley’s housing stock grew steadily from 1990 to 2010. Housing growth in the City outpaced growth Countywide but lagged behind that of Camarillo and Moorpark. While housing growth during the previous decade was significant, residential construction in the City slowed dramatically between 2008 and 2010, primarily due to the economic recession and lack of remaining developable vacant land. According to the US Census, from 2000 to 2010, the City of Simi Valley increased in population from 111,361 to 124,237.

For years, Simi Valley has enjoyed a high degree of employment diversification, lacking a concentration of any one employment category. This diversification has contributed to the success of Simi Valley’s economic vitality. More recent additions to the local business community include a variety of Internet and technology companies, along with a growing number of manufacturing industries.

Simi Valley remains very competitive in its ability to attract industrial employers. In the retail sector, Simi Valley has long been a secondary market to retailers. Located immediately adjacent to the primary markets of the 101 Freeway/Conejo Valley and the San Fernando Valley, many of Simi Valley’s desired retailers have already established themselves in these areas. The primary regional shopping center in the community is the Simi Valley Town Center located within northwest Simi Valley north of the Ronald Reagan Freeway (118) and east of First Street. The success of the Simi Valley Town Center is critical to the community and provides affirmation to business owners and residents that the City is economically viable.

74 http://edc-vc.com/simi-valley/
75 City of Simi Valley General Plan – Chapter 4: Housing
76 City of Simi Valley, 2014. City of Simi Valley Economic Development Program.
77 City of Simi Valley Department of General Services, June 2012. Simi Valley General Plan Environmental Impact Report.
78 City of Simi Valley, June 2012. City of Simi Valley General Plan.
80 City of Simi Valley, 2014. City of Simi Valley Economic Development Program.
81 http://www.simivalleychamber.org/economic-development/
82 City of Simi Valley, 2014. City of Simi Valley Economic Development Program.
83 City of Simi Valley, 2014. City of Simi Valley Economic Development Program.
Valley Town Center is a vital source of sales tax revenue to the City and creates a significant number of employment opportunities at various wage levels. Alberta Development, owners of the Simi Valley Town Center, are currently undertaking a major redevelopment with demolition of buildings in order to accommodate new tenants and more common areas for the community to gather.84

The Simi Valley Civic Center campus, which includes the Simi Valley Police Department Headquarters, City Hall, Simi Valley Public Library, Simi Valley Senior Center, East County Courthouse, and the Department of Motor Vehicles building, is located north of SR-118 at Alamo St. and Tapo Canyon Rd.

STUDY AREA DEMOGRAPHICS

Community cohesion is the degree to which residents have a sense of belonging to their neighborhood, their level of commitment to the community, or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time (Community Impact Assessment Handbook, Caltrans, June 1997). The demographic characteristics for the study area provided within this assessment were obtained from a combination of sources, including the United States Census Bureau (2010 Census and American Community Survey [ACS] 2010–2014) and the Southern California Association of Governments (SCAG).

Elements of community cohesion can be found in demographic data used to profile communities from the United States Census. Typical indicators of community cohesion are described below, followed by a specific discussion of these indicators within the study area.

- **AGE:** In general, communities with a high percentage of elderly residents (65 years or older) tend to demonstrate a greater social commitment to their community. This is because the elderly population, which includes retirees, often tends to be more active in the community as they have more time available for volunteering and participating in social organizations.

- **HOUSEHOLD SIZE:** In general, communities with a high percentage of families with children are more cohesive than communities consisting of mainly single people. This appears to occur as children tend to establish friendships with other children in their community. The social networks of children often lead to the establishment of friendships and affiliations among parents in the community. Although the Census Bureau does not provide specific data regarding the number of children present in each household, data regarding the persons per household in Ventura County as well as in each city, and community (including unincorporated areas) in the study area that can serve as a proxy for households with children.

- **HOUSING OCCUPANCY:** Communities with a high percentage of owner-occupied residences are typically more cohesive because their population tends to be less mobile. Since they have a financial stake in their community, homeowners often take a greater

84 City of Simi Valley, 2014. City of Simi Valley Economic Development Program.
interest in what is happening in their community than renters do. This means they often have a stronger sense of belonging to their community.

- **HOUSING TENURE:** Communities with a high percentage of long-term residents are typically more cohesive because a greater proportion of the population has had time to establish social networks and develop an identity with the community.

**Ventura County**

The California Department of Finance (DOF) now estimates that Ventura County’s population is just over 856,000 making it the thirteenth largest county in the State. Ventura County’s modest growth rate is projected to follow historic trends and remain approximately one percent (1%) or less per year. From July 2015 to July 2016, the most recent period for which there is data, the county’s population growth rate was 0.28 percent about a third of the state average of 0.75 percent. Table 8 reflects the City’s projected population in 5 year increments.

**Table 8 Ventura County Population Projections**

<table>
<thead>
<tr>
<th>Projected Population</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>County of Ventura</td>
<td>871,960</td>
<td>896,731</td>
<td>922,001</td>
</tr>
</tbody>
</table>

According to the 2010-2014 United States Census American Community Survey (ACS), Ventura County’s population is largely comprised of two groups: White/Non-Hispanic at 47.5% and Hispanic at 41.2%. The median age of County residents is 36.9 which is slightly higher than the State’s median age of 35.6. The senior population (over 65) is 12.6% and the population under 18 years is at 24.9%. Over the next decade, it is estimated that the 55 and over population will continue to grow faster, bringing significant changes to Ventura’s economy, social structure and workforce composition.

**Moorpark**

According to the US Census, from 2000 to 2010, the City of Moorpark increased in population from 31,415 to 34,421. The California Department of Finance estimates the City’s population to be 34,826 as of January 1, 2012. Thus, from 2000 to 2012, the City increased in population by an estimated 3,411, or 10.85 percent. This 10.85 percent growth rate over 12 years equates to an

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85 Ventura County Transportation Commission, June 2016. Budget Fiscal Year 2016/2017 Ventura County, CA.
86 Ventura County Transportation Commission, June 2016. Budget Fiscal Year 2016/2017 Ventura County, CA.
88 Ventura County Transportation Commission, June 2016. Budget Fiscal Year 2016/2017 Ventura County, CA.
estimated average annual growth rate of 0.90 percent. Table 9 reflects the City’s projected population in 5 year increments based on this estimated rate of growth:\textsuperscript{89}

<table>
<thead>
<tr>
<th>Projected Population</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Moorpark</td>
<td>37,414</td>
<td>39,128</td>
<td>40,920</td>
</tr>
</tbody>
</table>

Family households comprised approximately 82\% of all households in the City, as compared to 74\% for the County. The City had more families with children at home, fewer singles living alone, and a somewhat larger average household size than Ventura County as a whole.\textsuperscript{90} The City’s population was slightly younger than the County’s, with the “under 20 years” age cohort representing 31\% of the City compared to 29\% of the County.\textsuperscript{91}

The racial and ethnic composition of the City differs from the County in that a lower proportion of City residents are Hispanic/Latino or other racial/ethnic minorities. Approximately 59.4\% of City residents are White/Non-Hispanic, contrasted with approximately 47\% for the county as a whole. The percentage of Hispanics/Latinos residing in the City, at 29.6\%, is approximately 12\% less than that of the County. Asians, at 6.9\%, represent the largest non-Hispanic minority group.\textsuperscript{92}

\textbf{Simi Valley}

The 1990 Census reported that approximately 80\% of the population of the City of Simi Valley was Caucasian. The second highest ethnic group in the City at that time was Hispanic (13 percent) and less than 2 percent of the population was African American.\textsuperscript{93} By 2000, the racial and ethnic makeup of the City had remained mostly the same with African Americans comprising a slightly smaller proportion of the population and Asians constituting a larger proportion of the population. Both the Hispanic/Latino and Asian populations in Simi Valley were the fastest growing groups in Simi Valley from 1990 to 2010. The 2010 Census estimates that the Hispanic/Latino population made up 23\% of the City’s population and 9 percent of residents were of Asian/Pacific Islander descent.\textsuperscript{94}

According to the US Census, from 2000 to 2010, the City of Simi Valley increased in population from 111,361 to 124,237. The California Department of Finance estimates the City’s population to be 125,317 as of January 1, 2012. Thus, from 2000 to 2012, the City grew by an estimated

\textsuperscript{89} Ventura Local Agency Formation Commission, November 2012. Municipal Service Reviews, Nine Ventura County Cities.
\textsuperscript{90} City of Moorpark General Plan - Housing Element 2014 - 2021
\textsuperscript{91} City of Moorpark General Plan - Housing Element 2014 - 2021
\textsuperscript{92} City of Moorpark General Plan - Housing Element 2014 - 2021
\textsuperscript{93} City of Simi Valley General Plan – Chapter 4: Housing
\textsuperscript{94} City of Simi Valley General Plan – Chapter 4: Housing
13,956 people, or 12.5 percent. This growth rate over 12 years equates to an estimated average annual growth rate of 1.04 percent.95

In 2004, City voters approved a measure that limits the number of residential building permits that can be issued by the City to 292 per year through 2012. Measure N, which was approved by City voters on November 6, 2012, extends the 292-unit restriction through 2022. The following population projections are based on the construction of 292-units per year and 3.02 people per household through 2030:96

<table>
<thead>
<tr>
<th>Projected Population</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Simi Valley</td>
<td>132,372</td>
<td>136,781</td>
<td>141,190</td>
</tr>
</tbody>
</table>

Although the number of families with children in Simi Valley increased between 1990 and 2010, the number of children has declined moderately as a proportion of the City’s overall population. This can be explained in part by the growth of the senior population, which is an indication that people are aging in place and new senior residents are moving into the community.97

Households in Simi Valley increased by 13.2 percent between 2000 and 2010. Family households continue to make up the majority of Simi Valley households and increased by almost 10 percent between 2000 and 2010. Family households continue to make up more than three-quarters of the households. However, married families with children decreased by 8 percent while married families without children increased by nearly 26 percent. “Other” families are family households (as defined above) but do not include a married couple. They could be siblings living together or single parents. Other families also saw a large increase, with a jump of almost 21 percent since 2000.

While non-family households (households that are not made up of individuals related by blood, marriage or adoption) made up approximately 28 percent of Simi Valley’s households in 2010. The largest increase in household type was single-households. The number of singles increased almost 33 percent and the most dramatic increase is seen in the number of elderly (age 65 and older) living alone which jumped approximately 70 percent. These changes in household characteristics resulted in a slight decrease in the average household size.98

**Housing**

Comparison data on the regional and local housing characteristics in the study area are presented in Tables 11 and 12. The owner-occupied housing in Ventura County accounts for

95 Ventura Local Agency Formation Commission, November 2012. Municipal Service Reviews, Nine Ventura County Cities.
97 City of Simi Valley General Plan – Chapter 4: Housing
98 City of Simi Valley General Plan – Chapter 4: Housing
approximately 64.2 percent compared to 74 percent in Moorpark and 73.4 percent in Simi Valley. The average household size within Ventura County is 3.08 persons, which is less than the average for Moorpark (3.33), but higher than Simi Valley (2.99).

**Table 11 Average Household Size and Housing Occupancy**

<table>
<thead>
<tr>
<th></th>
<th>Average Household Size</th>
<th>Housing Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Owner-Occupied</td>
</tr>
<tr>
<td>Ventura County</td>
<td>3.08</td>
<td>64.2%</td>
</tr>
<tr>
<td>Moorpark</td>
<td>3.33</td>
<td>74%</td>
</tr>
<tr>
<td>Simi Valley</td>
<td>2.99</td>
<td>73.4%</td>
</tr>
</tbody>
</table>

Within the study area, households whose members have lived within the same housing unit prior to the year 2009 consist of approximately 69 percent for Ventura County, approximately 73.3 percent for the City of Moorpark and approximately 70.8 for the City of Simi Valley.

**Table 12 Housing Tenure**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventura County</td>
<td>7.6</td>
<td>8.7</td>
<td>17.3</td>
<td>35.5</td>
<td>29.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Moorpark</td>
<td>2.1</td>
<td>13.6</td>
<td>16.8</td>
<td>40.8</td>
<td>25.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Simi Valley</td>
<td>8.0</td>
<td>9.4</td>
<td>18.4</td>
<td>35.0</td>
<td>28.3</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Based on the information above, the study area is considered to be highly cohesive based on the factors of ethnic high tenure of residents, average household size, and percentage of elderly residents.

**Environmental Consequences**

**No Build Alternative**

Under the No Build Alternative, the proposed project would not be constructed. Therefore, no temporary impacts to community character/cohesion, housing, or economic conditions would occur.
Build Alternatives

Construction activities would result in temporary, localized site-specific disruptions to the population in the project area. Construction related impacts may include traffic disruptions, congestion and detours due to the movement of construction trucks and equipment; increased noise, vibration, light and glare and increased emissions due to construction equipment.

Impacts to community character and cohesion, specifically to pedestrians and bicyclists, are anticipated during construction due to bridge work. Access disruptions to adjacent commercial and industrial uses during construction would be temporary and would follow all applicable local guidelines. These impacts will be minimized with the implementation of a Traffic Management Plan. Construction impacts related to noise, vibration, odor, or pollution will be minimized by following all relevant laws, regulations, and Caltrans Standards which include but are not limited to Best Management Practices.

Direct impacts that could affect community character and cohesion would not occur because all proposed work would be constructed within the existing SR-118 and SR-23 facilities. For the same reason, the Build Alternatives would not bisect an existing residential neighborhood or community. Property acquisition would not be required as part of the proposed project and neither of the Build Alternatives encroach on or affect the operations of the surrounding neighborhoods and community facilities. Community services within the study area, such as fire, police protection, and other emergency responders, would be more readily available under the Build Alternatives as mobility within the study area would improve over existing conditions. The Build Alternatives would benefit the neighborhoods and communities in the study area by reducing congestion and travel time, which could help to further link these areas. The community character and cohesion of the communities within the study area would remain intact with implementation of the Build Alternatives, because none of the Build Alternatives would create a barrier or disrupt the connectivity of the communities. In summary, the cities and communities in the study area, would have no adverse impacts to community character and would remain cohesive and intact with construction and operation of the proposed project.

Cumulative Impacts

Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections, as well as impacts for other projects in the study area, would each be minimized or mitigated and would, therefore, not have a cumulative impact to humans or the physical environment.

Avoidance, Minimization, and Mitigation Measures

Coordination of the Traffic Management Plan with affected agencies will be conducted to minimize any temporary construction impacts that this project may have on the surrounding communities.
2.1.3.2 Environmental Justice

**Regulatory Setting**

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

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

**Affected Environment**

The FHWA Guidance on Environmental Justice and NEPA, dated December 16, 2011, states: “As per FHWA Order 6640.23, a disproportionately high and adverse effect on a minority or low income population means the adverse effect is predominantly borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population.”

The term “minority” includes persons who identify themselves as Black/African American, Asian/Pacific Islander, Native American, or of Hispanic/Latino origin. The White House Council on Environmental Quality (CEQ) Environmental Justice Guidance under the NEPA, dated December 10, 1997, states that “Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.” For the purpose of this environmental document, census tracts are considered to have substantial minority populations if the percentage of minority residents within them exceeds 50 percent and/or is more than 10 percentage points higher than that of the cities of Moorpark, Simi Valley, and/or Ventura County.

The term “low income” includes persons whose household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines. A different threshold (e.g. U.S. Census Bureau poverty threshold) may be utilized as long as it is not selectively implemented and is inclusive of all persons at or below the HHS poverty guidelines. For purposes of this environmental document, a low-income population is defined as a population group residing in a geographically affected area where the percentage of individuals at or below the poverty line exceeds that of the cities of Moorpark, Simi Valley, and/or Ventura County.
Census data was obtained for census tracts that most closely correspond to the project area were examined, and population and community characteristics of the groups were compared with the totals for the cities of Moorpark and Simi Valley and Ventura County. Census tracts are small, relatively permanent statistical subdivisions of a county. Census tracts are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. As shown in Figures 10 and 11, the area for the project lies within parts of Ventura County Census Tracts 76.13 and 76.14 in the City of Moorpark, as well as within parts of Ventura County Census Tracts 76.14, 79.01, 79.03, 81.01, 82.02 and 85 within the City of Simi Valley and unincorporated Ventura County. Some of the census tracts analyzed extend beyond the areas of anticipated direct and/or indirect impacts. Therefore, it was necessary to use a unit of analysis smaller than census tracts in some instances. A census block is a subdivision of a census tract and is the smallest geographic area for which the Census Bureau collects and tabulates decennial census data. Census blocks allow one to track demographic changes on a very fine scale. Many census blocks correspond to individual city blocks bounded by streets.

The study area for the proposed project comprises part or all of eight census tracts within the cities of Moorpark and Simi Valley, and are located either directly adjacent to the SR-118 and SR-23 facilities project improvements, where direct impacts would occur, or where indirect impacts may occur. The areas in the immediate vicinity of the proposed project will experience the majority of effects, as all proposed project components would occur within the existing SR-118 and SR-23 facilities. Demographic data was obtained for the various census tract and block groups within the study area. Census tract and block group data were compared to the local city and countywide demographics to help determine where disproportionate impacts on low-income and minority residents may occur.
Figure 10 Moorpark Census Tracts

118 Roadway Widening-Moorpark, CA Census Tracts

Legend
- Project Limits
- Moorpark City Borders
- Moorpark Census Tracts
  - 76.11
  - 76.12
  - 76.13
  - 76.14

Moorpark Census Tracts
California Department of Transportation,
District 7, Los Angeles
Source: City of Moorpark General Plan Data, May 2017
and United States Census Bureau Census Tracts 2010
Map Created by Savannah Speerstra,
Division of Environmental Planning, August, 2017
Figure 11 Simi Valley Census Tracts
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

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The combined percentages of minority populations within the study area census tracts compared to their respective city and county are summarized in Table 13. The percentage of low-income populations within the study area as compared to their respective city and county are also summarized. Census tracts with majority minority populations are shown in bold and italics.

**Table 13 Environmental Justice Populations**

<table>
<thead>
<tr>
<th>Minority Group</th>
<th>Moorpark 76.13</th>
<th>Moorpark 76.14</th>
<th>Moorpark 79.01</th>
<th>Moorpark 79.03</th>
<th>Moorpark 79.04</th>
<th>Moorpark 81.01</th>
<th>Moorpark 82.02</th>
<th>Moorpark 85</th>
<th>Simi Valley 17</th>
<th>Simi Valley 28</th>
<th>Simi Valley 43</th>
<th>Simi Valley 17</th>
<th>Simi Valley 32</th>
<th>Simi Valley 30</th>
<th>Simi Valley 18</th>
<th>Ventura County 29.6</th>
<th>Ventura County 24.9</th>
<th>Ventura County 42.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latino of any race</td>
<td>17</td>
<td>28</td>
<td>43</td>
<td>17</td>
<td>32</td>
<td>24</td>
<td>30</td>
<td>18</td>
<td>29.6</td>
<td>24.9</td>
<td>42.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American (Not Hispanic or Latino)</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0.9</td>
<td>1.2</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian and Alaska Native (Not Hispanic or Latino)</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.4</td>
<td>0.6</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian (Not Hispanic or Latino)</td>
<td>11</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>11</td>
<td>7.4</td>
<td>9.1</td>
<td>7.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority Resident Total</td>
<td>30</td>
<td>36</td>
<td><strong>52</strong></td>
<td>28</td>
<td>38</td>
<td>30</td>
<td>38</td>
<td>34</td>
<td>38.6</td>
<td>36</td>
<td>54.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons Below Poverty Line</td>
<td>6.3</td>
<td>5.4</td>
<td>4.3</td>
<td>1.8</td>
<td>3.3</td>
<td><strong>7.9</strong></td>
<td><strong>7.6</strong></td>
<td>3.3</td>
<td>7.2</td>
<td>6.1</td>
<td>9.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: The values in bold and italics indicate the majority minority populations.*
Environmental Consequences

As shown in Table 13, minority residents constitute less than 50 percent of the population within all study area census tracts and block groups, with the exception of census tract 79.01 which is located entirely within the City of Simi Valley. Also, census tract 79.01 is the only location within the study area where the percentage of minority residents is more than 10 percentage points higher as compared to the populations of the cities of Moorpark and Simi Valley. As compared to the minority population for the entire county, the percentage of minority residents within census tract 79.01 is 2 percent less. Also, census tracts 79.04 and 82.02, located within the City of Simi Valley, contain a slightly higher percentage of low-income populations as compared to the entire City of Simi Valley. The percentage of low-income populations within these census tracts is lower than the percentage for the entire county.

This analysis determines if any disproportionately high and adverse effects from the Build Alternative or No Build Alternative would be predominantly borne by minority or low-income populations, or would be appreciably more severe or greater in magnitude to minority or low-income populations compared to the effects on non-minority or non-low-income populations. The analysis below examines the ways in which impacts associated with the Build Alternative, including the No Build Alternative, may affect minority and low-income populations, and a determination is then made whether any alternative results in disproportionately high and adverse effects.

No Build Alternative

Under the No Build Alternative the impacts associated with environmental justice considerations discussed below for the Build alternatives would not occur as a result of the proposed project. However, some beneficial effects would also not occur, including abatement of freeway noise, improved operational capacity, and safety service level.

Build Alternatives

The Build Alternatives would have the same effects for environmental justice considerations. Although the effects of the Build Alternatives would occur in areas that contain minority and low-income populations, these effects cannot reasonably be considered disproportionately high and adverse under the circumstances as discussed below.

Construction activities would result in temporary, localized site-specific disruptions to the population in the project area. Construction related impacts may include traffic disruptions, congestion and detours due to the movement of construction trucks and equipment; increased noise, vibration, and increased emissions due to construction equipment. These impacts would be temporary during the construction period, and would be minimized with the avoidance and minimization measures. With implementation of avoidance and minimization measures, construction impacts related to traffic noise, or air quality and noise are not considered adverse. Furthermore, upon completion of construction activities, the proposed Build Alternatives would not expose minority and low-income communities within the project area to hazardous environmental conditions or any environmental justice concerns, including noise and air quality impacts.

The anticipated noise and air quality effects associated with the Build Alternatives are not confined to the three census tracts (i.e., census tracts 79.01, 81.01, and 81.04) within the study area.
area where environmental justice populations are present, but rather would be dispersed over the length of the project. Because these impacts would be distributed similarly throughout the corridor, impacts would not fall disproportionately on low-income and minority populations. Additionally, any noise and air quality impacts would be minimized with avoidance and minimization measures. Therefore, with implementation of avoidance and minimization measures, impacts associated with the Build Alternative would not be predominantly borne by a minority or low-income population, nor would these impacts be appreciably more severe or greater in magnitude than those experienced by non-minority or non-low income populations. Furthermore, the proposed project would have beneficial effects on the surrounding communities when compared with current conditions including abatement of freeway noise, improved operational capacity, and safety service level. These benefits would be shared among all of the study area populations.

**Cumulative Impacts**

Implementation of the proposed project would not disproportionately affect any minority or low-income populations; therefore, the project would not contribute to cumulative impacts on environmental justice.

**Avoidance, Minimization, and Mitigation Measures**

No minority or low-income populations have been identified that would be adversely affected by the proposed project as determined above. Therefore, this project is not subject to the provisions of Executive Order 12898.

**2.1.4 Utilities/ Emergency Services**

**Affected Environment**

All proposed work would be constructed within the existing SR-118 and SR-23 facilities and the proposed project would not affect utility systems in the project area, including water, sewer, electric power, or telecommunication systems. The physical impacts of the Build Alternatives as related to emergency services would be largely limited to areas adjacent to the SR-118 corridor. As a result, discussion of the affected environment focuses on services within 1 mile of the project limits on the SR-118 and SR-23 facilities.

**FIRE PROTECTION**

The Ventura County Fire Department (VCFD) serves more than 480,000 citizens in unincorporated areas of Ventura County, and the following cities: Ojai, Port Hueneme, Moorpark, Camarillo, Simi Valley and Thousand Oaks. The following is a list of VCFD stations within 1 mile of the project limits.

- Ventura County Fire Station 41, 1910 Church St., Simi Valley, CA 93065

  Fire Station 41 serves the central Simi Valley area and is the Battalion 4 Headquarters. Battalion 4 commands the Simi Valley and Moorpark areas. In addition to the chief officer, seven firefighters staff the Church Street Fire Station daily. Three are assigned to the engine (Engine 41); and four are assigned to the 100' tillered aerial ladder
truck (Truck 41). A reserve engine (Engine 141) is also assigned. The battalion chief has a command vehicle (Battalion 4).

- **Ventura County Fire Station 42, 295 E. High St., Moorpark, CA 93021**

  Fire Station 42 serves the central and east Moorpark areas. Its location also supports larger incidents in the Santa Clara Valley. The Moorpark station is staffed daily by three firefighters and houses an engine (Engine 42); reserve engine (Engine 142); and a brush engine (Engine 342).

- **Ventura County Fire Station 45, 790 Pacific Ave., Simi Valley, CA 93065**

  Fire Station 45 serves the midtown and western portions of the City of Simi Valley. The Pacific Avenue Fire Station is staffed daily by three firefighters and houses an engine (Engine 45); a reserve engine (Engine 145). It is also the secondary home for Dozer 4, a fire-fighting bulldozer staffed by an operator and a swamper.

- **Ventura County Fire Station 46, 3265 Tapo St., Simi Valley, CA 93063**

  Fire Station 46 serves the north side of the City of Simi Valley. The Tapo Fire Station is staffed daily by three firefighters and houses an engine (Engine 46); and a reserve engine (OES 283). The reserve engine is an Office of Emergency Services (OES) engine. There are 120 OES engines statewide and two in the Ventura County Fire Department. These engines are owned and maintained by the state and deployed with local fire departments to be used during disasters.

- **Ventura County Fire Station 47, 2901 Erringer Rd., Simi Valley, CA 93065**

  Ventura County Fire Station 47 was built in response to additional development in the Big Sky area and other safety needs in the central part of the City of Simi Valley. The station's central location on the north side of the SR-118 freeway will improve response times into the Big Sky and surrounding areas and increase operational effectiveness by giving firefighters easy access to the freeway for responses into others areas of the city. The station is staffed by a 3 person engine company, operating a medic-engine (Medic-Engine-47), a reserve ladder truck (Truck-147) and a utility (Utility-47).

**LAW ENFORCEMENT**

The City of Moorpark contracts for law enforcement services with the Ventura County Sheriff’s Department. In addition to the City of Moorpark, the Moorpark Station also provides police services to the unincorporated areas of Santa Rosa Valley, Moorpark Home Acres, Happy Camp, Fruitvale, Santa Susana Knolls, Box Canyon, Tapo Canyon, Balcom Canyon, Bradley, Stockton and Grimes Canyon.

The Ventura County Community College District Police Department’s primary jurisdiction includes all properties owned and operated by the Ventura Community College District, which includes Moorpark College, as well as adjacent public streets. However, their authority may extend to any place in the State of California.
In the City of Simi Valley, the Simi Valley Police Department (SVPD) provides police services citywide. The SVPD employs 125 sworn officers and 3 reserve officers. The SVPD patrol area covers the entire area within the Simi Valley municipal boundaries. The following is a list of police stations within 1 mile of the project limits.

- Moorpark Police Services Center
  610 Spring Rd.
  Moorpark, CA 93021

- Moorpark College Police Office
  7075 Campus Rd.
  Moorpark, CA 93021

- Simi Valley Police Department
  3901 Alamo St.
  Simi Valley, CA 93063

**HOSPITALS**
The following is a list of hospitals located within 1 mile of the project limits.

- Adventist Health Simi Valley
  2975 North Sycamore Drive
  Simi Valley, California 93065

**Environmental Consequences**

**No Build Alternative**
Under the No Build Alternative, emergency services (fire protection, law enforcement protection and emergency service vehicles) may be delayed as traffic congestion worsens and the level of service (LOS) in the study area declines, resulting in adverse impacts to emergency services compared to conditions that would exist under the Build Alternatives.

**Build Alternatives**
None of the fire/police stations or hospitals located within 1 mile of the proposed project would be directly impacted as a result of the Build Alternatives. The Build Alternatives would not result in increased population or demand for public services in the study area because they would not construct new housing or businesses. The Build Alternatives would have both beneficial and adverse effects on fire protection, law enforcement protection, and emergency vehicle services within the study area. Construction activities that require closures of travel lanes could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response time goals within the study area. Beneficial effects include improved emergency response times, as the ability to move fire protection, law enforcement, and emergency service vehicles from one area to another would be enhanced by the improved transportation network following construction.
**Cumulative Impacts**

Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections, as well as impacts for other projects in the study area, would each be minimized or mitigated and would, therefore, not have a cumulative impact to humans or the physical environment.

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

A Traffic Management Plan would be implemented to minimize any circulation impacts during construction and would include construction staging plans, as well as coordination with local residents, businesses, local agencies, and emergency responders. During project construction, Caltrans will coordinate with local emergency service providers to keep them informed of the project construction schedule and any detour routes so as to avoid or minimize any impacts.

2.1.5 **Traffic and Transportation/ Pedestrian and Bicycle Facilities**

**Regulatory Setting**

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

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

**Affected Environment**

The project proposes to widen State Route 118 (SR-118) from Los Angeles Ave. to 0.4 mile west of Tapo Canyon Rd., and from Los Angeles Ave. to 0.8 mile north of Tierra Rejada Rd. on State Route 23 (SR-23) in the County of Ventura. The project proposes to add one to two additional mixed-flow lanes.

For both directions of SR-118 within the study area, and due to the traffic demand exceeding the roadway capacity, especially during the AM and PM peak hours, motorists are experiencing considerable delay in travel time. Backups onto the mainline are creating a rippling effect of downgrading the operations of the on and off-ramps, resulting in unfavorable weaving and maneuvering for traffic connecting to or exiting off the mainline, adding to motorists’ frustration,
and consequently, a higher accident rate and a demise to the safety level of service for this corridor.

Traffic demand generated along the SR-118 corridor comes mainly from residential and commercial developments, in addition to the through traffic traveling between Routes 101, 405, 210 and 5 to the communities of Oxnard, Moorpark Simi Valley, Los Angeles and beyond at the eastern end of the study area. A lane drop (i.e, one less lane) from 0.8 mile north of Tierra Rejada Rd. on SR-23 to the downstream of the Madera Rd. on-ramp on SR-118 creates a critical five-mile long bottleneck on mainline SR-118 through this 2-lane stretch of the freeway. As a result, delay in travel time during peak periods, especially the PM hours between 3 and 7 PM, has increased by about 10-25 minutes per vehicle.

Within the project limits, SR-118 is a 4-lane to 6-lane freeway with 4 to 6 standard 12-foot lanes, 5 to 12-foot shoulders, and a 12 to 30-foot paved/dirt median. Widening of the east section of this freeway facility from three to four lanes in each direction, between Tapo Canyon Rd. and the Los Angeles County Line, was completed in 2011. The purpose of the project is to provide traffic congestion, improve traffic operation, and accommodate projected traffic volumes. The need for the proposed project is based on an assessment of the existing and future transportation demand in the project area compared to available capacity.

Currently several segments of this roadway are operating at near or over capacity with a Level of Service (LOS) of “E” or “F” during peak periods. The LOS is a letter designation that describes a range of operating conditions on a particular type of facility, with LOS A representing the best operating conditions and LOS F representing the worst. Each LOS represents a range of operating conditions and the driver’s perception of those conditions. Levels E and F typically are considered to be unsatisfactory.
Figure 12 Levels of Service for Freeways

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


**Bicycle and Pedestrian Facilities**

Bicycle travel is accommodated in the study area with three Class 2 (i.e., Princeton Ave., Collins Dr., and Galena Ave.) and four Class 3 facilities (Erringer Rd., Sycamore Dr., Sequoia Ave., and Tapo Canyon Rd.) crossing perpendicular, as well as one Class 1 facility running parallel, between Sycamore Dr. and Sequoia Ave., to the SR-118 freeway corridor. Class 1 Bikeways provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians, with cross-flow by motorists minimized. Class 2 Bikeways provide a striped lane for one-way bike travel on a street or highway. Class 3 Bikeways provide for shared use by pedestrian or motor vehicle traffic.  

Pedestrian facilities within the study area include sidewalks and undercrossings.

<table>
<thead>
<tr>
<th>Bicycle Facility Type</th>
<th>Name</th>
<th>Northern Limit</th>
<th>Southern Limit</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Princeton Ave.</td>
<td>Campus Park Dr.</td>
<td>Condor Dr.</td>
<td>0.59</td>
</tr>
<tr>
<td>2</td>
<td>Collins Dr.</td>
<td>University Dr.</td>
<td>Arroyo Dr.</td>
<td>1.13</td>
</tr>
<tr>
<td>1</td>
<td>Path parallel to 118 freeway</td>
<td>Sequoia Ave.</td>
<td>Sycamore Dr.</td>
<td>0.75</td>
</tr>
<tr>
<td>3</td>
<td>Erringer Rd.</td>
<td>Alamo St.</td>
<td>Cochran St.</td>
<td>0.39</td>
</tr>
<tr>
<td>3</td>
<td>Sycamore Dr.</td>
<td>SR-118</td>
<td>Alamo St.</td>
<td>0.27</td>
</tr>
<tr>
<td>2</td>
<td>Galena Ave.</td>
<td>Alamo St.</td>
<td>Cochran St.</td>
<td>0.39</td>
</tr>
<tr>
<td>3</td>
<td>Sequoia Ave.</td>
<td>Copperfield St.</td>
<td>Los Angeles Ave.</td>
<td>0.62</td>
</tr>
<tr>
<td>3</td>
<td>Tapo Canyon Rd.</td>
<td>SR-118</td>
<td>Cochran St.</td>
<td>0.26</td>
</tr>
</tbody>
</table>

**Accident Data Analysis**

Traffic Accident Surveillance and Analysis System (TASAS) data for the project limits was reviewed for the period from January 1, 2006 to June 30, 2014. Table 15 shows the accident rates for in each direction of travel. The table contains both the actual accident rate within the project limits (Actual) and the statewide average accident rate (Average) for similar highway segments. The accident rate is expressed as a ratio between the number of collisions that occur over a set time period on a certain roadway segment and the average traffic volume traveling over the length of that segment. The calculated ratio can then be compared to ratios calculated for similar highway segments to establish the relative safeness of a given segment. Accident rates are calculated to evaluate the relative safeness of a highway and to set priorities for safety improvement work.

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Accident rate data derived from TASAS present opportunities to enhance safety within the project limits. The TASAS data indicates that the accident rate within the project limits is higher than the statewide average for similar highway segments in each direction of travel. An examination of the factors that contributed the most to collisions within the project limits revealed that speeding, improper turns, unsafe lane changes, and driving under the influence represented the primary causes that were attributed to approximately 94% of the total number of collisions. Henceforth, it could be reasonably deduced that the existing roadway geometries and design features were not a major contributor to its accident rates and had little to do with the vast majority of the collisions that took place along both of its directions within the project limits.

### Table 15 Accident Data

<table>
<thead>
<tr>
<th>Segment</th>
<th>Actual Accident Rates</th>
<th>Average Accident Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fatal</td>
<td>Injury</td>
</tr>
<tr>
<td>Westbound SR-118</td>
<td>0.003</td>
<td>0.21</td>
</tr>
<tr>
<td>Eastbound SR-118</td>
<td>0.003</td>
<td>0.21</td>
</tr>
</tbody>
</table>

### Environmental Consequences

#### No-Build Alternative

Due to expected increase in traffic demand due to ambient growth and/or planned developments within the neighboring communities and beyond, the No Build Alternative would result in large segments SR-118 operating at a LOS "F2/3" during peak, and sometimes off-peak periods by the design year 2040. In addition to the segments within the project limits, this poor operational performance would negatively influence other segments that are outside the project limits.

#### Build Alternatives

Based on Caltrans' published data, the average AADT for 2009, 2010, and 2014 for this segment of Route 118 were 104,500, 105,300, and 112,500 respectively. Accordingly, the average annual calculated ambient growth rate for this route would be approximately 1.53%. The current 2016 average peak and non-peak hourly demand per lane could be estimated at approximately 1,930 and 1,610 vehicles per hour per lane (vphpl). Consequently, and considering a maximum lane capacity of 2200~2300vphpl, and based upon a vehicle/capacity (V/C) analysis, this segment of SR-118 is currently operating at a LOS “E/F” and “C/D” during peak and non-peak periods. Moreover, the average 2040 AADT for this route could be forecasted to reach about 157,500. Therefore, under the current configuration, and based upon a V/C analysis. The mainline could be expected to operate at a LOS “F2/3” with a per lane demand exceeding 2800 vphpl during peak periods by the design year 2040. The proposed project would increase the capacity of various segments of the study corridor by about 33%~100%, and hence, would result in operating LOS “C/D” during peak periods in design year 2040. The implementation of either of the two Build Alternatives could be expected to improve the operational capacity, and consequently the safety service level, for SR-118 within and beyond the project limits.
Table 16 Existing/Future Traffic Volumes and Level of Service

<table>
<thead>
<tr>
<th>Route</th>
<th>From (PM)</th>
<th>To (PM)</th>
<th>Current (2014)</th>
<th>Forecast (2040) Without Project</th>
<th>Forecast (2040) With Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>ADT</td>
<td>LOS</td>
<td>ADT</td>
</tr>
<tr>
<td>118</td>
<td>Los Angeles Ave (T18.2)</td>
<td>Princeton Ave (T19.1)</td>
<td>77,000</td>
<td>E</td>
<td>92,300</td>
</tr>
<tr>
<td>118</td>
<td>Princeton Ave (T19.1)</td>
<td>Collins Dr (T20.0)</td>
<td>82,000</td>
<td>E</td>
<td>97,100</td>
</tr>
<tr>
<td>118</td>
<td>Collins Dr (T20.0)</td>
<td>Madera Rd (R23.0)</td>
<td>78,000</td>
<td>E</td>
<td>92,400</td>
</tr>
<tr>
<td>118</td>
<td>Madera Rd (R23.0)</td>
<td>First St (R23.8)</td>
<td>95,000</td>
<td>D</td>
<td>112,700</td>
</tr>
<tr>
<td>118</td>
<td>First St (R23.8)</td>
<td>Erringer Rd (R24.8)</td>
<td>110,000</td>
<td>E</td>
<td>124,700</td>
</tr>
<tr>
<td>118</td>
<td>Erringer Rd (R24.8)</td>
<td>Sycamore Dr (R25.8)</td>
<td>124,000</td>
<td>F0</td>
<td>135,500</td>
</tr>
<tr>
<td>118</td>
<td>Sycamore Dr (R25.8)</td>
<td>Tapo Canyon Rd (R27.3)</td>
<td>128,000</td>
<td>F0</td>
<td>136,700</td>
</tr>
</tbody>
</table>
During construction, the proposed project would result in temporary impacts to traffic circulation due to traffic diversions resulting from temporary closures to local roadways, sidewalks and bikeways, and freeway lanes. A Transportation Management Plan (TMP) will be implemented to address changes in traffic flows and pedestrian and bicycle circulation and provide measures to minimize the adverse effects of construction activities on traffic flows and pedestrian and bicycle travel within the study area. The TMP, a standard measure implemented on all Caltrans construction projects, is designed to minimize construction activity-related motorist delays, queuing, and accidents by the effective application of traditional traffic-handling practices and innovative approaches. The purpose of the TMP is to relieve congestion and maintain traffic flow throughout the alternative routing and surrounding area within the study area. The TMP will be finalized during final design but not until funding and final staging/phasing is determined at a later date. The TMP includes traffic mitigation strategies for the duration of construction, addresses lane closure requirements, and seeks to inform the public and motorists regarding the construction schedule, potential detours, and anticipated traffic delays during construction.

**Cumulative Impacts**

The implementation of either of the Build Alternatives could be expected to improve the operational capacity, and consequently the safety service level, for SR-118 within and beyond the project limits. Therefore, the proposed project would not contribute to cumulative impacts. Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts as well as impacts for other projects in the study area, would each be minimized or mitigated and would, therefore, not have a cumulative impact to humans or the physical environment.

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

The following measures shall be implemented to minimize any potential adverse effects on traffic, circulation and safety during construction:

- **Transportation Management Plan (TMP).** A TMP shall be developed to implement practical measures to minimize any traffic delays that may result from lane restrictions or closures in the work zone. TMP strategies shall be planned and designed to improve mobility, as well as increase safety for the traveling public and highway workers. These strategies include, but are not limited to, dissemination of information to motorists and the greater public, traffic incident management, construction management strategies, traffic demand management, and alternate route planning/detouring. The TMP would include coordination with local residents, businesses, local agencies, and emergency responders.

- **Roadway Closure Planning.** Closure plans shall be developed to minimize traffic disruption during peak periods, and to the extent possible, such closures (when required) shall occur during off-peak and/or overnight periods. In advance of any closure periods, appropriate temporary signage (in accordance with Caltrans and City guidelines) shall be used to alert motorists of the closure and direct them to alternate routes.

