

Interstate 580 and Interstate 205 Roadside Safety Improvement Project

ALAMEDA COUNTY, CALIFORNIA
DISTRICT 4 – ALA – 580/205 (PM 0.0-R9.7/L0.0-0.5)
EA 04-4J940/ EFIS 0416000025

Initial Study with Proposed Negative Declaration



**Prepared by the
State of California, Department of Transportation**



April 2020

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General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS) with Proposed Negative Declaration (ND), which examines the potential environmental impacts of the proposed Interstate 580 and Interstate 205 Roadside Safety Improvement Project (project) located from North Vasco Road in the City of Livermore in Alameda County to the Alameda-San Joaquin county line, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document explains why the project is being proposed, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and the proposed avoidance and minimization measures, and/or mitigation measures.

What you should do:

- Please read this document.
- This document can be accessed electronically at the following website: <https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs>
- We would like to hear what you think. If you have comments regarding the proposed project, please send your written comments, including requesting that Caltrans hold a public meeting, to Caltrans by May 20, 2020.

No public meeting is planned for this project. It is, however, Caltrans policy to offer a meeting if one is requested. Due to the COVID-19 pandemic and to maintain consistency with orders by Governor Gavin Newsom for Californians to remain home except to perform essential activities and to avoid public gatherings, Caltrans will not hold a traditional, in-person public meeting for this project. Should a public meeting be requested, Caltrans will offer online opportunities to review the project.

- Send comments via U.S. mail to:
Caltrans, District 4-Office of Environmental Analysis
ATTN: Sabrina Dunn, Associate Environmental Planner
P.O. Box 23660, MS-8B
Oakland, CA 94623-0660
- Send comments via email to sabrina.dunn@dot.ca.gov.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans may (1) give environmental approval to the proposed project, (2) do additional environmental

studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

Alternate formats:

Printed copies of this document are available upon request. For individuals with sensory disabilities, this document can be made available in Braille, in large print, or digital audio. To obtain a copy in one of these alternate formats, please call or write to the California Department of Transportation, District 4-Office of Environmental Analysis, Attn: Sabrina Dunn, Associate Environmental Planner, P.O. Box 23660, MS-8B, Oakland, CA 94623-0660; (510) 286-6025 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

Improve maintenance worker safety by extending and paving gore areas and constructing maintenance vehicle pullouts along Interstate 580 (post mile 0.0 to post mile R9.7) and Interstate 205 (post mile L0.0 to post mile 0.5) from North Vasco Road in the City of Livermore in Alameda County to the Alameda-San Joaquin county line.

INITIAL STUDY WITH PROPOSED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: California Transportation Commission and California Department of Fish and Wildlife

April 14, 2020

Date of Approval



CHRISTOPHER CAPUTO
Chief, Office of Environmental Analysis
California Department of Transportation District 4
CEQA Lead Agency

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

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Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to construct the Interstate 580 (I-580) and Interstate 205 (I-205) Roadside Safety Improvement Project to improve maintenance worker safety along I-580 and I-205. This will be accomplished by extending and paving gore areas and constructing maintenance vehicle pullouts (MVPs) at 14 locations from North Vasco Road in the City of Livermore in Alameda County to the Alameda/San Joaquin county line (post mile [PM] 0.0 to PM R9.7 on I-580, and PM L0.0 to PM 0.5 on I-205).

Determination

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

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

The proposed project would have no effect on aesthetics, agriculture and forest resources, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, and wildfire.

The proposed project would have less than significant impacts on biological resources and transportation and traffic.

Melanie Brent
Deputy District Director
Office of Environmental Analysis
California Department of Transportation District 4

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to improve maintenance worker safety by extending and paving gore areas, which are small triangular unpaved areas between on-ramps and highways, and constructing maintenance vehicle pullouts (MVPs) at 14 locations along Interstate 580 (I-580) and Interstate 205 (I-205) from North Vasco Road in the City of Livermore in Alameda County to the Alameda-San Joaquin county line (post mile [PM] 0.0 to PM R9.7 on I-580, and PM L0.0 to PM 0.5 on I-205). The total length of the project is approximately 9.62 miles. The Project Vicinity Map is shown below in Figure 1.

1.2 National Environmental Policy Act (NEPA) Assignment

Caltrans prepared this IS ND pursuant to CEQA. Because this project will also receive funding from the Federal Highway Administration (FHWA), it is also subject to NEPA review. Caltrans entered into a Memorandum of Understanding (MOU) pursuant to 23 USC 327 (NEPA Assignment MOU) with the FHWA. Under the NEPA Assignment MOU, Caltrans assumes FHWA responsibilities under NEPA and other federal environmental laws. With the NEPA Assignment MOU, the FHWA assigned, and Caltrans assumed, all of the U.S. Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions (CEs) that the FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Caltrans, as assigned by FHWA, is the federal lead agency under NEPA for this project. Caltrans is also the state lead agency under CEQA for this project. Caltrans is planning to prepare a Categorical Exclusion, pursuant to NEPA, for this project.

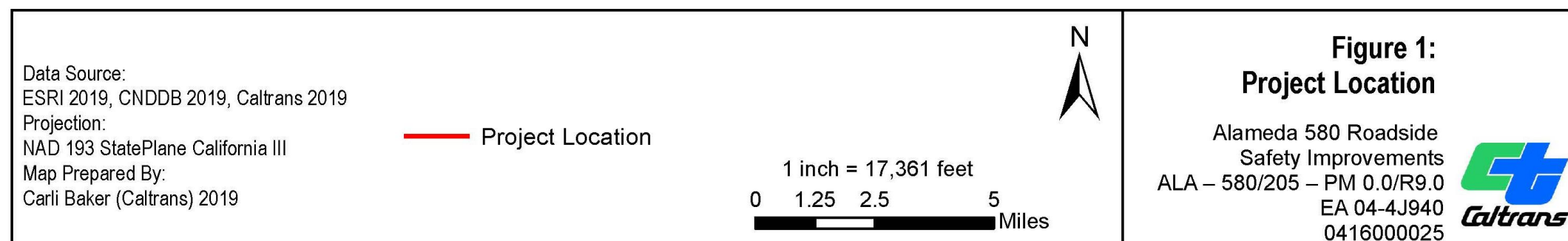
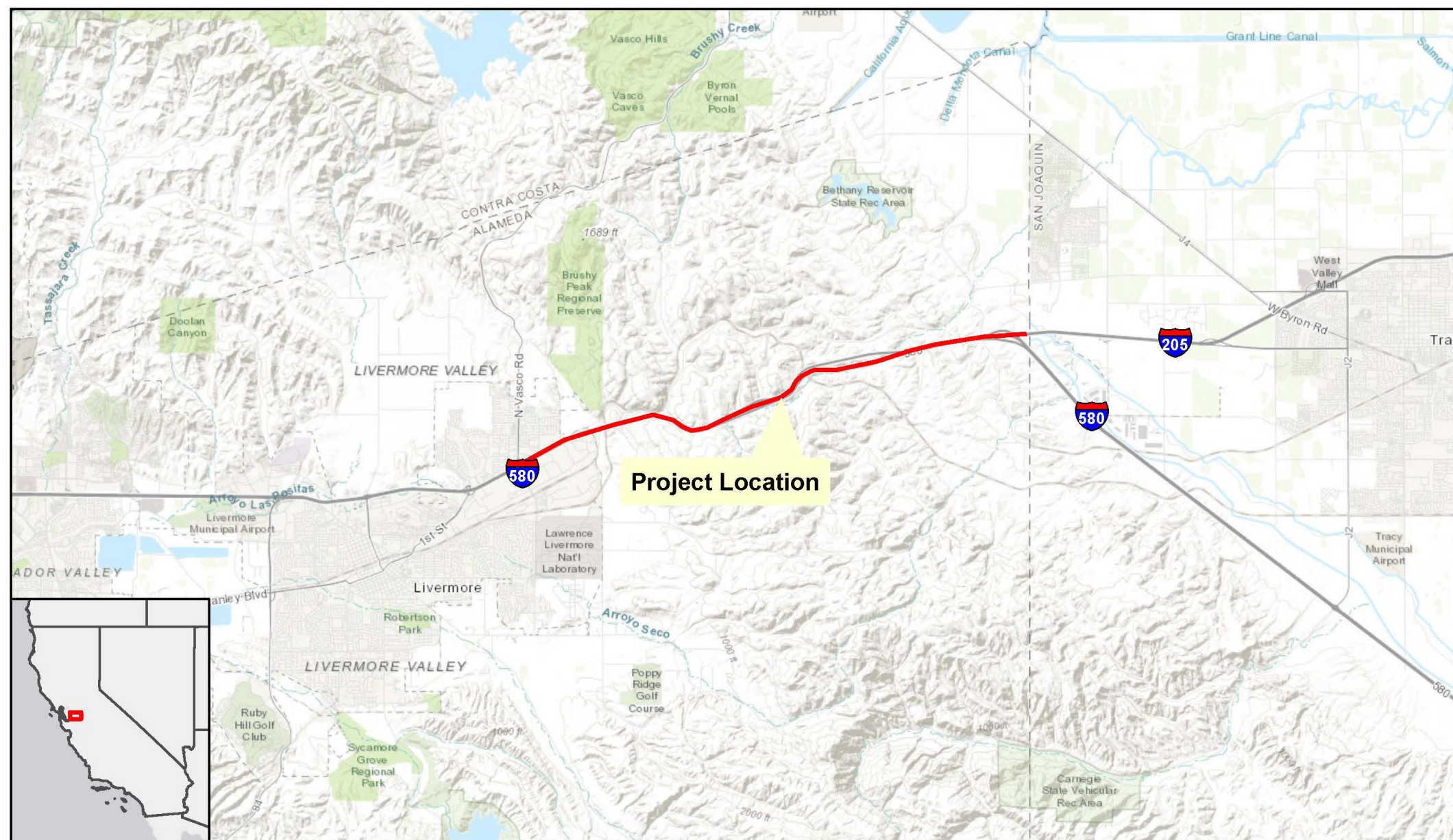


Figure 1. Project Vicinity Map

1.3 Background

The project includes 14 locations within a 9-mile segment of I-580, starting at North Vasco Road in the City of Livermore to the west and ending on I-205 at the San Joaquin/Alameda county line to the east. The I-580 corridor is an east-west route in Alameda County that serves a growing number of commuters living outside the Bay Area, provides access for the movement of goods and freight into and out of the region, and serves significant recreational travel during weekends and summer months to and from the Central Valley, the Sierra Nevada, and Southern California.

The cities of Livermore, Pleasanton, and Dublin, and the community of Castro Valley are the main urban centers along the corridor. Livermore, Pleasanton, and Dublin are included in what is referred to as the “Tri-Valley” region. The corridor is characterized by steep grades from its eastern limit near the I-580/I-205 interchange to the west side of the Altamont Pass, then continues through the highly urbanized, Tri-Valley area, including the interchange with I-680. West of the Tri-Valley area, the corridor is again characterized by another steep grade referred to as the Dublin Grade. Finally, it passes through the urbanized area of Castro Valley and an interchange with I-238 in the City of Hayward.

The segment of I-580 within the project limits is classified as a rural divided freeway. The first mile of the western segment of I-580 is situated within an urbanized section of the City of Livermore. The remaining segment of I-580 in the project limits consists primarily of mountainous terrain with eight lanes, an unpaved median, a paved 8-foot inside shoulder, and a paved 10-foot outside shoulder. The roadway contains a lengthy downhill section followed by several reverse and compound curves (“S”-curves) situated on a high embankment. The eastern project limits end on I-205 a quarter of a mile after the I-580/I-205 interchange.

