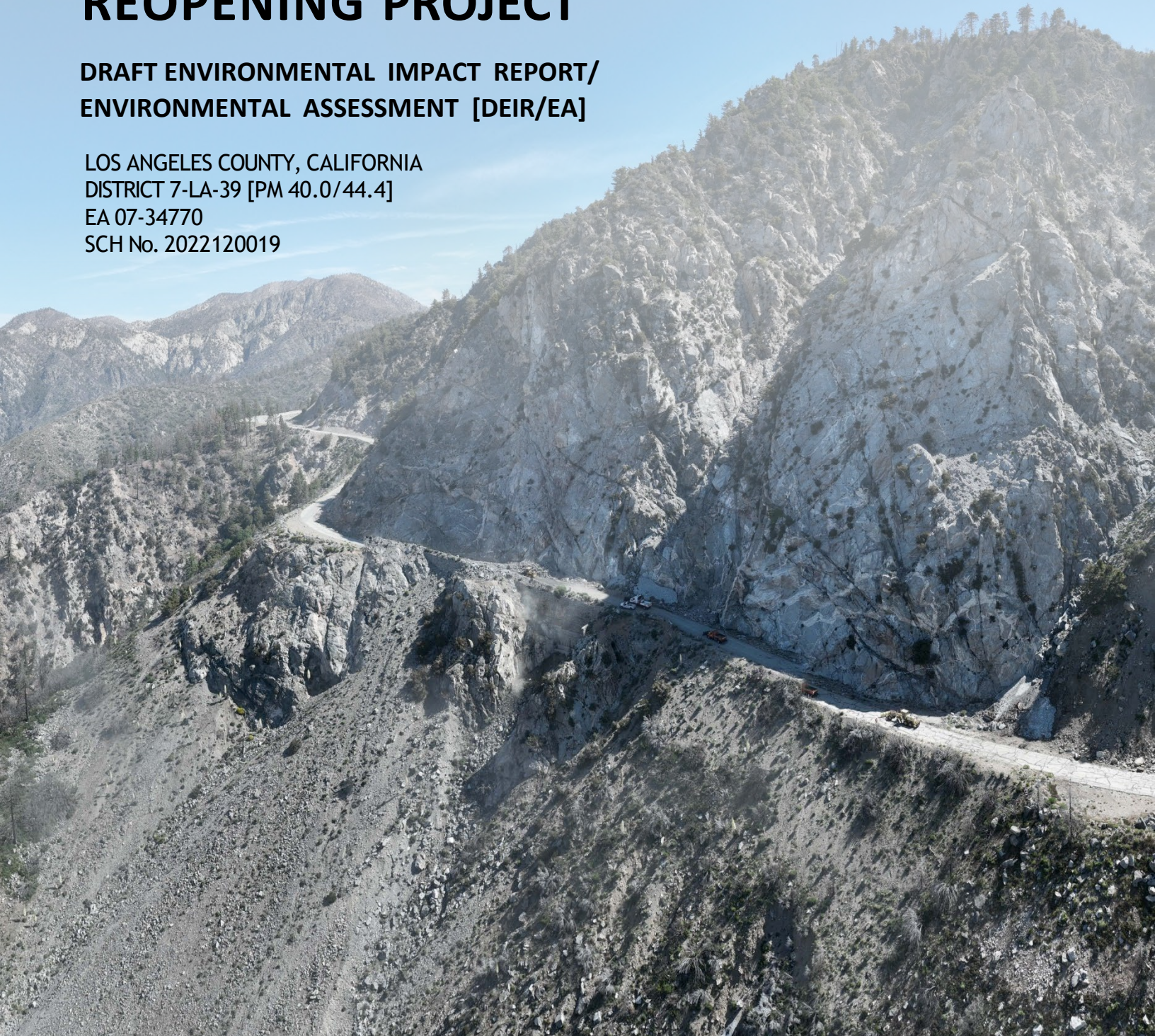


CALIFORNIA STATE ROUTE 39 (SAN GABRIEL CANYON ROAD) REOPENING PROJECT



**DRAFT ENVIRONMENTAL IMPACT REPORT/
ENVIRONMENTAL ASSESSMENT [DEIR/EA]**

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7-LA-39 [PM 40.0/44.4]
EA 07-34770
SCH No. 2022120019



Prepared by the California Department of Transportation

This environmental review, consultation, and any other action required in accordance with applicable Federal Laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.



February 2024

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CALIFORNIA STATE ROUTE 39 (SAN GABRIEL CANYON ROAD) REOPENING PROJECT

LOS ANGELES, CALIFORNIA
DISTRICT 7 –LA–39 (PM 40.0/44.4)
EA 07 34770

Draft Environmental Impact Report/ Environmental Assessment

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

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.



February 2024

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State Route 39 (SR-39/San Gabriel Canyon Road) Reopening Project

State Route 39, from North of Crystal Lake Road to State Route 2 (Angeles Crest Hwy.) in the Angeles National Forest, Los Angeles County
Post Mile 40.0 to 44.4

Draft Environmental Impact Report/Environmental Assessment

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

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

THE STATE OF CALIFORNIA
Department of Transportation

Kelly Ewing-Toledo

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02/08/2024

Date

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Summary

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 United States Code (USC) 327, for more than 5 years, beginning on July 1, 2007 and ending on September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the California Department of Transportation (Caltrans) entered into a Memorandum of Understanding (MOU) pursuant to 23 USC 327 (National Environmental Policy Act [NEPA] Assignment MOU) with Federal Highway Administration (FHWA). The NEPA Assignment MOU became effective on October 1, 2012 and was renewed on May 27, 2022 for a term of 10 years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 Categorical Exclusion Assignment MOU, projects excluded by definition, and specific project exclusions.

Caltrans proposes to restore and reopen a segment of State Route (SR) 39 that has been closed to public traffic since 1978 due to massive mud and rockslides caused by heavy rains and floods. This project is located near the northern terminus of SR-39 from Post Mile (PM) 40.0 to PM 44.4, within the Angeles National Forest (ANF), in Los Angeles County. Since 1990, the Caltrans Division of Maintenance has rebuilt the road at Snow Spring, made additional minor repairs, and performed recurring debris removal to make the road traversable by Caltrans, U.S. Forest Service (USFS), and emergency-response personnel. However, it has remained closed to public access due to the continued threat of falling rocks.

Purpose

The purpose of this project is to reopen the closed segment of SR-39, thereby restoring access between Interstate 210 and SR-2. The project seeks to preserve the integrity of the existing facility while preventing further deterioration of the highway and its surrounding environs per Section 100 of the California Streets and Highway Code. The proposed project would also provide access for Caltrans, USFS, and emergency-response personnel, as well as opportunities for multi-modal use.

Need

Restoring and reopening the closed segment of SR-39 would bring this roadway into compliance with the California Streets and Highway Code (Sections 91 and 100), which mandates that Caltrans shall improve and maintain state highways as provided in the code, and that Caltrans shall monitor the cumulative impacts of fragmented gaps in the State Highway System to identify safety and long-term maintenance issues.

Implementation of the proposed project would also assist in satisfying goals and policies as outlined in the ANF Land Management Plan through an enhancement of community protection and a reduction in the risk of loss of human life, structures, improvements, and natural resources from wildland fire and subsequent floods.

The geology and slope instability continue to degrade current conditions, producing flooding of the roadway, landslides, erosion, and falling rocks. Portions of the existing 4.4-mile-long “gap” face slope erosion/failures due to storm events, causing retaining wall and roadway failure. Several landslides have occurred within the project limits, and various locations along the project are susceptible to frequent rockfall. Existing stormwater inlets are buried by the rockfall, further causing roadway and slope erosion to occur. Further deterioration of the existing roadway and walls is expected if they are not properly repaired or rehabilitated. Cumulatively, these problems cause a safety hazard for maintenance workers and emergency service personnel that use the route. With implementation of the proposed project, these safety concerns would be addressed, and a regional traffic circulation connection would be restored.

Proposed Alternatives

The following design alternatives have been developed by a multi-disciplinary team to achieve the project purpose and need, while avoiding or minimizing environmental impacts. They include a variety of elements that provide varying degrees of improvements and levels of access.

Alternative 1 – No-Build Alternative: The “No-Build Alternative” proposes to maintain the existing conditions of the roadway without any improvements. The current safety concerns would not be addressed.

Alternative 2 – Evacuation Route (Minimum Build): This alternative proposes limited roadway restoration. Access to the roadway would be strictly for emergency service responders and maintenance access. The roadway would continue to be closed to public highway traffic.

Alternative 3 – Active Transportation Access (Shuttle and Bicycle Path Facilities): This alternative proposes to restrict access to the roadway to recreational related activities

(e.g., enjoying vista views, hiking, biking, picnicking, camping, fishing, etc.) and allow only an onsite shuttle service to operate and ferry national forest visitors through the restricted roadway. The road would remain closed to public vehicles. This alternative also proposes two sustainable public parking areas (at PMs 40.0 and 44.4) to be constructed for visitors to park their vehicles and bicycles. The main structural features include three viaduct structures, a rock-shed, five soldier pile retaining walls, six rock catchment walls, and repairs to several retaining walls that are in poor condition.

Alternative 4 – Full Opening: This alternative proposes to rehabilitate and reopen the closed segment of SR-39 to public traffic and provide unrestricted access and a through-traffic connection between Interstate 210 (Foothill Freeway) and SR-2 (Angeles Crest Highway). A roundabout feature is also proposed at the SR-2/SR-39 junction. No parking lots are proposed under this alternative. The main structural features include five viaduct structures, a rock-shed, five soldier pile retaining walls, four rock catchment walls, and repairs to several retaining walls that are in poor condition.

A full description of the alternatives is provided in Section 1.4, *Alternatives*.

Joint NEPA/CEQA Document

The proposed project is a joint project by Caltrans and the FHWA and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and NEPA. Caltrans is the lead agency under both NEPA and CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, conducted by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a "lower level" document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact

(FONSI) or require an Environmental Impact Statement for compliance with NEPA. A Notice of Availability of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

Project Impacts

Table S-1, below, summarizes the impacts under each environmental resource reviewed by this Environmental Document. The table identifies the level of impact for each of the resources with proposed Avoidance, Minimization, and/or Mitigation Measures that would reduce or avoid that impact. Please refer to each of the resource sections in Chapter 2 for a deeper analysis and explanation of impacts.

Table S-1 Summary of Impacts and Avoidance, Minimization, and/or Mitigation Measures

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
HUMAN ENVIRONMENT					
Land Use - Consistency with State, Regional, and Local Plans/Programs	No impact.	Consistent with <u>some</u> goals and objectives, but inconsistent with others. Would improve function for emergency access and evacuations. Would not improve recreational access.	Consistent with <u>most</u> goals and objectives. Improvements in safety and roadway integrity would be in compliance with California Streets and Highways Code. Would offer multimodal access to recreation opportunities.	Consistent with <u>most</u> goals and objectives. Improvements in safety and roadway integrity would be in compliance with California Streets and Highways Code. Would offer multimodal access to recreation opportunities.	None.
Coastal Zone	No impact.	No impact. The project is not within the Coastal Zone.			None.
Wild and Scenic Rivers	No impact.	No impact. There are no wild or scenic rivers within or near the project vicinity.			None.
Parks and Recreational Facilities	No impact.	Would improve roadway conditions for emergency and maintenance vehicles, which would benefit recreational areas through improved response times. No new roadway easements or relocation of recreational facilities would be required.	Would improve roadway conditions for emergency and maintenance vehicles, which would benefit recreational areas through improved response times. Caltrans would need to obtain an additional roadway easement from USFS for the rehabilitation and construction of parking lots affecting the Islip Saddle Day Use Area, a Section 4(f) resource. Impacts to this resource are considered de minimis.	Would improve roadway conditions for emergency and maintenance vehicles, which would benefit recreational areas through improved response times. Caltrans would need to obtain an additional roadway easement from USFS for the rehabilitation and construction of parking lots affecting the Islip Saddle Day Use Area and the roundabout. Construction of the roundabout would cause permanent impacts to the	PR-1 and PR-2: will minimize direct impacts to the Islip Saddle Day Use Area Parking Lot.

Summary

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
				Islip Saddle Day use Area, a Section 4(f) resource. Impacts to this resource are considered de minimis.	
Farmlands	No impact.	No impact. There are no farmlands within the project area or vicinity.			None.
Timberlands	No impact.	No impact. There are no areas within the project limits that are actively managed for timber production nor designated as Timber Production Zones.			None.
Growth	No impact.	No impact. There would be no influence on growth in the surrounding communities.			None.
Community and Character Cohesion	No impact.	No impact. There would be no changes to travel options for the general public.	Could attract more visitors to the ANF, but the diversion of trips from SR-2 to SR-39 is expected to be minimal and have a negligible effect on economic conditions in adjacent communities.	Could attract more visitors to the ANF from the San Gabriel Valley. Visitors to the ski resort would likely continue to access it via SR-2 through Wrightwood. There would likely be a negligible effect on economic conditions in adjacent communities.	None.
Relocations and Real Property Acquisition	No impact.	No impact. The project does not propose to relocate persons temporarily or permanently from the surrounding project area.			None.
Environmental Justice	No impact.	No impact.	Would provide improved access to recreational opportunities within the ANF by reducing travel times for all residents. There would be no disproportionately adverse effect on minority or low-income populations.	Would provide improved access to recreational opportunities within the ANF by reducing travel times for all residents. There would be no disproportionately adverse effect on minority or low-income populations.	EJ-1: Would help ensure that Caltrans is actively and effectively engaging all segments of the affected community.

Summary

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
			The shuttle service would likely benefit a greater proportion of low-income residents.		
Utilities/Emergency Services	No impact.	No impact on utilities. Would provide improved access for emergency personnel and services to the currently closed portion of SR-39. However, the gates would remain closed and would continue to slow access.		No impact on utilities. Would reopen the closed segment of SR-39 and allow unrestricted access to all through-traffic, fully restoring access to emergency personnel and services.	PF-UES-2: All temporary ramp and arterial roadway closures and detour plans will be coordinated with law enforcement, fire protection, and emergency medical service providers.
Traffic and Transportation/Pedestrian and Bicycle Facilities	No impact.	Would continue to restrict public access and no changes to traffic patterns would occur.	Would improve access for pedestrians, bicyclists, and public transportation.	Would improve access for pedestrians, bicyclists, and public transportation. Would also allow room for drivers to pass bicyclists and provide unrestricted access to the entirety of SR-39 for all vehicle types.	TT-1 and TT-2: Would help minimize any potential temporary traffic impacts.
Visual/Aesthetics	No impact.	Would have low visual impact to the character and quality of the existing environment. Project features are similar to existing features.	Would have a moderate to high visual impact because it proposes three viaducts and a rock shed that change the visual character and quality of the environment. Viewer response would be moderate-low. The overall visual impact would be moderate.	Would have a moderate impact because it proposes a roundabout, five viaducts, wildlife exclusionary fencing, and a rock shed that would change the visual character and quality by interrupting the continuity of the natural environment. Viewer response would be moderate-	The following measures would help offset visual impact as a result of the proposed project: VIS-1 through VIS-19.

Summary

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
				low. Overall visual impact would be moderate.	
Cultural Resources	No impact	The proposed project finding is <i>No Historic Properties Affected</i> . None of the proposed alternatives would affect the French Wall’s integrity or structure. The build alternatives are not expected to affect any Section 4(f) historic properties.			PF-CUL-1 and PF-CUL-2: These project features would avoid/minimize impacts to cultural resources if they are found on-site.
PHYSICAL ENVIRONMENT					
Hydrology and Floodplain	No impact.	No impact. The project is outside the limits of any flood hazard zone as stated by the Federal Emergency Management Agency.			None.
Water Quality and Stormwater Runoff	No impact.	A total Disturbed Soil Area of about 14.9 acres would result due to the construction of various structures. The New Impervious Surface is estimated to be 14.88 acres. Impacts to water quality and stormwater runoff would be minimal.			WQ-1 through WQ-11: Design Best Management Practices (BMPs), implementation of a Stormwater Pollution Prevention Plan, and compliance with Caltrans’ National Pollutant Discharge Elimination System permit and Stormwater Management Plan would minimize impacts.
Geology/Soils/Seismicity/Topography	No impact.	Though the proposed project would not pose any major impacts related to geologic, erosion, or seismic activities, a rockfall hazard risk exists along the adjacent slopes throughout the closed segment of SR-39. Several measures, structures, and			GEO-1 through GEO-13: Rockfall mitigation measures and

Summary

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
		recommendations have been proposed for the build alternatives to mitigate these risks. Rockfall and geologic hazards will be minimized with the implementation of these measures.			<p>proposed structures would reduce hazards and result in safe and reliable operation of the roadway.</p> <p>GEO-14: Revegetation of disturbed areas would minimize erosion and runoff after construction.</p>
Hazardous Waste/Materials	No impact.	Impacts are expected to be minimal. Further testing is required to determine if hazardous materials are present within the project area. Standard measures would be implemented to ensure that any risk to the environment and public is minimized.			<p>HAZ-1: Conducting a Site Investigation will assess risk.</p> <p>HAZ-2 through HAZ-5: Preparation of, and adhering to, hazardous waste management plans will ensure proper safety and disposal protocols are utilized.</p>
Air Quality	No impact.	The proposed project is in conformance with federal, state, and regional air quality standards, but some minimal effects may be encountered during construction. Most of the impacts to air quality will be short-term and therefore, would not result in adverse or long-term conditions. Implementation of BMPs would reduce any air quality impacts resulting from construction activities.			AQ-1 through AQ-14: Standard construction BMPs would minimize short- and long-term air quality impacts.
Noise and Vibration	No impact.	Construction activities would result in a substantial, temporary increase in noise levels of as much as 42 to 64 A-weighted decibels (dBA) adjacent to the roadway. There are no “sensitive receptors” in the area, but this could adversely impact wildlife. Noise levels would be reduced to an acceptable level by using standard noise management			NOI-1 through NOI-5: Standard construction BMPs would minimize the temporary

Summary

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
		BMPs and adhering to applicable local, state, and federal regulations. The effect on operational noise levels would be minimal.			increase in noise levels.
Energy	No impact.	Energy consumption during construction would be temporary and minimized by using Caltrans standard measures.	Energy consumption during construction would be temporary and minimized by using Caltrans standard measures. Possible minimal increase in operational energy consumption through increased visitation of the ANF. This would likely be offset by reducing out-of-direction travel.		E-1: Use fuel-efficient vehicles during construction.
BIOLOGICAL ENVIRONMENT					
Natural Communities	No impact.	A total of 2.9 acres of permanent impacts and 4.5 acres of temporary impacts would occur to the five natural plant communities on site.	A total of 4.6 acres of permanent impacts and 5.7 acres of temporary impacts would occur to the five natural plant communities on site. There are no identified wildlife corridors in the project area. However, increased traffic and human disturbance could hinder wildlife movement, particularly for Nelson’s bighorn sheep. Alternative 4 would result in a greater increase in traffic than Alternative 3 but would also incorporate addition avoidance and minimization measures.	A total of 5.4 acres of permanent impacts and 6.3 acres of temporary impacts would occur to the five natural plant communities on site. There are no identified wildlife corridors in the project area. However, increased traffic and human disturbance could hinder wildlife movement, particularly for Nelson’s bighorn sheep. Alternative 4 would result in a greater increase in traffic than Alternative 3 but would also incorporate addition avoidance and minimization measures.	NC-1 and NC-2: Implement water quality BMPs and replant temporarily impacted areas. NC-3 and NC-4: moderate effect of traffic and human disturbance on wildlife. NC-5: Viaducts to function as wildlife crossings in Alternatives 3 and 4.
Wetlands and Other Waters	No impact.	Minimal impact to Waters of the U.S. and State. Wetland delineation is pending.			WW-1 through WW-3: Revegetation and

Summary

Potential Impact	Alternative 1 (No-Build)	Alternative 2	Alternative 3	Alternative 4	Avoidance, Minimization, and/or Mitigation Measures
					compensation for impacts to waters and/or wetlands. PF-WQ-1 through PF-WQ-4: Water quality BMPs.
Plant Species	No impact.	No impact. There are no special status plant species or their habitat within the project area.			None.
Animal Species	No Impact.	Minimal temporary impacts to wildlife due to noise and human/vehicle presence during construction. Potential adverse impacts to Nelson’s bighorn sheep through habitat modification and vehicle collisions.			AS-1 through AS-3: Preconstruction surveys and biological monitoring during construction. AS-4 through AS-6: Signage and modified road opening to minimize impacts to Nelson’s bighorn sheep. Mitigate impacts that do occur.
Threatened and Endangered Species	No impact.	Threatened and endangered species are not expected to be present. But rockslides and erosion could occur during construction and impact the habitat of southwestern willow flycatcher, least Bell’s vireo, and southern mountain yellow-legged frog downslope from the project.			AS-1: Pre-construction surveys. PF-WQ-1 through PF-WQ-4: Water quality BMPs.
Invasive Species	No impact.	Small amounts of invasive species will be removed during construction. There is a potential for adverse impacts due to propagation of non-native invasive species following soil disturbance.			IS-1 through IS-3: Minimize spread of invasive species and replant disturbed areas with native species.

Coordination with Public and Other Agencies

Caltrans filed a Notice of Preparation (NOP) for the Draft EIR/EA with the State Clearinghouse on December 1, 2022. The filing on the NOP began a 30-day scoping period that extended through January 16, 2023. One virtual scoping meeting was held on December 15, 2022.

Concerns that have been brought to the Project Delivery Team’s attention through coordination with agencies and the public include several factors that will require special environmental consideration. The proposed project is located in the ANF and therefore will require extensive coordination with the USFS. Two alternatives (Alternatives 3 and 4) propose the construction of several viaducts adjacent to the existing roadway, which will impact land outside of the existing right-of-way and Special Use Permit (SUP) agreement with the USFS. Coordination with the USFS during the Design Phase would need to occur to amend the existing SUP and obtain a permanent easement for the proposed structures outside of the existing right-of-way. Additionally, the Nelson's bighorn sheep, a USFS Sensitive Species and California Department of Fish and Wildlife Fully Protected Species, is known to occur in the project area. Further coordination with these agencies would be required to ensure a minimal level of impact is achieved. Additional information about project concerns and public scoping and results of the outreach can be found in Chapter 4, *Comments and Coordination*.