- **Temporary Traffic Controls.** Temporary traffic controls, signage, barriers, and flagmen shall be deployed as necessary and appropriately for the efficient movement of traffic (in accordance with standard traffic engineering practices) to facilitate construction of the project improvements while maintaining traffic flows and minimizing disruption.
2.1.6 Cultural Resources

Regulatory Setting

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

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

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)100 between the Department and SHPO, effective

100 The MOU is located on the SER at http://www.dot.ca.gov/ser/vol2/5024mou_15.pdf
January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

**Affected Environment**

The information in this section is based on an Archaeological Survey Report (ASR) and an Historic Property Survey Report (HPSR) prepared for the project. The ASR was completed in July 2017, while the HPSR was completed in August 2017. Methods used to complete the technical studies included defining the Area of Potential Effects (APE), conducting a records search of the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC), reviewing other pertinent cultural resources documentation, reviewing historical information, contacting the Native American Heritage Commission (NAHC) and consulting with interested Native Americans, conducting archaeological and built environment field surveys, and analyzing the results in the technical documentation.

**Area of Potential Effects (APE)**

The project’s Area of Potential Effects (APE) map was prepared to ensure identification of significant archaeological, architectural, and historical resources listed in or eligible for inclusion in the National Register of Historic Places (National Register or NRHP) that may be directly or indirectly affected by the proposed project, in compliance with 36 Code of Federal Regulations (CFR) Part 800.16(d). The APE is comprised of the direct APE and the indirect APE. The direct APE was established as the maximum extent (i.e., both horizontal and vertical) for potential ground disturbing activities (such as grading and excavation) associated with work activities that would occur on SR-118 between PM T18.2 and PM R27.3 and on SR-23 between PM R11.0 and R11.4. The horizontal extent of activities within the direct APE would extend along the westbound and eastbound lanes, and the unpaved median, roughly to approximately 25 feet outward from the edge of the existing highway along most of the alignment. In the areas where the soundwalls are proposed, the direct APE extends approximately 25 feet outward from the soundwall locations. The horizontal extent of the direct APE is approximately 330 acres. The maximum (or range of) depth of excavation/ground disturbance ranges from 2 feet to 6 feet for median and shoulder grading and installation of the concrete median barriers; 16 feet for installation of soundwalls and grading for slopes; and to depths of 6.5 feet to 40 feet for bridge widening. The indirect APE extends beyond the direct APE to include parcels that directly face the proposed project and may be affected by its construction or implementation due to project-related visual, noise or vibration effects. The maximum height of soundwalls would be 14 feet above the existing ground surface.

Consideration was also given for U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdictions due to the presence of Arroyo Simi. In order to delineate the wetlands, Caltrans biologists identified locations to hand dig small soil pits to an approximate depth of two feet in order to determine if the soil exhibits any evidence of prolonged saturation. The APE Map depicts delineation of the Wetland Waters of the United States (WOUS) and the Non-Wetland WOUS-Arroyo Simi River.
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Records Searches

A records search was performed on March 15, 2016 at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. The SCCIC record search included a review of all recorded prehistoric and historic-era archaeological sites within a 0.5-mile radius of the study area, a review of all recorded historic-era built environment resources within the Area of Potential Effects (APE--both Indirect APE and Direct APE), as well as a review of known cultural resource surveys and technical reports within the 0.5-mile radius. Sources consulted while conducting the records search included: National Register of Historic Places (National Register or NRHP); California Register of Historical Resources (California Register or CRHR); California Historical Landmarks (CHL); California Points of Historical Interest (CPHI); California Historic Property Data File for Ventura County, dated April 5, 2012; and Department of Parks and Recreation (DPR) Series 523 Forms. Additionally, the Caltrans Cultural Resources Database (CCRD) and cultural resources department files were also cross-checked for additional Caltrans cultural resources documentation completed in vicinity of the direct APE that may have not been submitted to the SCCIC. The City of Simi Valley 2030 General Plan Update’s map of Historic Resources was also reviewed; however, it does not include any cultural resources within the direct APE.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted to ascertain whether any Native American sacred lands or Traditional Cultural Properties were located within or near the direct APE. The NAHC replied on May 24, 2016 and indicated 1) there are no sacred lands in the vicinity of the direct APE; and 2) provided a list of three interested Native American parties who may have further knowledge of resources in or near the APE.

On June 15, 2016, Caltrans staff sent letters via U.S. Mail to two of three Native American groups/individuals on the list. An email with the individual’s letter and maps were sent to all three persons on the list. The letter from Caltrans asked individuals to provide pertinent information or to express any concerns they may have about the proposed project, and requested a reply stating that they would like to consult on the project pursuant to Public Resources Code 21083.3.1(d). Freddy Romero of the Tribal Elders Council Office, Santa Ynez Band of Mission Indians requested a list of Native Americans contacted for this project, then followed up by declining to comment and to defer comment to local tribes. Julie Lynne Tumamait-Stennsle, Chair of the Barbareño/Ventureño Band of Mission Indians was contacted several times but did not respond. Mia Lopez of the Coastal Band of the Chumash Nation did not respond.

Field Surveys

An archaeological reconnaissance survey was conducted on June 17, 2016 and an intensive-level archaeological pedestrian survey of the Arroyo Simi portion of the APE was conducted on July 7, 2016. The purpose of the field surveys was threefold: (1) to get a better understanding of the nature of the construction of the existing freeway; (2) to have a better understanding of previous ground disturbances within the prism of the road and areas immediately adjacent; and (3) to intensively survey areas near the Arroyo Simi in order to assess the potential for encountering archaeological resources within the direct APE. No archaeological sites were identified as a
result of the survey, and the potential for subsurface archaeological resources appears to be low because of the nature of the proposed work, the area’s geomorphology, and previous disturbance from construction of the existing freeway structures and facilities.

An intensive built environment survey of the entire APE was conducted on June 16, 2017 and on July 7, 2016 using the Office of Historic Preservation’s (OHP) Guidelines for Recording Historical Resources. Following Secretary of the Interior’s Standards and Guidelines and Attachment 4 of the Caltrans First Amended Section 106 PA, and properties that are not exempt from evaluation were included in the inventory. The Caltrans Historic Bridge Inventory dated November 2015 was reviewed, as was the Ventura County Assessor’s Website for construction date information. Built environment properties were photographed and recorded in an exempt properties spreadsheet for the district file. No built environment properties requiring evaluation on California Department of Parks and Recreation Series 523 Forms were encountered in the APE.

**Archaeological Resources**

No prehistoric or historic archaeological resources have been previously recorded or were observed within the APE during the pedestrian survey. The SCCIC records search identified one prehistoric isolate recorded in the direct APE. The results of the research and archaeological field survey confirmed that the prehistoric isolate was completely destroyed by construction of the existing SR-18/SR-23 Interchange. Given the cut and fill construction methods of the existing SR-118, the location of the proposed ground disturbances within the median and/or adjacent freeway shoulders and the nature of the ground disturbances for either Alternative 2 or Alternative 3, and the development of the modern urban built environment, the probability of encountering buried archaeological deposits is very low for either Build Alternative. Therefore, no areas sensitive for archaeological resources exist within the direct APE.

**Built Environment Resources**

Twelve Caltrans bridges proposed to be widened are located in the APE, as are four additional Caltrans bridges. According to the Caltrans Historic Bridge Inventory, 14 of the 16 bridges in the direct APE were previously determined not eligible for listing for the NRHP. All 14 of these previously determined not eligible bridges are also ineligible for the CRHR. Two bridges are listed in the bridge inventory as Category 4 or “Historical Significance not determined.” Because the two bridges are less than 30 years old they meet the Caltrans Section 106 PA Attachment 2 Properties Exempt from Evaluation as Property Type 2—Buildings, structures, objects, districts, and sites less than 30 years old and are therefore, exempt from evaluation. Research and the field survey failed to identify any additional historic-era buildings, structures, objects, or districts requiring evaluation in the direct or indirect APE.
Table 17 Caltrans Bridges in Area of Potential Effect (APE)

<table>
<thead>
<tr>
<th>Br. No.</th>
<th>Bridge Name</th>
<th>Year Built (R/L)</th>
<th>Historical Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>52-0309</td>
<td>Tapo Canyon Road UC</td>
<td>1969</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0320 R/L</td>
<td>Dry Canyon Channel</td>
<td>1970/1970</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0321 R/L</td>
<td>Arroyo Del Tapo Channel</td>
<td>1967/1969</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0322 R/L</td>
<td>Sequoia Avenue UC</td>
<td>1969/1969</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0323 R/L</td>
<td>Galena Avenue UC</td>
<td>1969/1969</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0326 R/L</td>
<td>Erringer Road UC</td>
<td>1970/1970</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0327 R/L</td>
<td>Sycamore Drive UC</td>
<td>1969/1969</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0329</td>
<td>First Street OC</td>
<td>1970</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0330 R/L</td>
<td>Los Angeles Avenue Undercrossing (UC)</td>
<td>1993/1993</td>
<td>Category 4 (Historical Significance not determined)</td>
</tr>
<tr>
<td>52-0331 R/L</td>
<td>Arroyo Simi Bridge and Overhead (OH)</td>
<td>1993/1993</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0332</td>
<td>Collins Drive OC</td>
<td>1970</td>
<td>Category 4 (Historical Significance not determined)</td>
</tr>
<tr>
<td>52-0334 R/L</td>
<td>Princeton Avenue Undercrossing (UC)</td>
<td>1993/1993</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0346 R/L</td>
<td>Caldwell Avenue UC</td>
<td>1970/1970</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0354 R/L</td>
<td>Madera Road UC</td>
<td>1976/1976</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0355 R/L</td>
<td>Alamos Canyon Road UC</td>
<td>1976/1976</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
<tr>
<td>52-0387</td>
<td>Landfill Access Road OC</td>
<td>1974</td>
<td>Category 5 (ineligible for National Register listing)</td>
</tr>
</tbody>
</table>

Environmental Consequences

No Build Alternative

The existing condition would remain; therefore, no impacts would occur.

Build Alternatives

Within the project APE, there are 14 Caltrans bridges that have been determined ineligible for inclusion to the National Register of Historic Places and two Caltrans bridges that are exempt from evaluation. Caltrans, in accordance with Section 106 PA Stipulation VIII.C.5, has determined there are properties within the APE that were previously determined not eligible for inclusion in the NRHP and those determinations remains valid. Additionally, Caltrans, pursuant to PRC 5024 Memorandum of Understanding Stipulation VIII.C.5, has determined that the 14 bridges are State-owned cultural resources that previously were determined not eligible for inclusion in the NRHP or for registration as California Historical Landmarks and that determination is still valid.
**Cumulative Impacts**

No prehistoric or historic archaeological resources have been previously recorded or were observed within the APE during the pedestrian survey. Also, no areas sensitive for archaeological resources exist within the direct APE. Furthermore, the project as a whole has a No Historic Properties Affected finding. Construction of the Build Alternatives could result in the discovery of previously unknown cultural resources. Once construction is complete, the Build Alternatives would have no effects on subsurface cultural resources; therefore, the project would not contribute to cumulative impacts on cultural resources.

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

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Kelly Ewing-Toledo, District Environmental Branch—Cultural Resources so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

**2.2 Physical Environment**

**2.2.1 Water Quality and Storm Water Runoff**

**Regulatory Setting**

**Federal Requirements: Clean Water Act**

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

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

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101 A point source is any discrete conveyance such as a pipe or a man-made ditch.
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).

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

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

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

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

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

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

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

State Route 118 Widening Project
surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined, and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

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

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

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. 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 (NPDES) Program**

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

The Department’s MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0077-DWQ (effective July 1, 2014) and Order No. 2015-0036-EXEC (effective April 7, 2015) has three basic requirements:

1. The Department must comply with the requirements of the Construction General Permit (see below);
2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

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

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

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

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

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

**Affected Environment**

The proposed project is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board and within the Calleguas Creek watershed. The Calleguas Creek Watershed covers approximately 343 square miles, in southeastern Ventura County. This watershed, which is elongated along an east-west axis, is about 30 miles long and 14 miles wide. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

The Calleguas Creek Watershed has three major watercourses: the Arroyo Simi/Arroyo Las Posas/Calleguas Creek system, the Arroyo Santa Rosa/Arroyo Conejo/Conejo Creek system, and the Honda Barranca/Beardsley Wash/Revolon Slough system. These watercourses drain from the Santa Susana Mountains and Santa Monica Mountains through the Oxnard Plain into the Pacific Ocean through Mugu Lagoon. The Arroyo Simi/Arroyo Las Posas/Calleguas Creek system, the longest of the three drainage systems, drains Simi Valley, the eastern Las Posas Valley, much of Pleasant Valley, and the eastern portion of the Oxnard Plain. In addition to the natural streams, Arroyo Simi is also fed by a number of dewatering wells operated by the City of Simi Valley, as well as discharges from the Simi Valley Water Quality Control Plant and the Moorpark Wastewater Treatment Plant.

Undeveloped areas account for 50% of the land in the greater watershed while 25% is urban, and 25% is agricultural. Most of the urban areas, including the communities of Moorpark, Simi Valley and Thousand Oaks are located in the upper sub-watershed and most of the agriculture is located in the middle and lower sub-watersheds. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Although some residential development has occurred along the slopes of the watershed, most upland areas are still open space; however, golf courses are becoming increasingly popular to locate in these open areas. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

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103 [http://www.ventura.org/wcvc/calleguas.htm](http://www.ventura.org/wcvc/calleguas.htm)
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Figure 13 Calleguas Creek Watershed

Figure 3-2 Calleguas Creek Watershed
WCVC IRWM Region

State Route 118 Widening Project
The nearest Receiving Water Bodies/Reaches within the project limits are Calleguas Creek Reach 6, Calleguas Creek Reach 7, and Calleguas Creek Reach 8. Calleguas Creek Reach 6 crosses the project and has Happy Camp Canyon stream as a major stream that crosses the project. Calleguas Creek Reach 7 has Alamos Canyon, Brea Canyon, and Dry Canyon as major streams that cross the project. Calleguas Creek Reach 8 also crosses the project. These streams/reaches traverse the freeway in concrete or dirt-lined channels. Storm water runoff is discharged directly and indirectly to the mentioned five streams and eventually reaches Calleguas Creek Reaches 6, 7, and 8.

The Calleguas Creek Watershed has perhaps the most serious impairment problems of Ventura County’s watersheds; as 14 separate reaches of the Calleguas Creek are listed in the EPA’s 303(d) list of impaired water bodies. A variety of pollutants from agricultural and urban sources, such as pesticides and metals, have been identified as impairments to the quality of creek water. Urban development and agricultural activities within the Calleguas Creek Watershed have resulted in the degradation of water resources, loss of sensitive ecosystems, floods, and erosion and sedimentation problems.

Calleguas Creek Reaches 6, 7, and 8 are all on the 2010 303(d) list. Calleguas Creek Reach 6 is listed as impaired for Ammonia, Chlordane, Chloride, Chlorpyrifos, DDT (Sediment), Diazinon, Dieldrin, Fecal Coliform, Nitrate and Nitrite, Nitrate as Nitrate (NO3), Sedimentation / Siltation, Sulfates, Total Dissolved Solids, and Toxicity. Calleguas Creek Reach 7 is listed as impaired for Ammonia, Boron, Chloride, Chlorpyrifos, Diazinon, Indicator Bacteria, Organophosphorus Pesticides, Sedimentation / Siltation, Sulfates, Total Dissolved Solids, Toxicity, and Trash. Calleguas Creek Reach 8 is listed as impaired for, Boron, Chlordane, Chloride, Chlorpyrifos, DDT (Dichlorodiphenyltrichloroethane), Diazinon, Dieldrin, PCBs (Polychlorinated biphenyls), Sedimentation / Siltation, Sulfates, Total Dissolved Solids, and Toxaphene.

A number of Regional Board programs and actions are in place to address the water quality impairments noted above. Total Maximum Daily Loads (TMDLs) have been developed (as required by the Clean Water Act) for many of the impairments in the watershed. The TMDLs established for the Calleguas Creek watershed are listed below:

**Calleguas Creek Nitrogen Compounds and Related Effects TMDL**

The Calleguas Creek Nitrogen Compounds and Related Effects TMDL became effective July 16, 2003. The TMDL requires the Calleguas Creek Watershed Management Plan Subcommittees to submit a Monitoring Work Plan and complete several special studies including planning and preparation of construction for TMDL remedies to reduce Nitrogen loads. Caltrans is actively participating in the Subcommittee and working toward compliance of the TMDL. Targeted Pollutants are Ammonia, NO3-N, NO2-N, and NO3-N+NO2-N. The

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Department's monitoring data depicts Caltrans discharges to be below the TMDL limits, thus no additional measures are needed to be considered for meeting the conditions of the Nitrogen TMDL.

**Calleguas Creek Watershed OC Pesticides and PCBs TMDL and the Calleguas Creek Watershed Toxicity, Chlorpyrifos and Diazinon TMDL**

The Calleguas Creek Watershed Metals and Selenium TMDL became effective March 26, 2007. The TMDL assigns waste load allocations to the Permitted Stormwater Dischargers (PSD) that include the Municipal Storm Water (MS4) Permittees, Caltrans and others. The PSD 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. 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 Storm Water Coordinator.

**Total Maximum Daily Load for Boron, Chloride, Sulfate, and TDS (Salts) in the Calleguas Creek Watershed**

The TMDL for Chloride, Sulfate, and TDS (Salts) in the Calleguas Creek Watershed became effective December 2, 2008. The TMDL assigns interim and final dry weather waste load allocations (WLA) to the Permitted Stormwater Dischargers (PSD) for Chloride, Total Dissolved Solids (TDS), sulfate and Boron. The PSD are required to achieve the interim WLAs in a progressive manner and to meet the final WLAs in 15 years. Caltrans is not named in the TMDL.

**Total Maximum Daily Loads 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 wasteload 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 a responsible jurisdiction in the TMDL.

Beneficial uses form the cornerstone of water quality protection under the Los Angeles RWQCB’s Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan, September 2014). Appropriate water quality objectives are identified in the Basin Plan in relation to the designated beneficial uses to ensure the protection of these uses. The designated beneficial uses, together with water quality objectives, form the water quality standards. Existing beneficial uses for the nearest Receiving Water Bodies/reaches within the project limits are presented in Table 18. To preserve the beneficial uses at their current level, water quality objectives have been developed and published in the basin plans.
Table 18 Beneficial Uses (Calleguas Creek Reaches 6, 7, and 8)

<table>
<thead>
<tr>
<th>Calleguas Creek Reach</th>
<th>Municipal and Domestic Supply (MUN)</th>
<th>Industrial Service Supply (IND)</th>
<th>Agricultural Supply (AGR)</th>
<th>Ground Water Recharge (GWR)</th>
<th>Freshwater Replenishment (FRSH)</th>
<th>Warm Freshwater Habitat (WARM)</th>
<th>Cold Freshwater Habitat (COLD)</th>
<th>Wildlife Habitat (WILD)</th>
<th>Rare, Threatened, or Endangered Species (RARE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach 6 (Arroyo Las Posas)</td>
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<tr>
<td>Calleguas Creek Reach 3 to Long Canyon</td>
<td>P</td>
<td>P</td>
<td>P</td>
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<td>Long Canyon to Hitch Rd.</td>
<td>P</td>
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<td>P</td>
<td>P</td>
<td>E</td>
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<td>E</td>
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<td>Reach 7 (Arroyo Simi)</td>
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<tr>
<td>Hitch Rd. to Happy Camp Canyon</td>
<td>P</td>
<td>I</td>
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<td>I</td>
<td>E</td>
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<tr>
<td>Happy Camp Canyon to Alamos Canyon</td>
<td>P</td>
<td>I</td>
<td>I</td>
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<tr>
<td>Alamos Canyon to Above Tapo Canyon Creek</td>
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<td>Above Tapo Canyon Creek</td>
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<tr>
<td>Reach 8 (Tapo Canyon Creek)</td>
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<tr>
<td>Above Arroyo Simi</td>
<td>I</td>
<td>P</td>
<td>P</td>
<td>P</td>
<td>I</td>
<td>I</td>
<td>E</td>
<td>E</td>
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</tbody>
</table>

E: Existing beneficial use  P: Potential beneficial use  I: Intermittent beneficial use

Source: Table 2-1. Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties (electronic copy accessed August 16, 2017)
Water quality in the South Las Posas Basin is dominated by the movement of salts from the East Las Posas Basin. The progressive filling of the shallow aquifer of the South Las Posas Basin progresses from the upstream to the downstream portions. Two wells completed in the shallow aquifer beneath the Arroyo that have had elevated salts for 20 years have shown a lessening of salinity in the past two years.

Primarily agricultural in land use, the South Las Posas Basin has generally good groundwater quality. TDS typically ranges between 600 and 1400 mg/l depending upon well depth and location, with the average for all samples on file at 709 mg/l. The deeper Fox Canyon and Grimes Canyon aquifer waters yield the best groundwater quality in the 600-700 mg/l TDS range, with shallow river alluvium producing the less desirable water. 111

The 2007 Update to the Fox Canyon Groundwater Management Agency Groundwater Management Plan (GMP) established Basin Management Objectives (BMOs) for the basins within the Agency. BMOs are groundwater level and/or water quality concentration thresholds measured at specific locations (as identified in the GMP) that serve as quantitative performance metrics for evaluating the effectiveness of the Agency's groundwater management strategies toward meeting its GMP goals.

The basin has BMOs for chloride and TDS to protect groundwater quality for potable and irrigation uses. The designated BMO well, located in the north-central portion of the basin, has been abandoned and no data were available for 2015. A nearby well, which has monitoring data available back to 2009, was selected as a temporary replacement. Based on averages of chloride and TDS concentrations, the chloride BMO (160 mg/L) and TDS BMO (less than 1,500 mg/L) were met. During the five-year period 2011 through 2015, chloride concentrations have been stable at the temporary replacement BMO location, while TDS average concentrations have slightly decreased.112

Groundwater quality in the basin is naturally poor, particularly in the central and western portions of the basin. Historical agricultural, urban and industrial land uses also have contributed contaminants to the basin. The typically-observed basin groundwater concentrations of TDS, sulfate, nitrate, and boron exceed water quality objectives and groundwater would require treatment to make the water acceptable for municipal use. 113 The Los Angeles Regional Water Quality Control Board (LARWQCB) has established Basin-Specific Basin Plan Objectives (BSBPOs) for the confined aquifers of the Simi Valley Basin for TDS, sulfate, chloride, and boron (LARWQCB, 2011). BSBPOs have not been established by the LARWQCB for the unconfined aquifers in the Simi Valley Basin.114

113 County Waterworks District No. 8, City of Simi Valley, March 2016. Groundwater Supply Assessment for Simi Valley Basin.
114 County Waterworks District No. 8, City of Simi Valley, March 2016. Groundwater Supply Assessment for Simi Valley Basin.
**Environmental Consequences**

**No Build Alternative**

The existing condition would remain; therefore, no impact would occur.

**Build Alternatives**

In terms of the long-term effects, the proposed project has the potential to impact water quality because it would result in an increase in roadway surface area. The maximum increase in impervious area for either Build Alternative is 71.4 acres, which results in a maximum post-project impervious surface area of 176.4 acres (pre-project area of 105 acres). This increase in impervious area brings an increase in runoff volume and pollutant loads that require treatment. Treatment BMPs have been identified and preliminarily sited for both Build Alternatives.

Both Build Alternatives would require replacing or extending the existing on-site drainage systems, such as drainage inlets along the median and shoulders with new drainage systems that can accommodate the increased project flows associated with additional impervious area. Existing conveyance systems will not change. The net increase in velocity or volume of downstream flow will be small and considered negligible. The project will not increase potential sediment load of downstream flow.

The long-term surface runoff operational effects on water quality stemming from construction of the proposed project considers the continuous impact on contaminant runoff throughout the life of the new facility. This typically includes the following impacts on receiving water quality:

- Incidental drippings from vehicle and accidental spills that introduce contaminant material or waste discharge from the new bridge and its approach structures
- Maintenance activities, such as bridge painting, surface treatments and surface cleaning, substructure repair, joint repair, repairing drainage structures and pavement repair, and repaving.

Surface runoff would be designed to flow directly into the closest stormwater channel. Runoff from bridges would be directed to nearby drainage features via drainage inlets on the decks which then flow through the pillars. From an operational standpoint, impacts to water quality may be expected from the loading of various constituents typically associated with highway runoff into the channel. These constituents may include the following:

- Particulates from pavement wear and vehicles
- Metals, such as zinc, lead, iron, copper, cadmium, chromium, nickel, and manganese
- Bromide (from leaded gasoline exhaust)
- Diesel fuel
- Tire wear
- Auto body rusting
- Metal plating
- Brake lining wear
- Greases and lubricating oils from automobiles and trucks
- Trash discarded from vehicles and along the roadside
• Pathogenic bacteria (indicators) from soil, litter, bird droppings, and stockyard waste hauled by vehicles

These potential operational impacts would be addressed through the incorporation of design pollution prevention BMPs and treatment BMPs, for a total of 33 permanent treatment BMPS, as well as adherence to the necessary operational maintenance protocols identified in the Caltrans SWMP. The proposed treatment BMPs include 22 Bio-Swales, one Infiltration Device, two Gross Solids Removal Devices (GSRDs), and eight Media Filters.

Bioswales are vegetated, typically trapezoidal channels, which receive and convey storm water flows while meeting water quality criteria and other flow criteria. Pollutants are removed by filtration through the vegetation, uptake by plant biomass, sedimentation, adsorption to soil particles, and infiltration through the soil. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Bioswales are effective at trapping litter, Total Suspended Solids (soil particles), and particulate metals (Caltrans, 2007).

An infiltration basin is a depression used to detain stormwater for short periods until it percolates to the groundwater table. Infiltration effectively prevents pollutants in the captured runoff from reaching the surface waters.

A GSRD is device installed at drainage outlets designed to capture gross solids (litter, vegetation, and other large particles). These devices include physical/mechanical methods of removing litter, debris, and vegetation from stormwater runoff using various metal or fabric screening technologies. Screens provide treatment by preventing solids larger than the screen opening from passing through.

Media filters are devices that removes fine sediments, particulate-associated pollutants, and sometimes, dissolved pollutants. The normal configuration of such devices consists of an initial sedimentation basin or chamber followed by a filtering basin or chamber that contains a filter media.

Proposed design pollution prevention BMPs also include consideration of downstream effects related to potentially increased flow, preservation of existing vegetation, concentrated flow conveyance systems, and slope/surface protection systems.

All permanent treatment BMPs will have maintenance requirements associated with their implementation. Proposed operational maintenance BMPs include storm drain cleaning and normal roadway and bridge maintenance, in addition to maintaining all vegetated slopes. The introduction of treatment BMPs as part of both Build Alternatives would represent an improvement when compared to the No Build condition, as there currently one existing Treatment BMP within the project limits. The proposed BMPs would treat 61.2 percent of on-site runoff from the total post project impervious surface areas within the project area, which would be an improvement over the existing condition. After implementation of BMPs, the proposed project is not anticipated to further degrade the water quality of any receiving waters. With the incorporation of the proposed site-specific BMPs during the operational phase of the proposed project, along with adherence to BMP and operational maintenance protocols, no adverse impacts to water quality due to operation of either Build Alternative are anticipated.
The maximum total disturbed soil area under either Build Alternative would be 58.3 acres. Standard construction measures require the capture and treatment of all runoff from the construction area. Water quality BMPs would be implemented to treat stormwater runoff during construction of the Build Alternatives. As a result, the Build Alternatives are not anticipated to degrade the water quality of the receiving waters.

Cumulative Impacts

Projects with particular relevance to water quality and stormwater runoff impacts are shown in Table 19.

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butler Ranch Zone Change and Tentative Tract Map Project</td>
<td>1313 Tierra Rejada Road, Simi Valley, CA 93065 (Approximately 1.34 mi. south of SR-118, and approximately 1.92 mi., southeast of SR-23 southern project limits)</td>
<td>Proposes to change the zoning of the 508-acre property from the current designation of Agricultural Exclusive-40 acres minimum lot size to Open Space-20 acres minimum lot size and to subdivide a 508-acre property into 24 residential lots, each a minimum of 20 acres in size, with two means of access from Tierra Rejada Road. The application also indicates that an open space conservation easement of approximately 332 acres (65% of the total property) is proposed.</td>
<td>A Notice of Preparation for an EIR was issued by the Ventura County Planning Division on November 17, 2014. A Request for Proposals to prepare an EIR was distributed on September 5, 2017.</td>
</tr>
</tbody>
</table>

| Tentative Parcel Map (TPM) No. 5977 (Case No. PL17-0056) | 2881 Avenida Simi, Simi Valley, CA 93065 (Approximately 0.5 mi. north of SR-118) | The applicant requests that a TPM be granted that would authorize the subdivision of a 33,564 square foot (sf) lot into three lots. After subdivision, the lots could be developed with a single family dwelling and an accessory dwelling unit. | The public review period for the Initial Study/Negative Declaration commenced on August 21, 2017 and ended on September 10, 2017. Based on the findings in the Initial Study, the Ventura County Planning Division has determined that the proposed project will not have a significant effect on the environment, and a Negative Declaration has been prepared. |
The proposed project and cumulative projects shown in Table 19 would be required to include BMPs to target constituents of concern, which includes any pollutants causing downstream impairments. The cumulative projects include BMPs to address pollutants of concern; therefore incremental contribution for impairments resulting from pollutants of concern would not be cumulatively considerable. Also, during construction, there is a possibility for cumulative impacts to storm water runoff if similar projects were in construction simultaneously. These impacts would be minimized through incorporation of storm water BMPs and permit requirements, as required by law. Implementation of these procedures would minimize potential impacts on water quality and would avoid significant cumulative effects.

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

Compliance with standard requirements and permits would minimize short-term, construction-related impacts to water quality. Measures for avoiding or reducing potential storm water impacts will include the following: use of all applicable construction site BMPs, disturb existing slopes only when necessary, minimize the disturbance of existing vegetation, and collect all concentrated flows in stabilized drains and channels. In addition, the following measures are required for long-term impacts to water quality and groundwater recharge.
The California Department of Transportation (Caltrans) shall comply with provisions identified in the National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Stormwater Permit and Waste Discharge Requirements (WDRs) Order No. 2012-0006-DWQ, NPDES No. CAS000002, or subsequent permit of the Construction General Permit (CGP). An effective Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented. During final design, Caltrans will consult with the jurisdictions where discharges of runoff from SR-118 to local jurisdictions’ streets and/or stormwater drainage systems will occur during the project design development, treatment, and operational Best Management Practices (BMPs) in those local jurisdictions.

Caltrans shall follow the procedures outlined in the Caltrans Stormwater Quality Handbooks, Project Planning and Design Guide for implementing design pollution prevention and treatment BMPs. Caltrans-approved treatment BMPs shall be implemented to the Maximum Extent Practicable (MEP), consistent with the requirements of the Statewide Storm Water Permit, Order No. 2012-0011-DWQ, NPDES No. CAS000003, and WDRs for Caltrans’ properties, facilities, and activities, and any required MS4 Permits. This will include coordination with the Los Angeles Regional Water Quality Control Board (LARWQCB) with respect to feasibility, maintenance, and monitoring of Treatment BMPs as set forth in the Caltrans Storm Water Management Plan (SWMP).

2.2.2 Geology/Soils/Seismic/Topography

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

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

Affected Environment
This section describes geologic, soil, and seismic conditions near the project area; an analysis of potential environmental impacts of the project alternatives on these conditions and potential impacts of geotechnical conditions on the transportation facility is also included. This section assesses potential impacts from faulting, seismicity, and liquefaction to the proposed project.

The geologic and geotechnical conditions and subsequent conclusions presented in this section are based on the District Preliminary Geotechnical Report (Caltrans, May 2016) prepared for the project.
Regional Geology

The project location is within the Transverse Ranges Province. The project location is bounded on the north by the Santa Susana Mountains, to the south and east by the Simi Hills and Simi Valley.

The Simi-Santa Rosa fault zone lies south of the western portion of the project (extending from Arroyo Simi Overhead to Madera Rd. Undercrossing). The east/northeast- trending Simi-Santa Rosa fault zone is approximately near or crosses SR-118 in the vicinity of Caldwell Avenue Undercrossing and also 1st Street Overcrossing. The fault then trends north of the eastern portion of the SR-118 project from Erringer Rd. Undercrossing through Tapo Canyon Rd.

For SR-23, the Simi-Santa Rosa fault zone is near or crosses in the area of Tierra Rejada Rd. Undercrossing, which is about 0.8 miles southeast of the proposed project. West of the project location are some unnamed hills around Moorpark which then extends west to the Oxnard Plain. A thick Cenozoic sedimentary section underlies the Moorpark/Simi Valley area beneath SR-118.

Topography and Drainage

The SR-118 embankment fill varies in height from a few feet to as much as 40 feet with average side slopes of 2:1 or flatter. In some areas the freeway elevation is at native or surrounding grade elevation. The median area varies in width from 55-90 feet with an approximate 2% drainage grade toward the centerline of the median. The median is often grass covered. The side shoulder areas are about 10-25 feet wide with an approximately 3% grade toward the edge of shoulder. Storm drains run parallel along the shoulder at various locations. The side slopes are covered with trees and vegetation. The SR-23 segment of the project limits is aligned through cut and fill embankment sections. With cuts ranging from 20 to 50 feet and the embankment fill heights about 50 feet in height with standard 2:1 side slopes. The side slopes of the embankments are 2:1 or flatter, with no visible signs of distress. There are also no apparent signs of distress within the cut sections. Therefore, the local and global stability of the alignment is considered to be stable.

Site Geology

The material directly underlying most of the eastern portion of this segment of SR-118 (from approximately First Street to Tapo Canyon Boulevard) generally consists of varying thickness of embankment fill (as mentioned above) which is underlain by Recent surficial sediments/alluvium and older Quaternary alluvium (Dibblee, T.W., Jr, June 1992, Geologic Maps of the Simi and Santa Susana 7.5’ Quadrangles, Ventura County, California, CDMG and USGS, Dibblee Geological Foundation Map #’s DF-39 and DF-38, Scale 1:24,000). Embankment fill ranges from approximately 15 to 25 feet thick. Underlying Recent and older alluvium (sampled down to about 80 to 103 feet depth) is composed of sand, silty sand, silt, clayey sand, and sandy gravel interbeds. Alluvial deposits range from generally loose to medium dense and dense from 0 feet depth (top of alluvial surface) ranging down to 43 to 70 feet depth. Below 43 to 70 feet down to 82 to 103 feet depth, alluvial material is dense to very dense.
For the southern and western portions of SR-23 and SR-118, respectively (from Los Angeles Avenue Undercrossing and Arroyo Simi Overhead to west of First Street) material underlying the roadway is composed of sporadic embankment fill varying from 0 to 40 feet thick (exception is at Brea Canyon just west of Madera Rd. where fill is about 80 feet thick). Sporadically underlying Recent and older alluvium/colluvium ranges from 0 to greater than 100 feet thick (maximum variable thickness within Arroyo Simi Channel/Calleguas Creek and greater than 61 feet thick at Princeton Avenue). Alluvium/colluvium consists of mostly sand, gravelly sand, clayey sand, gravelly silty sand, and gravel deposits. From 0 to approximately 15 to 20 feet depth, alluvium is generally loose to medium dense. Below about 15 to 20 feet depth alluvium is medium dense to very dense.

At Arroyo Simi Overhead and Los Angeles Avenue Undercrossing, surface outcrops of Pleistocene Saugus Formation (interbedded sandstone, conglomerate, and siltstone/claystone) and Oligocene/late Eocene Sespe Formation (sandstone interbedded with claystone and local conglomerate) are present and also underlie alluvium at variable depths (top of rock elevations vary from about +500 to +640 feet and is found at +556 feet within As-Built Boring B-14 for the Los Angeles Avenue Undercrossing). Generally, these bedrock formations are dense to very dense and are weathered.

**Groundwater Conditions**

Log of Test Borings (LOTB’s) indicate that groundwater was encountered in the range of +513 to +585 feet elevation (Mean Sea Level) near the Arroyo-Simi Bridge Overhead to the Collins Drive Overcrossing (Typically 15-30 feet below ground surface, measured in 1989). Also, sporadic surface water flows occur at Arroyo Simi and have caused scour. Depth to groundwater at Arroyo Simi OH area ranged from 5 to 31 feet near the creek and on adjacent banks. Groundwater records also show fairly shallow depths below ground surface for wells located close to Arroyo Simi. Based on As-built LOTB records at other bridge locations in the hills away from Arroyo Simi or alluvial sites east of First Street within the project limits, the deepest borings in the range of 80 to 103 feet deep below native grade (from approximately +820 to +800 feet MSL elevation ) did not encounter groundwater.

In addition to the bridge LOTB records, a January 1990 investigation by Staal, Gardner, and Dunne [Consulting Engineers and Geologists, mentioned in Caltrans July 13, 2004 Preliminary Seismic Design Recommendations for Madera Rd. UC (Widening)] revealed a perched water table or local water seepage at 797 feet elevation in borings DH-2 and DH-6 (near SR 118 and Madera Rd.). Groundwater was not encountered in boring DH-5 which was 10 feet deeper than the other borings but located a significant distance east of boring DH-6.

For the segment along SR-23, a 2002 geotechnical investigation for Tierra Rejada Rd. UC showed that groundwater was not encountered to an elevation of +590 feet. Furthermore, during the original 1966 geotechnical investigation for the bridge, groundwater was not encountered to an elevation of +576 feet. Also, the 1989, 1975, and 1968 geotechnical investigations for Los Angeles Avenue Undercrossing all show no ground water encountered. At the Los Angeles Avenue Undercrossing, the bottom of deepest borings varies from approximately +550 to +517 feet elevation (from 50 to 65 feet depth maximum).
Faulting and Seismicity

The Simi-Santa Rosa fault zone (Simi-Santa Rosa section) is closest and just south of the site from Arroyo Simi Overhead to Madera Rd. Undercrossing, crosses beneath SR-118 near the vicinity of First St. Overcrossing and Caldwell Ave. Undercrossing, then is present north of SR-118 from near Erringer Rd. Undercrossing to Tapo Canyon Rd. The same fault zone also crosses SR-23 near or at Tierra Rejada Undercrossing, which is about 0.8 mile south of the proposed improvements. The Simi-Santa Rosa fault zone dips 60° N, and shows left lateral strike-slip displacement. Other significant nearby faults include the Oak Ridge (Onshore) reverse fault which dips 65° S and is north of the site, and the Chatsworth fault with reverse displacement which dips 45° N and extends southeast of the project location.

In summary, the closest fault to be considered for the site should be the Simi-Santa Rosa fault zone ranging from approximately 0 to 3 km away from the proposed alignment widening and crossing the SR 118 between First St. and Erringer Rd. This fault zone has a Moment Magnitude of 6.8 Peak Ground Acceleration for sites along the SR-118 and SR-23 improvements.

Liquefaction

According to existing nearby bridge LOTB data, site native materials consist predominantly of dense to very dense sands and silty sands below measured groundwater elevations. Therefore, liquefaction potential is considered low at the project site. In addition, the January 1990 field study by consultants indicated a perched water table or local water seepage at 797 feet elevation. Notwithstanding the above findings, the Simi Valley West Quadrangle Seismic Hazard Map (CGS April 7, 1997) revealed some intermittent segments of the SR 118 project site limits fall within historic liquefaction potential zones.

Subsidence

Ground subsidence is the gradual settling or sinking of the ground surface with little or no horizontal movement. In the areas of Southern California where significant ground subsidence has been reported, this phenomenon is usually associated with the extraction of oil, gas, or groundwater from below the ground surface. Historically, no regional subsidence has been reported for the Moorpark area. However, the thick alluvial deposits underlying Little Simi Valley and Tierra Rejada Valley may be susceptible to subsidence should rapid groundwater withdrawal occur beneath the area in response to an increasing population.  

Subsidence may also be a potential hazard within Simi Valley. Subsidence can occur as a result of excessive groundwater or petroleum withdrawal where the ground surface sinks. Important examples of subsidence are found in alluvial valleys filled to great depth with alluvial fan and lake-deposited sediments. Subsidence produces cracks in pavements and buildings and may dislocate wells, pipelines, and water drains. The Simi Valley area is not likely to experience significant amounts of subsidence due to the withdrawal of water, oil, or gas. Currently, no large-scale local subsidence has been reported in the City due to either groundwater or oil extraction (City of Simi Valley 1999). However, removal of oil and gas resources from local bedrock areas

such as Sespe, Llajas, and Santa Susana Formations may be susceptible to fluid withdrawal and thus, subsidence. These bedrock areas are primarily open space; therefore, localized subsidence would not adversely affect structures.  

**Environmental Consequences**

**No Build Alternative**

There would be no modifications to existing structures and no ground disturbance would occur under the No Build Alternative. Therefore, this alternative would not result in impacts related to geology, soils, seismicity, and topography.

