

Avila Beach Drive at SR-101 Interchange Improvement Project

SAN LUIS OBISPO COUNTY, CALIFORNIA
5-SLO-101-21.1
05-1G480
CMFERP16-5949(161)

Initial Study with Mitigated Negative Declaration



**Prepared by
The State of California, Department of Transportation
and County of San Luis Obispo Department of Public Works**

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.



February 2020

Avila Beach Drive at SR-101 Interchange Improvement, Avila Beach, San Luis Obispo County

INITIAL STUDY with Mitigated Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation
and

The County of San Luis Obispo Department of Public Works

Responsible Agencies: California Transportation Commission

2/24/20
Date of Approval


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MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The County of San Luis Obispo Department of Public Works (County) proposes the Avila Beach Drive at SR-101 Interchange Improvement Project (project), located in San Luis Obispo County at the Avila Beach Drive and SR-101 interchange approximately 2 miles east of the community of Avila Beach, and approximately 0.5 mile west of the City of Pismo Beach.

The purpose of the proposed project is to improve the operations and multimodal access of the SR-101/Avila Beach Drive interchange northbound and southbound intersections. The project is needed because the five-legged intersection of the southbound ramps, Avila Beach Drive and Shell Beach Road experiences operational issues during weekday afternoon peak travel times and the summer tourist seasons due to the intersection's geometry.

Project Description

The project includes three components:

1. Roundabout intersection improvements at the SR-101 southbound Ramps, Avila Beach Drive, and Shell Beach Road intersection;
2. Modifications to the SR-101 northbound off-ramp; and
3. Construction of a Park-and-Ride lot located southwest of the interchange.

Determination

This Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the County's intent to adopt an MND for this project. This does not mean that the County's decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public, and project details may change as the project and plans progress.

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

The proposed project would have no impact on Agriculture and Forest Resources, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation and Traffic, Tribal Cultural Resources, or Mandatory Findings of Significance.

In addition, the proposed project would have less than significant impacts on Geology and Soils, Land Use and Planning, Noise, Utilities and Service Systems.

By implementing mitigation measures, the proposed project would have less than significant impacts on Aesthetics, Biological Resources, and Cultural Resources.

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Chapter 1 Proposed Project

Introduction

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 United States Code (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 California Department of Transportation (Caltrans) entered into a Memorandum of Understanding (MOU) pursuant to 23 USC 327 (National Environmental Policy Act [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 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 the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

The County of San Luis Obispo Department of Public Works (County) is the lead agency for the Avila Beach Drive at SR-101 Interchange Project (project) under the California Environmental Quality Act (CEQA). Caltrans designated the County as the lead agency in May 2016.

The County and Caltrans have identified the project as a capital improvement project. They have proposed the evaluation of proper control for this intersection with strong consideration given to the construction of a roundabout. San Luis Obispo Council of Governments (SLOCOG) and the County are considering a future parking lot and Regional Transit Authority (RTA) bus stop at the southwest corner of Avila Beach Drive and Shell Beach Drive that could serve recreational and commuter purposes.

On May 21, 2012, the City of Pismo Beach held a community workshop, which identified a roundabout at this intersection as the desired alternative along with a city gateway enhancement. In January 2015, SLOCOG, Caltrans, and the County initiated a Project Study Report-Project Development Support (PSR-PDS) effort corresponding to the County’s capital improvement project and the recommendations listed in SLOCOG’s 2014 SR-101 Corridor Mobility Master Plan. For Avila Beach Drive, the plan identified the simplification of the intersections of Avila Beach Drive, Shell Beach Road, and SR-101 southbound ramps, and better access to park and ride lots. The SR-101/Avila Beach Drive interchange northbound ramp intersection was included in order to analyze and address bicycle needs.

The project is included in SLOCOG’s *SLOCOG 2014 Regional Transportation Plan (RTP)*. Local funds (County) will be used during the Project Approval and Environmental Document (PA&ED) phase. Additional funding for final design, right-of-way (ROW), and construction costs will be proposed in future programming cycles.

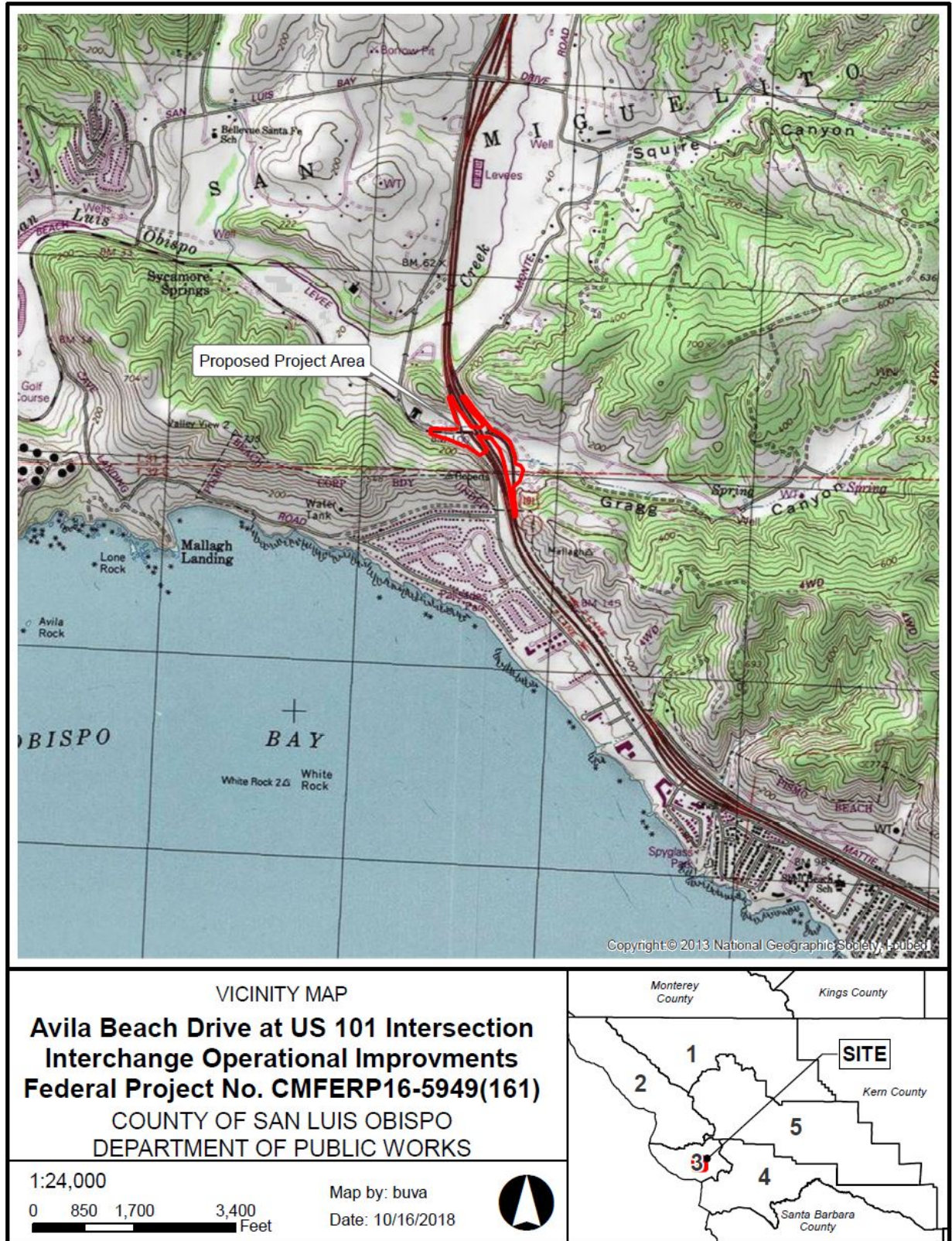


Figure 1. Project Vicinity Map

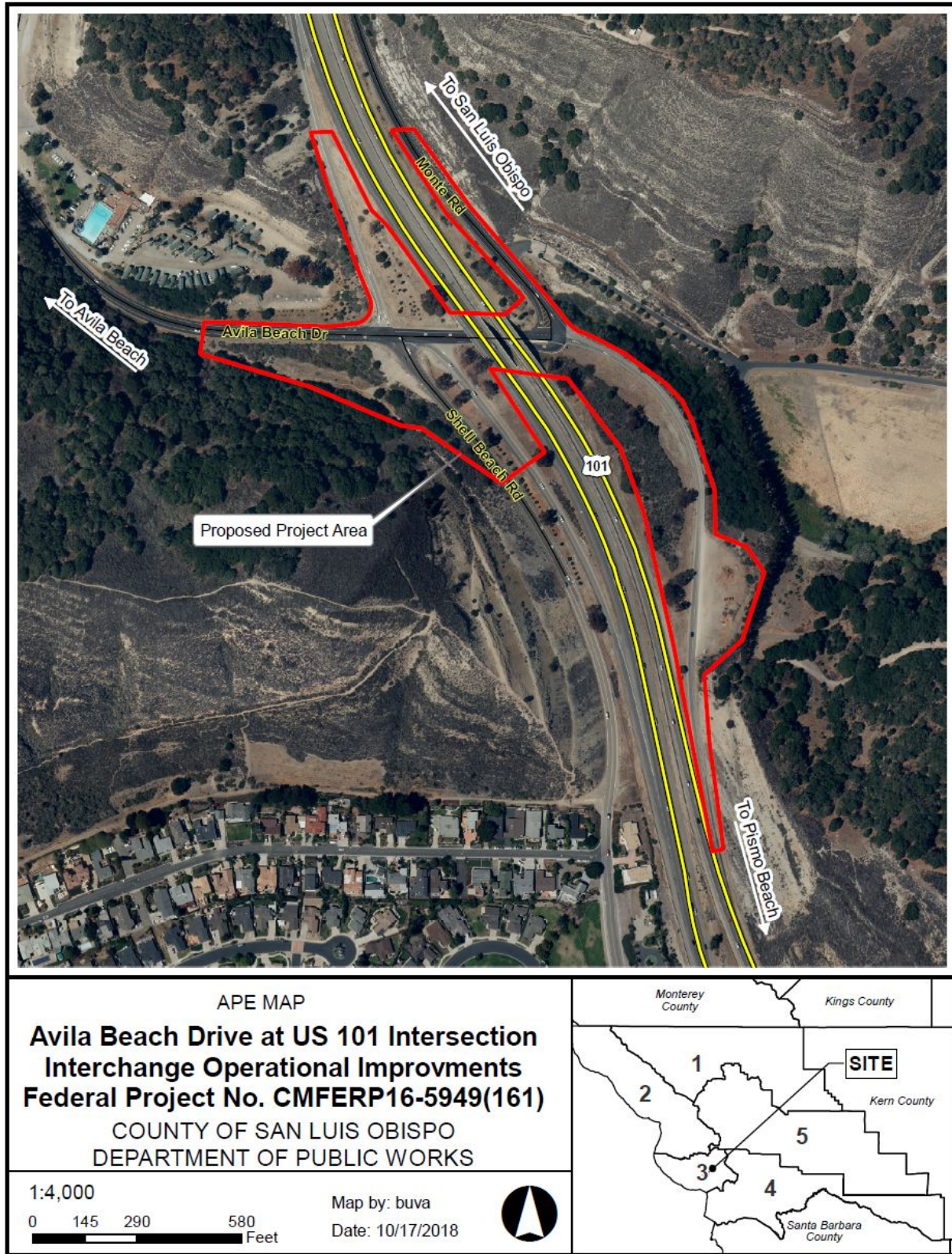


Figure 2. Proposed Project Area Map

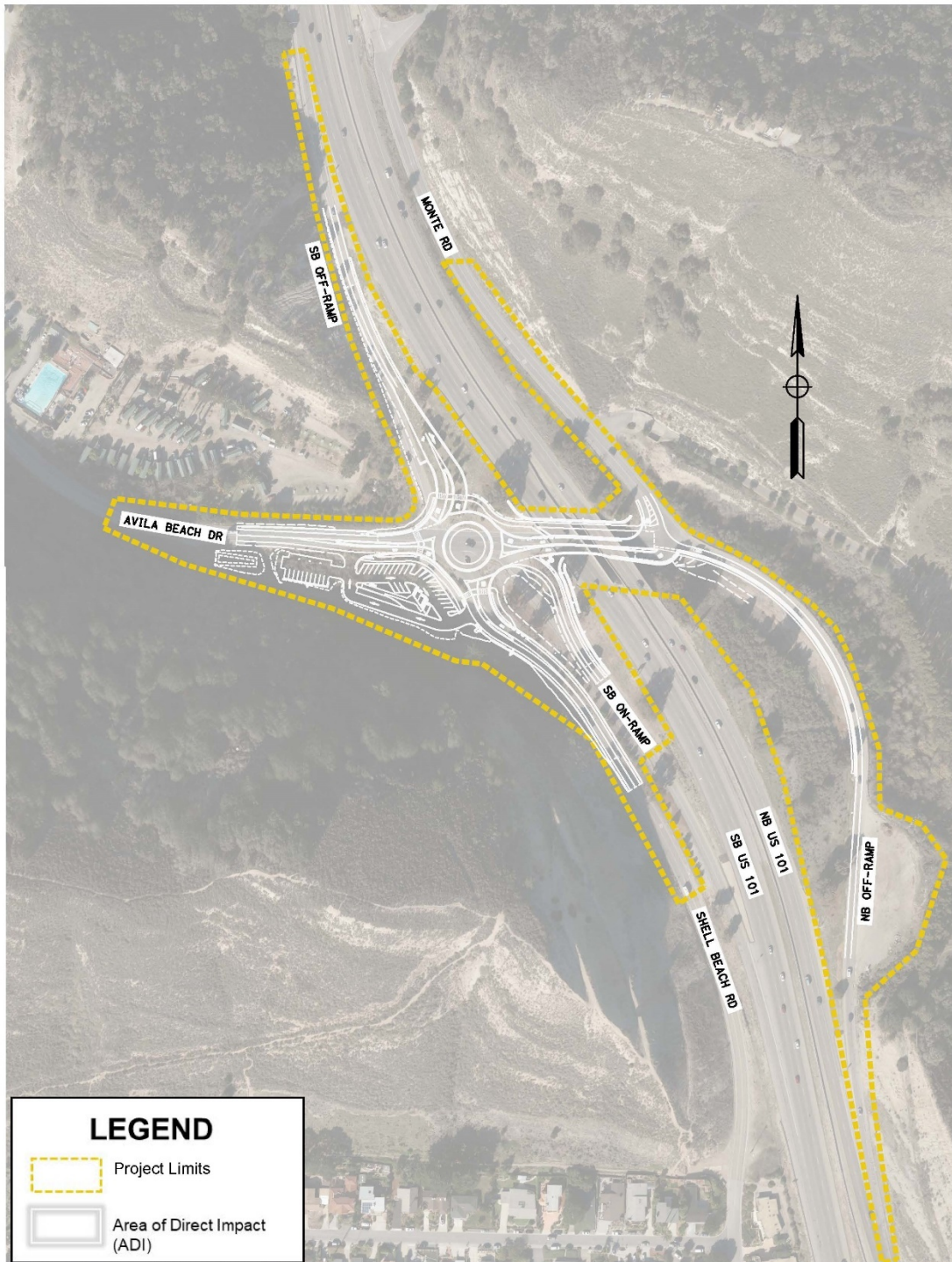


Figure 3: Avila Beach Drive at SR-101 Interchange Project Impact Map

Figure 3: Avila Beach Drive at SR-101 Interchange Project Impact Map

Purpose and Need

The purpose of the proposed project is to improve the Avila Beach Drive at SR-101 Interchange northbound and southbound ramp intersections to address traffic operational and safety deficiencies and improve multimodal access.

The County has identified the intersection of Avila Beach Drive/SR-101 southbound ramps/Shell Beach Road as operationally deficient at certain times of the day/year. The intersection is currently operating at Level of Service (LOS) "F" during p.m. peak periods. The three-year collision rate is slightly below the statewide collision average; however, the three-year fatality and injury rate for the southbound offramp is above State average. The corner sight distance is limited for the left turn and through movements at the terminus of the southbound off-ramp.

Traffic patterns at the SR-101 northbound off-ramp, Avila Beach Drive and Monte Road intersection are challenging, especially for bicyclists. Vehicles on the northbound off-ramp, which are not required to yield, approach the intersection at high speeds. The corner sight distance is limited for the minor movement turning left (the only movement possible) onto Monte Road from eastbound Avila Beach Drive. Vehicles exiting on the northbound off-ramp, which becomes westbound Avila Beach Drive, passes through the northbound intersection and onto the southbound intersection without the requirement to yield to the other minor movements.

The project has independent utility, in that it addresses forecasted future operational deficiencies at the interchange and existing safety deficiencies without requiring any additional transportation improvements in the area. In other words, no other related projects are required for the project to be effective.

Project Description

This section describes the proposed project to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. Project description details may change as the project and plans progress.

The project is located in San Luis Obispo County at the Avila Beach Drive and SR-101 interchange, approximately 2 miles east of the community of Avila Beach and approximately 0.5 mile west of the City of Pismo Beach (community of Shell Beach). The project is comprised of three main components:

1. A roundabout at the southbound ramp intersection.
2. Modifications to the northbound off-ramp.
3. A park-and-ride lot and Regional Transit Authority bus stop at the southwest corner of Avila Beach Drive and Shell Beach Road.

While final design is pending and Contractor construction operations are not yet defined, the preliminary Area of Potential Effect (APE) contains approximately 15.25 acres of which approximately 5.6 acres are within anticipated ground disturbance limits and of that area approximately 3.4 acres will have permanent hardscaped improvements.

Roundabout Intersection

The roundabout design features converting the two closely spaced intersections of Avila Beach Drive, SR-101 southbound Ramps and Shell Beach Drive to a 4-leg single-lane modern roundabout. Bike lanes on Avila Beach Drive and Shell Beach Road will terminate

approximately 100 feet in advance of the circulatory roadway with bike ramps. The ramps will allow cyclists the option to 1) merge with vehicular traffic, take the lane and navigate the roundabout as a vehicle; or, 2) exit the roadway using the bike ramp to the shared use path and use the crosswalks as a pedestrian. The shared-use paths will be 8-feet-wide with 2-foot buffers between the paths and circulatory roadway curb and gutter. Pedestrian crossings will be set back 20-25 feet (approximately one car length) from the circulatory roadway and the pedestrian refuges at the splitter islands are at least 10-feet wide by 6-feet deep.

Preliminary traffic engineering reports showed that the Avila Beach Drive/SR-101 southbound off-ramp/Shell Beach Road intersection was operating at unacceptable Level of Service during some periods. The report concluded that a 4-leg single lane roundabout at the existing two-way stop-controlled southbound ramp intersection would operate better than an all-way stop or traffic signal control. The entry and departure legs of Shell Beach Road and the southbound ramps will be reconstructed to conform to the proposed roundabout. Landscaped trees will be removed to accommodate the realignment. The center island of the roundabout will create a potential location for landscaping or other treatments and will feature a truck apron to accommodate large truck trailers. The roundabout will also include median islands with crosswalks and shared-use paths offset from the roundabout for safer connectivity for bicyclists and pedestrians. Retaining walls will be required between the southbound ramps and the SR-101 mainline due to the realignment of the ramps. The slope adjacent to the northerly abutments beneath SR-101 will be excavated and a tie-back wall constructed to allow for a shared use path.

Northbound Off-ramp Improvements

Modifications to the northbound off-ramp are proposed to alert motorists of a change in roadway characteristics in advance of the ramp termini intersections. A strategic system of modifications including optical speed bars, cross section edge treatment and advance warning signs are proposed to help reduce speeds and alert motorists prior to the Monte Road intersection. These modifications are consistent with strategies contained in current engineering guidance documents.