The necessary permits, reviews, and approvals for construction of the proposed project are presented in the following table:

Agency	Permits, Licenses, Agreements, and Certifications	Status
U.S. Army Corps of Engineers	Section 404 Permit	To be obtained during the Design phase
Regional Water Quality Control Board & State Water Resources Control Board	Section 401 Water Quality Certification	To be obtained during the Design phase
Regional Water Quality Control Board & State Water Resources Control Board	Section 402 Permit (National Pollutant Discharge Elimination System)	To be obtained during the Design phase
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained during the Design phase
California Department of Fish and Wildlife	Incidental Take Permit	To be obtained during the Design phase
U.S. Forest Service	U.S. Department of Transportation Highway Easement or Special Use Permit	To be obtained during the Design phase
State Historic Preservation Officer	Finding of No Historic Properties Affected pursuant to Section 106 PA Stipulation IX.A	Obtained on December 20, 2023

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Chapter 1 Proposed Project

1.1 Introduction

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

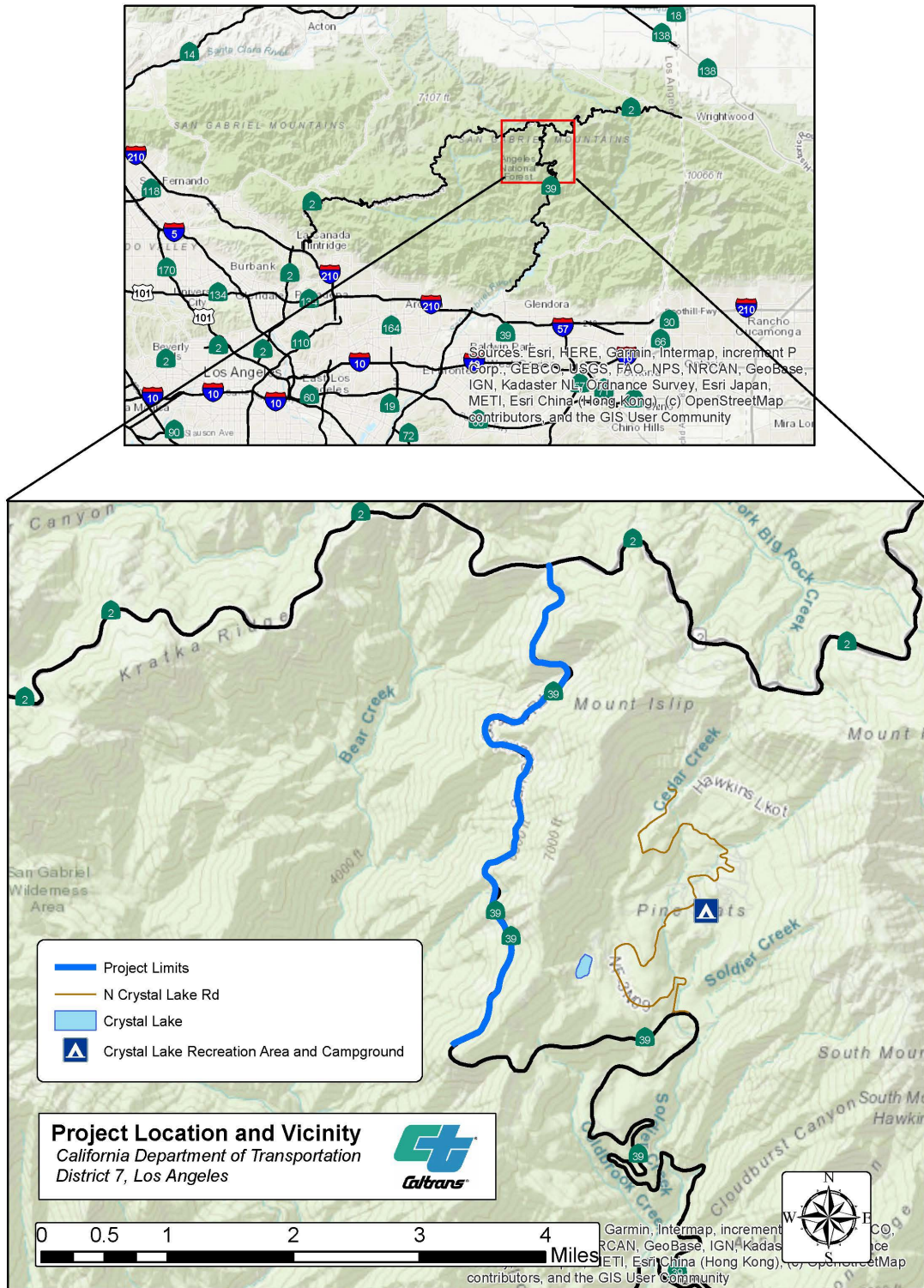
Caltrans proposes to rehabilitate and reopen a 4.4-mile-long segment of State Route (SR) 39 from Post Mile (PM) 40.0 to PM 44.4, within the Angeles National Forest (ANF), in Los Angeles County. Caltrans holds an easement within the ANF that extends 66 feet both ways from the centerline (132 feet total width) of the SR-39 roadway under a Special Use Permit (SUP) authorized by the United States Forest Service (USFS). This segment has been closed to public highway traffic since 1978 due to extensive and recurring damage as a result of natural erosion and rockfall on the adjacent steep slopes. Since 1990, the Caltrans Division of Maintenance has rebuilt the unstable roadway at Snow Spring (an area prone to rockfall due to eroding slopes), cleaned drainage culverts, and built a dirt berm to prevent sediment and other debris from entering the highway. These activities, along with periodic maintenance and debris removal (including monthly rock and debris clearing at “Headache Valley”—a section of the roadway that experiences rockfall onto the roadway on a regular basis), have allowed the entire segment to be traversable by Caltrans, USFS, and emergency-response personnel. It is not, however, considered safe enough for routine public use.

The rehabilitation and reopening of this 4.4-mile-long segment of SR-39 would restore a vital traffic circulation connection between points to the north on SR-2 (Angeles Crest Highway) and points to the south in the San Gabriel Valley along Interstate 210 (Foothill Freeway, or I-210). It would enhance recreational opportunities within the ANF, improve access to local mountain communities, and improve safety and response times for the USFS, the Los Angeles County Sheriff’s Department, and others involved in fire suppression and search and rescue activities. It would also open a critical route that could be used to safely evacuate people in the event of a forest fire, earthquake, or other disaster. The route would improve access for patrons to the numerous recreational areas within the ANF, while potentially providing economic benefits to the associated parks and businesses in the area.

The restored connection would be accessible throughout the year, with seasonal closures during times of inclement weather. These closures would likely occur during the winter and early-spring seasons. Figure 1.1-1 shows the project location and vicinity.

The Caltrans 2020 State Highway Operation and Protection Program (SHOPP) was prepared in accordance with California Government Code Section 14526.5, Streets and Highways Code Section 164.6, and the strategies outlined in Caltrans' Policy for Management of the SHOPP. The 2020 SHOPP is a 4-year program that funds projects related to repair and preservation, emergency repairs, safety improvements, and some highway operational improvements, as well as the preservation of other transportation facilities on the State Highway System (SHS). In 2020, the proposed project was included as part of a lump sum category LALS02, which is a SHOPP funding category for roadway rehabilitation (protective betterments). In 2023 the Project Change Request was approved to extend the project into the 2024 SHOPP Long Lead cycle (2026 SHOPP cycle). Currently, the project has been programmed in the 2024 SHOPP Long Lead cycle under Program 20.XX.201.150 (Roadway Protective Betterment). The future need of the remaining funding components is set aside under 20.XX.201.2XX (Future Need). Capital Outlay Support (COS) Costs for the Design Phase, Right-of-Way, and Construction will be determined and programmed after the completion of the Project Approval and Environmental Document (PA&ED) phase. The project is identified in the latest conforming Federal Transportation Improvement Program (FTIP) as a lumpsum category of LALS02 for Pavement Resurfacing and/or Rehabilitation.

Figure 1.1-1 Project Location and Vicinity Map



1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to restore access and provide a through-traffic connection between I-210 and SR-2. This project would enhance access for fire suppression forces, search and rescue, and emergency response personnel, including the USFS and the Los Angeles Sheriff's Department. It also aims to improve the safety and operation of the roadway while preserving the integrity of the existing facility and its surrounding environment.

Consistent with Caltrans Complete Streets policy (DD 64-R2), this project would also improve access for pedestrians, bicyclists, and public transportation along the 4.4-mile project limits by providing greater access to a variety of sustainable recreational, educational, and conservation opportunities for those who do not use personal vehicles. Proposed improvements would also help with reducing vehicle congestion, addressing parking capacity issues, and improving public safety.

1.2.2 Need

The California Streets and Highway Code (Section 91 and 100) mandates that Caltrans shall improve and maintain state highways, as provided in the code. It also requires Caltrans to monitor the cumulative impacts of fragmented gaps in the SHS to identify safety and long-term maintenance issues. Restoring and reopening the closed segment of SR-39 would restore the regional traffic connection between I-210 and SR-2 (i.e., eliminate the gap in the SHS), provide another option for accessing remote areas of the San Gabriel Mountains, and bring this roadway into compliance with the Streets and Highways Code.

There is also a need for an alternate, more direct route for motorists driving between the San Gabriel Valley and Wrightwood or communities in the High Desert; currently, motorists driving from the San Gabriel Valley must either drive west on I-210 and then take SR-2 north toward Wrightwood, or drive east on I-210 to I-15 north and then SR-138 north before connecting to SR-2 west to Wrightwood. These circuitous (indirect) routes increase travel times, fuel consumption, and vehicle emissions, including greenhouse gases.

Implementation of the proposed project would also assist in satisfying goals and policies as outlined in the Angeles National Forest Land Management Plan (ANFLMP) through an enhancement of community protection and a reduction in the risk of loss of human life, structures, improvements, and natural resources from wild land fire and subsequent floods. The proposed project would also provide enhanced access for the Los Angeles

County Sheriff's Department and other emergency personnel in search and rescue activities and in reducing response times.

The local geology and slope instability continue to impede necessary water flow and occasionally cause extreme flooding of the roadway. The existing roadway on this segment of SR-39 is most degraded at the original drainages, which have reached their holding capacities and continue to cause excessive flooding and erosion. The current conditions are continuing to degrade to such a level that they pose a safety hazard to maintenance crews and other users of the facility. Caltrans maintenance crews currently work in perilous conditions with the constant threat of rocks and boulders falling onto vehicles or personnel. Ultimately, these volatile conditions create a safety hazard for highway maintenance workers who often perform duties within the most vulnerable rockfall areas. With the implementation of the proposed project, these safety concerns would be addressed via rehabilitation of the roadway and its appurtenant facilities.

1.2.3 Capacity, Transportation Demand, and Safety

The current 4.4-mile-long segment of SR-39 from PM 40.0 to PM 44.4 has been closed to public highway traffic since 1978. Supporting traffic data is limited due to the nature of the proposed project (i.e., opening a closed segment of highway) and the amount of time that has passed since the roadway was passable and operable. In 1977, the Average Annual Daily Traffic (AADT) on the segment of SR-39 between Crystal Lake Road and SR-2 was 200 vehicles. Although no recent traffic data exists within the project limits, a more recent traffic count from the 2016 Traffic Volumes on California State Highways recorded an AADT of 1,850 vehicles at the lower portion of SR-39 (PM 25.7) and an AADT of 150 vehicles at Crystal Lake Road (PM 38.1). As part of the 2009 Environmental Impact Report/Environmental Assessment for the SR-39 Rehabilitation/Reopening Project, the Los Angeles Area Regional Transportation Study 2030 Regional Transportation Plan modeling was performed and projected an AADT of 2,876 vehicles for the year 2030, assuming the flow of traffic continued through the closed segment of SR-39 to SR-2. There are no available records for the Traffic Accident Surveillance and Analysis System for this segment of SR-39 because the closure of this segment predates the implementation of this monitoring system.

However, a Vehicle Miles Traveled (VMT) analysis dated November 1, 2023 was conducted by Caltrans Division of Planning. Preliminary analysis shows a forecasted daily volume of 1,542 on SR-39 south of SR-2 by 2045. The analysis showed no discernable peak period, and no induced travel is anticipated.

System Safety Improvements

This project proposes to include several safety features to address the unsafe conditions of the current roadway. One of the safety needs includes safety from falling rocks and debris from the eroding cliff sides. Many areas also require a Midwest Guardrail System (MGS) to guard against steep cliff drop-offs that are adjacent to the roadway. The roadway itself is also in very poor condition and is heavily deteriorated, which makes it unsafe to host public traffic in its current condition. The list below highlights all of the proposed project elements that will address the project's safety concerns.

Safety improvements include the following:

- Rehabilitation of roadway (Alternatives 2, 3, and 4)
- Repair of retaining walls (Alternatives 2, 3, and 4)
- Installation of retaining walls (Alternatives 2, 3, and 4)
- Installation of MGS (Alternatives 3 and 4)
- Installation of catchment walls (Alternatives 3 and 4)
- Installation of viaducts/wildlife crossings (Alternatives 3 and 4)
- Installation of a rock shed (Alternatives 3 and 4)
- Installation of signage every 0.25 mile to warn shuttle service of potential wildlife crossing areas (Alternative 3)
- Installation of continuous barrier fencing (Alternative 4)
- Construction of a roundabout at the SR-39/SR-2 junction (Alternative 4)

Roadway Deficiencies

The current roadway design accommodates two travel lanes in each direction. As a result of being closed for nearly 40 years, the striping on this segment is nearly nonexistent, the road surface conditions are heavily deteriorated, and many standard roadway and safety features that modern highways possess are absent. The natural erosion of the steep cliffsides on the eastern side of the roadway causes major safety concerns due to rocks and other large debris that regularly fall from the mountain and create blockages on the roadway. However, drainage system blockages and the lack of storm drain improvements accelerate the erosion process in this area because the blockages interrupt the natural flow of stormwater, which causes further damage to the

road and adjacent cliffsides. More information regarding how the physical characteristics of the roadway and surrounding environment are affected by natural elements can be found in Chapter 2. As the roadway currently exists, it is unable to support any active public traffic due to its current deteriorated state and roadway deficiencies.

Maintenance Problems

Rockfall from eroding cliffs is the main safety concern that Caltrans, USFS, and emergency-response personnel are faced with when navigating this segment of SR-39. Rockfall and debris often cover the road and create blockages that prevent Caltrans, USFS, and emergency-response personnel from passing. Rocks, dirt, and debris on the road make it difficult for maintenance crews to transport large machinery, equipment, and trucks through this segment. Regular maintenance on this segment of SR-39 is needed to keep the roadway free of debris and to prevent further erosion of the roadway, steep cliffs, and valleys that surround the project limits. Monthly maintenance and cleanup at “Headache Valley” and Snow Springs is necessary because these sections of the highway regularly experience rockfall onto the roadway. Without regular debris cleanups, the road would be inaccessible to Caltrans, USFS, and emergency-response personnel.

Projected Land Use Plan Changes

The project area is within a designated Developed Area Interface, which includes roadways and areas adjacent to development or concentrated use areas that are managed for motorized public access. There would be no change to land uses within or adjacent to the project area. Development in the project area’s vicinity is sparse and is limited to the necessary infrastructure needed to access and enjoy the scenic and recreational opportunities of the ANF. No residences or private in-holding properties are located within the project area. The nearest residential structures are recreational cabins permitted under SUPs with the USFS; the cabins are located near Soldier Creek and the North Fork San Gabriel River, approximately 1.5 to 2.0 miles southeast of the project limits. No additional development is anticipated within the project area other than minor roadway and roadside features rehabilitation projects, as shown in Table 1.2-1 below.

1.2.4 Transportation Demand Management Strategies

A White Paper Analysis was prepared in June 2023 to consider the viability of a shuttle service for SR-39. The analysis included research efforts that consisted of a broad review of relevant background literature related to existing shuttle services in outdoor/recreational-based settings, along with a detailed examination of several of

those services. These relevant studies of shuttle systems that were operated by different entities in a variety of settings, in addition to the analysis of their major characteristics, helped serve as a foundation for the assessment of the potential viability of this Alternate Transportation System (i.e., the shuttle service) on SR-39.

One of the strategic decisions that Caltrans would have to make is to choose how the shuttle service would be implemented on SR-39, given the different models available. The broad options for shuttle operation include the following:

1. Caltrans owns and maintains the vehicles (i.e., shuttles) and operates the service.
2. Caltrans administers a concession or holds a service contract with a private entity or local government to operate the shuttle service.
3. Caltrans partners with a nonprofit organization or local government to operate the service. In this last option, Caltrans may or may not own the shuttle vehicles.

If the decision by Caltrans is to move ahead with an SR-39 shuttle concept, a prudent approach would be to start with a modest or smaller system that can be successfully managed and expanded in phases so that the shuttle service would attract growing support over time as people learn of the benefits, and also gain the support of partners and the community of prospective riders. In most of the successful shuttle systems that were reviewed in the White Paper Analysis, whether operated by the National Park Service or another entity, the business community and other environmental advocacy and nonprofit organizations played a prominent role in the Alternate Transportation System planning process. Therefore, careful and extensive planning would be required before a shuttle system is established.

1.2.5 Independent Utility and Logical Termini

FHWA regulations (23 Code of Federal Regulations (CFR) 771.111 (f)) require that projects being evaluated under NEPA must have “independent utility” and “logical termini”. A project is defined as having “independent utility” if it meets the project purpose and need, regardless of other future improvements in the project limits. “Logical termini” is defined as a project having rational endpoints for transportation improvements and the analysis of the potential environmental impacts of a proposed project. A project has independent utility and logical termini, as defined under 23 CFR 771.111(f), if all three of the following conditions are met:

1. The project connects logical termini and is of sufficient length to address environmental matters on a broad scope.

2. The project has independent utility or independent significance (i.e., it is usable and a reasonable expenditure of funds, even if no additional transportation improvements are made in the area).
3. The project does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Independent Utility

To meet the criteria for “independent utility”, this project must be usable even if no additional improvements in the area are made. The proposed project intends to restore access to the closed segment of SR-39 and improve safety and operation of the roadway for all users, including vehicles, bicyclists, pedestrians, and wildlife. This is a standalone project that is intended to restore access and provide a through-traffic connection between I-210 and SR-2. This project is not dependent on the implementation of other Caltrans projects on SR-39 prior to or subsequent to this proposed undertaking. The project would fulfill its purpose and need, benefit the local mountain and regional communities, and be a reasonable expenditure of funds even in the absence of other transportation improvement projects in the area.

Logical Termini

To meet the FHWA criteria for “logical termini”, this project must have rational end points for transportation improvements, and rational end points to address environmental impacts. The southern terminus of this project is located 1.8 miles north of Crystal Lake Road, and the northern terminus of the project is at the SR-2/SR-39 junction within the ANF in Los Angeles County. The length of the proposed project spans the 4.4-mile-long closed segment of SR-39 in its entirety, which creates rational end points for the project and the environmental evaluation.

Based on the discussion, and pursuant to 23 CFR 771.111(f), this project has both independent utility and logical termini.

1.3 Project Description

Caltrans proposes to rehabilitate and reopen a 4.4-mile-long segment of SR-39, from PM 40.0 (1.8 miles north of N. Crystal Lake Road) to PM 44.4 (intersection of SR-39 and SR-2). The project alternatives under consideration are described below.

1.4 Alternatives

1.4.1 Project Alternatives

This section describes the proposed action and the design alternatives that were developed by a multi-disciplinary team to achieve the project purpose and need while avoiding or minimizing environmental impacts. A total of four alternatives are being considered, including one no-build alternative (Alternative 1) and three build alternatives (Alternatives 2, 3, and 4). Each of the alternatives, with the exception of the Alternative 1, provides its own unique features and measures to avoid/minimize environmental impacts.

Alternative 1: No-Build Alternative

Under Alternative 1, the project would maintain the existing conditions of the roadway without making any additional improvements. This alternative would fail to meet the fundamental purpose and need to reopen the closed segment of SR-39 and would not resolve the ongoing safety concerns, which are central to the proposed project's objectives. Access to the closed segment of SR-39 would remain restricted to Caltrans (who would continue to perform minimal maintenance efforts), USFS, and emergency-response personnel. Safety enhancements and structural/operational improvements would not be implemented, and the closed segment of SR-39 would continue to degrade.

Alternative 2: Evacuation Route (Minimal Build)

Alternative 2 proposes limited roadway restoration. Under normal circumstances, access to the roadway would be restricted to Caltrans, USFS, and emergency-response personnel. The roadway from PM 40.0 to PM 44.4 would continue to be closed to public highway traffic but would be improved to better serve as an evacuation route during emergencies or natural disasters that require immediate evacuation off the mountain.

This alternative would include the following:

- Reconstruction of the pavement along the entire 4.4-mile-long segment.
- Striping of the new pavement to establish two 12' lanes and a 2' shoulder in each direction.
- Installation of shoulder backing to support the pavement edge and to prevent cracking.
- Restoration of the damaged drainage system at various locations.

- Installation of new culverts to facilitate stormwater runoff away from the roadway and to mitigate further erosion of the highway and its supporting retaining walls.
- Removal of roadside obstructions, including boulders, fractured rock, overgrown vegetation, fallen trees, and dirt/debris, to promote safe non-obstructive conditions for the excavation route.
- Repair of existing soldier pile walls and masonry retaining walls at various locations, as needed.
- Construction of six retaining walls where the existing road has been undermined and removal of failed gabion walls at two locations.
- Cutting into the rock at PMs 40.01, 40.13, 40.47, 41.66, 41.99, 42.20, 42.54, 42.62, 42.71, 42.84, 42.98, 43.71, 44.00, 44.28, and 44.36 to obtain a 24-foot-wide road width and to avoid construction of additional retaining walls.
- Continuation of regular maintenance and clearing of large debris and overgrown vegetation from the roadway on a monthly or as-needed basis.
- Inclusion and application of vegetation control measures, such as the replanting of native fire-resistant plants that may be removed due to construction, as needed.

In summary, Alternative 2 offers a minimal approach to providing the essential roadway improvements for this segment to function as an evacuation route during emergencies within the ANF. This alternative places an emphasis on meeting fundamental roadway safety standards to ensure a secure and efficient route for immediate evacuation off of the mountain.