**Build Alternatives**

Facilities and structures that would be constructed as part of the Build Alternatives could potentially be affected by liquefaction and seismically induced settlement, which could occur where liquefaction potential exists. The potential impacts to facilities and structures can be substantially reduced based on design and construction, consistent with the recommendations of the detailed geotechnical investigations prepared during final design. Any liquefaction potential would have negligible effects on the proposed widening, including pavement widening of the median and some shoulder, as well as the addition of soundwalls.

Caldwell Avenue Undercrossing and First Street Overcrossing are located within the Alquist-Priolo Earthquake Fault Zone. First Street OC has already been widened and is not currently part of the widening project (at least not the structure). Earthquake Fault Zones are regulatory zones around active faults. The zones vary in width, but average about one-quarter mile wide. When a bridge crosses such a fault, it must be designed for the displacement demand resulting from a static fault offset, the dynamic response due to ground shaking, and any other fault-induced hazards (e.g., creep) that may occur at the site.

Design and construction of the proposed project to current highway and structure design standards, including applicable seismic standards, would minimize the potential impacts on the Build Alternatives. Through compliance with applicable building and seismic codes the project facilities can be designed to accommodate the expected ground accelerations associated with Simi –Santa Rosa Fault Zone in the project area. As a result, the potential for structural damage can be substantially reduced or avoided through seismic engineering design.

**Cumulative Impacts**

While other projects may impact the geology at their project sites, the geological impacts would be localized and would not impact regional geology. Therefore, the build alternatives would not contribute to cumulative adverse impacts related to geological and seismic hazards.

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

Prior to completion of final design, a design-level geotechnical report will be prepared in accordance with the Guidelines for Preparing Geotechnical Design Reports (Caltrans 2006). Design level geotechnical reports precede development of grading and/or construction plans, and

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116 City of Simi Valley Department of Environmental Services, June 2012. Simi Valley General Plan Environmental Impact Report.
they provide detailed, site-specific design recommendations. Studies at this stage shall provide specific design recommendations to mitigate geologic hazards as they relate to grading and construction of the project.

A geotechnical design report will document soil-related constraints and hazards such as slope instability, settlement liquefaction, or related secondary seismic impacts that may be present. The report shall also include:

- Evaluation of expansive soils and recommendations regarding construction procedures and/or design criteria to minimize the effect of these soils on development of the project.
- Identification of potential liquefiable areas within the project limits and recommendations for mitigation.

The Caltrans Project Engineer will incorporate the measures recommended in the design level geotechnical report in the final design and project specifications. The Caltrans Resident Engineer will require the construction contractor to implement the measures recommended in the design-level geotechnical report as included in the project specifications.

While implementation of standard design will reduce the proposed project risk for geologic hazards, the measures listed below will also reduce potential impact. The following measures would apply to both build alternatives.

A Fault Evaluation Study is required for the Caldwell Avenue UC Widening. The location of the fault (or fault zone) with respect to the structure and a determination of the design fault offset shall be included in the Seismic Recommendations of the project’s Foundation Report.

Geotechnical exploration will be conducted to determine groundwater levels, soil types and strengths, corrosion, susceptibility to liquefaction and settlement, and any areas that require dewatering. Several investigative methods should be used, including but not limited to, geologic mapping, soil borings, and geophysical studies that evaluate soil liquefaction potential and shear strength. Once the required site exploration is completed, the Office of Bridge Design will prepare a Foundation Report Study to present the results of the site exploration (i.e., soil strength, consolidation, classification, corrosion, and liquefaction potential) and make preliminary foundation design recommendations in order to facilitate “type selection” for the type of bridge foundation that is appropriate for the given soil/geologic condition. Also for this study, borings will be drilled along the proposed soundwall alignment for the purposes of soundwall foundation adequacy. Any groundwater or perched water found in those borings will be duly noted and liquefaction potential will be further evaluated. Current groundwater conditions will also be evaluated in the Foundation Report Study for the associated bridge widenings.

Laboratory testing will be performed to supplement field observations and may include soil moisture content and unit weight, soil classification, corrosion, and direct shear tests. Other laboratory tests may be required depending upon the nature of the soils encountered during the investigation.
For areas of proposed pavement widening, the District 7 Materials Office would need to evaluate and test the median and shoulder subgrade materials for pavement design purposes.

### 2.2.3 Paleontological Resources

**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) 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law.

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

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

Fossils are considered to be non-renewable scientific resources and are, therefore, protected by various laws, ordinances, regulations, and standards across California. The Project is subject to the provisions of the CEQA and other State regulations, the Ventura County General Plan, and SVP guidelines.

**State Regulations**

**California Environmental Quality Act (PRC §21000 et seq.)**

The CEQA requires public agencies and private interests to identify the potential adverse impacts or environmental consequences of their proposed project to any object or site of significance with respect to the scientific annals of history.

**California Environmental Quality Act Guidelines (14 C.C.R. § 15064.5 [a][3])**

Paleontological resources are listed in Appendix G (Part V) of CEQA, indicating that the destruction of unique, non-renewable paleontological resources is a significant impact on the environment that requires mitigation of the impact. Construction excavation in paleontologically sensitive deposits that underlie a project area is a significant impact that can be mitigated through collection and identification of excavated fossils from the deposit.

**California Administrative Code, Title 14, Section 4307**

This code states that “no person shall remove, injure, disfigure, deface, or destroy any object of paleontological, archaeological, or historical interest or value.”
Public Resources Code 5097.5

PRC 5097.5 prohibits the excavation and/or the removal of a “vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.”

Public Resources Code 30244

PRC 30244 requires the reasonable mitigation of adverse impacts on paleontological resources resulting from development on public land.

Local Regulations

Ventura County General Plan

In the Ventura County General Plan (Ventura County, 2011), the Ventura County Board of Supervisors defines paleontological resources as the “fossilized remains of ancient plants and animals.” The General Plan typically treats paleontological and cultural resources together, with the Ventura County Board of Supervisors stating that these resources include “geological formations, sites, objects of material culture, buildings and structures, and districts of historical significance, all of which have left [the County] a rich fossil record of millions of years of biological evolution, as well as a legacy of at least 8,000 years of human activity.”

According to the Ventura County Board of Supervisors (2011), paleontological resources could be “protected and preserved in much the same manner as any scarce, non-renewable natural resource” such as biological and cultural resources. It is, therefore, the “County’s responsibility to assess environmental impacts and resource significance of any paleontological site affected by discretionary development requests deemed non-exempt under the provisions of CEQA” (Ventura County, 2011). The steps of the environmental review process for such resources and sites include:

1) Inventory the subject resource
2) Assess its scientific and educational significance
3) Identify potential direct and indirect impacts
4) Develop appropriate measures to avoid or otherwise mitigate adverse effects

It is the ultimate goal of the Resource Management Agency (Ventura County, 2011) to:

[i]nventory and map all fossil bearing formations, outcrops, and sites with the assistance of qualified professionals in the paleontological and historic geology fields; [a]ssess the significance of paleontological sites and determine direct and indirect impacts, resulting from discretionary development requests; and [d]evelop mitigation measures to minimize or eliminate negative impacts upon these resources, as determined by professionals in this field.

In regards to both paleontological and cultural resources, the goals of Ventura County (Ventura County, 2011) are to:
1) Identify, inventory, preserve and protect the paleontological and cultural resources of Ventura County (including archaeological, historical, and Native American resources) for their scientific, educational and cultural value.

2) Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County’s paleontological and cultural resources.

The policies of the Ventura County Cultural Heritage Board (Ventura County, 2011) in regards to both paleontological and cultural resources are:

1) Discretionary developments shall be assessed for potential paleontological and cultural resource impacts, except when exempt from such requirements by CEQA. Such assessments shall be incorporated into a county-wide paleontological and cultural resource data base.

2) Discretionary development shall be designed or re-designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated.

Affected Environment
This section identifies and evaluates the potential for impacts caused by the proposed project on significant paleontological resources in the study area. Information contained in this section is summarized from the Paleontological Evaluation Report (Caltrans, February 2017) prepared for the project.

Regional Geology

The proposed project is located in Simi Valley and Moorpark, within the eastern portion of the Ventura Basin. The Ventura Basin is a large east-west-trending, depositional basin that is approximately 40-miles wide and 165-miles long that is bounded to the north by the Coast Ranges, to the east by the San Gabriel Mountains, to the south by the Channel Islands and Santa Monica Mountains, and to the west by the Pacific Ocean, with the Santa Barbara Channel representing the western-most portion of the Ventura Basin. The Ventura Basin formed as a forearc basin during the Cretaceous Period. The basin contains about 17,700 meters (58,000 feet) of mostly marine sedimentary rocks that are Cretaceous to Recent in age (Norris and Webb, 1976). The Ventura Basin is located within the Transverse Ranges Geomorphic Province of southern California. This province has an east-west trend that is different from the northwest-southeast trend of the Coast Ranges Geomorphic Province to the north and the Peninsular Ranges Geomorphic Province to the south (Bailey and Jahns, 1954).

The east-west orientation of the Transverse Ranges and their associated geologic faults are due to a 90-degree, clockwise rotation caused by tectonic-plate movements that occurred during the Miocene Epoch (about 20 million years ago) (Fritsche, 1998). This rotation also resulted in a bend in the San Andreas Fault, which starts where the San Andreas Fault passes the San
Bernardino Mountains and continues along the base of the San Gabriel Mountains on a primarily east-west trend, after which it heads north again. The geologic units in the Transverse Ranges tend to be folded due to this bend in the San Andreas Fault. The Pacific Plate is moving northwest in relation to the North American Plate and, in the area of the bend, this movement causes the crust on the Pacific Plate to converge with the North American Plate. This collision causes a significant amount of compression that has not only resulted in folding of geologic units, but also causes the uplift of the Transverse Ranges, making them one of the fastest rising mountain systems in the world. As a result of this compression, the Ventura Basin is extensively folded, and has several thrust and reverse faults.

The Ventura Basin was once part of an extensive marine basin in the Los Angeles area that was separated from the open ocean by a submerged ridge. This larger basin started to form during the middle Miocene (15 to 11 million years ago). Toward the end of the middle Miocene, the larger basin started deforming and subdivided into the smaller Ventura Basin, San Gabriel Basin (Valley), San Fernando Basin (Valley), and Los Angeles Basin (Quinn, 2001). The Ventura Basin remained submerged until the Quaternary Period (Pleistocene and Holocene epochs).

**Local Stratigraphy**

There are four geologic units mapped in the project area, as shown in Figure 14. These units from oldest to youngest are the Sespe Formation, Saugus Formation, Quaternary older surficial deposits, and Quaternary alluvial deposits (Dibblee, 1992a, 1992b; Swanson and Irvine, 2015). The Sespe Formation in the eastern Ventura Basin is middle Eocene to late Oligocene in age and typically consists of river deposits predominantly of sandstone with interbeds of claystone and conglomerate (Taylor, 1983; Dibblee, 1992a, 1992b). Originally named by Watts (1897), the Sespe Formation is about 1656 m thick (5433 feet thick). The Sespe Formation is divided into three unnamed members, which are the lower, middle, and upper members. In the Project area, the formation unconformably overlies the marine Llajas Formation and is overlain conformably by the Modelo and Saugus formations (Bown, 1994).

The Saugus Formation in the eastern Ventura Basin is Pliocene in age and consists of 198 m (650 feet) of poorly consolidated, coarse-grained sandstone and conglomerate that formed in fluvial and alluvial-fan environments around the western end of the San Gabriel Mountains (Kew, 1924; Oakeshott, 1958). Hershey (1902) originally proposed the name “Saugus Division” for a series of alluvial deposits in Soledad Canyon near Saugus. Oakeshott (1958) later restricted the name “Saugus formation” to those lower Pleistocene continental beds unconformably above the upper Pliocene Sunshine Ranch Member of the Pico Formation and lying with an angular unconformity below upper Pleistocene terrace deposits. Squires et al. (2006) continued this usage, although previous workers have placed marine deposits of the Pico Formation into the lower Saugus Formation (e.g., White, 1983; Groves, 1991) (see White [1983], Squires et al. [2006], and Swanson and Irvine [2015] for a discussion of the history of the stratigraphic nomenclature of the Pico and Saugus formations). The age of the Saugus Formation is late Pliocene to early Pleistocene (about 3 to 1.5 million years old). In the Project area, the Saugus Formation unconformably overlies steeply dipping strata of the Sespe Formation. The Saugus Formation is unconformably overlain by Quaternary older surficial deposits, as well as by recent deposits (Dibblee, 1992a, 1992b; Swanson and Irvine, 2015).
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES

Figure 14 Geologic Map

LEGEND

- **Qg**: Quaternary gravel
- **Qa**: Quaternary alluvial deposits
- **Qoa**: Quaternary older surficial deposits
- **QTs**: Saugus Formation
- **Tsp**: Sespe Formation

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VEN-118 Widening Phase II Project Area

Base map from Dibblee (1992a, 1992b)
Quaternary older surficial deposits consisting of poorly consolidated cobbles, gravel, and sand occur locally in the Project area (Dibblee, 1992a, 1992b). These remnants of older alluvial deposits that were uplifted and eroded to form terraces, represent stream-channel and flood-plain deposits, alluvial fans, and talus accumulations (Oakeshott, 1958). In the Transverse Ranges, Quaternary older surficial deposits are primarily preserved as isolated, uplifted, and eroded remnant terraces (Oakeshott, 1958). Stratigraphic thickness varies from a few meters to as much as 61 m (200 feet) (Oakeshott, 1958). Quaternary older surficial deposits unconformably overlie the Sespe and Saugus formations. The exact age of Quaternary older surficial deposits is not known, but they are most likely Pleistocene in age (Oakeshott, 1958; Dibblee, 1992a, 1992b).

Quaternary alluvial deposits in the Project area consist of unconsolidated gravel, sand, and silt of relatively recent age associated with the Simi River and its tributaries (Dibblee, 1992a, 1992b). For the purposes of this PER, this geologic unit also includes Quaternary gravel. Quaternary alluvial deposits are underlain by the Sespe Formation, Saugus Formation, and Quaternary older surficial deposits.

**Paleontological Resources**

No recorded paleontological localities were found within the proposed project boundaries. However, many previously recorded paleontological localities were found in the same geologic units that also occur within the Project area, within one mile of SR-118. The paleontological resources of each geologic unit found in the Project area are discussed below, based on the results of the locality record search, literature search, and field survey.

**Sespe Formation**


The Sespe Formation has produced over 100 species of vertebrates, grouped into 35 families and 12 orders (Bown, 1994). Some of the vertebrate fossils found at the Simi Valley Landfill and Recycling Center, which is located just north of the project area in an unnamed canyon between Brea and Alamos canyons, include: Chelonia (turtle), Iguanidae, Parasauromalus, Glyptosaurini, Melanosaurini, Tinosaurus, Paracontogenys sp., Paleoxantusia sp., P. allisoni, (lizards), Ophidea, Boidae, Boavus (Boa), Cryptolestes, Sespidectes singularis, Proterixoides davisi, Centetodon sp. cf. C. aztecus, Batodonoides powayensis (insectivores), Omomyidae, Dyseolemur pacificus, Macrotherius roedelii, Apatemys downsii, Unitasorex (primates), Leptotomus, Microparamys sp., Microparamys tricus, Microparamys sp. und., Namatomys n. sp, Paradjiadaumo n. sp, Griphomys alecer, Heliscomys n. sp, Simimys simplex, Simimys n. sp., Zapodidae n. gen, Pareumys sp. aff. P. milleri, Pareumys sp., Rapamys, Metanoiamys fantasma,
Metanoiamys korthi, Eohaplomys (rodents), Miacis sp. und., Miacisae (carnivoramorphs), Protoreodon annnectens tardus, Protoreodon pacificus, Protolopus robustus, Camelidae, Dichobunidae gen./sp. und., Leptoreodon edwardsi, Leptoreodon stocki, Simimeryx hudsoni, and Simimeryx n. sp. (Artiodactyla [even-toed ungulates]) (Kelly et al., 1991; Bown, 1994; Graber, 2000).

Dr. Samuel McLeod of the Natural History Museum of Los Angeles (LACM) provided information for several of the nearest land-mammal localities to the Project area (Appendix). He indicated that there are more than 100 localities that are located in the Sespe Formation just north of the central portion of the proposed project area in the Simi Hills. The closest localities to this portion of the project area on the north side of Brea Canyon are LACM 5987 and 5988, which produced fossil specimens of an alligator lizard (Glyptosaurini), opposums (Peradectes californicus and Peratherium), an insectivore (Sespedectes singularis), and rodents (Simimys simplex and Microparamys).

**Saugus Formation**

The Saugus Formation also contains known paleontological localities near the Project area. For instance, a locality located in the Meridian Hills of Moorpark northwest of the Project area produced a land-mammal assemblage of early Pleistocene age (850,000 to 780,000 years ago [Irvingtonian NALMA]) (Wagner et al., 2007). This fossil assemblage is known as the Meridian Hills Local Fauna and includes Sylvilagus?, Thomomys, Perognathus, Dipodomys, Reithrodontomys, Neotoma, Pitymys meadensis, the mammoths Mammutus meridionalis and M. columbi, the horse Equus occidentalis?, and the llama Hemiauchenia macrocephala. This locality is particularly noteworthy because it produced a 70% complete skeleton of *M. meridionalis*, which is one of the two most complete specimens of this mammoth known from North America. In addition, its association with *M. columbi* is only one of three associations of these species known from North America (Wagner et al., 2007).

**Quaternary older surficial deposits**

The Quaternary older surficial deposits also contain paleontological localities near to the project area. LACM 6107 located on the south side of Alamos Canyon north of the Project area produced a fossil specimen of the horse Equus occidentalis. Also, LACM 7455 located in a ravine west of Dry Canyon north of the eastern portion of the Project area produced a fossil skeleton of the mastodon Mammut americanum. Lastly, LACM 7594 located northeast of the eastern terminus of the project area produced a fossil specimen of the mastodon Mammut.

**Paleontological Sensitivity**

The project area contains four geologic units, three of which have a high paleontological sensitivity (Sespe Formation, Saugus Formation, and Quaternary older surficial deposits). One geologic unit has a low paleontological sensitivity (Quaternary alluvial deposits), but may have a higher paleontological sensitivity at a greater depth below the surface. Each geologic unit is discussed below in relation to its paleontological sensitivity.
Table 20 Geologic Units and Paleontological Sensitivity in the Project Area

<table>
<thead>
<tr>
<th>Geologic Unit</th>
<th>Geologic Age</th>
<th>Map Symbol</th>
<th>Paleontological Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaternary alluvial deposits</td>
<td>Recent</td>
<td>Qa</td>
<td>Low</td>
</tr>
<tr>
<td>Quaternary older surficial deposits</td>
<td>Pleistocene</td>
<td>Qoa</td>
<td>High</td>
</tr>
<tr>
<td>Saugus Formation</td>
<td>Pleistocene</td>
<td>QTs</td>
<td>High</td>
</tr>
<tr>
<td>Sespe Formation</td>
<td>Eocene-Oligocene</td>
<td>Tsp</td>
<td>High</td>
</tr>
</tbody>
</table>

**Sespe Formation**

The Sespe Formation has a high paleontological sensitivity because it contains well-known and abundant fossiliferous terrestrial deposits that locally contain fossil vertebrates, particularly turtles, lizards, snakes, marsupials, insectivores, primates, rodents, artiodactyls (even-toed mammals), and early carnivores.

**Saugus Formation**

The Saugus Formation has a high paleontological sensitivity because it contains fossiliferous terrestrial deposits that locally contain fossil vertebrates, such as rabbit, gopher, pack rat, mammoth, horse, and llama of Pleistocene age in Moorpark, California (Wagner et al., 2007). In addition, fossil vertebrates have been found elsewhere in the Saugus Formation, most notably terrapins, tortoises, lizards, rabbit, gopher, pack rat, dog, cat, mastodon, tapir, horse, peccary, camel, deer, and bison in the Santa Clarita and San Fernando Valley areas (Winterer and Durham, 1954, 1962).

**Quaternary older surficial deposits**

The older surficial deposits have a high paleontological sensitivity, because of the important paleontological localities found close to the project area. Furthermore, similar deposits elsewhere in southern California have produced significant fossils of Pleistocene megafauna, such as ground sloth, mammoth, and mastodon (Jefferson, 1991).

**Quaternary alluvial deposits**

The Quaternary alluvial deposits are considered to have a low paleontological sensitivity, because any organic remains present are probably too young to be considered paleontological resources due to the recent age of these deposits and their association with modern drainages. However, Recent deposits within the project area may overlie older deposits of Pleistocene age (2.6 million to 10,000 years ago) at an unknown, but potentially shallow depth. In general, older alluvial deposits may be slightly to moderately consolidated, but are generally only distinguishable from Recent deposits through stratigraphic position and age-dating techniques, such as the presence of Pleistocene fossils. Since Pleistocene deposits may underlie younger deposits at an unknown, but possibly shallow depth, these deposits are considered to have a low paleontological sensitivity at the ground surface, but a higher paleontological sensitivity that increases with depth.
Environmental Consequences

No Build Alternative

The No Build Alternative would not create surface or subsurface impacts; therefore, it would not create adverse impacts to potential paleontological resources.

Build Alternatives

The most common impacts to paleontological resources from either Build Alternative will be from ground-disturbing activities that occur during construction. Ground-disturbing activities include grading, cutting, trenching, tunneling, augering, drilling, and boring while in geologic units (i.e., natural soil, sediment, deposits, or rock). These impacts may result in the destruction of fossils and their geological context. Fossils are considered to be non-renewable resources because they are finite and will decrease in abundance through time due to both natural and human processes. All alternatives as currently stated will have the same potential impacts to paleontological resources, because ground-disturbing activities will be the same for both build alternatives. Areas with a high paleontological sensitivity mostly occur in the western portion of the project area. Areas containing Sespe Formation, Saugus Formation, and Quaternary older surficial deposits have a high paleontological sensitivity. Implementation of proper mitigation measures will reduce any impacts to paleontological resources to below the level of significance.

Cumulative Impacts

Potential paleontological resource impacts from the proposed project would be associated with short term activities such as excavation and grading, although such impacts would be considered long-term because the associated loss of resource values would be permanent. Cumulative impacts to paleontological resources can occur when development of an area results in the removal of paleontological resources, which could degrade the physical historical record of an area. While impacts associated with such resources tend to be limited to individual project sites and do not generally result in substantial cumulative impacts, the proposed project, in combination with the related projects, could result in cumulative impacts to such resources.

Proposed grading and excavation activities associated with the cumulative projects listed in Table 21 have the potential to encounter and adversely affect subsurface paleontological resources.
Table 21 Paleontological Resources Cumulative Project(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butler Ranch Zone Change and Tentative Tract Map Project</td>
<td>1313 Tierra Rejada Road, Simi Valley, CA 93065</td>
<td>Proposes to change the zoning of the 508-acre property from the current designation of Agricultural Exclusive-40 acres minimum lot size to Open Space-20 acres minimum lot size and to subdivide a 508-acre property into 24 residential lots, each a minimum of 20 acres in size, with two means of access from Tierra Rejada Road. The application also indicates that an open space conservation easement of approximately 332 acres (65% of the total property) is proposed.</td>
<td>A Notice of Preparation of an EIR was issued by the Ventura County Planning Division on November 17, 2014. A Request for Proposals to prepare an EIR was distributed on September 5, 2017.</td>
</tr>
<tr>
<td>Simi Valley Landfill and Recycling Center Expansion Project</td>
<td>2801 North Madera Road, Simi Valley, CA 93065</td>
<td>The approved Conditional Use Permit boundary has expanded to encompass 887 acres, within which the existing 185-acre waste disposal area is proposed to expand north and west from its current location to encompass 186 acres of additional waste disposal area. The buffer area around the disposal footprint would expand from 112 acres to 516 acres, for a net increase of 404 acres. The buffer area surrounding the disposal footprint primarily consists of open space area, but may also include access roads, material and equipment Storage yards, mitigation areas, recycling facilities and equipment, and drainage structures. The permitted fill elevation would increase from 1,118 feet above msl to approximately 1,270 feet above msl, for a net increase of 152 feet. The increase in elevation would be applied gradually as each phase of the landfill is developed.</td>
<td>County supervisors in July 2011 approved Waste Management's proposal to add 186 acres to the site, increasing its size to 887 acres, and to double the maximum amount of daily trash that can be accepted there, from 3,000 tons to 6,000. The supervisors also green-lighted increasing the landfill's elevation from 1,118 feet to 1,270 feet. In May 2017, Waste Management completed building the first, new 18-acre &quot;cell&quot; for trash disposal. Prior to the latest cell being built, the site had 143 acres designated for trash. With the new cell, the site now has 161 such acres. The site is permitted for 368 acres of landfill and thus has 207 more acres of cells potentially to be built.</td>
</tr>
</tbody>
</table>

The initial paleontology survey of the project site for the Butler Ranch Zone Change and Tentative Tract Map Project recovered indeterminate mammal fossils from road cuts and confirmed that Sespe Formation at the site is the very fossiliferous Middle Sespe Formation. This project will contribute to the progressive loss of exposed rock in Ventura County, namely outcrops of the Sespe Formation that can be studied and prospected for fossil remains. Further
evaluation of this project’s impacts to paleontological resources and a paleontological mitigation monitoring and reporting program will be set forth in the EIR for the project.

The occurrence of a number of previously recorded fossil sites in the middle member of the Sespe Formation and of numerous additional sites in the Simi Valley Landfill and Recycling Center Expansion Project area, suggests a high potential for previously unrecorded fossil sites and remains being encountered by earth-moving activities during excavation of the expansion area, excavation of daily cover, and general grading of the site. As such, the Simi Valley Landfill and Recycling Center Expansion Project would cause the loss of scientifically important fossils and associated geologic data, resulting in a significant impact on paleontological resources.

The proposed project would reduce potential paleontological resources with implementation of the avoidance, minimization, and/or mitigation measures listed in the section below. As a result the proposed project, in combination with the cumulative projects, would not result in an adverse cumulative impact.

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

Ground-disturbing activities related to the widening of the SR-118 may result in impacts to paleontological resources. Implementation of proper mitigation measures will reduce any impacts to paleontological resources to below the level of significance. The full implementation of a Paleontological Mitigation Plan (PMP) will mitigate impacts to paleontological resources and will comply with the applicable regulations and measures. In order to facilitate the implementation of a PMP, the following measures are indicated. They will ensure that potential adverse impacts to paleontological resources are at a less than significant level. These measures are based on the SVP standard guidelines (1995) and meet the requirements of CEQA, Caltrans Guidelines, and other agency regulations. Similar measures have been followed throughout California and have been demonstrated to be successful in protecting paleontological resources, while allowing timely completion of construction projects in paleontologically sensitive areas.

A qualified Principal Paleontologist will be retained by Caltrans to develop and implement a PMP. A qualified Principal Paleontologist is defined as an individual with a M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of the project area, and who has worked as a paleontological mitigation project supervisor for at least one year. The PMP will be based on SVP guidelines and meet all regulatory requirements. The PMP will identify construction impact areas of high paleontological sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The PMP will outline a coordination strategy to ensure that a qualified Paleontological Monitor will conduct full-time monitoring of all ground disturbance in geologic units determined to have a high paleontological sensitivity. The qualified Principal Paleontologist will determine when and where geologic units of low paleontological sensitivity will be monitored, based on geologic conditions. If and when paleontological resources are found, the fossils and geologic contextual data will be collected. The PMP will also detail methods of collection, preparation and analysis of specimens, final curation and deposition of specimens at a federally accredited repository, data analysis, and reporting.

Areas with a high paleontological sensitivity mostly occur in the western portion of the Project area. Areas containing Sespe Formation, Saugus Formation, and Quaternary older surficial
deposits have a high paleontological sensitivity. All ground-disturbing activities in areas where these geologic units are present will need to be monitored on a full-time basis by a qualified Paleontologic Monitor. Ground-disturbing activities that will need to be monitored full-time in these areas include grading, cutting, trenching, tunneling, augering, drilling, and boring. Areas of low paleontological sensitivity, specifically areas containing Quaternary alluvial deposits, will be monitored at the discretion of the qualified Principal Paleontologist, because these areas may contain older deposits of Pleistocene age (2.6 million to 10,000 years old) at an unknown depth below the ground surface.

The qualified Principal Paleontologist and Paleontological Monitor will have the authority to divert or redirect construction-related, ground-disturbing activities temporarily if fossil remains are observed or suspected. If a fossil is uncovered, the qualified Paleontological Monitor will ask the equipment operator to temporarily halt or divert the work, until the discovery can be examined and collected in a timely manner. If the fossils are observed in situ, the qualified Paleontological Monitor will determine if the discovery requires excavation. The qualified Paleontological Monitor will also be prepared to remove samples of sediment likely to contain the remains of small to microscopic fossil invertebrates and/or vertebrates. The qualified Paleontological Monitor may enlist the assistance of construction personnel and equipment in this undertaking to avoid delays in excavation activities. At the discretion of the qualified Principal Paleontologist or Paleontological Monitor, samples of spoil piles will be screened to determine the presence of micro-vertebrate fossils. Qualified Paleontological Monitors will be equipped with the necessary tools for the rapid retrieval of fossils and associated data.

Many fossils are typically too small to be readily visible in the field (generally small enough that magnification with a microscope or hand lens is necessary for identification), but are, nevertheless, significant and worthy of collection (e.g., small mammal, bird, reptile, amphibian, and fish). Micro-vertebrate fossils have been especially important in the Sespe Formation in Simi Valley. If sedimentary deposits are shown to contain micro-vertebrate fossils, the qualified Paleontological Monitor will take a representational sample of the sediment, according to SVP guidelines (2010, 2013), per fossil locality. A test sample of about 200 pounds is typically processed first in order to determine the concentration of micro-vertebrate fossils present in the sediment.
2.2.4 Hazardous Waste/Materials

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

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

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

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

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

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

Affected Environment
Information regarding hazardous wastes/hazardous materials was obtained from a Hazardous Waste Assessment prepared in May 2017. The assessment generally consists of project evaluation, a departmental record review, regulatory agency records review, and a general field visit. Key elements of the project scope of work will involve environmental issues common to highway construction projects. Of particular concern were the potential occurrence of pesticides,
aerially deposited lead, yellow traffic striping, and asbestos containing materials as presented in Table 22.

### Table 22 Hazardous Waste/Materials of Concern

<table>
<thead>
<tr>
<th>Hazardous Waste/Materials of Concern</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerially Deposited Lead</td>
<td>Aerially Deposited Lead contamination is generally found in unpaved soil due to historical use of lead containing fuel.</td>
</tr>
<tr>
<td>Yellow Traffic Striping</td>
<td>Yellow traffic stripes that need to be removed may contain lead and chromium at concentrations that are considered hazardous.</td>
</tr>
<tr>
<td>Asbestos Containing Material</td>
<td>Asbestos containing materials are suspected to be present in the structure proposed for widening, especially for bridges built prior to 1970.</td>
</tr>
<tr>
<td>Pesticides</td>
<td>The potential of exists for persistent pesticides to be present in soil as a result of using pesticides for weeds control. It is recommended that the soil be sampled and analyzed for organochlorine pesticides (OCPs).</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Since the proposed project includes widening 10 to 11 structures, if cast-in-drilled-holes (CIDH) piles are used for supporting new bridge structures, the holes may encounter groundwater. If groundwater is encountered during construction, there will be a need to perform groundwater quality analysis to apply for a construction de-watering permit. If the groundwater is found with contaminants of concerns, site-specific treatments to achieve National Pollutant Discharge Elimination System (NPDES) discharge limits will be required for surface discharge.</td>
</tr>
</tbody>
</table>

**Environmental Consequences**

**No Build Alternative**

The No Build Alternative would not change the existing physical environment and therefore would not result in permanent impacts related to hazardous wastes, including permanent acquisition of properties with hazardous waste concerns and the beneficial effect of improved traffic safety. As with the Build Alternatives, routine maintenance activities would continue and would be required to follow applicable regulations with respect to the handling and disposal of potentially hazardous materials. Vehicles utilizing the SR-118 Corridor would continue to transport hazardous substances that could spill and impact the roadway, adjacent properties, or resources.
Build Alternatives
There is a potential for exposure to general hazardous waste/material of concern during construction. Soil excavation and earth-moving activities associated with the Build Alternatives could expose workers to contaminants associated with yellow traffic striping, aerially deposited lead (ADL), groundwater and pesticides. Structural demolition work associated with all Build Alternatives has the potential to expose workers to contaminants associated with Asbestos Containing Materials.

During construction, exposure to contaminants associated with yellow traffic striping can be avoided fully, or minimized as needed, through adherence to protocols for their removal, handling, and disposal. Furthermore, a project-specific ADL investigation would be implemented to more accurately assess lead-impacted soils in the project study area. The scope of the ADL investigation would be dictated by which Build Alternatives is selected and, more specifically, by construction features during the Plans, Specifications, and Estimates stage of the project.

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

There is a hazardous waste concern that Asbestos Containing Materials (ACM) might exist in bridge structures. Therefore, to meet the National Emission Standards for Hazardous Air Pollutants, an asbestos survey by a certified asbestos consultant would be required to determine if ACM is present in the bridge structure. If the bridge contains ACM, abatement would be required.

Since the proposed project includes widening 10 to 11 structures, if cast-in-drilled-holes (CIDH) piles are used for supporting new bridge structures, the holes may encounter groundwater. If groundwater is encountered during construction, there will be a need to perform groundwater quality analysis to apply for a construction de-watering permit. If the groundwater is found with contaminants of concerns, site-specific treatments to achieve National Pollutant Discharge Elimination System (NPDES) discharge limits will be required for surface discharge.

The potential exists for persistent pesticides to be present in soil as a result of pesticide use for weed control. Soil sampling and analysis for organochlorine pesticides (OCPs) will be conducted for the proposed project.

Potential impacts related to hazardous waste/materials would not be considered adverse with implementation of avoidance and minimization measures.
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

**Cumulative Impacts**

The proposed project operations would not involve the use of hazardous materials and would not have impacts with regard to hazardous waste. Therefore, proposed project operations would not contribute to cumulative effects regarding hazardous wastes or materials.

Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections, as well as impacts for other projects in the study area, would each be minimized and would, therefore, not have a cumulative impact to humans or the physical environment.

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

A project-specific Lead Compliance Plan and Debris Containment and Disposal Work Plan will be prepared to address the removal, containment, storage, sampling, transport, and disposal of yellow thermoplastic and lead-based painted traffic stripe and/or pavement markings, and to prevent or minimize worker exposure to lead while handling the debris/residue (California Code of Regulations [CCR], Title 8, Section 1532.1, “Lead,” and California Occupational Safety and Health Administration [Cal OHSA] Construction Safety Order).

During construction, excess ADL soils require special handling and waste management, especially when disturbed during earthmoving activities. The California Department of Transportation (Caltrans) Office of Environmental Engineering will initiate a project-specific aerially deposited lead (ADL) site investigation to evaluate whether the excess ADL spoils generated can be reused on the project site and/or along the project corridor by adhering to the requirements of the Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils (ADL Agreement) that the Department entered into with the California Department of Toxic Substances Control (July 2016). If the excess ADL soils cannot be reused on the project site and/or along the project corridor, the site investigation will also determine whether they are classified as federal or state hazardous waste that requires off-site disposal at a permitted Class I California hazardous waste disposal facility or can be relinquished to the contractor with or without restrictions on land use.

Surveying and sampling will be required to determine procedures for the proper removal, handling, and disposal of asbestos-containing materials (ACM) and lead-based paint (LBP) during construction. Upon completion and analyses of surveys and sampling, an Asbestos Compliance Plan, Asbestos Removal Work Plan, and Lead-Based Paint Compliance Plan, and Lead-Based Paint Removal Work Plan shall be completed and signed by a Certified Industrial Hygienist that outlines potential risks and appropriate monitoring plans, as well as safety measures, to reduce the risk of worker exposure to contamination.

A Dust Control Plan will be prepared and approved by the South Coast Air Quality Management District (SCAQMD) before commencing any work in areas containing ACM. The Dust Control Plan will outline procedures to prevent dust emission during excavation, stockpiling, transportation, or placement of materials containing ACM.
Groundwater testing will be required to determine the extent of potential contamination in groundwater that will be encountered during construction, and to confirm whether contamination, if any, can be attributed to nearby sources and impacts from previous releases.

2.2.5 Air Quality

Air Quality

Regulatory Setting

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

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

Conformity

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

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

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

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

**Affected Environment**

The proposed project is located in Ventura County, an area within the South Central Coast Air Basin (SCCAB). Air quality regulation in SCCAB is administered by Ventura County Air Pollution Control District (VCAPCD).

Ventura County is comprised of coastal mountain ranges, the coastal shore, the coastal plain, and several inland valleys. The northern half of the county (Los Padres National Forest) is extremely mountainous with altitudes up to 8,800 feet. Consequently, the climate in the northern half of the County varies a great deal depending on elevation. In the winter, low-pressure systems originating in the northern Pacific Ocean bring clouds, rain, and wind into Ventura County. Ventura County winds are dominated by a diurnal land-sea breeze cycle. Since the sea breeze is stronger than the land breeze, the net wind flow during the day is from west to east. Under light land-sea breeze regimes, recirculation of pollutants can occur as emissions move westward during morning hours, and eastward during the afternoon. This can cause a build-up of pollutants over several days. The vertical dispersion of air pollutants in Ventura County is limited by the presence of persistent temperature inversions. Approximately 60 percent of all inversions measured at Point Mugu are surface based, with most occurring during the morning hours.

The climatological station closest to the site that monitors temperature is the Thousand Oaks monitoring station (#048904) maintained by the Western Regional Climate Center. The annual average maximum temperature recorded from 08/10/2004 to 11/29/2010 at this station is 23.2°C.

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117 “Design concept” means the type of facility that is proposed, such as a freeway or arterial highway. “Design scope” refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.
(73.7°F), and the annual average minimum is 10.3°C (50.5°F). December and January are typically the coldest months in this area of the Basin.

Almost all rainfall in Ventura County falls during the winter and early spring (November through April). Summer rainfall is normally restricted to scattered thundershowers in lower elevations and somewhat heavier activity in the mountains. The Thousand Oaks monitoring station (#048904) also monitors rainfall levels. Average monthly rainfall measured at this station varied from 0.84 centimeters (cm) (0.33 inches) in April to 3.8 cm (1.52 inches) in October, 7.5 cm (2.94 inches) in January, and 8.7 cm (3.41 inches) in February with an average annual total of 26.6 cm (10.49 inches).

The primary agency responsible for attaining state and federal air quality standards in the SCCAB for the proposed project is the VCAPCD. The VCAPCD works directly with the Southern California Association of Governments (SCAG), an MPO, and with local governments and cooperate actively with all states and federal government agencies. The VCAPCD regulate stationary source emissions and have been given the authority to regulate mobile emissions as an indirect source. As such, they also have transportation-related programs aimed primarily at reducing the number of cars on the road and promoting the use of cleaner fuels and vehicles. In addition, VCAPCD is responsible for developing and adopting an Air Quality Management Plan (AQMP) that serves as the blueprint for all future rules necessary to bring the region into compliance with federal and state clean air standards. The California Air Resources Board (CARB) regulates motor vehicles and fuels.

The VCAPCD is required to update its plans on a regular basis. Updates may be in the form of a new plan or an amendment. The latest 2016 AQMP employs the most recent scientific findings, primarily in the form of updated emission inventories, ambient measurements, new meteorological episode data, and new modeling tools. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, area sources, and on-road and off-road mobile sources in an effort to bring the County to attainment of the applicable federal ozone standard by 2020.

In 1976, the California Legislature adopted the Lewis Air Quality Management Act that created the Air Quality Management District’s (AQMDs) in addition to Air Pollution Control Districts (APCDs). Though separate from federal actions, the creation of AQMDs is an integral part of transportation conformity. The AQMDs and APCDs promulgate the State Implementation Plans for achieving cleaner air quality on a region-by-region basis. The State Implementation Plan (SIP) is a legal agreement between California and the federal government to commit resources to improving air quality. It serves as the template for conducting regional and project-level air quality analysis. The regional analysis is the responsibility of the MPO and the project-level analysis is that of the project sponsor. For both analyses, the AQMD or APCD overseeing the air basin provide technical support.

Applicable SIP in the Ventura County portion of the SCCAB area include the 2007 Ozone SIP. The 2007 Ozone AQMP/SIP revision (which EPA has not taken an action) makes no changes to previously approved TCMs contained in the 1994 SIP (as amended in 1995). Effective July 27, 2009, EPA took a final action to find that the Ventura County attained the revoked 1-hour ozone standard by its attainment date. Effective January 2, 2013, EPA took another final action to find
that the Ventura County attained the 1997 8-hour ozone standard by its attainment date. Several of the local control measures from the 2007 AQMP are not in the 2016 AQMP. VCAPCD staff determined that some measures are either obsolete or infeasible for the County. No control measures, however, from previous AQMPs are deleted from their latest AQMP that would slow the county’s progress towards attaining the federal and state ozone standards. The 2016 AQMP control strategy consists of a local component implemented by the VCAPCD, including emission control measures from previous plans plus new and further study emission control measures. These measures will be proposed as new rules and revisions to existing VCAPCD rules that are found practicable for the County.