Park-and-Ride Lot

The project includes a park-and-ride lot and transit stop for the Avila Beach Trolley and RTA bus at the southwest corner of Avila Beach Drive and Shell Beach Road. The lot will serve recreational and commuter purposes. The location of this lot is close to freeway ramp terminals and has good visibility. The lot will be accessible from the freeway, with driveways along Avila Beach Drive and Shell Beach Road and will provide multi-modal accessibility. The current design of the park-and-ride lot includes paved and unpaved parking spaces, a bus loading bay and an accessible bicycle/pedestrian path between them. Overhead and other security lighting and equipment will be installed. Clearing and grubbing of vegetation will be necessary in this area.

Other Design Features

Retaining Walls

The project includes various retaining walls, with the following taller walls presumed to be constructed using top-down techniques due to the close proximity of the freeway:

- Wall W1: Approximately 240 feet long with an approximate maximum height of 22 feet in the existing freeway embankment south of the overpass between the southbound on-

ramp and southbound SR-101 mainline. Two alternatives are being considered for this retaining feature a single taller wall or a two-wall alternative using a shorter stepped configuration. This will likely be a soil nail wall.

- Wall W2: Approximately 67 feet long with an approximate maximum height of 14 feet in the existing freeway embankment north of the overpass between the southbound off-ramp and the southbound SR-101 mainline. This will likely be a soil nail wall.
- Wall N1: Approximately 212 feet long with an approximate maximum height of 15 feet in the existing freeway embankment under the overpass on the north side of the shared use path and Avila Beach Drive. This will likely be a sub-horizontal ground anchor wall.
- Wall W3: Approximately 110 feet long with an approximate maximum height of 5 feet in the park-and-ride lot.
- Wall W4: Approximately 100 feet long with an approximate maximum height of 3 feet on the west side of Shell Beach Road.

Stormwater Detention Basin

Two stormwater basins are currently planned for the project; a subsurface infiltrator system for stormwater quality, and a detention basin for peak flow management. The detention basin is planned as a shallow aggregate surface area that will also serve to accommodate overflow parking in dry weather. A diversion box is intended for the site stormwater system to direct flow to the basin during high storms. An outlet structure and pipe will deliver metered flow back to the storm drain system, reducing peak flows. The basin will be shallow (approximately 2 feet deep) and will be unfenced. The parking lot will be signed flooded during storms. The infiltrator system will be a system of perforated storm drainpipes with a design based on County standards modified to use a common diversion box which will deliver low flows from the storm drain system into the infiltrators. The infiltrator system will be placed in trenches within the parking lot. Construction will be conventional trench excavation and backfill, with a zone of float rock and filter fabric around the pipe.

Utility Considerations

Multiple utilities are located within the project area that will require relocation. These utilities include but are not limited to oil pipelines, water lines, electrical service, cable, and fiberoptic lines.

Construction Methodology

Clearing and grubbing of ramp gore areas and the park-and-ride area is expected to be accomplished with traditional bull dozer and dump truck equipment. Standard traffic handling techniques will be used in areas where public traffic is near a work zone. Construction zone traffic handling will include advanced warning signs, changeable message signs, flagging and temporary K-rail when warranted. Where applicable, Environmentally Sensitive Area (ESA) fencing will also be used to designate areas where construction is prohibited. Excavation by backhoe, bulldozer, scraper or similar equipment is expected for wall and new pavement construction areas. Roadway excavation for ramp realignment and roundabout construction is expected to range between 20,000 and 30,000 cubic yards. Drill rigs, drivers and concrete trucks are expected to be used for wall construction and spreaders and pavers will be needed for the roadway surface construction. Hydroseeding of generally disturbed areas will be accomplished with locally approved seed mixes and some streetscape (consisting of native plants) will be planted around the parking lot and the roundabout.

Staging

Materials and equipment may be staged at the existing maintenance pullout area along the northbound off-ramp at the southeast end of the project. The future park-and-ride area may also be used as a staging area once the vegetation has been cleared.

Schedule

Construction is anticipated to take approximately 2.5 years with most activities occurring in the first 2 years.

Permits and Approvals Needed

The permits, licenses, agreements, and certifications (PLACs) are required for project construction are described below in Table 1:

Table 1: Project Permits, Licenses, Agreements, and Certifications

Agency	PLAC	Status
County of San Luis Obispo	Coastal Development Permit (CDP)	Application for CDP expected after FED approval.
California Coastal Commission	Federal Coastal Consistency Certification	Consistency Certification expected after draft ED distribution.
California Transportation Commission	CTC vote to approve funds; AND/OR CTC vote to approve a new public road connection; AND/OR CTC vote to approve a route adoption.	Following the approval of the FED, the California Transportation Commission will be required to vote to approve funding for the project, as well as approve the project design.
RWQCB	SWPPP	To be developed prior to construction.

ED = Environmental Document

FED = Final Environmental Document

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

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. There is no further discussion of these issues in this document.

Wild and Scenic Rivers: The project is not near or next to any Wild and Scenic Rivers. (Source: Geoview Mapping Application).

Agriculture and Forest Resources: There is no farmland or forest resources within the project area. The eastern portion of the project area is bound by agriculturally designated land use. (Source: Rural Land Use Category map).

Farmlands/Timberlands: The project will not be acquiring or result in impacts to farmland or timberland because they do not exist within the project area. (Source: Geoview Mapping Application)

Growth: The project will accommodate existing demands and anticipated future demands based on forecasts prepared by SLOCOG in their *2014 Corridor Mobility Master Plan*. (Source: Project Description).

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

Community Character and Cohesion: The project will not affect the character or cohesion of the community because it is located outside of the developed community of Avila Beach and the City of Pismo Beach and involves the replacement of an existing interchange within existing State and local rights-of-way. Alterations of the visual character of the project area are addressed in the Visual/Aesthetics section and were analyzed in Visual Impacts Assessment. (Source: Project Description)

Environmental Justice: No minority or low-income populations will be adversely affected by the project. Therefore, this project is not subject to the provisions of EO 12898.

Hydrology and Floodplain: There will be no effects to hydrology because no hydrologic features are present within the project area. A realigned, engineered unnamed tributary to San Luis Obispo Creek occurs adjacent to the project area but will not be adversely affected by the proposed project. There will be no effects to floodplains because the project is not located within a 100-year base floodplain. The nearest 100 Year Flood Zone is located approximately 0.23 mile/1,200 feet to the north of the project area.

Human Environment

LAND USE

Existing and Future Land Use

Regulatory Setting

The project area exists within an area that does not contain any designated land use as it is located within the SR-101 corridor. The project is bound to the east by land use designations of Agriculture and Rural Lands, is bound to the west by Recreation and Rural Lands and is bound to the south by the City of Pismo Beach. The proposed project will not change or affect existing land uses. (Source: Geoview Mapping Application)

The County is the lead agency under CEQA. Caltrans, as assigned by the FHWA, is the lead agency under NEPA. The project will be consistent with the San Luis Obispo County General Plan and Title 23, the Coastal Zone Land Use Ordinance (CZLUO).

Affected Environment

The land use surrounding the proposed project falls primarily within the SR-101 highway corridor and is entirely within Caltrans and County ROW. The southwestern portion of the project area, where the Park and Ride is planned, is designated as Rural Lands. The southeastern portion of the project area, at the northbound SR-101 off ramp, is within the City of Pismo Beach ROW. The northwestern portion of the project area, adjacent to the Avila Hot Springs Resort is located within the Recreational land use category. Figure 4 shows the land uses, as designated by the San Luis Obispo County General Plan, within the study area and as confirmed by various site visits.

The San Luis Obispo County General Plan divides San Luis Obispo County into sub-county planning areas to better develop and implement goals, policies, and programs specific to each planning area. The project study area straddles both the San Luis Obispo Planning Area – San Luis Bay Inland Sub Area North, and the San Luis Bay Coastal Planning Area – Coastal Zone.

The proposed project falls within the San Luis Obispo Planning Area, mostly within the San Luis Bay Coastal Planning Area Coastal Zone, and to a much lesser extent in the San Luis Bay Inland Sub Area North of the San Luis Obispo County General Plan, and Coastal Plan Policies. The Coastal Plan Policies were adopted March 1, 1988 and were revised in 2007.

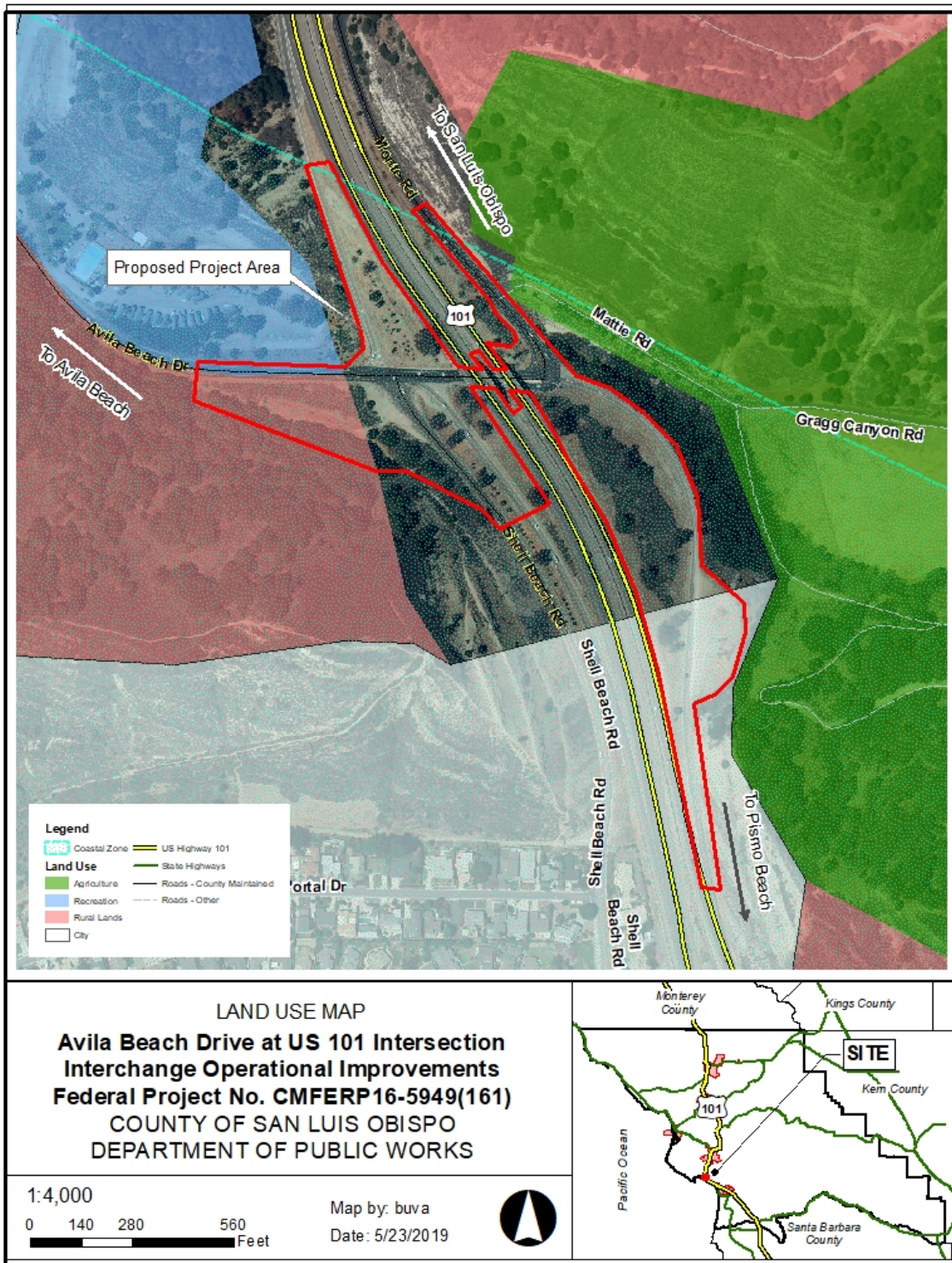


Figure 4. Land Use Map

The project is not within or adjacent to a Habitat Conservation Plan (HCP) area. The project is consistent or compatible with the surrounding uses as summarized above. The project is subject to the San Luis Obispo Planning Area Standards.

The project is subject to the following standards from the County's CZLUO:

- CZLUO Section 23.05.036 – Sedimentation and Erosion Control
- CZLUO Section 23.05.140 – Archeological Resources Discovery
- CZLUO Sections 23.070.160 thru 23.07.174 – Sensitive Resource Area, Environmentally Sensitive Habitats, Wetlands, and Streams and Riparian Vegetation

Additionally, the project is subject to the following policies from the County's Coastal Plan Policies Document:

- Environmentally Sensitive Habitat Policies
- Visual and Scenic Resource Policies
- Hazard Policies
- Archaeology Policies
- Air Quality

No inconsistencies were identified and no project-related impacts to land uses are anticipated. The project is consistent with the pursuant LUO policies because no new development will occur as a result of project implementation and no change to the current land use regimes on-site will ensue.

Avoidance, Minimization, and/or Mitigation Measures

No inconsistencies were identified and therefore no additional measures above what will already be required were determined necessary.

COASTAL ZONE

Regulatory Setting

This project has the potential to affect resources protected by the Coastal Zone Management Act (CZMA) of 1972. The CZMA is the primary federal law enacted to preserve and protect coastal resources. The CZMA sets up a program under which coastal states are encouraged to develop coastal management programs. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the California Coastal Act of 1976, to protect the coastline. The policies established by the California Coastal Act are similar to those for the CZMA: They include the protection and expansion of public access and recreation; the protection, enhancement, and restoration of

environmentally sensitive areas; the protection of agricultural lands; the protection of scenic beauty; and the protection of property and life from coastal hazards. The California Coastal Commission (CCC) is responsible for implementation and oversight under the California Coastal Act.

Just as the federal CZMA delegates power to coastal states to develop their own coastal management plans, the California Coastal Act delegates power to local governments to enact their own local coastal programs (LCPs). This project is subject to the County’s LCP which contains the ground rules for development and protection of coastal resources in their jurisdiction consistent with the California Coastal Act goals. A Federal Consistency Certification will be needed as well. The Federal Consistency Certification process will be initiated prior to the Final Environmental Document (FED) and will be completed to the maximum extent possible during the NEPA process.

Affected Environment

The proposed project falls within the San Luis Bay Area Plan of the Land Use Element and Local Coastal Plan of the San Luis Obispo County General Plan. Specifically, the project is located within the San Luis Obispo Planning Area and straddles both the San Luis Bay Coastal Planning area (approximately 85 percent) and the San Luis Bay Inland Sub Area North (approximately 15 percent). The San Luis Bay Area Plan was originally adopted in 1988 and revised in August 2009. The specific policies from the County’s Coastal Plan Policies and California Coastal Act Chapter Three Policies that are relevant to this project are identified in Table 2. The project’s anticipated impacts to coastal resources was analyzed, and Table 2 describes project features that have been incorporated into the project to avoid or minimize the project’s environmental consequences.

The project area is located approximately 0.5 mile from the ocean. While this location is outside the Original Jurisdiction of the California Coastal Commission, it is almost entirely within the coastal zone. There are no lagoons, estuaries, or wetlands within the project area. Riparian habitats exist to the east and north of the project area; however, no impacts to riparian habitats would result from the project. There are no Environmentally Sensitive Habitat Areas within the project area.

Table 2. Consistency with California Coastal Act and San Luis Obispo Local Coastal Plan

Plan Policy No.	Subject of Policy	Discussion
Local Coastal Plan (LCP) Policies: 1, 2, 3, 20, 21, 26, 30 California Coastal Act (CCA) Policies: 30231, 30240, 30253	Environmentally Sensitive Habitats 1. Land Uses Within or Adjacent to Environmentally Sensitive Habitats 2. Permit Requirements 3. Habitat Restoration 20. Coastal Streams & Riparian Vegetation 21. Development in or Adjacent to a Coastal Stream 26. Riparian Vegetation 30. Protection of Native Vegetation	<i>Consistent</i> <i>The project will occur adjacent to locations of environmentally sensitive habitats and shall not significantly disrupt the resource(s). As a condition of permit approval, the County will demonstrate that there will be no significant impact of sensitive habitats, and that the proposed activity will be consistent with the biological continuance of the habitat. The County shall require the restoration of damaged habitats as a condition of approval when feasible. The coastal stream and adjoining riparian vegetation in the project area and the stream’s natural hydrological system and ecological function shall be protected and preserved. The proposed</i>

		development adjacent to a coastal stream shall be sited and designed to prevent and/or minimize adverse impacts which would degrade the coastal habitat. Cutting or alteration of naturally occurring vegetation that protects riparian habitat is not permitted. Native trees and plant cover shall be protected wherever possible, and native plants shall be used where vegetation is removed. Biological productivity and stream quality shall be maintained.
LCP Policies: 2, 5, 7 CCA Policies: 30252, 30254	Public Works 2. New or Expanded Public Works Facilities 5. Capital Improvement Program 7. Permits Requirements	Consistent The project is a new Public Works Facility & shall be designed to accommodate the needs generated by projected development. This Capital Improvement Project will institute a coordinated review process. The County shall require a permit for this project. The project, expanding a Public Works facility, will enhance public access to the coast by facilitating extension of transit service by promoting non-automobile circulation, providing adequate parking facilities and by providing substitute means of public transportation.
LCP Policies:8, 10	Coastal Watersheds 8. Timing of Construction & Grading 10. Drainage Provisions	Consistent The project will conduct land clearing/grading outside of the rainy season and will utilize appropriate erosion control measures. The project will ensure that drainage onsite does not increase erosion through on-site conveyance to storm drains or suitable watercourses.
LCP Policies: 1, 5, 7 CCA Policies: 30251	Visual and Scenic Resources 1. Protection of Visual & Scenic Resources 5. Landform Alterations 7. Preservation of Trees & Native Vegetation	Consistent Unique/attractive scenic and visual features of the landscape within the project area are to be preserved and protected. Grading, earthmoving or other landform alterations within public view corridors are to be minimized to achieve a consistent grade and natural appearance. The project shall minimize the need for tree removal.
LCP Policies: 2, 9	Hazards 2. Erosion and Geologic Stability 9. High Fire Risk Area	Consistent The project shall ensure structural stability while not exacerbating or contribute to erosion or geological instability. The County shall designate and show on the Hazards maps those high-risk fire areas.
LCP Policies: 1, 4, 6 CCA Policies: 30244	Archaeological Resources 1. Protection of Archaeological Resources 4. Preliminary Site Survey for Development within Archaeological Sensitive Area 6. Archaeological Resources Discovered during Construction	Consistent The project shall provide for the protection of both known and potential archaeological resources. The project area shall require a preliminary site survey by a qualified archaeologist who is knowledgeable in Chumash culture. Where substantial archaeological resources are discovered during construction, all activities shall cease until a qualified archaeologist can determine the significance of the resource and submit alternative mitigation measures.
LCP Policies: 1	Air Quality 1. Air Quality	Consistent The project proponent will provide adequate administration and enforcement of air quality programs and regulations to be consistent with

	<i>the County's Air Pollution Control District, and the State Air Resources Control Board.</i>
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Environmental Consequences

The proposed project was reviewed for consistency with the applicable policies of the San Luis Obispo County General plan with a focus on consistency with the LCP. The applicable policies and the project impacts to the resources identified are listed in Table 2.

Although this project would result in some minor impacts to coastal resources, measures are included as part of this project to minimize those impacts. With those measures included the project is consistent with state, regional and local plans.

Avoidance, Minimization, and/or Mitigation Measures

The project is consistent with state, regional, and local plans and does not cause adverse impacts with respect to land use. Avoidance, minimization, and mitigation measures will be used to minimize impacts during construction.

All development and land divisions within or adjacent to an Environmentally Sensitive Habitat Area (ESHA) shall be designated and located in a manner which avoids any significant disruption or degradation of habitat values. In some cases where development within the ESHA cannot be avoided, the development shall be modified as necessary so that it is the least environmentally damaging feasible alternative.