Alternative 3: Active Transportation Access (Shuttle and Bicycle Path Facilities)

Alternative 3 proposes a unique approach to roadway access on the segment of SR-39 from PM 40.0 to PM 44.4, primarily focusing on recreation-related activities such as biking, hiking, picnicking, camping, fishing, and enjoying vista views. Central to this alternative is the introduction of an onsite shuttle service to transport visitors through the ANF, within the project limits. The proposed shuttle service would transport visitors through the restricted roadway while prioritizing recreational opportunities and wildlife safety, with well-marked wildlife crossing signage along the roadway. To accommodate visitors with vehicles and bicycles, two sustainable parking lots would be constructed and located at either end of the closed segment (i.e., PMs 40.0 and 44.4). Although this

segment would remain closed for public vehicle traffic, the route would remain accessible to Caltrans, USFS, and emergency-response personnel. During emergencies, this segment could serve as an evacuation route for local residents and visitors to the ANF.

This alternative includes many of the same features as Alternative 2, such as:

- Reconstruction of the roadway/pavement.
- Enhancements to pavement striping.
- Restoration of damaged drainage culverts.
- Clearing of roadside obstructions.
- Construction of shoulder backing.
- Repairs to existing soldier pile walls and masonry retaining walls.
- Continuation of regular maintenance and clearing of large debris and overgrown vegetation from the roadway on a monthly or as needed basis.
- Application of vegetation control measures, such as the replanting of native fire-resistant plants that may be removed due to construction, as needed.

Additional features included in Alternative 3 include the following:

- Slight widening of the pavement and striping to meet current design standards, with two 12-foot-wide lanes and a 4-foot-wide shoulder in each direction, wherever feasible.
- Realignment of roadway centerline at PMs 40.50, 40.61, and 41.09 to shift upslope and avoid construction of unnecessary retaining walls.
- Construction of three major viaduct structures. More information about the location and length of each one is provided in the next section where the project's features are discussed in more detail.
 - One viaduct would be constructed at a location known as "Snow Springs", which is a major area of slide debris and heavy runoff. Bypassing this slide area with a viaduct would protect the road by allowing runoff and debris to pass safely beneath the bridge.

- Two viaducts would be constructed at strategic locations to allow wildlife to traverse beneath the highway safely while also protecting the road and vehicle traffic from rockslides and erosion.
- Construction of one 700-foot-long rock-shed structure.
- Construction of five soldier pile walls/retaining walls,
- Construction of four catchment walls,
- Cutting into the rock at PMs 40.15, 40.42, 41.57, 41.99, 42.11, 42.46, 42.60, and 42.69 to obtain a 32-foot road width and to avoid construction of new retaining wall.
- Upgrading of Metal Beam Guardrail (MBG) to MGS and installation of 14,559 linear feet of MGS with steel posts.

Constructing the viaducts and parking areas for this alternative would require an amendment to the USFS SUP to change the limits of the Caltrans easement.

In summary, Alternative 3 offers a complex approach to reopening SR-39, prioritizing both roadway safety and recreation, while simultaneously addressing the needs of visitors and wildlife protection.

Alternative 4: Full Opening

Alternative 4 presents a solution to rebuild the closed segment of SR-39, which would bring this segment up to current safety standards and fully restore public access for unrestricted travel between I-210 and SR-2. This alternative will share all construction elements with Alternative 3, with the exception of the parking lots at the project limits' southern terminus (PM 40.0) and northern terminus (PM 44.4) and the inclusion of a shuttle service. Project features that will be carried over from Alternative 3 include the following:

- Reconstruction of the roadway/pavement.
- Enhancements to pavement striping.
- Restoration of damaged drainage culverts.
- Clearing of roadside obstructions.
- Construction of shoulder backing.

- Repairs to existing soldier pile walls and masonry retaining walls.
- Continuation of regular maintenance and clearing of large debris and overgrown vegetation from the roadway on a monthly or as needed basis.
- Application of vegetation control measures, such as the replanting of native fire-resistant plants that may be removed due to construction, as needed.
- Slight widening of the pavement and striping to meet current design standards, with two 12-foot-wide lanes and a 4-foot-wide shoulder in each direction, wherever feasible.
- Realignment of roadway centerline at PMs 40.50, 40.61, and 41.09 to shift upslope and avoid construction of unnecessary retaining walls.
- Construction of one 800-foot-long rock-shed structure (proposed in same location as Alternative 3, but 100 feet longer).
- Construction of five soldier pile walls/retaining walls.
- Construction of four catchment walls.
- Cutting into the rock at PMs 40.15, 40.42, 41.57, 41.99, 42.11, 42.46, 42.60, and 42.69 to obtain a 32-foot road width and to avoid construction of new retaining wall.
- Upgrading of MBG to MGS and installing 14,179 linear feet of MGS with steel posts.

Alternative 4, however, distinguishes itself by removing the construction of parking lots from the scope of work and introducing the following key project features:

- The construction of a single-lane roundabout at the junction of SR-39 and SR-2. This roundabout would be equipped with a 140-foot-radius raised central island and raised splitter islands at all three entry points approaching the roundabout. The specific appearance of these features, whether they are hardscaped or landscaped, would be determined in the next phase (Design Phase) of this project.
- The installation of continuous barrier fencing that spans the entire length of the project. The woven wire fence would have a height of 8 feet and would serve as a key wildlife protection measure, preventing the movement of wildlife onto the roadway, with a particular focus on protecting bighorn sheep from live traffic.

- The construction of five viaducts at strategic locations along the route. These viaducts vary in length from 210 to 450 feet and provide vertical clearance ranging from 30 to 100 feet. The exact locations and length of each of the proposed viaducts is documented in the next section where the project features are discussed in detail. These viaduct structures would bypass areas that are prone to rockslides and erosion, which frequently damage the existing road, and would provide a secure passage for wildlife to cross underneath traffic.

An amendment to the USFS SUP would be needed under Alternative 4 to change the limits of the Caltrans easement for SR-39 associated with the proposed viaducts and roundabout at the SR-39/SR-2 intersection.

In summary, Alternative 4 combines the latest roadway safety standards, wildlife protection measures, and infrastructure enhancements to address the challenges posed by the closed segment of SR-39. This alternative offers an effective approach to road reconstruction, safety, and environmental stewardship, while meeting the overall purpose and need of the project.

Common Design Features of the Build Alternatives

Several common design features of the build alternatives are presented below. Structural elements including viaducts, a rock shed, retaining walls, and catchment walls are proposed to reduce ongoing maintenance at the project site and provide a safer, more reliable roadway.

Roadway Rehabilitation

Each of the build alternatives proposes to reconstruct the pavement within the project limits with a full structural section consisting of 0.2 feet of rubberized hot mix asphalt, type A; 0.3 feet of hot mixed asphalt; 0.5 feet of lean concrete base; and 0.9 feet of aggregate base.

Roadway Delineation

The roadway would be delineated to meet the current traffic roadway safety standards. Alternatives 3 and 4 would be delineated to accommodate a 12-foot-wide travel lane in each direction with 4-foot-wide shoulders. Because Alternative 2 would restrict access to the roadway to Caltrans, USFS, and emergency-response personnel, the roadway will be delineated to accommodate a 12-foot-wide travel lane in each direction with 2-foot-wide shoulders on each side. Pavement markings will also be enhanced with wet-visibility striping to provide safety and improved visibility during inclement weather conditions.

Clearing of Roadway Debris and Rocks

Clearing of roadway debris and rocks will be a standard feature for all alternatives. This aspect of the project includes regular maintenance of the roadway and debris clearance of various natural obstructions that can cascade down from the adjacent mountain slopes onto the roadway. These obstructions may include large boulders, fractured rocks, overgrown vegetation, trees, and loose dirt. Such natural hazards pose a safety risk to road users, potentially causing accidents, road closures, and disruptions to traffic flow. By incorporating a proactive approach to clearing and removing these impediments, the project aims to ensure the continuous functionality and safety of the roadway. Currently, Caltrans maintenance crews typically work on the roadway approximately once per month to clear roadside obstructions.

Drainage System Restoration

The restoration of damaged drainage culverts in various locations within the project limits will be addressed for all build alternatives. These culverts play a critical role in managing water flow and preventing erosion, and their deterioration can lead to further erosion of the surrounding environment, including surrounding slopes, and compromise road safety. By restoring these damaged drainage culverts, the project aims to enhance the overall resilience of the roadway infrastructure, reduce the risk of flooding, and mitigate erosion-related issues.

New Retaining Walls

Retaining walls will be a standard feature for all build alternatives to stabilize embankments at various locations within the project limits where the foundations or slopes under the roadway are weak or may be eroding. Cuts into the adjacent rock slope at PMs 40.01, 40.13, 40.47, 41.66, 41.99, 42.20, 42.54, 42.62, 42.71, 42.84, 42.98, 43.71, 44.00, 44.28, and 44.36 will be required to obtain a 24-foot road width and to avoid construction of additional retaining walls for Alternative 2. Alternative 3 will cut into rock at PMs 40.15, 40.42, 41.57, 41.99, 42.11, 42.46, 42.60, and 42.69 to obtain a 32-foot road width and to avoid construction of new retaining wall. The roadway centerline will also be realigned at PMs 40.50, 40.61, and 41.09 to shift upslope and avoid construction of unnecessary retaining walls. The locations and lengths of the retaining walls proposed for each of the build alternatives can be found in Table 1.4-1 below:

Table 1.4-1 Retaining Wall Locations

Alternative No.	Retaining Wall No.	Beginning (Post Mile)	End (Post Mile)	Wall Length (linear feet)
Alternative 2	RW 2.0	40.09	40.10	53.51
Alternative 2	RW2.1	40.93	40.95	80.78
Alternative 2	RW2.2	41.82	41.86	196.95
Alternative 2	RW2.3	42.78	42.80	111.40
Alternative 2	RW2.4	43.23	43.27	187.61
Alternative 2	RW2.5	43.85	43.86	63.94
Alternative 3	R01.A3	40.09	40.10	53.51
Alternative 3	R02.A3	42.07	42.08	61.11
Alternative 3	R03.A3	42.49	42.51	70.00
Alternative 3	R04.A3	42.78	42.80	136.22
Alternative 3	R05.A3	43.85	43.86	65.37
Alternative 4	R01.A4	40.09	40.10	53.51
Alternative 4	R02.A4	42.07	42.08	61.11
Alternative 4	R03.A4	42.49	42.51	70.00
Alternative 4	R04.A4	42.78	42.80	136.22
Alternative 4	R05.A4	43.85	43.86	65.37

Repair Existing Soldier Pile Walls and Masonry Retaining Walls

There are plans within each of the build alternatives to perform repairs on existing soldier pile walls and masonry retaining walls situated at multiple locations within the project limits. These walls serve as vital structural elements along the roadway, providing stability, preventing soil erosion, and ensuring the safety of the road, adjacent areas, and its users. Years of erosion have caused the timber laggings on multiple soldier pile walls to become damaged and in need of repairs. Over time, these structures have incurred wear and tear, compromising their effectiveness and safety. By repairing and restoring these soldier pile walls and masonry retaining walls, the project aims to maintain the integrity of the transportation infrastructure, mitigate potential hazards, and prolong the lifespan of these essential components. The locations of the wall repairs for each of the build alternatives can be found in Table 1.4-2 below:

Table 1.4-2 Soldier Pile Wall/Masonry Wall Repair Locations

Alternative No.	Wall Repair No.	Post Mile
Alternative 2	RP2.1	43.28
Alternative 2	RP2.2	43.32
Alternative 2	RP2.3	43.94

Alternative No.	Wall Repair No.	Post Mile
Alternative 2	RP2.4	44.06
Alternative 3	RP3.1	43.72
Alternative 3	RP3.2	43.94
Alternative 3	RP3.3	44.06
Alternative 3	RP3.4	44.23
Alternative 4	RP4.1	43.72
Alternative 4	RP4.2	43.94
Alternative 4	RP4.3	44.06
Alternative 4	RP4.4	44.34

Each project alternative also includes the following standardized measures that are included as part of the project description. Standardized measures (such as Best Management Practices [BMPs]) are those measures that are generally applied to most or all Caltrans projects. These standardized or pre-existing measures allow little discretion regarding their implementation and are not specific to the circumstances of this proposed project or any other project. More information on each measure can be found in the applicable sections of Chapter 2.

- PF-UES-1: Utility relocation plans shall be prepared in consultation with the affected utility providers/owners for those utilities that will need to be relocated, removed, or protected in-place.
- PF-UES-2: All temporary ramp and arterial roadway closures and detour plans will be coordinated with law enforcement, fire protection, and emergency medical service providers.
- PF-T-1: A Final Transportation Management Plan (TMP) shall be developed in detail during final design.
- PF-VIS-1: All areas disturbed by the proposed roadway improvements or grading operations shall receive replacement planting where feasible.
- PF-CUL-1: If cultural materials are discovered during site preparation, grading, or excavation, the construction Contractor would divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can access the nature and significance of the find. At that time, there would be coordination with the appropriate local agency.
- PF-CUL-2: If human remains are discovered during site preparation, grading, or excavation, California State Health and Safety Code (H&SC) Section

7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to Public Resources Code (PRC) Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Claudia Harbert, Caltrans District 7 Native American Coordinator, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

- PF-WQ-1: The proposed project will comply with the provisions of the Caltrans National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit (Order No. 2012-0011-DWQ, as amended by Order WQ 2014-0006-EXEC, Order WQ 2014-0077-DWQ, and order WQ 2015-0036-EXEC, NPDES No. CAS000003) and the NPDES General Permit for Storm Water Discharges of Storm Water Runoff Associated with Construction Activities (Order No. 2009-0009-DWQ, as amended by 2012-0006-DWQ), and any subsequent permits in effect at the time of construction.
- PF-WQ-2: A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality. It shall be prepared per the requirements stated in the NPDES General Permit for Storm Water Discharges of Stormwater Runoff Associated with Construction Activities and any subsequent permit in effect at the time of construction. The SWPPP shall identify the sources of pollutants that may affect the quality of storm water and include the construction site BMPs to control pollutants such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All construction site BMPs shall follow the latest editions of the Caltrans Project Planning and Design Guide (PPDG) (2019) and Caltrans Construction Manual (2020). These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.
- PF-WQ-3: Caltrans-approved Design Pollution Prevention BMPs shall be implemented to the maximum extent practicable (MEP), consistent with the requirements of the Caltrans Permit.

- PF-WQ-4: Caltrans-approved Treatment BMPs shall be implemented to the maximum extent possible (MEP), consistent with the requirements of the Caltrans Permit.
- PF-GEO-1: Revegetation of graded slopes should be performed to minimize erosion, and runoff should be diverted from each slope face using earthen berms and/or concrete swales at the top of each slope.
- PF-HAZ-1: Site investigations performed at the properties for the project will be completed during the Design Phase to determine whether more extensive subsurface investigation will be needed.
- PF-HAZ-2: If hazardous materials contamination or sources are suspected or identified during project construction activities, the construction contractor will be required to cease work in the area and have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans Construction Manual (2020). Adequate protection to construction workers will be provided with the implementation of a Health and Safety Plan and Soil Management Plan.
- PF-HAZ-3: If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance with the Caltrans Construction Manual (2020), Chapter 7, Section 7-107, Hazardous Waste and Contamination.
- PF-HAZ-4: A Lead Compliance Plan shall be prepared prior to the start of construction activities.
- PF-AQ-1: Excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403.
- PF-AQ-2: Ozone precursor emissions from construction equipment vehicles shall be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.
- PF-AQ-3: All trucks that are to haul excavated or graded material on site shall comply with California Vehicle Code Section 23114, with special attention to Sections 23114(b)(F),(e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.

- PF-AQ-4: The Caltrans Standard Specifications for Construction (2018), Section 14.9 must be adhered to.
- PF-AQ-5: If naturally occurring asbestos, serpentinite, or ultramafic rock is discovered during grading operations, Section 93105, Title 17 of the California Code of Regulations requires notification to the South Coast Air Quality Control Board by the next business day and implementation of dust control measures described in Section 93105 (d)(B).
- PF-AQ-6: All construction vehicles both on and off site shall be prohibited from idling in excess of 5 minutes.
- PF-NOI-1: The control of noise from construction activities shall conform to the Caltrans Standard Specifications, Section 14-8.02, "Noise Control".
- PF-BIO-1: To avoid impacts to nesting birds, any native or exotic vegetation removal or tree-trimming activities shall occur outside the nesting season (February 1st through September 1st). If vegetation clearing is necessary during the nesting season, a preconstruction survey will be conducted by a qualified biologist within 3 days of commencement of vegetation removal or the beginning of construction activities to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist.
- PF-BIO-2: The construction contractor shall inspect and clean construction equipment at the beginning of each day and prior to transporting equipment from one project location to another. Any plants removed, or soil disturbed during the course of construction should be contained and properly disposed of offsite. All mulch, topsoil, seed mixes, or other plantings used during landscaping activities and erosion-control BMPs implemented shall be free of invasive plant species seeds or propagules listed in the California Invasive Plant Council (Cal-IPC) inventory. City tree planting and removal requirements will also be adhered to.

Unique Features of Build Alternatives

Structures

Alternatives 3 and 4 propose the construction of multiple viaduct structures to bypass areas prone to major debris slides. These viaducts serve a dual purpose by enhancing motorist safety and providing safe wildlife crossings. By shifting the roadway away from these hazardous zones, the viaducts effectively protect motorists from the dangers of runoff and debris flows, thereby ensuring safe passage. Additionally, these structures

will provide pathways for wildlife, including the Nelson’s bighorn sheep population in this region. With a vertical clearance ranging from 30 to 100 feet, these viaducts offer ample space for wildlife to traverse safely underneath vehicle traffic, which would mitigate the risk of wildlife-vehicle collisions and would contribute to the conservation of this ecologically valuable area.

The locations and lengths of the viaduct structures/wildlife crossings proposed for Alternatives 3 and 4 can be found in Table 1.4-3 below:

Table 1.4-3 Viaduct Structure Locations

Alternative No.	Viaduct No.	Beginning (Post Mile)	End (Post Mile)	Approximate Bridge Length (linear feet)
Alternative 3	3.1	41.77	41.87	495
Alternative 3	3.2 (Snow Springs)	42.15	42.31	700
Alternative 3	3.3	43.21	43.34	585
Alternative 4	4.1	41.17	41.32	700
Alternative 4	4.2	41.66	41.74	350
Alternative 4	4.3	41.77	41.88	518
Alternative 4	4.4 (Snow Springs)	42.16	42.32	705
Alternative 4	4.5	43.21	43.34	600

Midwest Guardrail System

Alternatives 3 and 4 propose to upgrade the existing MBG along the project limits to the current standard MGS. MGS will also be installed at new locations where safety concerns have been identified. The MGS would function as vehicle collision mitigation to prevent vehicles from veering off the road and going down the cliff, thereby protecting drivers and the habitat/landscape below. The steel posts on MGS may also offer improved fire resistance compared to the wooden posts currently used in the MBG.

Catchment Walls

Alternatives 3 and 4 propose the construction of several catchment walls at specific locations where the adjacent slopes are highly prone to heavy debris runoff and rockfall. Catchment walls play a large role in minimizing the impact of rockfall and erosion, especially in areas prone to such hazards. These walls are designed to “catch” falling rocks, debris, or soil, preventing them from reaching the roadway and posing a hazard to motorists, infrastructure, and the environment. The locations and lengths of the catchment walls proposed for Alternatives 3 and 4 are provided in Table 1.4-4 below.

Table 1.4-4 Catchment Wall Locations

Alternative No.	Catchment Wall No.	Beginning (Post Mile)	End (Post Mile)	Wall Length (linear feet)
Alternative 3	CW01.A3	39.89	40.11	1,100
Alternative 3	CW02.A3	40.29	40.50	1,100
Alternative 3	CW03.A3	42.78	43.22	2,300
Alternative 3	CW04.A3	43.47	44.36	4,700
Alternative 4	CW01.A4	39.89	40.11	1,100
Alternative 4	CW02.A4	40.29	40.50	1,100
Alternative 4	CW03.A4	42.78	43.21	2,240
Alternative 4	CW04.A4	43.48	44.36	4,700

Rock Sheds

Alternatives 3 and 4 propose the construction of a rock shed in a specific location of the project area where rockfall has been prevalent. Rockfall poses a safety risk to both motorists and the integrity of the roadway. A rock shed is a protective structure that is designed to mitigate the hazards of rocks falling onto the roadway. These structures function as an overhead shelter, providing a secure passage for vehicles while preventing falling rocks and debris from reaching the surface of the road. Construction of a rock shed may also indirectly contribute to wildlife protection by providing a safe passage for local wildlife, particularly the Nelson's bighorn sheep. The locations and lengths of the rock sheds proposed for Alternatives 3 and 4 are provided in Table 1.4-5 below:

Table 1.4-5 Rock Shed Locations

Alternative No.	Rock Shed No.	Beginning (Post Mile)	End (Post Mile)	Length (linear feet)
Alternative 3	RS01.A3	49.94	41.07	700
Alternative 4	RS01.A4	40.92	41.07	800

Parking Lots

Alternative 3 proposes the construction of two public parking lots, located at the project's starting point (PM 40.0; Figure 1.4-1) and at the junction with SR-2 (PM 44.4; Figure 1.4-2). The existing facilities at the Islip Saddle Day Use Area parking lot (PM 44.4) would be maintained and improved. Both lots would provide convenient parking, giving forest visitors designated areas to store their vehicles while enjoying full recreational access to the closed segment of SR-39.