**Existing Ambient Air Quality**

Ambient monitoring data was obtained from the Simi Valley-Cochran Street Monitoring Station (ARB# 56434), which is located at 5400 Cochran St, Simi Valley at latitude of 34.27640 and longitude of -118.68375. The monitoring station is approximately 0.17 miles south of SR-118 and about 1.9 miles east of the project site. Figure 15 illustrates the proximity of this monitoring station to the freeway and to the proposed project.
Figure 15 Representative Monitoring Station and Project Location
The 2014 Annual Average Daily Traffic (AADT) at the SR-118/Tapo Street intersection, post mile R27.8, where the project ends and approximately 1.9 miles west of the Simi Valley-Cochran St. monitoring station is 134,000 with 3.5 percent trucks. While the AADT at SR-23 at SR-118 intersection, post mile R11.4, is 66,000 with 5.5 percent trucks. Based on the comparison of the traffic volumes, truck percentage, land uses, and the proximity to the freeway, the ambient concentration data measured at the Simi Valley-Cochran monitoring station is deemed representative for comparison to the proposed project. A summary of the most recent three years of ambient air monitoring data at the Simi Valley-Cochran Monitoring Station (ARB# 56434) for criteria pollutants is provided in Table 23.

### Table 23 Three Year Ambient Air Monitoring Data

<table>
<thead>
<tr>
<th>Pollutant/Standard</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ozone (O₃)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)</td>
<td>0.104</td>
<td>0.097</td>
<td>0.096</td>
</tr>
<tr>
<td>Days &gt; CAAQS (0.09 ppm)</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>O₃ (8-hour)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)</td>
<td>0.089</td>
<td>0.085</td>
<td>0.078</td>
</tr>
<tr>
<td>Days &gt; CAAQS (0.070 ppm)</td>
<td>11</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Days &gt; NAAQS (0.075 ppm)</td>
<td>4</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td><strong>Particulate Matter (PM₁₀)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ug/m³)</td>
<td>41.1</td>
<td>49.6</td>
<td>63.5</td>
</tr>
<tr>
<td>Days &gt; CAAQS (50 ug/m³)</td>
<td>0</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Days &gt; NAAQS (150 ug/m³)</td>
<td>0</td>
<td>*</td>
<td>0</td>
</tr>
<tr>
<td><strong>PM₁₀ (Annual Average)</strong></td>
<td>9.2</td>
<td>9.0</td>
<td>8.3</td>
</tr>
<tr>
<td><strong>Particulate Matter (PM₂.₅)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ug/m³)</td>
<td>28.6</td>
<td>30.8</td>
<td>30.5</td>
</tr>
<tr>
<td>Days &gt; NAAQS (35 ug/m³)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>PM₂.₅ (Annual Average)</strong></td>
<td>9.2</td>
<td>9.0</td>
<td>8.3</td>
</tr>
<tr>
<td><strong>Carbon Monoxide (CO)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)**</td>
<td>3.65</td>
<td>2.62</td>
<td>*</td>
</tr>
<tr>
<td>Days &gt; CAAQS (20 ppm)**</td>
<td>0</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Days &gt; NAAQS (35 ppm)**</td>
<td>0</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td><strong>CO (8-hour)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)</td>
<td>3.65</td>
<td>2.62</td>
<td>*</td>
</tr>
<tr>
<td>Days &gt; CAAQS (9 ppm)</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>Days &gt; NAAQS (9 ppm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Nitrogen Dioxide (NO₂)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppm)</td>
<td>0.043</td>
<td>0.047</td>
<td>0.041</td>
</tr>
<tr>
<td>Days &gt; CAAQS (0.18 ppm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>NO₂ (1-hour - - National Standard)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Concentration (ppb)</td>
<td>43</td>
<td>47</td>
<td>41</td>
</tr>
<tr>
<td>Days &gt; NAAQS (100 ppb)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: * means there was insufficient data available to determine the value. No data available for SO₂.
# Table 24 Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>California Standards</th>
<th>National Standards</th>
<th>Method 4</th>
<th>Secondary</th>
<th>Method 7</th>
<th>Method 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O₃)</td>
<td>1 Hour</td>
<td>0.09 ppm (180 µg/m³)</td>
<td>—</td>
<td>Ultraviolet Photometry</td>
<td>—</td>
<td>Same as Primary Standard</td>
<td>Ultraviolet Photometry</td>
</tr>
<tr>
<td></td>
<td>8 Hour</td>
<td>0.070 ppm (137 µg/m³)</td>
<td>—</td>
<td>—</td>
<td>0.070 ppm (137 µg/m³)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM₁₀)</td>
<td>24 Hour</td>
<td>50 µg/m³</td>
<td>—</td>
<td>Gravimetric or Beta Attenuation</td>
<td>150 µg/m³</td>
<td>—</td>
<td>Inertial Separation and Gravimetric Analysis</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>20 µg/m³</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM₂.₅)</td>
<td>24 Hour</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>35 µg/m³</td>
<td>Same as Primary Standard</td>
<td>Inertial Separation and Gravimetric Analysis</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>12 µg/m³</td>
<td>—</td>
<td>Gravimetric or Beta Attenuation</td>
<td>12.0 µg/m³</td>
<td>15 µg/m³</td>
<td>—</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>1 Hour</td>
<td>20 ppm (23 mg/m³)</td>
<td>—</td>
<td>Non-Dispersive Infrared Photometry (NDIR)</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>8 Hour</td>
<td>9.0 ppm (10 mg/m³)</td>
<td>—</td>
<td>—</td>
<td>9 ppm (10 mg/m³)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>8 Hour (Lake Tahoe)</td>
<td>6 ppm (7 mg/m³)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>1 Hour</td>
<td>0.18 ppm (339 µg/m³)</td>
<td>—</td>
<td>Gas Phase Chemiluminescence</td>
<td>100 ppb (186 µg/m³)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>0.030 ppm (57 µg/m³)</td>
<td>—</td>
<td>—</td>
<td>0.053 ppm (100 µg/m³)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>1 Hour</td>
<td>0.25 ppm (655 µg/m³)</td>
<td>—</td>
<td>Ultraviolet Fluorescence</td>
<td>75 ppb (196 µg/m³)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>3 Hour</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>0.04 ppm (105 µg/m³)</td>
<td>—</td>
<td>—</td>
<td>0.14 ppm (1300 µg/m³)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Annual Arithmetic Mean</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.030 ppm (for certain areas)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lead</td>
<td>30 Day Average</td>
<td>1.5 µg/m³</td>
<td>—</td>
<td>Atomic Absorption</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Calendar Quarter</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Rolling 3-Month Average</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Visibility Reducing Particles</td>
<td>8 Hour</td>
<td>See footnote 14</td>
<td>Beta Attenuation and Transmittance through Filter Tape</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 Hour</td>
<td>25 µg/m³</td>
<td>—</td>
<td>Ion Chromatography</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>1 Hour</td>
<td>0.03 ppm (42 µg/m³)</td>
<td>—</td>
<td>Ultraviolet Fluorescence</td>
<td>0.15 µg/m³</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>24 Hour</td>
<td>0.01 ppm (26 µg/m³)</td>
<td>—</td>
<td>Gas Chromatography</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

See footnotes on next page...
1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

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

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM10 standards (primary and secondary) of 150 μg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. 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.

11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as ‘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.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/m³ 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.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrument 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.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)
Criteria Pollutants

Since the passage of the Federal Clean Air Act (FCAA) and subsequent amendments, the EPA has established and revised the NAAQS. The NAAQS was established for six major pollutants or criteria pollutants. The NAAQS are two tiered: primary, to protect public health, and secondary, to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property). The six criteria pollutants are ozone, CO, PMs (PM$_{10}$ and PM$_{2.5}$), NO$_2$, SO$_2$, and lead (Pb). Table 24 provides a summary of the latest applicable state and national AAQS for the six criteria pollutants as well as other pollutants of concern. Table 25 below summarizes health effects that result from exposure to these criteria pollutants.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Sources</th>
<th>Primary Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone ($O_3$)</td>
<td>Atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight.</td>
<td>Aggravation of respiratory diseases; irritation of eyes; impairment of pulmonary function; plant leaf injury.</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO$_2$)</td>
<td>Motor vehicle exhaust; high temperature; stationary combustion; atmospheric reactions.</td>
<td>Aggravation of respiratory illness; reduced visibility; reduced plant growth; formation of acid rain.</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; and natural events, such as decomposition of organic matter.</td>
<td>Reduced tolerance for exercise; impairment of mental function; impairment of fetal development; impairment of learning ability; death at high levels of exposure; aggravation of some cardiovascular diseases (angina).</td>
</tr>
<tr>
<td>Particulate Matter (PM$<em>{10}$ and PM$</em>{2.5}$)</td>
<td>Fuel combustion in motor vehicles, equipment, and industrial sources; construction activities; industrial processes; residential and agricultural burning; atmospheric chemical reactions.</td>
<td>Reduced lung function; aggravation of the effects of gaseous pollutants; aggravation of respiratory and cardio-respiratory diseases; increased cough and chest discomfort; siling; reduced visibility.</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO$_2$)</td>
<td>Combustion of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ores; industrial processes.</td>
<td>Aggravation of respiratory and cardiovascular diseases; reduced lung function; carcinogenesis; irritation of eyes; reduced visibility; plant injury; deterioration of materials (e.g., textiles, leather, finishes, coating).</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>Contaminated soil.</td>
<td>Impairment of blood function and nerve construction; behavioral and hearing problems in children.</td>
</tr>
</tbody>
</table>
Table 26 presents a list of attainment status for the Basin in which the proposed project is located. The attainment status is based on designations promulgated by the EPA.

Table 26 Federal (NAAQS) and State (CAAQS) Attainment Status

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>NAAQS</th>
<th>CAAQS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Averaging Time</td>
<td>Designation (Classification)</td>
</tr>
<tr>
<td>2008 8-Hour Ozone</td>
<td>8-Hour (0.070 ppm)</td>
<td>Nonattainment (Serious)</td>
</tr>
<tr>
<td>CO</td>
<td>1-Hour (35 ppm) 8-Hour (9 ppm)</td>
<td>Attainment/ Unclassified</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-Hour (150 ug/m³)</td>
<td>Attainment/ Unclassified</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>24-Hour (35 ug/m³)</td>
<td>Attainment/ Unclassified</td>
</tr>
<tr>
<td></td>
<td>Annual (15.0 ug/m³)</td>
<td>Attainment/ Unclassified</td>
</tr>
<tr>
<td>NO₂</td>
<td>1-Hour (100 ppb)</td>
<td>Attainment/ Unclassified</td>
</tr>
<tr>
<td></td>
<td>Annual (0.053 ppm)</td>
<td>Attainment/ Unclassified</td>
</tr>
<tr>
<td>SO₂</td>
<td>1-Hour (75 ppb) 24-Hour (0.14 ppm) Annual (0.03 ppm)</td>
<td>Designation Pending</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attainment</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>3-Months Rolling (0.15 ug/m³)</td>
<td>Attainment/ Unclassified</td>
</tr>
</tbody>
</table>

The discussion below provides a brief explanation of each criteria pollutant.

**Ozone (O₃)**

Ozone is a toxic gas that irritates the lungs and damages materials and vegetation. Ozone is a secondary pollutant; it is not directly emitted. Ozone is a principal cause of lung and eye irritation in an urban environment. It is formed in the atmosphere through a series of reactions...
involving hydrocarbons (HC) and nitrogen oxides in the presence of sunlight.

**Particulate Matter (PM$_{10}$ and PM$_{2.5}$)**

PM includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are those particles between 10 and 2.5 microns in size (PM$_{10}$) and smaller than or equal to 2.5 microns (PM$_{2.5}$). The size of the PM is referenced to the aerodynamic diameter of the particulate. The PM$_{10}$ criteria are aimed primarily at what the Environmental Protection Agency (EPA) refers to as “coarse particles.” Course particles are often found near roadways, dusty industries, construction sites, and fires. The PM$_{2.5}$ criteria, which are directed at particles less than or equal to 2.5 microns in size, are referred to as “fine particles.” These particles can also be directly emitted and they can also be formed when gases emitted from power plants, industries and automobiles react in the air. The principal health effect of airborne PM is on the respiratory system. Studies have linked particulate pollution with irritation of the airways, coughing, aggravated asthma, irregular heartbeat, and premature death in people with heart or lung disease.

**Carbon Monoxide (CO)**

CO is a colorless and odorless gas, which, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can lead to headaches, aggravation of cardiovascular disease, and impairment of central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations are typically found near crowded intersections, along heavily used roadways carrying slow moving traffic, and at or near ground level. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300 to 600 feet) of heavily traveled roadways. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

**Nitrogen Oxides (NOx)**

Nitrogen oxides from automotive sources are some of the precursors in the formation of ozone and secondary PM. Ozone and PM are formed through a series of photochemical reactions in the atmosphere. Because the reactions are slow and occur as the pollutants are diffusing downwind, elevated ozone levels are often found many miles from the source of precursor emission. The effects of nitrogen oxides emission are examined on a regional basis.

**Lead (Pb)**

Nitrogen oxides from automotive sources are some of the precursors in the formation of ozone and secondary PM. Ozone and PM are formed through a series of photochemical reactions in the atmosphere. Because the reactions are slow and occur as the pollutants are diffusing downwind, elevated ozone levels are often found many miles from the source of precursor emission. The effects of nitrogen oxides emission are examined on a regional basis.
**Sulfur Oxides (SOx)**

Sulfur oxides constitute a class of compounds of which sulfur dioxide (SO2) and sulfur trioxide (SO3) are of greatest importance. The oxides are formed during combustion of the sulfur components in motor fuels. Relatively few sulfur oxides are emitted from motor vehicles since motor fuels are now de-sulfured. The health effects of sulfur oxides include respiratory illness, damage to the respiratory tract, and bronchia-constriction.

**Toxic Air Contaminants**

Toxic Air Contaminants (TACs) are pollutants that may result in an increase in mortality or serious illness or that may pose a present or potential hazard to human health. Health effects of TACs include cancer, birth defects, neurological damage, damage to the body’s natural defense system, and diseases that lead to death. In 1998, following a 10-year scientific assessment process, the California Air Resources Board (CARB) identified particulate matter from diesel-fueled engines as a TAC. Compared with other air toxics CARB has identified and controlled, diesel particulate matter (DPM) emissions are estimated to be responsible for about 70% of the total ambient air toxics risk (CARB 2000).

Through the 1990 amendments to the FCAA, Congress mandated that EPA regulate 188 air toxics, which are also known as hazardous air pollutants (HAPs). In the EPA’s latest final rule on the control of hazardous air pollutants from mobile sources (72 FR 8430), the agency identified 93 compounds emitted from mobile sources, which are listed in their Integrated Risk Information System (IRIS). From this list of 93 compounds, EPA has identified nine as priority mobile-source air toxics (MSATs). The high priority of these nine MSATs was based on EPA’s 2011 National Air Toxics Assessment (NATA); and the MSATs are listed as follows:

- acrolein,  
- acetaldehyde,  
- benzene,  
- 1,3-butadiene,  
- Diesel particulate matter (diesel PM),  
- Ethylbenzene,  
- formaldehyde,  
- naphthalene, and  
- polycyclic organic matter (POM).

The aforementioned 2007 rule requires controls to decrease MSAT emissions dramatically through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA’s latest emissions model, the Motor Vehicle Emissions Simulator (MOVES2014a), even if vehicle activity (vehicle miles traveled [VMT]) increases by 45%, as assumed from 2010 to 2050, a combined reduction of 90% in the total annual emission rate for the priority MSATs is projected for the same period.
Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the demographic characteristics of occupants and users and the activities involved. Sensitive receptors include residential areas, hospitals, elder-care facilities, rehabilitation centers, elementary schools, daycare centers, and parks. Residential areas are considered sensitive to air pollution because residents, including children and the elderly, tend to be at home for extended periods of time, resulting in sustained exposure to pollutants. Existing land uses surrounding the proposed project site include a mix of residential, commercial, and open spaces.

Table 27 STATE AND FEDERAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone (O₃)</td>
<td>1 hour</td>
<td>0.09 ppm</td>
<td>---</td>
<td>High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.</td>
<td>Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NOx) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.</td>
<td>Nonattainment</td>
<td>Nonattainment (Serious)</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>0.070 ppm</td>
<td>0.070 ppm (4th highest in 3 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>1 hour</td>
<td>20 ppm</td>
<td>35 ppm</td>
<td>CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.</td>
<td>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.</td>
<td>Attainment</td>
<td>Attainment/Unclassified</td>
</tr>
<tr>
<td></td>
<td>8 hours</td>
<td>9.0 ppm</td>
<td>9 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8 hours (Lake Tahoe)</td>
<td>6 ppm</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM₁₀)</td>
<td>24 hours</td>
<td>50 μg/m³</td>
<td>150 μg/m³ (expected number of days above standard &lt; or equal to 1)</td>
<td>Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic &amp; other aerosol and solid compounds are part of PM₁₀.</td>
<td>Dust- and fume-producing industrial and agricultural operations; combustion smoke &amp; vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.</td>
<td>Nonattainment</td>
<td>Attainment/Unclassified</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>20 μg/m³</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Particulate Matter (PM$_{2.5}$)</td>
<td>24 hours</td>
<td>---</td>
<td>35 μg/m$^3$</td>
<td>Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant is in the PM$<em>{2.5}$ size range. Many toxic &amp; other aerosol and solid compounds are part of PM$</em>{2.5}$.</td>
<td>Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NOx, sulfur oxides (SO$_x$), ammonia, and ROG.</td>
<td>N/A</td>
<td>Attainment/Unclassified</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Annual</td>
<td>12 μg/m$^3$</td>
<td>12.0 μg/m$^3$</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>24 hours (conformity process$^a$)</td>
<td>---</td>
<td>---</td>
<td>65 μg/m$^3$</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Secondary Standard (annual; also for conformity process$^b$)</td>
<td>---</td>
<td>---</td>
<td>15 μg/m$^3$ (99th percentile over 3 years)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO$_2$)</td>
<td>1 hour</td>
<td>0.18 ppm</td>
<td>0.100 ppm$^v$</td>
<td>Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain &amp; nitrate contamination of stormwater. Part of the “NOx” group of ozone precursors.</td>
<td>Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.</td>
<td>Attainment</td>
<td>Attainment/Unclassified</td>
</tr>
<tr>
<td>Annual</td>
<td>0.030 ppm</td>
<td>0.053 ppm</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO$_2$)</td>
<td>1 hour</td>
<td>0.25 ppm</td>
<td>0.075 ppm$^v$ (99th percentile over 3 years)</td>
<td>Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.</td>
<td>Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes, Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.</td>
<td>1-hour</td>
<td>Attainment</td>
</tr>
<tr>
<td>3 hours</td>
<td>---</td>
<td>---</td>
<td>0.5 ppm$^v$</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>24 hours</td>
<td>0.04 ppm</td>
<td>0.14 ppm (for certain areas)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Annual</td>
<td>---</td>
<td>---</td>
<td>0.030 ppm (for certain areas)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Lead (Pb)$^c$</td>
<td>Monthly</td>
<td>1.5 μg/m$^3$</td>
<td>---</td>
<td>Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.</td>
<td>Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.</td>
<td>Attainment</td>
<td>Attainment/Unclassified</td>
</tr>
<tr>
<td>Calendar Quarter</td>
<td>---</td>
<td>---</td>
<td>1.5 μg/m$^3$ (for certain areas)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Rolling 3-month average</td>
<td>---</td>
<td>---</td>
<td>0.15 μg/m$^3$</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Sulfate</td>
<td>24 hours</td>
<td>25 μg/m$^3$</td>
<td>---</td>
<td>Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.</td>
<td>Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.</td>
<td>Attainment</td>
<td>N/A</td>
</tr>
</tbody>
</table>

State Route 118 Widening Project
Environmental Consequences

Long-term (Operational) Emissions

Regional Conformity

The currently approved plans are the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2017 Federal Transportation Improvement Program (FTIP). The 2016 RTP/SCS was adopted by SCAG on April 4, 2012; FHWA and FTA approved the 2016 RTP/SCS on June 1, 2016. The 2017 FTIP was adopted by SCAG on September 14, 2016 and federally approved on December 16, 2016. The most recent Amendment to the 2017 FTIP is No. 17-05, approved by FHWA and FTA on March 22, 2017.

Based on the proposed project scope of work, this project is not exempt from conformity requirements according to 40 CFR 93.126-128. A request for an amendment has been submitted to revise the proposed project limits to include the planned improvements on SR-23.

Project Level Conformity

Carbon Monoxide Analysis

The local analysis is commonly referred to as a project-level hot-spot analysis. Conformity must be demonstrated at the project-level for projects in CO, PM10, and PM2.5 nonattainment maintenance areas. As discussed previously, a region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant CAAQS or NAAQS. In general, projects must not cause the standards to be violated; and in nonattainment areas, the project must not cause any increase in the number and severity of violations.
The CO Protocol has a screening exercise that would determine whether the project requires a qualitative or quantitative analysis, or whether none would be necessary. Below is a step-by-step explanation of the CO Protocol flowchart.

Q. 3.1.1. Is this project exempt from all emissions analyses?
A. NO. Table 1 of the CO Protocol is Table 2 of 40 CFR 93.126. Section 3.1.1 is inquiring if the project is exempt from all the requirements to determine conformity. The proposed project is not classified according to Table 1; and therefore, it is not deemed exempt from all emissions analyses.

Q. 3.1.2. Is project exempt from regional emissions analyses?
A. NO. Table 2 of the CO Protocol is Table 3 of 40 CFR 93.127. The question is attempting to determine if project is exempt from regional emissions analyses. The proposed project is not listed in Table 2; and therefore, it is not exempt from regional emissions analyses. The flowchart directs the project evaluation to Section 3.1.3.

Q. 3.1.3. Is the project locally defined as regionally significant?
A: YES. Projects not listed in Table 1 or Table 2 of the Protocol are usually considered regionally significant unless otherwise stipulated via interagency consultation.

Q. 3.1.4. Is project in a federal attainment area?
A. NO. Ventura County, which is located in the SCCAB, is designated as non-attainment for federal ozone standard among other pollutants. The proposed project is thus not in a federal attainment area.

Q. 3.1.5. Is there a conforming RTP and TIP?
A. YES. SCAG’s most recently approved plan and program is the 2016 RTP/SCS and the 2017 FTIP.

Q. 3.1.6. Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP?
A. A project included in the FHWA approved RTP and TIP satisfies the regional analysis requirement. An amendment has been submitted to revise the project limits to include the planned improvements on SR-23. When the proposed project is successfully amended into the conforming RTP and FTIP, the project will be considered to have satisfied regional conformity requirements.

Q. 3.1.7. Has project design concept and/or scope changed significantly from that in regional analysis?
A. NO. The scope and design concept of the proposed project will be consistent with the conforming RTP and FTIP when the proposed project is successfully amended.
Q. 3.1.9. Examine Local Impacts

A. Section 3.1.9 of the flowchart directs the project evaluation to Section 4, Local Air Quality Analysis. This concludes the evaluation of CO Protocol.

The Local Analysis starts at level 1 of the CO Protocol. This flowchart is utilized in determining the type of project-level CO analysis required for the proposed project. A step-by-step response to each step and level is provided below. Each level cited is followed by a response, which will determine the next applicable level of the flowchart.

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

A. NO, as shown in Table 4, the proposed project is located in CO attainment-unclassified area.

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

A. NO. As indicated above, project is located in a CO attainment-unclassified area. The flowchart directs the evaluation to Level 7.

Q. Level 7. Does project worsen air quality?

The CO Protocol Section 4.7.1 recommends the following criteria to be used to determine whether the project is likely to worsen air quality for the area substantially affected by the project.

- The project significantly increases the percentage of vehicles operating in cold start mode. Increasing the number of vehicles operating in cold start mode by as little as 2 percent should be considered potentially significant.

The purpose of the project is to alleviate traffic congestion, improve traffic operations, and accommodate future traffic volumes within the project vicinity. Therefore, the proposed project would not increase the percentage of vehicles operating in cold start mode.

- The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5 percent should be considered potentially significant. Increasing the traffic volume by less than 5 percent may still be potentially significant if there is also a reduction in average speeds.

As summarized in Table 28, peak-hourly volumes at ramp intersections remain unchanged between Build and No-Build alternatives in the opening years of 2025 and 2030 as well as in the horizon year 2040. The proposed project is not anticipated to result in increase in traffic volumes.

- The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 mph) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered as worsening traffic flow.
The proposed project would not worsen traffic flow with the implementation of the project. As shown in Table 28, delay and LOS remain the same between Build and No-Build alternatives.

All criteria in section 4.7.1 of the CO Protocol have been satisfied, indicating that no further analysis is needed according to Figure 3 (not shown) of the CO Protocol. The analysis has sufficiently addressed the CO impact and demonstrated that the proposed project is not anticipated to cause or contribute to any new violations of the federal CO standard.
# Table 28 Peak Hourly Volumes, Level of Service (LOS), and Delay at Ramp Intersections

<table>
<thead>
<tr>
<th>Ramp Intersect</th>
<th>Direction</th>
<th>2014</th>
<th>2025</th>
<th>2030</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Peak Hour Volume</td>
<td>LOS</td>
<td>Delay (sec)</td>
<td>Peak Hour Volume</td>
</tr>
<tr>
<td>Tapo Canyon Rd.</td>
<td>WB</td>
<td>1130</td>
<td>F</td>
<td>13.59</td>
<td>1254</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>1100</td>
<td>F</td>
<td>24.44</td>
<td>1221</td>
</tr>
<tr>
<td>Sycamore Dr.</td>
<td>WB</td>
<td>880</td>
<td>F</td>
<td>18.55</td>
<td>976</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>825</td>
<td>F</td>
<td>16.58</td>
<td>915</td>
</tr>
<tr>
<td>Erringer Rd.</td>
<td>WB</td>
<td>690</td>
<td>A</td>
<td>0.00</td>
<td>765</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>440</td>
<td>A</td>
<td>0.00</td>
<td>488</td>
</tr>
<tr>
<td>First Street</td>
<td>WB</td>
<td>1080</td>
<td>A</td>
<td>0.00</td>
<td>1198</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>540</td>
<td>A</td>
<td>0.00</td>
<td>599</td>
</tr>
<tr>
<td>Madera Rd.</td>
<td>WB</td>
<td>250</td>
<td>A</td>
<td>0.00</td>
<td>277</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>1250</td>
<td>F</td>
<td>16.90</td>
<td>1387</td>
</tr>
<tr>
<td>Madera / View Lane</td>
<td>WB</td>
<td>440</td>
<td>A</td>
<td>0.00</td>
<td>488</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collins Dr.</td>
<td>WB</td>
<td>490</td>
<td>A</td>
<td>0.00</td>
<td>543</td>
</tr>
<tr>
<td>Princeton Ave.</td>
<td>WB</td>
<td>550</td>
<td>A</td>
<td>0.87</td>
<td>610</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>320</td>
<td>A</td>
<td>0.00</td>
<td>355</td>
</tr>
<tr>
<td>New Los Angeles Ave.</td>
<td>WB</td>
<td>1860</td>
<td>F</td>
<td>24.77</td>
<td>2064</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>782</td>
<td>F</td>
<td>14.85</td>
<td>868</td>
</tr>
</tbody>
</table>

Source: Traffic Engineering Branch, 5/2/2017
Particulate Matter Analysis

The FCAA section 176(c)(1)(B) is the statutory criterion that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. Section 176(c)(1)(B) states that federally-supported transportation projects must not “cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.” To meet statutory requirements, the March 10, 2006 final rule requires PM$_{2.5}$ and PM$_{10}$ hot-spot analyses to be performed for projects of air quality concern. Qualitative hot-spot analyses would be done for these projects before appropriate methods and modeling guidance are available and quantitative PM$_{2.5}$ and PM$_{10}$ hot-spot analyses are required under 40 CFR 93.123(b)(4). In addition, through the final rule, EPA determined that projects not identified in 40 CFR 93.123(b)(1) as projects of air quality concern (POAQC) have also met statutory requirements without any further hot-spot analyses (40 CFR 93.116(a)). The final rule requires Interagency Consultation concurrence on the project-level hot spot analysis and findings for every project in a PM nonattainment and maintenance area, which is not fully exempt from conformity analysis requirements. Interagency Consultation concurrence is required for both projects where a detailed analysis is done, and for the decision that a project is not a POAQC and does not need a detailed analysis.

The proposed project is located in Ventura County within the SCCAB which is in attainment-unclassified area for PM$_{10}$ and PM$_{2.5}$. Therefore, the project meets the conformity requirements for 40 CFR 93.116 and 93.123 for both PM$_{2.5}$ and PM$_{10}$ without hot spot analyses. However, the County does not meet the PM$_{10}$ state standards. The SCCAB was designated attainment for PM$_{2.5}$ effective April 1, 2013.

The monitored concentrations measured in 2013 through 2015, range from 28.6 Micrograms per Cubic Meter of Air (ug/m$^3$) to 30.8 ug/m$^3$ for the 24-hour PM$_{2.5}$ and from 8.3 ug/m$^3$ to 9.2 ug/m$^3$ for the annual PM$_{2.5}$. The proposed project’s location thus has the ambient level of PM$_{2.5}$ below the federal 24-hour standard of 35 ug/m$^3$ and the federal and state annual standards of 12 ug/m$^3$. The ambient level of PM$_{10}$ concentrations measured in 2013 through 2015 range from 41.1 ug/m$^3$ to 63.5 ug/m$^3$; and they are significantly below the federal 24-hour PM$_{10}$ standard of 150 ug/m$^3$ and are below the state 24-hour standard of 50 ug/m$^3$ except in 2015. These monitoring data were collected at a representative monitoring station selected based on the land use, traffic impacts, and proximity to the highway in comparison to the project location.

Based on the travel activity data provided by the Office of Advance Planning, emissions of particulate matters (PM$_{10}$ and PM$_{2.5}$) have been estimated using CT-EMFAC2014; and are summarized in Tables 29 through 31. As shown, emissions of PMs for the Build Alternatives are compared to those for the No-Build Alternative in the opening and horizon years. Furthermore, the tables present a comparison of PM emissions for all future Alternatives with those in the existing year.
Table 29 PM$_{10}$ and PM$_{2.5}$ Emissions for All Alternatives in 2025 (Opening Year)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Emissions (g/day)</th>
<th>Vs No-Build (in %)</th>
<th>Vs 2014 Existing (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2025 No Build</td>
<td>2025 Alt 2</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>47869</td>
<td>46688</td>
<td>47810</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>22378</td>
<td>19473</td>
<td>19972</td>
</tr>
</tbody>
</table>

Table 30 PM$_{10}$ and PM$_{2.5}$ Emissions for All Alternatives in 2030 (Opening Year)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Emissions (g/day)</th>
<th>Vs No-Build (in %)</th>
<th>Vs 2014 Existing (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2030 No Build</td>
<td>2030 Alt 2</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>47869</td>
<td>46897</td>
<td>49366</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>22378</td>
<td>19315</td>
<td>20367</td>
</tr>
</tbody>
</table>

Table 31 PM$_{10}$ and PM$_{2.5}$ Emissions for All Alternatives in 2040 (Horizon Year)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Emissions (g/day)</th>
<th>Vs No-Build (in %)</th>
<th>Vs 2014 Existing (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2040 No Build</td>
<td>2040 Alt 2</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>47869</td>
<td>47694</td>
<td>50326</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>22378</td>
<td>19372</td>
<td>20459</td>
</tr>
</tbody>
</table>

The emission estimates indicate that PM$_{10}$ and PM$_{2.5}$ emissions are anticipated to increase with all Build Alternatives when compared to the No-Build Alternative in all future years. However, future PM$_{2.5}$ emissions for all Build Alternatives in all future years are anticipated to result in decrease when compared to the existing condition. PM$_{10}$ emissions for the Build Alternatives are anticipated to result in increase when compared to the existing condition except in 2025 when emissions are anticipated to decrease slightly.

**Mobile Source Air Toxic (MSAT) Analysis**

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAAA) of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) [https://www.epa.gov/iris](https://www.epa.gov/iris). In addition, EPA identified nine compounds with
significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 2011 National Air Toxics Assessment (NATA) https://www.epa.gov/nationa-air-toxics-assessment. These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

According to EPA, MOVES2014 is a major revision to MOVES2010 and improves upon it in many respects. MOVES2014 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2010. These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicle sales, population, age distribution, and Vehicle Miles Traveled (VMT) data.

MOVES2014 incorporates the effects of three new Federal emissions standard rules not included in MOVES2010. These new standards are all expected to impact MSAT emissions and include Tier 3 emissions and fuel standards starting in 2017 (79 FR 60344), heavy-duty greenhouse gas regulations that phase in during model years 2014-2018 (79 FR 60344), and the second phase of light duty greenhouse gas regulations that phase in during model years 2017-2025 (79 FR 60344). Since the release of MOVES2014, EPA has released MOVES2014a. In the November 2015 MOVES2014a Questions and Answers Guide, EPA states that for on-road emissions, MOVES2014a adds new options requested by users for the input of local VMT, includes minor updates to the default fuel tables, and corrects an error in MOVES2014 brake wear emissions. The change in brake wear emissions results in small decreases in PM emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014.

Using EPA’s MOVES2014a model as shown in Figure 16, FHWA estimates that even if VMT increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.
Figure 16 Projected National MSAT Emission Trends 2010 – 2050 For Vehicles Operating On Roadways Using EPA’s MOVES2014a Model

Note: Trends for specific locations may be different, depending on locally derived information, representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.

Source: EPA MOVES2014a model runs conducted by FHWA, September 2016.
Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Nonetheless, air toxics concerns continue to be raised on highway projects during the NEPA process. Even as the science emerges, we are duly expected by the public and other agencies to address MSAT impacts in our environmental documents. The FHWA, EPA, the Health Effects Institute (HEI), and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

Incomplete or Unavailable Information for Project Specific MSAT Impacts Analysis

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

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is “a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects” (EPA, https://www.epa.gov/iris/). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the HEI. A number of HEI studies are summarized in Appendix D of FHWA’s Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are: cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI Special Report 16, https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects) or in the future as vehicle emissions
substantially decrease.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (Special Report 16, https://www.healtheftacts.org/publication/mobile-source-air-toxicscritical-review-literature-exposure-and-health-effects). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, “[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk (https://www.epa.gov/iris).”

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

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

**Tiered Approach for MSAT Impacts Analysis**

Due to the emerging state of the MSAT-related science and techniques; there are no established criteria for determining the relative significance of air toxics emissions. Given the state, however, the FHWA, in its updated Interim Guidance published in October 2016, recommends a range of options deemed appropriate for addressing and documenting the MSAT issue in NEPA documents as described in Section 3.2.3.

The scope of the proposed project is to add eastbound and westbound lanes on SR-118, from Los Angeles Avenue in the City Moorpark to Tapo Canyon Road in the City of Simi Valley and on SR-23 from 0.8 miles north of Tierra Rejada Road undercrossing to New Los Angeles Avenue undercrossing. Based on a review of the proposed scope, traffic data, and settings, this project is anticipated to have meaningful differences in MSAT emissions among project alternatives. In accordance with the FHWA Interim Guidance, the project therefore requires a quantitative analysis in an effort to: 1) evaluate the levels of emissions for the priority MSATs for the project alternatives for the current, opening, and horizon years; and 2) utilize its result as a basis for comparison and differentiate among the project alternatives.

**Project Analysis**

A quantitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The quantitative assessment presented below is derived in part from a study conducted by the FHWA entitled “A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives”, found at: http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.cfm.

The project specific travel activity data required in estimating MSAT emissions include roadway length, truck traffic percentage, hours of vehicle activity, VMT, and speed distribution along each of the segments. Periods in each day are defined as: AM peak period from 6 AM to 9 AM; PM peak period from 3 PM to 7 PM; mid-day period from 9 AM to 3 PM; evening period from 7 PM to 9 PM; and night-time.
period from 9 PM to 6 AM. The MSAT analyses were performed for the existing year (2014), opening years (2025) and (2030), and horizon year (2040) for the No Build and Build scenarios. It should be noted that this MSAT emissions analysis does not include emissions from local arterials because detailed traffic data on arterials are not available.

For each alternative, the amount of MSAT emitted would be proportional to VMTs, assuming that other variables such as fleet mix are the same. The VMTs for the Build Alternatives are estimated to be higher than those for the No-Build Alternative in all future analyses years (2025, 2030, and 2040). The increase in VMTs is likely due to the increase in roadway capacity.

Emissions for each priority pollutants are estimated for all Alternatives in 2014, 2025, 2030, and 2040. The emissions estimates for the Build Alternatives are then compared to those for the No-Build Alternative in the opening and horizon years. MSAT emissions for all future Alternatives are also compared to those for the existing year (2014). Emissions of the priority MSAT pollutants and their differences are presented in Tables 32 through 34.

Table 32 MSAT Emissions for All Alternatives in 2025 (Opening Year)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Emissions (g/day)</th>
<th>Vs No-Build (in %)</th>
<th>Vs 2014 Existing (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2025 No Bld</td>
<td>2025 Alt 2</td>
</tr>
<tr>
<td>Benzene</td>
<td>2126.1</td>
<td>725.0</td>
<td>746.9</td>
</tr>
<tr>
<td>Acrolein</td>
<td>83.7</td>
<td>24.4</td>
<td>25.7</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>964.4</td>
<td>282.1</td>
<td>290.1</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2508.1</td>
<td>739.2</td>
<td>764.9</td>
</tr>
<tr>
<td>Butadiene</td>
<td>381.6</td>
<td>111.1</td>
<td>116.9</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>102.3</td>
<td>43.1</td>
<td>43.2</td>
</tr>
<tr>
<td>POM</td>
<td>72.7</td>
<td>22.1</td>
<td>23.1</td>
</tr>
<tr>
<td>Diesel PM</td>
<td>4658.3</td>
<td>451.5</td>
<td>465.1</td>
</tr>
<tr>
<td>DEOG</td>
<td>9128.2</td>
<td>2753.1</td>
<td>2801.3</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>1327.0</td>
<td>550.2</td>
<td>553.8</td>
</tr>
<tr>
<td>Pollutant</td>
<td>Total Emissions (g/day)</td>
<td>Vs No-Build (in %)</td>
<td>Vs 2014 Existing (in %)</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>2030 No Bld</td>
<td>2030 Alt 2</td>
</tr>
<tr>
<td>Benzene</td>
<td>2126.1</td>
<td>585.6</td>
<td>619.6</td>
</tr>
<tr>
<td>Acrolein</td>
<td>83.7</td>
<td>19.6</td>
<td>21.7</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>964.4</td>
<td>240.3</td>
<td>249.5</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2508.1</td>
<td>619.7</td>
<td>652.7</td>
</tr>
<tr>
<td>Butadiene</td>
<td>381.6</td>
<td>89.8</td>
<td>99.2</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>102.3</td>
<td>35.1</td>
<td>35.2</td>
</tr>
<tr>
<td>POM</td>
<td>72.7</td>
<td>17.0</td>
<td>18.6</td>
</tr>
<tr>
<td>Diesel PM</td>
<td>4658.3</td>
<td>327.1</td>
<td>341.5</td>
</tr>
<tr>
<td>DEOG</td>
<td>9128.2</td>
<td>2361.7</td>
<td>2385.5</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>1327.0</td>
<td>442.3</td>
<td>449.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Emissions (g/day)</th>
<th>Vs No-Build (in %)</th>
<th>Vs 2014 Existing (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2040 No Bld</td>
<td>2040 Alt 2</td>
</tr>
<tr>
<td>Benzene</td>
<td>2126.1</td>
<td>458.6</td>
<td>488.5</td>
</tr>
<tr>
<td>Acrolein</td>
<td>83.7</td>
<td>16.1</td>
<td>18.0</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>964.4</td>
<td>221.0</td>
<td>225.5</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2508.1</td>
<td>554.2</td>
<td>576.0</td>
</tr>
<tr>
<td>Butadiene</td>
<td>381.6</td>
<td>74.8</td>
<td>82.8</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>102.3</td>
<td>25.5</td>
<td>25.7</td>
</tr>
<tr>
<td>POM</td>
<td>72.7</td>
<td>12.9</td>
<td>14.0</td>
</tr>
<tr>
<td>Diesel PM</td>
<td>4658.3</td>
<td>246.2</td>
<td>252.9</td>
</tr>
<tr>
<td>DEOG</td>
<td>9128.2</td>
<td>2216.5</td>
<td>2185.2</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>1327.0</td>
<td>319.4</td>
<td>326.8</td>
</tr>
</tbody>
</table>
The increase in VMTs for the Build Alternatives are anticipated to result in localized increases in MSAT emissions when compared to the No-Build Alternative. As shown above, Build emissions are anticipated to result in an increase in all MSAT emissions when compared to the No Build Alternative, except for Naphthalene in 2030 Build Alternative 3 and for DEOG in 2040. It should be emphasized, however, that MSAT emissions in all future years (2025, 2030, and 2040) are anticipated to significantly decrease when compared to the existing (2014) conditions.