Parks and Recreational Facilities

Section 4(f) refers to the original section within the USDOT Act of 1966 which provided for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. The law, now codified in 49 U.S.C. §303 and 23 U.S.C. §138, applies only to the USDOT and is implemented by the FHWA and the Federal Transit Administration through the regulation.

Parks and other recreational facilities within 0.5 mile of the project include:

Bob Jones Bike Path Ontario Road Access Point and Parking Area. The eastern terminus of the Bob Jones Trail and an associated parking facility are located approximately 0.4 mile north of the project area. The Class I bikeway connects the parking/staging area to the community of Avila beach, approximately 2.5 miles to the west.

Avila Hot Springs Spa and Recreational Vehicle (RV) Park. This private facility is located immediately north and west of the project area. The facility allows tent camping, has cabins, and allows RVs. There is a pool, mineral bath, playground, and barbeque facilities.

Avila/Pismo Beach Kampgrounds of America (KOA). The KOA offers cabins and RV hook-ups. And is approximately 0.3 mile from the project. The facility also has a movie theater, pool, store and related amenities. It provides access to the Bob Jones Bike Path.

Ontario Ridge Trail. The Ontario Ridge Trail is located approximately 0.2 mile south of the project area. The trail is a popular coastal access point linking the informal trailhead on Shell

Beach Road to Pirate's Cove and the eastern edge of the community of Avila Beach. A rough and relatively unused volunteer trail has been started near the proposed park-and-ride facility and connects to the Ontario Ridge Trail near the trailhead.

The project would not acquire or otherwise affect any facility protected by the Park Preservation Act. There are no Section 4(f) public resource types within the project vicinity. There are Section 4(f) resources eligible for the National Register of Historic Places (NRHP) within the project vicinity; however, the project would not "use" or otherwise affect them in any way, therefore resulting in a *de minimis* impact.

UTILITIES/EMERGENCY SERVICES

Affected Environment

Emergency services in the project area are provided by the California Highway Patrol, San Luis Obispo County Sheriff's Department, the San Luis Obispo County Fire Department, and Cal Fire.

The southernmost section of the project area is located within the incorporated City Limits of Pismo Beach, while most of the project area is located in unincorporated San Luis Obispo County. In this area it is expected that utilities will be served by both the City and other regional entities. The relative location of existing utility components, infrastructure or systems in the project area, including water, sewer, natural gas, electric power, and telecommunications has been determined. The County sent Requests for Utilities in the project area to various utility providers that may have facilities within the project area and have the potential to be impacted or relocated by the proposed project. Any existing utility component or facility that would be impacted by the project would be relocated or replaced in kind.

Environmental Consequences

Several of the above listed utility facilities have the potential to conflict with the proposed work, therefore it will be necessary to identify each utility facility in the field via potholing activities, and require that the facilities are protected in place, or relocated from the proposed project work area. The water line meter vault and sampling station may require relocation within the project impact area.

During project construction emergency service access and emergency access to PG&E's Diablo Canyon will be maintained. Traffic control will be in place throughout the project. Traffic will be separated from construction activities by various temporary railings. Access to Avila Beach Drive, Monte Road and Shell Beach Road will not be impacted.

Coordination between the Resident Engineer, responsible for construction and the local emergency service providers is a standard practice on construction sites. This coordination results in delay times being as minimal as possible in the event of an emergency vehicle needing access through the construction site.

The surrounding vicinity is served by CalFire for fire protection; however, no fire protection services exist within the project area and CalFire maintains a 0-5-minute emergency response time from the nearest fire station. The proposed project will maintain acceptable service ratios, response times or performance objectives for fire protection services, and therefore will have no impact.

The surrounding vicinity is served by the County Sheriff; however, no police stations or substations exist within the project area, and the nearest police protection services exist in the communities of Pismo Beach and San Luis Obispo. The proposed project will maintain acceptable service ratios, response times or performance objectives for police protection services, and therefore will have no impact.

Avoidance, Minimization, and/or Mitigation Measures

Coordination between the County and the utility companies will be conducted to ensure minimal disruption to services during project construction. Coordination will take place between the Resident engineer and local emergency service providers before and during project construction to minimize potential delays through the construction site.

Coordination will take place between the Caltrans Resident Engineer and local emergency service providers during project construction to minimize delays through the construction site.

TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

Regulatory Setting

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

In July 1999, the 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 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.

California Street and Highway Code §§660-711, 670-695. Requires permits from County Public Works for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

SLOCOG Regional Transportation Plan. Contains goals and objectives for state highways, major local routes of significance, alternative transportation modes and strategies for transportation system and demand management. The Congestion Management Plan adopted by SLOCOG, has polices for integrating land use planning and transportation planning.

This project is being proposed to address traffic and transportation deficiencies by improving traffic operations, safety deficiencies, and multimodal (i.e., pedestrian and bicycle) access in the area. In general, when the County and Caltrans improve a road, the design includes all

necessary improvements to accommodate all roadway users. As such the latest edition of the following references will be used in the development and design of the roadway, interchange, and park-and-ride lot improvement:

- County Public Improvements Standards
- Caltrans Highway Design Manual
- Caltrans Standard Plans (CALSP)
- NCHRP Report 672, 2nd Edition (NCHRP 672)
- AASHTO Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- 2017 SLOCOG Park & Ride Lot Study (PRLS)
- DIB 78
- County General Plan Circulation Element
- Area and Specific Plans
- County Sidewalk Ordinance
- County Bikeways Plan

Affected Environment

Avila Beach Drive and the SR-101/Avila Beach Drive interchange are heavily used for weekend travel between the beach community and surrounding cities, particularly during the summer months. The five-legged intersection of the southbound ramps, Avila Beach Drive, and Shell Beach Road (Figure 3) experiences operational issues during the weekend peak travel times and the summer tourist seasons. The intersection is currently operating at LOS D during the weekend peak period. The general increase in traffic, coupled with the anticipated future traffic from planned projects in the area, is forecast to degrade the southbound ramp terminal intersection from LOS D to F in the years from 2018 to 2032.

According to the Intersection Control Evaluation (ICE) Step 1 in support of the May 2016 PSR-PDS approved by Caltrans, the recommended control strategy at the southbound ramp terminal intersection was a yield (roundabout) controlled intersection. The roundabout design will convert the two closely spaced intersections of Avila Beach Drive, SR-101 southbound ramps, and Shell Beach Road to a single-lane roundabout. The ICE Step 2 (March 2019) includes engineering analyses of the control strategies advanced from ICE Step 1 and considered roundabout configurations that fit within the constrained site conditions and completed performance checks (design vehicle, fastest path, and sight distance). The ICE Step 2 validates the ICE Step 1 findings and concludes the roundabout is the optimal intersection form to serve non-motorized and motorized users. The roundabout will have entry speeds of less than 25 miles per hour and have adequate intersection stopping sight distance and corner sight distance. The roundabout will accommodate the Surface Transportation Assistance Act (STAA) vehicles without external truck aprons. All approaches of the roundabout will readily serve a California Legal 65-foot Truck for all through and turning movements. All approaches of the roundabout will allow a 45-foot bus & motorhome design vehicle to circulate all through and turning movements without tracking over the truck apron. Deflection on entry will introduce varying degrees of advance roadway curvature that create speed management features.

The LOS for the single lane roundabout can be summarized as:

- Overall LOS for future weekday a.m. and p.m. traffic conditions is A and B, respectively.
- Adequate to meet 2042 weekend as well as a.m. and p.m. forecast traffic (LOS B); the existing configuration (two-way stop control) will not.

- With the construction of the right-turn yield lane as detailed in the Traffic Report (March 2019), could operate until 2048 under the weekday and weekend peak hour volumes before exceeding the Caltrans' performance criteria of LOS C.

The ICE Step 2 Report analyzed crash report data from Caltrans Traffic Accident Surveillance and Analysis System and California Statewide Integrated Traffic Records System and found that the northbound ramp terminal intersections have more total crash rates compared to the state-wide average for similar facilities. A roundabout intersection would reduce crash frequency and severity compared to the existing two-way stop condition (by 61% to 83%). The roundabout at the southbound ramp terminal and associated treatments (e.g., reducing speeds and improving sight lines) at the northbound ramp terminal will eliminate the free flow condition for through movements passing under SR-101 and reduce travel speeds within the interchange. The combined use of advance warning signs, optical speed markings, and a curbed cross section will reinforce the transitioning roadway environment and encourage deceleration.

The roundabout will serve as a gateway and terminal vista for the Avila Beach and Pismo Beach communities while supporting an environment conducive to a park-and-ride facility and increased pedestrian and bicyclist activity. Bike lanes on Avila Beach Drive and Shell Beach Road will terminate in advance of the roundabout with bike ramps which will allow cyclists the option to 1) merge with vehicular traffic, take the lane, and navigate the roundabout as a vehicle; or, 2) exit the roadway using the bike ramp to the shared-use path and use the crosswalks as a pedestrian. Pedestrian and bicycle circulation through the roundabout have been accommodated with the use of shared use paths, bike ramps, bike lanes, and high-visibility crosswalks. The shared use path is routed on the north side of the interchange to avoid conflicts with the southbound on-ramp and the northbound off-ramp.

The proposed park-and-ride lot will allow for a bicycle, pedestrian, transit, and motor vehicle interface that is consistent with planning for the area. As discussed in the 2017 SLOCOG Park and Ride Lot Study (PRLS), the location of a park-and-ride lot is the most important characteristic for success. The proposed location of this lot is close to freeway ramp terminals, has good visibility, and will be accessible to all modes of transportation from SR-101, Avila Beach Drive, and Shell Beach Road. This lot will accommodate a transit stop for the Pismo Trolley and an RTA bus. The design of the park-and-ride lot seeks to maximize parking capacity (26 paved angled parking spaces and 14 additional spaces in the unpaved overflow parking area), minimize conflict points, and optimize circulation for vehicles and transit buses. It will have a loading bay with three adjacent accessible (and ADA-compliant) parking with an accessible/ADA-compliant path provided between them.

Environmental Consequences

The project will result in beneficial impacts to the transportation and alternative transportation network through the construction of a more efficient intersection and congestion relief. Minor delays should be expected during construction of the project. With implementation of the roundabout corridor, average delays and LOS are expected to improve. This is true of the project individually and as part of the overall corridor improvements. The projects will not result in an increase in the local population and will not construct any facility that requires ongoing public safety services. Construction will result in minor traffic delays as lane closures are needed during construction. Construction of the project will involve temporary disturbance, partial or full closure of existing roadways, materials storage, and potentially the development of temporary contractor staging areas. The project does not conflict with any congestion management program or any plans or programs regarding public transit, bicyclist, or pedestrian facilities. The project would not result in any road closures and at least one lane of traffic will remain open during all phases of

construction.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation/Conclusion. No significant traffic impacts were identified and features to benefit the transportation network here are incorporated into the design of the project. However, the following measure will be implemented:

- TRANS-1.** A Transportation Management Plan will be prepared in advance of construction that will provide detour routes and notification to the public, and emergency and medical providers in the project location of possible alternate access routes during possible lane closures.

VISUAL/AESTHETICS

Regulatory Setting

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

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

Affected Environment

A Visual Impact Assessment (VIA) was documented in a technical report (May 2019) to assess the visual impacts of the proposed project. The existing visual context is characterized by hillsides covered in moderately dense vegetation surrounding the interchange, with more sparse vegetation and typical interchange signage and lighting in the immediate vicinity of the interchange. Campground facilities are present and partially visible northwest of the project area. The response viewers solicit to changes in their visual environment and change to visual resources determine the extent of visual impacts. Viewer sensitivity and response to change is expected to be moderate to moderate-high. In combination with the moderate to moderate-high sensitivity and response to change of the various viewer groups, the overall visual impact is characterized as moderate to moderate-high.

Avila Beach Drive and SR-101 are identified as Suggested Scenic Corridors, and the stretch of SR-101 through the project area is an Identified Community Separator. The areas of separation between the communities in the County are identified as typically rural and scenic. SR-101 is also eligible for designation as a State Scenic Highway.

Environmental Consequences

The project will alter (moderate change) the visual character of the project study area and surroundings by constructing a roundabout and new park-and-ride facility, increasing hardscape and nighttime lighting in the area. The project would maintain a similar scale and height as the existing intersection components and would not obstruct views of the surrounding hillsides and vegetation in the project study area. The project will increase the developed condition of the area and add to the diversity of the landscape by introducing more urbanized design features and nighttime lighting.

The project will alter (moderate change) the visual quality. The scale of the improvements would not interrupt views of the primary features of the landscape, but the roundabout and new park-and-ride facility would be prominent in certain views, and consequently would alter the intactness of some views. Increases in nighttime lighting and establishment of retaining walls would alter the overall vividness and unity of views of the surrounding landscape.

Visual impacts during phases of construction would include lighting to provide visibility for construction workers, roadside staging areas, and grading and removal of vegetation, which may result in dust generation. The intersection would remain in operation throughout construction and potential visual impacts during construction would be temporary and, therefore, low in degree.

There are no visual effects of public views to the shoreline or coastal resources.

Avoidance, Minimization, and/or Mitigation Measures

The following measures include features that would lessen the negative visual change to the corridor and reduce the project's visual impact by reducing the urbanizing effect of the project. However, some of the less than significant visual impacts would remain because of the increased hard surface, loss of vegetative character, and increased nighttime lighting. With implementation of the following measures, the project would be consistent with the aesthetic and visual resource protection goals along SR-101 and the community as defined by the State Scenic Highway goals as well as Coastal Act policies:

- AES-1.** Retaining walls will be designed to be aesthetically pleasing based on the stakeholder input process, incorporating locally appropriate context sensitive solutions to enhance their continuity with similar features used in the project site vicinity and local community, and to reduce their overall visual impact.
- AES-2.** A landscaping plan consisting of drought tolerant native species shall be planted within the first six months following project completion. Implementation of this plan shall be overseen for a period of 3 years by a qualified biologist or landscape architect.
- AES-3.** Native trees will be preserved and protected to the maximum extent feasible. Coast live oaks will be incorporated into the landscaping plant palette to be planted within the project area at the end of construction.
- AES-4.** A signage plan shall consolidate signs as appropriate, avoid redundancy and locate traffic control cabinets out of sight. A lighting plan shall require project lighting to be appropriately shielded, eliminate redundancy of lighting standards and use context sensitive street lighting designs. The plan will be consistent with Caltrans and County lighting guidelines and standards, developed in compliance

with the Illuminating Engineering Society's design guidelines and International Dark-Sky Association approved lighting features.

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 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 CFR 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the FHWA, the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA's responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 USC 327).

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. The ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California 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. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks.

Procedures for compliance with PRC Section 5024 are outlined in a MOU¹ between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

Affected Environment

An Archaeological Survey Report (ASR) was completed in March 2019 (Laurie, 2019). As part of the ASR preparation, a records search from the California Historical Resources Information System (CHRIS) Central Coast Information Center (CCIC), located at the University of California, Santa Barbara was requested on March 20, 2018. The CCIC completed the records search on April 9, 2018. The California Native American Heritage Commission (NAHC) was contacted on March 20, 2018, requesting a search of their Sacred Lands File for traditional cultural resources. The NAHC provided a list of 10 Native American groups and/or individuals who may have knowledge about cultural resources in the area. A letter requesting information to these contacts was sent on October 19, 2018. Follow-up correspondence (email and phone calls) were made on November 28 and 29, 2019. Assembly Bill 52 Native American Consultation Request letters were sent to 17 Native American groups and/or individuals on October 18th, 2018. An intensive pedestrian survey of the archaeological Area of Potential Effects was conducted on May 2 and 3, 2018.

The purpose of the project APE is to assist in the location and identification of significant cultural resources that may be listed in, determined eligible for, or appear to be eligible for listing in the NRHP and/or CRHR that may be affected, either directly or indirectly, by the proposed project. The archaeological APE includes approximately 15.25 acres consisting of ROW for the proposed project, all areas of ground disturbance, habitat mitigation area, and potential staging areas. Staging is proposed within either paved areas or previously disturbed areas and will not require improvements (ex. grading, leveling, graveling). Depths of disturbance will vary from less than 1 foot in temporary use areas and potentially greater than 10 feet for retaining wall construction and utility relocation.

The CCIC records searches revealed that two previously conducted studies overlapped with a small (less than 10%) portion of the APE, an additional 126 studies have been conducted within 0.5 mile of the APE. None of the 128 studies on file with the CCIC identified archaeological resources within or adjacent to the APE. In addition to the CCIC reports on file, a *Negative Historic Property Survey Report* (HPSR) was conducted and prepared by Caltrans (Levulett, 2002) for proposed improvements within the Caltrans ROW from post mile 13.2 to 21, on SR-101, which overlaps with 95% of the current project's APE, during separate field efforts in 2000 and 2001. No archaeological resources were identified within or adjacent to the APE as a result of those field surveys and therefore resulted in a finding of "No Historic Properties Affected". An additional ASR was prepared for the proposed Avila Park and Ride (Ballantyne, 2011) which falls within the current project's APE and resulted in negative archaeological findings.

No significant resources exist within the project's APE. Nine previously identified archaeological resources exist within 0.5 mile of the APE but will not be impacted as part of this project. Of the nine resources, eight are located greater than 0.25 mile from the APE. A large archaeological resource exists in the vicinity and remains highly sensitive to Northern Chumash Groups and Individuals. Details of the survey are documented in the ASR (Laurie, 2018).

¹ The MOU is located on the SER at http://www.dot.ca.gov/ser/vol2/5024mou_15.pdf

Previous studies did not identify any historical built resources eligible for listing in the National Register. One bridge within the project limits (Avila Road UC, Bridge Number 49-0191) has been previously evaluated and determined as a Category 5 bridge (not eligible for listing in the NRHP) on the Caltrans Historic Highway Bridge Inventory. Similarly, the bridge does not meet the criteria for listing in the CRHR and is not a historical resource for the purposes of CEQA.

One additional property located outside of the project area (Avila Hot Springs Resort) was determined not to be directly or indirectly impacted as part of the proposed project. A Historic Resource Evaluation Report was not required as part of this project as no historical properties, historic sites, or historical resources are located within the APE, resulting in a finding of “No Historic Properties Affected”.

Environmental Consequences

Within the project APE, there are no cultural resources that have been determined eligible for inclusion to the NRHP. Thus, the project has a “No Historic Properties Affected” finding. Overall, the project (undertaking) as whole has no effect on historic properties.

Consultation with SHPO

Under the First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (Section 106 PA) (Caltrans 2014), Caltrans is responsible for compliance with Section 106 of the NHPA.

The Native American Heritage Commission was contacted on March 20th, 2018, requesting a search of their Sacred Lands File for traditional cultural resources. The NAHC responded on March 21st, 2018, indicating the results of the Sacred Lands File search were negative. The NAHC also provided a list of 10 Native American groups. Letters were mailed to these contacts on October 19th, 2019 in support of the Section 106 process. Follow-up calls and emails were made on November 28th and 29th, 2018.

Native American Outreach and Caltrans coordination determined that the shell scatter isolated find did not constitute an intact or culturally significant site. Therefore, there are no historic properties affected (no sites or eligible bridges within the project area) and the project is exempt from evaluation as described in the Programmatic Agreement between FWHA and SHPO.

Assembly Bill 52 Native American Consultation letters were sent to 17 Native American groups and/or individuals on October 18th, 2018. The following tribes requested consultation, and/or provided comments for the proposed project:

- Northern Chumash Tribal Council - responded by email on October 22nd, 2018 and requested consultation.
- Salinan Tribe - responded by email on November 9th, 2018 and requested consultation and that a Native American monitor be present during ground disturbing activities.
- Santa Ynez Band of Chumash Indians - responded by telephone on November 7th, 2018, and deferred comments to the local tribes.
- Xolon Salinan Tribe - responded by email on November 4th, 2018 with no comments.