Figure 1.4-1 Proposed Parking Lot at PM 40.0

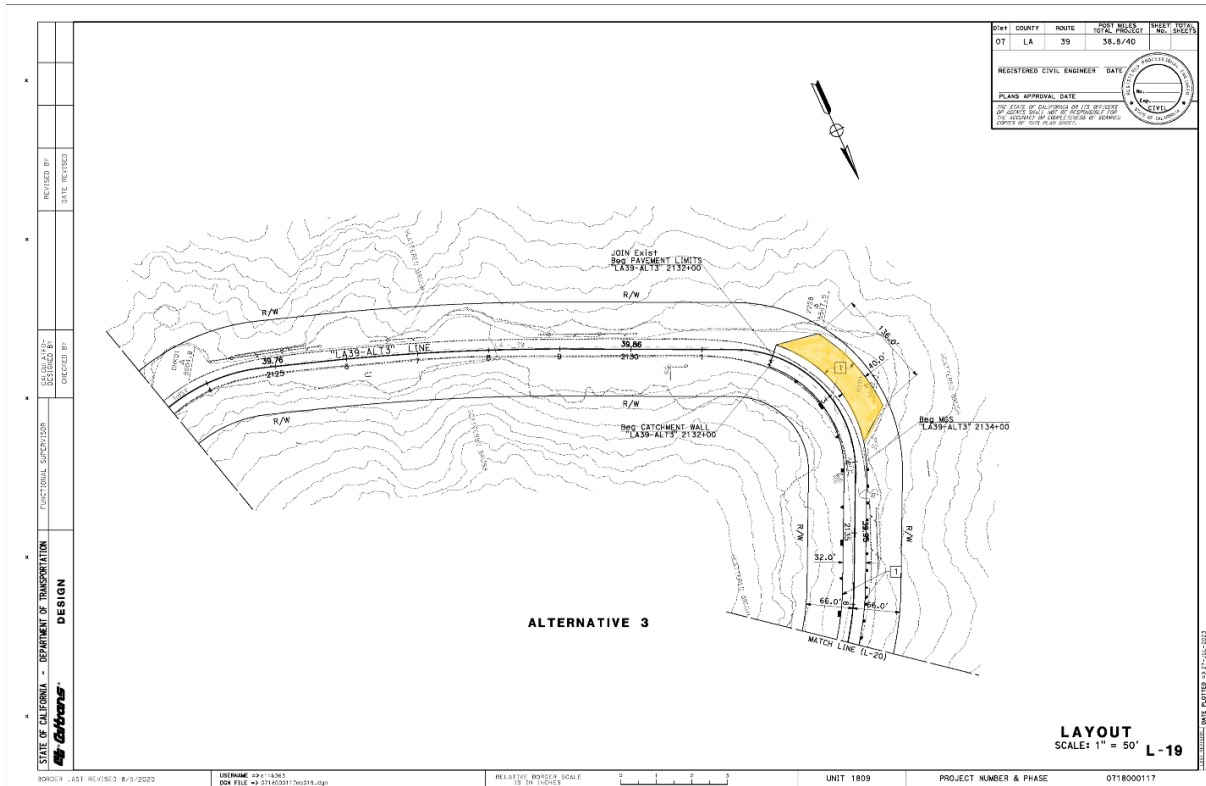
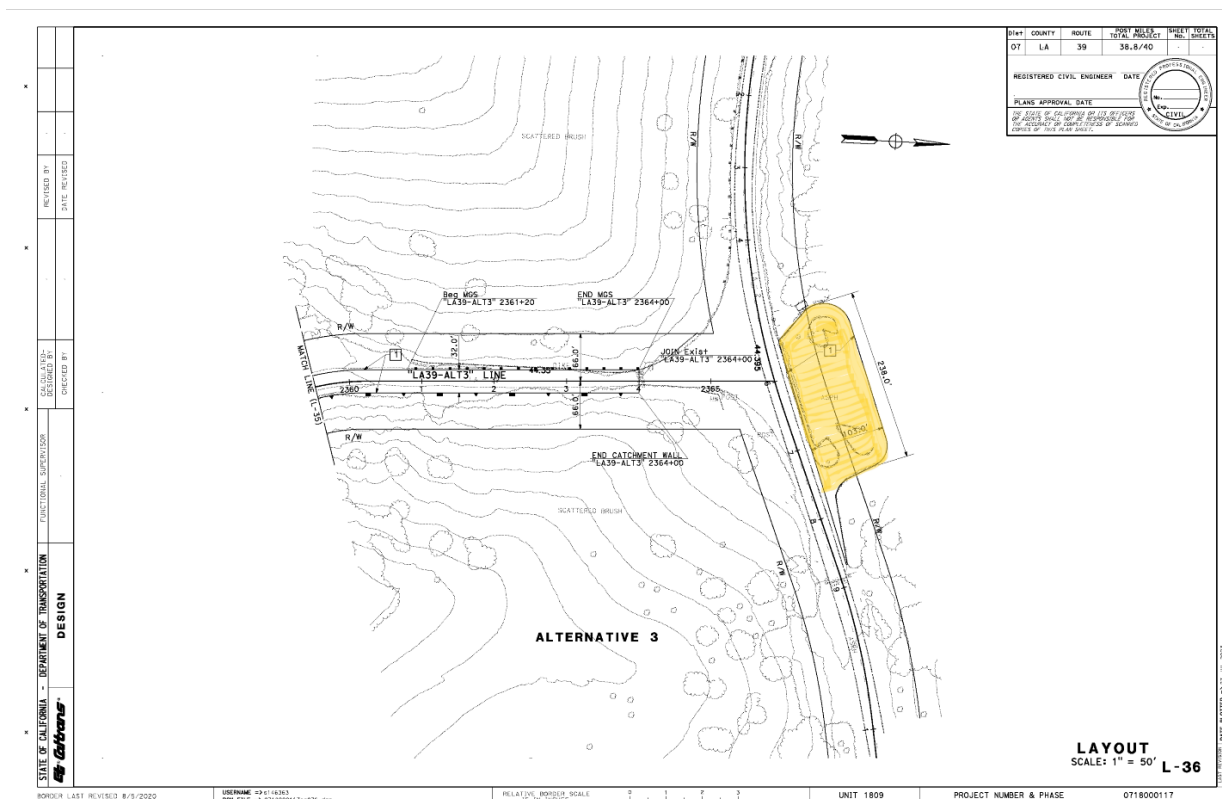


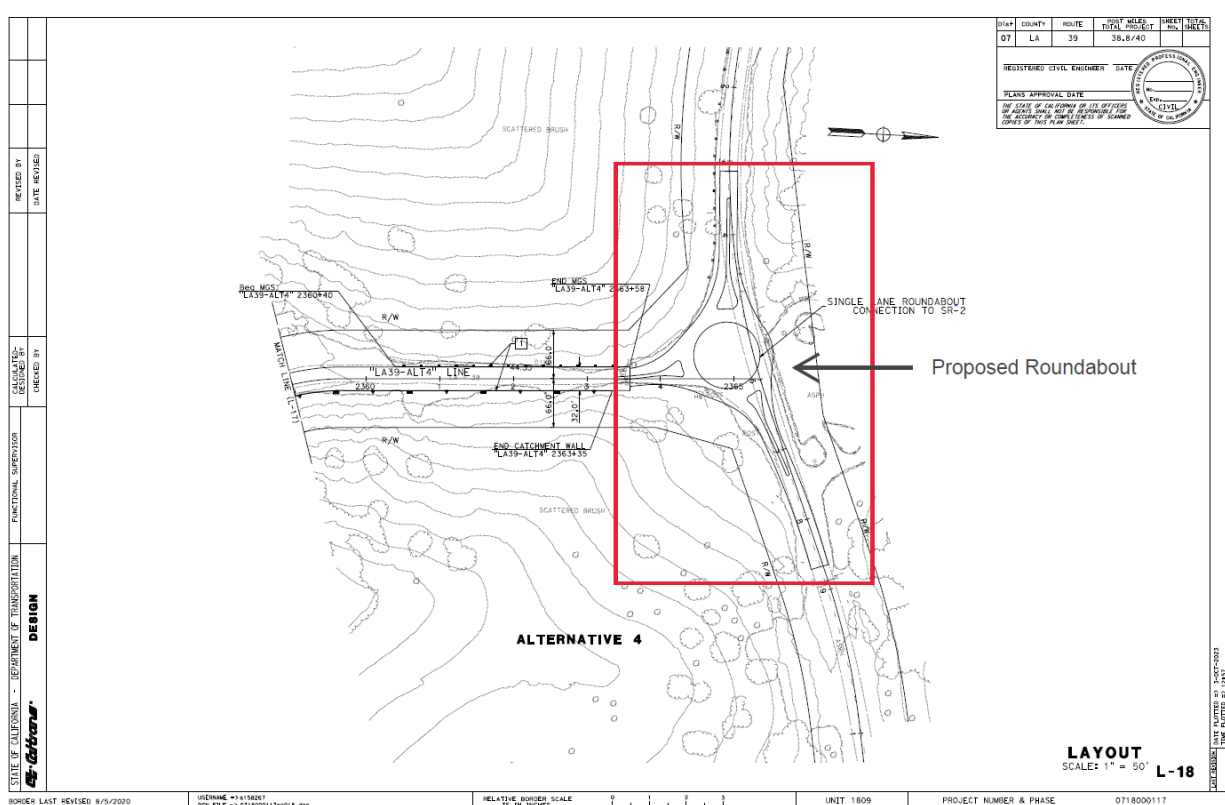
Figure 1.4-2 Proposed Parking Lot at PM 44.4



Single-Lane Roundabout

Alternative 4 proposes the construction of a single-lane roundabout at the junction of SR-39 and SR-2 (Figure 1.4-3). This roundabout is characterized by a central island with a 140-foot radius, along with raised splitter islands at all three entry points, and would be designed to have a traffic calming effect, smooth traffic flow, and reduce the severity of accidents; it might also reduce the likelihood and severity of vehicle-wildlife collisions.

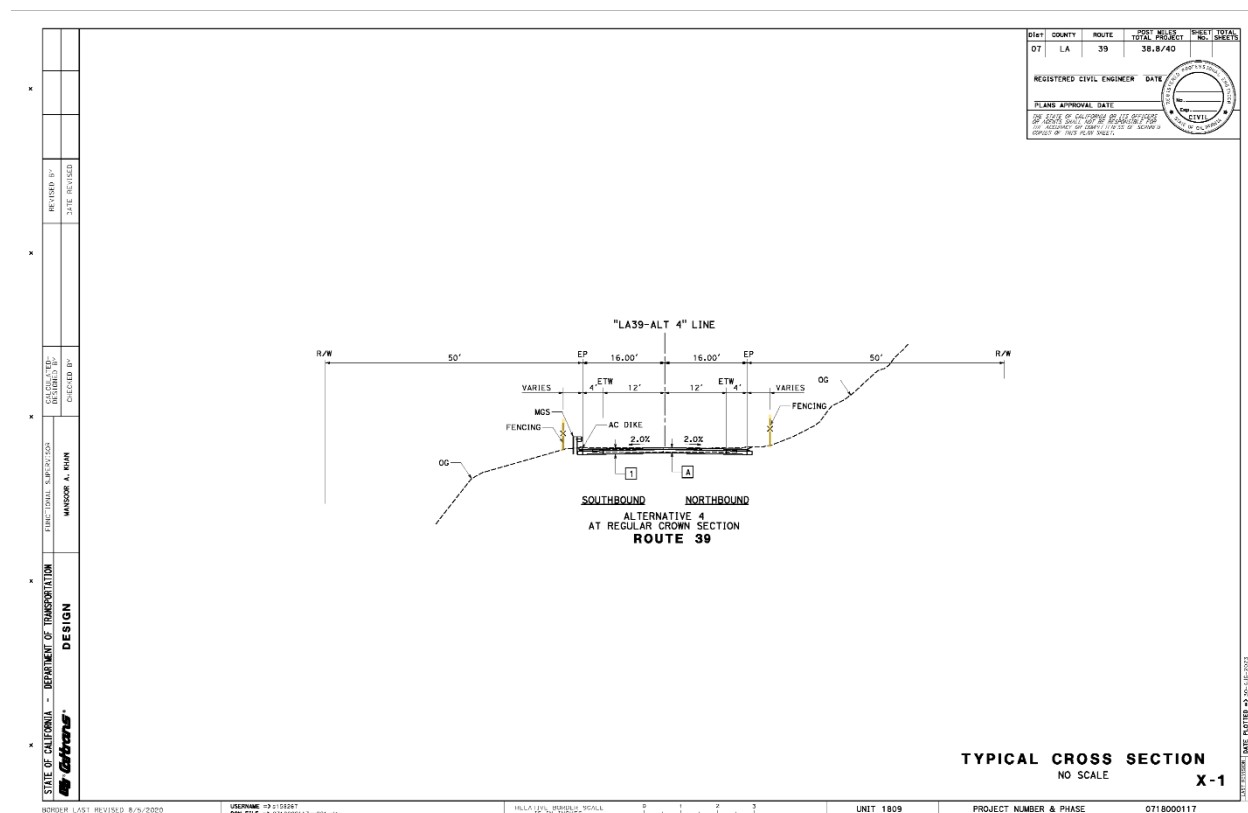
Figure 1.4-3 Proposed Single-Lane Roundabout



Continuous Barrier Fencing

Alternative 4 includes the installation of continuous wildlife barrier fencing along the entire length of the project limits. The 8-foot-tall woven-wire fencing would be strategically placed to prevent wildlife from attempting to cross the highway in areas where there is no designated wildlife crossing or viaduct; it would improve safety for motorists and wildlife by funneling wildlife toward the wildlife crossings and viaducts (Figure 1.4-4).

Figure 1.4-4 Continuous Barrier Fencing



Wildlife Crossing Signs

Alternative 3 proposes to install wildlife crossing signs every quarter mile and at strategically placed locations identified through wildlife surveys conducted by the California Department of Fish and Wildlife (CDFW). The signs would be designed and installed to alert shuttle operators to the potential presence of wildlife in the area, particularly populations of the Nelson’s bighorn sheep that often cross the roadway.

Shuttle Service System

Alternative 3 includes an onsite shuttle service as one of its main project features, distinguishing it from the other build alternatives. Vehicular traffic would be restricted to a designated shuttle service and to Caltrans, USFS, and emergency-response personnel. Active transportation options, such as biking and hiking, would also be encouraged. A partner to operate the shuttle service would be identified during a later project phase.

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

Transportation Systems Management (TSM) strategies increase the efficiency of existing facilities by promoting actions that increase the number of vehicle trips a facility

can carry without increasing the number of through lanes. TSM strategies may include ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. TSM also promotes automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvement as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit.

Transportation Demand Management (TDM) focuses on regional means of reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience.

Although TSM/TDM measures alone would not fully satisfy the purpose and need of the project, the following measures have been incorporated into the build alternatives for this project:

- Implementation of a transit shuttle system under Alternative 3 that would transport visitors through the closed segment of SR-39. Restricted access to the roadway would allow recreation-related activities, such as biking, hiking, and bird watching, to take place and would allow the public to access the closed section via shuttle bus.
- Alternatives 3 and 4 would also allow bicyclists to share the road with vehicles, contributing to alternative forms of transportation proposed for this project.

Alternative 1: No-Build Alternative

Under the No-Build Alternative, this project would maintain the existing conditions of the roadway without any improvements. This alternative does not address the project objective to reopen the closed segment of SR-39 or address persistent safety issues that the proposed project intends to resolve. There would be no through-traffic connection between I-210 and SR-2 and public access to the road between PMs 40.0 and 44.4 would continue to be prohibited; access would continue to be restricted to Caltrans, USFS, and emergency-response personnel. The road would continue to degrade at its current rate, with minimal maintenance, including the clearing of road debris, occurring occasionally or on an as-needed basis.

There would be no improvements to upgrade the safety and operation of the roadway or to preserve the integrity of the existing facility, while preventing further deterioration of the highway. The objectives of the California Streets and Highway Code (Sections 91

and 100) to close gaps in the state highway system would not be met, and the goals and policies outlined in the ANFLMP would not be satisfied.

Effects of the No-Build Alternative include no changes in VMT when compared to the build alternatives. Public vehicle traffic from the San Gabriel Valley would continue to travel to the I-210/SR-2 terminus to the west or SR-138/SR-2 terminus to the east to gain full access to the ANF. Selection of the no-build alternative would also not contribute to potential improvements to air quality, specifically a reduction in carbon dioxide and GHG emissions, that might occur with one or more build alternative.

Additionally, the costs to maintain the closed section in its current state will continue to increase over time. Furthermore, smaller projects might be required in the future to repair damage caused by severe storms, rockslides, etc.; this damage could be prevented with implementation of one of the build alternatives.

1.4.2 Comparison of Alternatives

Table 1.4-6 below provides a comparison of the proposed improvements by alternative.

Table 1.4-6 Comparison of Improvements for Each Alternative

Improvements	Alternative 1 (No-Build)	Alternative 2 (Evacuation Route)	Alternative 3 (Active Transportation Access)	Alternative 4 (Full Opening)
Restore damaged drainage culverts and install new culverts	–	Yes	Yes	Yes
Reconstruct pavement with full structural section consisting of 0.2 feet of rubberized hot mix asphalt, type A; 0.3 feet of hot mixed asphalt; 0.5 feet of lean concrete base; and 0.9 feet of aggregate base	–	Yes	Yes	Yes
Construct mechanically stabilized embankment walls and/or soldier pile ground anchor walls where the existing road has been undermined	–	Yes	Yes	Yes
Removal of roadside obstructions (boulders, rocks, tree, dirt/debris)	–	Yes	Yes	Yes
Replace rotting timber lagging at bays of existing retaining walls/soldier pile walls	–	Yes	Yes	Yes
Cut into rock at Post Miles (PMs) 40.01, 40.13, 40.47, 41.66, 41.99, 42.20, 42.54, 42.62, 42.71, 42.84, 42.98, 43.71, 44.00, 44.28, and 44.36 to obtain a 24-foot road width and avoid construction of new retaining wall.	–	Yes	–	–
Cut into rock at PMs 40.15, 40.42, 41.57, 41.99, 42.11, 42.46, 42.60, and 42.69 to obtain a 32-foot road width and avoid construction of new retaining wall	–	–	Yes	Yes
Realign roadway centerline at PMs 40.50, 40.61, and 41.09 to shift upslope and avoid construction of unnecessary retaining walls	–	–	Yes	Yes
Fill void at toe of existing masonry gravity wall with concrete at PM 44.23	–	–	Yes	Yes
Pavement delineation with enhanced wet visibility striping and pavement markings	–	–	Yes	Yes
Construct a Rock Shed to stabilize rocks on the upslope at PM 40.92/41.07	–	–	Yes	Yes
Construct 890-foot-long viaduct bridge at Snow Spring Slide (PM 42.18/42.32)	–	–	Yes	Yes
Install rock fall catchment wall with precast concrete lagging at PMs 39.89/40.11, 40.29/40.50, 42.78/43.21, and 43.47/44.36	–	–	Yes	Yes
Install Midwest Guardrail System (MGS) with steel posts.	–	–	Yes	Yes
Construct two public parking lots at PMs 40 and 44.4	–	–	Yes	–

Chapter 1 Proposed Project

Improvements	Alternative 1 (No-Build)	Alternative 2 (Evacuation Route)	Alternative 3 (Active Transportation Access)	Alternative 4 (Full Opening)
Construct viaducts at two locations for wildlife crossing at PMs 41.8 and 43.3	–	–	Yes	–
Wildlife crossing signs placed every 0.25 mile and at spot locations along the route where big horn sheep have been concentrated	–	–	Yes	–
Construct viaducts at four locations for wildlife crossing at PMs 41.17, 41.66, 41.77, and 43.21	–	–	–	Yes
Installation of continuous barrier fencing that would run the entire length of the project to restrict movement of wildlife onto the roadway	–	–	–	Yes
Construction of a single-lane roundabout at the junction of SR-39 and SR-2. The roundabout will have a 140-foot radius raised central island with raised splitter islands at all three approaches.	–	–	–	Yes

1.4.3 Alternatives Considered but Eliminated from Further Discussion

This section includes all alternatives that were considered during the project development process but were eliminated from further consideration, in addition to the issues supporting the elimination. Elimination of the alternatives from being further evaluated was based on the following criteria: (1) the alternative failed to meet the purpose and need of the project; (2) the alternative is not feasible per CEQA Guidelines Section 15126.6(f)(1); or (3) the alternative was unable to avoid significant environmental impacts.

Five build alternatives were originally proposed during the project initiation phase: an evacuation route alternative (Alternative 2), an active transportation access alternative (Alternative 3), a full reopening (Alternative 4), the construction of a full-length viaduct (Alternative 5), and a single travel lane alternative (Alternative 6). Alternatives 5 and 6 were ultimately removed from further consideration for this project due to the reasons provided below.

Alternative 5: Full Length Viaduct

This alternative would reopen the closed segment of SR-39 to public traffic via the construction of a full-length viaduct adjacent to the existing roadway that would span the entire length of the 4.4-mile-long closed segment. Placing traffic on the viaduct would eliminate the potential danger of rockfall from the eroding slopes and would also remove any conflict between vehicles and the Nelson's bighorn sheep, thus avoiding the take of this protected species. The viaduct would end at PM 44.3, where it would rejoin the existing roadway at the junction of SR-39 and SR-2. A single-lane roundabout was proposed at the junction of SR-39 and SR-2 with a raised central island and splitter islands as a traffic control measure to improve safety at this intersection.

Reason for Elimination

This alternative was proposed as a way to satisfy the project purpose and need while avoiding impacts to the Nelson's bighorn sheep. The bighorn sheep is protected by the California Fish and Game Code as a state Fully Protected species. Until recently, CDFW was not authorized to issue incidental take permits for any Fully Protected species. This changed on July 10, 2023, when Senate Bill 147 was approved by the Governor of California. Senate Bill 147 does allow the "take" of this species under certain circumstances. This project would qualify for such a "take" and CDFW can now issue a permit that would allow the project to move forward.

In addition, because of the high altitude and steep terrain, this alternative would require construction of numerous bridge columns, some of which would be as tall as 100 feet. Although it is within Caltrans's ability to do so, constructing these columns would be

extremely challenging and would result in excessive and unnecessary impacts to the natural environment below. The forest habitats and the animals that live there would be subjected to disturbance at the sites of the columns and potentially through the construction of an access road to get to those sites.

Finally, construction of the viaduct is estimated to cost between \$373–\$693 million. This is substantially more than the cost of any other build alternative under consideration. Alternative 4, which proposes full public access of the segment, has a total projected cost of \$335 million, Alternative 3 is estimated to cost \$271 million, and Alternative 2 is projected to cost \$37 million. Alternative 5 is not considered a reasonable expenditure of funds when there are viable, less-expensive alternatives available that meet all or most of the project's purpose and need.

Alternative 6: Single Travel Lane

This alternative would construct a single 12-foot-wide travel lane that would be shared by northbound and southbound vehicles on the closed segment of SR-39. The typical section is a 12-foot-wide travel lane with 4-foot-wide shoulders on each side. There would be 8-foot-wide vehicle pullouts at various locations, which would enable drivers to stop and move to the side to allow oncoming vehicles to pass. This alternative would be open to full public use, therefore, the same roadway, safety, and structural features found in Alternative 4 (Full Roadway Reopening), including wildlife crossings, rock sheds, catchment walls, fencing, etc., would be included in Alternative 6.