As mentioned previously, the magnitude and the duration of the potential increases as a result of the overall project cannot be accurately quantified because research is still being conducted on health effects and modeling techniques and due to the lack of available data on local arterials. Furthermore, while these emissions are estimated based on the vehicle fleet and fuel regulations current up to the development of EMFAC2014, the emissions of MSAT will likely be further reduced in the future due to implementation of future vehicle and fuel regulations by ARB and EPA.

**Construction (Short-term) Impacts**

The construction of the proposed project at each individual site is anticipated to last approximately 2 years. Therefore, emissions from construction related activities are considered temporary as defined in 40 CFR 93.123(c)(5). Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

<table>
<thead>
<tr>
<th>Table 35 Construction Activities and Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milestone</strong></td>
</tr>
<tr>
<td>Advertisement and Award of Contract</td>
</tr>
<tr>
<td>Construction First Phase (EB improvements)</td>
</tr>
<tr>
<td>Construction Second Phase (WB improvements)</td>
</tr>
<tr>
<td>Construction Third Phase (Bridge Widening without additional capacity)</td>
</tr>
</tbody>
</table>

According to 40 CFR 93.123 (c)(5), hot-spot analyses are not required to consider construction related activities that cause temporary increases in emissions. Temporary increases in emissions are defined as those that occur only during the construction phase and that last five years or less at any individual site. The proposed project has construction duration of approximately 2 years for each individual site:
improvements in the eastbound (EB) direction will be constructed from 2021 to 2023 in Phase 1; improvements in the WB direction will be constructed from 2023 to 2025 in Phase 2. Construction at individual site will not last more than five years. Emissions from the construction activities therefore are considered temporary pursuant to 40 CFR 93.123(c)(5) and a qualitative analysis is provided accordingly.

An estimate of approximate construction emissions is provided using the latest Sacramento Metropolitan Air Quality Management District’s (SMAQMD) Road Construction Model (RoadConstructionEmissionsModelVer8.1.0). While the model was developed for Sacramento conditions in terms of fleet emission factors, silt loading, and other modeling assumptions, it is considered adequate for estimating road construction emissions by the San Joaquin Valley Air Pollution Control District under its Indirect Source regulations and the South Coast Air Quality Management District (SCAQMD) in its CEQA guidance; and is used for that purpose in this project analysis.

**No-Build Alternative**

The No-Build Alternative would not result in the construction of any of the proposed improvements and therefore, would not result in temporary, construction-related impacts to air quality.

**Build Alternatives**

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment also are anticipated and would include CO, NOx, VOCs, directly-emitted particulate matter (PM\(_{10}\) and PM\(_{2.5}\)), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NOx and VOCs in the presence of sunlight and heat. Construction activities associated with the build alternatives of the proposed project would be temporary and would not require more than five years to complete; therefore, construction emissions are not considered for conformity purposes.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM\(_{10}\), PM\(_{2.5}\), and small amounts of CO, SO\(_2\), NOx, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM\(_{10}\) emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM\(_{10}\) emissions
would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the EPA to add 1.09 tonne (1.2 tons) of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Caltrans' Standard Specifications (Section 14-9.02) pertaining to dust minimization requires use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction. The proposed project is located within the SCCAB and is required to comply with the respective VCAPCD Fugitive Dust Rule to minimize emissions of fugitive dust during construction activities.

In addition to fugitive dust emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO2, NOx, VOCs and some soot particulate (PM10 and PM2.5) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site. In order to minimize the temporary exhaust emissions from the heavy-duty trucks and construction equipment adjacent to certain sensitive receptors, certain construction activities, e.g., extended idling, material storage, and equipment maintenance, would need to be conducted in areas at least 500 feet away from those sensitive receptors.

SO2 is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Off-road diesel fuel meeting Federal standards can contain 300 parts per million (ppm) or more of sulfur, whereas on-road diesel is restricted to less than 15 ppm of sulfur. However, under California law and ARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 ppm), thus SO2-related issues due to diesel exhaust will be minimal. Some phases of construction, particularly asphalt paving, would result in short-term odors in the immediate area of each paving site(s). Such odors would be quickly dispersed below detectable thresholds as distance from the site(s) increases.

Construction emissions for the proposed project are estimated based on engineers’ estimate for construction activities, using the Road Construction Model v8.1, developed by the Sacramento Metropolitan Air Quality Management District (SMAQMD). A summary of construction emissions is provided in Tables 36 and 37.
During construction, contractors are required to comply with the requirements of all applicable state and local regulations including, but not limited to, VCAPCD Rules 50 (Opacity), 51 (Nuisance), and 55 (Fugitive Dust).

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air disease and cancer.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. Serpentinite may contain chrysotile asbestos, especially near fault zones. Ultramafic rock, a rock closely related to serpentinite, may also contain asbestos minerals. Asbestos can also be associated with other rock types in California, though much less frequently than serpentinite and/or ultramafic rock. Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are
particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. The California Department of Conservation, Division of Mines and Geology have developed a map of the state showing the general location of ultramafic rock in the state. Los Angeles County is one of the Counties identified as one of the Counties containing serpentinite and ultramafic rock.

According to the United States Geological Survey (USGS) Report Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California (2011), Ventura County is one of five counties with no reported asbestos occurrences, and (or) ultramafic rock/serpentinite. Therefore, no or little potential impacts from naturally occurring asbestos during project construction would occur.

While unlikely, if naturally occurring asbestos, serpentine, or ultramafic rock is discovered during grading operations Section 93105, Title 17 of the California Code of Regulations requires notification to the VCAPCD by the next business day and implementation of the following measures within 24-hours:

1. Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos;

2. The speed of any vehicles and equipment traveling across unpaved areas must be no more than fifteen (15) miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust that is visible crossing the project boundaries;

3. Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos; and

4. Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.

5. **Cumulative Impacts**

Projects with particular relevance to air quality impacts are shown in Table 38.
Table 38 Air Quality Cumulative Project(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simi Valley Landfill and Recycling Center Expansion Project</td>
<td>2801 North Madera Road Simi Valley, CA 93065</td>
<td>The approved Conditional Use Permit boundary has expanded to encompass 887 acres, within which the existing 185-acre waste disposal area is proposed to expand north and west from its current location to encompass 186 acres of additional waste disposal area. The buffer area around the disposal footprint would expand from 112 acres to 516 acres, for a net increase of 404 acres. The buffer area surrounding the disposal footprint primarily consists of open space area, but may also include access roads, material and equipment Storage yards, mitigation areas, recycling facilities and equipment, and drainage structures. The permitted fill elevation would increase from 1,118 feet above msl to approximately 1,270 feet above msl, for a net increase of 152 feet. The increase in elevation would be applied gradually as each phase of the landfill is developed.</td>
<td>County supervisors in July 2011 approved Waste Management’s proposal to add 186 acres to the site, increasing its size to 887 acres, and to double the maximum amount of daily trash that can be accepted there, from 3,000 tons to 6,000. The supervisors also green-lighted increasing the landfill’s elevation from 1,118 feet to 1,270 feet. In May 2017, Waste Management completed building the first, new 18-acre “cell” for trash disposal. Prior to the latest cell being built, the site had 143 acres designated for trash. With the new cell, the site now has 161 such acres. The site is permitted for 368 acres of landfill and thus has 207 more acres of cells potentially to be built.</td>
</tr>
</tbody>
</table>

Emissions from project construction and operation of the Simi Valley Landfill and Recycling Center Expansion Project would exceed the VCAPCD daily operational nitrogen oxide (NOx) and reactive organic compounds (ROC) emission thresholds. Project construction and operation would result in offsite ambient air pollutant concentrations that would contribute to or exacerbate exceedances of the following standards: (1) 1-hour California Ambient Air Quality Standard (CAAAQS) and National Ambient Air Quality Standard (NAAQS) for nitrogen dioxide (NO2); (2) 24-8 hour CAAQS and NAAQS for particulate matter less than 10 microns in diameter (PM10); (3) annual CAAQS for PM10; (4) the 24-hour NAAQS for particulate matter less than 2.5 microns in diameter (PM 2.5); and (5) annual CAAQS for PM2.5.

The emission estimates for the proposed project indicate that PM10 and PM2.5 emissions are anticipated to increase with all Build Alternatives when compared to the No-Build Alternative in all future years. However, the proposed project would
not substantially contribute to cumulative impacts because future PM$_{2.5}$ emissions for all Build Alternatives in all future years are anticipated to result in decrease when compared to the existing condition. Also, PM$_{10}$ emissions for the Build Alternatives are anticipated to result in an increase when compared to the existing condition except in 2025 when emissions are anticipated to decrease slightly. The project’s incremental contribution is not cumulatively considerable because the project will comply with the requirements in the State Implementation Plan (SIP) process, which provides specific requirements that will avoid or substantially lessen the cumulative impact.

The SIP process ensures compliance with state and federal air quality standards. In order to meet their transportation planning goals, Metropolitan Planning Organizations (MPO) and Regional Transportation Agencies (RTA) create long-range plans and programs, such as Regional Transportation Plans (RTP) and Regional Transportation Improvement Programs (RTIP), which include proposed transportation projects. The projects included in these plans and programs must be consistent with (or conform to) the approved SIP. If a project would contribute to the violation of a standard, it cannot be included in the conforming plan and cannot be built.

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

Most of the construction impacts to air quality are short-term in duration and, therefore, will not result in long-term adverse conditions. Implementation of the following measures, some of which may also be required for other purposes such as storm water pollution control, will reduce any air quality impacts resulting from construction activities:

- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.

- Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
  - All trucks shall be required to cover their loads as required by California Vehicle Code 23114.
  - All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering.
application of environmentally-safe soil stabilization materials, and/or roll-``compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

- Graded and/or excavated inactive areas of the construction site shall be monitored by (indicate by whom) at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.

- Signs shall be posted on-site limiting traffic to 15 miles per hour or less.

- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.

- Adjacent streets and roads shall be swept at least once a day, preferably at the end of the day, if visible oil material is carried over to adjacent streets and roads.

- Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

- Caltrans Standard Specifications 2015 specifically require compliance with all applicable laws and regulations related to air quality, which would include applicable rules and regulations of the respective APCD such as Rules 50, 51, and 55.

The proposed project is located within the boundaries of the VCAPCD within the SCCAB. Measures to control fugitive dust caused by project construction are presented in VCAPCD Rule 55 – Fugitive Dust. The project construction will need to comply with these control measures and any other local or
Climate Change
Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

2.2.6 Noise
Regulatory Setting
The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act
CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/23 Code of Federal Regulations Part 772 (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772
For highway transportation projects with Federal Highway Administration (FHWA) involvement (and the Department, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 Code of Federal Regulations [CFR] 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 39 lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.
Table 39 Noise Abatement Criteria

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>NAC, Hourly A-Weighted Noise Level, Leq(h)</th>
<th>Description of activity category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57 (Exterior)</td>
<td>Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.</td>
</tr>
<tr>
<td>B(^1)</td>
<td>67 (Exterior)</td>
<td>Residential.</td>
</tr>
<tr>
<td>C(^1)</td>
<td>67 (Exterior)</td>
<td>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.</td>
</tr>
<tr>
<td>D</td>
<td>52 (Interior)</td>
<td>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.</td>
</tr>
<tr>
<td>E</td>
<td>72 (Exterior)</td>
<td>Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.</td>
</tr>
<tr>
<td>F</td>
<td>No NAC—reporting only</td>
<td>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.</td>
</tr>
<tr>
<td>G</td>
<td>No NAC—reporting only</td>
<td>Undeveloped lands that are not permitted.</td>
</tr>
</tbody>
</table>

\(^1\) Includes undeveloped lands permitted for this activity category.

Figure 17 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.
According to the Caltrans’ Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Department’s Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of
noise abatement is basically an engineering concern. A minimum 5 dBA reduction for all impacted receptors in the future noise levels must be achieved for an abatement to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. Additionally, a noise reduction of at least 7 dBA must be achieved at one or more benefited receptors for an abatement measure to be considered reasonable. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents’ acceptance and the cost per benefited residence.

Affected Environment
The information in this section is based on the Noise Study Report (NSR) prepared for the project. The purpose of the NSR is to evaluate traffic noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23CFR772) “Procedures for Abatement of Highway Traffic Noise”. 23CFR772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to 23CFR772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Protocol) (Caltrans 2011) provides Caltrans policy for implementing 23CFR772 in California. Under 23CFR772.7, projects are categorized as Type I, Type II projects, or Type III projects. FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. The proposed project has been deemed to be a Type I project. As such, traffic noise analysis has been conducted for this project in accordance with the Protocol for Type I projects.

Sensitive Receptors
Sensitive receptors in the project area were categorized by land use type, and the extent of frequent human use. As stated in the Protocol, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Although all developed land uses are evaluated in this analysis, the focus is on locations of frequent human use that would benefit from a lowered noise level.

Traffic noise impacts, as defined in 23CFR772.5, occur when the predicted noise level in the design year approaches or exceeds the NAC specified in 23CFR772, or a predicted noise level substantially exceeds the existing noise level (a “substantial” noise increase). Noise levels are expressed in terms the A-weighted decibel (dBA) and the one-hour equivalent sound level (Leq[h]).
Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dBA changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dBA in typical noisy environments. Further, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dBA increase in sound, would generally be perceived as barely detectable.

**Existing Land Uses**

A field investigation was conducted to identify land uses that could be subject to traffic and construction noise impacts from the proposed project. Single-family residences and multi-family residences were identified as Activity Category B while schools, park, and recreation areas were identified as Activity Category C land uses in the project area. Hotel/motel and restaurant facilities/land uses were identified under Activity Category E land uses.

As required by the Protocol, all developed land uses are evaluated in this analysis. However noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences, schools, park and recreation areas.

**Existing Traffic Noise**

A field noise investigation was conducted to determine existing noise levels and gather information to develop and calibrate the traffic noise model that was used for predicting future noise levels. Existing noise levels were recorded at 55 locations and modeled at 9 locations, which were acoustically representative of the entire area within the limits of the project. Short-term measurement locations were selected to represent each major developed area within the limits of the project. Long-term measurements were conducted to determine the noisiest hour within the project limits. Several other non-measurement locations were selected as modeling locations.

Additionally, four community background noise readings (duration of 10-minutes) were taken within the project limits. They ranged between 49 and 51 dBA–Leq(h). Background noise is the total of all noise generated within a community and is measured away from the freeway where freeway traffic noise does not contribute to the total noise level. Background noise levels are typically measured to determine the acoustical feasibility (noise reducibility of 5 dBA) of noise abatement and to ensure that noise reduction goals can be achieved. Noise abatement cannot reduce noise levels below background noise levels. The noise measurement sites were selected taking into consideration the following general site requirements:
1. Sites were acoustically representative of areas and conditions of interest. They were located at areas of human use.

2. Sites were clear of major obstructions between source and receiver. Microphone positions were more than 10 feet away from reflecting surfaces.

3. Sites were free of noise contamination by sources other than those of interest. Sites were not located near barking dogs, lawn mowers, pool pumps, air conditioners, etc.

4. Sites were not exposed to prevailing meteorological conditions that are beyond the constraints discussed in the Technical Noise Supplement (TeNs).

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). TNM 2.5 is a computer model based on two FHWA reports: FHWA-PD-96-009 and FHWA-PD-96-010 (FHWA 2004). Key inputs to the traffic noise model were the locations of roadways, shielding features (e.g., topography and buildings), noise barriers, ground type, and receivers.

Traffic noise was evaluated under existing conditions, design year non-project conditions, and design year conditions with the project alternatives. To validate the accuracy of the traffic noise model, TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. The existing ambient noise level measurements were between 46 and 69 decibels (dBA).

**Existing Noise Barriers**

1) 14 ft. high sound wall along edge of shoulder on westbound SR-118 between Tapo Canyon Rd. and Kirkwood Ct.

2) 14 ft. high sound wall along the edge of shoulder/right of way on westbound SR-118 between Sycamore Dr. and Erringer Rd.

3) 10 ft. high sound wall along the edge of shoulder on westbound SR-118 between Melray St. and Collins Dr.

4) 10 ft. high sound wall on earth berm along the edge of shoulder on westbound SR-118 between Collins Dr. and Princeton Ave.

5) 10 ft. high soundwall on earth berm along the edge of shoulder on westbound SR-118 between Princeton Ave. and College Heights Dr.

6) 10 ft. high soundwall along the edge of shoulder on westbound SR-118 between Amherst St. and Berkeley Circle.

7) 14 ft. high soundwall along the edge of shoulder on westbound SR-23 just north of Tierra Rejada Rd.
Figure 18 Typical A-Weighted Noise Levels

Source: B&K
Environmental Consequences

No Build Alternative

If the proposed project were not built, there would be no alterations or improvements to the existing facility, thereby posing no changes to the existing noise environment and requiring no minimization of noise effects. Therefore, the No Build Alternative would present no potential impacts to the existing noise environment.

Build Alternatives

Traffic noise impacts for the Build Alternatives are considered to occur at receiver locations where predicted design-year noise levels are at least 12 dBA greater than existing noise levels, or where predicted design year noise levels approach (within 1 dBA) or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for feasibility and reasonableness as required by 23CFR772 and the Protocol.

The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dBA. The Protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in 23CFR772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

Predicted design-year traffic noise levels with the project are compared to existing conditions and to design-year no-project conditions. The comparison to existing conditions is included in the analysis to identify traffic noise impacts under 23CFR772. The comparison to future no build condition indicates the traffic noise increase resulting from the project.

Traffic noise impacts are predicted to occur at Activity Categories B and C land uses within the project area, and noise abatement has been considered. The following is a discussion of noise abatement considered for each area where traffic noise impacts are predicted.

Activity Category A

There are no land use activities under this Activity Category.

Activity Category B

Traffic noise impacts are considered to occur at receiver locations where predicted design-year noise levels are at least 12 dBA greater than existing noise levels (substantial noise increase), or where predicted design year noise levels approach (within 1dBA) or exceed the NAC of 67 dBA. All impacted residential areas within the project limits have been considered for noise abatement and acoustically feasible sound barriers have been provided in this report. However, for sites C5, G1 and site
G3, which are behind an existing soundwall, it was determined that increasing the existing soundwall height to maximum of 16 feet would not provide additional 5 dBA noise reduction.

**Activity Category C**

This activity category includes school, parks and recreation areas.

1) Atherwood Elementary School is located behind an existing 14 feet high soundwall along the westbound Route 118 between Atherwood Avenue and east of the storm drainage channel. Site C3 represents an area of frequent human use (children playground). No traffic noise impact has been identified at this school under both Alternatives.

2) Mayfair Park is located along eastbound SR-118 between First St. and Erringer Rd. Site E3 represents an area of frequent human use (one bench and basketball court). Based on the noise analysis, noise impacts have been predicted to occur at this park under both Alternatives. Therefore, noise abatement has been considered in the form of soundwalls.

3) College View Park is located on the northeast corner of VEN-118 and Collins Drive. Site F2 represents an area of frequent human use (picnic area). Based on the noise analysis, no traffic noise impacts have been predicted to occur at this park due to the project. Therefore, no noise abatement has been considered.

4) Oak Park is located along eastbound SR-118 between Collins Dr. and Alamos Canyon Rd. Site F6 represents an area of frequent human use (picnic area). Based on the noise analysis, no traffic noise impacts have been predicted to occur at this park due to the project. Therefore, no noise abatement has been considered.

5) Campus Park is located behind an existing 10 feet high soundwall along the westbound Route 118 between Penn Street and Harvard Street. Site G3 represents an area of frequent human use (picnic area) and it was determined to have traffic noise impacts under both alternatives. The results of TNM modeling indicated that increasing the existing 10 feet soundwall to a maximum height of 16 feet provides only 1-2 dBA noise reduction, which does not satisfy the minimum of 5 dBA noise reduction for acoustical feasibility and 7 dBA noise reduction to at least one receiver for reasonableness.

6) Miller Park is located along southbound SR-23. Site I3 represents an area of frequent human use (sitting area). Based on the noise analysis, no traffic noise impacts have been predicted to occur at this park due to the project. Therefore, no noise abatement has been considered.

7) There are two recreation areas located along eastbound SR-118 between Galena Avenue and Sequoia Avenue. Site B4 and B5 represent an area of frequent human use
(tennis court). Based on the noise analysis, noise impacts have been predicted to occur at these locations under both Alternatives. Therefore, noise abatement has been considered in the form of soundwalls.

8) Another recreation area is located at the northwest corner of SR-118 and Erringer Rd. along westbound Route 118. It is represented by Site ME7. For both alternatives, no freeway traffic noise Impacts have been predicted to occur at this area as a result of the proposed project. Therefore, no noise abatement has been considered.

**Activity Category D**

There is only one land use under this category.

Atherwood Elementary School – the future worst-hour interior traffic noise level of 44.9 dBA would not approach or exceed the NAC of 52 dBA. This assumes a noise insertion loss of 20 dBA or more with the windows closed in the air-conditioned classrooms (subtracted from the exterior predicted design-year noise level Site C3 at 64.9 dBA).

**Activity Category E**

Noise sensitive land uses under this activity category includes a hotel and restaurants.

1) Motel 6 is located just east of Erringer Rd. along eastbound SR-118. Site D6 represents the exterior frequent human use (outdoor swimming pool) at the Motel 6. No noise impacts have been identified at this motel due to this proposed project under both alternatives. Therefore, no noise abatement has been considered.

2) Del Taco restaurant represented by site E9A is located on the northwest corner of SR-118. It has an outdoor sitting area with tables and benches. No noise impacts have been identified at this restaurant due to the project. Therefore, no noise abatement has been considered.

3) Arena Sport Grill and Bar restaurant represented by site E9 is located on the northwest corner of SR-118. It has outdoor sitting area on the balcony. No noise impacts have been identified at this restaurant due to the project. Therefore, no noise abatement has been considered.

4) In-n-Out Burger and Jamba Juice in Moorpark Plaza located on the southwest corner of SR-23 and New Los Angeles Avenue. Site I4 and site MI4 represent an exterior area of human use. No noise impacts have been identified at these two commercial sites. Therefore, no noise abatement has been considered.
Activity Category F

There are several agriculture, manufacturing, retail facilities, and warehouses located within the project limits. However, no sensitive noise receptors were identified in these areas.

23CFR772 requires that construction noise impacts be identified, but does not specify specific methods or abatement criteria for evaluating construction noise. However, the FHWA Roadway Construction Noise Model (Federal Highway Administration 2006) can be used to determine if construction would result in adverse construction noise impacts on land uses or activities in the project area.

Construction (Short-term) Impacts

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans standard specifications, Section 7-1.01I, Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

Figure 19 summarizes typical 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 70 to 90 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA per doubling of distance. Normally, construction noise levels should not exceed 86 dBA (Lmax) at a distance of 50 feet. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans standard specifications and would be short-term, intermittent, and dominated by local traffic noise.
**Figure 19 Construction Equipment Noise Levels**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>A-Weighted Sound Level (dBA) At 50 Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compactor (Rollers)</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Front Loader</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Backhoe</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Tractor</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Scraper, Grader</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Paver</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Truck</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Concrete Mixer</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Concrete Pump</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Crane (Movable)</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Crane (Derrick)</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Pump</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Generator</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Compressor</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Pneumatic Wrench</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Jackhammer and Drill</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Pile Drivers (Peak Levels)</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Vibrator</td>
<td>60 70 80 90 100 110</td>
</tr>
<tr>
<td>Saw</td>
<td>60 70 80 90 100 110</td>
</tr>
</tbody>
</table>

Source: "Handbook of Noise Control," by Cyril Harris, 1979
Cumulative Impacts

Traffic noise from a freeway in an area where other manmade noise sources are part of ambient background noise becomes less audible with increasing distance from the freeway. As a result, the potential for cumulative noise impacts is limited to those receivers that are within the noise exposure area. None of the related projects in the immediate project vicinity would generate construction or operation noise that would cumulatively contribute to the noise levels associated with the proposed project. Implementation of abatement measures discussed below would reduce the project’s noise effects. Therefore, the proposed project would not result in cumulative impacts related to noise.

Avoidance, Minimization, and/or Abatement Measures

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of soundwalls, which are listed in Table 40. The locations of the proposed soundwalls, which are the same for both Build Alternatives, are shown in Figure 20. These measures may change based on input received from the public. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.
### Table 40 Summary of Acoustically Feasible Soundwalls

<table>
<thead>
<tr>
<th>Soundwall</th>
<th>Direction</th>
<th>Location</th>
<th>Acoustically Feasible Height Range (ft)</th>
<th>Approximate Length (ft)</th>
<th>Noise Attenuation Range (dBA)</th>
<th>Number of Benefitted Receivers</th>
<th>Reasonable Allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW-1</td>
<td>EB</td>
<td>Between Collins Dr and Madera Rd</td>
<td>10 to 16</td>
<td>1,840</td>
<td>5 to 6</td>
<td>9 to 20</td>
<td>$0 to $1,840,000</td>
</tr>
<tr>
<td>SW-2</td>
<td>EB</td>
<td>Between First St and Erringer Rd</td>
<td>8 to 16</td>
<td>3,590</td>
<td>6 to 10</td>
<td>11 to 53</td>
<td>$1,012,000 to $4,876,000</td>
</tr>
<tr>
<td>SW-3</td>
<td>EB</td>
<td>Between Erringer Rd and Sycamore Dr</td>
<td>8 to 16</td>
<td>4,365</td>
<td>6 to 9</td>
<td>32 to 98</td>
<td>$2,944,000 to $9,016,000</td>
</tr>
<tr>
<td>SW-4</td>
<td>WB</td>
<td>Between Sycamore Dr and Tapo Canyon Rd</td>
<td>8 to 16</td>
<td>6,155</td>
<td>5 to 10</td>
<td>20 to 86</td>
<td>$1,840,000 to $7,912,000</td>
</tr>
<tr>
<td>SW-5</td>
<td>EB</td>
<td>Between Sycamore Dr and Tapo Canyon Rd</td>
<td>8 to 16</td>
<td>4,840</td>
<td>5 to 9</td>
<td>30 to 67</td>
<td>$2,760,000 to $6,164,000</td>
</tr>
</tbody>
</table>
**Figure 20 Proposed Soundwall Locations**

**Soundwall (SW) Locations**

- **SW #1** – Eastbound side of SR-118
  Major Streets: Arroyo Drive

- **SW #2** – Eastbound side of SR-118
  Major Streets: 1st St and Erringer Rd

- **SW #3** – Eastbound side of SR-118
  Major Streets: Erringer Rd and Sycamore Dr

- **SW #4** – Westbound side of SR-118
  Major Streets: Sycamore Dr and Tapo Canyon Rd

- **SW #5** – Eastbound side of SR-118
  Major Streets: Galena Ave and Tapo Canyon Rd

*State Route 118 Widening Project*
Implementing the following measures would minimize temporary construction noise impacts:

- Equipment noise control is needed to reduce the noise emissions from construction sites by mandating a specified noise levels for design of new equipment, and updating old equipment with new noise control devices and techniques presented below:
  
  o Mufflers are very effective devices which reduce the noise emanating from the intake or exhaust of an engine, compressor, or pump. The fitting of effective mufflers on all new equipment and retrofitting of mufflers on existing equipment is necessary to yield an immediate noise reduction at all types of road construction sites.

  o Sealed and lubricated tracks for crawler mounted equipment will lessen the sound radiated from the track assembly resulting from metal to soil and metal to metal contact. Contractors, site engineers, and inspectors should ensure that the tracks are kept in excellent condition by periodic maintenance and lubrication.

  o Lowering exhaust pipe exit height closer to the ground can result in an off-site noise reduction. Barriers are more effective in attenuating noise when the noise source is closer to ground level.

  o General noise control technology can have substantially quieter construction equipment when manufacturers apply state-of-the-art technology to new equipment or repair old equipment to maintain original equipment noise levels.

- In–use site noise control is necessary to prevent existing equipment from producing noise levels in excess of specified limits. Any equipment that produces noise levels less than the specified limits would not be affected. However, those exceeding the limit would be required to meet compliance by repair, retrofit, or replacement. New equipment with the latest noise sensitive components and noise control devices are generally quieter than older equipment, if properly maintained and inspected regularly. They should be repaired or replaced if necessary to maintain the in-use noise limit. All equipment applying the in-use noise limit would achieve an immediate noise reduction if properly enforced.
Site restrictions should be applied to achieve noise reduction through different methods, resulting in an immediate reduction of noise emitted to the community without requiring any modification to the source noise emissions. The methods include shielding with barriers for equipment and site, truck rerouting and traffic control, time scheduling, and equipment relocation. The effectiveness of each method depends on the type of construction involved and the site characteristics.

- Shielding with barriers should be implemented at an early stage of a project to reduce construction equipment noise. The placement of barriers must be carefully considered to reduce limitation of site access. Barriers may be natural or man-made, such as excess land fill used as a temporary berm strategically placed to act as a barrier.

- Efficient rerouting of trucks and control of traffic activity on construction site will reduce noise due to vehicle idling, gear shifting and accelerating under load. Planning proper traffic control will result in efficient workflow and reduce noise levels.

- Time scheduling of activities should be implemented to minimize noise impact on exposed areas. Local activity patterns and surrounding land uses must be considered in establishing site curfews. Sequencing the use of equipment with relatively low noise levels versus equipment with relatively high noise levels during noise sensitive periods is an effective noise control measure.

- Equipment location should be as far from noise sensitive land use areas as possible. The contractor should substitute quieter equipment or use quieter construction processes at or near noise sensitive areas.

- Educating contractors and their employees to be sensitive to noise impact problems and noise control methods. This may be one of the most cost-effective ways to help operators and supervisors become more aware of the construction site noise problem and to implement the various methods of improving the conditions. A training program for equipment operators is recommended to instruct them in methods of operating their equipment to minimize environmental noise. Many training programs are presently given on the subject of job safety. This can be extended to include the impact due to noise and methods of abatement.


2.3 Biological Environment
The Biological Environment section of the environmental document is divided into the following subsections:

- Natural Communities
- Wetlands and Other Waters
- Plant Species
- Animal Species
- Threatened and Endangered Species
- Invasive Species

The Biological Study Area (BSA) for the proposed project is roughly 500 feet in every direction of the project limits with approximately 1,000 feet downstream within the Arroyo Simi. The BSA, which is shown in Figure 21, is the area assessed for biological resources. Biological resources surrounding the project area and potential impact from construction related noise and vibration were considered when determining the BSA.

2.3.1 Natural Communities
This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation, as appropriate. 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.

Wetlands and other waters are discussed in Section 2.14. Habitat areas that have been designated as critical habitat under the federal Endangered Species Act (FESA) are discussed in Section 2.17, Threatened and Endangered Species.

Affected Environment
The total area within the BSA is approximately 1,650 acres. Features within the BSA include the existing SR-118 roadway, the Arroyo Simi Overhead, the Arroyo Simi itself, open space to the north of SR-118, and various culverts and roads traversing under SR-118.

Within the project area the Arroyo Simi has low-flow with a natural-bottom, consisting of cobble, gravel and sand. Arroyo Simi is a semi-natural riparian
waterway with native and non-native vegetation. Reaches downstream are concrete lined with concrete drop-structures. Its’ width varies from approximately 90 to 280 feet wide at the Arroyo Simi Overhead and occurs in a regional area with development and nearby open space. During site visits, numerous wildlife signs were observed within and along the creek. Species directly or indirectly observed within Arroyo Simi or surrounding open space include: mountain lion, coyote, red fox, and raccoon. Ambient noise during day and nighttime is low at Arroyo Simi, mostly from passing vehicles on SR-118, with little to no ambient lighting at night due to the high elevation of the bridge above the vegetation below. As such, it is expected that all wildlife known to occur within the vicinity could and from time to time will use Arroyo Simi for movement.

Alamos Canyon is a 734-acre open-space area north of the 118 Freeway and west of the Simi Valley Landfill. The Rancho Simi Recreation and Park District, in partnership with the Nature Conservancy, has purchased about half the site for $2.9 million. Officials hope to protect the remaining 408 acres of Alamos Canyon through a yet-to-be-determined conservation easement. Acquisition of Alamos Canyon will supply a key piece of open space needed to provide a continuous wildlife corridor linkage and public trail between the Sierra Madre Mountains and the Santa Monica Mountains.

The Alamos Canyon area is in the western branch of the linkage, and extends from Happy Camp Canyon Park near Big Mountain and Oak Ridge in the Santa Susana Mountains to protected lands south of SR-118 in the western Simi Hills near the Tierra Rejada Valley. From here, there is a contiguous connection of protected habitat all the way to Malibu Creek State Park in the Santa Monica Mountains. From the Arroyo Simi, an animal traveling southbound would encounter the grassland and coastal sage habitats of the Tierra Rejada Valley and to the west of the Wood Ranch Reservoir to reach the Simi Hills.120

Figure 21 Biological Study Area

SR-23 & SR-118 Project Study Area
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

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SR-118 facilities in the Alamos Canyon area consist of two culverts and the Alamos Canyon Undercrossing. It is within this area that natural and disturbed natural open space occurs on the north side of SR-118 with Designated Critical Habitat for California gnatcatcher. On the south side of the project area there is a native habitat restoration area for upland plant community and riparian community. The roadway associated with Alamos Canyon has a corridor that is likely used by all wildlife occurring within the region. A detailed description of the Alamos Canyon area is provided below.

Alamos Canyon West: This potential passageway is located along an unnamed drainage that empties into the Arroyo Simi. The structure consists of double pipe culverts, each measuring 3.1 m (10 ft) in diameter and approximately 243.8 m (800 ft) in length. There is no visibility to the other side because the culvert drops at about a 45 degree angle at the northern entrance. In addition to no visibility due to the slope of the culvert, vegetative debris collects on the southern side of SR-118 following storm events.\(^\text{121}\)

Alamos Canyon: This excellent bridged underpass provides a clear view to the other side and measures roughly 4.9 m (16 ft) high, 41.8 m (137 ft) wide, and 48.9 m (160 ft) long. There is an asphalt road on one side of the structure that is not in use. The openness of this structure and the gap between the north and southbound lanes allows natural light and moisture to enter the passageway supporting well-developed coastal sage vegetation on natural substrate to one side of the structure.\(^\text{122}\)

Alamos Canyon East: This potential passageway consists of a 1.83 m (6 ft) diameter pipe culvert, extending approximately 183 m (600 ft) under SR-118. This structure is located roughly 150 m (492 ft) east of the bridged structure described above. LSA (2004) documented use of this structure by bobcat, skunk, opossum, and raccoon, and recorded a variety of medium and large-sized mammals in the vicinity of this structure, both north and south of SR-118. Natural habitats occur on either side of the freeway, though no vegetation occurs in the structure itself.

**Plant Communities**

The BSA comprises two plant communities, Sage Scrub-Brittlebrush Scrub Alliance and Salix lasiolepsis-Baccharis salicifolia Woodland Alliance, which are described in detail below and shown in Figure 22.

---


**Sage Scrub-Brittlebrush Scrub Alliance**

This alliance consists primarily of purple sage (*Salvia leucophylla*) with California sagebrush (*Artimesia californica*) and brittlebrush (*Encelia farinosa*) as co-dominants. This plant community occurs adjacent to the Arroyo Simi and in discrete areas along the north side of the highway, particularly around Alamos Canyon and Madera Rd, as shown in Figure 23.

**Salix lasiolepsis-Baccharis salicifolia Woodland Alliance**

*Salix lasiolepsis-Baccharis salicifolia* Woodland Alliance is co-dominated by arroyo willow and mulefat with additional sandbar willow (*Salix exigua*). This alliance is found in intermittently flooded substrate in ditches and along streams where it may be codominant with other shrubs and emergent trees including willows, California sycamore, and oaks (Sawyer et al., 2009). A common tree associated within the project area is arroyo willow with an understory of annual grasses. This alliance is observed along the extent of the arroyo under the Arroyo Simi Overhead.

**Environmental Consequences**

**NO BUILD ALTERNATIVE**

Under the No Build Alternative, the proposed project would not be constructed. There would be no permanent direct or indirect impacts to natural communities.

**BUILD ALTERNATIVES**

The work proposed under Alternative 2 includes constructing eight pilings within the upper banks of Arroyo Simi. Construction of the pilings would not reduce the width of the Arroyo Simi or have any known reason to inhibit the use of the creek by wildlife. However, potential exists for reduced use of by wildlife during the construction phase of Alternative 2. Heavy equipment would access the Arroyo Simi and generate noise that would likely cause wildlife stress and reduced use. There would be no potential impacts as a result of Alternative 3, as this alternative would not require construction in this area.

It is not expected that there will be any change to wildlife use of the undercrossing at Alamos Canyon under both Build Alternative because of the height (16 feet) and width (110 feet) of the existing crossing. Although it should be noted that there is a proposed change to the structure at this location. The gap between the northbound and southbound lanes would be closed due to widening of the existing structures to accommodate additional lanes in the median. However, because the height and width of the existing crossing would not change, closing the gap would not substantially confine the space. Depending on the activity and equipment used for roadway work, potential exists for temporary reduced use of Alamos Canyon by wildlife during construction.
Figure 22 Plant Communities within Arroyo Simi
CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

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Limits and the acreage calculations of permanent and temporary impacts to plant communities due to implementation of Alternative 2 are shown in Table 41. If Alternative 3 is selected then only disturbed areas would be impacted and no impacts to the Arroyo Simi Salix lasiolepsis-Baccharis salicifolia Woodland Alliance would occur.

### Table 41 Alternative 2 Impacts to Plant Communities/Land Cover

<table>
<thead>
<tr>
<th>Plant Community/Land Cover</th>
<th>Permanent Impact (Acres)</th>
<th>Temporary Impact (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salix lasiolepsis-Baccharis salicifolia Woodland Alliance</td>
<td>0.0018</td>
<td>0.100</td>
</tr>
<tr>
<td>Disturbed</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.0018</strong></td>
<td><strong>17.600</strong></td>
</tr>
</tbody>
</table>

No special-status plant communities were observed within or directly adjacent to the project limits. Therefore, no impacts to any special-status plant communities is expected with the implementation of this proposed project. It should be noted that composition of plant communities can vary slightly over time with changing water availability, incidental impacts from other activities such as off highway vehicles use and human impacts. Although Salix lasiolepsis-Baccharis salicifolia Woodland Alliance is not considered special-status, it shares plant species with other plant communities that are considered special-status and with a change in plant composition over time or status, this plant community could be classified as a special-status in the future.

### Cumulative Impacts

The Butler Ranch Zone Change and Tentative Tract Map project site occupies approximately one third (one mile) of the width of the wildlife Santa Monica-Sierra Madre Connection between the Cities of Moorpark, Thousand Oaks, and Simi Valley. Although the Butler Ranch Zone Change and Tentative Tract Map project is relatively low density (minimum of one residence per 20 acres), the proposed building pads are scattered across the 508-acre project site, which will fragment the linkage and introduce light, noise, and human activity to the existing undeveloped open space. Therefore, the Butler Ranch Zone Change and Tentative Tract Map project will have potentially significant project-specific impacts, and will make a cumulatively considerable contribution to significant impacts, related to habitat connectivity and wildlife movement. A proposed easement area within the project site might maintain the linkage, but at a significantly reduced width relative to existing conditions.

The Conditional Use Permit (CUP) Case No. PL15-0202 project site is also located within the Santa Monica to Sierra Madre Connection. Temporary events proposed as part of the project would increase traffic, noise, and human presence within the corridor. However, these events are temporary in nature and will be subject to noise, traffic, and guest number restrictions. As a result, no habitat will be removed within this linkage, and indirect impacts would be less than significant. As a condition of
approval, the applicant will be required to ensure that all outdoor lighting for the
building envelope, driveway, or any other area of the project site be hooded to direct
light downward onto buildings, structures, driveways, to prevent the illumination of
surrounding habitat. Floodlights are prohibited.