1.4 Purpose and Need

The purpose of this project is to improve maintenance worker safety at fourteen locations along I-580 and I-205 by increasing worker access off the traveled roadway and accommodating maintenance activities, with a goal of reducing roadside worker fatalities to zero. The project is needed because maintenance workers must currently park, walk, and work on the roadside, frequently exposing them to freeway traffic. Of the fourteen identified locations with worker safety deficiencies in the project limits, eight are proposed MVPs where maintenance workers must currently park on the shoulder to perform necessary activities, exposing them to high speed traffic. The other six locations are new contrasting surface areas beyond the unpaved gore areas, which require workers to perform weed and litter control on foot. In these fourteen locations, the traveling public are also at risk of potential accidents with maintenance workers, vehicles, and equipment on the roadside.

Current average daily traffic in the project vicinity is 148,700 vehicles, 10.4 percent of which is truck traffic. The Caltrans Office of Traffic Safety performed a collision analysis with data obtained during the most recent three-year period available (January 1, 2016 to December 31, 2018). During that period, a total of 309 accidents occurred at the project's proposed 14 locations.

The accident rate, measured in accidents per million vehicle miles (MVM), is relatively higher in the project locations than the expected accident rate for the types of facilities statewide. At location 7 on I-580 at PM R3.9L/R4.1L, for example, the accident rate is 1.89 accidents per MVM, while the statewide average for this type of facility is 0.31 accidents per MVM. In average, the 14 locations have an accident rate of 1.40 accidents per MVM compared to a sitewide average of 0.49 accidents per MVM. Of all accidents at the 14 locations, about 26% resulted in injury or fatality.

The proposed project would create safer conditions for both maintenance workers and the travelling public.

1.5 Project Description

Project construction will occur along eastbound and westbound I-580 and I-205 at fourteen discrete locations that were identified as having deficiencies in worker safety. Eight new MVPs will be constructed within the project limits to increase maintenance workers' access to the shoulder. Six locations along the project limits will receive new concrete pavement beyond the unpaved gore areas, eliminating the need for maintenance workers to perform weed and litter control on foot and allowing the areas to become accessible to mechanical sweeping (Table 1).

1.5.1 Maintenance Vehicle Pullouts (MVPs)

Eight proposed MVPs will be constructed to provide additional space for safe exit off of the freeway mainline, providing better maintenance worker access to the shoulder and reducing worker exposure to high speed traffic. To construct the MVPs, existing vegetation and substrate material will first be cleared and grubbed to a depth of 0.85 feet in a 972 square foot area. The excavated area will then be repaved using Aggregate Base-Class 2 (AB) followed by hot mix asphalt (HMA), to be installed using a skip loader, paving machine, and roller. Erosion control will be applied as necessary around MVPs and any temporarily disturbed areas will be revegetated. Excavated soil will be tested and trucked to an appropriate disposal site depending on the level of contamination.

1.5.2 Gore and Reverse Gore Paving

At six locations, new concrete pavement will be installed at the tips of extended gore areas, which are areas between the off-ramps (gore) or on-ramps (reverse gore) and

the freeway mainline. This will allow maintenance personnel to collect trash using a mechanical sweeper and eliminate the need to perform weed and litter control on foot. All proposed contrasting surface areas will be excavated beyond the gore to a depth of 9 inches from the original ground level. The excavated area will be replaced with a 4-inch layer of Aggregate Base-Class 2. A welded wire mesh will be placed over the aggregate base, and a 4-inch layer of concrete will be poured over the wire mesh. According to Caltrans Department of Hydraulics and Stormwater Design, this activity may require raising existing drainage inlets to grade, and installation of additional inlets and pipes around Grant Line Road would be required due to the increased runoff generated by the loss of permeable surface from gore paving.

Table 1. Project Installation Activities and Location Details

Location Number	Activity	Post Mile (PM)	Location Description
1	MVP	9.50	westbound I-580
2a	MVP	7.86	eastbound I-580
2	Gore	8.42	westbound I-580 Greenville Road/Altamont Pass off-ramp
3	MVP	6.55	eastbound I-580
4	Reverse Gore Paving	5.69	eastbound I-580 North Flynn Road on-ramp
5	MVP	5.05	eastbound I-580
6	MVP	4.10	westbound I-580
7	MVP	3.99	eastbound I-580
8	Gore	1.70	eastbound I-580 Grant Line Road off-ramp
9	Gore	1.66	westbound I-580 Grant Line Road on-ramp
10	Reverse Gore Paving	1.38	eastbound I-580 Grant Line Road on-ramp
11	Gore	1.28	westbound I-580 Grant Line Road off-ramp
12	MVP	0.65	westbound on-ramp from northbound I-5
13	MVP	0.30	westbound I-205

The estimated total duration of construction is 120 working days. Work is expected to take place during daylight hours. Work will include temporary ramp, lane, and shoulder closures at various locations along I-580 and I-205 in the project area. Staging will primarily involve lane closures during non-peak hours. A Traffic Management Plan (TMP) will be required for this project. The TMP and details of the construction staging for the project will be developed and refined during the next phase of project design. TMP development will be supported by detailed traffic studies to evaluate traffic operations. The need for lane closures during off-peak hours or at night, or short-term

detour routes, will be identified, as required. The project may need to be constructed in stages to minimize disruption to the traveling public. The TMP will include press releases to notify and inform motorists, businesses, community groups, local entities, and emergency services of upcoming closures or detours. Various TMP elements such as portable Changeable Message Signs and Construction Zone Enhanced Enforcement Program may be utilized to minimize delay to the traveling public.

The project is funded from the 2018 State Highway Operation and Protection Program, under Safety Improvements, Program Code 201.010. The total approximate cost of the project for support and capital, including construction costs, is estimated at \$3,632,000.

1.6 Project Features

The project will install eight MVPs and pave six gore areas. As part of the project, Caltrans would implement standard conservation measures, avoidance and minimization measures (AMMs), and standard best management practices (BMPs) as outlined in the Caltrans' 2018 Standard Specifications and the Caltrans Construction Site Best Management Practices Manual. Measures include minimizing the area of impact, conducting preconstruction surveys for biological resources, and implementing water quality BMPs and other construction-site BMPs.

1.7 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

- United States Fish and Wildlife Service (USFWS) Endangered Species Act Section 7 Consultation and Biological Opinion (BO), and
- California Department of Fish and Wildlife (CDFW) consistency determination or Section 2081 Agreement for Threatened and Endangered Species (Incidental Take Permit) for California tiger salamander.

Caltrans received a BO from the USFWS on March 26, 2020. USFWS actively participated in the NEPA process.

The project may require either a consistency determination or a Section 2081 Agreement (Incidental Take Permit) from CDFW. Consultation with CDFW is ongoing and an application will be submitted following approval of the FED.

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

2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant with Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A “No Impact” answer reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA or any other environmental legislation, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Standard Conservation Measures and project features, which can include both design elements of the project, standardized measures that are applied to 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 Chapter 1 for a detailed discussion of these features. Standard Conservation Measures are discussed herein. All AMMs and/or Mitigation Measures are found in Appendix B.

2.1.1 Aesthetics

CEQA Significance Determinations for Aesthetics

This section is summarized from the *Visual Impact Analysis* for the proposed project, which was completed in August 2019.

The portion of I-580 within the project limits is eligible for designation as a State Scenic Highway. Immediately past the border of the eastern edge of the project, at the I-205 and I-580 interchange, eastbound I-580 becomes an Officially Designated Scenic Highway. The regional landscape is characterized by linear/curvilinear stretches bordered by rolling hills of naturalized annual grass and scrub plantings on both sides of the project. Existing vegetation removal is expected to be minimal.

Would the project:

a) Have a substantial adverse effect on a scenic vista?

No Impact – The proposed area does not include any scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact – All project work is expected to occur within Caltrans Right-of-Way (ROW) or in temporary construction easements. It is not anticipated that the project would adversely affect any designated scenic resource, such as a rock outcropping, tree grouping, or historic property, etc., as defined by CEQA statutes or guidelines, or by Caltrans' policy.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

No Impact – The proposed project would not conflict with any applicable zoning or regulations governing scenic quality. Views of the roadway would remain similar to existing conditions and there are no residential views of the proposed project, as it is located between grassy rolling hills and lacks development within the project limits.

Commuter and local motorists likely have previous experience with construction occurring on I-580 westbound near Livermore and will be familiar with staging areas for construction. North Flynn Road already has two existing turn outs and a break check

area; therefore, motorists are likely accustomed to encountering large vehicles alongside the road in these locations.

Based on preliminary investigation, the primary visual concerns associated with the proposed project involve the preservation of the naturalized annual grassland along the hillsides of this Eligible State Scenic Highway corridor. Contractor staging areas and operations will be conducted with minimal impacts to existing hillsides and sporadic scrub areas. Equipment and material staging areas can be placed in less visible locations and covered where possible to reduce the temporary visual impacts from construction. After construction, areas cleared for contractor access and trenching operations will be treated with appropriate erosion control measures and replacement planting where required. Existing mature vegetation will be protected, and motorists are not expected to notice a high amount of visual changes once construction is complete.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact – The proposed project will install new pavement alongside the freeway mainline and between the freeway mainline and on- and off-ramps. The project will not install any new permanent lighting, and project construction would not occur at night. The proposed project will not result in any permanent new light or glare that would adversely affect day or nighttime views of the area.

Standard Conservation Measures:

AES-1: Protect mature vegetation to the maximum extent feasible in order to preserve the scenic quality of the existing landscape.

AES-2: Plan contractor staging and operations to protect and preserve naturalized annual grassland and sporadic shrubs to the maximum extent feasible.

AES-3: After construction, treat areas cleared for contractor access and trenching operations with appropriate erosion control measures where required.

AES-4: Provide replacement highway planting, if warranted, in all areas of highway planting removal where ROW allows. Where replacement planting is not possible at the removal location, provide replacement in adjacent planting areas along the project corridor.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.2 Agriculture and Forest Resources

CEQA Significance Determinations for Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

- 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?

No Impact – There is no prime farmland, unique farmland, or farmland of statewide importance within the project limits. All work is expected to occur within Caltrans ROW or in temporary construction easements. The land adjacent to the project limits is predominantly low density rural and classified as “Urban and Built-Up Land” and “Other Land” by the Department of Conservation. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. There are no changes anticipated to prime farmland, unique farmland, or farmland of statewide importance

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact – There are no areas zoned for agricultural use or parcels under a Williamson Act contract within the project limits. All work is expected to occur within Caltrans ROW or in temporary construction easements. The land adjacent to the project limits is predominantly low density rural and classified as “Urban and Built-Up Land” and “Other Land” by the Department of Conservation. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. No conflicts with areas zoned for agricultural use or parcels under a Williamson Act contract are anticipated as a result of this project.

- 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))?

No Impact – There are no forest lands or timberlands within the project limits. All work is expected to occur within Caltrans ROW or in temporary construction easements. The land adjacent to the project limits is predominantly low density rural and classified as “Urban and Built-Up Land” and “Other Land” by the Department of Conservation. This project does not propose changes in the use of the current roadway and will not require or cause changes in the use of adjacent properties. No conflicts are anticipated with areas zoned as forest land or timberland.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact – There are no forest lands within the project area. The land adjacent to the project limits is predominantly low density rural and classified as “Urban and Built-Up Land” and “Other Land” by the Department of Conservation. All work is expected to occur within Caltrans ROW or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not necessitate changes in the use of adjacent properties. There are no changes anticipated to forest land.

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?