- *yak tityu tityu yak tilhini* Northern Chumash Tribe of San Luis Obispo County and Region - responded via email on November 27th, 2018 and requested consultation and recommended that an archaeologist and a Northern Chumash monitor be present during excavation.

Section 4(f) of the 1966 Department of Transportation Act prohibits use of land from any historic property on or eligible for the NRHP unless there is no feasible and prudent alternative to the use of land from the affected historic property *and* the project includes all possible planning to minimize harm. The implementing regulations for Section 4(f) appear in 23 CFR 774. No historic properties, or protected Section 4(f) resources exist in the project APE.

Avoidance, Minimization, and/or Mitigation Measures

The following measures include will ensure the project has less than significant impact on cultural resources:

- Arch-1.** Due to the archaeological sensitivity of the project area, and the potential to encounter previously disturbed cultural materials during construction, an archaeological briefing will be conducted prior to construction. The briefing will alert construction crews of the possibility of unearthing cultural materials and the appropriate process to follow.
- Arch-2.** 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. Additional archaeological reconnaissance survey will be needed if project limits are extended beyond the present survey limits.
- Arch-3.** 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 Keith Miller, Environmental Division Manager at 805-781-5714 and Damon Haydu, Caltrans District 5 Archaeologist at 805-542-4799 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.

Physical Environment

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 source² unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. 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 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

² A point source is any discrete conveyance such as a pipe or a man-made ditch.

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 effluent³ 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 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.

³ The U.S. EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”

- **National Pollutant Discharge Elimination System (NPDES) Program**

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including MS4s. An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified 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

A Water Quality Assessment has determined that no water quality impacts are anticipated for the project. The project is near, but does not include, a realigned engineered unnamed tributary to San Luis Obispo creek (associated with Gragg Canyon). This section of creek travels 2.5 miles before discharging into Port San Luis. Grading, paving, and vegetation grubbing are activities that could generate stormwater pollutants. Standard construction practices such as linear barriers, waste management procedures, and other Best Management Practices (BMPs) should be incorporated into the plans to minimize potential risk of runoff from construction activities. The project will increase the net area of impervious surface, mostly as a result of the park-and-ride lot. Because the project will result in over one acre of soil disturbance, a SWPPP will be required and implemented. By incorporating proper and accepted engineering controls, BMPs, and implementing a SWPPP, the project will not result in significant impacts to water quality. A Water Quality Memorandum of Assumptions (WQMOA) has been developed (Campbell, 2018). The intent of the WQMOA is early identification for discussion and concurrence of the Post Construction Treatment BMPs for the project, with consideration of each agency's requirements.

The project area is located within the Sea Canyon Watershed, and San Luis Obispo Avila Water Planning Area (GeoView). The estimated mean annual precipitation for the Lower San Luis Obispo Creek Watershed is 19.9 inches (GeoView). The WQMOA determined that the project APE contains four hydrologic soils groups: Elder sandy loam (2 to 5 percent slopes), Lopez very shaly clay loam (30 to 75 percent slopes), Santa Lucia channery clay loam (30 to 50 percent slopes, MLRA 15), and Xerets-Xerolls-Urban land complex (0 to 15 percent slopes). The proposed Park and Ride falls within Watershed Management Zone – 1, as demarcated by the NPDES. The project area does not appear to be located in a mapped ground water basin as demarcated by the Department of Water Resources (DWR).

Environmental Consequences

Agency Jurisdiction

Both Caltrans and the County have storm water programs and regulations which implement orders by the SWRCB. Within each jurisdiction, water quality requirements are evaluated according to the respective SWRCB orders and based on an evaluation of existing and proposed surface areas for various components. It is anticipated that the ROW line between Caltrans and County will be adjusted to fit the project, and that the water quality regulations would be evaluated based on the adjusted ROW line.

Existing Drainage Facilities

Existing storm drains exist in the project area. Caltrans culvert inspection reports indicate that the existing Caltrans 60-inch corrugated metal pipe (CMP) culvert (MP 21.19) is partially filled with sediment at the downstream end. This culvert receives flows from both the east side of the interchange as well as from a cross culvert at Avila Beach Drive. From those outlets the flows continue to the northwest in an overland swale and mix with other overland flows to then enter the inlet for the culvert crossing Avila Beach Drive. Flows collected in that existing inlet are conveyed north across Avila Beach Drive and into the 60-inch CMP upstream of the 60-inch CMP outlet. It is anticipated that this flow path will be maintained with the overland flow conveyed in new culverts to allow the construction of the Park and Ride facility. Maintenance of the culvert and/or drainage will be the responsibility of the County and any future sediment removal will be performed as a maintenance activity and is not part of the interchange project. Specifically, this project does not include improvements at either the inlet or outlet areas of the 60-inch culvert system.

Stormwater Treatment Areas- Caltrans ROW

The requirements for storm water quality treatment will be evaluated based on the Caltrans Stormwater Project Planning and Design Guide and related documents. A preliminary Storm water data Report (SWDR) has been prepared by Caltrans and this will be revised and updated as the project design is refined. Design strategies that may reduce the thresholds that trigger treatment requirements include: utilizing existing pavement to reduce Replaced Impervious Surfaces (RIS), utilizing bike lane and pedestrian pathway exemptions to reduce the post project impervious surface under consideration, and utilizing pervious surfaces where feasible.

A review of the preliminary project design and the preliminary SWDR indicates that there is a slight possibility that these considerations will reduce the project's postconstruction runoff control thresholds to a level where treatment facilities are not required within the Caltrans ROW, but that it is more likely that area thresholds that trigger requiring treatment facilities will be

reached. This will be confirmed either way as the design progresses. Within the Caltrans ROW, there are two areas of interest for Treatment BMP's (TBMP): along the northbound offramp and within the gore space between the southbound onramp and the Shell Beach Road

Storm Water Treatment Areas – County Row

The requirements for storm water quality treatment will be evaluated based on the RWQCB Board Orders and the County Post Construction Requirements Handbook (PCRH). A Park and Ride facility is proposed in the southwest quadrant of the project limits. The Park and Ride site is within an MS4 area, in Watershed Management Zone 1 (WMZ-1) and does not overlie a DWR mapped groundwater basin. New and replaced impervious surfaces are expected to exceed 22,500 sf. Based on this, it is anticipated that the project will be required to meet Performance Requirements 1, 2,3, and 4 of the PCRH:

- Performance Requirement 1 “Site Design and Runoff Reduction”
- Performance Requirement 2 “Water Quality Treatment”
- Performance Requirement 3 “Runoff Retention”
- Performance Requirement 4 “Peak Management”

It is anticipated that there will be limited room in that County ROW for treatment and retention BMP's. Only the west side of the proposed Park and Ride location has potential room for retention. Runoff to the north side of Avila Beach Drive is proposed to not be retained, but the retention be accounted for on the south side with additional volume. If required, low flow runoff from the north side could be delivered to the south side in a new storm drain. Within the Park and Ride site, the parking spaces (or portions of them) could be constructed of pervious materials to lessen the impervious area and also potentially to provide runoff retention. The driving lanes, and accessible parking spaces are anticipated to be paved. The Hydrologic Soil Group of this area has not been identified by the Natural Resources Conservation Service and the infiltration capability should be tested identified to verify the viability of infiltration BMPs. The County has also anticipated that the use of underground infiltrator systems may be a viable option as Road Side Infiltrator (RSI) systems has become more widespread and successfully implemented by the County.

Storm Water Quality Coordination

In general, it seems that the project can be developed with each jurisdiction addressing its own storm water quality requirements within its own right of way. Some small tributary area trade-offs are approximately equal and reduce project complexity.

There appears to be adequate room in Caltrans ROW to include the potential TBMPs without directly affecting proposed project geometrics. For the Park and Ride, the space available for TBMPs is limited. Addressing the TBMPs will affect and need to be integrated into the Park and Ride layout, such as using pervious surfaces or reducing the footprint. This will be evaluated more fully as the design progresses and the infiltration testing is performed. Small areas may drain from paved areas across the ROW line as they do now. If the project is required to separate Caltrans drainage flow from Park and Ride treatment flow, the Caltrans storm drains that currently exit onto the Park and Ride site should be extended to connect directly to the existing storm drain crossing Avila Beach Drive. All area flows eventually drain away from Caltrans ROW and into the County ROW.

Avoidance, Minimization, and/or Mitigation Measures

In addition to the measure below, implementation of the measures specified in the Biological Resources Section will ensure that there are no impacts to hydrology or water quality:

- WQ-1:** A Stormwater Pollution Prevention Plan will be prepared to minimize on-site sedimentation and erosion.

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 CEQA.

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

The following relates to the geologic aspects or conditions within the project site:

Topography: Nearly Level with downward sloping trends from the elevated north-bound and south-bound US 101 off-ramps.

Within County’s Geologic Study Area: No

Geologic Formations: Miguelito Member of Pismo Formation (Tpm)- Low Liquefaction Potential; Latest Pleistocene to Holocene alluvium, undifferentiated (Qa)- Moderate Liquefaction Potential; Gragg Member of Pismo Formation (Tpg)- Low Liquefaction Potential.

The project site is located within the southern portion of the Coast Ranges Geological Province on the southwestern margin of the San Luis Range which is a prominent west-northwest trending topographic and structural high that is one of several structural blocks of the Los Osos/Santa Maria tectonic domain. The project site is directly underlain by unconsolidated sediments and bedrock.

Landslide Risk Potential: Moderate to High Potential

Liquefaction Potential: Low to Moderate Potential

Nearby potentially active faults: Yes, one existing fault that is classified as “Potentially Capable Inferred” is located in close proximity to the project area. This fault is located approximately 3.5 miles west from a second fault that is classified as “Capable.”

Distance from Faults: The project area is located approximately 0.4 mile east of a “Potentially Capable Inferred” fault line. The project area is located approximately 3.07 miles southwest from the nearest section of a “Capable” classified fault, which is located just south of the city of San Luis Obispo.

Area known to contain serpentine or ultramafic rock or soils: No serpentine or ultramafic rock or soils are located within or adjacent to the project area.

Soils: Xererts -Xerolls-Urban land complex, 0 to 15 percent slopes. This complex consists of nearly level to strongly sloping soils and miscellaneous areas that are covered by urban structures. The soil materials have been modified by earthmoving equipment or covered by urban structures so that much of their original shape and physical characteristics have been altered.

Shrink/Swell potential of soil: Dependent upon changes in moisture content- has slow permeability. When used for urban development, the shrink-swell potential of the Xererts soils and the Xerolls subsoils and the very slow and slow permeability of the Xerolls subsoil need to be considered in the design and building of foundations, concrete structures, and paved area. These limitations can be minimized by backfilling, using blankets of crushed rock and sand beneath concrete structures, using vapor barriers and diverting runoff away from structures. Replanting disturbed areas as soon as possible helps to control erosion.

The project site is not within the County Geologic Study Area designation or within a high liquefaction area. Potential sedimentation and erosion issues will be addressed in the SWPPP (or Water Pollution Control Plan [WPCP]), which will be prepared for the project. Likewise, a Hazardous Materials Prevention and Response Plan will be prepared to allow for a prompt and effective response to any accidental spills, should they occur. These plans are also required to avoid and minimize potential impacts to state and federally jurisdictional waters and other sensitive habitat types present on-site.

The project site has a low to high potential for landslides and liquefaction. It is situated in relatively close proximity to one existing “Capable Inferred” faults and one “Capable” fault. However, these factors are insignificant because project implementation does not entail any permanent impacts from new development.

Environmental Consequences

The APE consists of approximately 15.25 acres. Preliminary calculations indicate that implementation of the project has potential to result in approximately 3.4 acres of permanent ground disturbance and approximately 2.2 acres of temporary ground disturbance. However, most of the potential disturbance will be limited to the construction phase of the project. No permanent impacts to geology and soils will occur. Potential sedimentation and erosion issues will be addressed, avoided, and minimized through implementation of the SWPPP or WPCP and Hazardous Materials Prevention and Response Plan that will be prepared for the project prior to construction (refer to the Biological Resources section). Implementation of the project will improve the structural integrity of the slopes around the interchange with installation of retaining walls and improved onsite drainage. There is no indication at this time that standard measures to address geologic hazards (e.g., compliance with American Association of State Highway and Transportation Officials [AASHTO] standards) will be required for this project. Consistent with Caltrans policy, a geotechnical study will be prepared to provide guidance for project design. Technical justification for the project design and explanations of the associated assessments conducted in support of the project will be provided in the forthcoming Geotechnical study and report expected before early 2020.

Development of the project would meet or exceed the most current requirements of the American Association of State Highway and Transportation Officials (AASHTO), which have been developed to establish the minimum requirements necessary for project design to safeguard the public health, safety and general welfare through structural strength, stability, access, and other standards. The project would be designed to meet Caltrans SDC and AASHTO Standards.

Compliance with AASHTO, Caltrans, and other applicable standards typically indicates that risks to people and structures, including those related to unstable soil conditions, were properly safeguarded against. Through compliance with these current standards, the project will be designed to withstand anticipated seismic and geologic stresses according to current established engineering practices. Therefore, potential impacts related to unstable soil conditions are considered less than significant.

Avoidance, Minimization, and/or Mitigation Measures

The project site is located within the Avila Beach MS4 coverage area. Projects involving more than one acre of disturbance are subject to preparing a SWPPP to minimize on-site sedimentation, runoff and erosion.

Although SWPPP and geotechnical studies will be required, no significant impacts to geology and soils are anticipated and no mitigation measures are required.

PALEONTOLOGY

Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. Paleontology is a multidisciplinary science that combines elements of geology, biology, chemistry, and physics in an effort to understand the history of life on earth. Paleontological resources, or fossils, are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. These include mineralized, partially mineralized, or un-mineralized bones and teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains. Paleontological resources include not only the fossils themselves, but also the physical characteristics of the fossils' associated sedimentary matrix. Fossils are considered nonrenewable resources because the organisms they represent no longer exist.

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

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under federal and state laws and regulations. This analysis conducted as part of the project also complies with guidelines and significance criteria specified by the Society of Vertebrate Paleontology (SVP) (1995, 2010).

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at PRC Section 21000 et seq. CEQA requires lead agencies to

determine if a proposed project would have a significant effect on the environment, including significant effects on paleontological resources. The current State CEQA Guidelines define procedures, types of activities, persons, and public agencies required to comply with CEQA, and include the following as one of the questions to be answered in the Appendix G Environmental Checklist: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?”

Requirements for paleontological resource management are included in the PRC Division 5, Chapter 1.7, Section 5097.5, and Division 20, Chapter 3, Section 30244, which states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, 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. Violation of this section is a misdemeanor.

These statutes prohibit the removal, without permission, of any paleontological site or feature from lands under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, local agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others. PRC Section 5097.5 also establishes the removal of paleontological resources as a misdemeanor and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, and district) lands.

The Conservation and Open Space Element of the County General Plan (2010) states as one of its intents the “increased protection of . . . paleontological and other cultural features that contribute to ‘sense of place’” (County of San Luis Obispo 2010:18).

The General Plan identifies the following cultural resources goal relating to paleontological resources and relevant to the current project:

Goal CR 4.5: Protect paleontological resources from the effects of development by avoiding disturbance where feasible.

Under this goal, the County identifies two strategies for implementation:

Implementation Strategy CR 4.5.1 Paleontological Studies: Require a paleontological resource assessment and mitigation plan to 1) identify the extent and potential significance of the resources that may exist within the proposed development and 2) provide mitigation measures to reduce potential impacts when existing information indicates that a site proposed for development may contain biological, paleontological, or other scientific resources.

Implementation Strategy CR 4.5.2 Paleontological Monitoring: Require a paleontologist and/or registered geologist to monitor site-grading activities when paleontological resources are known or likely to occur. The monitor will have the authority to halt grading to determine the appropriate protection or mitigation measures. Measures may include collection of paleontological resources, curation of any resources collected with an appropriate repository, and documentation with the County.

16 USC 431-433 (the “Antiquities Act”) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

16 USC 461-467 established the National Natural Landmarks (NNL) program. Under this program property owners agree to protect biological and geological resources such as paleontological features. Federal agencies and their agents must consider the existence and location of designated NNLs, and of areas found to meet the criteria for national significance, in assessing the effects of their activities on the environment under NEPA.

16 USC 470aaa (the Paleontological Resources Preservation Act) prohibits the excavation, removal, or damage of any paleontological resources located on federal land under the jurisdiction of the Secretaries of the Interior or Agriculture without first obtaining an appropriate permit. The statute establishes criminal and civil penalties for fossil theft and vandalism on federal lands.

23 USC 1.9(a) requires that the use of Federal-aid funds must be in conformity with all federal and state laws.

23 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 CEQA.

Affected Environment

A paleontological investigation and associated report were conducted and prepared in May 2019 (Bell 2019). The report is based on a desktop review of available scientific literature, geologic maps, a records search from the Natural History Museum of Los Angeles County, and a review of the online collections database of the University of California Museum of Paleontology. This report conforms to industry standards as developed by the SVP (1995, 2010). The purpose of the analysis was to: (1) determine whether any previously recorded fossil localities occur in the project area; (2) assess the potential for disturbance of these localities during construction; and (3) evaluate the paleontological sensitivity of the project area.

The project area is located on the eastern side of the San Luis Mountains, at the opening of Gragg Canyon and near San Luis Obispo Creek. Recent sedimentation to the site is sourced from the nearby mountains and deposited by San Luis Obispo Creek. The geology in the vicinity of the project area has been mapped. The surficial geology of the project area is mapped as primarily Younger Alluvium (Qa), with outcrops of the Pismo Formation occurring along the north and south margins. These sediments are associated with valley floors but are too young to preserve fossil resources in the upper layers, but deeper layers of the deposit may be of an age to preserve fossil resources (i.e., over 5,000 years old, as per the SVP 2010). While the exact depth at which the transition to older sediments is not known, fossils have been discovered in valley settings as shallow as 5–10 feet below the surface in similar sediments. Younger Alluvium is therefore assigned low-to-high paleontological sensitivity, increasing with depth. The entire project area is situated on fill from when the freeway and interchange was originally constructed. The amount of fill varies in depth around the project area, but some areas (near the overpass) can be over sixty feet deep.

The Pismo Formation, including the Squire Sandstone, Gregg Member, and Miguelito Member, are assigned high paleontological sensitivity.

Environmental Consequences

Given the highly disturbed project locality it is unlikely that 'original ground' (i.e., native material) that could potentially contain paleontological resources will be disturbed as there is documented evidence of up to 60 feet of fill in the project area.

Avoidance, Minimization, and/or Mitigation Measures

As currently designed, it is unlikely that the project would impact paleontological resources. The following mitigation measure has been developed in accordance with the SVP (2010) standards and meets the paleontological requirements of CEQA and the guidelines of the County General Plan. This measure has been used throughout California and have been demonstrated to be successful in protecting unanticipated paleontological resources while allowing timely completion of construction.

PALEO-1: Once a final design for the project has been determined, and prior to construction, a Project Paleontologist (meeting SVP standards) will prepare a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). This PRMMP will include development of a Worker's Environmental Awareness Program for project personnel, and will address specifics of monitoring (e.g., when and where monitoring is needed, the level of effort needed, Native American involvement, etc.), if needed. The PRMMP will also include the process to be followed in the event of a fossil discovery. The Project Paleontologist will also prepare a report of the findings of the PRMMP after construction is completed.