Reason for Elimination

Although roads with a single travel lane have been used successfully in other locations within California, a preliminary assessment determined that this alternative was not viable due to safety concerns and minimal cost savings.

Although this alternative would experience a reduction in the number of retaining walls and pavement required by eliminating one lane, the costs associated with these savings would be minimal when compared to the other alternatives. Alternative 6 would reduce roadway pavement by 353,000 square feet. However, the sight distance needed to safely navigate this single-lane highway with a speed limit of 45 miles per hour is 675 feet in most areas. Vehicle pullouts would need to be placed approximately every 600 feet to ensure that one driver could safely pull over to allow an oncoming vehicle to pass. This would require an additional 73,000 square feet of pavement, resulting in a net savings of 280,000 square feet and an estimated net cost savings of approximately \$8.5 million. Compared to an estimated cost for Alternative 4 of between \$96 and \$180 million (likely near the high end, given current economic conditions), the cost savings are minimal.

Furthermore, and more importantly, it was determined that there are 24 locations where the roadway curve impairs the stopping sight distance, with sight distance dropping to as low as 90 feet in many locations due to the tight curvature of the road. There is not enough sight distance at these curves for drivers to be able to see an approaching vehicle and safely pull off to the side, thereby creating a serious safety issue.

For these reasons, Alternative 6 was eliminated from consideration.

1.5 Permits and Approvals Needed

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

Table 1.5-1 Permits and Approvals Needed

Agency	Permits, Licenses, Agreements, and Certifications	Status
U.S. Army Corps of Engineers	Section 404 Permit	To be obtained during the Design phase
Regional Water Quality Control Board & State Water Resources Control Board	Section 401 Water Quality Certification	To be obtained during the Design phase
Regional Water Quality Control Board & State Water Resources Control Board	Section 402 Permit (National Pollutant Discharge Elimination System)	To be obtained during the Design phase
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained during the Design phase
California Department of Fish and Wildlife	Incidental Take Permit	To be obtained during the Design phase
U.S. Forest Service	U.S. Department of Transportation Highway Easement or Special Use Permit	To be obtained during the Design phase
State Historic Preservation Officer	Finding of No Historic Properties Affected pursuant to Section 106 PA Stipulation IX.A	Obtained on December 20, 2023

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Topics Considered But Determined Not To Be Relevant

As part of the scoping and environmental analysis that was carried out for the project, the following environmental issues were considered, but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

Coastal Zone

The proposed project is not within a coastal zone and is not within the jurisdiction of the California Coastal Commission; therefore, this project would have no impact on coastal resources.

Wild and Scenic Rivers

There are no designated wild or scenic rivers within or around the project limits; therefore, this project would have no impact on wild or scenic rivers.

Farmlands

There are no farmlands within the proposed project area; therefore, the project would not convert any farmlands to non-agricultural use, nor would it conflict with existing zoning for agricultural use or a Williamson Act contract.

Timberlands

Although the proposed project area is surrounded by forested areas, there are no areas within the project limits that are actively managed for timber production, nor are there areas designated as Timber Production Zones; therefore, this project would have no impact on timberland resources.

Relocations and Real Property Acquisitions

The project does not propose to temporarily or permanently relocate persons or businesses from the surrounding project area. The existing facility is within the jurisdiction of the U.S. Forest Service, and the California Department of Transportation (Caltrans) is operating under Special Use Permit (SUP) No. 4 (recorded February 5,

1950), which grants Caltrans 66 feet of right-of-way in each direction from the centerline of State Route 39 for the purpose of maintaining a public road. The project would require a cooperative agreement to establish a permanent easement for Alternatives 3 and 4 due to the need to utilize land outside the SUP, but no individuals or businesses would be displaced; therefore, relocation is not discussed further in this document.

Paleontology

The project area contains igneous and metamorphic rocks, which do not contain fossilized materials due to the extreme heat required for their formation. Therefore, paleontological resources are not present, and this project would have no impact on paleontological resources.

2.1 Human Environment

2.1.1 Existing and Future Land Use

The following section is based on the Community Impact Assessment, dated September 2023. Within the project limits, State Route (SR) 39 is located within the Angeles National Forest (ANF), in an unincorporated area of Los Angeles County. Existing and future land use plans that were analyzed for the project area and surrounding lands within the ANF, included the Los Angeles County General Plan 2035, ANF Land Management Plan (ANFLMP), and the San Gabriel Mountains National Monument (SGMNM) Management Plan (2005). The analysis of existing and future land use focused on the project area and surrounding lands within the ANF.

Los Angeles County

Los Angeles County's General Plan 2035 identifies the entire ANF as "Special Management Areas." Special Management Areas are lands that require additional development regulations to prevent the loss of life and property and to protect the natural environment, important resources, and "Open Space Resources Areas," which are public and private lands and waters that are preserved in perpetuity or for long-term open space and recreational uses. The goals and policies of General Plan 2035 discourage development in Special Management Areas.

The ANF comprises 1,018 square miles, which is 25 percent of the land area of Los Angeles County, and is the largest area of dedicated open space in the County; two-thirds of the land within the ANF has slopes steeper than 60 percent. Los Angeles County retains responsibility for privately owned parcels ("in-holdings") within the ANF; much of this land is in remote locations, is subject to a high degree of natural hazards, and lacks adequate access to paved roads and water supply. The County does not

encourage development in the ANF, and regulation is coordinated closely with the United States Forest Service (USFS) (Los Angeles County, 2022).

Several structures are located south of the project area along SR-39, including the Soldier Creek tract and some residence cabins on the North Fork of the San Gabriel River (east of the highway) that are classified as recreation cabins under Special Use Permits issued by the USFS. Wrightwood is also located within the ANF but outside the project area, approximately 20 miles east of SR-39 via SR-2. No private in-holding properties are located within the project area.

Angeles National Forest (ANF)

The project area is located entirely within the ANF and, more specifically, within the San Gabriel Mountains National Monument (SGMNM), both of which are administered by the USFS. The SGMNM encompasses a large portion of the ANF, including lands near SR-2 from Mt. Wilson Red Box Road to approximately 0.75 miles west of Wrightwood and areas east and west of SR-39, which include the San Gabriel Wilderness, Sheep Mountain Wilderness, and San Dimas Experimental Forest (USFS, 2018). The ANF Land Management Plan identifies eight general land use zones, each with their own allowable uses and intensity of activity. These zones, in order of decreasing land use intensity, are shown in Table 2.1.1-1.

Table 2.1.1-1 Angeles National Forest Land Use Zones

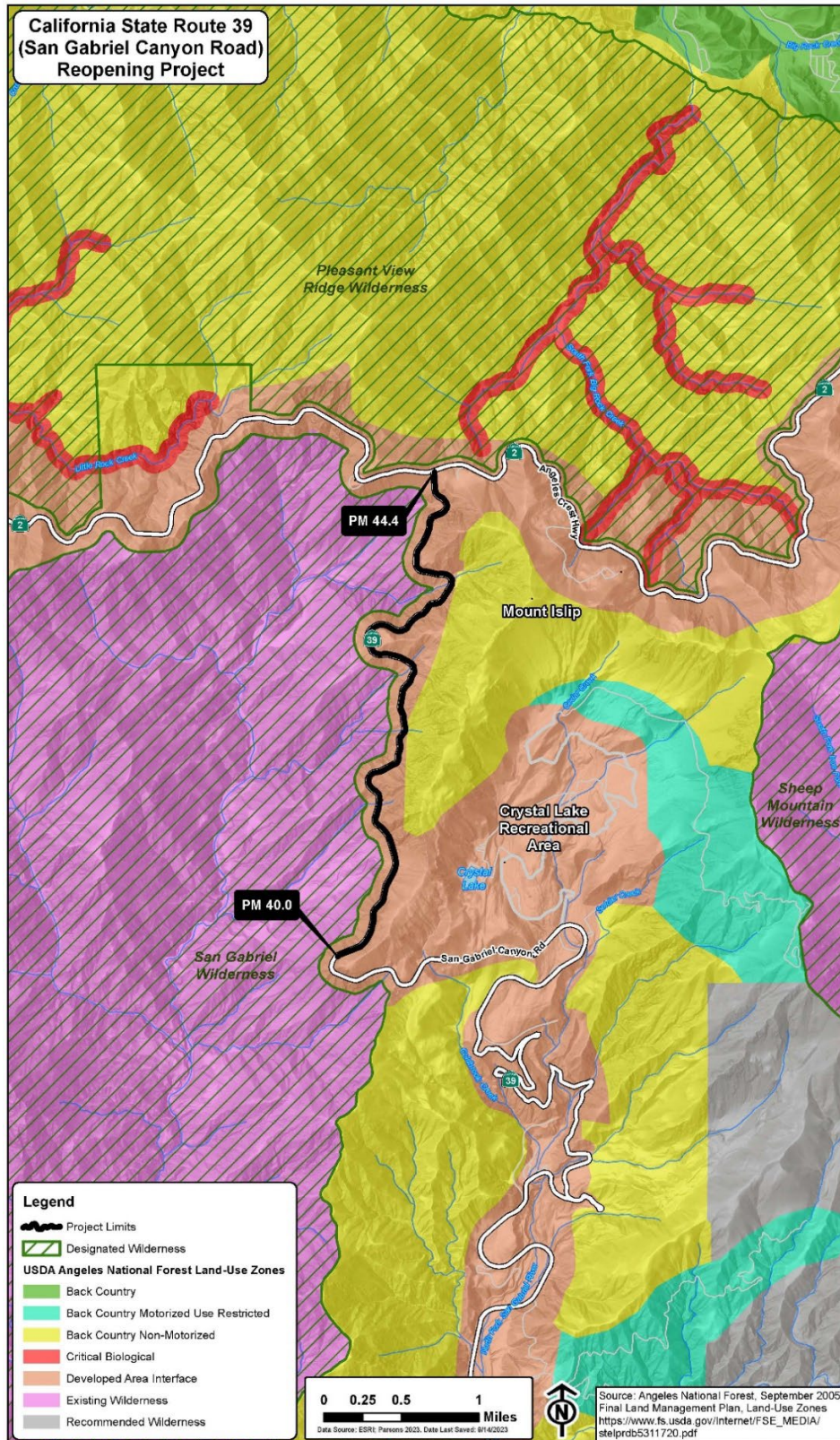
Forest Area	Description	Acreage	Approximate Percentage of Total Forest Area
Developed Area Interface (DAI)	Areas adjacent to communities or concentrated use areas and developed sites with more scattered or isolated community infrastructure.	85,828	12.9
Back Country (BC)	Areas of the national forest that are generally undeveloped and with few roads.	161,392	24.3
Back Country Non-Motorized (BCNM)	Areas of the national forest that are generally undeveloped with no roads.	248,219	37.5
Back Country Motorized Use Restricted (BCMUR)	Areas of the national forest that are generally undeveloped and with few roads (facilities in some remote areas).	52,971	7.9
Critical Biological (CB)	Areas of the national forest managed for the protection of species at risk.	3,920	0.59
Recommended Wilderness (RW)	This zone includes land that the USFS is recommending to Congress for wilderness designation and will be managed in the same manner as existing wilderness.	13,231	1.99

Forest Area	Description	Acreage	Approximate Percentage of Total Forest Area
Existing Wilderness (EW)	This zone includes Congressionally designated wildernesses. Only uses consistent with all applicable wilderness legislation and the primitive character are allowed in existing and recommended wilderness.	81,924	12.3
(San Dimas) Experimental Forest (EF)	Research and demonstration area; generally closed to the public except by permit	15,498	2.3
—	Total	662,983	100
Source: United States Forest Service, 2005			

The USFS has designated land use along SR-39, SR-2, and areas immediately adjacent to these roadways, as “Developed Area Interface”, which is the designation that allows for the highest intensity of use. Farther to the east of the project area, just north of the San Gabriel Mountains Lookout (PM 38.5), lies the Crystal Lake Recreation Area and Campgrounds, which are also within a “Developed Area Interface” zone. Areas to the east of SR-39 in the vicinity of Mount Islip and areas north of SR-2 at the intersection with SR-39 are designated as “Back County, Non-motorized.” To the west of the project area is the San Gabriel Wilderness, which has a land use designation of “Existing Wilderness”, and lastly to the north of the project area, surrounding small water bodies and tributaries, are areas designated as “Critical Biological”. The land use zones within the vicinity of the project area are shown in Figure 2.1.1-1 below.

Because the project is located in the ANF within the SGMNM, Caltrans would need to coordinate with the USFS to identify any work or structures that are located outside of the current easement granted by the current SUP. The SUP is a legal document that allows Caltrans to occupy and use USFS land. The authorization is granted for a specific use and for a specific period of time. Any deviation from the existing SUP would require an amendment from the USFS. Alternatives 3 and 4 for this project include elements that would extend outside of Caltrans’ current 132-foot-wide easement with the USFS and, therefore, would require the SUP to be amended. This is discussed further in the “Project Alternatives” section of this chapter.

Figure 2.1.1-1 Angeles National Forest Land Use Map



Source: Derived from United States Forest Service, 2005

The project area is within a designated Developed Area Interface, which includes roadways and areas adjacent to development. There would be no change to land uses within or adjacent to the project area. Development in the project area’s vicinity is sparse and is limited to the necessary infrastructure needed to access and enjoy the scenic and recreational opportunities of the ANF. No residences or private in-holding properties are located within the project area. The nearest residential structures are recreational cabins permitted under SUPs with the USFS; the cabins are located near Soldier Creek and the North Fork San Gabriel River, approximately 1.5 to 2.0 miles southeast of the project limits. No additional development is anticipated within the project area other than minor roadway and roadside features rehabilitation projects, as shown in Table 2.1.1-2 below.

Table 2.1.1-2 Current and Proposed Developments within 1 Mile of the Project Area

Name	Jurisdiction	Proposed Uses	Status
State Route (SR) 2/ Interstate 210 Sustainability Climate Change	California Department of Transportation (Caltrans)	Construct various Treatment Best Management Practices for implementation of Total Maximum Daily Loads along SR-2 (Post Mile [PM] R17.0/R75.24)	In Project Initiation Phase
LA-2 Digouts	Caltrans	Asphalt Concrete Overlay, Shoulder Backing, Dig out failed areas, and Seal random cracks on SR-2 (PM 46.0/82.2)	In Environmental Assessment, Project Specifications, and Estimates
Upgrade Metal Beam Guardrails (MBGs)	Caltrans	Upgrade MBG to Midwest Guardrail System (MGS) on SR-39 (PM 32.2/38.4)	In Construction
LA-2 MBGs	Caltrans	Upgrade MBG to MGS on SR-2 (PM 26.7/79.5)	In Construction
LA-39 3W7301 FY1920 2021	Caltrans	Slurry seal and localized resurfacing of existing asphalt concrete on SR-30 (PM 17.8/38.2)	Construction Closeout

In addition, as shown in Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, this project is not expected to draw substantial numbers of new visitors to the area. Therefore, no change to land use would occur as a result of this project.

No additional development is anticipated within the project area, with the exception of minor roadway rehabilitation projects. Development projects in the broader area are shown in Table 2.1.1-3.

Table 2.1.1-3 Current and Proposed Planned Developments in the Project Vicinity

Name	Location	Lead Agency	Description
Canyon City Business Center	Sierra Madre Avenue and North Todd Avenue, Azusa	City of Azusa	Demolition of the existing Colorama Wholesale Nursery (approximately 13,465 square feet) and construction of seven industrial buildings with associated surface parking, landscaping, and infrastructure improvements.
Big Dalton Dam, No. 32-0	Big Dalton Reservoir, Glendora	California Department of Water Resources	Replacement of the existing sluice gate, repair of the sluiceway pipeline, installation of a new regulating valve at the sluiceway outlet, replacement of the Outlet 1 riser gate, and installation of the water line for Penstock 1.
El Encanto Azusa River Wilderness Park Trail Extension Improvements Project	Off SR-39 at Old San Gabriel Canyon Road, Azusa	Watershed Conservation Authority	Construction of the El Encanto Azusa River Wilderness Park Trail extension and other path improvements.
Repair of Azusa Conduit Between Tunnels 23/24	San Gabriel Canyon at Morris Dam, Azusa	California Department of Fish and Wildlife, Region 5	Repair of the Azusa Conduit in the San Gabriel Canyon to restore water conveyance within the conduit.
California Grand Village Project	West Sierra Madre Avenue and North Todd Avenue, Azusa	City of Azusa	Redevelopment of an approximately 4.48-acre area of the Azusa Greens Country Club by constructing a residential community that will include 253 residences for seniors.
San Gabriel River Confluence with Cattle Canyon Improvements Project	On Camp Bonita Road, 1.2 miles east of Camp Williams Resort	Watershed Conservation Authority	Development of new picnic areas, pedestrian trails, and river access points; upgrades to existing facilities; improvements to paved and unpaved roadways, parking, restrooms and refuse disposal; and restoration of riparian and upland vegetation communities of the East Fork of the San Gabriel River and Cattle Canyon Creek.
SR-39 Road Realignment and Bridge Replacement Project Amendment (Lake or Streambed Alteration Agreement No. 1600-2016-0002-RS)	At the San Gabriel River Bridge #53-2245 on SR-39 (Post Mile [PM] 32.1)	California Department of Fish and Wildlife	Replacement of the San Gabriel River Bridge #53-2245 on SR-39, realignment of the existing road approach and departure for the new bridge, and demolition of the existing structure. Riparian vegetation will be cleared for approximately 100 feet upstream and 200 feet downstream below the existing bridge.

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Name	Location	Lead Agency	Description
Fire Camp 19 Life Safety Improvement Project	At 22550 East Fork Road, Azusa, Los Angeles County, CA 91702	State Water Resources Control Board	Upgrades to existing potable water system and replacing wastewater treatment system
Dhammakaya International Meditation Center Environmental Impact Report	At Monrovia Place and Palm Drive, Azusa.	City of Azusa	Demolition of several existing on-site structures located on the Dhammakaya International Meditation Center site and reconstruction.
Covina Bowl Specific Plan Project	At West San Bernardino Road, North Rimsdale Avenue, and West Badillo Street, Covina.	City of Covina	Implementation of a new Specific Plan on approximately 7.5-acres which includes mixed use, residential, and commercial land uses.
Upper San Gabriel River Watershed Urban Greening Project	Within communities across the Upper San Gabriel River Watershed: Azusa, Baldwin Park, Claremont, Covina, El Monte, Glendora, La Verne, Pomona, San Dimas, and West Covina	California State Coastal Conservancy	Planting of approximately 500 trees using resident volunteers who will receive environmental education in the process of the tree plantings.
Seismic Monitoring Station	Within the ANF, 1.3 miles east of Falling Springs.	California Governor's Office of Emergency Services	U.S. Geological Survey plans to install and operate an outdoor seismic monitoring station in a roughly 36-square-foot area, consisting of two small structures.
Upgrade MBGRs (07-32760)	On SR-39 in Azusa from the Coldbrook Campground to the San Gabriel Canyon Road Lookout (PM 32.2/38.4)	California Department of Transportation (Caltrans)	Upgrading of Metal Beam Guardrail (MBGR) to Midwest Guardrail System (MGS)
City of Azusa 2021-2029 Housing Element Update	Citywide	City of Azusa	Update of the Housing Element, which identifies the following: 1) housing needs, 2) constraints to housing development, 3) housing resources (available sites and funding sources), and 4) a housing plan, with goals, policies, and implementation actions that further housing opportunities for Azusa residents.
Old Schoolhouse Removal	403 North Angeleno Avenue, Azusa, CA 91702	Azusa Unified School District	Demolition and replacement of the Old Schoolhouse structure with a grass lawn or parking lot.

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Name	Location	Lead Agency	Description
Grand Estates	On Grand Avenue north of Palm Drive, east of North Silent Ranch Drive, and west of Rainbow Drive, Glendora	City of Glendora	Development of a 27-acre hillside property into a gated single-family residential community and open space.
Citrus, Forbes, and Walnut Rubber Dams Replacement Project	At Citrus, Forbes, and Walnut Spreading Grounds	Los Angeles County Flood Control District	Replacement of the existing rubber dam bodies used for groundwater recharge at the spreading grounds.
East San Gabriel Valley Area Plan	Across 24 unincorporated communities within Los Angeles County with a boundary of Irwindale to Pomona and Glendora to Rowland Heights	Los Angeles County Department of Regional Planning	Development of a plan to enhance, guide, and support the long-term growth, development, and maintenance of 24 unincorporated communities in the East San Gabriel Valley planning area. It consists of 6 elements: Land Use Element, Economic Development Element, Community Character and Design Element, Natural Resources and Conservation Element, Mobility Element, Parks and Recreation Element.
Mel Canyon Debris and Sediment Basin	Within the San Gabriel Mountain foothills at Brookridge Road and Melcanyon Road	City of Duarte	Construction of a debris and sediment catchment basin in Mel Canyon to prevent rock, sand, silt, and organic debris from flowing downslope onto Melcanyon Road and surrounding streets.
LA 39 3W7301 FY1920 2021 (07-3W730)	On SR-39 from the Azusa Wilderness Park to the San Gabriel Canyon Road Lookout (PM 17.8/38.2)	Caltrans	Slurry seal and localized resurfacing of existing asphalt concrete.
SR-2/I-210 Sustainability Climate Change (07-37930)	Along SR-2 from Glendale to 5 miles east of Wrightwood (PM R17.0/R75.24)	Caltrans	Construction of various Treatment Best Management Practices for implementation of Total Maximum Daily Loads
LA-002-Digouts (07-0W430)	On SR-2 from northern Monrovia to Wrightwood (PM 46.0/82.2)	Caltrans	Asphalt Concrete Overlay, Shoulder Backing, Dig out of failed areas, and Sealing of random cracks.
Cypress Villas Project	At North Azusa Avenue and Cypress Street, Covina	City of Covina	An 8-acre mixed commercial and residential development.

Name	Location	Lead Agency	Description
Angeles Crest Hwy Drainage (07-34900)	On SR-2 from 1 mile south of Dawson Saddle Trailhead to Wrightwood (PM 68.1/82.1)	Caltrans	Rehabilitation of culverts.
LA 2 MBGR (07-33250)	On SR-2 from La Canada Flintridge to 5 miles east of Wrightwood (PM 26.40/79.80)	Caltrans	Upgrading of MBGR to MGS.