No Impact – There are no prime farmland areas, no parcels under a Williamson Act contract, and no forest or timberlands within the project limits. All work is expected to occur within Caltrans ROW or in temporary construction easements. The land adjacent to the project limits is predominantly low density rural and classified as “Urban and Built-Up Land” and “Other Land” by the Department of Conservation. This project does not propose changes in the use of the current roadway and would not necessitate changes in the use of adjacent properties. No conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use is anticipated as a result of this project.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.3 Air Quality

CEQA Significance Determinations for 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:

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact – The proposed project is exempt from the requirement to determine conformity per 40 Code of Federal Regulation (CFR) 93.126: Table 2 – Shoulder improvements. The project would not conflict with or obstruct implementation of the air quality plan of the area.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?

No Impact – The proposed project is exempt from the requirement to determine conformity per 40 CFR 93.126: Table 2 – Shoulder improvements. The project will not add travel lanes to I-580 or I-205. The project would not substantially increase any criteria pollutant that the area is in non-attainment for.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact – The proposed project is exempt from the requirement to determine conformity per 40 CFR 93.126: Table 2 – Shoulder improvements. Surrounding land use is rural and undeveloped. No sensitive receptors have been identified in the project area. The project would not add travel lanes to I-580 or I-205. The project will not expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact – The proposed project is exempt from the requirement to determine conformity per 40 CFR 93.126: Table 2 – Shoulder improvements. Surrounding land use is rural and undeveloped, and project construction is limited to Caltrans ROW. The project would not result in emissions that would adversely affect a substantial number of people.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Caltrans Office of Biological Sciences and Permits prepared a Natural Environment Study (NES) for the proposed project in February 2020. The NES documented the potential effects of the proposed project on nearby biological resources. This section is summarized from the NES, which is incorporated into this IS ND by reference.

Caltrans established a biological study area (BSA) to evaluate the effects of the proposed project on natural communities and other biological resources. The BSA encompasses the project footprint along with a 2-mile buffer to include areas that project construction activities may directly or indirectly impact (Figure 2).

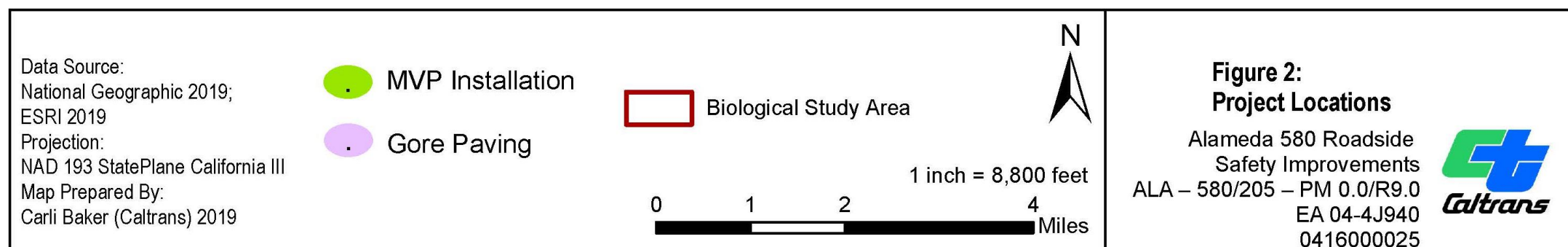
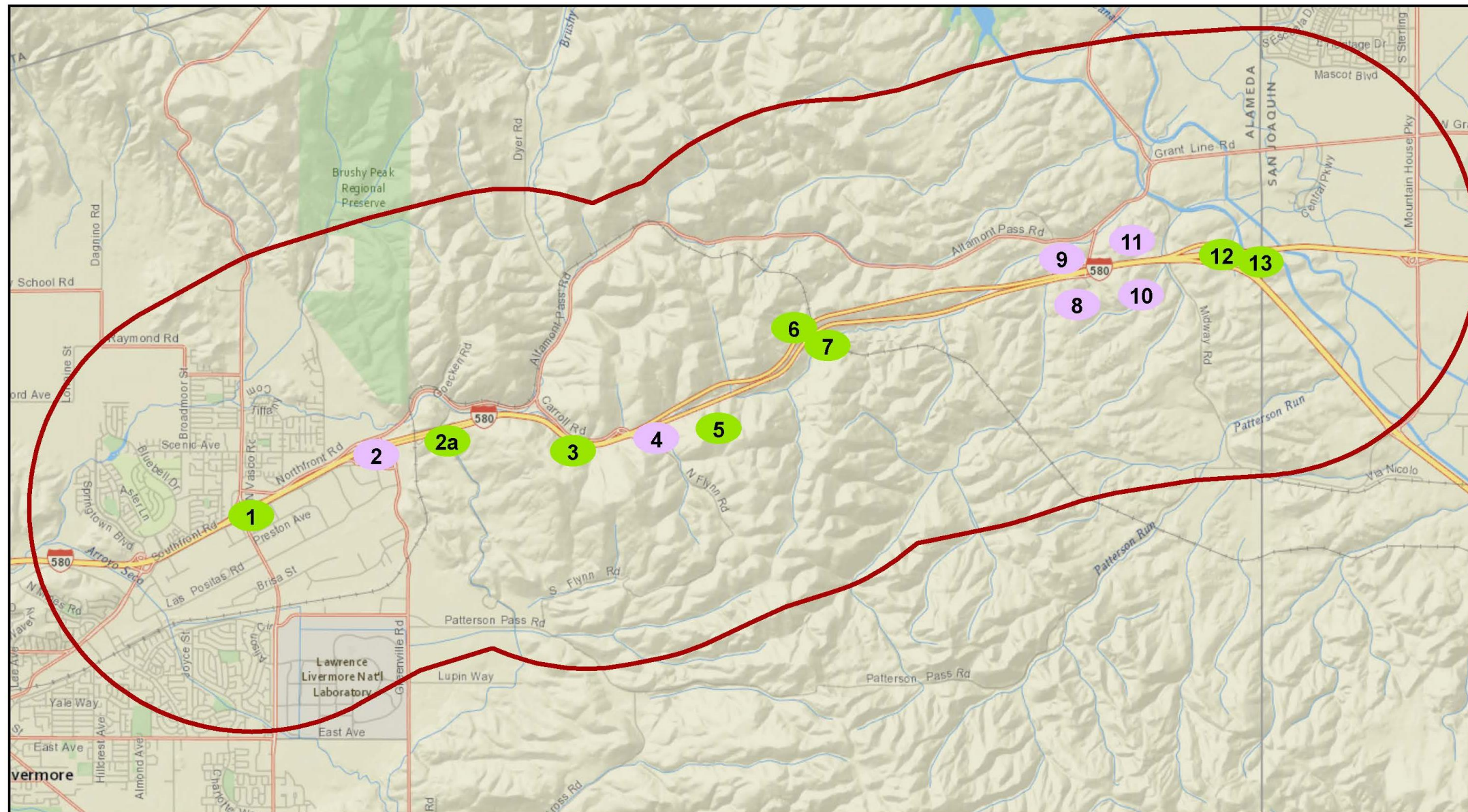


Figure 2. Project Work Locations

For the proposed project, the BSA consists of approximately 2.55 acres located within the City of Livermore and the Altamont Pass I-580 transportation corridor, before the San Joaquin/Alameda county line. The BSA is composed primarily of paved road and barren ground. About 15 percent of the BSA is composed of naturalized annual grassland and landscaped land.

Caltrans conducted plant and vegetation surveys and a wildlife habitat assessment within the BSA in spring 2019 to assess biological resources. Based on literature reviews, database searches, and familiarity with the region, a total of 35 special-status plant and 37 special-status wildlife species were initially considered to have potential to occur within the BSA. Further evaluation found that no plant species are expected to occur within or around the project area due to lack of suitable habitat. Eleven individual wildlife species, including three migratory bird and three bat species, were determined to have some potential to occur within the BSA:

- American badger (*Taxidea taxus*) – state species of special concern
- burrowing owl (*Athene cunicularia*) – state species of special concern
- California red-legged frog (CRLF) (*Rana draytonii*) – federally threatened, state species of special concern
- California tiger salamander (CTS), Central California Distinct Population Segment (DPS) (*Ambystoma californiense*) – federally threatened, state threatened
- San Joaquin kit fox (*Vulpes macrotis mutica*) – federally endangered, state threatened
- migratory birds
 - loggerhead shrike (*Lanius ludovicianus*) – state species of special concern
 - northern harrier (*Circus hudsonius*) – state species of special concern
 - white-tailed kite (*Elanus leucurus*) – state fully protected species
- bats
 - pallid bat (*Antrozous pallidus*) – state species of special concern
 - Townsend's big-eared bat (*Corynorhinus townsendii*) – state species of special concern
 - hoary bat (*Lasiurus cinereus*) – included on the CDFW's Special Animals List

Three species—CRLF, CTS, and San Joaquin Kit Fox—are listed as threatened or endangered under the California Endangered Species Act (CESA) and/or the Federal Endangered Species Act (FESA). Under CESA and FESA, compensation is required if suitable habitat for these species will be impacted temporarily or permanently. The following discussion summarizes the affected environment and environmental consequences for each species.

San Joaquin Kit Fox

The San Joaquin kit fox was listed as an endangered species under the FESA and CESA. There are five occurrences of San Joaquin kit fox within 2.5 miles of the BSA. All occurrences were recorded prior to 2000. The presence of suitable habitat and occurrence records nearby suggest that San Joaquin kit foxes may be present intermittently and in low numbers in the region. The BSA is, however, at the edge of the species' range, and the potential that the species would occur within the BSA during the limited time period of construction is low. Although suitably friable, or crumbly, soils are present, it is unlikely that San Joaquin kit foxes would dig or use dens within the BSA due to constant disturbance from I-580 and other intersecting roads. San Joaquin kit foxes may use grassland within the BSA for dispersal or movement between dens and other destinations. They are not expected to occur in urbanized areas, except under locally unique conditions, and are not known to occur in Livermore or other urbanized areas of the BSA.

California tiger salamander (CTS)

The Central California DPS of CTS is listed as federally threatened under FESA and state threatened under CESA. There are no documented occurrences of CTS inside the BSA. There are, however, 15 occurrences within 2 miles of the BSA boundaries, 10 of which are within the 1.3-mile dispersal range of the species. Dispersal range refers to the distance a species can travel away from an existing population. The USFWS-recommended survey buffer is 1.3 miles (USFWS. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. August 2005.)

CTS require two different habitats to complete their life cycle. The dry summer and fall months are spent in underground burrows in upland habitat. On rainy fall and winter nights, CTS leave their burrows to feed and migrate to nearby ponds or seasonal water sources for breeding.

Suitable upland habitat in the form of grassland is present within the BSA.

Critical habitat, a USFWS designation, is the specific geographic areas that contain physical or biological features that are essential to the conservation of an endangered or threatened species and that may need special management or protection. There is no designated critical habitat or suitable breeding habitat inside of the BSA.

There are numerous documented CTS occurrences in ponds within 2 miles of the BSA boundary, so it is possible that adults may travel into the BSA and use it as upland habitat from surrounding suitable habitat areas.

Due to the presence of known populations and potential breeding ponds within dispersal range of the BSA, Caltrans has concluded that the presence of CTS is possible throughout the BSA.

California red-legged frog (CRLF)

The CRLF is listed as federally threatened under the FESA and as a state species of special concern under the CESA. There are 20 recorded occurrences of CRLF within 2 miles of the BSA boundaries, three of which are within 1 mile of the BSA. Of these three occurrences, two occurred in ponds, streams, or wetlands.