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 of 1992
- Clean Water Act
- Clean Air Act

- Safe Drinking Water Act
- Occupational Safety and Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, 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

The information in this section is from the Initial Site Assessment (ISA) (May 2019) and Preliminary Site Investigation (PSI) (April 2019) prepared for the project. The ISA includes a review of federal, state, and local regulatory records for reports of hazardous wastes, as well as a visual inspection of the project site from publicly accessible sidewalks and streets to check for evidence of potential environmental concerns such as debris piles, leaks, or stains, monitoring wells or evidence of ongoing environmental work, chemical storage, poor housekeeping, active underground storage tanks, aboveground storage tanks, or dry cleaners with onsite storage of solvents. The objective of the PSI was to assess the shallow soils within the project within the State ROW that are proposed to be disturbed by grading activities for the presence of aerially deposited lead (ADL), and to compare the results of soil sample analytical results to applicable regulatory thresholds regarding handling and re-use/disposal.

Adjacent land uses include U.S. Highway 101, agriculture (grazing land), a hot springs facility and undeveloped land. The study area contains lead contamination in the soil from motor vehicle exhaust. Past uses of the surrounding area are not readily apparent based on the site assessment. The project site contains no structures. No hazardous substances, storage tanks, odors, drums, unidentified substance containers, indication of polychlorinated biphenyls, or other conditions of concern were identified during site assessment.

According to the National Pipeline Mapping Service (NPMS) online map viewer, there is an active hazardous liquid pipeline (4.55 miles in length) containing crude oil located along Avila Beach Drive. In addition, there is an active natural gas pipeline (0.73 mile in length) located

along Shell Beach Road. No unauthorized releases were identified on the NPMS website or in other online databases.

Based on a sampling report of ADL conducted in February 2019, ADL was detected at the subject property. However, based on the statistical analysis using the 95 percent Upper Confidence Limit (UCL) for lead and for soluble lead, the detected concentrations of lead are low enough that the soil can be reused onsite as “clean” soil.

Environmental Consequences

ADL Contamination

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 (DTSC). This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

In July 2018 and January 2019, soil samples were collected at 23 locations at the surface, and between 1 and 2 feet below ground surface depending on site conditions and refusal. A total of 57 samples were submitted to the laboratory to be chemically analyzed for total lead by EPA Method 6010. A total of 13 samples were further analyzed for Soluble Threshold Limit Concentration (STLC) by a California Waste Extraction Test. Six of the 13 samples were further analyzed by the Toxicity Characteristics Leaching Procedure. Select soil samples were also analyzed for pH by EPA Method 9045C.

Per the DTSC/CalTrans Agreement the chemical analytical results for soil samples collected from all 23 drill holes were evaluated statistically using the U.S. EPA’s statistical analysis to appropriately categorize the ADL containing soil for on-site re-use or offsite disposal. All 57 total lead results were included in the data set for the statistical analysis to calculate the 95% Upper Confidence Limit (UCL) for total lead. Soil at the project site contains soil with a calculated 95% UCL for total lead less than 80 mg/kg and calculated 95% UCL for STLC lead less than 5 mg/L. Therefore, the project site soil is defined as Clean Soil and may be reused onsite with no restrictions.

Avoidance, Minimization, and/or Mitigation Measures

Although ADL was detected onsite, it has been properly characterized and addressed. Therefore, no avoidance, minimization, and/or mitigation measures are necessary for the project for hazardous waste/materials.

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 is its companion state law. These laws, and related regulations by the U.S. EPA and the California Air Resources Board (ARB), set standards for

the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5})—and sulfur dioxide (SO₂). In addition, national and state standards exist for lead (Pb), and state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under 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 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 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 CO, NO₂, O₃, PM₁₀ and PM_{2.5}, and in some areas (although not in California), SO₂. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO₂, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of 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), FHWA, and Federal Transit Administration 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 scope⁴ 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 the South-Central Coast Air Basin in San Luis Obispo County which is in attainment and/or unclassified for all Federal Standards. According to 40CFR Section 93.127 Table 3, this project is considered as an Intersection channelization and is exempted from the regional emission analysis requirements. Project level emission analysis is not required because the County is in attainment for carbon monoxide, PM₁₀ and PM_{2.5}. Therefore, conformity requirements do not apply and no further investigation concerning air quality is needed.

The San Luis Obispo Air Pollution Control District (APCD) has developed and updated their CEQA Air Quality Handbook (2012) to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. To evaluate long-term emissions, cumulative effects, and establish countywide programs to reach acceptable air quality levels, a Clean Air Plan has been adopted and prepared by the APCD.

On February 8, 2019 the APCD for the County was contacted to comment on the project. On February 22, 2019 the APCD provided their comments on the proposed project. The APCD commended the County for improving multimodal access and providing congestion relief through construction of a roundabout and park-and-ride lot; the project was found to be consistent with APCD's Clean Air Plan transportation strategies intended to reduce emissions and vehicle miles traveled. The APCD found that the project is consistent with helping meet the emission reduction target set in SB 32.

The APCD evaluated the construction phase emissions and found that the construction phase would likely be less than the APCD's significance threshold identified in Table 2-1 of the *CEQA Air Quality Handbook* (April 2012) and did not require any construction phase mitigation measures. The APCD provided guidance on encountering lead or asbestos during the course of the project and prohibited developmental burning of vegetative material.

Environmental Consequences

The project is located in an attainment/unclassified area for all current NAAQS. This project is exempted from the regional emission analysis requirements. Project level emission analysis is not required because the County is in attainment for CO, PM₁₀, and PM_{2.5}. Therefore, conformity requirements do not apply and no further investigation concerning air quality is needed.

However, 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 construction-related activities.

Avoidance, Minimization, and/or Mitigation Measures

The APCD provided guidance and mitigation measures to manage fugitive dust emissions such that they do not exceed the APCD's 20% opacity limit (APCD Rule 401) or prompt nuisance violations (APCD Rule 402):

- AQ-1.** Reduce the amount of the disturbed area where possible.
- AQ-2.** Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. **Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.**
- AQ-3.** All dirt stockpile areas should be sprayed daily and covered with tarps or other dust barriers as needed.
- AQ-4.** Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities.
- AQ-5.** Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established.
- AQ-6.** All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.
- AQ-7.** All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- AQ-8.** Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- AQ-9.** All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code Section 23114.
- AQ-10.** To prevent "track out" (sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment [including tires] that may then fall onto any highway or street), the contractor should designate access points and require all employees, subcontractors, and others to use them. Install

and operate a 'track-out prevention device' where vehicles enter and exit unpaved roads onto paved streets. The 'track-out prevention device' can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.

- AQ-11.** Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Where feasible, water sweepers shall be used with reclaimed water. Roads shall be pre-wetted prior to sweeping when feasible.
- AQ-12.** All PM₁₀ mitigation measures required should be shown on grading and building plans.
- AQ-13.** The contractor or builder shall designate a person or persons whose responsibility is to ensure any fugitive dust emissions do not result in a nuisance and to enhance the implementation of the mitigation measures as necessary to minimize dust complaints and reduce visible emissions below the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Their duties shall include holidays and weekend periods when work may not be in progress (for example, wind-blown dust could be generated on an open dirt lot).
- AQ-14.** Portable equipment, 50 horsepower or greater, such as diesel engines and portable generators, used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit.
- AQ-15.** Depending on lead-based paint removal method, an APCD permit may be required. Contact the APCD Engineering & Compliance Division at 805-781-5912 for more information.
- AQ-16.** If this project will include demolition activities of potentially asbestos containing material (ACM), then it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include but are not limited to 1) written notification to the APCD within at least 10 business days of activities commencing, 2) asbestos survey conducted by a Certified Asbestos Consultant, and 3) applicable removal and disposal requirements of identified ACM.

Climate Change

Neither the U.S. EPA, nor the 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 EOs on climate change, the issue is addressed in the CEQA chapter of this document. The CEQA analysis may be used to inform the NEPA determination for the project.

Greenhouse Gas (GHG) Emissions are said to result in an increase in the earth's average surface temperature. This is commonly referred to as global warming or climate change. The rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the earth's climate system. These changes are now thought to be broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels.

The passage of Assembly Bill 32, the California Global Warming Solutions Act (2006), recognized the need to reduce GHG emissions and set the GHG emissions reduction goal for the State of California into law. The law required that by 2020, State emissions must be reduced to 1990 levels. This is to be accomplished by reducing GHG emissions from significant sources via regulation, market mechanisms, and other actions. Subsequent legislation (e.g., SB 97- Greenhouse Gas Emissions bill) directed the California Air Resources Board (CARB) to develop statewide thresholds.

In March 2012, the San Luis Obispo County APCD approved thresholds for GHG emission impacts, and these thresholds have been incorporated into the APCD's CEQA Air Quality Handbook. APCD determined that a tiered process for residential / commercial land use projects was the most appropriate and effective approach for assessing the GHG emission impacts. The tiered approach includes three methods, any of which can be used for any given project:

1. Qualitative GHG Reduction Strategies (e.g. Climate Action Plans): A qualitative threshold that is consistent with AB 32 Scoping Plan measures and goals; or,
2. Bright-Line Threshold: Numerical value to determine the significance of a project's annual GHG emissions; or,
3. Efficiency-Based Threshold: Assesses the GHG impacts of a project on an emissions per capita basis.

For most projects the Bright-Line Threshold of 1,150 Metric Tons CO₂/year (MT CO₂e/yr) will be the most applicable threshold. In addition to the residential/commercial threshold options proposed above, a brightline numerical value threshold of 10,000 MT CO₂e/yr was adopted for stationary source (industrial) projects.

It should be noted that projects that generate less than the above mentioned thresholds will also participate in emission reductions because air emissions, including GHGs, are under the purview of CARB (or other regulatory agencies) and will be "regulated" either by CARB, the Federal Government, or other entities. For example, new vehicles will be subject to increased fuel economy standards and emission reductions, large and small appliances will be subject to more strict emissions standards, and energy delivered to consumers will increasingly come from renewable sources. Other programs that are intended to reduce the overall GHG emissions include Low Carbon Fuel Standards, Renewable Portfolio standards and the Clean Car standards. As a result, even the emissions that result from projects that produce fewer emissions than the threshold will be subject to emission reductions.

NOISE

Regulatory Setting

NEPA of 1969 and 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 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 FHWA involvement (and the Department, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the 23 CFR 772 analysis.

COUNTY OF SAN LUIS OBISPO NOISE ELEMENT

Construction noise is typically exempt from Noise Element standards, and construction activities performed by the Department of Public Works in the road ROW are generally exempt from the County’s LUO. The ordinance limits construction hours to 7:00 A.M. and 6:00 P.M. Monday through Friday, and from 9:00 A.M. and 5:00 P.M. on Saturday. Construction is prohibited on Sundays.

Table 3: Noise Abatement Criteria		
Activity Category	NAC, Hourly A- Weighted Noise Level, Leq(h)	Description of activity category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording

		studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC— reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC— reporting only	Undeveloped lands that are not permitted.
¹ Includes undeveloped lands permitted for this activity category.		

Figure 5 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Figure 5: Noise Levels of Common Activities

According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with 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

Because the proposed project is not considered a Type I or Type II project, as it will not construct a highway on a new location, significantly change the alignment of the existing highway, or involve construction of noise abatement on an existing highway with no changes to the highway capacity or alignment, it is not subject to Caltrans Traffic Noise Analysis Protocol.

Though it is not subject to noise analysis, this project may generate temporary construction-related noise impacts. Noise generated by construction activities will be intermittent and its intensity will vary depending on the construction activity.

The project is located in a semi-rural area at an existing interchange. The nearest sensitive receptor is the Avila Hot Spring Spa and RV Resort to the north and west of the project. Outdoor areas at this facility include picnic tables, waterslides, pool, spa, lawn etc. Additional sensitive receptors (residential homes) are located over 1,000 feet from the project area. The degree of construction noise impacts may vary for different areas of the project site and vary depending on the construction activities. Based on the County of San Luis Obispo's General Plan Noise Element, due to the high volume of traffic on SR-101, noise levels at the site are already above 65 to 70 decibels on average. During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction, although it is likely that in most cases construction noise may be imperceptible from existing traffic noise.

Environmental Consequences

The proposed project is not considered a Type I or Type II project. Temporary construction-related noise impacts may be generated by the project. Noise generated by construction activities will be intermittent and its intensity will vary depending on the construction activity. The Avila Beach Hot Springs Resort is adjacent to the project area and may intermittently be affected by construction noise.

Avoidance, Minimization, and/or Abatement Measures

No measures for noise abatement are required or proposed for the project.

Based on the studies completed to date and input from the public, the Department is not requiring noise abatement barriers or berms. Construction hours will be limited to 7:00 A.M. and 6:00 P.M. Monday through Friday, and from 9:00 A.M. and 5:00 P.M. on Saturday. Construction is prohibited on Sundays. There may be some exceptions but in general there will be peak period and holiday limitations.

Biological Environment

NATURAL COMMUNITIES

Regulatory Setting

This section of the document discusses natural communities of concern (NCC). The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species section. Wetlands and other waters are also discussed below.

Affected Environment

County Environmental Division staff prepared a Natural Environment Study (Minimal Impacts) (NES[MI]) for the project in May 2019. The NES(MI) details the literature review and the findings of various survey efforts.

Few natural landscapes occur within the project area and much of it is paved roadway or bare ground associated with the roadway. Vegetation along the roadsides are influenced by the existing roadway infrastructure and the periodic mowing or disking operations. Primarily non-native grasses and forbs with landscaped trees and shrubs occur within the project area. Several patches of coastal scrub also occur on the southwest and southeastern portions of the project area. The hillside in the southwestern portion supports a coast live oak woodland. There are no natural drainage features or wetlands within the project area. Riparian habitat associated with Gragg Canyon is adjacent to, but not part of the project area.

Vegetation and land cover types in the project area include Developed/Bare Ground, Ruderal (Wild oats grassland), Coastal Scrub (Coyote brush scrub), Landscaped, and Coast Live Oak Woodland. None of these habitat types is considered an NCC.

One NCC is mapped within five miles of the project area – Central Maritime Chaparral. However, this vegetation community, or any other NCC, do not occur within the project area. Although the project area is located within the coastal zone, none of the habitat types found within the project area qualify as ESHA.

Environmental Consequences

Developed/Bare Ground. Within the project area, this cover type includes the roadways (i.e., SR-101 main lines and ramps, Avila Beach Drive, Shell Beach Road, Monte Road) and the existing unpaved parking lot at the future Park-and-Ride lot and the existing unpaved maintenance pullout along the northbound offramp. These areas are devoid of vegetation or contain minimal amounts of ruderal species. These developed areas have negligible value as habitat for native plants and most animals. The paved roadways likely have negative effects on local wildlife populations through mortality due to collisions with vehicles. Because of the highly disturbed nature of this land cover type, it is of little to no value to wildlife. Most of the ground disturbance associated with this project will occur in developed/bare ground.

Ruderal (Wild Oats Grassland). A large portion of the project area consists of ruderal vegetation associated with unpaved highway ROW and waste areas that are routinely maintained by human-generated disturbances (e.g., mowing, disking, and herbicide application). Vegetation in this cover type includes primarily nonnative grasses and forbs that establish quickly after disturbance activities. Because of the consistently disturbed nature of this land cover type, it is not particularly valuable to wildlife species. Much of the ruderal vegetation will be adversely affected by this project except for the areas closest to the main lines of SR-101.

Coastal Scrub (Coyote Brush Scrub). Coastal scrub habitat occurs in the southwestern portion of the project area in the proposed park-and-ride lot and between the northbound off-ramp and main lines of SR-101. These areas were both established in association with the construction of the highway and interchange. Coastal scrub communities provide cover and nesting habitat for a variety of animals, such as reptiles, songbirds, and small mammals. The field surveys indicate the presence of these types of animals. However, due to the relatively small patch size of the coastal scrub, it is not expected to provide high-quality foraging or nesting habitat for common or special-status wildlife species known to occur in the region. The coastal scrub in the southwestern portion of the project area (associated with the park-and-ride lot) will be cleared and grubbed. The coastal scrub between the northbound off-ramp and main lines of SR-101 will likely not be adversely affected by the project.

Landscaped. Planted trees and shrubs occur within the unpaved highway ROW as part of the landscaping process associated with the existing interchange. These areas are immediately surrounded by ruderal vegetation and the developed roadways. Because of the highly disturbed or developed areas surrounding the landscaped vegetation, this cover type is of little value to wildlife, although some trees and large shrubs may support nesting birds during the nesting season. Much of the landscaped vegetation, especially west of SR-101 will be removed as a result of project activities.

Coast Live Oak Woodland. Coast live oak woodland occurs in the southwestern portion of the project area along the boundary of the proposed park-and-ride lot. Coast live oak woodland communities provide cover, foraging, and nesting habitat for a variety of animals, such as reptiles, songbirds, raptors, and mammals. The field surveys indicate the presence of these types of animals. While most of the coast live oak woodland habitat occurs outside the project footprint, impacts to coast live oak woodland will occur at the entrance to the proposed park-and-ride lot.

The project area is not in or adjacent to California Essential Habitat Connectivity mapped Natural Landscape Block or Essential Connectivity Areas. The project area and its associated land cover types do not provide an important wildlife movement corridor for local and regional terrestrial or aquatic animals. The disturbed nature of the project area and its proximity to busy roadways makes it unlikely that wildlife would access this area for local or long-distance movements.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are proposed; however, coast live oak trees will be incorporated into the landscaping plant palette to be planted within the project area at the end of construction.

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 CWA (33 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 USACE with oversight by the 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 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 EO for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Finding must be made.

At the state level, wetlands and waters are regulated primarily by the SWRCB, the RWQCBs, and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission 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 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 Jurisdictional Delineation report was not prepared for the project because there are no natural drainage features or wetlands within the project area. Riparian habitat associated with Gragg Canyon is adjacent to, but not part of the project area. No adverse impacts to wetlands or other waters will occur with implementation of the project.

Environmental Consequences

This project will not require a Section 404 Permit or a Section 401 Water Quality Certification pursuant to the CWA, or a Section 1600 Streambed Alteration Agreement because no wetlands or jurisdictional waters are present within the project area and no work associated with the project will be conducted within the bed or bank of a waterway or its associated riparian habitat.

Avoidance, Minimization, and/or Mitigation Measures

No adverse impacts to wetlands or other waters will occur with implementation of the project. Therefore, no avoidance, minimization, and/or mitigation measures are proposed.

PLANT SPECIES

Regulatory Setting

The United States Fish and Wildlife Service (USFWS) and CDFW have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section 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 (SSC), USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC Section 1531, et seq. See also 50 CFR Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and CEQA, found at California PRC, Sections 21000-21177.

Affected Environment

County Environmental Division staff prepared an NES(MI) for the project in March 2019. The NES(MI) describes 33 special-status plant species documented in the vicinity of the project area, nine of which were determined to have marginal or suitable habitat and growing conditions in the project area. Those species include Hoover's bent grass (*Agrostis hooveri*), Pecho manzanita (*Arctostaphylos pechoensis*), Santa Margarita manzanita (*Arctostaphylos pilosula*), San Luis Obispo sedge (*Carex obispoensis*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Pismo clarkia (*Clarkia speciosa* ssp. *immaculata*), mesa horkelia (*Horkelia cuneata* var. *puberula*), woodland woollythreads (*Monolopia gracilens*), and black-flowered figwort (*Scrophularia atrata*). The remaining species were determined to be absent because the project area is outside of the species' range or it does not support the appropriate vegetation, soil, or elevation requirements.

Although coast live oak is not a special-status species, mitigation is often required for projects where oak trees will be removed. Most of the coast live oak trees occurring within the project area are planted individuals as part of the landscaping associated with SR-101; mitigation is not required for removal of these trees. However, several naturally occurring oaks in the southwestern portion of the project area associated with the park-and-ride lot will be mitigated for upon their removal.

Reconnaissance-level and focused botanical surveys were conducted in 2016 and 2018 during the appropriate seasons for detecting the target species (and other species). None of the special-status plant species evaluated for the proposed project were detected within the project area. Local reference sites for Pismo clarkia, mesa horkelia, black-flowered figwort, and Congdon's tarplant were checked in conjunction with the botanical surveys. Each of these special-status species were observed within their reference sites, but none were observed within the project area.