The CUP-S-778 project site contains an ephemeral north-south trending drainage
which, along with an off-site box culvert beneath Los Angeles Avenue, provides a
passable linkage between the Arroyo Simi and uplands north of Los Angeles Avenue.
From a localized perspective, this feature may be important in allowing small and
medium-sized wildlife to safely reach Arroyo Simi from areas to the north, without
threat of injury or mortality from crossing Los Angeles Avenue. The CUP-S-778
project would convert this drainage to an underground culvert, and it is unlikely that
wildlife will continue to use this route in the post-project condition due to the
extended culvert length and darkness. To ensure that wildlife movement is not
significantly disrupted, the project incorporates a substitute linkage that will allow
animals to reach the Arroyo Simi safely. A wildlife exit structure will allow small and
medium-sized animals to pass through the existing culvert beneath Los Angeles
Avenue, and then enter the landscaped area on the northern side of the site fence.
This area will be landscaped with native shrubs and trees, and will provide a path for
wildlife to reach the site’s western edge. The western edge of the CUP-S-778 project
site is also proposed to be planted in native species and connects to the Arroyo Simi.
This feature was incorporated into the project in June 2017 based on input received
from the California Department of Fish and Wildlife. Considering this information, it
was determined that this cumulative project would not result in substantial
interference with wildlife movement either locally or in the Arroyo Simi.
### Table 42 Natural Communities Cumulative Project(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
</table>
| Butler Ranch Zone Change and Tentative Tract Map Project | 1313 Tierra Rejada Road, Simi Valley, CA 93065  
(Approximately 1.34 mi. south of SR-118, and approximately 1.92 mi., southeast of SR-23 southern project limits) | Proposes to change the zoning of the 508-acre property from the current designation of Agricultural Exclusive-40 acres minimum lot size to Open Space-20 acres minimum lot size and to subdivide a 508-acre property into 24 residential lots, each a minimum of 20 acres in size, with two means of access from Tierra Rejada Road. The application also indicates that an open space conservation easement of approximately 332 acres (65% of the total property) is proposed. | A Notice of Preparation for an EIR was issued by the Ventura County Planning Division on November 17, 2014. A Request for Proposals to prepare an EIR was distributed on September 5, 2017. |
| Conditional Use Permit (CUP) Case No. PL15-0202 | 1241 and 1248 Rocky Road, Simi Valley 93063  
(Approximately 3.89 mi. southeast of SR-118 eastern project limits) | The applicant requests that a CUP be granted to authorize a maximum of 60 temporary outdoor events to be conducted on the project site per year. | The public review period for the Initial Study/Mitigated Negative Declaration commenced on March 21, 2017 and ended on April 20, 2017. The Ventura County Planning Division determined that this proposed project may have a significant effect on the environment, however a mitigation measure is available that would reduce the impact to a less than significant level. As such a Mitigated Negative Declaration has been prepared and the applicant has agreed to implement the mitigation measure. |
The level of disturbance to plant communities within the Arroyo Simi as a result of the proposed project would not change substantially over the long term because of the small amount that would be affected, as listed in Table 42. Also, the proposed project would not reduce the width of the Arroyo Simi or have any known reason to inhibit the use of the creek by wildlife. Furthermore, it is not expected that there will be any change to wildlife use of the undercrossing at Alamos Canyon as a result of the proposed project because of the height and width ratio of the bridge. However, potential exists for reduced use of both locations by wildlife during the construction phase of Alternative 2. Heavy equipment would access the Arroyo Simi and generate noise that would likely cause wildlife stress and reduced use. Depending on the
activity and equipment used for roadway work, potential exists for temporary reduced use of Alamos Canyon by wildlife during construction.

The avoidance and minimization measures identified in the section below would serve to minimize cumulative impacts to wildlife movement during construction to the extent feasible. As a result, temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse.

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

To minimize potential impacts to wildlife movement, construction activities shall occur during daytime hours when wildlife are less likely to use undercrossings. Having daytime only activities would also eliminate the need for nighttime lighting, which would further reduce use by wildlife.

Fencing to delineate work zones shall be installed to reduce incidental human and equipment access to the Arroyo Simi and Alamos Canyon. This fencing shall be installed in a manner that does not prevent wildlife use of the crossing as in creating a barrier that spans the crossing but to limit the work zone to only the area necessary to perform the work.

A pre-construction survey shall be conducted immediately prior to construction to determine if site conditions related to Salix lasiolepsis-Baccharis salicifolia Woodland Alliance have changed.

**2.3.2 Wetlands and Other Waters**

**Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is
less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA’s Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a “least environmentally damaging practicable alternative” (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or
may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

**Affected Environment**

A portion of the project limits includes work on the Arroyo Simi Overhead, which spans the Arroyo Simi. The Arroyo Simi drains Simi Valley, which is bordered to the north by the Santa Susana Mountains and to the south by Simi Hills. Water flows westward through the City of Moorpark and ultimately into the Pacific Ocean further west. Surface flow in the creek is typically less than five cubic feet per second (cfs) during the late spring and summer, with variable flow during the fall and winter depending on rain events. The creek flows intermittently and has a natural-bottom, consisting of a mixed sized aggregate ranging from cobble to gravel and sand. The width of the creek varies, but in general the creek is approximately 90 feet wide to 280 feet wide from top of bank to top of bank. The section of the creek within the study area is 1,000 feet long.

A jurisdictional delineation was conducted to determine areas within the proposed project limits that are under jurisdiction of the United States Army Corps of Engineers (USACE). Additionally, the jurisdictional delineation describes the type, amount, and extent of wetlands and waters of the state under jurisdiction of the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB). A combined total of approximately 8.92 acres of hydrological features were mapped within the survey area.

**Environmental Consequences**

**No Build Alternative**

Under the No Build Alternative 1, the proposed project would not be constructed. No permanent (direct or indirect) impacts to jurisdictional waters would occur.

**Build Alternatives**

No permanent (direct or indirect) impacts to jurisdictional waters would occur as a result of Alternative 3.

Alternative 2 is the only alternative with impacts to jurisdictional waters. Approximately eight pilings would be constructed within the jurisdictional feature.
known as Arroyo Simi. These pilings would not be constructed within the lower flow areas where water would occur during dry season or smaller rainfall events.

Table 43 summarizes estimated permanent and temporary impacts to jurisdictional waters within the project limits as a result of implementing Alternative 2.

Table 43 Jurisdictional Waters Within Project Area

<table>
<thead>
<tr>
<th>Regulatory Agency</th>
<th>Jurisdictional Waters within the Project Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permanent Impact (Acres)</td>
</tr>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>0.0018</td>
</tr>
<tr>
<td>Regional Water Quality Control Board</td>
<td>0.0018</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>0.0018</td>
</tr>
</tbody>
</table>

The majority of impacts will be temporary for the purposes of equipment maneuvering and access during construction. Because the areas of permanent impact relative to the size of the Arroyo Simi is low and the majority of the impacts are temporary, impacts to jurisdictional waters are considered to be minimal with the implementation of avoidance and minimization measures.

**Cumulative Impacts**

Construction of an access road associated with the Butler Ranch Zone Change and Tentative Tract Map Project will result in the loss of 0.09-acre of California Department of Fish and Wildlife (CDFW) jurisdictional streambeds, and is considered a potentially significant impact. In addition, proposed grading limits associated with the Butler Ranch Zone Change and Tentative Tract Map Project are closer than 100 feet to a drainage which has been identified in the National Wetlands Inventory, and grading will occur on steep slopes that have a strong potential to erode into streams that are tributaries to the Arroyo Simi, which is a Watershed Protection District-maintained red-line channel. Furthermore, land clearing and potential grading that occurred in the summer of 2013 impacted a drainage which was found to be under CDFW jurisdiction, thereby contributing to cumulative impacts to waters and wetlands.

The CUP Case No. PL15-0202 proposed project includes installation of a 20-foot wide paved access road that would span a drainage and connect Rocky Road to a proposed parking area. The CDFW may take jurisdiction over the onsite drainages due to potential adverse effects on riparian habitat. Best management practices and conditions associated with the 1600 Permit may be placed on the project if CDFW determines they are necessary to prevent impacts on these drainages.

A Jurisdictional Waters Delineation was completed for the CUP-S-778 project site. The report concluded that the project has the potential to significantly affect U.S.
Army Corps of Engineers Waters of the United States (USACE), waters within the jurisdiction of the CDFW, and California Regional Water Quality Control Board (RWQCB) Waters of the State. A Conceptual Restoration Mitigation Plan for the CUP-S-778 project was prepared that provides an implementation approach and areas of wetland restoration. To reduce potential impacts, the applicant has agreed to various mitigation measures. With the inclusion of these mitigation measures, the project will not result in a substantial adverse effect on wetland and jurisdictional areas.

Table 44 Wetlands and Other Waters Cumulative Project(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butler Ranch Zone Change and Tentative Tract Map Project</td>
<td>1313 Tierra Rejada Rd., Simi Valley, CA 93065 (Approximately 1.34 mi, south of SR-118, and approximately 1.92 mi southeast of SR-23 southern project limits)</td>
<td>Proposes to change the zoning of the 508-acre property from the current designation of Agricultural Exclusive-40 acres minimum lot size to Open Space-20 acres minimum lot size and to subdivide a 508-acre property into 24 residential lots, each a minimum of 20 acres in size, with two means of access from Tierra Rejada Road. The application also indicates that an open space conservation easement of approximately 332 acres (65% of the total property) is proposed.</td>
<td>A Notice of Preparation for an EIR was issued by the Ventura County Planning Division on November 17, 2014. A Request for Proposals to prepare an EIR was distributed on September 5, 2017.</td>
</tr>
<tr>
<td>Conditional Use Permit (CUP) Case No. PL15-0202</td>
<td>1241 and 1248 Rocky Road, Simi Valley 93063 (Approximately 3.89 mi southeast of SR-118 eastern project limits)</td>
<td>The applicant requests that a CUP be granted to authorize a maximum of 60 temporary outdoor events to be conducted on the project site per year.</td>
<td>The public review period for the Initial Study/Mitigated Negative Declaration commenced on March 21, 2017 and ended on April 20, 2017. The Ventura County Planning Division determined that this proposed project may have a significant effect on the environment, however a mitigation measure is available that would reduce the impact to a less than significant level. As such a Mitigated Negative Declaration has been prepared and the applicant has agreed to implement the mitigation measure.</td>
</tr>
</tbody>
</table>
### Name | Location | Description | Status
--- | --- | --- | ---
CUP-S-778 | South side of West Los Angeles Ave., approximately 4,500 feet west of Madera Rd. Simi Valley, CA 93094 (Approximately 0.5 mi. south of SR-118) | The project proposal will authorize and construct an outdoor storage yard for recycled concrete and concrete products on a 6.6-acre parcel. The project site is associated with the main Pre-Con Products concrete products manufacturing plant located adjacent to 240 West Los Angeles Avenue, and the project will be an accessory use to the main manufacturing facility. The project includes the grading and filling of the site, preservation of a majority of existing oak trees on the site, installation of underground drainage facilities to replace an existing surface drainage channel, with provision of a landscaped escape route for wildlife to minimize potential disturbance to movement under Los Angeles Avenue, grading and re-vegetation of a large slope adjacent to the Arroyo Simi, dedication of a 20-foot-wide trail easement to the Rancho Simi Recreation and Park District, and paving both for a gated driveway connection to West Los Angeles Avenue and for an internal access to connect the site to the main Pre-Con Products operation. | The Mitigated Negative Declaration was revised and re-circulated on August 9, 2017 and ended on September 7, 2017. On the basis of the Initial Study for the project, it has been determined that the project would not have a potential for a significant effect on the environment. A Mitigated Negative Declaration was issued based upon the inclusion of several mitigation. |

Existing regulatory requirements, ensure that implementation of these cumulative projects would not result in cumulative effects on wetlands and other waters of the U.S. Regulatory requirements for wetlands include avoidance and minimization of impacts and “no net loss” policies imposed by the USACE and CDFW. Regulatory requirements concerning non-wetland waters of the U.S. require avoidance and minimization of impacts through Section 404 of the Clean Water Act which has a “no net loss” of wetlands provision. It requires that wetlands lost due to a Section 404-permitted project be replaced at a minimum 1:1 ratio.
The build alternatives for the proposed would be subject to Caltrans requirements for construction Best Management Practices and operational design pollution prevention, treatment, and maintenance BMPs to address pollutants of concern. Drainage facilities would be upgraded on an as-needed basis to prevent localized flooding; BMPs would be required during construction to minimized impacts to jurisdictional drainages.

Potential operational impacts would be addressed through the incorporation of design pollution prevention BMPs and treatment BMPs, for a total of 33 permanent treatment BMPs, as well as adherence to the necessary operational maintenance protocols identified in the Caltrans Storm Water Management Plan (SWMP). The proposed treatment BMPs include 22 Bio-Swales, one Infiltration Device, two Gross Solids Removal Devices (GSRDs), and eight Media Filters.

No permanent (direct or indirect) impacts to jurisdictional waters would occur as a result of Alternative 3. With implementation of avoidance, minimization measures, and mitigation measures, as well as project design features, the contribution of the Alternative 2 to cumulative effects on wetlands and other waters of the U.S. is not considered adverse.

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

Coordination with USACE, RWQCB, and CDFW will occur to determine the level of on-site restoration and off-site mitigation within the appropriate watershed. Since this project has minimal permanent impacts within Arroyo Simi, it is not expected for this project to have extensive off-site mitigation.

To further reduce impacts to jurisdictional waters, the following avoidance and minimization measures will be implemented:

1. Any work within Arroyo Simi will be conducted outside of the winter rainy season (November 1st - April 1st) when flow is to be minimal.
2. Temporary construction staging areas and access roads will be strategically placed to avoid and/or minimize impacts to USACE, RWQCB, and CDFW jurisdictional waters to the extent feasible and are expected to be enhanced to pre-project conditions.

**2.3.3 Plant Species**

**Regulatory Setting**

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the
Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

**Affected Environment**

The thirty-three (33) special status plant species listed in Table 45 were identified as being potentially present within the quadrangle and neighboring quadrangles the BSA occurs in, based on preliminary literature research, and historical documentation including California Natural Diversity Database (CNDDB) occurrences. Special-status plant species are either listed as endangered or threatened under FESA or CESA, or rare under the California Native Plant Protection Act, or are considered to be rare or of scientific interest (but not formally listed) by resource agencies, professional organizations (i.e., CNPS), and the scientific community.

**Table 45 Plant Species of Concern**

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Habitat Requirements</th>
<th>Rationale</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arenaria paludicola</td>
<td>Marsh sandwort</td>
<td>Fed: FE</td>
<td>Found in marshes and swamps on sandy substrate at 23-820 feet elevation.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Astragalus brauntonii</td>
<td>Braunton’s milk-vetch</td>
<td>Fed: FE</td>
<td>CHAPARRAL, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>California macrophylla</td>
<td>Round-leaved filaree</td>
<td>Fed: None</td>
<td>CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND. CLAY SOILS 15-1200 M.</td>
<td>Marginal habitat within the BSA.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>Calochortus fimbriatus</em></td>
<td>Late-flowered mariposa lily</td>
<td>Fed: None</td>
<td>CHAPARRAL, CISMONTANE WOODLAND, RIPARIAN WOODLAND. DRY, OPEN COASTAL WOODLAND, CHAPARRAL; ON SERPENTINE. 270-1435 M.</td>
<td>Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Calochortus clavatus</em> var. <em>gracilis</em></td>
<td>Slender mariposa-lily</td>
<td>Fed: None</td>
<td>CHAPARRAL, COASTAL SCUB, VALLEY AND FOOTHILL GRASSLAND. SHADED FOOTHILL CANYONS; OFTEN ON GRASSY SLOPES WITHIN OTHER HABITAT. 210-1815 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Calochortus plummerae</em></td>
<td>Plummer's mariposa-lily</td>
<td>Fed: FE</td>
<td>Rocky and sandy sites usually of granitic or alluvial material at 328-5,577 feet.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Centromadia parryi ssp. Australis</em></td>
<td>Southern tarplant</td>
<td>Fed: FE</td>
<td>Found in marshes and swamps, valley and foothill grasslands, and vernal pools at 0-1,575 feet.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Chorizanthe parryi</em> var. <em>Fernandina</em></td>
<td>San Fernando Valley spineflower</td>
<td>Fed: Prop. FT</td>
<td>COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND. SANDY SOILS. 15-1015 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Deinandra minthornii</em></td>
<td>Santa Susana tarplant</td>
<td>Fed: None</td>
<td>CHAPARRAL, COASTAL SCRUB. ON SANDSTONE OUTCROPS AND CREVICES, IN SHRUBLAND. 280-705 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Delphinium parryi ssp. blochmaniae</em></td>
<td>Dune larkspur</td>
<td>Fed: None</td>
<td>Chaparral and cismontane woodland habitats at 1,312-5,249 feet.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>---------------------------------</td>
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</tr>
<tr>
<td><em>Delphinium umbraculorum</em></td>
<td>Umbrella larkspur</td>
<td>Fed: None</td>
<td>Chaparral and cismontane woodland habitats at 1,312-5,249 feet.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Dodecahema leptoceras</em></td>
<td>Slender-horned spineflower</td>
<td>Fed: FE State: SE</td>
<td>COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND. SANDY SOILS. 15-1015 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Dudleya cymosa ssp. agourensis</em></td>
<td>Agoura Hills dudleya</td>
<td>Fed: FT State: None</td>
<td>CHAPARRAL. ON SHEER ROCK SURFACES AND ROCKY VOLCANIC CLIFFS. 145-670 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Dudleya abramsii ssp. Parva</em></td>
<td>Conejo dudleya</td>
<td>Fed: FT State: None</td>
<td>COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND. IN CLAY OR VOLCANIC SOILS ON ROCKY SLOPES AND GRASSY HILLSIDES. 90-380 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Dudleya cymosa ssp. marcescens</em></td>
<td>Marcescent dudleya</td>
<td>Fed: FT State: Rare</td>
<td>CHAPARRAL. ON SHEER ROCK SURFACES AND ROCKY VOLCANIC CLIFFS. 145-670 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Dudleya multicaulis</em></td>
<td>Many-stemmed dudleya</td>
<td>Fed: None</td>
<td>COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND. IN HEAVY, OFTEN CLAYEY SOILS OR GRASSY SLOPES 15-790 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Dudleya blochmaniae ssp. blochmaniae</em></td>
<td>Blochman's dudleya</td>
<td>Fed: None</td>
<td>COASTAL SCRUB, COASTAL BLUFF SCRUB, CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND. OPEN, ROCKY SLOPES; OFTEN IN SHALLOW CLAYS OVER SERPENTINE OR IN ROCKY AREAS WITH LITTLE SOIL. 5-450 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
</tr>
<tr>
<td>-------------------</td>
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</tr>
<tr>
<td><em>Dudleya verity</em></td>
<td>Verity’s dudleya</td>
<td>Fed: FT State: Rare CNPS: 1B.1</td>
<td>CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB. ON VOLCANIC ROCK OUTCROPS IN THE SANTA MONICA MOUNTAINS 60-335 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Eriogonum crocatum</em></td>
<td>Conejo buckwheat</td>
<td>Fed: None State: Rare CNPS: 1B.2</td>
<td>CHAPARRAL, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND. CONEJO VOLCANIC OUTCROPS; ROCKY SITES. 90-580 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Harpagonella palmeri</em></td>
<td>Palmer’s grapplinghook</td>
<td>Fed: None State: None CNPS: 4.2</td>
<td>CHAPARRAL, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND. CLAY SOILS; OPEN GRASSY AREAS WITHIN SHRUBLAND. 20-955 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Horkelia cuneata var. puberula</em></td>
<td>Mesa horkelia</td>
<td>Fed: None State: None CNPS: 1B.1</td>
<td>Coastal sage scrub and chaparral at 40 to 1,110 meters elevation (130-3,640 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Lepechinia rossi</em></td>
<td>Ross’ pintcher sage</td>
<td>Fed: None State: None CNPS: 1B.2</td>
<td>CHAPARRAL. SOIL DERIVED FROM FINE-GRAINED, REDDISH SEDIMENTARY ROCK. 670-915 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Monardella hypoleuca ssp. Hypoleuca</em></td>
<td>White-veined monardella</td>
<td>Fed: None State: None CNPS: 1B.3</td>
<td>Coastal sage scrub and chaparral at 200 to 1,320 meters elevation (650-4,330 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Monardella sinuate ssp. gerryi</em></td>
<td>Gerry’s curly-leaved moardella</td>
<td>Fed: None State: None CNPS: 1B.1</td>
<td>COASTAL SCRUB. SANDY OPENINGS. 150-245 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
</tbody>
</table>
## CHAPTER 2: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Habitat Requirements</th>
<th>Rationale</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navarretia fossalis</td>
<td>Spreading navaretia</td>
<td>Fed: FT State: None CNPS: None</td>
<td>Shadescale scrub, freshwater-marsh, swamps and vernal-pools at 90 to 1,070 meters elevation (290-3,510 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Navarretia ojaiensis</td>
<td>Ojai navaretia</td>
<td>Fed: None State: None CNPS: 1B.1</td>
<td>Coastal sage scrub and chaparral at 240 to 620 meters elevation (780-2,030 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Nolina cismontana</td>
<td>Chaparral nolina</td>
<td>Fed: None State: None CNPS: 1B.2</td>
<td>Coastal mountain ranges in dry chaparral and coastal sage scrub at 130 to 1,270 meters elevation (420-4,160 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Orcuttia californica</td>
<td>California orcutt grass</td>
<td>Fed: FE State: SE CNPS: 1B.1</td>
<td>Valley grassland, freshwater wetlands, wetland-riparian and vernal-pools at 60 to 660 meters elevation (190-2,160 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Pentachaeta lyonii</td>
<td>Lyon’s pentachaeta</td>
<td>Fed: FE State: SE CNPS: 1B.1</td>
<td>CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND, COASTAL SCRUB.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Pseudognaphalium leucocephalum</td>
<td>White rabbit-tobacco</td>
<td>Fed: None State: None CNPS: 2B.2</td>
<td>Riparian woodland, Cismontane woodland, coastal scrub, chaparral in sand gravelly sites at 35 to 515 meters</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Rorippa gambellii (Nasturtium gambelii)</td>
<td>Gambel's watercress</td>
<td>Fed: FE State: None CNPS:</td>
<td>Coastal wetlands at 5 to 780 meters elevation (16-2,660 feet)</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Senecio aphanactis</td>
<td>Chaparral ragwort</td>
<td>Fed: None State: None CNPS: 2B.2</td>
<td>CHAPARRAL, CISMONTANE WOODLAND, COASTAL SCRUB. DRYING ALKALINE FLATS. 20-855 M.</td>
<td>Marginal habitat within the BSA. Focused survey conducted.</td>
<td>None found. Not expected to occur and therefore no-effect on species.</td>
</tr>
</tbody>
</table>
After further research, several special status plant species were determined to have the potential to occur within the BSA based on habitat requirements. During focused surveys, no special-status plants were observed. It should be noted that surveys occurred within a drought year; therefore, a focused plant survey shall be conducted prior to construction.

**Environmental Consequences**

**No Build Alternative**

Under the No Build Alternative, existing conditions would remain and no impacts to plant species would occur.

**Build Alternatives**

No individuals of these species were observed during focused surveys. Therefore no impacts to individuals of plant species are expected to occur with the implementation of the proposed project.

**Cumulative Impacts**

The proposed project would not result in cumulative impacts to special status plant species.

**Avoidance, Minimization and Mitigation**

Should pre-construction surveys determine presence of this species, a qualified biologist will establish Environmentally Sensitive Area fencing surrounding the areas where individuals of plant species are found. If impacts cannot be avoided,
individual specimens of species shall be collected and propagated at preapproved nurseries and replanted onsite, whenever possible.

### 2.3.4 Animal Species

**Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

**Affected Environment**

The thirty-two (35) special status animal species listed in Table 46 were identified as potentially occurring within the quadrangle and neighboring quadrangles that the BSA occurs in, based on preliminary literature research, and historical documentation including CNDDDB occurrences.
Table 46 Animal Species of Concern

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Habitat Requirements</th>
<th>Rationale</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invertebrates</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Streptocephalus woottoni</strong></td>
<td>Riverside fairy shrimp</td>
<td>Fed: FE State: None</td>
<td>Restricted to deep vernal pools and ponds with chemistry and temperature conditions specific to nonmarine and nonriverine waters. Vernal pool habitat lies within annual grasslands, which may be interspersed with chaparral or coastal sage scrub vegetation.</td>
<td>No suitable habitat within the BSA</td>
<td>Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><strong>Fishes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Catostomus santaanae</em></td>
<td>Santa Ana sucker</td>
<td>Fed: FT State: None</td>
<td>Shallow lagoons and lower stream reaches with still but not stagnant water with high oxygen levels.</td>
<td>No suitable habitat within the BSA.</td>
<td>Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Gasterosteus aculeatus williamsoni</em></td>
<td>Unarmored threespine stickleback</td>
<td>Fed: FE State: SE, FP</td>
<td>Weedy pools, backwaters, and emergent vegetation at the stream edge. Cool, clear water with abundant vegetation</td>
<td>Marginal habitat within Arroyo Simi. Avoidance of habitat.</td>
<td>No impact to habitat therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Gila orcuttii</em></td>
<td>Arroyo chub</td>
<td>Fed: None State: SSC</td>
<td>Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates</td>
<td>Marginal habitat within Arroyo Simi. Avoidance of habitat.</td>
<td>No impact to habitat therefore no-effect on species.</td>
</tr>
<tr>
<td><em>Oncorhynchus mykiss irideus</em></td>
<td>Southern California steelhead</td>
<td>Fed: FE State: None</td>
<td>Found in streams with deep low-velocity pools for wintering habitat. Spawning habitat consists of gravel substrates free of excess silt.</td>
<td>No suitable habitat occurs within BSA, a concrete barrier occurs downstream.</td>
<td>Not expected due to barrier downstream. No impact to habitat therefore no-effect on species.</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific Name Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
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</tr>
<tr>
<td>Anaxyrus californicus Arroyo toad</td>
<td>Fed: FE State: SSC</td>
<td>Washes and arroyos with open water; sand or gravel beds; for breeding, pools with sparse overstory vegetation. Coastal and a few desert streams from Santa Barbara County to Baja California.</td>
<td>No suitable habitat within the BSA and outside of geographic range.</td>
<td>Not expected to occur therefore no effect on species</td>
<td></td>
</tr>
<tr>
<td>Rana boylii Foothill yellow-legged frog</td>
<td>Fed: None State: CT, SSC</td>
<td>Partly-shaded, shallow streams and riffles with a rocky substrate. Found in cismontane woodland, coastal scrub, coniferous forest, riparian forest.</td>
<td>No suitable habitat within the BSA and outside of geographic range.</td>
<td>Not expected to occur therefore no effect on species.</td>
<td></td>
</tr>
<tr>
<td>Rana draytonii California red-legged frog</td>
<td>Fed: FT State: SSC</td>
<td>Occurs in or near quiet permanent water of streams, marshes, ponds, and lakes. Individuals may range far from water along riparian corridors and in damp thickets and forests.</td>
<td>Suitable habitat occurs within Arroyo Simi. Focused survey conducted</td>
<td>Not observed during focused surveys. Not expected to occur therefore no effect on species.</td>
<td></td>
</tr>
<tr>
<td>Spea hammondii Western spadefoot</td>
<td>Fed: None State: SSC</td>
<td>Occurs primarily in grassland habitats but can be found in valley-foot hill hardwood woodlands. Vernal pools are used for breeding and egg-laying and can occur in shallow or deep puddled water or ponds, water must be present for only a few weeks or longer.</td>
<td>Suitable habitat may occur within Arroyo Simi or adjacent pools at times.</td>
<td>Potential to occur. None observed during site visits.</td>
<td></td>
</tr>
</tbody>
</table>

Reptiles
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Status</th>
<th>Habitat Requirements</th>
<th>Rationale</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anniella pulchra pulchra</td>
<td>Silvery legless lizard</td>
<td>Fed: None State: SSC</td>
<td>Occurs in moist warm loose soil with plant cover. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Found from 0 to 5,900 feet elevation.</td>
<td>No suitable habitat within the impact area.</td>
<td>Not expected to occur therefore no-effect on species.</td>
</tr>
<tr>
<td>Arizona elegans occidentalis</td>
<td>California glossy snake</td>
<td>Fed: None State: SSC</td>
<td>PATCHILY DISTRIBUTED FROM THE EASTERN PORTION OF SAN FRANCISCO BAY, SOUTHERN SAN JOAQUIN VALLEY, AND THE COAST, TRANSVERSE, AND PENINSULAR RANGES, SOUTH TO BAJA CALIFORNIA.</td>
<td>No suitable habitat within the impact area.</td>
<td>Not expected to occur therefore no-effect on species.</td>
</tr>
<tr>
<td>Aspidoscelis tigris stejnegeri</td>
<td>Coastal whiptail</td>
<td>Fed: None State: SSC</td>
<td>Found in hot and dry open areas with sparse foliage within chaparral, woodland, and riparian areas</td>
<td>No suitable habitat within the impact area.</td>
<td>Not expected to occur therefore no-effect on species.</td>
</tr>
<tr>
<td>Emys marmorata</td>
<td>Western pond turtle</td>
<td>Fed: None State: SSC</td>
<td>Occur in permanent and intermittent waters, including marshes, streams, rivers, ponds, and lakes. They favor habitats with large numbers of emergent logs or boulders, where they aggregate to bask.</td>
<td>Marginal habitat occurs within the BSA, not within impact area.</td>
<td>Potential to occur within BSA but not within impact area. Not observed during focused surveys.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
</tr>
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<td>-----------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Phrynosoma blainvillii</td>
<td>Coast horned lizard</td>
<td>Fed: None State: SSC</td>
<td>Occurs in annual grassland, coastal sage scrub, chaparral, and woodland communities. Requires open areas for sunning, bush for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Occurs in non-desert areas of southern California below 6,000 feet elevation.</td>
<td>No suitable habitat occurs within the BSA.</td>
<td>Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Salcadora hexalepis virgultea</td>
<td>Coast patch-nosed snake</td>
<td>Fed: None State: SSC</td>
<td>Found in hot and dry open areas with sparse foliage within chaparral, woodland, and riparian areas</td>
<td>No suitable habitat occurs within the BSA.</td>
<td>Not expected to occur and therefore no-effect on species.</td>
</tr>
<tr>
<td>Thamnophis hammondii</td>
<td>Two-striped garter snake</td>
<td>Fed: None State: SSC</td>
<td>Occur near permanent freshwater, often along streams with rocky beds bordered by willows and other riparian vegetation</td>
<td>Suitable habitat occurs within the BSA.</td>
<td>Potential to occur. Not observed during focused surveys.</td>
</tr>
<tr>
<td>Birds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agelaius tricolor</td>
<td>Tricolored blackbird</td>
<td>Fed: None State: CT, SSC</td>
<td>Lowland species, breeding in freshwater marshes with tall emergent vegetation, in upland habitats (especially thickets of non-native Himalayan blackberry), and in silagefields. Forages in agricultural areas where livestock is present and grass is short.</td>
<td>Marginal habitat occurs within the BSA.</td>
<td>None observed during focused riparian bird survey. Not expected to occur therefore no-effect on species</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
</tr>
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</tr>
<tr>
<td><em>Aquila chrysaetos</em></td>
<td>Golden eagle</td>
<td>Fed: None State: FP</td>
<td>ROLLING FOOTHILLS, MOUNTAIN AREAS, SAGE-JUNIPER FLATS, AND DESERT. CLIFF-WALLED CANYONS PROVIDE NESTING HABITAT IN MOST PARTS OF RANGE; ALSO, LARGE TREES IN OPEN AREAS.</td>
<td>Marginal foraging habitat occurs within the BSA.</td>
<td>None observed during site visits. Not expected to occur therefore no-effect on species</td>
</tr>
<tr>
<td><em>Athene cunicularia</em></td>
<td>Burrowing owl</td>
<td>Fed: None State: SSC</td>
<td>Usually occupies ground squirrel burrows in open, dry grasslands, agricultural and range lands, railroad rights-of-way, margins of highways, golf courses, and airports. Resident over most of southern California, sparsely distributed over desert areas.</td>
<td>No suitable habitat occurs within the BSA.</td>
<td>None observed during site visits. Not expected to occur therefore no-effect on species</td>
</tr>
<tr>
<td><em>Coccyzus americanus occidentalis</em></td>
<td>Western yellow-billed cuckoo</td>
<td>Fed: FT State: SE</td>
<td>Riparian obligate species primarily with willow-cottonwood riparian forests, but other species occur in alder and box elder dominated riparian habitats</td>
<td>Suitable habitat occurs within Arroyo Simi.</td>
<td>Potential to occur. Not observed during focused surveys.</td>
</tr>
<tr>
<td><em>Elanus leucurus</em></td>
<td>White-tailed kite</td>
<td>Fed: None State: FP</td>
<td>ROLLING FOOTHILLS AND VALLEY MARGINS WITH SCATTERED OAKS &amp; RIVER BOTTOMLANDS OR MARSHES NEXT TO DECIDUOUS WOODLAND. OPEN GRASSLANDS, MEADOWS, OR MARSHES FOR FORAGING CLOSE TO ISOLATED, DENSE-TOPPED TREES FOR NESTING AND PERCHING.</td>
<td>Suitable habitat occurs within the BSA</td>
<td>Potential to occur. Not observed during focused surveys.</td>
</tr>
<tr>
<td>Scientific Name Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
<td>Rationale</td>
<td>Potential for Occurrence</td>
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</tr>
<tr>
<td><strong>Empidonax traillii extimus</strong> Southwestern willow flycatcher</td>
<td>Fed: FE State: SE</td>
<td>Breeds and nests in riparian forest with dense understory. Rare and local in southern California.</td>
<td>Suitable habitat occurs within Arroyo Simi.</td>
<td>Potential to occur. Not observed during focused surveys.</td>
<td></td>
</tr>
<tr>
<td><strong>Gymnogyps californianus</strong> California condor</td>
<td>Fed: FE State: SE</td>
<td>Range includes rocky, open-country scrubland, coniferous forest and oak savanna. Cliffs, rocky outcrops or large trees are used as nest sites.</td>
<td>Outside of range. No suitable habitat occurs within the BSA.</td>
<td>Not expected to occur and therefore no-effect on species.</td>
<td></td>
</tr>
<tr>
<td><strong>Icteria virens</strong> Yellow-breasted chat</td>
<td>Fed: None State: SSC</td>
<td>SUMMER RESIDENT; INHABITS RIPARIAN THICKETS OF WILLOW AND OTHER BRUSHY TANGLES NEAR WATERCOURSES. NESTS IN LOW, DENSE RIPARIAN, CONSISTING OF WILLOW, BLACKBERRY, WILD GRAPE; FORAGES AND NESTS WITHIN 10 FT OF GROUND.</td>
<td>No suitable habitat occurs within the BSA.</td>
<td>Not observed during focused riparian bird survey. Not expected to occur and therefore no-effect on species.</td>
<td></td>
</tr>
<tr>
<td><strong>Polioptila californica californica</strong> Coastal California gnatcatcher</td>
<td>Fed: FT State: SSC</td>
<td>OBLIGATE, PERMANENT RESIDENT OF COASTAL SAGE SCRUB BELOW 2500 FT IN SOUTHERN CALIFORNIA.</td>
<td>Suitable habitat occurs within BSA but not within impact zone.</td>
<td>Potential for occurrence near impact zone.</td>
<td></td>
</tr>
<tr>
<td><strong>Riparia riparia</strong> Bank swallow</td>
<td>Fed: None State: ST</td>
<td>COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT. REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.</td>
<td>No suitable habitat occurs within the BSA.</td>
<td>Not expected to occur and therefore no-effect on species.</td>
<td></td>
</tr>
</tbody>
</table>
### Chapter 2: Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

#### Scientific Name
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Status</th>
<th>Habitat Requirements</th>
<th>Rationale</th>
<th>Potential for Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setophaga petechia</td>
<td>Yellow warbler</td>
<td>Fed: None State: SSC</td>
<td>Riparian woodland or forest dominated by cottonwoods and willows. Nesting habitat must contain dense understory vegetation.</td>
<td>Suitable foraging and nesting habitat occurs within the BSA.</td>
</tr>
<tr>
<td>Vireo bellii pusillus</td>
<td>Least Bell's vireo</td>
<td>Fed: FE State: SE</td>
<td>Riparian forests and willow thickets. Breeds and nests only in southwestern California; winters in Baja California.</td>
<td>Suitable habitat occurs within Arroyo Simi.</td>
</tr>
<tr>
<td><em>Mammals</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antrozous pallidus</td>
<td>Pallid bat</td>
<td>Fed: None State: SSC</td>
<td>Deserts, grasslands, shrublands, woodlands &amp; forests. Most common in open, dry habitats with rocky areas for roosting</td>
<td>No suitable habitat occurs within the BSA.</td>
</tr>
<tr>
<td>Euderma maculatum</td>
<td>Spotted bat</td>
<td>Fed: None State: SSC</td>
<td>OCCUPIES A WIDE VARIETY OF HABITATS FROM ARID DESERTS AND GRASSLANDS THROUGH MIXED CONIFER FORESTS. FEEDS OVER WATER AND ALONG WASHES. FEEDS ALMOST ENTIRELY ON MOTHS. NEEDS ROCK CREVICES IN CLIFFS OR CAVES FOR ROOSTING.</td>
<td>Potential foraging habitat within Arroyo Simi.</td>
</tr>
<tr>
<td>Eumops perotis californicus</td>
<td>Western mastiff bat</td>
<td>Fed: None State: SSC</td>
<td>Primarily cliff-dwelling mammal that occurs in a dry desert washes, flood plains, chaparral, oak woodlands, open ponderosa pine forests, grasslands and montane meadows.</td>
<td>No suitable habitat occurs within the BSA.</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Status</td>
<td>Habitat Requirements</td>
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</tr>
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</tr>
<tr>
<td><em>Macrotis californicus</em></td>
<td>California leaf-nosed bat</td>
<td>Fed: None State: SSC</td>
<td>Primarily cliff-dwelling mammal that occurs in a dry desert washes, flood plains, chaparral, oak woodlands, open ponderosa pine forests, grasslands and montane meadows.</td>
<td>No suitable habitat occurs within the BSA.</td>
</tr>
<tr>
<td><em>Myotis ciliolabrum</em></td>
<td>Western small-footed myotis</td>
<td>Fed: None State: SSC</td>
<td>WIDE RANGE OF HABITATS MOSTLY ARID WOODED &amp; BRUSHY UPLANDS NEAR WATER. SEEKS COVER IN CAVES, BUILDINGS, MINES, AND CREVICES.</td>
<td>Potential foraging habitat within Arroyo Simi.</td>
</tr>
<tr>
<td><em>Neotoma lepida intermedia</em></td>
<td>San Diego desert woodrat</td>
<td>Fed: None State: SSC</td>
<td>Found in southern California inhabiting Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Nest middens are built against a rock crevice, at the base of creosote or cactus or in the lower branches of trees</td>
<td>No suitable habitat occurs within the BSA.</td>
</tr>
<tr>
<td><em>Taxidea taxus</em></td>
<td>American badger</td>
<td>Fed: None State: SSC</td>
<td>Prefers open areas and may frequent brushlands with little groundcover. Inhabits regions ranging from below sea level to elevations upwards of 3,600 meters (11,800 feet).</td>
<td>No suitable habitat occurs within the BSA.</td>
</tr>
</tbody>
</table>

Designations:
- Fed. – United States
- FE – Federally Endangered
- FT – Federally Threatened
- State: California
- SE – State Endangered
- ST – State Threatened
- CT – Candidate Threatened
- FP – Fully Protected
- SSC – Species of Special Concern
After further research, a total of twelve (12) special status animal species were determined to have the potential to occur within the BSA based on habitat requirements for these species. Five of the twelve special status animal species identified are listed or proposed for listing as threatened or endangered (i.e., California Red-legged Frog (*Rana draytonii*), Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*), Southwestern Willow Flycatcher (*Empidonax traillii extimus*), Coastal California Gnatcatcher (*Polioptila californica californica*) and Least Bell’s Vireo (*Vireo bellii pusillus*) are discussed in the Threatened and Endangered Species Section below. All other special status animal species with potential to occur within the BSA are discussed in this section.

**Western Spadefoot (*Spea hammondii*)**

Western spadefoot is designated by CDFW as a species of special concern (SSC). This species occurs in southern California primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are used for breeding and egg-laying and can occur in shallow or deep puddled water or ponds. Water must be present for at least a few weeks or longer for eggs and larva stages to mature. Protocol level surveys for this species occurred in the spring/summer of 2016. No Western spadefoot individuals were observed within the BSA. The BSA contains little suitable breeding habitat within the Arroyo Simi.

**Western Pond Turtle (*Emys marmorata*)**

Western pond turtles are designated as a species of special concern by CDFW, but are not listed under the FESA or CESA. They are often found in slow-moving waterways where movement to upland habitat and presence of basking sites is necessary. Upland habitat is necessary as that is where egg laying occurs. They also burrow underground over winter. Basking occurs in the warmer months on logs and boulders. They are aquatic and require a perennial water source. Their carapace is dark brown to olive colored, with a lack of prominent markings. No western pond turtle individuals were observed within the BSA. Breeding habitat for this species does not occur within the BSA as there is no ponding of water or surface flow.