Critical habitat (Unit ALA-2, Arroyo Valle) is adjacent to multiple locations in the BSA, to the north and south of I-580 from PM 1.0 to PM 8.2, and is located 0.03 mile from Locations 8-11. The critical habitat is separated from the project by roadways and Grant Line Road on- and off-ramps.

Critical habitat is determined based on the presence of physical and biological Primary Constituent Elements (PCE) that are essential to the conservation of a species. For CRLF, these elements include:

1. Aquatic breeding habitat. Aquatic breeding habitat consists of standing bodies of fresh water, including: natural and man-made ponds, slow-moving streams or pools within streams, and other ephemeral or permanent water bodies that typically become inundated during winter rains and hold water for a minimum of 20 weeks.
2. Non-breeding aquatic habitat. Non-breeding aquatic habitat consists of freshwater habitats that may not hold water long enough to be suitable for breeding, but that do provide potential for shelter, foraging, predator avoidance, and aquatic dispersal. Non-breeding habitat may include plunge pools within intermittent creeks, seeps, quiet water sanctuary areas during high water flows, and springs of sufficient flow to withstand the summer dry period.
3. Upland habitat. Upland habitat provides shelter, foraging, and predator avoidance areas. These areas are located within 200 feet of the edge of aquatic and riparian habitat and consist of grasslands, woodlands, or wetland/riparian vegetation. Upland habitat can include features such as boulders, rocks, downed trees, small mammal burrows, and moist leaf litter.
4. Dispersal habitat. Dispersal habitat, which allows for movement between occupied sites, consists of accessible upland or riparian habitat within designated critical habitat units located between occupied locations within 0.70 mile of each

other. Dispersal habitat includes natural and altered habitats that do not contain barriers. Barriers may include heavily traveled roads constructed without culverts or bridges. Dispersal habitat does not include moderate-to-high-density urban or industrial development, large reservoirs, or areas that do not contain other PCEs.

Surveys show that the areas near the critical habitat within the BSA do not contain the PCEs required to support CRLF. Aquatic features that are in the BSA are too shallow to provide suitable breeding or non-breeding aquatic habitat for the CRLF. The BSA also does not contain suitable upland habitat for CRLF.

There are two documented CRLF occurrences in ponds within 1 mile of the BSA, as well as numerous ponds and streams visible on aerial imagery within 1 mile of the BSA that could contain suitable breeding habitat. Adults and juveniles originating from these ponds and streams may potentially use the BSA for dispersal between occupied sites. Therefore, CRLF have potential to occur in grassland habitat within the BSA.

Interstate 580 represents a major barrier to dispersal of CRLF because of heavy traffic likely to cause mortality of almost all individuals attempting to cross. This also includes on- and off-ramps along I-580 that also receive heavy loads of traffic throughout the day. Caltrans has identified several natural and artificial wildlife crossings within the project area that could potentially be used by dispersing CRLF to cross under I-580, including road underpasses, railroad undercrossings, drainage culverts, and hydraulic structures carrying streams under the freeway.

Due to the presence of known populations and potential breeding ponds within dispersal distance of the BSA and designated critical habitat in the region, Caltrans has concluded presence of CRLF is possible throughout the BSA.

Project Impacts

The project would result in less than significant impacts to CRLF, CTS, San Joaquin kit fox, American badger, burrowing owl, migratory bird species, and bat species from temporary impacts related to construction activities, such as site preparation, MVP installation, paving, and equipment use. AMMs and standard conservation measures, listed below and in Appendix B, are intended to reduce impacts during project activities.

The proposed project would result in approximately 0.06 acre of temporary impacts and approximately 0.01 acre of permanent impacts to suitable CTS and CRLF habitat. See Table 2 below for estimated impacts to suitable habitat types for both species.

Table 2. Temporary and Permanent Impacts within the BSA to Suitable Habitat for Listed Species, and Proposed Compensation to Impacted Species Habitat

Vegetation Type	Habitat Impacts (acres)		Compensation (acres)		
	Temporary	Permanent	1:1 ratio	3:1 ratio	Total Compensation
Annual Grassland	0.064	0.009	0.064	0.0297	0.0937
Total	0.064	0.009	0.064	0.0297*	0.0937

*Mitigation credits cannot be purchased at such a small increment

Caltrans obtained a BO from the USFWS for CTS, CRLF, and San Joaquin kit fox on March 26, 2020. A Biological Assessment (BA) was submitted to USFWS on December 11, 2019. Caltrans will obtain a consistency determination or Section 2081 Incidental Take Permit (ITP) from CDFW for CTS during the next phase of the project, as the project design is further refined.

To avoid the potential adverse effects under FESA and CESA, and as a condition of permits under both regulations, Caltrans also proposes compensation to offset any adverse impacts caused by the project. Caltrans proposes that compensation in the form of habitat restoration and preservation would be provided at a 1:1 ratio for temporary habitat impacts, and a 3:1 ratio for permanent habitat impacts. Compensation for temporary impacts would be accomplished through restoration on-site of 0.06 acre of CTS and CRLF habitat. Compensation for permanent impacts would be accomplished through the purchase of 0.1 acre of off-site compensation at an agency-approved mitigation bank.

The proposed compensation is based on the current estimate of effects to suitable habitat within the range of the species. Caltrans developed the proposed compensation during Section 7 consultation with USFWS. Caltrans believes the AMMs, in conjunction with the proposed compensation for impacts, will reduce project impacts to a negligible level. The final compensation may be subject to change during the consultation and permitting processes.

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?

Less than Significant Impact – The project’s NES details project impacts to candidate, sensitive, and special-status species determined to be present in the BSA. Caltrans biologists have determined, through completion of the biological study referenced above, that the project would have a less than significant impact on CTS, CRLF, San

Joaquin kit fox, American badger, burrowing owl, migratory bird species, and bat species.

The AMMs and Standard Conservation Measures listed below and in Appendix B will reduce potential impacts to San Joaquin kit fox, American badger, burrowing owl, migratory bird species, bat species, CTS, and CRLF. The amount and quality of habitat proposed to be impacted by the project is minimal, and impacts to the project would not affect the persistence of local wildlife populations in the project area.

Because the impacts from the project would not jeopardize the continued existence of San Joaquin kit fox, American badger, burrowing owl, migratory bird species, bat species, CTS, and CRLF, and thus would not present a significant impact to the species as a whole, Caltrans has determined that the project will have a “Less than Significant Impact” on species identified as a candidate, sensitive, or special-status.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact – The proposed project would not affect riparian habitat or other sensitive natural communities.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact – The proposed project would not affect any state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact – Interstates 580 and 205 represent major barriers to dispersal of CTS and CRLF; the paved surface of I-580 and I-205 are not considered to be viable dispersal corridors because heavy traffic likely causes mortality of almost all individuals attempting to cross. The proposed project work activities would not impact potential wildlife crossings present in the project area, such as road underpasses, railroad undercrossings, drainage culverts, and hydraulic structures carrying streams under the freeway.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact – This project would not conflict with any local policies or ordinances protecting biological resources.

- 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?

No Impact – This project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Standard Conservation Measures:

BIO-1: Work Window for Nesting Birds. To the extent practicable, clearing and grubbing activities should occur outside of the bird nesting season (February 1 to September 30). When it is necessary to conduct clearing during the nesting season, preconstruction surveys would be conducted within the BSA prior to clearing and grubbing of vegetation. If preconstruction surveys indicate the presence of nests of any special-status species, CDFW/USFWS would be consulted to determine the appropriate buffer area to be established around the nesting site for the duration of the breeding season.

BIO-2: Preconstruction Surveys for Nesting Birds. Pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction for activities occurring during the breeding season (February 1 to September 30).

BIO-3: Non-disturbance Buffer for Nesting Birds. If work is to occur within 300 feet of active raptor nests or 100 feet of active passerine nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance.

BIO-4: Vehicle Use. Project employees will be required to comply with Caltrans' guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.

BIO-5: Trash Control. All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed at least once a day from the work area.

BIO-6: Prohibition of Mono-filament Erosion Control. Plastic mono-filament netting (erosion control matting) or similar material will not be used for the project because CRLF and CTS may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

BIO-7: Staging. Staging and parking areas will be located in designated areas, as specified by Caltrans' Environmental Staff in coordination with the resident engineer.

BIO-8: Revegetation following Construction. All areas that are temporarily affected during construction will be revegetated with an assemblage of native grass, shrub, and trees. Invasive, exotic plants will be controlled within the BSA to the maximum extent practicable, pursuant to Executive Order 13112.

AMMs and/or MMs:

AMM BIO-1: Permits. Caltrans will include a copy of the BO and ITP/consistency determination within the construction bid package of the proposed project. The Resident Engineer or their designee will be responsible for implementing the Conservation Measures and Terms and Conditions of the USFWS BO and the CDFW ITP/consistency determination.

AMM BIO-2: Reinitiation of Consultation. Caltrans will reinitiate consultation if the project results in effects to listed species not considered in the USFWS BO or CDFW ITP/consistency determination.

AMM BIO-3: Biological Monitor Approval. Caltrans will submit the names and qualifications of the biological monitor(s) for USFWS and CDFW approval prior to initiating construction activities for the proposed project. Only agency-approved biological monitors would implement the monitoring duties outlined in the BO.

AMM BIO-4: Preconstruction Surveys. Prior to initiation of construction activities at the eight MVP installation locations, preconstruction surveys will be conducted by an agency-approved biologist for listed species. These surveys will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least 50 feet of the project limits. The biologist(s) will investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, and debris. Native vertebrates found in the cover sites within the project limits will be documented and relocated to an adequate cover site in the vicinity. The entrances and other refuge features within the project limits will be collapsed or removed following investigation. Preconstruction surveys should

identify San Joaquin kit fox habitat features on the project site, evaluate use by kit foxes, and, if possible, assess the potential effects to kit foxes by the proposed activity. If an occupied den is discovered within the project area, or within 100 feet of the project boundary, an exclusion zone of a minimum of 100 feet around the den will be established. If the minimum exclusion zone cannot be met, then USFWS must be contacted. If a natal/pupping den is discovered within the project area or within 200 feet of the project area boundary, the agencies will be notified immediately.

AMM BIO-5: Biological Monitoring. The agency-approved biologist(s) will be on-site during initial ground-disturbing activities at the eight MVP installation locations and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) will keep copies of applicable permits in their possession when on site. Through the Resident Engineer or their designee, the agency-approved biologist(s) shall be given the authority to communicate either verbally or by telephone, email, or hardcopy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the Resident Engineer or their designee, the agency-approved biologist(s) shall have the authority to stop project activities to minimize take of listed species or if he/she determines that any permit requirements are not fully implemented. If the agency-approved biologist(s) exercises this authority, the agencies shall be notified by telephone and email within 48 hours.

AMM BIO-6: Listed Species On-site. The Resident Engineer will immediately contact the agency-approved project biologist(s) if a San Joaquin kit fox, CRLF, or CTS is observed within a construction zone. The Resident Engineer will suspend construction activities within a 50-foot radius of the animal until the animal leaves the site voluntarily. If a San Joaquin kit fox, CRLF, or CTS is observed, an agency-approved biological monitor may relocate the animal if an agency-approved protocol for removal has been established. The agency-approved biological Monitor will follow established USFWS protocols for relocation.

AMM BIO-7: Work Window for CTS and CRLF. All work within suitable habitat for CTS and CRLF will occur between April 15 and October 15, when the species are unlikely to be active and there is less potential for an individual to enter the work area.

AMM BIO-8: Worker Environmental Awareness Training. All construction personnel will attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project. The program would focus on the

conservation measures that are relevant to employee's personal responsibility and would include an explanation as how to best avoid take of sensitive species. Distributed materials would include a pamphlet with distinguishing photographs of sensitive species, species' habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, would be kept on file and would be available on request.