2.1.2 Consistency with State, Regional, and Local Plans and Programs

Affected Environment

The following section is based on the Community Impact Assessment that was completed in September 2023 by ECORP Consulting, Inc. and a review of state, regional, and local plans and programs. The proposed project study area is within Los Angeles County, in unincorporated land within the Angeles National Forest (ANF). It includes the segment of State Route (SR) 39 from Post Miles 40.0 to 44.4 and areas adjacent to either side of the roadway that could potentially be directly affected by construction or implementation of the proposed project. Several programs or plans are applicable to the proposed project and are discussed below.

California Transportation Plan 2050

The California Transportation Plan (CTP) is the State’s statutorily, fiscally unconstrained, long-range transportation roadmap that provides a common framework for guiding transportation decisions and investments by all levels of government and the private sector. The vision of CTP 2050 is that “California’s safe, resilient, and universally accessible transportation system supports vibrant communities, advances racial and economic justice, and improves public and environmental health” (Caltrans, 2021). CTP 2050 identifies goals and objectives for implementing this vision. The proposed project aligns with CTP goals of “provid[ing] a safe and secure transportation system’ that “enable[s] vibrant, healthy, communities” (Caltrans, 2021).

Caltrans 2022 State Highway Operation and Protection Program (SHOPP)

The Caltrans 2022 State Highway Operation and Protection Program (SHOPP), prepared in accordance with California Government Code Section 14526.5, is a 4-year program of projects that collectively improves the condition, operation, and sustainability of the State Highway System (SHS) and associated transportation infrastructure in

California (Caltrans, 2022a). The 2022 SHOPP is Caltrans' "fix-it-first" program, which funds repair and preservation projects, emergency repairs, safety improvements, and some highway operational improvements on the SHS. This project is included for programming in the 2022 SHOPP as a long-lead project funded from the National Highway System fund and is coded as a roadway preservation project.

Southern California Association of Governments Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the metropolitan planning organization for six counties in Southern California: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) (SCAG, 2020a) is a long-term (minimum of 20 years) vision document that outlines transportation goals, objectives, and policies for the SCAG region. The proposed project aligns with one of SCAG's main transportation priorities from the RTP/SCS of "[p]reserving and optimizing our current and future system", which includes the core vision of system preservation and resilience, with an emphasis on, "strategically reinvest[ing] in the transportation network to realize an improvement in the conditions of the existing system" (SCAG, 2020a).

Southern California Association of Governments 2023 Federal Transportation Improvement Program

SCAG's 2023 Federal Transportation Improvement Program (FTIP) (SCAG, 2022) lists transportation projects proposed over a 6-year period, from fiscal year 2022/23 to 2027/28. The FTIP must include all transportation projects that require federal funding, as well as all regionally significant transportation projects for which federal approval (by the Federal Highway Administration or the Federal Transit Administration) is required, regardless of funding source. The proposed project is included within the Project Listing in the Technical Appendix Volume III of III of the 2023 FTIP as a lump-sum category of LALS02/SHP03, a SHOPP funding category for roadway rehabilitation. The FTIP states, regarding the lump-sum category LALS02/SHP03, that the "[p]rojects are consistent with 40 CFR Part 93.126 Exempt Tables 2, categories - Pavement resurfacing and/or rehabilitation, Emergency relief (23 U.S.C. 125) – widening narrow pavements or reconstructing bridges," with no additional travel lanes.

Angeles National Forest Land Management Plan (2005)

The ANFLMP describes the strategic direction at the broad program level for managing the land and its resources over a 10- to-15-year timeframe. The ANFLMP divides the ANF into "Places", which refer to geographical units or landscape characters with specified desired conditions and program emphasis for each. The ANFLMP is focused on the attainment of the desired condition of the land by using strategies that are consistent with the concept of adaptive management and sustainable resource use. The

project is located at the western edge of an area called Angeles High Country, with the Angeles Uplands to the west. The Angeles High Country is a year-round forested mountain recreation area that is managed by USFS with an emphasis on protecting forest health, including community protection from fire, while maintaining the natural landscape. Additional emphasis is placed on sustainable use, minimal impacts to plant and wildlife species, exotic species eradication, providing scenic routes, maintaining historic character, and managed use of recreational areas and facilities. SR-39 is an important access route for individuals who use the Angeles Forest High Country recreational areas and facilities and serves as a crucial route for fire-suppression forces and emergency services personnel.

Implementation of the proposed project would assist in satisfying the goals and policies of the ANFLMP through an enhancement of community protection and a reduction in the risk of loss of human life, structures, improvements, and natural resources from wild land fires and subsequent floods. Goal 3.1, titled "Provide for Public Use and Natural Resource Protection", in addition to its associated policies regarding recreation and road and trail systems, are also applicable to the proposed project. Specifically, the ANFLMP asserts that recreational opportunities and services contribute to urban community well-being, the well-being of the environment, and visitors' physical and mental well-being, which necessitate that those facilities and infrastructure be high quality, well-maintained, safe, and accessible. With respect to road and trail systems, the ANFLMP states that the transportation system of roads and trails should be safe, affordable, and environmentally sound; efficient to manage; and respond to public needs.

San Gabriel Mountains National Monument Management Plan (2018)

On October 10, 2014, President Barack Obama signed a Proclamation that described the historical, natural, and cultural significance of the features within the boundaries of the San Gabriel Mountains National Monument (SGMNM) that warranted the special designation of a national monument. The Proclamation acknowledged the continuation of valid existing rights and uses, such as utilities and other infrastructure, but in a manner consistent with the protection of historic, natural, and cultural resources. The USFS' SGMNM Management Plan (USFS, 2018) provides strategic direction and guidance for future management of the SGMNM and amended the 2005 ANFLMP.

The vision of the SGMNM Management Plan recognizes the unique recreational and educational opportunities that the SGMNM provides to the Nation's most populous county, as the SGMNM also provides critical infrastructure that sustains the surrounding metropolitan area, including flood control and water storage, delivery, and diversion; energy development; utilities; and telecommunication facilities (USFS, 2018). The SGMNM Management Plan's components are intended to provide for social, economic,

and ecological sustainability and multiple uses in an integrated manner. With respect to the proposed project, the SGMNM Management Plan contains an SGMNM Transportation Plan, which identifies a framework for managing the transportation system to inform future decisions that would support the SGMNM Management Plan's goals and desired conditions. The plan states that "proper maintenance and care of existing roads [is] critical to minimize effects due to erosion" (USFS, 2018) and calls out the need for maintenance, reconstruction, or rehabilitation of appropriate roads when funding is available to keep those roads in acceptable condition. The proposed project is intended to serve these goals specifically and would help to improve the transportation system within the SGMNM.

Los Angeles County General Plan 2035

The Los Angeles County General Plan 2035 provides the policy framework for growth within the unincorporated areas of the County through the year 2035 and establishes goals, policies, and programs for the benefit of its communities. The Los Angeles County General Plan is the foundational document for all community-based plans that serve the unincorporated areas. The mobility section provides guidance for developing transportation infrastructure that is efficient, multimodal, and "accommodates trails and landscaping, which encourage active transportation, provide shade, and reduce runoff from pollutants" (Los Angeles County, 2022). Additionally, the safety element has goals that mandate "an effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to climate hazards and climate-induced secondary impacts."

Environmental Consequences

The consistency of the project alternatives with the relevant goals that are identified in the above-mentioned plans is provided below.

Table 2.1.2-1 Consistency with State, Regional, and Local Plans and Programs

Goal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
California Transportation Plan 2050				
<p>Goal – Safety: Provide a safe and secure transportation system.</p>	<p>Inconsistent. Under the No-Project Alternative, the roadway and its associated features would continue to deteriorate and remain in subpar condition, creating unsafe conditions.</p>	<p>Consistent. Although the road would remain closed to public use, Alternative 2 would improve the road to a condition where it is safe enough to function as an emergency evacuation route and for other emergency needs.</p>	<p>Consistent. Alternative 3 would bring the road into compliance with California Streets and Highways Code by improving the safety and integrity of the roadway and its roadside features.</p>	<p>Consistent. Alternative 4 would bring the road into compliance with California Streets and Highways Code by improving the safety and integrity of the roadway and its roadside features.</p>
<p>Goal – Infrastructure: Maintain a high-quality, resilient transportation system</p>	<p>Inconsistent. Under the No-Project Alternative, the roadway and its associated features would continue to deteriorate and remain in subpar condition, creating unsafe conditions.</p>	<p>Consistent. Alternative 2 would increase the roadway’s infrastructure resiliency by rehabilitating culverts and the roadway itself.</p>	<p>Consistent. Alternative 3 would increase the roadway’s infrastructure resiliency by rehabilitating culverts and the roadway itself and by preserving and maintaining a multimodal transportation asset.</p>	<p>Consistent. Alternative 4 would increase the roadway’s infrastructure resiliency by rehabilitating culverts and the roadway itself and by preserving and maintaining a multimodal transportation asset.</p>
<p>Goal – Quality of Life & Public Health: Enable vibrant, healthy communities</p>	<p>Inconsistent. Under the No-Project Alternative, the northern segment of SR-39 would remain closed to the public and there would be no contribution to accessing recreational opportunities which could improve quality of life and public health.</p>	<p>Inconsistent. Alternative 2 would keep the north end of SR-39 closed to the public and there would be no contribution to accessing recreational opportunities which could improve quality of life and public health.</p>	<p>Consistent. Alternative 3 would offer multi-modal access to recreational opportunities that meet the diverse needs of California residents and visitors.</p>	<p>Consistent. Alternative 4 would reopen SR-39 within the project limits to vehicles and bicyclists and enhance access to recreational opportunities which could improve quality of life and public health.</p>

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Goal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Angeles National Forest Land Management Plan (2005)				
Goal 3.1 – Provide for Public Use and Natural Resource Protection	Inconsistent. Under the No-Project Alternative, the northern end of SR-39 would remain closed and would not improve access to recreation opportunities. There would also be no improved infrastructure available to first responders, fire crews, and other emergency-response personnel.	Inconsistent. Alternative 2 would keep the northern end of SR-39 closed and would not improve access to recreation opportunities. Consistent. The rehabilitated roadway would provide enhanced access to first responders, fire crews, and other emergency-response personnel.	Consistent. Alternative 3 would rehabilitate the roadway and its associated features to ensure safe, accessible, consistent, public access for recreation, special uses, and fire protection activities.	Consistent. Alternative 4 would rehabilitate the roadway and its associated features to ensure safe, accessible, consistent public access for recreation, special uses, and fire protection activities. Additionally, four-foot-wide shoulders would provide room for drivers and bicyclists to use the road simultaneously.
San Gabriel Mountains National Monument Management Plan (2018)				
Goal 1 – Transportation: Evaluate alternative transportation opportunities, facilitate access from underserved communities and ways to link public transportation options	Inconsistent. Under the No-Project Alternative, the roadway would remain closed to the public, with no access to underserved communities or public transportation.	Inconsistent. Under Alternative 2, the roadway would remain closed to the public, with no access to underserved communities or public transportation.	Consistent. Alternative 3 would open the road to multi-modal uses, including to members of underserved communities. It would also provide access via a public shuttle service, which might connect to other public transportation options.	Consistent. Alternative 4 would open the road to vehicles and bicyclists, including to members of underserved communities. However, there would be no direct link to public transportation.

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

Goal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p>Management Approaches 7: Coordinate with Caltrans to improve transportation and wildlife connectivity within the Monument, while minimizing adverse resource effects</p>	<p>Inconsistent. Under the No-Project Alternative, the roadway would remain closed and there would be no improvement in transportation or wildlife connectivity.</p>	<p>Inconsistent. Under Alternative 2, the road would be improved for emergency access but would remain closed to the public. There would be no improvement in transportation or wildlife connectivity.</p>	<p>Consistent. Alternative 3 would open the road to multi-modal uses, including a public shuttle service. Viaducts and wildlife crossing structures would improve wildlife connectivity.</p>	<p>Consistent. Alternative 4 would open the road to vehicles and bicyclists. Viaducts and wildlife crossing structures would improve wildlife connectivity.</p>
<p>Los Angeles County General Plan 2035</p>				
<p>Goal M 4: An efficient multimodal transportation system that serves the needs of all residents.</p>	<p>Inconsistent. Under the No-Project Alternative, the northern end of SR-39 would remain closed to the public. There would be no changes to existing public transportation, nor would new transit facilities or services be provided.</p>	<p>Inconsistent. Alternative 2 would keep the northern end of SR-39 closed to the public. There would be no changes to existing public transportation, nor would new transit facilities or services be provided.</p>	<p>Consistent. Alternative 3 would offer expanded transportation options via the public shuttle service, two parking lots, and four-foot-wide shoulders that would provide room for the shuttle and bicyclists to use the road simultaneously</p>	<p>Consistent. Alternative 4 would reopen SR-39 within the project limits as a two-lane roadway with unrestricted access to the public, thus reducing unnecessary vehicle trips by enhancing roadway connectivity.</p>

Goal	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Goal M 7: Transportation networks that minimize negative impacts to the environment and communities.	Inconsistent. Under the No-Project Alternative, no roadway improvements would occur. Recurring maintenance activities would continue to be required. Out-of-direction travel would still be required when traveling between the San Gabriel Valley and the mountain/High Desert communities.	Consistent. Alternative 2 would alleviate the excessive flooding and erosion by rehabilitating culverts. Less recurring maintenance activities would be required. Inconsistent. Out-of-direction travel would still be required when traveling between the San Gabriel Valley and the mountain/High Desert communities.	Consistent. Alternative 3 would rehabilitate culverts and the roadway, and would also encourage the use of sustainable transportation/active transit via the public shuttle service. Viaducts and wildlife crossing structures and signs would reduce potential collisions with wildlife. Inconsistent. Out-of-direction travel would still be required when traveling between the San Gabriel Valley and the mountain/High Desert communities.	Consistent. Alternative 4 would rehabilitate culverts and the roadway, and would eliminate the need for out-of-direction travel when traveling between the San Gabriel Valley and the mountain/High Desert communities. Viaducts and wildlife crossing structures and signs would reduce potential collisions with wildlife.

Construction Impacts

Temporary construction impacts are not anticipated to affect the existing and future land use within the project area or conflict with state, regional, and local plans.

Avoidance, Minimization, and/or Mitigation Measures

The consistency of the proposed project with transportation and land use plans varies with each alternative. Some alternatives meet some goals and objectives, while other alternatives do not. The extent to which each alternative contributes to the goals and objectives of transportation and land use plans will be considered during selection of the preferred alternative. Although many project features will inherently help meet various goals and objectives, it is not expected that any one alternative could meet all of them.

No avoidance, minimization, and/or mitigation measures are proposed at this time. Additional opportunities to improve the consistency of the proposed project with the

goals and objectives of applicable transportation and land use plans will be considered during project design of the preferred alternative.

2.1.3 Parks and Recreational Facilities

Regulatory Setting

The Park Preservation Act (California Public Resources Code Sections 5400-5409) prohibits local and state agencies from acquiring any property that is in use as a public park at the time of acquisition, unless the acquiring agency pays sufficient compensation, land, or both to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

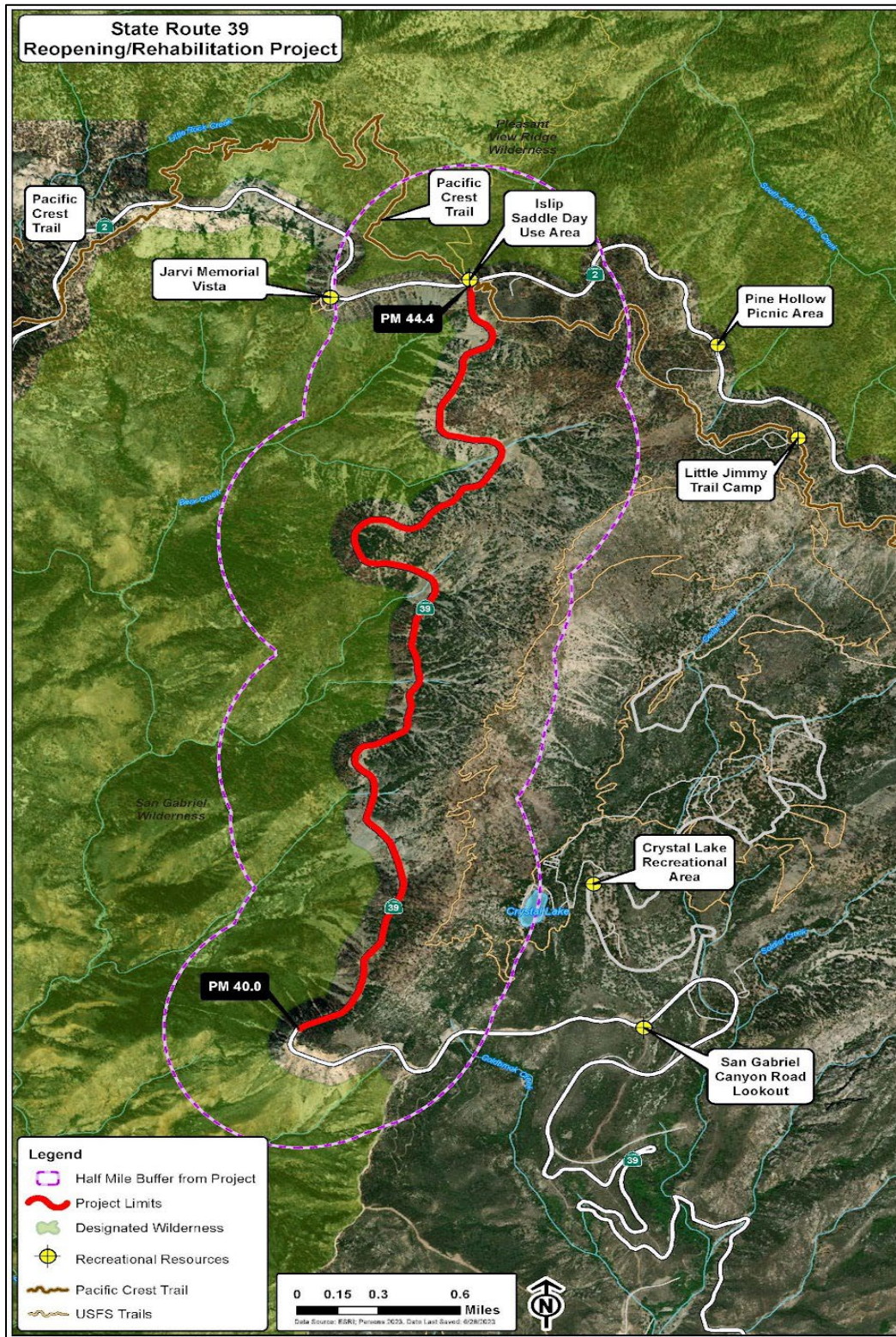
This section was prepared using information from the Community Impact Assessment and the Draft de Minimis Section 4(f) Evaluation, both of which were prepared by ECORP Consulting, Inc. (ECORP) in September 2023 (ECORP 2023).

The proposed project is in a sparsely populated area of the Angeles National Forest (ANF)—a publicly owned multiple-use national forest—with no nearby public parks, schools with publicly accessible recreational areas, or publicly owned fairgrounds. The ANF Land Management Plan identifies “managed recreation in a natural setting” as the objective of *Strategic Goal 3.1. Provide for Public Use and Natural Resource Protection*; this characterizes recreational activities as a key use of the ANF, which is a major recreational venue for the surrounding Los Angeles County area, as well as parts of San Bernardino, Riverside, and Orange Counties. Millions of people living within a 90-minute drive of the San Gabriel Mountains visit the ANF each year seeking cooler temperatures in the hot summer months, snowcapped mountains in the winter, and recreational opportunities year-round (U.S. Forest Service [USFS], 2018a). Recreational facilities within the ANF include picnic areas, campgrounds, trails, scenic overlooks, fishing lakes, and visitor centers. Table 2.1.3-1 below lists recreational resources in the vicinity of the project area, and Figure 2.1.3-1 provides a visual representation of these recreational resources’ locations relative to the project area.

Table 2.1.3-1 Recreational Resources in the Vicinity of the Project Area

Name	Location	Facilities
Pacific Crest Trail	At the southeastern and northern corners of the State Route (SR) 39/SR-2 intersection	Trail
Islip Saddle Day Use Area	North of the SR-39/SR-2 intersection	Trailhead, picnic area
Jarvi Memorial Vista	0.5 mile west of the SR-39/SR-2 intersection	Trailhead, picnic area, trail, scenic overlook
Pine Hollow Picnic Area	0.8 mile east of SR-29	Picnic area
Little Jimmy Trail Camp	1.0 mile east of SR-39	Trail and campground
San Gabriel Canyon Road Lookout	At Post Mile (PM) 38.5 on SR-39	Trailhead, scenic overlook
Crystal Lake Recreational Area	0.4 mile east of SR-39	Campgrounds, trails, trailheads, fishing lake, visitor center, cabins, picnic areas, amphitheater

Figure 2.1.3-1 Recreational Resources in the Vicinity of the Proposed Project



There are parks and recreational facilities within the project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966. The project would result in a “use” of some of those facilities, as defined by Section 4(f). Please see Appendix G for additional details.

Environmental Consequences

There are two main recreational resources that have the potential to be impacted by the proposed project: the Pacific Crest Trail (PCT) and the Islip Saddle Day Use Area. The PCT is a 2,650-mile-long scenic trail that parallels the entire West Coast of the U.S., spanning from Manning Park in British Columbia, Canada to Campo, California, which is located at the U.S./Mexico international border in San Diego County, California. The trail, which is officially designated as the *Pacific Crest National Scenic Trail*, is a long-distance hiking and equestrian trail that is open to the public for foot and equestrian travel only. The Islip Saddle Day Use Area is located off of SR-2 at the junction with SR-39 and features a moderately sized parking area with picnic tables and bathrooms. From the parking area, visitors have access to the PCT and several peak-climbing opportunities, such as Mount Williamson, Mount Hawkins, Mount Baden Powell, and more.

The PCT and the Islip Saddle Day Use Area may be affected due to the rehabilitation of the parking lot located north of the SR-2/SR-39 junction (Alternative 3), and the construction of a 140-foot-radius, single-lane roundabout (Alternative 4). Access to the trail will not be restricted at any time during construction, however, there will be a temporary construction detour for hikers as the PCT meets SR-2 to avoid construction zones for Alternatives 3 and 4. No impacts are anticipated to the trail itself because the trail will remain untouched by any construction or post-construction activities. There will be direct impacts to the Islip Saddle Day Use Area parking lot because Alternative 3 proposes to rehabilitate the existing parking lot, and Alternative 4 will require slight modifications to be made to the parking lot to accommodate the design of the proposed roundabout at the SR-2/SR-39 junction. Other recreational resources around the project area would not be affected by the project due to their proximity to SR-39 and the SR-2/SR-39 junction.