Environmental Consequences

Vegetation will be removed as a result of this project. However, special-status plants were not observed within the project area during appropriately timed focused botanical surveys. Therefore, no special-status plants are expected to occur within the project area and no impacts to special-status plants are anticipated as a result of this project.

Avoidance, Minimization, and/or Mitigation Measures

Biological conditions within the project area may change between the time when surveys were conducted to when the project goes to construction. Therefore, the following avoidance and minimization efforts are recommended to ensure no impacts to special-status plant species occur as a result of the project:

- BIO-1.** Prior to initial ground disturbance construction, all construction personnel will attend an environmental education program delivered by a qualified biologist. At a minimum, the program will include a description of invasive species, potential special-status species, and other protected natural resources, as well as an explanation of the regulatory and legal compliance setting for the project.
- BIO-2.** All work, including construction access and equipment staging areas, will be confined to the project area.
- BIO-3.** Prior to ground disturbance, a qualified biologist will conduct a preconstruction survey to ensure site conditions haven't changed and no special-status plants occur within the project area.
- BIO-4.** Coast live oak trees will be incorporated into the landscaping plant palette to be planted within the project area at the end of construction.

ANIMAL SPECIES

Regulatory Setting

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

Federal laws and regulations relevant to wildlife include the following:

- NEPA
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- CEQA
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

County Environmental Division staff prepared an NES(MI) for the project in May 2019. The NES(MI) describes 36 special-status animal species documented in the vicinity of the project

area, one of which was determined to have marginal or suitable upland habitat conditions in the project area (California red-legged frog [*Rana draytonii*]). The remaining species were determined to be absent because they are marine or aquatic species, the project area is outside of the species' range, or the project area does not support the appropriate vegetation, soil, or elevation requirements. No special-status species were observed or are expected to occur within the project area.

Although no nesting birds or other evidence of nesting activities (e.g., inactive nests) were observed within the project area during the field surveys, the project area contains suitable habitat for a variety of more common nesting bird species that are afforded protection under the California Fish and Game Code and the Migratory Bird Treaty Act.

A woodrat midden (i.e., nest) belonging to big-eared woodrat (*Neotoma macrotis*) was observed in the coast live oak woodland near the proposed park-and-ride. This area will be cleared of vegetation; therefore, the midden will require relocation or dismantling. No woodrats were observed or handled during the survey efforts, so it could not be determined which subspecies of *N. macrotis* this is and whether it is considered a special-status species (*N. macrotis* ssp. *luciana* is a SSC, while *N. macrotis* ssp. *macrotis* does not have a special-status; both subspecies occur in the County).

Environmental Consequences

Vegetation removal and ground disturbance could directly destroy active nests or indirectly contribute to nest failure by exposing active nests to the elements and/or predators. Human activity close to an active nest could attract potential nest predators and/or disrupt the normal nesting activities of adult birds and contribute to nest failure. Clearing vegetation containing woodrat nests would impact woodrat foraging habitat and could destroy nests as well as directly kill individual woodrats.

Avoidance, Minimization, and/or Mitigation Measures

Biological conditions within the project area may change between the time when surveys were conducted to when the project goes to construction. Therefore, the following avoidance and minimization measures will be implemented to avoid, minimize, or mitigate potential project-related adverse effects to special-status animal species, including nesting birds and woodrats:

- BIO-5.** To the greatest extent feasible, vegetation removal and ground disturbance should be conducted during the non-breeding season for birds (i.e., between September 2 and January 31). This will discourage birds from nesting in construction areas and will greatly reduce the potential for nesting birds to delay the construction schedule.
- BIO-6.** If construction activities are proposed during the typical nesting season (February 1 to September 1), a nesting bird survey will be conducted by a qualified biologist no more than one week prior to the start of construction to determine presence/absence of nesting birds within the biological study area and immediate vicinity.
- BIO-7.** If an active nest is found, a qualified biologist will establish an appropriate avoidance buffer. If necessary, the biologist will consult with the USFWS/CDFW to determine an appropriate buffer size. Construction within the buffer will be prohibited until the qualified biologist determines that the nest is no longer active.

- BIO-8.** Prior to vegetation removal, the area will be surveyed for woodrat nests. If nests are found within areas to be impacted, woodrat nests will be picked up whole with a piece of equipment and relocated out of the impact area. If this is not feasible, a qualified biologist will dismantle the nest by hand or with hand tools (preferably during the non-breeding season) to allow woodrats in the nest to escape into adjacent undisturbed habitat. Equipment may also be used to dismantle the nest at the discretion of the qualified biologist. The nest material will then be moved out of the work area and stacked where it is accessible to the woodrats.

THREATENED AND ENDANGERED SPECIES

Regulatory Setting

The primary federal law protecting threatened and endangered species is the FESA: 16 USC Section 1531, et seq. See also 50 CFR Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA (and the Department, as assigned), are required to consult with the USFWS and the NMFS 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 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 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

County Environmental Division staff prepared an NES(MI) for the project in March 2019. No federally designated critical habitat or Essential Fish Habitat occurs within the project area. A “no effects” determination was made for all federally listed species known to occur or that potentially occur in the region. ESHAs occur in the vicinity, but not within the project area.

Although no California red-legged frog protocol-level surveys were conducted, multiple survey efforts were conducted between 2016 and 2018 by County staff with extensive knowledge and experience with this species. No California red-legged frogs were observed during these surveys. The project area is not located within designated critical habitat for California red-legged frog and the two within two miles of the project area are associated with the riparian and aquatic habitats which do not occur with the project area. The habitats within the project area would only be considered marginal upland habitat because they are isolated from the riparian and aquatic habitat by steep fill slopes and existing busy roadways and there is no aquatic habitat beyond. It is extremely unlikely that California red-legged frog would or could successfully move through the project area.

Environmental Consequences

Marginally suitable upland habitat (coastal scrub and coast live oak woodland) will be removed as part of the project, but no riparian or aquatic habitat will be adversely affected because none occurs within the project area. Therefore, California red-legged frog is not expected to occur within the project area and no impacts to this species are anticipated as a result of this project.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of BIO-1 through BIO-7 provided above will be sufficient to ensure California red-legged frog occur is not adversely affected by the project. In the extremely unlikely event that a California red-legged frog is found within the project area, work will cease in that area until the animal has left the area on its own volition. The County will immediately notify the USFWS for further direction before work can resume.

INVASIVE SPECIES

Regulatory Setting

On February 3, 1999, President William J. Clinton signed EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of NEPA analysis for a proposed project.

Affected Environment

County Environmental Division staff prepared an NES(MI) for the project in March 2019. The NES(MI) describes the 36 plant species listed as high, moderate, or limited on the California Invasive Plant Council (Cal-IPC) inventory that occur within the project area. Three of these

species (French broom [*Genista monspessulana*], foxtail brome [*Bromus madritensis* ssp. *rubens*], and freeway iceplant [*Carpobrotus edulis*]) have a Cal-IPC rating of high, but all have low amount of coverage (i.e., not a dominant species in any land cover type). The Cal-IPC rated species occur throughout the project area, but primarily adjacent to the existing roadways.

Environmental Consequences

Ground disturbance associated with project construction can create optimal conditions for the spread of invasive plants by removing and/or disturbing vegetation and soil. Construction equipment contaminated with soil containing invasive plant seeds from other areas can result in the spread of such species to new areas (e.g., the project area). Invasive species may be included in seed mixtures and mulch, and invasive species may be improperly removed and disposed of so that seed is spread. The project is not expected to facilitate the movement or spread of invasive fish or wildlife species.

Avoidance, Minimization, and/or Mitigation Measures

The County should comply with EO 13112 to reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife by implementing the following avoidance and minimization measures in addition to BIO-1:

- BIO-9** Prior to initial ground disturbance construction, all construction personnel will attend an environmental education program delivered by a qualified biologist. At a minimum, the program will include a description of invasive species, potential special-status species, and other protected natural resources, as well as an explanation of the regulatory and legal compliance setting for the project.
- BIO-10** Immediately prior to construction, the contractor, with assistance from a qualified biologist will identify the "work area" limits with brightly-colored flagging or fencing to prevent unnecessary direct impacts. Flagging will be maintained in good repair for the duration of the Project. All trees and shrubs to be removed will be identified and clearly marked. The biologist will remain onsite to monitor the initial ground disturbance especially in the naturally vegetated area associated with the park-and-ride lot.
- BIO-11** During construction, soil and vegetation disturbance will be minimized to the minimum area necessary to construct the project.
- BIO-12** Invasive plant species that have been identified within the project footprint will be removed and transported to an approved disposal facility as trash (not green waste) during construction activities and will not be replanted.
- BIO-13** During construction, the project will make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing onsite will be used for fill material to the maximum extent practicable. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species or the material must consist of purchased clean material such as crushed aggregate, sorted rock, or other similar substances.
- BIO-14** All erosion control materials including straw bales, straw wattles, or mulch used onsite must be free of invasive species seed.

Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under NEPA can be found in 40 CFR Section 1508.7.

Affected Environment

Caltrans guidance for CEQA cumulative impacts assessments includes defining a Resource Study Area (RSA). An RSA is the geographic area within which impacts on a particular resource are analyzed. The boundaries of RSAs for cumulative impacts analysis are often broader than the boundaries used for project specific analysis. The project study area surroundings are mostly developed for recreational, agricultural, and rural uses as designated in the County General Plan. The project area is primarily a previously disturbed area associated with SR-101 situated on a massive quantity of fill material.

Other Projects in the Resource Study Area

Information on current and probable future projects was requested from the County of San Luis Obispo and California Department of Transportation District 5.

The County is aware of one other project within the RSA:

- US Route 101 Pismo Congestion Relief Project, Pismo Beach, San Luis Obispo County, California. Caltrans proposes congestion relief measures along a 5.94-mile stretch of US Route 101 in San Luis Obispo County, California. The project will extend a truck lane, reconfigure ramps, and add an auxiliary lane between the Mattie Road on-ramp and the State Route 1 (Dolliver Street) Price Street southbound off-ramp on SR-101. Work will also include reconstruction of the inside shoulder to serve as a managed shoulder (part-time travel lane during peak periods). The Archaeological Survey Report for the proposed project was drafted in May 2018.

Environmental Consequences

Identification of the resources to consider is the first step in preparing a cumulative impact analysis. The proposed project will not impact existing and future land uses and policies, cultural or paleontological resources, special-status biological resources, geologic conditions, water quality, or air quality. Planned and foreseeable development in the RSA has low potential to change the visual character of the area. The visual impacts of the project would not result in a cumulatively considerable contribution to visual impacts from planned development in the project study area vicinity. Planned and foreseeable development in the RSA would have a beneficial impact on traffic and transportation/pedestrian and bicycle facilities by improving the efficiency and safety of the intersection as well as relieving traffic congestion.

Avoidance, Minimization, and/or Mitigation Measures

No additional measures are proposed beyond those identified in the Avoidance, Minimization and/or Mitigation Measures in Chapter 2.

Chapter 3 – California Environmental Quality Act (CEQA) Evaluation

Determining Significance under CEQA

The proposed project is a joint project by the Department and the FHWA and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both CEQA and 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 MOU dated December 23, 2016 and executed by FHWA and Caltrans. The County is the lead agency under CEQA, and the Department is the lead agency under NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an 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 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 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

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Aesthetics

a, b) No Impact

The proposed project would not have a substantial adverse impact on a scenic vista because the project area does not include any scenic vistas.

The project will not substantially damage scenic resources.

c) Less Than Significant with Mitigation Incorporated

As discussed in the Visual/Aesthetics section in Chapter 2, the proposed project would alter (moderate change) the visual character of the project study area by changing the intactness of some views, but not obstructing views. The project will increase the developed condition of the area and add to the diversity of the landscape by introducing more urbanized design features and nighttime lighting. The project would also include the construction of several retaining walls along the project limits. Viewer sensitivity in the area is considered moderate to moderate-high.

The proposed project includes context-sensitive design solutions, including incorporating tree species that will be removed into the landscaping plan and also the use of aesthetic treatments on the retaining walls. These project features would result in no net loss of trees along the project site and would blend the retaining walls into the project setting.

The proposed project would not diminish the views that make the highway eligible for scenic status. Therefore, the project as designed would not substantially degrade the visual character and quality of the site and would have less than significant impacts to scenic resources and visual character. Features to reduce visual impacts have been included into the project design, but no mitigation is required.

d) Less Than Significant

The proposed project includes a lighting plan to appropriately shield the project area, eliminate redundancy of lighting standards, and use context sensitive street lighting designs. The plan will be consistent with Caltrans and County lighting guidelines and standards.

AGRICULTURE AND FOREST RESOURCES

<p>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.</p>				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact

Based on the National Resource Conservation Service soils maps, the soil type within the project area is "Xerets-Xeroll-Urban land complex". The soils are not Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project would have no impact to these soils.

b) No Impact

There are no parcels under a Williamson Act contract within the project limits.

c, d) No Impact

There are no forest or timberlands within the project limits.

e) No Impact

There are no other changes anticipated to farmland or forest land.

AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Air Quality

a) No Impact

The proposed project is consistent with the APCD's CEQA Air Quality Handbook and other applicable air quality plans, and therefore will have no impact.

b) Less Than Significant with Mitigation Incorporated

The project is exempted from the regional emission analysis requirements and no further investigation concerning air quality is needed. Temporary construction activities could generate fugitive dust from the operation of construction equipment. The project will comply with construction standards adopted by the San Luis Obispo County APCD as well as Caltrans standardized procedures for minimizing air pollutants during construction. Several mitigation measures to ensure no impacts to air quality will be implemented, to reduce impacts to less than significant levels.

c) Less Than Significant Impact

San Luis Obispo County has been designated as in nonattainment; the proposed project will not result in a cumulative considerable net increase of any criteria pollutant. Construction related pollutants may occur during the proposed bridge replacement, but this does not constitute a considerable regional net increase as work will be temporary in nature and compliant with the APCD Air Quality Guidelines, and therefore will have a less than significant impact.

d) Less Than Significant Impact

The Avila Hot Springs Resort is located adjacent to the project area. The Resort is considered a sensitive receptor. Sensitive receptors within the project area may be exposed to pollutant concentrations during the construction phase of the project, however the exposure will be temporary in nature and therefore will have a less than significant impact.

e) Less Than Significant Impact

The proposed project is not expected to result in other emissions (such as those leading to objectionable odors) adversely affecting a substantial number of people and therefore will have a less than significant impact.

BIOLOGICAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Biological Resources

a) Less Than Significant with Mitigation Incorporated

Although none were observed during appropriately timed botanical surveys of the project area, the proposed project will impact habitat that may support special-status plants. Although none were observed during various survey efforts and none are expected to occur within the project area, the proposed project will impact marginally suitable upland habitat for California red-legged frog, a federally listed threatened species. In addition, nesting birds may occur throughout the project area. With implementation of the measures described in

the Biological Resources section in Chapter 2, project impacts to special-status species would be less than significant.

b) No Impact

This project will not affect riparian habitat or other sensitive natural communities.

c) No Impact

This project will not affect federally protected wetlands.

d) No Impact

This project will not affect any migratory wildlife corridors or the movement of any native resident or migratory fish or wildlife species. This project will not impede the use of native wildlife nursery sites.

e) No Impact

This project will not conflict with any local policies or ordinances protecting biological resources.

f) No Impact

This project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

CULTURAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Cultural Resources

a) No Impact

There are no historical resources within the project limits. The project area is adjacent to the historically developed Avila Hot Springs (formerly known as the Ontario Hot Springs. It was determined that the project will not impact the Avila Hot Springs, therefore no historical resources will be impacted.

b) Less Than Significant Impact

A low-density marine shell scatter (less than one fragment per square meter) was observed in the central portion of the APE within a heavily disturbed context. This area was subject to extensive, documented land modification from the construction of the SR-101 and the Avila Beach Drive interchange. Given the low density, lack of context, and no evidence of any intact archaeological deposits, the scatter was determined not to constitute an archaeological resource and was not formally recorded or documented. This determination is supported by a 2002 archaeological study that occurred in the area. Therefore, no significant archaeological resources were identified within the project area and will not be significantly impacted by the proposed project.

Comments received from Native American contracts expressed concern that the area is sensitive, but no specific knowledge regarding cultural resources within or adjacent to the APE was provided.

If previously unidentified cultural materials are unearthed during construction, work will be halted in that area until a qualified archaeologist can assess the significance of the find.

c) Less Than Significant with Mitigation Incorporated

There are no paleontological resources or unique geologic features were identified within the project limits. And as currently designed paleontological resources are not expected to be encountered during project implementation. A paleontological analysis of the project area determined that the Younger Alluvium formation that occurs within the project area is assigned a low-to-high paleontological sensitivity, increasing with depth. The Pismo Formation, including Squire Sandstone, Gregg Member, and Miguelito Member, all which occur in the project area, are assigned a high paleontological sensitivity. Therefore, with implementation of the measure described in the Paleontology section in Chapter 2, project impacts to paleontological resources would be less than significant.

d) No Impact

Human remains have not been identified at the project location. The likelihood of unearthing human remains are low given the highly disturbed nature, and documentation of imported fill within the project site. The discovery of human remains is always a possibility during ground disturbance; therefore, the State of California Health and Safety Code Section 7050.5 and PRC Section 5097.98 will be followed in the event that human remains are inadvertently discovered. If the remains are determined to be prehistoric, the County Coroner will notify the NNAHC, which will designate and notify a MLD whom shall complete the inspection of the site within 48 hours of notification and provide recommendations.

GEOLOGY AND SOILS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Geology and Soils

a.i) No Impact

The site does not lie within an Alquist- Priolo Earthquake Fault Zone, and no known active faults are mapped within or through the project area. Based on the mapping, the potential for fault rupture at the site is considered to be low. The project site is not located within 500 feet of any potentially active faults, or by an Alquist-Priolo Earthquake Fault Zone and therefore will have no impact.

a.ii) Less Than Significant Impact

The proposed project will not result in strong seismic ground shaking, and no active faults that could produce strong ground shaking are located within the project area. Some ground shaking related to increased vehicle loads (heavy equipment) and ground disturbance related to constructing the interchange improvements may occur during the construction phase of the project. These impacts will be temporary in nature and will not introduce permanent strong seismic ground shaking, therefore resulting in a less than significant impact.

a.iii) Less Than Significant Impact

The central portion of the project area is considered to have moderate liquefaction potential. The potential for liquefaction to occur increases when sandy or loose to moderately saturated granular soils with poor drainage are present. The project has been designed to meet Caltrans SDC and will therefore have a less than significant impact related to seismic-related ground failure.

a.iv) Less Than Significant Impact

The project area has mapped low to high landslide potential. The lands surrounding the project area do contain moderately steep hills as well as flatter area, therefore a low to high landslide potential is expected. The project is not expected to increase or exacerbate the risk of potential landslide and will have a less than significant impact.

b) Less Than Significant Impact

Grading, vegetation removal, excavation, and placement of fill materials required for the project could result in temporary soil erosion, sedimentation, and/or stormwater runoff. No substantial changes in the existing site topography will occur and all disturbed areas will be restored to pre-project conditions, to the extent feasible, upon completion of construction activities. When construction is completed, the project site would be restored and revegetated. The project will not require excessive grading and is not going to result in significant geologic impacts related to erosion or displacement/loss of topsoil and will therefore result in a less than significant impact.

c) No Impact

The majority of the project area is located on mapped Quaternary age Surficial sediments (Qa) geologic formation that consists of alluvial sand and gravel. The project is designed to meet the most current requirements of the AASHTO. The project is not located on a geologic unit or soils that are unstable or would become unstable as a result of the project and therefore will have no impact.

d) Less Than Significant Impact

Xererts soils are located in majority of the project area. This soil type has cracks that regularly close and open each year. Because these soils become dry every summer and moisten in winter, damage to structures and roads is very significant. The project has been designed to meet AASHTO standards, and therefore the impact of expansive soils will be reduced to less than significant levels.

e) No Impact

The use of septic tanks or alternative wastewater disposal systems are not proposed for the project and therefore will have no impact.