AMM BIO-9: Prevention of Wildlife Entrapment. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than 1 foot deep with walls steeper than 30 degrees will be covered by plywood or similar materials at the close of each working. Alternatively, an additional 4-foot-high vertical barrier, independent of exclusionary fences, will be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional 4-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape, or the USFWS and/or CDFW will be contacted by telephone for guidance. The agencies will be notified of the incident by telephone and electronic mail within 48 hours.

AMM BIO-10: Environmentally Sensitive Area Fencing. Before the start of construction, Environmentally Sensitive Areas (ESAs), defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed, will be clearly delineated using temporary high-visibility fencing. Construction work areas will include the active construction site and all areas providing support for the project, including areas used for vehicle parking, equipment and material storage and staging, and access roads. The high-visibility fencing will remain in place throughout the duration of construction activities, will be inspected regularly, and will be fully maintained at all times. The final project plans will show all locations where the fencing will be installed and will provide installation specifications. The project Special Provisions and Notice to Bidders will clearly describe acceptable fencing material and prohibited construction-related activities, including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within ESAs.

AMM BIO-11: Material Storage. CTS and CRLF are attracted to cavity-like structures such as pipes and may seek refuge under construction equipment or debris. They may become trapped or injured if such materials are moved. All

construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.

AMM BIO-12: Night Work. To the extent practicable, nighttime construction will be minimized.

AMM BIO-13: Night Lighting. Artificial lighting of the project construction area during nighttime hours will be minimized to the maximum extent practicable.

2.1.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

This section is summarized from the Caltrans District 4 Office of Cultural Resource Studies (OCRS) Completion of Section 106 Compliance memorandum that was prepared for this project, dated July 9, 2019.

No significant historical resources are within the project area.

Would the project:

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact – Background research and identification efforts did not reveal any recorded archaeological resources in the area that will be affected by the proposed project. A survey for archaeological resources was completed in July 2019.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No Impact – Background research and identification efforts did not reveal any recorded archaeological resources in the area that will be affected by the proposed project.

- c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact – There are no known interred human remains within the project vicinity.

Standard Conservation Measures:

CULT-1: If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' OCRS will be called. A Caltrans ORCS qualified archeologist will assess the remains and, if determined human, will contact the County Coroner as per Public Resources Code (PRC) Sections 5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC) who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.6 Energy

CEQA Significance Determinations for Energy

Would the project:

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

No Impact – The proposed project will not add travel lanes to I-580 or I-205 that would increase roadway capacity or build structures that would require substantial direct or indirect energy use. The project would result in direct energy use during construction for on-site construction equipment. The project would not introduce any new activities that would significantly impact or increase energy use.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact – The proposed project will not add travel lanes to I-580 or I-205 that would increase roadway capacity. The project will result in temporary energy use during construction for the operation of on-site equipment. The project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.7 Geology and Soils

CEQA Significance Determinations for Geology and Soils

This section summarizes the Geologic and Paleontological Environmental Study/Memorandum prepared for this project, which is dated October 23, 2019.

Would the project:

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
 - ii. Strong seismic ground shaking?
 - iii. Seismic-related ground failure, including liquefaction?
 - iv. Landslides?

No Impact – The proposed work would not further expose the public to adverse effects from earthquakes, liquefaction, landslides, or other geologic hazards.

- b) Result in substantial soil erosion or the loss of topsoil?

No Impact – The work activities are not expected to impact soil conditions. There would be no disturbance to the native ground or native subsurface from this project.

- 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?

No Impact – The project will be located on artificial fill, clay, loam, and bedrock containing weathered sandstone and shale. The project is not located on a geologic unit that is unstable, nor is it located on an expansive soil.

- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact – The project will be located on artificial fill, clay, loam, and bedrock containing weathered sandstone and shale. The project is not located on a geologic unit that is unstable, nor is it located on an expansive soil.

- 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?

No Impact – There are no nearby residences and the project does not propose to install sewers or wastewater treatment systems.

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact –The Geologic and Paleontological Environmental Study/Memorandum prepared for this project on October 23, 2019 determined that the excavations for the proposed project will be shallow and superficial. There would be no impacts to sensitive paleontological resources or unique geologic features within the project limits.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

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 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), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with 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). This analysis will include a discussion of both.

Regulatory Setting

This section outlines state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA; 42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability” (FHWA n.d.). 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.

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 most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy (CAFE) 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 CAFE program based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

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) the establishment of the Office of Indian Energy Policy and Programs within the Department of 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.

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for new cars and light-duty

vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

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 (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

AB 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (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 [H&SC] 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-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.

SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012): This EO 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): This EO establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). The “carbon dioxide equivalent” (CO_{2e}) is a metric used to express amounts of other gases relative to CO₂, which is the most important GHG. Since GHGs differ in how much heat they each trap in the atmosphere (known as global warming potential, or GWP), CO₂ is used as a base for measurement. The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂. Finally, the EO 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.

SB 32, Chapter 249, 2016: This bill 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.

SB 1386, Chapter 545, 2016: This bill declared “it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state’s greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.”

AB 134, Chapter 254, 2017: This bill allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles travelled, to promote the state’s goals of reducing GHG emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional GHG emission reduction targets.

EO B-55-18 (September 2018): This EO sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

Environmental Setting

The proposed project is in a rural area, with a primarily natural resources based agricultural and tourism economy. I-580 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest route that connects to this stretch of roadway is I-205, 6 miles to the east. Traffic counts are moderate to high and this segment of I-580 is intermittently congested. The Metropolitan Transportation Commission (MTC) is the regional transportation agency that guides transportation development in the project area. The City of Livermore General Plan: Climate Change elements also address GHGs in the project area.

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 MMTCO_{2e} for 2017, with the transportation sector responsible for 41% of total GHGs (Figure 3). It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (Figure 4).

National GHG Inventory

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO₂, CH₄, N₂O, HFCs, perfluorocarbons, SF₆, and nitrogen trifluoride. It also accounts for emissions of CO₂ that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store CO₂ (carbon sequestration). The 1990–2016 inventory found that of 6,511 MMTCO₂e GHG emissions in 2016, 81% consist of CO₂, 10% are CH₄, and 6% are N₂O; the balance consists of fluorinated gases (U.S. EPA 2018). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

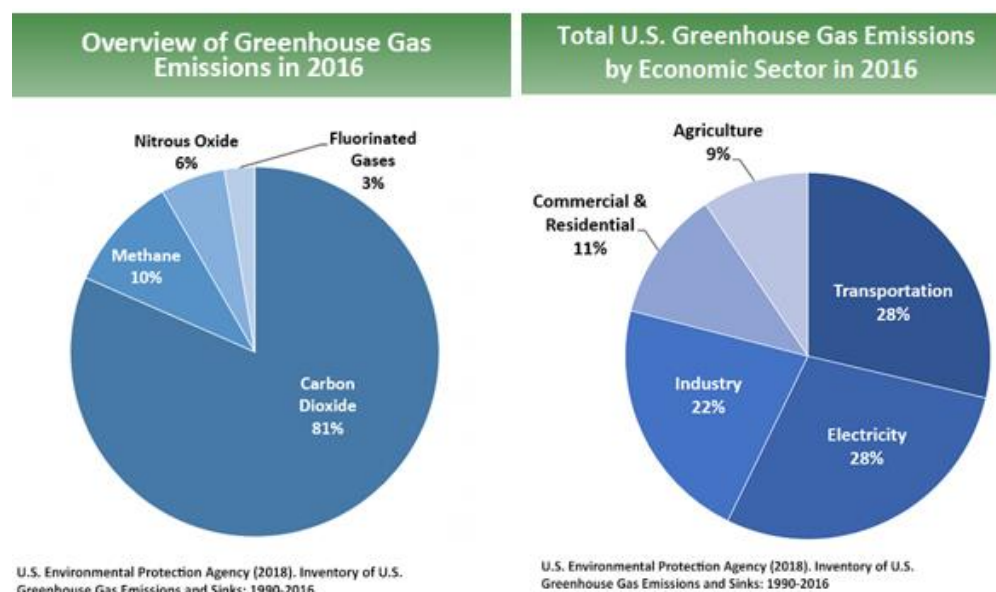


Figure 3. U.S. 2016 Greenhouse Gas Emissions

Source: California Air Resources Board (ARB). 2019a. California Greenhouse Gas Emissions Inventory–2019 Edition. <https://ww3.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: August 21, 2019.

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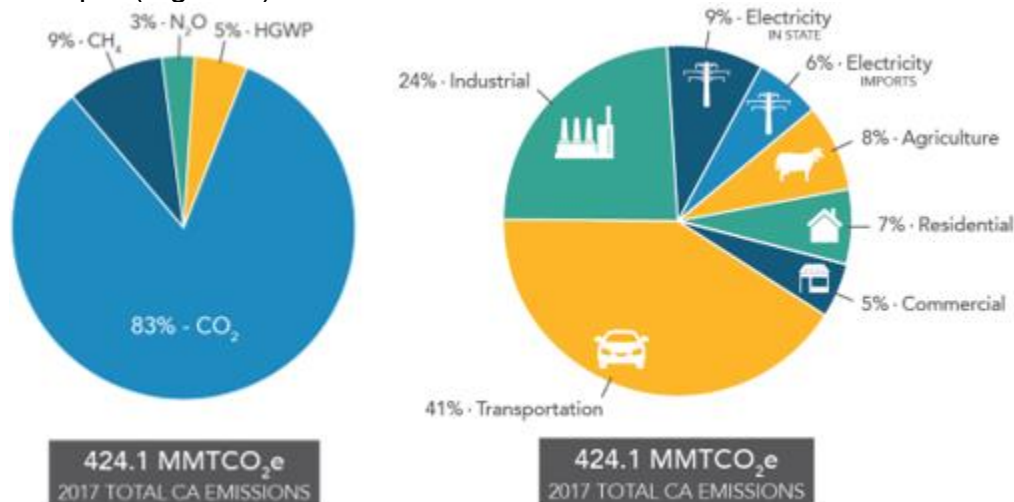


Figure 4. California 2017 Greenhouse Gas Emissions

Source: California Air Resources Board (ARB). 2019a. California Greenhouse Gas Emissions Inventory–2019 Edition. <https://ww3.arb.ca.gov/cc/inventory/data/data.htm>. Accessed: August 21, 2019.

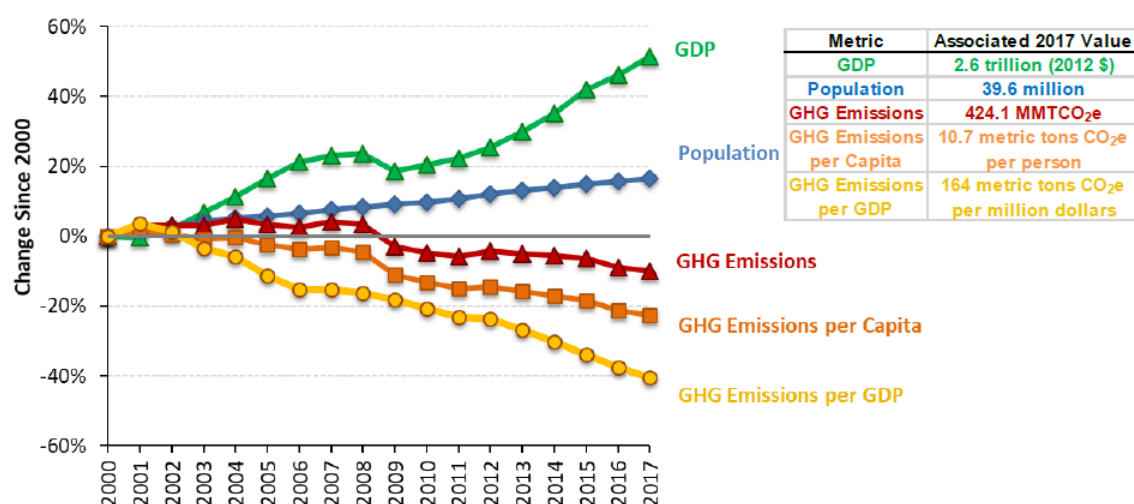


Figure 5. Change in California GDP, Population, and GHG Emissions since 2000

Source: California Air Resources Board (ARB). 2019b. California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf. Accessed: August 21, 2019.