Permanent Impacts

No-Build Alternative

Under the No-Build Alternative, SR-39 would remain closed to the public between PM 40.0 and PM 44.4, and no additional access to recreational facilities would be created. Although Caltrans, USFS, and emergency-response personnel would continue to have access to this segment of SR-39, roadway conditions would continue to be

substandard, and there would be no improvements to emergency response time or access to ensure proper maintenance and amelioration of occurrences that would negatively impact existing recreational areas. The No-Build Alternative would not require new roadway easements within National Forest lands, nor would it require the relocation of recreational facilities.

Build Alternatives

For all the build alternatives, the proposed project would result in improved roadway conditions for emergency and maintenance vehicles within the project limits, which would benefit recreational areas within the ANF through improved response times for fires and other incidents and would ensure proper maintenance and amelioration of occurrences that would negatively impact existing recreational areas.

Right-of-way is granted through a Transportation Easement from the United States Department of Agriculture Forest Service. California Department of Transportation (Caltrans) has determined that the California Park Preservation Act is not applicable because Caltrans is acquiring rights-of-way as an easement from a federal agency rather than fee ownership with title transfer.

Under Alternative 2, SR-39 would remain closed to the public between PM 40.0 and PM 44.4; and therefore, no new roadway easements or relocation of recreational facilities would be required; nor would there be any improvements to public access of the ANF from the San Gabriel Valley to recreational facilities north of the project limits.

Under Alternatives 3 and 4, recreational sites would be affected because Caltrans would need to obtain an additional roadway easement from the USFS for construction of the parking lots (Alternative 3), the roundabout (Alternative 4), and the viaducts (both Alternatives 3 and 4). Under Alternative 3, the existing parking lot north of the SR-2/SR-39 junction at the Islip Saddle Day Use Area would be rehabilitated, resulting in direct impacts to a portion of the Islip Saddle Day Use Area. Use of the Islip Saddle Day Use Area parking lot would be limited during construction of Alternatives 3 and 4. Under Alternative 3, it is anticipated that the northern parking lot would be repaved in sections to prevent a temporary closure of the entire parking lot. Limited parking will be available during construction to avoid a full closure of the lot. Repaving the parking lot in sections would allow hikers and other visitors to use the parking lot to park their vehicles for the day, allowing for continuous access even during construction. Under Alternative 4, construction of the roundabout will cause permanent impacts to the parking lot at the Islip Saddle Day Use Area because the parking lot would have to be modified slightly to accommodate the design of the roundabout. The roundabout structure will protrude partially into the parking lot, causing permanent impacts the existing parking lot. However, these impacts will be minor, and the existing parking spaces would be

adjusted slightly to maintain the same number of parking spaces that are currently in the lot. Therefore, the parking lot would still be able to accommodate the same number of visitors as before, causing no difference in accessibility. The Islip Saddle Day Use Area is a resource protected by Section 4(f) of the Department of Transportation Act. With the proposed rehabilitation of the parking lot and slight modification to the parking spaces, the impacts of Alternatives 3 and 4 are considered *de minimis* under Section 4(f); this is discussed further in Section 7.2 of the Draft De Minimis Section 4(f) Evaluation, which is included as Appendix G.

There will be no permanent impacts or relocation of the Pacific Crest Trail, for Alternatives 3 or 4, at the junction of SR-2/SR-39 or the portion of the trail that reconnects at Islip Saddle Day Use Area. The trail will remain untouched during construction of these alternatives. However, there will be temporary construction detours for hikers as they cross the road to avoid the construction zones as they connect with the other section of the trail. These detours will be in place during construction of the roundabout (Alternative 4) and the repaving of the Parking lot at the Islip Saddle Day Use Area (Alternative 3).

Under Alternative 3, the proposed parking areas and shuttle service would allow visitors to park their vehicle and take the shuttle, walk, or ride their bicycles between the Crystal Lake Recreation Area and the Islip Saddle Day Use Area and Pacific Crest Trail, creating a multitude of access options for users of these recreational resources. Under Alternative 4, access to the currently closed portion of SR-39 would be open to the public via vehicle, bicycle, or by foot, which would also contribute to increased access to recreational facilities as discussed further in Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. Although Alternatives 3 and 4 would increase the ease of access to recreational facilities for those using SR-39 for access needs, it is not expected to contribute to an increase in use to the extent that substantial physical deterioration of the facility would occur or be accelerated because there are other access opportunities currently available. The project would not contribute to an expansion of recreational facilities due to development within the project area being constrained because of Los Angeles County or ANF zoning designations.

Construction Impacts

Construction activities would limit the informal use of the project segment by bicyclists and hikers during the construction period. Various other trails and trailheads are available throughout the ANF that could be used by bicyclists and hikers during this time. After construction, use of the project segment by bicyclists and hikers would be able to resume. Use of the Islip Saddle Day Use Area and the PCT would be limited during the construction of Alternatives 3 and 4. Under Alternative 3, it is anticipated that the northern parking lot would be repaved in sections to prevent a temporary closure of

the entire parking lot. Limited parking will be available during construction to avoid a full closure of the lot. Repaving the parking lot in sections would allow hikers and other visitors to use the parking lot to park their vehicles for the day, allowing for continuous access even during construction. Under Alternative 4, construction of the roundabout will cause permanent impacts to the parking lot at the Islip Saddle Day Use Area, as the parking lot would have to be modified slightly to accommodate the design of the roundabout. The roundabout structure will protrude partially into the parking lot causing permanent impacts to the existing parking lot. However, these impacts will be minor and the existing parking spaces would be adjusted slightly to maintain the same number of parking spaces that are currently in the lot. Therefore, the parking lot would still be able to accommodate the same number of visitors as before, causing no difference in accessibility.

Avoidance, Minimization, and/or Mitigation Measures

There will be no permanent impacts or relocation of the Pacific Crest Trail at the junction of SR-2/SR-39 or the portion of the trail that reconnects at Islip Saddle Day Use Area. The trail will remain untouched. Direct impacts to the Islip Saddle Day Use Area parking lot under Alternatives 3 and 4 would be reduced by the following minimization measures:

- PR-1: During project construction of Alternative 3, Caltrans shall rehabilitate and repave the Islip Saddle Day Use Area's parking lot in sections to prevent a temporary closure of the entire parking lot. Limited parking will be available during construction to avoid a full temporary closure of the lot to allow hikers and other visitors to access the park for the day.
- PR-2: Caltrans shall implement temporary construction detours for hikers as they cross the road (to connect with the other section of the trail) during construction of the roundabout (Alternative 4) and the repaving of the Parking lot at the Islip Saddle Day Use Area (Alternative 3).

2.1.4 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which established the steps necessary to comply with the National Environmental Policy Act of 1969, require evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The Council on Environmental Quality regulations (40 Code of Federal

Regulations 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

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

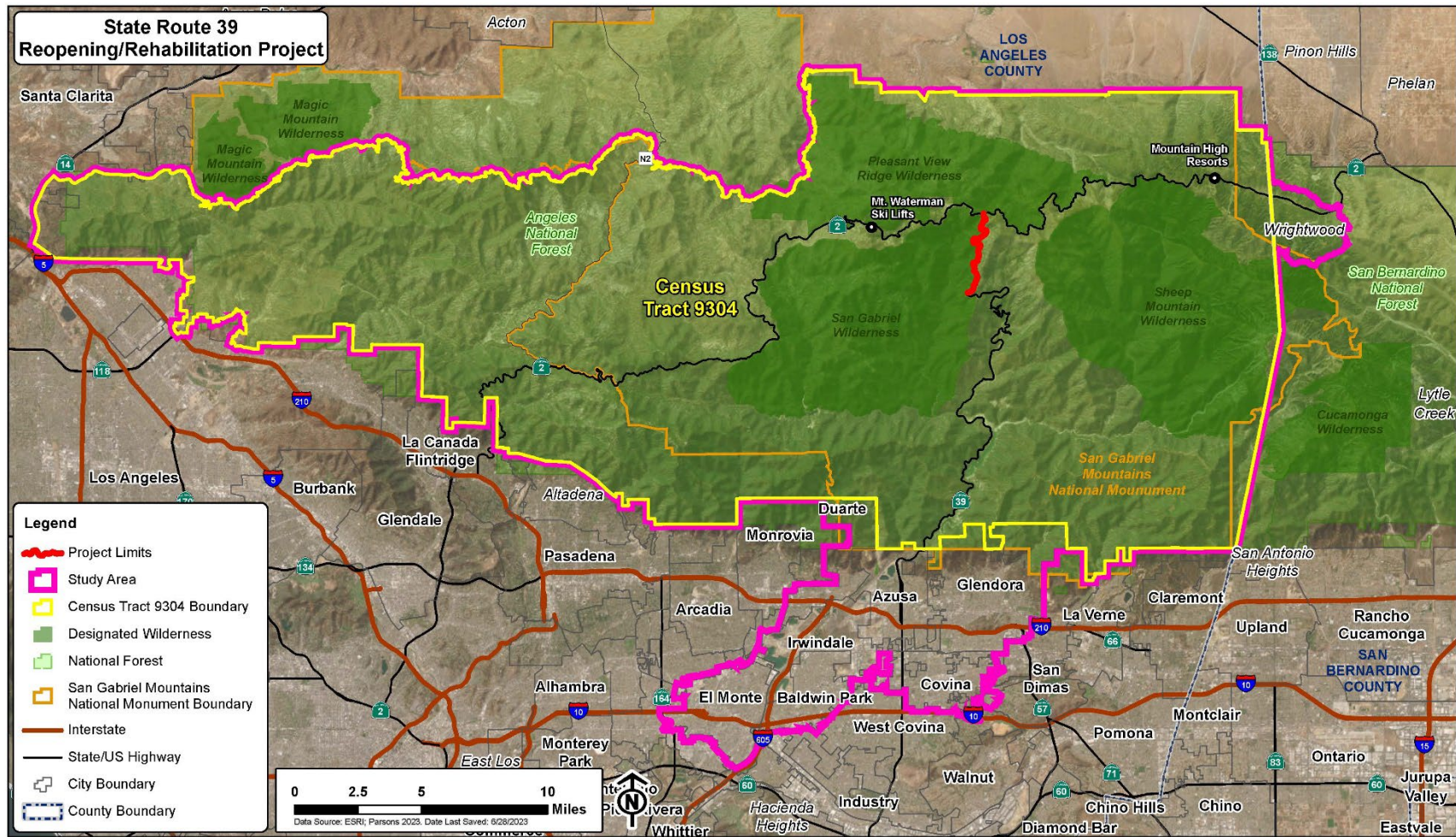
Affected Environment

This section was prepared using information from the Community Impact Assessment that was prepared in September 2023 (ECORP 2023). The project area for the State Route (SR) 39 Reopening/Rehabilitation Project includes the segment of SR-39 from Post Mile (PM) 40.0 to PM 44.4 and areas adjacent to either side of the roadway that could potentially be directly affected by construction or implementation of the proposed project. The study area for this analysis includes the project area, surrounding lands within the Angeles National Forest (ANF), and communities outside the project area that could potentially be indirectly affected by the proposed project, including Wrightwood, and portions of the San Gabriel Valley in the vicinity of SR-39. Within the San Gabriel Valley, the study area includes the cities of Azusa, Duarte, El Monte, Covina, Glendora, Irwindale, and Baldwin Park. Figure 2.1.4-1 identifies the lands and jurisdictions that compose the study area. As discussed in the next section (Chapter 2.1.5, *Community Character and Cohesion*), the population of Los Angeles County is projected to increase from approximately 10.1 million people in 2016 to approximately 11.7 million people by 2045—an increase of approximately 15.5 percent. The Los Angeles County 2035 General Plan provides the policy framework for how and where the unincorporated County will grow through the year 2035. As noted in Chapter 2.1.1, *Existing and Future Land Use*, the County does not encourage development in the ANF, and regulation is coordinated closely with the U.S. Forest Service (USFS) (Los Angeles County, 2022). According to the ANF Land Management Plan, undeveloped lands surrounding the proposed project are protected and dedicated for back-country and wilderness use (USFS, 2018).

Further outside the project area, the availability of developable land within the gateway communities of Azusa and Wrightwood is very limited. Azusa is a highly urbanized community that is nearly built out. Given that little vacant land remains within the city, most future development within Azusa is expected to take place as infill development within areas developed below the maximum density allowed in Azusa's zoning code (City of Azusa, 2004). Conversely, Wrightwood is surrounded in all directions by national forest land. Except for areas along SR-2 west of Wrightwood, most of the

national forest lands surrounding Wrightwood are designated as “Back Country” and “Back Country, Non-Motorized”, and commercial areas within Wrightwood are generally concentrated along SR-2. Nearly all lands south of SR-2 within Wrightwood have been converted to a residential grid of moderate-density single-family homes, and north of SR-2, developable lands are limited by mountainous terrain.

Figure 2.1.4-1 SR-39 Reopening Study Area



Environmental Consequences

The following discussion follows the “first-cut screening” approach outlined in the California Department of Transportation (Caltrans) *Guidance for Preparers of Growth-related, Indirect Impact Analysis* (Caltrans, 2006) for determining whether a proposed project has the potential to have growth-related impacts.

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

The proposed project is located within national forest lands, and the SR-39 project segment is bound by steep slopes to the east and west and, except for the Pacific Crest Trail and Islip Saddle Day Use Area, which are also accessible from SR-2, does not provide direct access to any recreational sites or facilities. Other than the Crystal Lake Recreation Area, lands surrounding the project area are protected and designated for backcountry and wilderness use only. Developed sites within the ANF are already accessible from other roadways within the study area.

Alternatives 1 and 2 would have no effect on accessibility for the general public because SR-39 would only be open to Caltrans, USFS, and emergency-response personnel under these alternatives. As discussed in Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, Alternatives 3 and 4 would provide improved access to some recreational sites within the ANF by reducing travel times to these destinations for visitors from the central San Gabriel Valley. Thus, Alternatives 3 and 4 would make some recreational areas within the ANF more accessible in terms of travel times and travel behavior. Alternatives 3 and 4 would not, however, introduce new access to existing or future-planned commercial or residential developments.

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

The proposed project involves reopening a road that has been closed for more than 40 years, and although the reopening of a road that has been closed for that length of time could potentially influence patterns of growth, SR-39 is surrounded by mountainous terrain within the ANF that is protected and designated for open space use; thus, the proposed project would not influence growth within the vicinity of the project area. Azusa and Wrightwood, which are positioned near the entrance to the ANF on SR-39 and SR-2, respectively, serve as gateways to the ANF.

According to the Southern California Association of Governments' Connect SoCal demographics and growth forecast, Azusa is projected to experience increases in population and employment between 2016 and 2045. Despite these projections, the opportunities for growth within Azusa are limited by the lack of vacant land and the challenges of attracting new industries and workers in those industries. Azusa retains a high proportion of manufacturing jobs but has struggled to attract jobs in the growing

high-tech industry due to the declining conditions of its commercial and residential properties and the lack of housing for middle- and upper-income families (City of Azusa, 2004). The residential vacancy rate within Azusa is only 6 percent. Because Azusa is nearly built out, future home construction within the city is expected to occur as infill development.

Growth opportunities within Wrightwood are also limited by the lack of vacant land and limited job growth. Wrightwood's local economy is largely dependent on tourism, and the residential vacancy rate is relatively high (33.4 percent), in large part because many of the homes are vacation rentals. Additionally, a large proportion of residents (29.9 percent) within Wrightwood are more than 65 years of age.

Therefore, the communities closest to the project area are not well suited for growth. Also, due to the scope of the proposed project and its distance from other communities within the study area, project-related growth in communities adjacent to Azusa, such as Duarte, El Monte, Covina, Glendora, Irwindale, and Baldwin Park, is not expected to occur.

Is project-related growth reasonably foreseeable?

The proposed project would not influence growth within the vicinity of the project area due to land use protections afforded by the ANF, San Gabriel Mountains National Monument, and Los Angeles County General Plan, in addition to the steep terrain that makes development adjacent to the roadway difficult. Alternatives 1 and 2 would have no effect on the accessibility of recreational opportunities within the ANF for residents residing in the central San Gabriel Valley. Alternatives 3, and 4 would improve access to the ANF for residents in the central portion of the San Gabriel Valley by reducing travel times to some recreational sites. This improved access to recreational opportunities would contribute to the quality of life within communities of the central San Gabriel Valley, but it is not expected to influence growth within these communities.

Construction Impacts

Construction would not be expected to attract people to the project area or nearby communities in numbers, or for a sufficient length of time, that would necessitate the need for additional housing or services. Therefore, there would be no construction impacts that would induce growth within the project area or areas surrounding the project area.

Avoidance, Minimization, and/or Mitigation Measures

No Avoidance, Minimization, and/or Mitigation measures are required.

2.1.5 Community Character and Cohesion

Regulatory Setting

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

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

Affected Environment

Information in this section is based on the Community Impact Assessment (CIA) prepared for the project (ECORP, 2023) and review of land use plans, growth policies, and demographic statistics of the community. The affected environment of a community is largely based on boundaries, subdivisions, demographics (population, housing, income, and economics), and community features, all of which are further described below. The CIA study area for the proposed project (Figure 2.1.4-1) includes the proposed project area along with surrounding lands within the Angeles National Forest (ANF), and communities outside the project area that could potentially be indirectly affected by the proposed project. This includes the cities immediately adjacent to the project area—Azusa and Wrightwood—as well as the surrounding cities of Duarte, El Monte, Covina, Glendora, Irwindale, and Baldwin Park. Demographic data was obtained for the study area, which includes United States Census Tract 9304 (within the ANF), Wrightwood, and multiple cities within the San Gabriel Valley. Demographic data was also obtained for the counties of Los Angeles and San Bernardino for the purpose of comparing the percentage of population groups within the affected socioeconomic areas with those of the larger region.

Regional Population Characteristics

The County of Los Angeles has a high population density due to its widely dispersed geographic area and large portion of developed land. The county's total population reported in the 2020 United States Census was 10,014,009. Table 2.1.5-1 presents census information on the total population, race, and ethnic composition of the study area in comparison to Los Angeles County. The table shows that, of that population, the largest group was persons of Hispanic or Latino origin (47.98 percent), while white (non-Hispanic) persons composed the next largest group (25.6 percent). As the data indicates, the minority population percentages within the counties of Los Angeles (74.4 percent) and San Bernardino (74.05 percent) and nearly all of the communities within the study area, except Wrightwood, exceed 50 percent. The minority population percentages within the cities of Azusa, Baldwin Park, Covina, Duarte, El Monte, and Irwindale also exceed those within the County of Los Angeles. Furthermore, the percentages of persons with disabilities within the study area communities range from 8.9 percent with the City of Azusa, to 18.5 percent with Census Tract 9304. The communities of Census Tract 9304, Wrightwood, and the cities of Covina, Duarte, El Monte, and Glendora have a higher percentage of persons with disabilities than within the respective counties (Los Angeles and San Bernardino counties).

Of the persons residing in Los Angeles County, 21.7 percent were less than 18 years of age, which is higher than any of the cities within the study area, while 13.6 percent were 65 years of age and over, as shown in Table 2.1.5-2 below. The median household income in Los Angeles County in 2020 was \$71,358, with approximately 14 percent of the population living below the poverty line. As shown below in Table 2.1.5-3, the percentage of the population in poverty is 14 percent in Los Angeles County and 15 percent in San Bernardino County. The percentage of low-income populations ranges from 7 to 19 percent within the communities of the study area, with only Census Tract 9304 and El Monte having a higher percentage of low-income populations than the corresponding county level, according to 2020 Census data.

Table 2.1.5-1 Existing Regional and Local Population Characteristics – Race/Ethnicity (2020 U.S. Census)

Area	Total Population	White	%	Minority (%)	Hispanic/Latino	%	Black/African American	%	American Indian and Alaska Native	%	Asian	%	Native Hawaiian and Other Pacific Islander	%	Other	%	Two or More Races*	%
Los Angeles County	10,014,009	2,563,609	25.60	74.40	4,804,763	47.98	760,689	7.60	18,453	0.18	1,474,237	14.72	20,522	0.20	58,683	0.59	313,053	3.13
Census Tract 9304*	1,285	408	31.75	68.25	674	52.45	92	7.16	20	1.56	37	2.88	3	0.23	2	0.16	49	3.81
Azusa**	50,000	7,751	15.50	84.50	32,020	64.04	1,589	3.18	113	0.23	7,187	14.37	65	0.13	234	0.47	1,041	2.08
Baldwin Park**	72,176	2,391	3.31	96.69	53,683	74.38	609	0.84	92	0.13	14,590	20.21	44	0.06	266	0.37	501	0.69
Covina*	51,268	10,051	19.60	80.40	30,108	58.73	1,748	3.41	156	0.30	7,571	14.77	87	0.17	268	0.52	1,279	2.49
Duarte*	21,727	4,892	22.52	77.48	10,436	48.03	1,126	5.18	59	0.27	4,507	20.74	15	0.07	101	0.46	591	2.72
El Monte*	109,450	3,667	3.35	96.65	70,819	64.70	745	0.68	146	0.13	32,940	30.10	34	0.03	356	0.33	743	0.68
Glendora*	52,558	23,384	44.49	55.51	19,017	36.18	1,021	1.94	120	0.23	6,656	12.66	24	0.05	274	0.52	2,062	3.92
Irwindale*	1,472	53	3.60	96.40	1,336	90.76	15	1.02	1	0.07	50	3.40	0	0.00	2	0.14	15	1.02
San Bernardino County	2,181,654	566,113	25.95	74.05	1,170,913	53.67	173,322	7.94	8,412	0.39	176,204	8.08	6,173	0.28	12,117	0.56	68,400	3.14
Wrightwood	4,720	3,482	73.77	26.23	839	17.78	22	0.47	26	0.55	89	1.89	1	0.02	39	0.83	222	4.70

Note: Total of percentages may be larger than 100% because Hispanic/Latino may include persons of multiple ethnicities.

*Localities with minority populations, i.e. (a) the minority population exceeds 50 percent or (b) the minority population percentage is greater than the minority population within the respective county. Minority individuals are defined as members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black; or Hispanic.