GREENHOUSE GAS EMISSIONS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<p>Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to 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.</p>			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

a) Less Than Significant Impact

Using the GHG threshold information described in the Setting section, the project is expected to generate less than the Bright-Line Threshold of 1,150 metric tons of GHG emissions. Therefore, the project's potential direct and cumulative GHG emissions are found to be less significant and less than a cumulatively considerable contribution to GHG emissions. Section 15064(h)(2) of the CEQA Guidelines provide guidance on how to evaluate cumulative impacts. If it is shown that an incremental contribution to a cumulative impact, such as global climate change, is not 'cumulatively considerable', no mitigation is required. Because this project's emissions fall under the threshold, no mitigation is required and will have a less than significant impact.

b) Less Than Significant Impact

The project is consistent with the general level of development anticipated and projected in the Clean Air Plan. Based on Table 1-1 of the CEQA Air Quality Handbook (2012), the project will not exceed operational thresholds triggering mitigation. The proposed project would not generate any greenhouse gases except those typically associated with construction activities, which will be short term and are considered a less than significant impact.

HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hazards and Hazardous Materials

a, b, c, d, e, f, g, h) No Impact

See discussion of Hazardous Waste/Materials in Chapter 2. Although ADL was detected onsite, it has been properly characterized and addressed. Therefore, the project site soil is defined as clean soil and may be reused onsite with no restrictions. No unauthorized releases of the active hazardous crude oil pipeline active natural gas pipeline have been documented and are not expected.

Initial Study/Mitigated Negative Declaration

The project will not emit hazardous emissions within on-quarter mile of an existing school. The 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. The project is not located within an airport land use plan, within two miles of a public airport or public use airport nor within the vicinity of a private airstrip.

The project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Any disruption to regular vehicular traffic flow during construction will be controlled by on-site flaggers.

The project will not expose people or structures to a significant loss, injury or death involving wildland fires.

HYDROLOGY AND WATER QUALITY

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Hydrology and Water Quality

a, b, c, d, e, f, g, h) No Impact

See discussion of Water Quality and Stormwater Runoff in Chapter 2. This project will not affect wetlands, waterways, or the floodplain. The drainage plan being incorporated into the project design addresses stormwater runoff as will the SWPPP.

LAND USE AND PLANNING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Land Use and Planning

a, c) No Impact

There is no established community within the project area. The project will not conflict with any HCP or Natural Community Conservation Plan.

b) Less Than Significant Impact

As described in Chapter 2, the project is consistent with state, regional, and local plans and does not cause adverse impacts with respect to land use. Avoidance, minimization, and mitigation measures associated with biological resources and aesthetics will be implemented. The project is within the coastal zone, so a CDP will be required for the project.

MINERAL RESOURCES

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Mineral Resources

a, b) No Impact

There are no known mineral resources or sites in the project area.

NOISE

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Noise

a, b, c, d, e, f) No Impact and Less Than Significant Impact

The existing noise level at the project area ranges between 65db to 70db due to the existing SR-101. Although during construction, noise levels would increase, the predicted noise level upon completion of the project is not expected to change. Therefore, under CEQA, no noise impact would occur as a result of the project and no mitigation is required.

POPULATION AND HOUSING

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Population and Housing

a, b, c) No Impact

The project will not induce substantial population growth, nor will it displace existing housing or people.

PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Public Services

a) No Impact

There project will not create or alter existing governmental facilities serving the public. In fact, the increased efficiencies associated with the project may benefit these facilities. A Transportation Management Plan will be implemented to reduce impacts to Public Services.

RECREATION

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Recreation

a, b) No Impact

There project does not include recreational facilities other than providing a safer route for cyclists and pedestrians.

TRANSPORTATION/TRAFFIC

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Transportation/Traffic

a, b, c, d, e, f) Less Than Significant Impact

As described in Chapter 2, the project will be designed to ensure there are no significant impacts. And overall, the project is seen as a benefit to transportation and traffic by increasing efficiency at the interchange and providing congestion relief for motorists and non-motorists. The project does not conflict with any transportation plans, congestion management program, or transportation policies. The project will not change air traffic patterns or increase hazards due to project design (it will reduce them).

TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Tribal Cultural Resources

a, b) No Impact

Local Tribal representatives were notified of the project under the requirements of Senate Bill AB-52. Several responses were received and are documented in Chapter 4.

There are no listed or eligible for listing Historical Resources or significant tribal resources within the project area.

UTILITIES AND SERVICE SYSTEMS

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Utilities and Service Systems

a, b, e, f, g) No Impact

As described in Chapter 2, the project will not exceed wastewater treatment requirements, will not construct new or expand water or wastewater treatment facilities and will meet project wastewater demands. The project will comply with federal, state, and local statutes and regulations related to solid waste and be served by a landfill permitted to accommodate the project's solid waste disposal needs

C, d) Less Than Significant Impact

Two new stormwater basins are currently planned for the project; a subsurface infiltrator system for stormwater quality, and a detention basin for peak flow management. The detention basin is planned as a shallow aggregate surface area that will also serve to accommodate overflow parking in dry weather. A diversion box is intended for the site stormwater system to direct flow to the basin during high storms. The construction of these basins will not cause significant environmental effects.

Water will be imported to the project site, but not new or expanded entitlements are needed.

MANDATORY FINDINGS OF SIGNIFICANCE

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Mandatory Findings of Significance

a, b, c) No Impact

The project will not degrade the existing environment which is already an existing freeway interchange. Habitat and populations of local fish, wildlife, and plants will not be substantially impacted. There are no cumulative impacts to these resources either. The project will not substantially adversely affect human beings.

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 GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.⁵ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.⁶ The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." "Greenhouse gas mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

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.

NEPA (42 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 FHWA recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.⁷ This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic,

⁵ <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

⁶ <https://www.arb.ca.gov/cc/inventory/data/data.htm>

⁷ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

and social values—“the triple bottom line of sustainability.”⁸ Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, 74 *Federal Register* 52117 (October 8, 2009): This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

Executive Order (EO) 13693, *Planning for Federal Sustainability in the Next Decade*, 80 *Federal Register* 15869 (March 2015): This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous EOs to ensure agency operations and facilities prepare for impacts of climate change. This order revokes EO 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,

⁸ <https://www.sustainablehighways.dot.gov/overview.aspx>

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 2010⁹ 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.¹⁰

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 CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

Presidential EO 13783, *Promoting Energy Independence and Economic Growth*, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

State

With the passage of legislation including State Senate and Assembly bills and EOs, 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.

EO S-3-05 (June 1, 2005): The goal of this 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

⁹ <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

¹⁰ <http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256> and

<https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse>

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.

EO S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the (Cal/EPA) and state agencies with regard to climate change.

EO 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 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” 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.

EO 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.

EO 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 (MMT_{CO₂e}). 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.¹¹ 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.

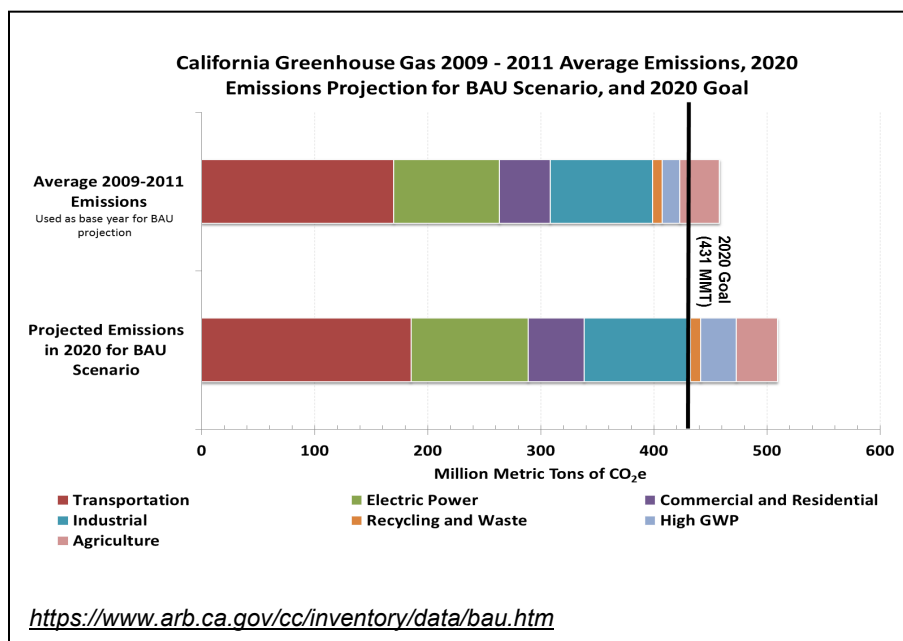
An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure ## represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO_{2e}¹². The 2017 edition of the GHG emissions inventory (released June 2017) found total California emissions of 440.4 MMTCO_{2e}, 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_{2e} total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO_{2e}.

¹¹ 2016 Edition of the GHG Emission Inventory Released (June 2016):
<https://www.arb.ca.gov/cc/inventory/data/data.htm>

¹² The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

FIGURE 6 2020 Business as Usual (BAU) Emissions Projection 2014 Edition



Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.¹³ In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

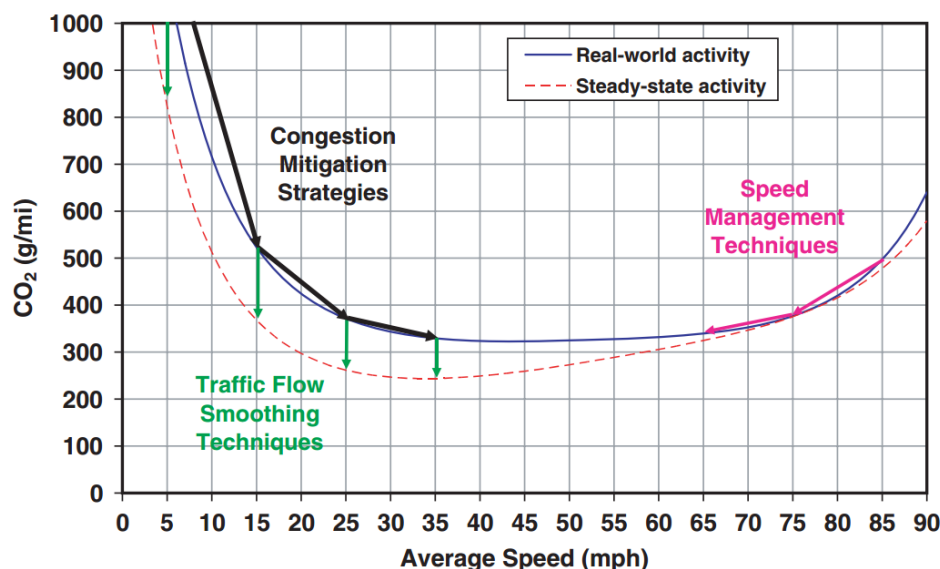
GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

¹³ 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).

Operational Emissions

The proposed project is a congestion relief project that addresses future demand volumes.

FIGURE 7 POSSIBLE USE OF TRAFFIC OPERATION STRATEGIES IN REDUCING ON-ROAD CO₂ EMISSIONS



Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside, May 2010 (<http://ucltc.berkeley.edu/research/papers/846.pdf>)

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity), (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.

FHWA supports these strategies to lessen climate change impacts, 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 7 above). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel.

While EMFAC has a rigorous scientific foundation and has been vetted through multiple stakeholder reviews, its emission rates are based on tailpipe emission test data. The numbers are estimates of CO₂ emissions and not necessarily the actual CO₂ emissions. The model does not account for factors such as the rate of acceleration and the vehicles' aerodynamics, which would influence CO₂ emissions. To account for CO₂ emissions, ARB's GHG Inventory follows the IPCC guideline by assuming complete fuel combustion, while still using EMFAC data to calculate CH₄ and N₂O emissions. Though EMFAC is currently the best available tool for use in calculating GHG emissions, it is important to note that the CO₂ numbers provided are only useful for a comparison of alternatives.

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 transportation management during construction phases.

In addition, with innovations such as longer pavement lives, improved transportation 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.

CEQA Conclusion

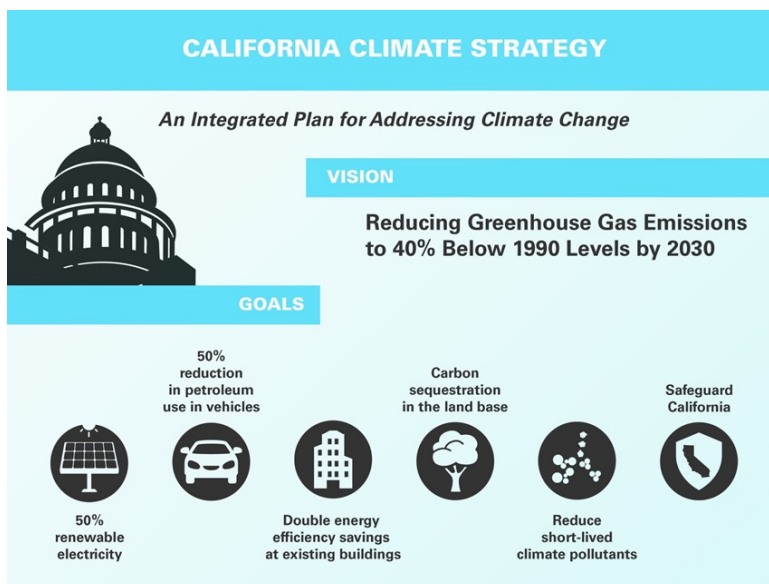
The project will not have a significant impact on the various aspects of climate change.

Greenhouse Gas Reduction Strategies

Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

FIGURE 8 THE GOVERNOR’S CLIMATE CHANGE PILLARS: 2030 GREENHOUSE GAS REDUCTION GOALS



The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and 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 vehicle miles traveled 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.

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 Council on Environmental Equality, the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011¹⁴, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal

¹⁴ <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

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 USDOT issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”¹⁵

To further the DOT Policy Statement, in December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).¹⁶ This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs 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.¹⁷

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report)¹⁸ was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (Dec 2009),¹⁹ which summarized the best available

¹⁵ https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

¹⁶ <https://www.fhwa.dot.gov/legregs/directives/orders/5520.cfm>

¹⁷ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

¹⁸ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at: http://www.nap.edu/catalog.php?record_id=13389.

¹⁹ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

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, 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 update²⁰ finalizes the SLR Guidance by incorporating findings of the National Academy's 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

Although the proposed project is within the coastal zone, it is not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

²⁰ <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/>

Chapter 4 – Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, and Project Development Team meetings. This chapter summarizes the results of the County's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

Coordination with the following individuals was conducted by the County on April 4th, 2016 by regarding utilities within the project area:

- Autumn Woolworth of Caltrans: A search of the Caltrans CALTREC records database found that several facilities, that are operated by various agencies, exist in Caltrans ROW that is within the project area. Per Caltrans records, the companies that operate various facilities within the Caltrans ROW include, for example: PG&E, AT&T, Southern California Gas Company, and Union Oil Company.
- Andrea Montes of the County Utilities Division: San Luis Obispo County Flood Control and Water Conservation District waterline connects to the Lopez Water Supply traverses along the southern portion of the project area.
- Steve Plemons of AT&T: AT&T has buried phone cables within the project area. The buried cables traverse along Avila Beach Drive.
- Jeff Davis of Charter Communications: Charter has fiber optic line and coax mounted to overhead power poles that perpendicularly cross Avila Beach Drive at the westernmost section of the project area.
- Leo Martinez of the Conoco-Phillips (Phillips 66): Phillips 66 has a focus oil pipeline within the project area that traverses along Monte Road and Avila Beach Drive under the Highway 101 and continues southwest along Ontario Ridge. They have provided the County with General Encroachment Guidelines which will be adhered to.
- Claudia Turner of the Southern California Gas Company – Distribution: The Gas Company operates and maintains various buried natural gas mains within the limits of the proposed project.
- Rosalyn Squires of the Southern California Gas Company – Transmission: The Gas Company does not have any facilities within the limits of the proposed project.
- Tim Pearson of PG&E, Los Padres Division: PG&E operates lines that are within the project area. The existing PG&E lines perpendicularly cross both Highway 101 and Avila Beach Drive.
- Ben Fine of the City of Pismo Beach: The City of Pismo Beach does not have any facilities within the vicinity of the project location.

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- Dan Migliazzo of the San Miguelito Mutual Water Company (SMMWC): SMMWC does not have any facilities within the vicinity of the project location.

During the scoping process, the County participated in the following meetings with the Avila Valley Advisory Council:

- September 11, 2017: General meeting where the project was introduced to the community.
- November 5, 2018: General meeting and conceptual presentation.
- May 24, 2019: Meeting with land use committee to discuss Visual/Aesthetics design and concerns.
- January 13, 2020: Follow-up meeting to provide updated conceptual design and results of various technical studies as well as notify that the Draft IS/MND is out for public review during this time.

No formal consultation with resource agencies has been necessary due to the location of the project impact area and incorporation of design features to avoid resources and environmentally sensitive areas. However, on October 18th, 2018, seventeen local Tribal representatives were notified of the project under the requirements of Senate Bill AB-52. Responses are summarized here:

- Northern Chumash Tribal Council - requested consultation.
- Salinan Tribe - requested consultation and that a Native American monitor be present during ground disturbing activities.
- Santa Ynez Band of Chumash Indians - deferred comments to the local tribes.
- Xolon Salinan Tribe - no comments.
- yak tityu tityu yak tilhini Northern Chumash Tribe of San Luis Obispo County and Region - requested consultation and recommended that an archaeologist and a Northern Chumash monitor be present during excavation.

Newspaper notices/articles and web-based information have been distributed notifying the public that the environmental document review period closed February 5, 2020. Comments on the document were only received from the Department of Toxic Substances Control (DTSC). Their comments and the applicable responses are listed below:

1. Comment: The MND should acknowledge the potential for project site activities to result in the release of hazardous wastes/substances. In instances in which releases may occur, further studies should be carried out to delineate the nature and extent of the contamination, and the potential threat to public health and/or the environment should be evaluated. The MND should also identify the mechanism(s) to initiate any required investigation and/or remediation and the government agency who will be responsible for providing appropriate regulatory oversight.

Response: The Geology/Soils/Seismic/Topography section discusses a Hazardous Materials Prevention and Response Plan to be prepared to allow for a prompt and effective response to any accidental spills, should they occur.

- Comment: If any sites within the project area or sites located within the vicinity of the project have been used or are suspected of having been used for mining activities, proper investigation for mine waste should be discussed in the MND. DTSC recommends that any project sites with current and/or former mining operations onsite or in the project site area should be evaluated for mine waste according to DTSC's 1998 Abandoned Mine Land Mines Preliminary Assessment Handbook (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/11/aml_handbook.pdf).

Response: No sites within the project area have been used or are suspected of having been used for mining activities.

- Comment: Refiners in the United States started adding lead compounds to gasoline in the 1920s in order to boost octane levels and improve engine performance. This practice did not officially end until 1992 when lead was banned as a fuel additive in California. Tailpipe emissions from automobiles using leaded gasoline contained lead and resulted in aerially deposited lead (ADL) being deposited in and along roadways throughout the state. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities. Due to the potential for ADL-contaminated soil DTSC, recommends collecting soil samples for lead analysis prior to performing any intrusive activities for the project described in the MND.

Response: The recommended effort (for ADL) has already been conducted and is discussed in the Hazardous Waste/Materials section of the MND.