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second

updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in 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.

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plans (RTPs)/SCSs to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the MTC's RTP/SCS, Plan Bay Area. The regional reduction target for MTC is 10% percent by 2020 and 19% by 2035 (California Air Resources Board (ARB). 2019c. SB 375 Regional Plan Climate Targets. <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>. Accessed: August 21, 2019).

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH₄ and N₂O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (PRC § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself" (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512). In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to improve maintenance worker safety at fourteen locations along I-580 and I-205 in Alameda County by installing MVPs and paving additional areas to increase worker access off the traveled roadway for maintenance activities. The proposed project would not increase the number of travel lanes and would result in no increase in vehicle miles traveled (VMT). Although some GHG emissions during the construction period would be unavoidable, no significant increase in operational GHG emissions is expected because the proposed project would not increase roadway capacity or VMT.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, workers commuting to and from the project site, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Based on project information available for environmental studies, the construction-related GHG emissions were calculated using the Road Construction Emissions Model (RCEM), version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District. It was estimated that for projected construction duration of 120 working days, the total amount of CO₂ produced to construct the project would be 351.30 metric tons of CO₂e (Table 3).

Table 3. Summary of Construction-related GHG Emission Estimates

Project Location: Alameda Co.	PARAMETERS			PROJECT TOTAL
	CO2 (tons)	CH4 (tons)	N2O (tons)	CO2e (metric tons)
TOTAL EMISSIONS	347.76	0.10	0.00	351.30

¹ Gases are converted to CO₂e by multiplying by their global warming potential (GWP). Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO₂).

Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions from construction activities.

CEQA Conclusion

While the proposed project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (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 farms and rangelands, forests, and wetlands so they can store carbon; and, (6) periodically updating the state's climate adaptation strategy, *Safeguarding California* (Figure 6).

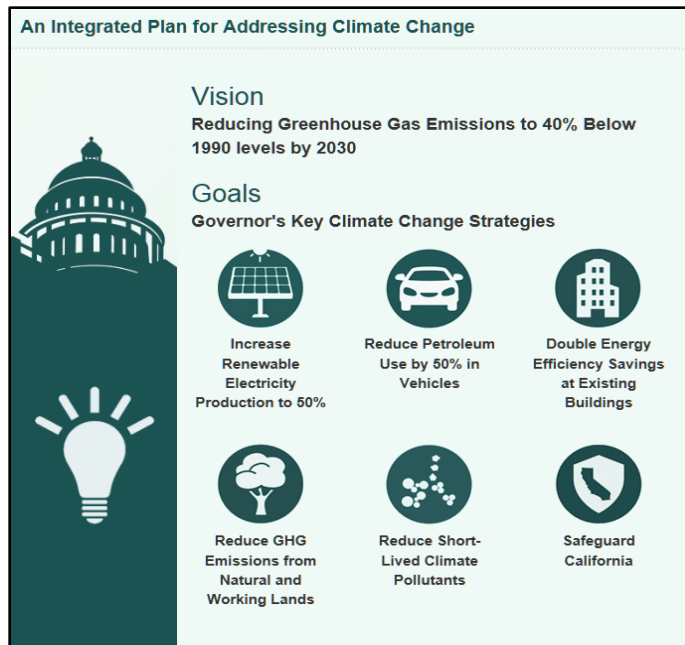


Figure 6. California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of VMT. A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California. 2019. *California Climate Strategy*. <https://www.climatechange.ca.gov/>. Accessed: August 21, 2019).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the 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 an 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. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO₂ reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

CALTRANS STRATEGIC MANAGEMENT PLAN

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT
- 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 sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and, support other climate adaptation goals (e.g., *Safeguarding California*).

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

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 Caltrans' statewide activities 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:

- Construction contractors will comply with Caltrans Standard Specifications to comply with all federal, state, and local air quality requirements, such as proper construction vehicle maintenance and idling restrictions. Measures that reduce vehicle emissions also help reduce GHGs.
- During construction, if feasible, the project will use solar-powered signal boards, which have reduced GHG emissions from energy consumption.
- A TMP will be developed to alleviate and minimize delays to the traveling public and potential emissions from idling traffic.

Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. ch. 56A § 2921 et seq). The Fourth National Climate Assessment, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.” Chapter 12, “Transportation,” presents a key discussion of vulnerability assessments. It notes that “asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime” (U.S. Global Change Research Program (USGCRP). 2018. Fourth National Climate Assessment. <https://nca2018.globalchange.gov/>. Accessed: August 21, 2019.).

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation 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” (U.S. Department of Transportation (U.S. DOT). 2011. Policy Statement on Climate Change Adaptation. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.).

FHWA order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (Federal Highway Administration (FHWA). 2019. Sustainability. <https://www.fhwa.dot.gov/environment/sustainability/resilience/>. Last updated February 7, 2019. Accessed: August 21, 2019.).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to “translate the state of

climate science into useful information for action” in a variety of sectors at both statewide and local scales (State of California. 2018. *California’s Fourth Climate Change Assessment*. <http://www.climateassessment.ca.gov/>. Accessed: August 21, 2019). It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the “combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.”
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the “capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience”. Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the “susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt.” Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate “sea-level rise (SLR) projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.

- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

SEA LEVEL RISE ANALYSIS

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

FLOODPLAINS

The project is not located in a floodplain or adjacent to any streams or water bodies that could be affected by climate change so as to present a hazard to the new facility or be affected by the new facility.

WILDFIRE

The project area traverses moderate and high Fire Hazard Severity Zones in a State Responsibility Area (SRA), as designated by the California Department of Forestry and Fire Protection. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction.

2.1.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No Impact – The proposed project work locations were subjected to lead deposition from vehicular emissions during the era of leaded fossil fuel. Given the traffic volumes the project corridor experienced at the time, it is likely that the shallow soils to be excavated for this project have elevated concentrations of lead. The project will implement BMPs according to special provision 12-11.09 “Minimal Disturbance of Regulated Material Containing Aerially Deposited Lead (ADL).” With the implementation of BMPs, project construction would not result in hazards to the public or the environment through the transport, use, or disposal of hazardous materials.

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact – Based on preliminary investigations, there is no potential for release of hazardous materials into the environment.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact – Based on preliminary investigations, there is no potential for release of hazardous materials into the environment. The project is not located within 0.25 mile of a school.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact – The project is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

- 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?

No Impact – The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Nor is the project located in the vicinity of a private airstrip.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact – The project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact – The project is primarily surrounded by grazing lands, rural dwellings, and generally undeveloped, grassy areas. Urbanized areas adjacent to the project are commercial and industrial. The project would take place in existing Caltrans ROW and would not change existing land use. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. The project would not increase or contribute to new risks of exposure to fire hazards for the surrounding community.

Standard Conservation Measures:

HAZ-1: Caltrans Standards will be followed for the proper handling and disposal of any unanticipated hazardous waste discovered during construction.

HAZ-2: The project will implement BMPs according to special provision 12-11.09 “Minimal Disturbance of Regulated Material Containing ADL.”

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

This section summarizes the Location Hydraulics Study memorandum prepared for this project, which is dated October 15, 2019. This section also summarizes the Water Quality Study that was prepared for this project, which is dated October 2019.

This project is under jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB; Region 2) and the Central Valley RWQCB (Region 5). This project would result in less than an acre of disturbed soil area (DSA) and will require a Water Pollution Control Plan (WPCP). The project lies in Hydrological Sub Areas 543.00-575.00 in the North Diablo Range-Carbona hydrologic unit. Runoff drains into delta waterways, Mountain House Creek, Arroyo Las Positas, Arroyo Mocho, and Old River; all these waters are listed as 303(d) impaired water bodies.

Would the project:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

No Impact – The proposed project would result in less than one acre of DSA. There would be no permanent water quality impacts.

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact – The proposed project's work activities would not substantially deplete groundwater supplies or interfere with groundwater recharge.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i. result in substantial erosion or siltation on- or off-site;

No Impact – The proposed project will not encroach into creeks or other water bodies. Existing drainage patterns will not be substantially altered and would not result in substantial erosion or siltation on- or off-site. After construction, areas cleared for contractor access and trenching operations will be treated with appropriate erosion control measures.

- ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
- iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

No Impact – The proposed MVP pullouts would not adversely affect any of the existing drainages, and gore paving locations will not be changing existing grade or flow patterns. The proposed project would not alter existing drainage patterns of the site or area and will not substantially increase the rate or amount of surface runoff that would result in flooding on- or offsite. The proposed project would also not create or contribute to runoff water that would exceed the capacity of existing or planned storm water drainage systems.

- iv. impede or redirect flood flows?

No Impact – The proposed project will not encroach into creeks or other water bodies. Existing drainage patterns will not be substantially altered and would not impede or redirect flood flows. After construction, areas cleared for contractor access and trenching operations will be treated with appropriate erosion control measures.

- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact – The proposed project is not located in an area that would be subject to inundation by seiche, tsunami, or mudflow.

- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact – The proposed project would use temporary construction-site BMPs to avoid any impacts to water from construction activities. The project would not conflict with or obstruct implementation of a water quality control or sustainable groundwater management man.

Standard Conservation Measures:

HYDRO-1: Standard BMPs. The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind- or water-related erosion. BMPs to be implemented within the project area will include, at a minimum:

- a. No discharge of pollutants from vehicle and equipment cleaning will be allowed into storm drains or water courses.
- b. Vehicle and equipment fueling, and maintenance operations must be at least 50 feet away from water courses.
- c. Concrete wastes will be collected in washouts, and water from curing operations will be collected, disposed of, and not allowed into water courses.
- d. Dust control will be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.
- e. Coir rolls will be installed along or at the base of slopes during construction to capture sediment, and temporary organic hydro-mulching would be applied to all unfinished disturbed and graded areas.
- f. Work areas where temporary disturbance has removed the pre-existing vegetation will be restored and reseeded with a native seed mix.
- g. Graded areas will be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.
- h. A Revegetation Plan will be prepared for restoration of temporary work areas.

HYDRO-2: During construction, a silt fence will be used to intercept and slow the flow of sediment-laden sheet flow runoff. A silt fence is a temporary linear sediment barrier of permeable fabric.

HYDRO-3: Prior to commencement of construction activities, a WPCP will be prepared by the Contractor and approved by Caltrans. The WPCP addresses potential temporary impacts via implementation of appropriate BMPs, such as those mentioned above, to the maximum extent practicable.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

- a) Physically divide an established community?

No Impact – The land immediately adjacent to the western portion of the proposed project, from North Vasco Road to North Greenville Road in the City of Livermore, is zoned commercial and industrial. The remaining 8.22 miles of the project is situated in a predominantly rural area of unincorporated Alameda County and features a few residences adjacent to the interstates. The new MVPs and gore areas proposed by the project are contained within Caltrans ROW. The proposed project would not physically divide an established community.