**Two-striped Gartersnake (*Thamnophis hammondii*)**

The two-striped gartersnake is designated as a species of special concern by CDFW and Sensitive (S) by USFS, but is not listed under the FESA or CESA. This species is aquatic in nature and typically resides in areas of permanent or semi-permanent water with vegetative cover. Suitable habitat for this species occurs within the BSA and marginal habitat occurs within the project limits. No two-striped gartersnake individuals were observed within the BSA during field surveys.
White-tailed Kite (*Alanus leucurus*)

The white-tailed kite is designated as fully protected by CDFW. This species prefers rolling foothills and valley margins with scattered oaks and river bottomlands or marshes, open grasslands, meadows for foraging. Nesting and perching habitat is dense-topped trees. No individuals were observed during site visits in spring/summer of 2016.

Yellow Warbler (*Setophaga petechia*)

The yellow warbler is designated as a species of special concern by CDFW but is not listed under the FESA or CESA. This species prefers riparian woodland or forests dominated by cottonwoods and willows. Nesting habitat for this species must contain dense understory vegetation. This species was observed during the focused riparian bird surveys in 2016. Suitable foraging and breeding habitat for this species is present within the BSA.

Spotted Bat (*Euderma maculatum*)

The spotted bat is designated as a species of special concern (SSC) by CDFW and is not listed under FESA or CESA. This species occupies a wide variety of habitat from arid deserts and grasslands to mixed conifer forests. It forages over water and along washes almost entirely for moths. It uses rock crevices in cliffs or caves for roosting. Suitable foraging and habitat for this species is present within the BSA in the vicinity of the Arroyo Simi.

Western small-footed myotis (*Myotis ciliolabrum*)

The spotted bat is designated as a species of special concern (SSC) by CDFW and is not listed under FESA or CESA. This species has a wide range of habitats with mostly arid wooded and brushy uplands near water. It seeks cover in caves, buildings, mines, and crevices. Suitable foraging and habitat for this species is present within the BSA in the vicinity of the Arroyo Simi.

Environmental Consequences

No Build Alternative

Under the No Build Alternative, existing conditions would remain and no impacts to special status animal species would occur.
Build Alternatives

The removal and/or trimming of trees and vegetation as a result of project activities may impact nesting birds within the project impact areas under both Build Alternatives. There would be no other impacts to special status species as a result of Alternative 3. Additional impacts related to Alternative 2 are discussed below.

Alternative 2

The implementation of Alternative 2 has the potential to impact Yellow Warbler (*Setophaga petechia*) and White-tailed kite (*Alanus leucurus*) during the construction phase of this project. Because these species have the ability to fly away, direct impacts to individual adults are not expected during the construction phase of this project. Potential exists for impacts to nesting birds should they be present.

The implementation of Alternative 2 also has the potential to impact Spotted Bat (*Euderma maculatum*) and Western small-footed myotis (*Myotis ciliolabrum*) during the construction phase of this project. With the implementation of the avoidance and minimization measure, potential impacts will be minimized.

Impacts to Western Spadefoot (*Spea Hammondi*) individuals are not anticipated as a result of Alternative 2 because none were detected within the project limits. Temporary impacts to this species habitat are expected to occur. With the implementation of the avoidance and minimization measures, potential impacts to this species will be minimized.

Alternative 2 is not expected to impact individual species of Western Pond Turtle (*Emys marmorata*) and Two-striped Gartersnake (*Thamnophis hammondii*) since work will be limited to the dry season when Arroyo Simi has no surface flow.

Cumulative Impacts

Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections would each be avoided or minimized and would, therefore, not have a cumulative impact to special status animal species.

Avoidance, Minimization, and/or Mitigation Measures

Construction equipment within the Arroyo Simi will be minimized to the extent feasible.

In order to avoid impacts to Western Spadefoot (*Spea Hammondi*), Western Pond Turtle (*Emys marmorata*), and Two-striped Gartersnake (*Thamnophis hammondii*) habitat, work will be limited to the dry season where there is no surface flow.
Pre-construction surveys will be done by a qualified herpetologist with experience in locating and identifying Western spadefoot (*Spea Hammondi*) prior to initiation of work. If this species is found within the project site, work will not commence until coordination with CDFW has occurred.

The project has the potential to impact breeding/nesting birds protected by MBTA and therefore the following avoidance and minimization measures would be implemented.

- The removal and/or disturbance of trees or suitable roosting shrubbery would be minimized to the greatest extent possible.
- Wherever possible, vegetation would be trimmed and/or removed outside of core nesting period (February 15-September 1).
- Should bridges be widened/constructed during nesting season, a qualified biologist would be required to inspect the bridge for breeding/nesting birds.
- If avoidance of these activities during this period is not possible, preconstruction surveys by a qualified biologist would be conducted to identify any existing nests or breeding birds within the area scheduled for construction. The survey should be completed no more than 48 hours prior to the start of project activities. Additional surveys would be conducted if more than 72 hours pass between preconstruction nesting bird surveys and the start of construction.
- If breeding/nesting birds are located within 150 ft of the limits of disturbance, a buffer shall be flagged around the nest and Environmentally Sensitive Area signs posted. Any work within 150 ft of the flagged area would require a biologist to monitor the birds and ensure that the construction activities do not negatively impact the birds.
- If the biologist identifies signs of stress, the biologist will inform the Engineer that activities within the immediate area cannot resume until the birds resume their normal behavior or until the nest has been determined to be no longer active.
- Should breeding/nesting of raptors be located within the area scheduled for construction, the buffer shall be extended to 500 ft. as raptors are more sensitive to disturbance.

Yellow Warbler (*Setophaga petechia*) and White-tailed kite (*A³alanus leucurus*) have the potential to occur during the construction phase of this project and therefore the following avoidance and minimization measures would be implemented.

- A qualified biologist will recommend approved limits of disturbance, including construction staging areas and access routes, to minimize impacts to adjacent habitat. To ensure the avoidance of impacts to
migratory birds, the following measures will be implemented pursuant to the Migratory Bird Treaty Act (MBTA). Clearing and grubbing of vegetation will be conducted outside of bird-nesting season. If clearing and grubbing of vegetation needs to be conducting during bird-nesting season (February 15th to September 1st), a qualified biologist will monitor construction during clearing, grading and/or trenching activities for any occurrence of birds nesting. In the event birds are observed nesting, construction should stop until it is determined that the fledglings have left their nests. If this is not possible, coordination with the a qualified biologist should take place in order to minimize the risk of violating the Migratory Bird Treaty Act, and the following minimization measure put in place: an Environmentally Sensitive Area fencing buffer of 150 ft. for songbirds, and 500 ft. for raptors which must be maintained during all phases of construction.

- A biological monitor shall be present a minimum of one week prior to clearing and grubbing activities in order to walk the proposed areas to be cleared and grubbed and dispel animals that have the ability to flee.

Spotted Bat (*Euderma maculatum*) and Western small-footed myotis (*Myotis ciliolabrum*) have the potential to occur during the construction phase of this project and therefore the following avoidance and minimization measures would be implemented.

- Construction within the Arroyo Simi will be during daytime hours in order to avoid impact to this Spotted Bat (*Euderma maculatum*) and Western small-footed myotis (*Myotis ciliolabrum*) during foraging times.

### 2.3.5 Threatened and Endangered Species

#### Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under
Section 7 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

**Affected Environment**

There are four special status animal species identified as listed or proposed for listing as threatened or endangered that have potential to occur within the BSA. These species are discussed below. Also, Designated Critical Habitat for coastal California gnatcatcher and California red-legged frog is present near the project limits.

**California Red-legged Frog (Rana draytonii)**

California red-legged frog (CLRF) is listed as threatened under FESA and designated by CDFW as a species of special concern. This subspecies of red-legged frog occurs from sea level to elevations of about 1,500 meters (5,200) feet. Nearly all sightings have occurred below 1,050 meters (3,500 feet) (Natural Diversity Database 2001). It has been extirpated from 70 percent of its former range and now is found primarily in coastal drainages of central California, from Marin County, California, south to northern Baja California, Mexico. Potential threats to the species include elimination...
or degradation of habitat from land development and land use activities and habitat invasion by non-native aquatic species.

The CRLF requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites of the CRLF are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag pond, dune ponds, and lagoons. Additionally, CRLF frequently breed in artificial impoundments such as stock ponds (USFWS 2002).

CRLF are primarily pond frogs, but they also inhabit marshes, streams, and lagoons during the breeding season. During other parts of the year, some frogs remain at breeding sites while others disperse to other areas. Non-breeding habitat includes nearly any area within 1.2-1.8 miles (2–3 km) of a breeding site that stays moist and cool through the summer. This includes coyote bush and California blackberry thickets, and root masses associated with willow and California bay trees (CNDDB).

Protocol level surveys for this species occurred in the spring/summer of 2016. No California-red legged frog individuals were observed within the BSA. The project limits and the BSA does not contain any aquatic habitat with a suitable hydroperiod for California red-legged frog breeding.

**Western Yellow-billed Cuckoo (Coccyzus americanus occidentalis)**

This species is designated as federally threatened under FESA and is state endangered under CESA. Western yellow-billed cuckoos prefer dense riparian thickets with low-level foliage near slow-moving water sources. No individuals were observed during the protocol surveys that were conducted in spring/summer of 2016.

**Coastal California Gnatcatcher (Polioptila californica californica)**

This species is listed as federally threatened under FESA and designated as Species of Special Concern (SSC) by CDFW. This species is an obligate, permanent resident of coastal sage scrub in southern California below 2,500 feet elevation. Marginal suitable habitat occurs north of SR-118, as shown in Figure 23, between Alamos Canyon Rd. and Madera Rd. No individuals were observed during site visits conducted in spring/summer of 2016.

**Southwestern Willow Flycatcher (Empidonax traillii extimus)**

This species is listed as federally endangered under FESA and state endangered under CESA. This species typically resides and breeds within shrubby riparian vegetation, often dominated by willows equal to or greater than 10 feet tall. Potentially suitable southwestern willow flycatcher habitat exists within the BSA. No individuals were observed during protocol surveys conducted in spring/summer of 2016.
Figure 23 Coastal Sage Scrub Plant Communities
Figure 24 Coastal Sage Scrub Plant Communities
Least Bell’s Vireo (*Vireo bellii pusillus*)

The least Bell’s vireo is listed under both FESA and CESA as endangered and is protected under the MBTA. This species typically resides and breeds within shrubby riparian vegetation, often dominated by willows. Potentially suitable habitat for this species occurs within the BSA. No individuals were observed during protocol surveys conducted in spring/summer of 2016.

**Environmental Consequences**

**No Build Alternative**

Under the No Build Alternative, existing conditions would remain and no impacts to special status animal species would occur.

**Build Alternatives**

There would be no other impacts to threatened and endangered species as a result of Alternative 3. Potential impacts related to Alternative 2 are discussed below.

**Alternative 2**

The project will have no effect on the federally listed red-legged frog, southwestern willow flycatcher, least Bell’s vireo, or the yellow-billed cuckoo. Concurrence from U.S. Fish and Wildlife Service (USFWS) with regard to impact analysis and proposed measures was achieved by early coordination. The purpose of this coordination was to provide agency personnel with the latest project design information, proposed surveys and protocol, and impact analysis. The USFWS has also provided general concurrence that the California gnatcatcher and its’ Designated Critical Habitat would not be impacted with the implementation of the proposed project.

**California Red-legged Frog (*Rana draytonii*)**

Alternative 2 is not expected to impact individuals of this species because none were detected within the limits of this proposed project. Temporary impacts to this species habitat are expected to occur.

**Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)**

Alternative 2 is not expected to impact individuals of this species since work will be limited to the dry season when Arroyo Simi has no surface flow.

**Southwestern Willow Flycatcher (**Empidonax traillii extimus**)**

The implementation of Alternative 2 has the potential to impact this species during the construction phase of this project. Because this species has the ability to fly away, direct impacts to individual adults are not expected during the construction phase of this project. Potential
exists for impacts to nesting birds should they be present. With the implementation of avoidance and minimization measures, impacts to this species will be minimized.

*Coastal California Gnatcatcher (Polioptila californica californica)*

The implementation of Alternative 2 has the potential to impact this species during the construction phase of this project. Because construction would occur outside of the breeding season indirect impacts to individuals are not expected. Also, because no suitable habitat for this species would be removed with the implementation of Alternative 2, no impacts would occur to suitable habitat.

*Least Bell’s Vireo (Vireo bellii pusillus)*

The implementation of Alternative 2 has the potential to impact this species during the construction phase of this project. Because this species has the ability to fly away, direct impacts to individual adults are not expected during the construction phase of this project. Potential exists for impacts to nesting birds should they be present. With the implementation of the above stated avoidance and minimization measures, impacts to this species will be minimized.

**Cumulative Impacts**

Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections would each be avoided or minimized and would, therefore, not have a cumulative impact to threatened and endangered species.

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

With regard to protected riparian birds (i.e., Western Yellow-billed Cuckoo, Southwestern Willow Flycatcher, and Least Bell’s Vireo) potentially occurring within Arroyo Simi, additional focused protocol surveys would be required immediately prior to start of construction activities. The following avoidance and minimization measures are also proposed.

**Western Yellow-billed Cuckoo, Southwestern Willow Flycatcher, and Least Bell’s Vireo**

These species have the potential to occur during the construction phase of this project and therefore the following avoidance and minimization measures would be implemented.

1. A qualified biologist will recommend approved limits of disturbance, including construction staging areas and access routes, to minimize impacts to adjacent habitat. To ensure the avoidance of impacts to migratory birds, the following measures will be implemented pursuant to the Migratory Bird Treaty Act (MBTA). Clearing and grubbing of vegetation will be conducted outside of bird-nesting season. If clearing and grubbing of vegetation needs to be conducting during bird-nesting season (February 15th to September 1st), a qualified biologist will monitor construction during clearing, grading and/or trenching activities for any occurrence of birds nesting. In the event birds are
observed nesting, construction should stop until it is determined that the fledglings have left their nests. If this is not possible, coordination with the a qualified biologist should take place in order to minimize the risk of violating the Migratory Bird Treaty Act, and the following minimization measure put in place: an Environmentally Sensitive Area fencing buffer of 150 ft. for songbirds, and 500 ft. for raptors which must be maintained during all phases of construction.

2. A biological monitor shall be present a minimum of one week prior to clearing and grubbing activities in order to walk the proposed areas to be cleared and grubbed and dispel animals that have the ability to flee.

**California Red-legged Frog** (*Rana draytonii*)

In order to avoid impacts to this species and its habitat, work will be limited to the dry season when little surface flow is present and construction equipment within the channel of Arroyo Simi will be minimized to the extent feasible.

Pre-construction surveys will be done by a qualified herpetologist with experience in locating and identifying CRLF and approved by USFWS, prior to initiation of work. If CRLF are found within the project site, work will not commence until coordination with USFWS has occurred.

**Coastal California Gnatcatcher** (*Polioptila californica californica*)

Project construction within the stretch of freeway with coastal sage scrub habitat (Madera Road) shall occur during the non-breeding period (Sept. 15-March 15)

**2.3.6 Invasive Species**

**Regulatory Setting**

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

**Affected Environment**

Four exotic plants occurring on the California Exotic Plant Council’s (Cal-IPC) Invasive Plant Inventory were identified in the BSA. The invasive species identified in the BSA are: giant reed (*Arundo donax*), Bermuda grass (*Cynodon dactylon*), tamarisk (*Tamarix ramosissima*), and bigleaf periwinkle (*Vinca major*).
Environmental Consequences

No Build Alternative

Under the No Build Alternative, existing conditions would remain and no impacts to special status animal species would occur.

Build Alternatives

The proposed project has the potential to spread invasive species to adjacent native habitats in the BSA by the entering and exiting of construction equipment contaminated by invasive species, the inclusion of invasive species in seed mixtures and mulch, and by the improper removal and disposal of invasive species so that seed is spread along the highway.

Cumulative Impacts

The weed abatement program that would be implemented as part of the proposed project would minimize any potential project contribution to cumulative effects related to invasive species. Therefore, the Build Alternatives would not contribute to cumulative adverse impacts related to invasive species.

Avoidance, Minimization, and/or Mitigation Measures

In compliance with EO 13112, a weed abatement program will be developed to minimize the importation of nonnative plant material during and after construction. Eradication strategies would be employed should an invasion occur. At a minimum, this program will include the following measures:

- During construction, the construction contractor shall inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another.
- During construction, soil and vegetation disturbance will be minimized to the greatest extent feasible.
- During construction, the contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.
- During construction, the contractor shall ensure that all material stockpiled is sufficiently watered or covered to prevent excessive amounts of dust.
- During construction, soil/gravel/rock will be obtained from weed-free sources.
- Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.
- After construction, affected areas adjacent to native vegetation will be revegetated with plant species approved by the District Biologist that are native to the vicinity.
- After construction, all revegetated areas will avoid the use of species listed on Cal-IPC’s California Invasive Plant Inventory
- Erosion control and revegetation sites will be monitored for 2 to 3 years after construction to detect and control the introduction/invasion of nonnative species.

- Eradication procedures (e.g., spraying and/or hand weeding) will be outlined should an infestation occur; the use of herbicides will be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by the District Biologist and Landscape Architect.
Chapter 3 California Environmental Quality Act (CEQA) Evaluation

Determining Significance under CEQA

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA’s responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of “mandatory findings of significance,” which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.
CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.
AESTHETICS

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect on a scenic vista?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>c) Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Aesthetics

No Impact

Neither those using the highway, nor those adjacent to the highway or residents next to the highway will be negatively impacted. Proposed soundwalls will not visually affect those adjacent to the highway because existing mature trees will screen much of these structures. For those using the highway, the use of borrowed landscape in the background will lessen the visual impact of these structures. Also, there are areas within the project limits that have existing soundwalls and any additional soundwalls will blend into the highway features. The proposed widening will not incur any negative impacts.
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.

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>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))?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Agriculture and Forest Resources

No Impact
There are no impacts to farmland, agricultural and farmland resources within the project area.
AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e) Create objectionable odors affecting a substantial number of people?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Air Quality

a, b, c, d, e Less Than Significant Impact

For purposes of determining significance under CEQA, a potentially significant impact would be failure to conform to the applicable air quality plan, or obstructing implementation of such a plan. As discussed in Section 2.2.5, the project area currently exceeds State and/or Federal standards for ozone (O3), as well as State standards for particulate matter less than 10 microns in size (PM10).

The proposed project is located in Ventura County, an area within the South Central Coast Air Basin (SCCAB). Air quality regulation in SCCAB is administered by Ventura County Air Pollution Control District (VCAPCD). The VCAPCD is responsible for developing and adopting an Air Quality Management Plan (AQMP) that serves as the blueprint for all future rules necessary to bring the region into compliance with federal and state clean air standards.

The latest 2016 AQMP employs the most recent scientific findings, primarily in the form of updated emission inventories, ambient measurements, new meteorological episode data, and new modeling tools. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, area sources, and on-road and off-road mobile sources in an effort to bring the County to attainment of the applicable federal ozone standard by 2020.

In 1976, the California Legislature adopted the Lewis Air Quality Management Act that created the Air Quality Management District’s (AQMDs) in addition to Air Pollution Control Districts (APCDs). The AQMDs and APCDs promulgate the State Implementation Plans for achieving cleaner air quality on a region-by-region basis. The State Implementation Plan (SIP) is a legal agreement between California and the federal government to commit resources to improving air quality. It serves as the template for conducting regional and project-level air quality analysis. The regional analysis is the responsibility of
the MPO and the project-level analysis is that of the project sponsor.

Implementation of the SIP would bring the region into conformance with the applicable air quality standards. If a project “conforms” with the SIP, it would not conflict with or obstruct implementation of the applicable air quality plan. The currently approved plans are the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2017 Federal Transportation Improvement Program (FTIP). The 2016 RTP/SCS was adopted by SCAG on April 4, 2012; FHWA and FTA approved the 2016 RTP/SCS on June 1, 2016. The 2017 FTIP was adopted by SCAG on September 14, 2016 and federally approved on December 16, 2016. The most recent Amendment to the 2017 FTIP is No. 17-05, approved by FHWA and FTA on March 22, 2017.

Based on the proposed project scope of work, this project is not exempt from conformity requirements according to 40 CFR 93.126-128. A request for an amendment has been submitted to revise the proposed project limits to include the planned improvements on SR-23. The scope and design concept of the proposed project will be consistent with the conforming RTP and FTIP when the proposed project is successfully amended.

Air quality models are used to demonstrate that the project’s emissions will not contribute to the deterioration of or impede the progress of air quality goals stated in the AQMP. The air quality models for this project used project-specific data to estimate the quantity of pollutants generated from implementation of the project. The results for the No Project (No Build) Alternative and the proposed project (Build Alternatives) scenarios in the horizon year are compared to the AQMP’s air quality projections. Results indicate that the proposed project would not significantly contribute to or cause deterioration of existing air quality; therefore, mitigation measures are not required for the long-term operation of the project. Because the project “conforms” with the SIP, it would not conflict with or obstruct the implementation of the applicable air quality plan, and potential impacts would be less than significant.

Furthermore, the project’s incremental contribution is not cumulatively considerable because the project will comply with the requirements in the SIP process, which provides specific requirements that will avoid or substantially lessen cumulative impacts.

In order to minimize the temporary exhaust emissions from the heavy-duty trucks and construction equipment adjacent to certain sensitive receptors, certain construction activities, e.g., extended idling, material storage, and equipment maintenance, would need to be conducted in areas at least 500 feet away from those sensitive receptors.

Highway improvement projects do not typically produce odors that would affect off-site sensitive receptors. Implementation of the SCAQMD and Caltrans standard conditions, will address short-term project air quality impacts, including objectionable orders. Impacts would be less than significant.

With implementation of avoidance and minimization measures discussed in Section 2.2.5, potential impacts to sensitive receptors are considered less than significant.
BIOLOGICAL RESOURCES

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Biological Resources

**a, b, c, d, Less than Significant Impact**
The work proposed under Alternative 2 includes constructing eight pilings within the upper banks of Arroyo Simi. Construction of the pilings would not reduce the width of the Arroyo Simi or have any known reason to inhibit the use of the creek by wildlife. However, potential exists for reduced use by wildlife during the construction phase of Alternative 2. Heavy equipment would access the Arroyo Simi and generate noise that would likely cause wildlife stress and reduced use. There would be no potential impacts as a result of Alternative 3, as this alternative would not require construction in this area.

It is not expected that there will be any change to wildlife use of the undercrossing at Alamos Canyon under both Build Alternative because of the height (16 feet) and width (110 feet) of the existing crossing. Although it should be noted that there is a proposed change to the structure at this location. The gap between the northbound and southbound lanes would be closed due to widening of the existing structures.
to accommodate additional lanes in the median. However, because the height and width of the existing crossing would not change, closing the gap would not substantially confine the space. Depending on the activity and equipment used for roadway work, potential exists for temporary reduced use of Alamos Canyon by wildlife during construction. The avoidance and minimization measures discussed in Section 2.3.1 (Natural Communities) would reduce potential construction impacts to wildlife movement.

Limits and the acreage calculations of permanent and temporary impacts to plant communities due to implementation of Alternative 2 are shown in the table below. If Alternative 3 is selected then only disturbed areas would be impacted and no impacts to the Arroyo Simi Salix lasiolepsis-Baccharis salicifolia Woodland Alliance would occur.

<table>
<thead>
<tr>
<th>Plant Community/Land Cover</th>
<th>Permanent Impact (Acres)</th>
<th>Temporary Impact (Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salix lasiolepsis-Baccharis salicifolia Woodland Alliance</td>
<td>0.0018</td>
<td>0.100</td>
</tr>
<tr>
<td>Disturbed</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td>Total</td>
<td>14.0018</td>
<td>17.600</td>
</tr>
</tbody>
</table>

No special-status plant communities were observed within or directly adjacent to the project limits. Therefore, no impacts to any special-status plant communities is expected with the implementation of this proposed project. It should be noted that composition of plant communities can vary slightly over time with changing water availability, incidental impacts from other activities such as off highway vehicles use and human impacts. Although Salix lasiolepsis-Baccharis salicifolia Woodland Alliance is not considered special-status, it shares plant species with other plant communities that are considered special-status and with a change in plant composition over time or status, this plant community could be classified as a special-status in the future.

Although Salix lasiolepsis-Baccharis salicifolia Woodland Alliance is not considered special-status, it shares plant species with other plant communities that are considered special-status and with a change in plant composition over time or status, this plant community could be classified as a special-status in the future.

No permanent (direct or indirect) impacts to jurisdictional waters would occur as a result of Alternative 3.

Alternative 2 is the only alternative with impacts to jurisdictional waters. Approximately eight pilings would be constructed within the jurisdictional feature known as Arroyo Simi. These pilings would not be constructed within the lower flow areas where water would occur during dry season or smaller rainfall events.

The following table summarizes estimated permanent and temporary impacts to jurisdictional waters within the project limits as a result of implementing Alternative 2.
Jurisdictional Waters Within Project Area

<table>
<thead>
<tr>
<th>Regulatory Agency</th>
<th>Jurisdictional Waters within the Project Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permanent Impact (Acres)</td>
</tr>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>0.0018</td>
</tr>
<tr>
<td>Regional Water Quality Control Board</td>
<td>0.0018</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>0.0018</td>
</tr>
</tbody>
</table>

The majority of impacts will be temporary for the purposes of equipment maneuvering and access during construction. Because the areas of permanent impact relative to the size of the Arroyo Simi is low and the majority of the impacts are temporary, impacts to jurisdictional waters are considered to be less than significant.

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The removal and/or trimming of trees and vegetation as a result of project activities may impact nesting birds within the project impact areas.

The proposed project is not expected to impact individual species of Western Pond Turtle (*Emys marmorata*) and Two-striped Gartersnake (*Thamnophis hammondii*) since work will be limited to the dry season when Arroyo Simi has no surface flow.

The implementation of the proposed project has the potential to impact Yellow Warbler (*Setophaga petechia*) during the construction phase of this project. Because this species has the ability to fly away, direct impacts to individual adults are not expected during the construction phase of this project. Potential exists for impacts to nesting birds should they be present. With the implementation of the avoidance and minimization measures, impacts to this species will be minimized.

The project will have no effect on the federally listed red-legged frog, southwestern willow flycatcher, least Bell’s vireo, or the yellow-billed cuckoo. Concurrence from U.S. Fish and Wildlife Service (USFWS) with regard to impact analysis and proposed measures was achieved by early coordination. The purpose of this coordination was to provide agency personnel with the latest project design information, proposed surveys and protocol, and impact analysis. The USFWS has also provided general concurrence that the California gnatcatcher and its’ Designated Critical Habitat would not be impacted with the implementation of the proposed project.

The proposed project has the potential to spread invasive species to adjacent native habitats in the BSA by the entering and exiting of construction equipment contaminated by invasive species, the inclusion of invasive species in seed mixtures and mulch, and by the improper removal and disposal of invasive species so that seed is spread along the highway.

**e, f) No Impact**

The project does not conflict with any local polices or ordinances protecting biological resources such as tree preservation or the provisions of an adopted Habitat Conservation Plan, Natural; Community Conservation Plan or other approved local, regional, or state habitat conservation plan. This project is consistent with the state, regional and local plans and preserves open spaces and wildlife connectivity.
CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Disturb any human remains, including those interred outside of dedicated cemeteries?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Cultural Resources

**No Impact**
There are no historic resources, paleontological resources or unique geologic features within the project limits.
GEOLOGY AND SOILS

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>ii) Strong seismic ground shaking?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>iii) Seismic-related ground failure, including liquefaction?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>iv) Landslides?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b) Result in substantial soil erosion or the loss of topsoil?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Geology and Soils

a, c Less than Significant Impacts

Facilities and structures constructed as part of the proposed project could potentially be affected by liquefaction and seismically induced settlement, which could occur where liquefaction potential exists. The potential impacts to facilities and structures can be substantially reduced based on design and construction, consistent with the recommendations of the detailed geotechnical investigations prepared during final design. Any liquefaction potential would have negligible effects on the proposed widening, including pavement widening of the median and some shoulder, as well as the addition of soundwalls.

Caldwell Avenue Undercrossing and First Street Overcrossing are located within the Alquist-Priolo Earthquake Fault Zone. First Street OC has already been widened and is not currently part of the widening project (at least not the structure). Earthquake Fault Zones are regulatory zones around active faults. The zones vary in width, but average about one-quarter mile wide. When a bridge crosses such a fault, it must be designed for the displacement demand resulting from a static fault offset, the dynamic response due to ground shaking, and any other fault-induced hazards (e.g., creep) that may occur at the site.
Design and construction of the proposed project to current highway and structure design standards, including applicable seismic standards, would minimize the potential impacts on the build alternatives. Through compliance with applicable building and seismic codes the project facilities can be designed to accommodate the expected ground accelerations associated with Simi –Santa Rosa Fault Zone in the project area. As a result, the potential for structural damage can be substantially reduced or avoided through seismic engineering design.

**b Less than Significant Impact**

During construction of the proposed project, excavated soil would be exposed that would increase the potential for soil erosion. Additionally, during a storm event, soil erosion could occur at an accelerated rate. The proposed project would be required to adhere to the requirements of the General Construction Permit and implement erosion and sediment control Best Management Practices (BMPs) specifically identified in a project Storm Water Pollution Prevention Plan (SWPPP) in order to keep sediment from moving off site. Impacts related to soil erosion would be less than significant with compliance with these standard requirements.

**c Less than Significant Impact**

Soils within Ventura County vary, ranging from soils that are well-drained to excessively drained loamy sands to 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 from basic igneous rocks. These generalized soil types have been derived from the more detailed soil survey of Ventura County and soils map. "Expansive soils" are soils that expand when wet and contract when dry. Historically, expansive soils have caused considerable damage in Ventura County. In the early 1960s, numerous homes were razed and many more were severely damaged in the Shadow Oaks Tract, adjacent to the City of Thousand Oaks. Even though expansive soils are scattered throughout the County, their potential impact on structures is limited to just a few developed areas including areas around the community of Moorpark. The presence of expansive soils in these developed areas presents no threat, however, because soils tests and engineering solutions can overcome the dangers of expansive soils.¹²³

Generally, the potential for soils to exhibit expansive properties occur in low-lying areas, especially near river channels. Certain bedrock and soils within Simi Valley contain sufficient clay content; thus, the potential for shrink/swell to occur exists. According to the U.S. Soil Conservation Service (1970) soils maps, several zones of highly expansive soils are present in the foothills of Simi Valley. The Santa Susana, Llajas, Sespe, Modelo, Conejo volcanics, and older alluvium may develop or include areas of highly expansive soils. Other remaining areas of the City exhibit moderately expansive soil (City of Simi Valley 1999).¹²⁴

As discussed in section 2.2.2 (Geology/ Soils/Seismic/Topography), required compliance with the Caltrans standard design requirements would result in potential impacts being less than significant. A geotechnical design report will include evaluation of expansive soils and recommendations regarding construction procedures and/or design criteria to minimize the effect of these soils on development of the project.


¹²⁴ City of Simi Valley Department of Environmental Services, June 2012. Simi Valley General Plan Environmental Impact Report Volume I: Final EIR
GREENHOUSE GAS EMISSIONS

<table>
<thead>
<tr>
<th>Would the project:</th>
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<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
<td>Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans’ determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project’s direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**HAZARDS AND HAZARDOUS MATERIALS**

<table>
<thead>
<tr>
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<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
<td>❌</td>
</tr>
<tr>
<td>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?</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
<td>❌</td>
</tr>
<tr>
<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
<td>❌</td>
</tr>
<tr>
<td>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?</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
</tr>
<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
</tr>
<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>❌</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
</tr>
<tr>
<td>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
<td>❌</td>
</tr>
<tr>
<td>h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</td>
<td>❌</td>
<td>❌</td>
<td>✗</td>
<td>❌</td>
</tr>
</tbody>
</table>

**CEQA Significance Determinations for Hazards and Hazardous Materials**

**a, c Less than Significant Impacts**
Transport of hazardous substances that could spill and impact the roadway and adjacent properties or resources would continue along the SR-118 and SR-23 facilities. However, the implementation of either of the two Build Alternatives could be expected to improve the operational capacity, and consequently the safety service level, for SR-118 within and beyond the project limits. In addition, transport of hazardous materials is subject to strict regulation. Caltrans, the California Highway Patrol, and local police and fire departments are trained in emergency response procedures for safely responding to accidental spills of hazardous substances on public roads, which further reduces impacts. For these reasons, operation of
either of the build alternatives would not result in a significant permanent impact related to transport or upset of hazardous waste and materials. Also, operation of either of the build alternatives would not result in a significant permanent impact within 0.25 mile of existing and proposed schools.

**b Less than Significant Impacts**

There is a potential for exposure to general hazardous waste/material of concern during construction. Soil excavation and earth-moving activities associated with the Build Alternatives could expose workers to contaminants associated with yellow traffic striping, aerially deposited lead (ADL), groundwater and pesticides. Structural demolition work associated with all Build Alternatives has the potential to expose workers to contaminants associated with Asbestos Containing Materials.

During construction, exposure to contaminants associated with yellow traffic striping can be avoided fully, or minimized as needed, through adherence to protocols for their removal, handling, and disposal. Furthermore, a project-specific ADL investigation would be implemented to more accurately assess lead-impacted soils in the project study area. The scope of the ADL investigation would be dictated by which Build Alternative is selected and, more specifically, by construction features during the Plans, Specifications, and Estimates stage of the project.

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

There is a hazardous waste concern that Asbestos Containing Materials (ACM) might exist in bridge structures. Therefore, to meet the National Emission Standards for Hazardous Air Pollutants, an asbestos survey by a certified asbestos consultant would be required to determine if ACM is present in the bridge structure. If the bridge contains ACM, abatement would be required.

Since the proposed project includes widening 10 to 11 structures, if cast-in-drilled-holes (CIDH) piles are used for supporting new bridge structures, the holes may encounter groundwater. If groundwater is encountered during construction, there will be a need to perform groundwater quality analysis to apply for a construction de-watering permit. If the groundwater is found with contaminants of concerns, site-specific treatments to achieve National Pollutant Discharge Elimination System (NPDES) discharge limits will be required for surface discharge.

The potential exists for persistent pesticides to be present in soil as a result of pesticide use for weed control. Soil sampling and analysis for organochlorine pesticides (OCPs) will be conducted for the proposed project.

Site investigation for pesticides, ADL, ACMs, and groundwater shall be performed during the PS&E stage instead of “the final phases of design.” The Office of Environmental Engineering, Hazardous Waste Group will perform the site investigation as requested by the Design Manager.

A project-specific Lead Compliance Plan and Debris Containment and Disposal Work Plan will be prepared to address the removal, containment, storage, sampling, transport, and disposal of yellow thermoplastic and lead-based painted traffic stripe and/or pavement markings, and to prevent or minimize worker exposure to lead while handling the debris/residue (California Code of Regulations [CCR], Title
During construction, excess ADL soils require special handling and waste management, especially when disturbed during earthmoving activities. The California Department of Transportation (Caltrans) Office of Environmental Engineering will initiate a project-specific aerially deposited lead (ADL) site investigation to evaluate whether the excess ADL spoils generated can be reused on the project site and/or along the project corridor by adhering to the requirements of the Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils (ADL Agreement) that the Department entered into with the California Department of Toxic Substances Control (July 2016). If the excess ADL soils cannot be reused on the project site and/or along the project corridor, the site investigation will also determine whether they are classified as federal or state hazardous waste that requires off-site disposal at a permitted Class I California hazardous waste disposal facility or can be relinquished to the contractor with or without restrictions on land use.

Surveying and sampling will be required to determine procedures for the proper removal, handling, and disposal of asbestos-containing materials (ACM) and lead-based paint (LBP) during construction. Upon completion and analyses of surveys and sampling, an Asbestos Compliance Plan, Asbestos Removal Work Plan, and Lead-Based Paint Compliance Plan, and Lead-Based Paint Removal Work Plan shall be completed and signed by a Certified Industrial Hygienist that outlines potential risks and appropriate monitoring plans, as well as safety measures, to reduce the risk of worker exposure to contamination.

A Dust Control Plan will be prepared and approved by the South Coast Air Quality Management District (SCAQMD) before commencing any work in areas containing ACM. The Dust Control Plan will outline procedures to prevent dust emission during excavation, stockpiling, transportation, or placement of materials containing ACM.

Groundwater testing will be required to determine the extent of potential contamination in groundwater that will be encountered during construction, and to confirm whether contamination, if any, can be attributed to nearby sources and impacts from previous releases.

Implementation of the avoidance and minimization measures discussed above would minimize or avoid impacts related to hazardous materials and hazardous wastes during construction of the build alternatives. Therefore, hazardous wastes and materials impacts associated with the project would be less than significant.

d, e, f No Impact
The proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Also, the proposed project is not located within an airport land use plan, within two miles of an airport, or within the vicinity of a private airstrip. Therefore, the build alternatives would not result in a safety hazard to aircraft operations or persons living or working near an airport.

g Less than Significant Impacts
The build alternatives would not impair the implementation of, or physically interfere with, the adopted emergency response or evacuation plans of the cities in the study area and the County of Ventura. By providing a freeway that operates more efficiently, the build alternatives would have a beneficial effect on emergency response and evacuation. Temporary impacts to emergency services would be addressed through preparation of the Transportation Management Plan (TMP). The TMP is a standard Caltrans measure applicable to large construction projects.
**No Impact**
The project area west of Erringer Rd. to the southern project limits is located within the Fire Hazard Severity Zone. SR-118 is traditionally subject to closure for fires that burn through the Rocky Peak area. The highway has been closed due to fires for up to one full day, twice since 1993. In the case of a large fire, motorists may have to divert to the 101 Freeway. Wildfires are the most frequent hazard that occurs in Simi Valley, but have historically not had a significant impact on life safety, infrastructure damage, or economic losses. The project area is at the wildland/urban interface where the potential for fire damage is heightened; however, considering that the proposed project would neither involve construction of habitable structures nor land use changes, it is concluded that there would not be an increased exposure of people or structures to a significant risk involving wildland fires. All proposed project components would occur within the existing SR-118 and SR-23 facilities, and implementation of either of the two Build Alternatives could be expected to improve the operational capacity along these facilities. By providing a freeway that operates more efficiently, the build alternatives would have a beneficial effect on emergency response and evacuation.
HYDROLOGY AND WATER QUALITY

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Violate any water quality standards or waste discharge requirements?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f) Otherwise substantially degrade water quality?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>j) Inundation by seiche, tsunami, or mudflow</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Hydrology and Water Quality
a. e) Less than Significant Impact
In terms of the long-term effects, the proposed project has the potential to impact water quality because it would result in an increase in roadway surface area. The maximum increase in impervious area for either Build Alternative is 71.4 acres, which results in a maximum post-project impervious surface area of 176.4 acres (pre-project area of 105 acres). This increase in impervious area brings an increase in runoff volume and pollutant loads that require treatment. Treatment BMPs have been identified and preliminarily sited for both Build Alternatives.

The proposed project would require replacing or extending the existing on-site drainage systems, such as drainage inlets along the median and shoulders with new drainage systems that can accommodate the increased project flows associated with additional impervious area. Existing conveyance systems will not change. The net increase in velocity or volume of downstream flow will be small and considered negligible. The project will not increase potential sediment load of downstream flow.

The long-term surface runoff operational effects on water quality stemming from construction of the proposed project considers the continuous impact on contaminant runoff throughout the life of the new facility. This typically includes the following impacts on receiving water quality:

- Incidental drippings from vehicle and accidental spills that introduce contaminant material or waste discharge from the new bridge and its approach structures
- Maintenance activities, such as bridge painting, surface treatments and surface cleaning, substructure repair, joint repair, repairing drainage structures and pavement repair, and repaving.

Surface runoff would be designed to flow directly into the closest stormwater channel. Runoff from bridges would be directed to nearby drainage features via drainage inlets on the decks which then flow through the pillars. From an operational standpoint, impacts to water quality may be expected from the loading of various constituents typically associated with highway runoff into the channel. These constituents may include the following:

- Particulates from pavement wear and vehicles
- Metals, such as zinc, lead, iron, copper, cadmium, chromium, nickel, and manganese
- Bromide (from leaded gasoline exhaust)
- Diesel fuel
- Tire wear
- Auto body rusting
- Metal plating
- Brake lining wear
- Greases and lubricating oils from automobiles and trucks
- Trash discarded from vehicles and along the roadside
- Pathogenic bacteria (indicators) from soil, litter, bird droppings, and stockyard waste hauled by vehicles

These potential operational impacts would be addressed through the incorporation of design pollution prevention BMPs and treatment BMPs, for a total of 33 permanent treatment BMPS, as well as adherence to the necessary operational maintenance protocols identified in the Caltrans SWMP. The proposed treatment BMPs include 22 Bio-Swales, one Infiltration Device, two Gross Solids Removal Devices (GSRDs), and eight Media Filters.