- Comment: If buildings or other structures are to be demolished on any project sites included in the proposed project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with DTSC's 2006 *Interim Guidance Evaluation of School Sites with Potential Contamination from Lead Based Paint, Termiticides, and Electrical Transformers* (https://dtsc.ca.gov/wpcontent/uploads/sites/31/2018/09/Guidance_Lead_Contamination_050118.pdf).

Response: No building or structures will be demolished as a result of the proposed project. Regardless, Measure AQ-16 in the Air Quality section of the MND discusses asbestos.

- Comment: If any projects initiated as part of the proposed project require the importation of soil to backfill any excavated areas, proper sampling should be conducted to ensure that the imported soil is free of contamination. DTSC recommends the imported materials be characterized according to *DTSC's 2001 Information Advisory Clean Imported Fill Material* (https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMP_FS_Cleanfill-Schools.pdf).

Response: Measure Bio-13 in the Biological Environment section of the MND discusses clean imported fill.

6. Comment: If any sites included as part of the proposed project have been used for agricultural, weed abatement or related activities, proper investigation for organochlorinated pesticides should be discussed in the MND. DTSC recommends the current and former agricultural lands be evaluated in accordance with DTSC's 2008 *Interim Guidance for Sampling Agricultural Properties (Third Revision)* (<https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/Aq-Guidance-Rev-3-August-7-2008-2.pdf>).

Response: The project site has not been used for agricultural or weed abatement activities.

Chapter 5 – List of Preparers

The following is a list of state and local agency personnel, including consultants, who were primarily responsible for preparing the environmental document and technical studies:

Personnel	Affiliation	Role
Paul Valadao	Caltrans District 5	Caltrans Project Manager
Julie McGuigan	Caltrans District 5	Environmental Document review and preparation
Damon Haydu	Caltrans District 5	Cultural Resource Report reviews
Isaac Leyva	Caltrans District 5	Paleontological Resource Report review
Andrew Domingos	Caltrans District 5	NES (MI) (biological report) review
Amy Millan	Caltrans District 5	NES (MI) (biological report) review
Joel Kloth	Caltrans District 5	Hazardous Material Reports review
Bing Yu	Caltrans District 5	Traffic Operations Reports review
Bob Carr	Caltrans District 5	Visual Impact Assessment review
Genaro Diaz	County of SLO Department of Public Works	County Project Manager
Matthew Willis	County of SLO Department of Public Works	Environmental Document and NES(MI) (biological report) preparation
Blaize Uva	County of SLO Department of Public Works	Environmental Document preparation
Keith Miller	County of SLO Department of Public Works	Environmental Document preparation and review
Jorge Aguilar	Wallace Group	Project design and engineering oversight
Sarah Huffman	Wallace Group	Project design and engineer
Matthew Parker	Wallace Group	Visual simulations and planting plans
Judd King	Yeh and Associates	Geotechnical/Geological expertise
Chris Bersbach	Rincon Consultants	Initial Site Assessment and Visual Impact Assessment preparation
Leroy Laurie	SWCA	Cultural Resource Report preparation
Alyssa Bell	SWCA	Paleontological Resources Report preparation

Chapter 6 – Distribution List

In addition to the general public, the County has or will contact the following federal, state, and local agencies and entities, as well as Native American tribes for their comments on the proposed project.

County Environmental Health Services

County Agricultural Commissioner's Office

Air Pollution Control District

County Sheriff's Department

Regional Water Quality Control Board

CA Coastal Commission

CA Department of Fish and Wildlife

CA Department of Forestry (Cal Fire)

CA Department of Transportation

Community Services District

Avila Valley Advisory Council

Northern Chumash Tribal Council

Salinan Tribe of San Luis Obispo, Monterey, & San Benito Counties

yak tityu tityu - Northern Chumash Tribe

Port San Luis Harbor District

Pacific Gas & Electric

City of Pismo Beach

Notice posted in the Tribune

Notice posted at the County Clerk

Appendix A. Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov



*Making Conservation
a California Way of Life.*

April 2018

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

A handwritten signature in blue ink that reads "Laurie Berman".

LAURIE BERMAN
Director

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

Appendix B. Avoidance, Minimization and/or Mitigation Summary

In order to be sure that all the avoidance and minimization measures (AMMs) identified in this document are executed at the appropriate times, the following mitigation program would be implemented. During project design, these AMMs will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits (i.e., a Coastal Development Permit) will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained herein are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. The following summary is a draft; conditional measures not listed below may be added because they are currently unknown. The list below is categorized by resource type, but some measures may apply to more than one resource area. Duplicative or redundant measures are not included.

Protected or Regulated Resource	Proposed Avoidance and Minimization Measures
Aesthetics/Visual	<p>AMM AES-1: Retaining walls shall be designed to be aesthetically pleasing based on the stakeholder input process, incorporating locally appropriate context sensitive solutions to enhance their continuity with similar features used in the project site vicinity and local community, and to reduce their overall visual impact.</p> <p>AMM AES-2: A landscaping plan consisting of drought tolerant native species shall be planted within the first six months following project completion. Implementation of this plan shall be overseen for a period of 3 years by a qualified biologist or landscape architect.</p> <p>AMM AES-3: Native trees shall be preserved and protected to the maximum extent feasible. Coast live oaks will be incorporated into the landscaping plant palette to be planted within the project area at the end of construction.</p> <p>AMM AES-4: A signage plan shall consolidate signs as appropriate, avoid redundancy, and locate traffic control cabinets out of sight. A lighting plan shall require project lighting to be appropriately shielded, eliminate redundancy of lighting standards, and use context sensitive street lighting designs. The plan will be consistent with Caltrans and County lighting guidelines and standards, developed and in compliance with the Illuminating Engineering Society's design guidelines and International Dark-Sky Association approved lighting features.</p>
Air Quality	<p>AMM AQ-1: Reduce the amount of the disturbed area where possible.</p> <p>AMM AQ-2: Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.</p> <p>AMM AQ-3: All dirt stock pile areas should be sprayed daily and covered with tarps or other dust barriers as needed.</p> <p>AMM AQ-4: Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities.</p> <p>AMM AQ-5: Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established.</p>

<p>Air Quality</p>	<p>AMM AQ-6: All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.</p> <p>AMM AQ-7: All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.</p> <p>AMM AQ-8: Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.</p> <p>AMM AQ-9: All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with California Vehicle Code (CVC) Section 23114.</p> <p>AMM AQ-10: To prevent “track out” (sand or soil that adheres to and/or agglomerates on the exterior surfaces of motor vehicles and/or equipment [including tires] that may then fall onto any highway or street), the contractor should designate access points and require all employees, subcontractors, and others to use them. Install and operate a ‘track-out prevention device’ where vehicles enter and exit unpaved roads onto paved streets. The ‘track-out prevention device’ can be any device or combination of devices that are effective at preventing track out, located at the point of intersection of an unpaved area and a paved road. Rumble strips or steel plate devices need periodic cleaning to be effective. If paved roadways accumulate tracked out soils, the track-out prevention device may need to be modified.</p> <p>AMM AQ-11: Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Where feasible, water sweepers shall be used with reclaimed water. Roads shall be pre-wetted prior to sweeping when feasible.</p> <p>AMM AQ-12: All PM10 mitigation measures required should be shown on grading and building plans.</p> <p>AMM AQ-13: The contractor or builder shall designate a person or persons whose responsibility is to ensure any fugitive dust emissions do not result in a nuisance and to enhance the implementation of the mitigation measures as necessary to minimize dust complaints and reduce visible emissions below the APCD’s limit of 20% opacity for greater than 3 minutes in any 60-minute period. Their duties shall include holidays and weekend periods when work may not be in progress (for example, wind-blown dust could be generated on an open dirt lot).</p> <p>AMM AQ-14: Portable equipment, 50 horsepower or greater, such as diesel engines and portable generators, used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit.</p> <p>AMM AQ-15: Depending on lead-based paint removal method, an APCD permit may be required. Contact the APCD Engineering & Compliance Division at 805-781-5912 for more information.</p> <p>AMM AQ-16: If this project will include demolition activities of potentially asbestos containing material (ACM), then it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include but are not limited to 1) written notification to the APCD within at least 10 business days of activities commencing, 2) asbestos survey conducted by a Certified Asbestos Consultant, and 3) applicable removal and disposal requirements of identified ACM.</p>
<p>Biological Resources</p>	<p>No AMMs Required for Natural Communities</p> <p>No AMMs Required for Wetlands and Other Waters Plant Species Avoidance and Minimization Measures:</p> <p>AMM BIO-1: Prior to initial ground disturbance construction, all construction personnel will attend an environmental education program delivered by a qualified biologist. At a</p>

<p>Biological Resources</p>	<p>minimum, the program will include a description of invasive species, potential special-status species, and other protected natural resources, as well as an explanation of the regulatory and legal compliance setting for the project.</p> <p>AMM BIO-2: All work, including construction access and equipment staging areas, will be confined to the project area.</p> <p>AMM BIO-3: Prior to ground disturbance, a qualified biologist will conduct a preconstruction survey to ensure site conditions haven't changed and no special-status plants occur within the project area.</p> <p>AMM BIO-4: Coast live oak trees will be incorporated into the landscaping plant palette to be planted within the project area at the end of construction.</p> <p>Animal Species Avoidance and Minimization Measures:</p> <p>AMM BIO-5: To the greatest extent feasible, vegetation removal and ground disturbance should be conducted during the non-breeding season for birds (i.e., between September 2 and January 31). This will discourage birds from nesting in construction areas and will greatly reduce the potential for nesting birds to delay the construction schedule.</p> <p>AMM BIO-6: If construction activities are proposed during the typical nesting season (February 1 to September 1), a nesting bird survey will be conducted by a qualified biologist no more than one week prior to the start of construction to determine presence/absence of nesting birds within the biological study area and immediate vicinity.</p> <p>AMM BIO-7: If an active nest is found, a qualified biologist will establish an appropriate avoidance buffer. If necessary, the biologist will consult with the USFWS/CDFW to determine an appropriate buffer size. Construction within the buffer will be prohibited until the qualified biologist determines that the nest is no longer active.</p> <p>AMM BIO-8: Prior to vegetation removal, the area will be surveyed for woodrat nests. If nests are found within areas to be impacted, woodrat nests will be picked up whole with a piece of equipment and relocated out of the impact area. If this is not feasible, a qualified biologist will dismantle the nest by hand or with hand tools (preferably during the non-breeding season) to allow woodrats in the nest to escape into adjacent undisturbed habitat. Equipment may also be used to dismantle the nest at the discretion of the qualified biologist. The nest material will then be moved out of the work area and stacked where it is accessible to the woodrats.</p> <p>No AMMs for Threatened and Endangered Species Required</p> <p>Invasive Species Avoidance and Minimization Measures:</p> <p>AMM BIO-9: Prior to initial ground disturbance construction, all construction personnel will attend an environmental education program delivered by a qualified biologist. At a minimum, the program will include a description of invasive species, potential special-status species, and other protected natural resources, as well as an explanation of the regulatory and legal compliance setting for the project.</p> <p>AMM BIO-10: Immediately prior to construction, the contractor, with assistance from a qualified biologist will identify the "work area" limits with brightly-colored flagging or fencing to prevent unnecessary direct impacts. Flagging will be maintained in good repair for the duration of the Project. All trees and shrubs to be removed will be identified and clearly marked. The biologist will remain onsite to monitor the initial ground disturbance especially in the naturally vegetated area associated with the park-and-ride lot.</p> <p>AMM BIO-11: During construction, soil and vegetation disturbance will be minimized to the minimum area necessary to construct the project.</p> <p>AMM BIO-12: Invasive plant species that have been identified within the project footprint will be removed and transported to an approved disposal facility as trash (not green waste) during construction activities and will not be replanted.</p> <p>AMM BIO-13: During construction, the project will make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing onsite will be used for fill material to the maximum extent practicable. If the use of imported fill material is necessary, the imported</p>
<p>Biological Resources</p>	<p></p>

	<p>material must be obtained from a source that is known to be free of invasive plant species or the material must consist of purchased clean material such as crushed aggregate, sorted rock, or other similar substances.</p> <p>AMM BIO-14: All erosion control materials including straw bales, straw wattles, or mulch used onsite must be free of invasive species seed.</p>
Coastal Zone	<p>AMM CZ-1: All development and land divisions within or adjacent to an Environmentally Sensitive Habitat Area (ESHA) shall be designated and located in a manner which avoids any significant disruption or degradation of habitat values. In some cases where development within the ESHA cannot be avoided, the development shall be modified as necessary so that it is the least environmentally damaging feasible alternative.</p>
Cultural Resources	<p>AMM CULT-1: Due to the archaeological sensitivity of the project area, the potential to encounter previously disturbed cultural materials during construction, an archaeological briefing will be conducted prior to construction. The briefing will alert construction crews of the possibility of unearthing cultural materials and the appropriate process to follow.</p> <p>AMM CULT-2: 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. Additional archaeological reconnaissance survey will be needed if project limits are extended beyond the present survey limits.</p> <p>AMM CULT-3: 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 Keith Miller, Environmental Division Manager at 805-781-5714 and Damon Haydu, Caltrans District 5 Archaeologist at 805-542-4799 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.</p>
Geology/Soils/ Seismic/Topography	No AMMs Required
Hazardous Waste/Materials	No AMMs Required
Land Use	No AMMs Required
Noise	No AMMs Required
Paleontology	<p>AMM PALEO-1: Once a final design for the project has been determined, and prior to construction, a Project Paleontologist (meeting SVP standards) will prepare a Paleontological Resources Monitoring and Mitigation Plan (PRMMP). This PRMMP will include development of a Worker's Environmental Awareness Program for project personnel, and will address specifics of monitoring (e.g., when and where monitoring is needed, the level of effort needed, Native American involvement, etc.), if needed. The PRMMP will also include the process to be followed in the event of a fossil discovery. The Project Paleontologist will also prepare a report of the findings of the PRMMP after construction is completed.</p>
Traffic & Transportation	<p>AMM TRANS-1: A Transportation Management Plan will be prepared in advance of construction that will provide detour routes and notification to the public, and emergency and medical providers in the project location of possible alternate access routes during possible lane closures.</p>
Utilities/Emergency Services	<p>AMM UTIL-1: Coordination between the County and the utility companies will be conducted to ensure minimal disruption to services during project construction. Coordination will take place between the Resident engineer and local emergency service providers before and during project construction to minimize potential delays through the construction site.</p> <p>AMM UTIL-2: Coordination will take place between the Caltrans Resident Engineer and local emergency service providers during project construction to minimize delays through the construction site.</p>
Water Quality & Storm Water Runoff	<p>AMM WQ-1: A Stormwater Pollution Prevention Plan will be prepared to minimize on-site sedimentation and erosion.</p>

Appendix C. List of Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos Containing Material
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
AMM	Avoidance and Minimization Measure
APCD	Air Pollution Control District
APE	Area of Potential Effects
ARB	Air Resources Board
ARPA	Archaeological Resources Protection Act
ASR	Archaeological Survey Report
BAU	Business-As-Usual
BMP	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CALSP	Caltrans Standard Plans
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCA	California Coastal Act

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CCC	California Coastal Commission
CCIC	Central Coast Information Center
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	Methane
CHRIS	California Historic Resources Information System
CMP	Corrugated metal pipe
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
County	County of San Luis Obispo Department of Public Works
CRHR	California Register of Historical Places
CTP	California Transportation Plan
CWA	Clean Water Act / Federal Water Pollution Control Act
CZLUO	Coastal Zone Land Use Ordinance
CZMA	Coastal Zone Management Act of 1972
dBA	A-Weighted Decibels, Abbreviated
DSA	Disturbed Soil Area
DTSC	California Department of Toxic Substances Control
DWQ	Diversion of Water Quality
DWR	Department of Water Resources

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ECR	Environmental Commitments Record
ED	Environmental Document
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emission Factors Model
EO	Executive Order
EPA	US Environmental Protection Agency
EPACT92	Energy Policy Act of 1992
ESA	Environmentally Sensitive Area
ESHA	Environmentally Sensitive Habitat Area
FCAA	The Federal Clean Air Act
FED	Final Environmental Document
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse Gas
H&SC	Health and Safety Code
H2S	Hydrogen Sulfide
HCP	Habitat Conservation Plan
HPSR	Historic Property Survey Report
ICE	Intersection Control Evaluation
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISA	Initial Site Assessment
KOA	Kampgrounds of America
LCFS	Low Carbon Fuel Standard

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LCP	Local Coastal Program
LEDPA	Least Environmentally Damaging Practicable Alternative
LOS	Level of Service
LUO	Land Use Ordinance
MLD	Most Likely Descendent
MMTCO2e	Million Metric Tons of Carbon Dioxide Equivalent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MP	Mile Post
MPH	Miles Per Hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MT	Metric Tons
N2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NCC	Natural Communities of Concern
NEPA	National Environmental Policy Act
NES(MI)	Natural Environment Study (Minimal Impacts)
NESHAP	National Emission Standard for Hazardous Air Pollutants
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NNL	National Natural Landmarks
NO2	Nitrogen Dioxide

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NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NPMS	National Pipeline Mapping Service
NRHP	National Register of Historic Places
O3	Ozone
OHWM	Ordinary High-Water Mark
OPR	Office of Planning and Research
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement
PA&ED	Project Approval and Environmental Document
PB	Lead
PCRH	Post Construction Requirements Handbook
PG&E	Pacific Gas and Electric
PLACs	Permits, Licenses, Agreements and Certifications
PM	Particulate Matter
PM10	Particles of 10-Micrometers or Smaller
PM2.5	Particles of 2.5 Micrometers or Smaller
PRC	Public Resources Code
PRLS	Park and Ride Lot Study
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
PSI	Preliminary Site Investigation
PSR-PDS	Project Study Report- Project Development Support
Qa	Quaternary Age Surficial Sediments
RCRA	Resource Conservation and Recovery Act of 1976
RIS	Replaced Impervious Surfaces
ROW	Right-of-Way

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RSA	Resource Study Area
RSI	Roadside Infiltrator
RTA	Regional Transit Authority
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RV	Recreational Vehicle
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SDC	Seismic Design Criteria
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLOCOG	San Luis Obispo Council of Governments
SLR	Sea-Level Rise
SMMWC	San Miguelito Mutual Water Company
SO ₂	Sulfur Dioxide
SR	State Route
SSC	Species of Special Concern
STAA	Surface Transportation Assistance Act
STLC	Soluble Threshold Limit Concentration
SVP	Society of Vertebrate Paleontology
SWDR	Storm Water Data Report
SWMP	Statewide Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TBMP	Treatment Best Management Practice
TMDL	Total Maximum Daily Loads

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Tpg	Gragg Member of Pismo Formation
Tpm	Miguelito Member of the Pismo Formation
UCL	Upper Confidence Limit
US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VIA	Visual Impact Assessment
WDR	Waste Discharge Requirements
WMZ	Water Management Zone
WPCP	Water Pollution Control Program
WQMOA	Water Quality Memorandum of Assumptions

Appendix D. Comment Letters and Responses

See Chapter 4 for all comments and coordination.

Appendix E. List of Technical Studies

Negative Historic Property Survey Report (for nearby portion of SR-101). Caltrans, 2002.

Archaeological Survey Report (for the proposed Avila Park and Ride). County of SLO Department of Public Works, 2011.

Archaeological Survey Report. SWCA, 2019.

Paleontological Resources Report. SWCA, 2019.

Natural Environment Study (Minimal Impacts). County of SLO Department of Public Works, 2019.

Water Quality Memorandum of Assumptions. Wallace Group, 2018.

Initial Site Assessment. Rincon Consultants. 2019.

Preliminary Site Investigation. Padre Associates, Inc. 2019.

Intersection Control Evaluation (ICE) Step 1 Report. 2015.

ICE Step 2 Report. Kittleson & Associates, 2019.

Design Criteria Memo. Wallace Group, 2019.

Visual Impact Assessment. Rincon Consultants, 2019.

Draft Project Report. Wallace Group, 2019.