- b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact – The proposed project would not cause a significant environmental impact that would conflict with an applicable land use plan, policy, or regulation.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

- 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?

No Impact – There are no known minerals of value within the project work location.

- 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?

No Impact – There are no known minerals of value within the project work location.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.13 Noise

CEQA Significance Determinations for Noise

There are a few dispersed residences located near the project area. Noise generated by the project will be temporary construction noise, and standard Caltrans noise abatement measures will be applied to reduce noise. Work will be confined to daytime hours and the work location will move periodically from one location to the next, so the duration of noise at any given location will be temporary.

Would the project result in:

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

No Impact – The proposed project will not add travel lanes to I-580 or I-205 that would increase roadway capacity. Anticipated noise impacts from the proposed project would be temporary and periodic, associated with construction. Noise associated with construction is controlled by Caltrans Standard Specification, Section 14-8.02, Noise Control. The proposed project would not introduce a permanent increase in noise levels.

- b) Generation of excessive groundborne vibration or groundborne noise levels?

No Impact – The project would not involve activities that result in excessive ground vibration.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact – The project is not located within the vicinity of a private airstrip, an airport land use plan, or two miles of a public airport or public use airport.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.14 Population and Housing

CEQA Significance Determinations for Population and Housing

Would the project:

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact – The project would not induce growth. No new commercial or residential establishments would be built, and the project would not add travel lanes to I-580 or I-205 that would increase roadway capacity.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact – The project would not induce growth. No new commercial or residential establishments would be built, and the project would not add travel lanes to I-580 or I-205 that would increase roadway capacity. The project would not displace people or housing units or require the construction of replacement housing. There are no houses within the project construction area and no ROW will be acquired.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.15 Public Services

CEQA Significance Determinations for Public Services

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, other public facilities?

No Impact – The proposed project would not result in the provision of new or physically altered government facilities. Furthermore, the project would not result in a need for new or physically altered governmental facilities in order to maintain acceptable service ratios or response times for fire protection, police protection, schools, parks, or other public facilities.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.16 Recreation

CEQA Significance Determinations for Recreation

- 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?

No Impact – Northfront Park and Bill Clark Park in the City of Livermore, and Brushy Peak Regional Preserve of the East Bay Regional Parks District are three publicly owned parks within a 0.5-mile radius of the project. None of these parks are within or adjacent to the project area. The described project work activities would not result in the increased use of or deterioration of existing neighborhood or regional parks or other recreational facilities.

- 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?

No Impact – Northfront Park and Bill Clark Park in the City of Livermore, and Brushy Peak Regional Preserve of the East Bay Regional Parks District are three publicly owned parks within a 0.5-mile radius of the project. None of these parks are within or adjacent to the project area. The described project work activities would not result in the construction, increased use, or expansion of new and existing recreational facilities.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.17 Transportation and Traffic

The Traffic Management Plan (TMP) for the project will be developed in the next stage of project development. The TMP will be supported by detailed traffic studies to evaluate traffic operations. The need for necessary lane closures during off-peak hours or at night, or for short-term detour routes will be identified as required.

CEQA Significance Determinations for Transportation/Traffic

Would the project:

- a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No Impact – The proposed project is consistent with the California Transportation Plan 2040, the Alameda Countywide Transportation Plan, and the City of Livermore General Plan: Circulation Element.

- b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant – The project is not a capacity increasing project, so it would have no effect on vehicle miles traveled.

- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact – The project would not substantially increase hazards due to a design feature or incompatible uses.

- d) Result in inadequate emergency access?

No Impact – The TMP will ensure that emergency services have adequate access.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.18 Tribal Cultural Resources

CEQA Significance Determinations for 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:

- 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

No Impact – To date, Caltrans cultural staff has determined that the proposed project is not located within or adjacent to any site listed or eligible for listing in a local register of historical resources as defined in PRC section 5020.1(k).

- 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.

No Impact – No previously known tribal cultural resources have been identified within the project area and there are no known concerns associated with the proposed project impacting such resources. Caltrans OCRS sent Assembly Bill (AB) 52 letters on February 18, 2020 to California Native American tribes identified by the NAHC as requesting consultation. No responses have been received, to date. See Chapter 3 for more details.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.19 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact – The project would not require or result in the relocation or construction of new water or wastewater treatment facilities, storm water drainage, electric power, natural gas, or telecommunications facilities. Neither would the project result in the expansion of existing facilities.

The project is not expected to exceed wastewater treatment requirements of the San Francisco Bay RWQCB (Region 2) or the Central Valley RWQCB (Region 5).

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

No Impact – The project does not require water supplies and would not impact current or future water supply.

- c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact – The project does not require the services of a wastewater treatment provider where the project would impact the capacity of the provider.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact – The project would not require the services of a solid waste facility where the project would impact the capacity of local infrastructure or impair the attainment of solid waste reduction goals.

- e) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact – The project is anticipated to comply with federal, state, and local statutes and regulations related to solid waste.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.20 Wildfire

CEQA Significance Determinations for Wildfire

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact – All project work is expected to occur within Caltrans Right-of-Way (ROW) or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The proposed project would not substantially impair an adopted emergency response or evacuation plan.

- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact – All project work is expected to occur within Caltrans Right-of-Way (ROW) or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. The proposed project would not exacerbate wildfire risks.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact – All project work is expected to occur within Caltrans Right-of-Way (ROW) or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. The proposed project would not exacerbate fire risk.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact – All project work is expected to occur within Caltrans Right-of-Way (ROW) or in temporary construction easements. This project does not propose changes in the use of the current roadway and would not require or cause changes in the use of adjacent properties. Existing drainage patterns will not be substantially altered and

would not result in substantial erosion or siltation on- or off-site. The project will apply standard specifications 7.1.02M(2) for fire prevention during construction. After construction, areas cleared for contractor access and trenching operations will be treated with appropriate erosion control measures. The proposed project would not expose people or structures to significant risks.

AMMs and/or MMs:

No impacts are anticipated; therefore, no measures are proposed.

2.1.21 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact – The proposed project would result in approximately 0.06 acre of temporary impact and approximately 0.01 acre of permanent impact to suitable CTS and CRLF habitat. The limited disturbance to species habitat from temporary construction would not substantially degrade the quality of the environment or reduce wildlife species habitat.

- 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)?

No Impact – All past, present, and future projects have gone through or are required to undergo an environmental review to identify, account for, and mitigate for potential significant impacts. All projects have or will incorporate standard conservation measures, including standard Caltrans BMPs, which will protect surrounding habitat and water quality. Therefore, Caltrans does not anticipate any cumulative effects as a result of the proposed project.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

No Impact – The project does not have environmental effects which would cause substantial adverse effects on human beings.

3 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. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

3.0 Native American Coordination

Caltrans OCRS sent AB 52 letters on February 18, 2020 to the following Native American tribes who requested consultation:

- Amah Mutsun Tribal Band
- North Valley Yokuts
- Indian Canyon Mutsun Band of Mission San Juan Bautista
- Ohlone Indian Tribe
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Confederated Villages of Lisjan
- Coastanonan Rumsten Carmel Tribe

No responses have been received, to date; however, Native American outreach is still ongoing.

3.1 Agency Coordination

The Information for Planning and Conservation online tool was used to generate a species list from the Sacramento Office of the USFWS for the project area on September 24, 2019. Caltrans initiated technical assistance with USFWS on October 18, 2019. A request for formal consultation and a BA was submitted to USFWS on December 11, 2019. USFWS submitted a 30-day letter to Caltrans on January 3, 2020, requesting additional information on project mitigation. Caltrans submitted a revised BA and a response to the 30-day letter on February 4, 2020.

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4 List of Preparers

This document was prepared by the following Caltrans staff and consultants:

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5 Distribution List

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The Honorable Kamala Harris
United States Senate, California
333 Bush Street, Suite 3225
San Francisco, CA 94104

U.S. House of Representatives

The Honorable Eric Swalwell
United States Congress, 15th District
3615 Castro Valley Boulevard
Castro Valley, CA 94546

California State Assembly

The Honorable Steve Glazer
California State Senate – 7th District
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Orinda, CA 94563

The Honorable Rebecca Bauer-Kahan
California State Assembly – 16th District
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San Ramon, CA 94583

County Officials

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Alameda County Board of Supervisors,
District 1, County Administration
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Oakland, CA 94612

Local Officials

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1052 S. Livermore Avenue
Livermore, CA 94550

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City Hall
1052 S. Livermore Ave.
Livermore, CA 94550

City Council Member Bob Coomber
City Hall
1052 S. Livermore Avenue
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City Council Member Trish Munro
City Hall
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Livermore, CA 94550

City Council Member Bob Woerner
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Livermore, CA 94550

Federal Agencies

Natural Resources Conservation
Service, Alameda County Conservation
District
3583 Greenville Road, Suite 2
Livermore, CA 94550

U.S. Army Corps of Engineers,
Sacramento District
ATTN: Regulatory Branch
1325 J Street, Room 1350
Sacramento, CA 95814

U.S. Environmental Protection Agency,
Pacific Southwest, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Mr. Ryan Olah
Division Chief
U.S. Fish and Wildlife Service
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Sacramento, CA 95825

State Agencies

State Clearinghouse, Executive Officer
1400 Tenth Street, Room 156
P.O. Box 3044
Sacramento, CA 95812
State Agencies Cont'd

Bay Area Air Quality Management
District
Jack Broadbent
Chief Executive Officer
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San Francisco, CA 94109

California Air Resources Board
Executive Officer Richard Corey 1001 I
Street
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Sacramento, CA 95812

California Department of Conservation
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Special Projects Section
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Sacramento, CA 92298

California Office of Historic Preservation
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California Transportation Commission
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Central Valley Regional Water Quality
Control Board
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Department of Toxic Substances
Control
1001 I Street
Sacramento, CA 95814-2828
P.O. Box 806
Sacramento, CA 95812

Native American Heritage Commission
Executive Secretary
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

San Francisco Bay Regional Water
Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Alameda County Planning Commission
224 W. Winton, Room 111
Hayward, CA 94544

California Office of Emergency Services
3650 Schriever Avenue
Mather, CA 95655

California Transportation Commission
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Sacramento, CA 95814

Regional Agencies

Association of Bay Area Governments
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Oakland, CA 94604-2050

Metropolitan Transportation
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Appendix A. Title VI Policy Statement

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*Making Conservation
a California Way of Life.*

November 2019

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, remedies, 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, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page:
<https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi>.

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, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A blue ink signature of Toks Omishakin, consisting of a stylized 'T' followed by 'O' and 'A'.

Toks Omishakin
Director

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

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Appendix B. Avoidance and Minimization Measures and/or Mitigation Measures

Avoidance and minimization measures (AMMs) and proposed compensatory mitigation measures (MMs) for biological resources for the project are listed below. For detailed descriptions of the following measures, refer to the appropriate topic section in Chapter 2.

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate time, the following mitigation program would be implemented: During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Some measures may apply to more than one resource area. Duplicative or redundant measures have not been listed.

Avoidance, Minimization, and/or Mitigation Measures

Biological Resources

AMM BIO-1: Permits. Caltrans will include a copy of the BO and ITP/consistency determination within the construction bid package of the proposed project. The Resident Engineer or their designee will be responsible for implementing the Conservation Measures and Terms and Conditions of the USFWS BO and the CDFW ITP/consistency determination.

AMM BIO-2: Reinitiation of Consultation. Caltrans will reinitiate consultation if the project results in effects to listed species not considered in the USFWS BO or CDFW ITP/consistency determination.