Bioswales are vegetated, typically trapezoidal channels, which receive and convey storm water flows while meeting water quality criteria and other flow criteria. Pollutants are removed by filtration through
the vegetation, uptake by plant biomass, sedimentation, adsorption to soil particles, and infiltration through the soil. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Bioswales are effective at trapping litter, Total Suspended Solids (soil particles), and particulate metals (Caltrans, 2007).

An infiltration basin is a depression used to detain stormwater for short periods until it percolates to the groundwater table. Infiltration effectively prevents pollutants in the captured runoff from reaching the surface waters.

A GSRD is a device installed at drainage outlets designed to capture gross solids (litter, vegetation, and other large particles). These devices include physical/mechanical methods of removing litter, debris, and vegetation from stormwater runoff using various metal or fabric screening technologies. Screens provide treatment by preventing solids larger than the screen opening from passing through.

Media filters are devices that remove fine sediments, particulate-associated pollutants, and sometimes, dissolved pollutants. The normal configuration of such devices consists of an initial sedimentation basin or chamber followed by a filtering basin or chamber that contains a filter media.

Proposed design pollution prevention BMPs also include consideration of downstream effects related to potentially increased flow, preservation of existing vegetation, concentrated flow conveyance systems, and slope/surface protection systems.

All permanent treatment BMPs will have maintenance requirements associated with their implementation. Proposed operational maintenance BMPs include storm drain cleaning and normal roadway and bridge maintenance, in addition to maintaining all vegetated slopes. The introduction of treatment BMPs as part of the proposed project would represent an improvement when compared to the No Build condition, as there currently one existing Treatment BMP within the project limits. The proposed BMPs would treat 61.2 percent of on-site runoff from the total post project impervious surface areas within the project area, which would be an improvement over the existing condition. After implementation of BMPs, the proposed project is not anticipated to further degrade the water quality of any receiving waters. With the incorporation of the proposed site-specific BMPs during the operational phase of the proposed project, along with adherence to BMP and operational maintenance protocols, no adverse impacts to water quality due to operation of the proposed improvements are anticipated. Standard construction measures require the capture and treatment of all runoff from the construction area. The maximum total disturbed soil area under either Build Alternative would be 58.3 acres. Standard construction measures require the capture and treatment of all runoff from the construction area. Water quality BMPs would be implemented to treat stormwater runoff during construction of the Build Alternatives. As a result, the Build Alternatives are not anticipated to degrade the water quality of the receiving waters. Water quality BMPs would be implemented to treat stormwater runoff during construction of the build alternatives. As a result, the build alternatives are not anticipated to degrade the water quality of the receiving waters.

**b No Impact**
The project would not affect groundwater supplies since it would not use substantial amounts of water. The project would not result in significant impacts to groundwater supplies.

**c, d, h) Less than Significant Impact**
There will be no change to the geometry upstream or downstream for streams within the project area (Arroyo Simi, Alamos Canyon Creek, and Brea Canyon Creek). The total runoff of these streams is unchanged for a 100-year storm event. The floodplain adheres to the zoning laws in its development. The development thus far suggests that there is no incompatibility in the floodplain that will adversely affect the proposed widening.
LAND USE AND PLANNING

<table>
<thead>
<tr>
<th>Would the project:</th>
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<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>X</td>
</tr>
<tr>
<td>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>X</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>X</td>
</tr>
</tbody>
</table>

CEQA Significance Determinations for Land Use and Planning

**No Impact**
The proposed project is a roadway improvement project that would provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes in the project study area. All proposed project components would occur within existing infrastructure and neither property acquisition nor use would occur on lands that are currently adjacent to freeway facilities; therefore, no conversion of land use is required. Construction of the proposed project would not result in adverse effects on land use in the project area. Construction activities would not permanently disrupt existing land uses or result in new land uses or incompatible development. The Build Alternatives will be consistent with all the State, regional, and local plans and programs.
## MINERAL RESOURCES

<table>
<thead>
<tr>
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<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
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</tr>
</tbody>
</table>

### CEQA Significance Determinations for Mineral Resources

**No Impact**

There are no known mineral resources located in the project vicinity.
CEQA Significance Determinations for Noise

a) **Less than Significant with Mitigation Incorporated**

The Caltrans *Traffic Noise Analysis Protocol* (Protocol) specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of Federal or Federal-aid highway projects. The Noise Abatement Criteria (NAC) specified in the Protocol are the same as those specified in 23 CFR 772. The FHWA NAC were established by considering: (1) hearing impairment, (2) annoyance, sleep, and task interference or disturbance, and (3) interference with speech communication. For example, the NAC for Activity Category B (Residential) establishes an exterior noise level of 67 Leq (h) because this is the noise level at which hearing impairment, annoyance, sleep, and task interference or disturbance and interference with speech generally occurs. The Protocol states that a sound level is considered to approach an NAC level when the sound level is within one dB of the NAC identified in 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not). For this CEQA analysis, the federal NAC has been used as the “applicable standards of other agencies”.

The proposed project would result in noise levels in excess of 67 dBA at 9 receiver locations, falling under Activity Categories B and C (Parks, Recreation Areas, etc.) land uses, within the project area. As for Activity Category B, the NAC for Activity Categories C is also 67 dBA. Since traffic noise impacts have been identified, noise abatement has been considered for the impacted receiver locations.
The following is a discussion of noise abatement considered for each of the 9 receiver locations where projected noise levels would be in excess of the NAC.

1. Mayfair Park is located along eastbound SR-118 between First St. and Erringer Rd. Site E3 represents an area of frequent human use (one bench and basketball court). Based on the noise analysis, noise impacts have been predicted to occur at this park under both Build Alternatives. The projected noise level for both Build Alternatives would be 68 dBA. The projected noise level increase at this location for both Build Alternatives is 2 dBA. Noise abatement proposed for this site is discussed further under no. 3 below.

All impacted residential areas within the project limits have been considered for noise abatement. Residential areas where projected noise levels would be in excess of the NAC include the following sites:

   2. Site MF4 (western portion of the Villa Del Arroyo community, south of SR-118 and east of Collins Dr.)

      o The projected noise level at this site for both Build Alternatives would be 68 dBA. The projected noise level increase for both Build Alternatives is 2 dBA. Noise abatement has been considered in the form of soundwalls. The proposed soundwall for this site, analyzed along the edge of shoulder on the eastbound SR-118, would benefit the Villa Del Arroyo community. The proposed soundwall (range of 10 to 16 feet in height) is predicted to provide 5 – 6 decibels noise reduction to the impacted areas.

   3. Site ME2 (Clearfield Pl. cul-de-sac, south of SR-118 and 4 blocks east of Mayfair Park)

      o The projected noise level at this site for both Build Alternatives would be 72 dBA. The projected noise level increase for both Build Alternatives is 1 dBA. Noise abatement has been considered in the form of soundwalls. The proposed soundwall for this site, analyzed along the edge of shoulder on the eastbound SR-118, would benefit the residential area between First Street and Erringer Road, including Mayfair Park. The proposed soundwall (range of 8 to 1 feet in height) is predicted to provide 6 – 10 decibels noise reduction to the impacted areas.

   4. Site D4 (Gayle Pl. cul-de-sac, south of SR-118, between Erringer Rd. and Sycamore Dr.)

      o The projected noise level at this site for both Build Alternatives would be 70 dBA. The projected noise level increase for both Build Alternatives is 2 dBA. Noise abatement has been considered in the form of soundwalls. The proposed soundwall for this site, analyzed along the edge of shoulder on the eastbound SR-118, would benefit the residential area between Erringer Road and Sycamore Drive. The proposed soundwall (range of 8 to 16 feet in height) is predicted to provide 6 – 9 decibels noise reduction to the adjacent residences.

   5. Site A6 and (Samantha Ct. cul-de-sac, north of SR-118, one block east of Galena Ave.)

      o The projected noise level at Site A6 for both Build Alternatives would be 72 dBA. The projected noise level increase at this location for both Build Alternatives is 2 dBA. Noise abatement has been considered in the form of soundwalls. The proposed soundwall for this site, analyzed along the edge of shoulder on the westbound SR-118, would benefit the residential area between Tapo Canyon Rd. and Sycamore Dr. The proposed soundwall (range of 8 to 16 feet in height) is predicted to provide 5 – 10 decibels noise reduction to the adjacent residences.
reduction to the adjacent residences. The soundwall proposed for this site would also benefit receiver locations represented by site MA6, site A4, and site A, which are discussed below.

6. Site MA6 (Samantha Ct. cul-de-sac, north of SR-118, one block east of Galena Ave.)
   - The projected noise level at site MA6 for both Build Alternatives would be 70 dBA. The projected noise level increase for both Build Alternatives is 4 dBA.

7. Site A5 (Rochelle Pl. cul-de-sac, north of SR-118, between Galena Ave. and Sequoia Ave.)
   - The projected noise level at this site for Build Alternatives would be 78 dBA. The projected noise level increase at this location for both Build Alternatives is 3 dBA.

8. Site A4 (Brindle Ct. and Copperfield St., north of SR-118, two blocks east of Sequoia Ave.)
   - The projected noise level at this site for both Build Alternatives would be 68 dBA. The projected noise level increase for both Build Alternatives is 2 dBA.

9. Site A (Valencia Ct. cul-de-sac, north of SR-118, one block east of Arroyo Del Tapo Channel, between Sequoia Ave. and Tapo Canyon Rd.)
   - The projected noise level at this site for both Build Alternatives would be 70 dBA. The projected noise level increase for both Build Alternatives is 1 dBA.

b Less than Significant Impact
Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used. The operation of construction equipment causes vibrations that spread through the ground and diminish in strength with traveled distance. Buildings in the vicinity of construction sites can be affected by these vibrations, with resulting damage in the most severe cases. The vibration levels created by the normal movement of construction vehicles are comparable in order-of-magnitude to groundborne vibrations created by heavy vehicles traveling on streets and highways. Building damage can be cosmetic or structural. Normal buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 25 feet based on typical construction equipment vibration levels. This distance can vary substantially depending on the soil composition between vibration source and receiver. There are many standard construction procedures that would be included in project specifications to minimize intrusion without placing unreasonable constraints on the construction process or substantially increasing costs.

Regarding facility operation, significant vibration impact from rubber-tire-fitted vehicles is extremely rare. Rubber-tire-fitted vehicles are typically well isolated by the vehicle suspension design, and tires also act as a highly effective barrier to vibration transmission from the vibration-generating carriage and the main propagation medium for vibration excitation (i.e., the ground); therefore, potential vibration impacts from traffic on the freeway can be reasonably dismissed. It is possible that there could be slight vibration issues at residences close to the traveled way if there are cracks, uneven slabs, and/or damaged expansion joints.

c Less than Significant Impact
Noise analysis for projects under CEQA centers on whether the proposed project or the proposed noise abatement would result in significant adverse environmental effects. Whether an increase in future noise level would result in a significant effect for purposes of CEQA is determined by comparing the existing
noise level (or baseline environmental setting) to the predicted noise level with the project. The CEQA noise analysis is completely independent of the 23 CFR 772 noise analysis, which is centered on the federal noise abatement criteria. Under CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

Land uses that could be subject to traffic and construction noise impacts from the proposed project include single-family residences and multi-family residences, as well as park and recreation areas. Hotel/motel and restaurant facilities/land uses were also identified. The existing ambient noise levels measured in the project area were between 46 and 69 decibels (dBA).

As a result of the Build Alternatives, projected noise levels would increase between 1 and 5 dBA. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dBA in typical noisy environments. Furthermore, a 5-dBA increase is generally perceived as a distinctly noticeable increase, and a 10-dBA increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dBA increase in sound, would generally be perceived as barely detectable.

In California a substantial noise increase is considered to occur when the project’s predicted worst-hour design-year noise level exceeds the existing worst hour noise level by 12 dBA or more. The use of 12 dBA was established in California many years ago and is based on the concept that a 10 dBA increase generally is perceived as a doubling of loudness. A collective decision by Caltrans staff, which was approved by FHWA, was made to use 12 dBA. The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Impacts related to permanent increase in ambient noise levels is considered less than significant.

**d Less than Significant Impact**
During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans standard specifications, Section 7-1.01I, Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

As indicated in section 2.2.6 (Noise), equipment involved in construction is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA per doubling of distance. Normally, construction noise levels should not exceed 86 dBA (Lmax) at a distance of 50 feet. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans standard specifications and would be short-term, intermittent, and dominated by local traffic noise. With compliance with the Caltrans Standard Specifications and implementation of minimization measures in section 2.2.6 (Noise), construction noise would be considered less than significant.

**e, f No Impact**
The proposed project is not located within an airport land use plan or within two miles of a public or private airport. Therefore, the build alternatives would not result in the exposure of people to excessive noise related to aircraft or airport operations.
**POPULATION AND HOUSING**

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Induce substantial population growth in an area, either directly (for example,</td>
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<tr>
<td>by proposing new homes and businesses) or indirectly (for example, through</td>
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<tr>
<td>extension of roads or other infrastructure)?</td>
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<tr>
<td>b) Displace substantial numbers of existing housing, necessitating the</td>
<td>☐</td>
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</tr>
<tr>
<td>construction of replacement housing elsewhere?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Displace substantial numbers of people, necessitating the construction of</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>replacement housing elsewhere?</td>
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</tbody>
</table>

**CEQA Significance Determinations for Population and Housing**

**No Impact**

Highly restrictive land use controls and growth management policies have created an unfavorable environment for development in the study area, limiting the availability of undeveloped land. These development constraints have shaped the current land use pattern in the study area and will be the primary influence on the rate, type, and amount of growth for the foreseeable future. As a result, the Build Alternatives are not expected to affect growth in or adjacent to the study area. Therefore, the proposed project would not indirectly induce substantial growth, and would not result in growth-related effects.

This project will not relocate or displace residential and non-residential (commercial businesses, industrial, manufacturing businesses or agricultural/farmland).
PUBLIC SERVICES

| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: |
|-----------------|----------------|----------------|----------------|----------------|
| Fire protection? | ![ ] | ![ ] | ![ ] | ![ ] |
| Police protection? | ![ ] | ![ ] | ![ ] | ![ ] |
| Schools? | ![ ] | ![ ] | ![ ] | ![ ] |
| Parks? | ![ ] | ![ ] | ![ ] | ![ ] |
| Other public facilities? | ![ ] | ![ ] | ![ ] | ![ ] |

**CEQA Significance Determinations for Public Services**

**Less than Significant**
None of the governmental facilities within 1 mile of the proposed project would be directly impacted as a result of the build alternatives. The build alternatives would not result in increased population or demand for public services in the study area because they would not construct new housing or businesses. The build alternatives would have both beneficial and adverse effects on fire protection, law enforcement protection, and emergency vehicle services within the study area. Construction activities that require closures of travel lanes could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response time goals within the study area. Beneficial effects include improved emergency response times, as the ability to move fire protection, law enforcement, and emergency service vehicles from one area to another would be enhanced by the improved transportation network following construction.

A Traffic Management Plan would be implemented to minimize any circulation impacts during construction and would include construction staging plans, as well as coordination with local residents, businesses, local agencies, and emergency responders. During project construction, Caltrans will coordinate with local emergency service providers to keep them informed of the project construction schedule and any detour routes so as to avoid or minimize any impacts.
**RECREATION**

<table>
<thead>
<tr>
<th></th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
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</tr>
<tr>
<td>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?</td>
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</tbody>
</table>

**CEQA Significance Determinations for Recreation**

**No Impact**
The proposed project is a roadway improvement project that would provide traffic congestion relief, improve traffic operation, and accommodate projected traffic volumes in the project study area. All proposed project components would occur within existing infrastructure and right-of-way and would not occur on parks or recreational facilities that are currently adjacent to freeway facilities.
TRANSPORTATION/TRAFFIC

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>e) Result in inadequate emergency access?</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
<tr>
<td>f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</td>
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<td>☒</td>
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</tbody>
</table>

CEQA Significance Determinations for Transportation/Traffic

**Less than Significant Impact**

Construction activities that require closures of travel lanes could result in traffic delays that could affect the ability of fire, law enforcement, and emergency service providers to meet response time goals within the study area. Beneficial effects include improved emergency response times, as the ability to move fire protection, law enforcement, and emergency service vehicles from one area to another would be enhanced by the improved transportation network following construction.

A Traffic Management Plan would be implemented to minimize any circulation impacts during construction and would include construction staging plans, as well as coordination with local residents, businesses, local agencies, and emergency responders. During project construction, Caltrans will coordinate with local emergency service providers to keep them informed of the project construction schedule and any detour routes so as to avoid or minimize any impacts.
TRIBAL CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>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:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>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</td>
<td>☐</td>
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<td>☐</td>
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</tr>
<tr>
<td>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.</td>
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</table>

CEQA Significance Determinations for Tribal Cultural Resources

a, b) No Impact
There are no historic or tribal cultural resources within the project limits.
# UTILITIES AND SERVICE SYSTEMS

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>g) Comply with federal, state, and local statutes and regulations related to solid waste?</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
</tbody>
</table>

## CEQA Significance Determinations for Utilities and Service Systems

**No Impact**
The project would not impact water supplies, water drainages and waste water treatments.
MANDATORY FINDINGS OF SIGNIFICANCE

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>a)</td>
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<tr>
<td>b)</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>c)</td>
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</table>

CEQA Significance Determinations for Mandatory Findings of Significance

The proposed project would have no effect on wild and scenic rivers, farmland, timberland, coastal zone, land use, community character and cohesion, environmental justice, relocations and real property acquisition, visual/aesthetics, cultural resources, hydrology, floodplains, mineral resources.

In addition, the proposed project would have less than significant effects to utilities/emergency services, traffic and transportation, water quality, geology/soils/seismic/topography, paleontology, geology, hazardous waste/materials, air quality, and biological resources.

Also, with incorporation of mitigation measures, the proposed project would have less than significant effects related to noise.

Temporary cumulative impacts as a result of the proposed project, in combination with other past, present and future projects, are not considered to be adverse. All temporary impacts described in the above sections, as well as impacts for other projects in the study area, would each be minimized or mitigated and would, therefore, not have a cumulative impact to humans or the physical environment.

The project’s incremental contribution to cumulative impacts related to air quality and stormwater runoff are not cumulatively considerable.
The proposed project will comply with the requirements in the State Implementation Plan (SIP) process, which provides specific requirements that will avoid or substantially lessen the air quality cumulative impact.

The SIP process ensures compliance with state and federal air quality standards. In order to meet their transportation planning goals, Metropolitan Planning Organizations (MPO) and Regional Transportation Agencies (RTPA) create long-range plans and programs, such as Regional Transportation Plans (RTP) and Regional Transportation Improvement Programs (RTIP), which include proposed transportation projects. The projects included in these plans and programs must be consistent with (or conform to) the approved SIP. If a project would contribute to the violation of a standard, it cannot be included in the conforming plan and cannot be built.

The proposed project and cumulative projects would have to include BMPs to target constituents of concern, which includes any pollutants causing downstream impairments. The cumulative projects include BMPs to address pollutants of concern; therefore incremental contribution for impairments resulting from pollutants of concern would not be cumulatively considerable. Also, during construction, there is a possibility for cumulative impacts to storm water runoff if similar projects were in construction simultaneously. These impacts would be minimized through incorporation of storm water BMPs and permit requirements, as required by law. Implementation of these procedures would minimize potential impacts on water quality and would avoid significant cumulative effects.
Climate Change
Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth’s climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO$_2$), methane (CH$_4$), nitrous oxide (N$_2$O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF$_6$), HFC-23 (fluoroform), HFC-134a (s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions. The dominant GHG emitted is CO$_2$, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” "Greenhouse gas mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

Regulatory Setting
This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal
To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset

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126 https://www.arb.ca.gov/cc/inventory/data/data.htm
management, project development and design, and operations and maintenance practices.\textsuperscript{127} This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”\textsuperscript{128} Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) nuclear energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

Executive Order 13514, \textit{Federal Leadership in Environmental, Energy, and Economic Performance}, 74 Federal Register 52117 (October 8, 2009): This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

Executive Order 13693, \textit{Planning for Federal Sustainability in the Next Decade}, 80 Federal Register 15869 (March 2015): This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

\textsuperscript{127} https://www.fhwa.dot.gov/environment/sustainability/resilience/
\textsuperscript{128} https://www.sustainablehighways.dot.gov/overview.aspx
sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous executive orders to ensure agency operations and facilities prepare for impacts of climate change. This order revokes Executive Order 13514.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010\textsuperscript{129} and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules’ long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.\textsuperscript{130}

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO\textsubscript{2} emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

\textsuperscript{129} \url{http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq}
State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (EO) is to reduce California’s GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.
Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan: This bill requires the State’s long-range transportation plan to meet California’s climate change goals under AB 32.

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO\textsubscript{2}e). Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, (SB 32) Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

**Environmental Setting**

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. ARB approved the *First Update to the Climate Change Scoping Plan* on May 22, 2014. ARB is moving forward with a discussion draft of an updated Scoping Plan that will reflect the 2030 target established in EO B-30-15 and SB 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California.\(^{131}\) ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 24 represent a business-as-usual (BAU)
scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO$_2$e$^{132}$. The 2017 edition of the GHG emissions inventory (released June 2017) found total California emissions of 440.4 MMTCO$_2$e, showing progress towards meeting the AB 32 goals.

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO$_2$e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO$_2$e.

**Figure 25 2020 Business as Usual (BAU) Emissions Projection 2014 Edition**

![Figure 25](https://www.arb.ca.gov/cc/inventory/data/bau.htm)

**Project Analysis**

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.$^{133}$ In assessing cumulative impacts, it must

$^{132}$ The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

$^{133}$ This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).
be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

**Operational Emissions**

Figure 26 POSSIBLE USE OF TRAFFIC OPERATION STRATEGIES IN REDUCING ON-ROAD CO₂ EMISSIONS

![Graph showing CO₂ emissions vs. average speed](http://uctc.berkeley.edu/research/papers/846.pdf)

Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside, May 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/efficiency. To be most effective all four strategies should be pursued concurrently.¹

FHWA supports these strategies to lessen climate change impacts, which correlate with efforts that the state of California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO₂ from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0–25 miles per hour (see Figure 25 above). To the extent that a project relieves congestion by
enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO₂, may be reduced.

Sources of operational GHG emissions are the same as those analyzed for criteria pollutant emissions and include GHG emissions from vehicles traveling along the project corridor. Project-related GHG emissions (No-Build and Build Alternative) were estimated. It should be noted, however, that climate change, as it relates to man-made GHG emissions, is by nature a global and cumulative impact. The following GHG emissions estimate is presented for the purpose of disclosing project-related emissions.

The project GHG emissions are evaluated for the following:

- The changes in the future GHG emissions along the project corridor compared to the existing emissions in 2014.
- The changes in GHG emissions for the Build Alternative along the project corridor compared to those for the No-Build scenario.

It should be noted that these GHG emissions are only useful in comparing among Alternatives or among milestone years. The numbers are not necessarily an accurate reflection of what the true GHG emissions will be because GHG emissions are dependent on other factors that are not part of the model, such as the fuel mix and consumption, rate of acceleration, and the aerodynamics and efficiency of the vehicles.

A summary of GHG emissions and comparison to the No-Build Alternative and to the existing conditions, as well as Vehicle Miles Traveled, is presented in Table 47.

**Table 47 Modeled Annual CO₂e Emissions and Vehicle Miles Traveled, by Alternative**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>CO₂e Emissions (Metric Tons/Year)</th>
<th>Annual Vehicle Miles Traveled¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Year 2014</td>
<td>122736.0</td>
<td>296,711,942</td>
</tr>
<tr>
<td>Opening Year 2025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Build</td>
<td>92316.4</td>
<td>314,807,460</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>97277.9</td>
<td>322,192,992</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>97151.0</td>
<td>321,734,448</td>
</tr>
<tr>
<td>Opening Year 2030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Build</td>
<td>82537.9</td>
<td>317,577,208</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>90889.1</td>
<td>334,376,139</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>90326.6</td>
<td>332,578,599</td>
</tr>
<tr>
<td>Horizon Year 2040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Build</td>
<td>77405.8</td>
<td>323,116,700</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>85187.5</td>
<td>341,433,397</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>84381.1</td>
<td>336,648,821</td>
</tr>
</tbody>
</table>

CO₂e= carbon dioxide equivalent

*Source: Office of Advance Planning and Office of Traffic Engineering. 5/2/2017*

As shown in the above tables, emissions of CO₂e under the Build Alternatives and the No Build Alternative would decrease as much as 31 percent when compared to the existing CO₂e emissions. However, GHG emissions (in CO₂ equivalency, CO₂e, comprising carbon dioxide [CO₂] and methane [CH₄]) for both Build Alternatives would increase in all future years when compared to the emissions for the No-Build Alternative in each year. The increase in GHG
emissions over the No-Build is likely due to the anticipated increase in traffic volumes within the study area.

The purpose of the proposed project is to provide traffic congestion relief, improve traffic operation, and accommodate traffic volumes. The need for the proposed project is based on an assessment of the existing and future transportation demand in the project area compared to available capacity. In general, projects that add capacity and thereby increase traffic volumes, tend to have the highest potential of increasing GHG emissions. The proposed project, however, is anticipated to alleviate traffic congestion and improve traffic operations in the project area as the implementation of the proposed improvements result in improvement in vehicle speed.

The proposed project will be amended into the latest 2016 RTP/SCS. The 2016 RTP/SCS includes a collective commitment to reduce emissions from all transportation sources in compliance with SB 375, improve public health, and meet air quality standards. Additional benefits of the 2016 RTP/SCS include reductions in GHG emissions within the air basin: reduction of 8 percent by 2020, 18 percent by 2035, and 22 percent by 2040 is expected in the overall GHG emissions. When amended into the RTP/SCS, the proposed project will become a part of the overall transportation network that is anticipated to achieve the expected GHG reductions.

GHG – Limitations and Uncertainties with Modeling

EMFAC
Although EMFAC can calculate CO₂ emissions from mobile sources, the model does have limitations when it comes to accurately reflecting changes in CO₂ emissions due to impacts on traffic. According to the National Cooperative Highway Research Program report, *Development of a Comprehensive Modal Emission Model* (April 2008) and a 2009 University of California study, brief but rapid accelerations, such as those occurring during congestion, can contribute significantly to a vehicle's CO₂ emissions during a typical urban trip. Current emission-factor models do not distinguish the emission of such modal events (i.e., acceleration, deceleration) in the operation of a vehicle and instead estimate emissions by average trip speed. It is difficult to model this because the frequency and rate of acceleration or deceleration that drivers chose to operate their vehicles depend on each individual’s human behavior, their reaction to other vehicles’ movements around them, and their acceptable safety margins. Currently, the EPA and the CARB have not approved a modal emissions model that is capable of conducting such detailed modeling. This limitation is a factor to consider when comparing the model’s estimated emissions for various project alternatives against a baseline value to determine impacts.

Other Variables
With the current understanding, project-level analysis of greenhouse gas emissions has limitations. Although a greenhouse gas analysis is included for this project, there are numerous external variables that could change during the design life of the proposed project and would thus change the projected CO₂ emissions.

First, vehicle fuel economy is increasing. The EPA’s annual report, *Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2012*, which provides data on the fuel economy and technology characteristics of new light-duty vehicles including cars, minivans, sport utility vehicles, and pickup trucks, confirms that average fuel economy improves each year with a noticeable rate of change beginning in 2005. Corporate Average Fuel Economy (CAFE) standards remained the same between model years 1995 and 2003, subsequently increasing to higher fuel economy standards for future vehicle model years. The EPA estimates that light duty fuel economy rose by 16% from 2007 to 2012. Table 48 shows the increases in required fuel economy standards for cars and trucks between Model Years 2012 and 2025 as available from the National Highway Traffic Safety Administration for the 2012–2016 and 2017–2025 CAFE Standards.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passenger Cars</strong></td>
<td>33.3</td>
<td>34.2</td>
<td>34.9</td>
<td>36.2</td>
<td>37.8</td>
<td>41.1-41.6</td>
<td>44.2-44.8</td>
<td>55.3-56.2</td>
</tr>
<tr>
<td><strong>Light Trucks</strong></td>
<td>25.4</td>
<td>26</td>
<td>26.6</td>
<td>27.5</td>
<td>29.6</td>
<td>30.6-32.1</td>
<td>39.3-40.3</td>
<td></td>
</tr>
<tr>
<td><strong>Combined</strong></td>
<td>29.7</td>
<td>30.5</td>
<td>31.3</td>
<td>32.6</td>
<td>34.1</td>
<td>36.1-36.5</td>
<td>38.3-38.9</td>
<td>48.7-49.7</td>
</tr>
</tbody>
</table>


Second, new lower emissions and zero-emissions vehicles will come into the market within the expected design life of this project. According to the 2013 Annual Energy Outlook (AEO2013):

“LDVs that use diesel, other alternative fuels, hybrid-electric, or all-electric systems play a significant role in meeting more stringent GHG emissions and CAFE standards over the projection period. Sales of such vehicles increase from 20 percent of all new LDV sales in 2011 to 49 percent in 2040 in the AEO2013 Reference case.”


135 http://www.epa.gov/oms/fetrends.htm
Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction GHG emissions for the proposed project were estimated using *Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model*. A summary of construction GHG emissions by construction phases is provided in Tables 49 and 48. The proposed project has a construction duration of approximately 2 years for each individual site: improvements in the eastbound (EB) direction will be constructed from 2021 to 2023 in Phase 1; improvements in the WB direction will be constructed from 2023 to 2025 in Phase 2.

**Table 49 Summary of Emissions from Phase 1 Construction Activities (EB), lbs/day**

<table>
<thead>
<tr>
<th>Project Phases</th>
<th>CO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grubbing/Clearing</td>
<td>3751.64</td>
</tr>
<tr>
<td>Grading/Excavation</td>
<td>21450.41</td>
</tr>
<tr>
<td>Drainage/Utilities/Sub-grade</td>
<td>7160.51</td>
</tr>
<tr>
<td>Paving</td>
<td>9416.26</td>
</tr>
<tr>
<td>Maximum (lbs/day)</td>
<td>21450.41</td>
</tr>
<tr>
<td>Total (in tons)</td>
<td>5098.08</td>
</tr>
</tbody>
</table>

Note: Calculation based on construction activities estimated by the project engineer.

**Table 50 Summary of Emissions from Phase 2 Construction Activities (WB), lbs/day**

<table>
<thead>
<tr>
<th>Project Phases</th>
<th>CO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grubbing/Clearing</td>
<td>3688.46</td>
</tr>
<tr>
<td>Grading/Excavation</td>
<td>21243.47</td>
</tr>
<tr>
<td>Drainage/Utilities/Sub-grade</td>
<td>7079.98</td>
</tr>
<tr>
<td>Paving</td>
<td>9235.94</td>
</tr>
<tr>
<td>Maximum (lbs/day)</td>
<td>21243.47</td>
</tr>
<tr>
<td>Total (in tons)</td>
<td>5040.93</td>
</tr>
</tbody>
</table>

Note: Calculation based on construction activities estimated by the project engineer.

Caltrans Standard Specifications, a part of all construction contracts, includes requirements for contractors to comply with CARB and local air pollution control district rules, ordinances, and regulations for air quality. Measures such as minimizing idling time, keeping equipment maintained, and using equipment with CARB-permitted engines contribute to reducing GHGs by...
minimizing construction vehicle emissions. Measures listed in Section 2.2.5 (Air Quality) would reduce the GHG emissions generated by on-site construction equipment.

**CEQA Conclusion**

As discussed above, CO$_2$e emissions under all future build alternatives would decrease from existing levels, but are higher than the estimated future no-build emissions. Under the No Build Alternative, GHG emissions would be lower than existing conditions. Nonetheless, there are also limitations with EMFAC and with assessing what a given CO$_2$e emissions increase means for climate change. Therefore, it is Caltrans’ determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project’s direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

**Greenhouse Gas Reduction Strategies**

**Statewide Efforts**

In an effort to further the vision of California’s GHG reduction targets outlined an AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today’s petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state’s climate adaptation strategy, *Safeguarding California*. 
The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown’s key pillars sets the ambitious goal of reducing today’s petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

**Caltrans Activities**
Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

**California Transportation Plan (CTP 2040)**
The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California’s future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.
SB 391 (Liu 2009) requires the CTP to meet California’s climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state’s transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

**Caltrans Strategic Management Plan**
The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:
- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans’ internal operational (buildings, facilities, and fuel) GHG emissions

**Funding and Technical Assistance Programs**
In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (2013).

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

*Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

**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.

- Caltrans Standard Specification 6-1.03 (Local Materials) requires the contractor to use material near the project site to avoid unnecessary travel.
- Caltrans Standard Specification 7-1.02C (Emissions Reduction) requires the contractor to abide by regulations issued by the California Air Resources Board (CARB). This includes requiring construction equipment to have engines permitted through the CARB.
- Caltrans Standard Specification 14-9.02 (Air Pollution Control) 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. To the extent such compliance reduces vehicle emissions and energy consumption, GHG emissions may be reduced.
• Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.

• To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related GHG emissions caused by idling vehicles along local roads during peak travel times.

• Landscape that is disturbed due to construction will be replaced following Caltrans policies and procedures. Landscaping reduces surface warming, and through photosynthesis, decreases CO2. The landscape planting would help offset any potential CO2 emissions increase.

• According to Caltrans Standard Specifications, idling time for lane closure during construction is restricted to ten minutes in each direction. In addition, the contractor must comply with Title 13, California Code of Regulations §2449(d)(3), adopted by ARB on June 15, 2008. This regulation restricts idling of construction vehicles to no longer than five consecutive minutes. Compliance with this regulation reduces harmful emissions from diesel-powered construction vehicles.

• The Construction Contractor would comply with Caltrans Standard Specifications, Sections 7-1.01F and 10. Section 7, “Legal Regulations and Responsibility to the Public”. These specifications address the Construction Contractor’s responsibility on many items of concern, such as air pollution; protection of lakes, streams, reservoirs, and other water bodies; use of pesticides; safety; sanitation; convenience of the public; and damage or injury to any person or property as a result of any construction operation. Section 7-1.01F specifically requires compliance by the Construction 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.

• The Construction Contractor would establish Environmentally Sensitive Areas (ESAs) for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited to the extent feasible.

Adaptation Strategies
“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.
**Federal Efforts**

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011\(^{137}\), outlining the federal government’s progress in expanding and strengthening the nation’s capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”\(^{138}\)

To further the DOT Policy Statement, in December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).\(^{139}\) This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.\(^{140}\)

**State Efforts**

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (*Sea-Level Rise Assessment Report*)\(^{141}\) was released in June 2012 and included relative sea-level rise projections

\(^{137}\) [https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience](https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience)


\(^{139}\) [https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm](https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm)

\(^{140}\) [https://www.fhwa.dot.gov/environment/sustainability/resilience/](https://www.fhwa.dot.gov/environment/sustainability/resilience/)

for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed the *California Climate Adaptation Strategy* (Dec 2009), which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided “guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California,” specifically, “information and recommendations to enhance consistency across agencies in their development of approaches to SLR.” The March 2013 update finalizes the SLR Guidance by incorporating findings of the National Academy’s 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

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142 http://www.climatechange.ca.gov/adaptation/strategy/index.html
Chapter 4 Comments and Coordination

Coordination efforts for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings and interagency coordination. This chapter summarizes the results of Caltrans’ efforts to fully identify, address, and resolve project-related issues through early and continued coordination.

At the request of the Ventura County Transportation Commission (VCTC), Caltrans prepared and approved a Supplemental Project Study Report-Project Development Support (PSR-PDS) to update Phase II of the original PSR dated June 28, 1991. Phase I is from Los Angeles/Ventura County Line to Tapo Canyon Rd., and the construction was completed in 2011.

The VCTC Comprehensive Transportation Plan (CTP) identified the proposed project as a top priority state highway projects in Ventura County, and established policy for the projects to be priority for State Transportation Improvement Program (STIP) and Surface Transportation Program (STP) funds. Based on the CTP, the VCTC nominated the Project Approval Environmental Document (PA/ED) phase for the proposed project as part of its 2014 STIP submittal.

On September 29, 2015 Caltrans hosted a kick-off meeting for the PA/ED phase of the proposed project. Representatives from the Caltrans Divisions of Project Management, Design, and Environmental were present, including technical specialists from each environmental branch. Representatives from the VCTC were also in attendance. Funding sources were identified and a preliminary schedule was determined to produce the deliverables for this phase of the project.

Beginning in April 2016, monthly or bi-monthly PDT meetings were held with VCTC representatives in attendance. Formal planning and preparation of the appropriate design and environmental documentation was initiated and critical issues were identified.

A Value Analysis (VA) study was conducted for the proposed project between January 30 – February 1 and February 6 – 8, 2017 in District 7 offices, Los Angeles, California. The VA study included representatives from VCTC, as well as the cities of Moorpark and Simi Valley.

The objectives of the VA study were to:

- Evaluate the proposed improvements and to develop new strategies for this project
- Evaluate proposed improvement for constructability
- Identify possible cost saving strategies
- Consider ways to reduce environmental impacts of the project
- Consider possible ways to phase the project.

The items listed below are the key drivers, constraints, or issues being addressed by the project and considered during this VA study to identify possible improvements.

- Obtaining adequate funding for the project is challenging. It is likely that the project will have to be phased to match available funding.
• Accommodating traffic during construction.
• Providing adequate wildlife crossings.

Concurrence from U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with regard to impact analysis and proposed mitigation was achieved by early coordination.

Circulation of this IS/EA environmental document will mark the beginning of further outreach to elected officials, additional governmental agencies, local stakeholders, and other interested and potentially affected parties –reference Appendix D of this environmental document (Distribution List) for a full listing.
Chapter 5 List of Preparers

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Appendix A. List of Studies and Technical Reports

Air Quality Analysis (California Department of Transportation, District 7, Division of Environmental Planning, Office of Environmental Engineering, June 2017)

Archaeological Survey Report (California Department of Transportation, District 7, Division of Environmental Planning, July 2017, Attachment to the Historic Property Survey Report)

Historic Property Survey Report (California Department of Transportation, District 7, Division of Environmental Planning, August 2017)

District Preliminary Geotechnical Report (California Department of Transportation, Division of Engineering Services, Geotechnical Services, Office of Geotechnical Design, June 2017)

Hazardous Waste Assessment (California Department of Transportation, District 7, Division of Environmental Planning, Office of Environmental Engineering, May 2017)

Traffic Engineering Assessment and Analysis Report (California Department of Transportation, District 7, Division of Operations, Office of Corridor Management (West), June 2017)

Preliminary Jurisdictional Delineation Report (California Department of Transportation, District 7, Division of Environmental Planning, December 2016, Appendix to Natural Environment Study)

Natural Environment Study (California Department of Transportation, District 7, Division of Environmental Planning, September 2017)

Noise Abatement Decision Report (California Department of Transportation, District 7, Division of Design, Office of Design C, August 2017)

Traffic Noise Study Report (California Department of Transportation, District 7, Division of Environmental Planning, Noise and Vibration Branch, June 2017)


Location Hydraulic Report (California Department of Transportation, Office of Engineering Services, Hydraulics, March 2004) reviewed by the California Department of Transportation, District 7, Division of Design, Hydraulics – West Region (May 2016 and July 2017)

Visual Analysis (California Department of Transportation, Office of Engineering Services, Landscape Architecture, March 2004) reviewed by the California Department of Transportation, Office of Engineering Services, Landscape Architecture (March 2013 and August 2016)
Appendix B. Title VI Policy Statement

March 2013

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6-violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

MALCOLM DOUGHERTY
Director

“Caltrans improves mobility across California”
Appendix C.  Avoidance, Minimization and/or Mitigation Summary
Appendix D. Distribution List
1 State standards are “not to exceed” or “not to be equaled or exceeded” unless stated otherwise.
2 Federal standards are “not to exceed more than once a year” or as described above.

iii ppm = parts per million

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

v Annual PM10 NAAQS revoked October 2006; was 50 μg/m³. 24-hr. PM2.5 NAAQS tightened October 2006; was 65 μg/m³. Annual PM2.5 NAAQS tightened from 15 μg/m³ to 12 μg/m³ December 2012 and secondary annual standard set at 15 μg/m³.

vi μg/m³ = micrograms per cubic meter

vii The 65 μg/m³ PM2.5 (24-hr) NAAQS was not revoked when the 35 μg/m³ NAAQS was promulgated in 2006. The 15 μg/m³ annual PM2.5 standard was not revoked when the 12 μg/m³ standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (7/20/2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the “Interim” period prior to availability of emission budgets, conformity tests may include some combination of build vs. no build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.


ix EPA finalized a 1-hour SO₂ standard of 75 ppb (parts per billion (thousand million)) in June 2010. Nonattainment areas have not yet been designated as of 9/2012.

x Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.

xi The ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM10 and, in larger proportion, PM2.5. Both the ARB and U.S. EPA have identified lead and various organic compounds that are precursors to ozone and PM2.5 as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

xii Lead NAAQS are not considered in Transportation Conformity analysis.