AMM BIO-3: Biological Monitor Approval. Caltrans will submit the names and qualifications of the biological monitor(s) for USFWS and CDFW approval prior to initiating construction activities for the proposed project. Only agency-approved biological monitors would implement the monitoring duties outlined in the BO.

AMM BIO-4: Preconstruction Surveys. Prior to initiation of construction activities at the eight MVP installation locations, preconstruction surveys will be conducted by an agency-approved biologist for listed species. These surveys will consist of walking surveys of the project limits and, if possible, accessible adjacent areas within at least

50 feet of the project limits. The biologist(s) will investigate all potential cover sites. This includes thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, and debris. Native vertebrates found in the cover sites within the project limits will be documented and relocated to an adequate cover site in the vicinity. The entrances and other refuge features within the project limits will be collapsed or removed following investigation. Preconstruction surveys should identify San Joaquin kit fox habitat features on the project site, evaluate use by kit foxes, and, if possible, assess the potential effects to kit foxes by the proposed activity. If an occupied den is discovered within the project area, or within 100 feet of the project boundary, an exclusion zone of a minimum of 100 feet around the den will be established. If the minimum exclusion zone cannot be met, then USFWS must be contacted. If a natal/pupping den is discovered within the project area or within 200 feet of the project area boundary, the agencies will be notified immediately.

AMM BIO-5: Biological Monitoring. The agency-approved biologist(s) will be on-site during initial ground-disturbing activities at the eight MVP installation locations and thereafter as needed to fulfill the role of the approved biologist as specified in project permits. The biologist(s) will keep copies of applicable permits in their possession when on site. Through the Resident Engineer or their designee, the agency-approved biologist(s) shall be given the authority to communicate either verbally or by telephone, email, or hardcopy with all project personnel to ensure that take of listed species is minimized and permit requirements are fully implemented. Through the Resident Engineer or their designee, the agency-approved biologist(s) shall have the authority to stop project activities to minimize take of listed species or if he/she determines that any permit requirements are not fully implemented. If the agency-approved biologist(s) exercises this authority, the agencies shall be notified by telephone and email within 48 hours.

AMM BIO-6: Listed Species On-site. The Resident Engineer will immediately contact the agency-approved project biologist(s) if a San Joaquin kit fox, CRLF, or CTS is observed within a construction zone. The Resident Engineer will suspend construction activities within a 50-foot radius of the animal until the animal leaves the site voluntarily. If a San Joaquin kit fox, CRLF, or CTS is observed, an agency-approved biological monitor may relocate the animal if an agency-approved protocol for removal has been established. The agency-approved biological monitor will follow established USFWS protocols for relocation.

AMM BIO-7: Work Window for CTS and CRLF. All work within suitable habitat for CTS and CRLF will occur between April 15 and October 15, when the species are

unlikely to be active and there is less potential for an individual to enter the work area.

AMM BIO-8: Worker Environmental Awareness Training. All construction personnel will attend a mandatory environmental education program delivered by an agency-approved biologist prior to working on the project. The program would focus on the conservation measures that are relevant to employee's personal responsibility and would include an explanation as how to best avoid take of sensitive species. Distributed materials would include a pamphlet with distinguishing photographs of sensitive species, species' habitat requirements, compliance reminders, and relevant contact information. Documentation of the training, including sign-in sheets, would be kept on file and would be available on request.

AMM BIO-9: Prevention of Wildlife Entrapment. To prevent inadvertent entrapment of listed species during construction, excavated holes or trenches more than 1 foot deep with walls steeper than 30 degrees will be covered by plywood or similar materials at the close of each working. Alternatively, an additional 4-foot-high vertical barrier, independent of exclusionary fences, will be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional 4-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site biologist will immediately place escape ramps or other appropriate structures to allow the animal to escape, or the USFWS and/or CDFW will be contacted by telephone for guidance. The agencies will be notified of the incident by telephone and electronic mail within 48 hours.

AMM BIO-10: Environmentally Sensitive Area Fencing. Before the start of construction, ESAs, defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed, will be clearly delineated using temporary high-visibility fencing. Construction work areas will include the active construction site and all areas providing support for the project, including areas used for vehicle parking, equipment and material storage and staging, and access roads. The high-visibility fencing will remain in place throughout the duration of construction activities, will be inspected regularly, and will be fully maintained at all times. The final project plans will show all locations where the fencing will be installed and will provide installation specifications. The project Special Provisions and Notice to Bidders will clearly describe acceptable fencing material and prohibited construction-related activities, including vehicle operation,

material and equipment storage, access roads and other surface-disturbing activities within ESAs.

AMM BIO-11: Material Storage. CTS and CRLF are attracted to cavity-like structures such as pipes and may seek refuge under construction equipment or debris. They may become trapped or injured if such materials are moved. All construction pipes, culverts, or similar structures, construction equipment or construction debris left overnight within the work area will be inspected by the agency-approved biological monitor prior to being moved.

AMM BIO-12: Night Work. To the extent practicable, nighttime construction will be minimized.

AMM BIO-13: Night Lighting. Artificial lighting of the project construction area during nighttime hours will be minimized to the maximum extent practicable.

Mitigation Measures (MMs)

Caltrans proposes to include compensatory mitigation for potential impacts to species listed under FESA and CESA. To develop an appropriate mitigation proposal that meets the regulatory requirements of CEQA and Fish and Game Code (FGC) 2081, Caltrans proposes that compensatory mitigation in the form of habitat restoration and preservation will be provided on-site for temporary habitat impacts at a 1:1 ratio, and off-site at a 3:1 ratio for permanent habitat impacts.

MM BIO-1: Caltrans will compensate for the project's temporary impacts to CTS and CRLF habitat with on-site compensatory mitigation at a 1:1 ratio, totaling 0.06 acre.

MM BIO-2: Caltrans will compensate for the project's permanent impacts to CTS and CRLF habitat with 0.1 acre of off-site compensatory mitigation at a USFWS-approved conservation bank within Alameda County.

Appendix C. List of Acronyms and Abbreviations

Abbreviation	Definition
AB	Aggregate Base-Class 2
ADL	aerially deposited lead
AMM	Avoidance and Minimization Measure
APE	Area of Potential Effects
ARB	California Air Resources Board
BA	Biological Assessment
BC	black carbon
BMP	Best Management Practice
BO	Biological Opinion
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CE	Categorical Exclusion
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	methane
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CRLF	California red-legged frog
CTP	California Transportation Plan
CTS	California tiger salamander
DPS	Distinct Population Segment
DSA	Disturbed Soil Area
ESA	Environmentally Sensitive Area
EO	Executive Order
FED	Final Environmental Document
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
HMA	hot mix asphalt
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ITP	Incidental Take Permit
LCFS	Low Carbon Fuel Standard
LOC	letter of concurrence
MM	mitigation measure
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
ND	Negative Declaration
MPO	Metropolitan Planning Organization

MTC	Metropolitan Transportation Commission
MVP	maintenance vehicle pullout
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NES	Natural Environment Study
OCRS	Office of Cultural Resource Studies
PCE	Primary Constituent Elements
PM	post mile
PRC	Public Resources Code
RCEM	Road Construction Emissions Model
ROW	right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SLR	sea-level rise
SRA	State Responsibility Area
TMP	Traffic Management Plan
USC	United States Code
USDOT	Department of Transportation
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
WPCP	Water Pollution Control Plan

Appendix D. U.S. Fish and Wildlife Species List



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

April 09, 2020

Consultation Code: 08ESMF00-2019-SLI-3153

Event Code: 08ESMF00-2020-E-04937

Project Name: 4J940- Altamont Pass Roadside Safety Improvements

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2019-SLI-3153

Event Code: 08ESMF00-2020-E-04937

Project Name: 4J940- Altamont Pass Roadside Safety Improvements

Project Type: TRANSPORTATION

Project Description: The California Department of Transportation (Caltrans) Roadside Safety Improvement project aims to extend and pave gore areas and construct maintenance vehicle pullouts (MVPs) at 13 locations along Route 580 (I-580) and Route 205 (I-205). The project will improve maintenance worker safety by reducing the duration and frequency of maintenance worker exposure to freeway traffic as well as potential conflict with the traveling public. The project will involve grinding of pavement, trenching a maximum depth of 1 inch, and group disturbance.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.74064240849481N121.58300624713621W>



Counties: Alameda, CA

Endangered Species Act Species

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) <i>Masticophis lateralis euryxanthus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
San Bruno Elfin Butterfly <i>Callophrys mossii bayensis</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3394	Endangered
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Large-flowered Fiddleneck <i>Amsinckia grandiflora</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5558	Endangered
Palmate-bracted Bird's Beak <i>Cordylanthus palmatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1616	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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Appendix E. National Marine Fisheries Service Species List

From: [NMFSWCRCA Specieslist - NOAA Service Account](#)
To: [Baker, Carli@DOT](mailto:Baker_Carli@DOT)
Subject: Re: NMFS Species List Request: 43940 Roadside Safety Improvement Project
Date: Thursday, April 9, 2020 12:20:31 PM

EXTERNAL EMAIL. Links/attachments may not be safe.

Receipt of this message confirms that NMFS has received your email to nmfswcrca.specieslist@noaa.gov. If you are a federal agency (or representative) and have followed the steps outlined on the California Species List Tools web page (http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html), you have generated an official Endangered Species Act species list.

Messages sent to this email address are not responded to directly. For project specific questions, please contact your local NMFS office.

Northern California/Klamath (Arcata) 707-822-7201

North-Central Coast (Santa Rosa) 707-387-0737

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600

From: [Baker, Carli@DOT](mailto:Baker_Carli@DOT)
To: nmfs_wcrca.specieslist@noaa.gov
Subject: NMFS Species List Request: 4J940 Roadside Safety Improvement Project
Date: Thursday, April 9, 2020 12:20:00 PM

Hello,

Below you will find the results from a search of the NMFS Resources in California KMZ for the 4J940 project, which is located in the Altamont and Midway USGS 7.5 minute quadrangle.
This species list is requested by:

California Department of Transportation, District 4
111 Grand Ave, Oakland CA 94606
Attn: Carli Baker, Assoc. Environmental Planner, carli.baker@dot.ca.gov. 510-622-8799

Thank you for your time,

Carli Baker

Quad Name **Altamont**

Quad Number **37121-F6**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - X
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Midway**

Quad Number **37121-F5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH - **X**
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

--

Carli Baker

[She/her/hers](#)

Associate Environmental Planner, Natural Sciences
Office of Biological Sciences & Permits
Division of Environmental Planning and Engineering
California Department of Transportation - District 4
510-622-8799

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Appendix F. List of Technical Studies

Biological Assessment: Interstate 580/205 Roadside Safety Improvements December 201

Comments from the Air/Noise/Energy Branch. February 21, 2020.

Comments from the Hazardous Waste Branch. February 13, 2020.

Construction Greenhouse Gas (GHG) Emissions Analysis Memorandum. October 10, 2019.

Location Hydraulics Study. October 15, 2019.

Natural Environmental Study: Interstate 580/205 Roadside Safety Improvements. February 2020.

Office of Cultural Resource Studies (OCRS) Section 106 review for Vegetation Control and Maintenance Vehicle Pullout (MVP) Project on Interstate 205 (I-205) and Interstate 580 (I-580), Alameda County. July 9, 2019.

Paleontology and Geology Environmental Study/Memorandum. October 23, 2019

Scenic Resource and Visual Impact Assessment Analysis Memorandum. August 28, 2019.

Section 4(f) Evaluation for Alameda County Roadside Safety Improvements Project. August 6, 2019.

Water Quality Study. October 2019.