Table 2.1.5-2 Existing Regional and Local Population Characteristics – Age (2020 U.S. Census)

Area	Total Population	Under 18 Years of Age	%	Over 65 Years of Age	%
Los Angeles County	10,040,682	2,178,559	21.7	1,370,141	13.6
Census Tract 9304	1,387	175	12.6	176	12.7
Azusa	49,584	10,599	21.4	5,467	11.0
Baldwin Park	75,659	17,346	22.9	9,583	12.7
Covina	47,787	10,343	21.6	6,459	13.5
Duarte*	21,399	3,638	17.0	4,185	19.6
El Monte	113,917	26,161	23.0	15,145	13.3
Glendora*	51,087	11,715	22.9	8,239	16.1
Irwindale*	1,365	352	25.8	222	16.3
San Bernardino County	2,162,532	570,845	26.4	250,032	11.6
Wrightwood*	4,362	892	20.4	1,306	29.9

*Localities with percentages of seniors (i.e., over 65 years of age) greater than that within the respective county.

Table 2.1.5-3 Existing Regional and Local Population Characteristics – Income/Poverty (2020 U.S. Census)

Area	Total Population	Median Household Income (\$)	Median Family Income (\$)	Per Capita Income (\$)	Population for Whom Poverty Status is Determined	Population Below Poverty Threshold	Population Below Poverty Line (%)
Los Angeles County	10,014,009	71,358	80,317	35,685	9,884,138	1,401,656	14
Census Tract 9304*	1,285	102,778	163,412	38,943	1,137	221	19
Azusa	50,000	65,912	72,326	24,686	44,210	6,329	14
Baldwin Park	72,176	68,741	69,299	20,882	75,154	9,475	13
Covina	51,268	77,913	85,231	31,157	47,362	4,302	9
Duarte	21,727	82,620	97,527	32,760	21,076	1,972	9
El Monte*	109,450	53,874	57,083	18,970	112,722	19,642	17
Glendora	52,558	99,153	107,549	42,494	50,194	3,647	7
Irwindale	1,472	86,250	92,000	32,431	1,357	115	9
San Bernardino County	2,181,654	65,761	72,465	26,402	2,107,058	315,656	15
Wrightwood	4,720	62,842	64,472	39,211	4,335	594	14

*Localities with percentages of low-income populations (i.e., populations below poverty threshold) greater than that within the respective county.

Projected Population, Housing, and Employment

According to the Southern California Association of Governments (SCAG) Connect SoCal demographics and growth forecast, the population of Los Angeles County is projected to increase from approximately 10.1 million people in 2016 to approximately 11.7 million people by 2045, an increase of approximately 15.5 percent. Population growth rates for cities within the study area for the same period are projected to range from 3.1 percent in the City of Covina to 35.7 percent in the City of Irwindale.

Populations in the unincorporated portions of Los Angeles County are projected to increase by 20.4 percent between 2016 and 2045. See Table 2.1.5-4 for more details. Wrightwood is located within unincorporated San Bernardino County, which is projected to experience a 14.6 percent increase in population during the same timeframe, however, this is not reflected in the table below, as population projections in this table are taken from the SCAG data and do not include census designated places such as Wrightwood.

Table 2.1.5-4 Population, Household, and Employment Projections for the Year 2045

Jurisdiction	Population		Households		Employment	
	2016	2045 (% increase)	2016	2045 (% increase)	2016	2045 (% increase)
Los Angeles County	10,110,000	11,674,000 (15.5%)	3,319,000	4,119,000 (24.1%)	4,743,000	5,382,000 (13.5%)
Azuza	49,600	56,200 (13.3%)	13,400	16,400 (22.4%)	19,400	21,800 (12.4%)
Baldwin Park	75,400	81,700 (8.4%)	16,900	19,200 (13.6%)	24,700	26,500 (7.3%)
Covina	49,000	50,500 (3.1%)	16,000	16,800 (5.0%)	26,300	28,900 (9.9%)
Duarte	22,000	25,100 (14.1%)	7,100	8,100 (14.1%)	11,300	15,700 (38.9%)
El Monte	114,300	137,500 (20.3%)	27,500	36,300 (32.0%)	30,600	37,100 (21.2%)
Glendora	52,300	55,700 (6.5%)	17,600	19,500 (10.8%)	21,600	23,100 (6.9%)
Irwindale	1,400	1,900 (35.7%)	400	500 (25.0%)	18,900	20,300 (7.4%)
San Bernardino County	2,174,506	2,623,308 (20.6%)	657,188	953,105 (45.0%)	859,875	1,144,814 (33.1%)

According to the 2020 United States Census, the total number of housing units in Los Angeles County was 3,559,790, of which 93.6 percent were occupied, and 6.4 percent were vacant. Approximately 46 percent of occupied housing were owner occupied and 54 percent were rented, as indicated in Table 2.1.5-5. The number of households in each jurisdiction is expected to increase between the years 2016 and 2045. The percentage increase in households is expected to be equal to, or exceed, the population growth rate in every jurisdiction except the City of Irwindale (SCAG, 2020b). According to the Los Angeles County Economic Development Corporation, the largest growth sectors countywide in terms of jobs are professional, scientific and technical services, health services, and retail trade. Over the past decades, the San Gabriel Valley has lost jobs in manufacturing, while gaining jobs in other business sectors.

Specifically, the city of Azusa retains a higher proportion of jobs in the manufacturing sector than the rest of the valley. It also has many jobs in agriculture (due to the Monrovia Nursery), construction, transportation, utilities, and communications (City of Azusa, 2004). Azusa is also well below other parts of the valley in its percentage of jobs in wholesale trade, retail trade, finance, insurance, real estate, business, legal, and professional services. Citrus College and Azusa Pacific University are major employers within the city and provide opportunities for education and training for local residents (City of Azusa, 2004). Overall, jobs within Azusa pay lower wages than those of Los Angeles County as a whole. On the other side of the study area, Wrightwood, according to the Wrightwood Community Action Guide (San Bernardino County, 2019), has approximately 642 jobs and 120 businesses. These jobs are within the service (38 percent); retail trade (16 percent); finance, insurance, and real estate (14 percent); construction (11 percent); and other sectors (13 percent).

Table 2.1.5-5 Existing Regional and Local Housing Characteristics – Occupancy (2020 U.S. Census)

Area	Total Housing Units	Occupied Housing Units	%	Vacant Housing Units	%	Owner-Occupied	%	Renter-Occupied	%	Average Household Size of Owner-Occupied Unit	Average Household Size of Renter-Occupied Unit
Los Angeles County	3,559,790	3,332,504	93.6	227,286	6.4	1,534,472	46.0	1,798,032	54.0	3.16	2.79
Census Tract 9304	588	384	65.3	204	34.7	318	82.8	66	17.2	2.71	2.32
Azusa	14,120	13,279	94.0	841	6.00	7,332	55.2	5,947	44.8	3.11	3.62
Baldwin Park	18,223	17,708	97.2	515	2.80	10,203	57.6	7,505	42.4	4.25	4.24
Covina	15,920	15,296	96.1	624	3.90	8,787	57.4	6,509	42.6	3.17	3
Duarte	7,255	6,982	96.2	273	3.80	4,468	64.0	2,514	36	3.17	2.74
El Monte	30,214	29,077	96.2	1,137	3.80	12,307	42.3	16,770	57.7	3.83	3.91
Glendora	17,258	16,523	95.7	735	4.30	11,637	70.4	4,886	29.6	3.02	3.05
Irwindale	432	405	93.8	27	6.30	319	78.8	86	21.2	3.46	3.03
San Bernardino County	721,376	640,090	88.7	81,286	11.30	384,774	60.1	255,316	39.9	3.31	3.27
Wrightwood	2,796	1,862	66.6	934	33.40	1,468	78.8	394	21.2	2.37	2.24

Economic Data and Trends

The current economy of Los Angeles County is technology driven, including biomedical, digital information technology, and environmental technology. Other key industries include the production of cultural, artistic, and design goods and services. International trade, aerospace, petroleum, and tourism continue to be major drivers of the economy, as well as media production, finance, telecommunications, law, healthcare, and transportation (Los Angeles County, 2022). Los Angeles County continues to have a net decrease in durable goods manufacturing and construction jobs. Despite significant losses, Los Angeles County is still the largest manufacturing center in the country (Los Angeles County, 2022).

The largest economic sectors in the valley are professional and business services, retail, educational and health services, and international trade. Azusa is centrally located within the San Gabriel Valley and the West End Industrial District is one of the largest business concentrations in the San Gabriel Valley. The city provides a major source of aggregate mined in two major quarry operations. Northrop Grumman is one of the larger industrial employers within the city; however, most industrial companies within the city employ between 50 and 150 workers.

Growing industry sectors within the city include food processing, light manufacturing, service, retail, technology, and real estate; however, the city has not captured much of the growth in high tech jobs compared to other parts of the valley. According to the City of Azusa General Plan, the city's business image is impaired by its declining retail strips, vacant commercial buildings, overcrowded apartments, and lack of housing for middle- and upper-income families (City of Azusa, 2004). City planners have identified concerns about aligning the skills of the valley's population with the jobs being created in more technical and high-skill positions. Firms in older industries, such as metalworking, are being replaced by companies in younger, more dynamic industries, such as printing and publishing.

In Wrightwood, its economy is heavily dependent on tourism. Mountain High Ski Resorts is located along State Route (SR) 2, just 5 miles west of Wrightwood. Many tourists travel through Wrightwood or stay overnight within vacation rentals or other lodging options within Wrightwood on weekends, holidays, and following snow events (San Bernardino County, 2019).

Neighborhoods and Community Characteristics

The project area is in a remote mountainous area within the ANF. There are no neighborhoods, communities, commercial properties, schools, libraries, or churches or other places of worship within the vicinity of the project limits. The nearest communities

include Azusa and Wrightwood, which are more than 10 miles from the project limits. These communities, being positioned near the entrance to the ANF on SR-39 and SR-2, serve as gateways to the ANF. As of the 2020 Census, the total population of Azusa and Wrightwood was 50,000, and 4,720, respectively. Azusa is one of many cities within the highly populated San Gabriel Valley, whereas Wrightwood is a small mountain community within the boundaries of the ANF.

Environmental Consequences

Permanent Impacts

The build alternatives would not disrupt or divide an established community, nor would they have direct effects on community character because there are no communities within 10 miles of the project limits. Furthermore, the project would stay on the existing alignment and would not alter zoning, nor would it provide access to developable areas. The build alternatives would not contribute to changes in population characteristics of the region or the study area. The project would not require acquisition of any residences nor businesses; no individuals would have to be displaced; and the build alternatives would have no direct impact on commercial properties because there are none within or adjacent to the project area. The build alternatives would not introduce new access to commercial centers and businesses within the study area because these areas are currently easily accessible from other parts of the study area. Alternatives 3 and 4 may indirectly affect economic conditions within the gateway communities of Azusa and Wrightwood by potentially altering the travel route choices of visitors to and from key destinations within the study area. See Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for more information regarding effects of the proposed project on traffic patterns.

Under Alternative 1 (No-Build Alternative) and Alternative 2, SR-39 would remain closed to the public between Post Mile (PM) 40.0 and PM 44.4; there would be no changes to travel options for the general public along SR-39 or changes to traffic patterns and economic conditions within Azusa and Wrightwood.

Under Alternative 3, the new shuttle service and reduced travel times to some key destinations via SR-39 may attract more visitors to the ANF and could encourage some visitors to certain destinations (e.g., Islip Saddle Day Use Area, Pacific Crest Trail, and Mount Waterman Ski Lift) within the ANF to access these areas via the SR-39 shuttle instead of via SR-2. An increase in the number of visitors accessing the ANF via SR-39 could benefit businesses within Azusa because ANF visitors may stop to dine or shop in Azusa on their way to or from the shuttle. The diversion of trips from SR-2 to SR-39 under Alternative 3 is expected to be minimal and would likely have a negligible effect

on economic conditions in Wrightwood, because Wrightwood continues to have attractive tourist destinations.

Under Alternative 4, estimated travel time from the central San Gabriel Valley to Wrightwood and Mountain High Ski Resort would continue to be shorter via SR-2. The reopening of SR-39 within the project limits may attract additional visitors from the San Gabriel Valley to the ANF who are interested in scenic driving along SR-39 and visiting Wrightwood via a travel loop within one trip. Visitors to the Mountain High Ski Resort would likely continue to access the resort via SR-2 through Wrightwood due to hazardous winter weather conditions and/or possible road closures. Given that Alternative 4 may encourage some drivers to access the ANF via SR-39 instead of SR-2, while attracting other drivers to visit Wrightwood, economic effects of this alternative within Wrightwood would likely be negligible.

Construction Impacts

The build alternatives would not create new or increased barriers that would physically or adversely divide the local community or disrupt cohesion. Access to SR-2 would not be affected for members of the public who use it to access Wrightwood or other portions of the ANF due to portioning the construction in order to keep SR-2 open. For more details regarding traffic access during construction, refer to Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. Construction would result in temporary visual impacts; increased noise levels; and increased air pollutants such as dust and particulate matter due to the excavation, grading, hauling, and other construction related activities. However, construction activities would cease with the end of construction. Additionally, the proposed project would implement Project Features to further reduce potential impacts resulting from construction activities, as described in Chapter 1.4, *Alternatives*.

Avoidance, Minimization, and/or Mitigation Measures

No Avoidance, Minimization, and/or Mitigation measures are required.

2.1.6 Environmental Justice

Regulatory Setting

All projects that involve a federal action (i.e., federal funding, permits, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-

income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines; for 2023, this was \$30,000 for a family of four.

EO 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All was enacted on April 21, 2023. EO 14096 on environmental justice does not rescind EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which has been in effect since February 11, 1994, and is currently implemented through Department of Transportation Order 5610.2C. This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on environmental justice.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. The California Department of Transportation's (Caltrans) commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Caltrans Director, which is provided in Appendix A of this document.

Affected Environment

The term "minority" includes persons who identify themselves as Black/African American, Asian, Native Hawaiian/Pacific Islander, Native American/Native Alaskan, or of Hispanic/Latino origin. Minority populations within the study area include communities for which the minority population percentage reported by the 2020 Census exceeds 50 percent or is greater than the minority population percentage at the county-level. Low-income populations within the study area include communities for which the percentage of population below poverty line is higher than the percentage identified as being under the poverty threshold in the County, according to data from the 2020 Census (refer to Table 2.2.5-1 in the previous section).

Analysis of environmental justice impacts is a two-step process. The first step is determining the presence of protected populations (i.e., minority or low-income populations). The second step is determining whether the project would have a disproportionate adverse impact on those protected populations, if the populations are present. Impacts are considered disproportionate if these impacts are more severe or greater in magnitude for minority and low-income populations compared to impacts on nonminority or higher-income populations.

The information in this section is based on the Community Impact Assessment that was prepared by ECORP Consulting, Inc. in September 2023 (ECORP, 2023). As indicated in Table 2.2.5-1 in the previous section, the aggregate minority percentages within Los Angeles County (74.4 percent), San Bernardino County (74.05 percent), and nearly all

the communities within the study area except Wrightwood exceed 50 percent. Within these areas, all minority population percentages are greater than their respective county minority population percentages except for Census Tract 9304 (68.25 percent) and Glendora (55.51 percent), which would indicate that there are a large number of minority populations within the study area. Furthermore, as indicated in Table 2.2.5-3 from the previous section, the percentage of persons living below the poverty line is 14 percent in Los Angeles County and 15 percent in San Bernardino County, both of which are higher than the 2020 national average of 11.4 percent (U.S. Census Bureau, 2020). At the city and census tract level, the percentage of low-income populations ranges from 7 to 19 percent, with only Census Tract 9304 (19 percent) and El Monte (17 percent) having a higher percentage of low-income populations than their corresponding county level (U.S. Census Bureau, 2020). Also, slightly more than half of the cities within the study area have a higher percentage of persons with low-income than the national average; refer to Chapter 2.1.5, *Community Character and Cohesion* for further details.

Based on this data, environmental justice populations, both minority and low income, are present within the study area; therefore, an analysis of effects related to environmental justice populations is required subject to the provisions of Executive Order 12898.

Environmental Consequences

Permanent Impacts

Alternatives 1 and 2 would have no impacts related to environmental justice because there would be no change in access to the closed section. Alternatives 3 and 4 would improve transportation infrastructure and access to recreational opportunities and are also expected to result in a modest increase in vehicle traffic in and around the Angeles National Forest (ANF) gateway cities of Azusa and Wrightwood (see Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*).

In accordance with the above discussion, Wrightwood has less than 50% minority population, which is well below the San Bernardino County average of 74.05%. In Los Angeles County, more than 75 percent of the population that would be potentially affected by project impacts would be minorities; this is consistent with the high percentage of minority populations within the greater Los Angeles County area. While minority populations at the county level are slightly lower than most of those at the city level, minority populations in the census tracts within and immediately adjacent to the project area are below the county level; therefore, minority populations would not be disproportionately affected by the project.

Regarding low-income populations, only 12.7 percent of the population that would be potentially affected by project impacts within Los Angeles County, and 14 percent within San Bernardino County (Wrightwood) would be low income; only El Monte and Census Tract 9304 contain a higher percentage of low-income populations relative to their respective counties. These communities would not incur more severe or greater impacts compared to impacts on higher-income population for the following reasons.

Alternatives 1 and 2 would have no effect on access to recreational opportunities within the ANF.

Alternatives 3 and 4 would provide improved access to recreational opportunities within the ANF by reducing travel times for residents of the central San Gabriel Valley (SGV) and within Census Tract 9304. Alternative 3 would provide a shuttle service that would be particularly beneficial for a greater proportion of low-income populations who may not otherwise be able to access places within the ANF due to the lack of a personal vehicle. See Chapter 2.1.3, *Parks and Recreation* for further discussion of the effects of each alternative on access to park and recreation resources. As discussed in Chapter 2.1.5, *Community Character and Cohesion*, Alternatives 3 and 4 may indirectly affect economic conditions within the gateway communities of Azusa and Wrightwood by potentially reducing travel times (see Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*) and affecting travel route choices of visitors to and from key destinations within the study area. However, negligible to minor beneficial effects on economic conditions within these communities are expected from each build alternative.

Furthermore, the proposed project would not involve any residential or commercial displacements or relocations because there are no residences or businesses within the project area. As discussed in Chapter 2.1.5, *Community Character and Cohesion*, the proposed project would not disrupt or divide an established community, nor would it have direct effects on community character. The proposed project would also have no direct impacts on community facilities because none are present within or adjacent to the project limits.

Construction Impacts

The short-term impacts of the project would primarily consist of construction noise and construction-induced emissions of air pollutants from vehicles travelling from the SGV to the project area. Temporary access restrictions to some recreational sites might also be required. These impacts would cease upon completion of construction and would not result in disproportionately high impacts to minority or low-income communities.

Avoidance, Minimization, and/or Mitigation Measures

No disproportionately high impacts on minority or low-income populations have been identified. However, Caltrans is committed to ensuring that no communities are disproportionately or adversely affected by this project. Therefore, the following minimization measure is required:

- EJ-1: Caltrans would actively and effectively engage all segments of the affected community. A community outreach and public involvement program would be developed and implemented to inform the community about project construction activities and address concerns should they arise.

2.1.7 Utilities/Emergency Services

Affected Environment

Utilities

The proposed project would reopen a segment of State Route (SR) 39 located within the Angeles National Forest (ANF) that has been closed since 1978, and as such, there are no existing utilities within the project limits, as confirmed by the California Department of Transportation, Division of Design, Utilities Engineering unit.

Emergency Services

SR-39, including the closed 4.4-mile-long section, currently serves as an access road for Caltrans, U.S. Forest Service (USFS), and emergency-response personnel. Through mutual aid agreements, these entities often work together to respond to emergencies, including wildland fires, depending on the severity and complexity of the incident. The ANF and surrounding wildland-urban interface areas within the study areas are classified as Very High Fire Hazard Severity Zones (Los Angeles County, 2022). Due to the remote location of the project area within the ANF, many emergency and medical services are a substantial distance away. Table 2.1.7-1 contains a list of all emergency services within the area, and Figure 2.1.7-1 shows their locations relative to the project area.

Table 2.1.7-1 Community Facilities within and surrounding the Study Area

Map No.	Facility Name	Facility Address	Direction from Project Area	Approximate Distance from Project Area (miles)
Fire Station/Service				
1	U.S. Department of Agriculture (USDA) Forest Service Rincon Fire Station	Forest Route 2N24 Azusa, CA 91702	South, off of SR-39	5
2	Los Angeles County Fire Department, Fire Camp 19	22550 East Fork Road Azusa, CA 91702-1401	Southeast, adjacent to SR-39, off of East Fork Road	6
3	East Fork Volunteer Fire Department	24210 East Fork Road Azusa, CA 91702	Southeast, adjacent to SR-39, off of East Fork Road	6
4	San Bernardino County Fire Station #14	5980 Elm Street Wrightwood, CA 92397	East, off of SR-2 in Wrightwood	13
5	USDA Forest Service Valyermo Fire Station	29835 Valyermo Road Valyermo, CA 93563	North, in Valyermo	6
6	USDA Forest Service Chilao Fire Station	3N21 Mount Hillyer Road Mount Wilson, CA 91023	West, off of SR-2	9
7	USDA Forest Service Station #25, Lower San Antonio	3000 North Mountain Avenue Upland, CA 91784	Southeast, in San Antonio Heights	13
8	USDA Forest Service Dalton Camp Fire Station	1090 Glendora Mountain Road Glendora, CA 91741	South, in Glendora	11
9	Los Angeles County Fire Department, Battalion 16, Station #97	18453 East Sierra Madre Avenue Azusa, CA 91702	South, adjacent to SR-39, in Azusa	11
10	Los Angeles County Fire Department, Battalion 16, Station #32	605 North Angeleno Avenue Azusa, CA 91702	South, adjacent to SR-39, in Azusa	13
11	Los Angeles County Fire Department Station #151	231 West Mountain View Avenue Glendora, CA 91741	South, in Glendora	12
12	California State Fire Marshal	602 East Huntington Drive, #A Monrovia, CA 91016	Southwest, adjacent to I-210 west of SR-39, in Monrovia	14
13	Monrovia Fire Department Station #102	2055 South Myrtle Avenue Monrovia, CA 91016	Southwest, adjacent to I-210 west of SR-39, in Monrovia	15

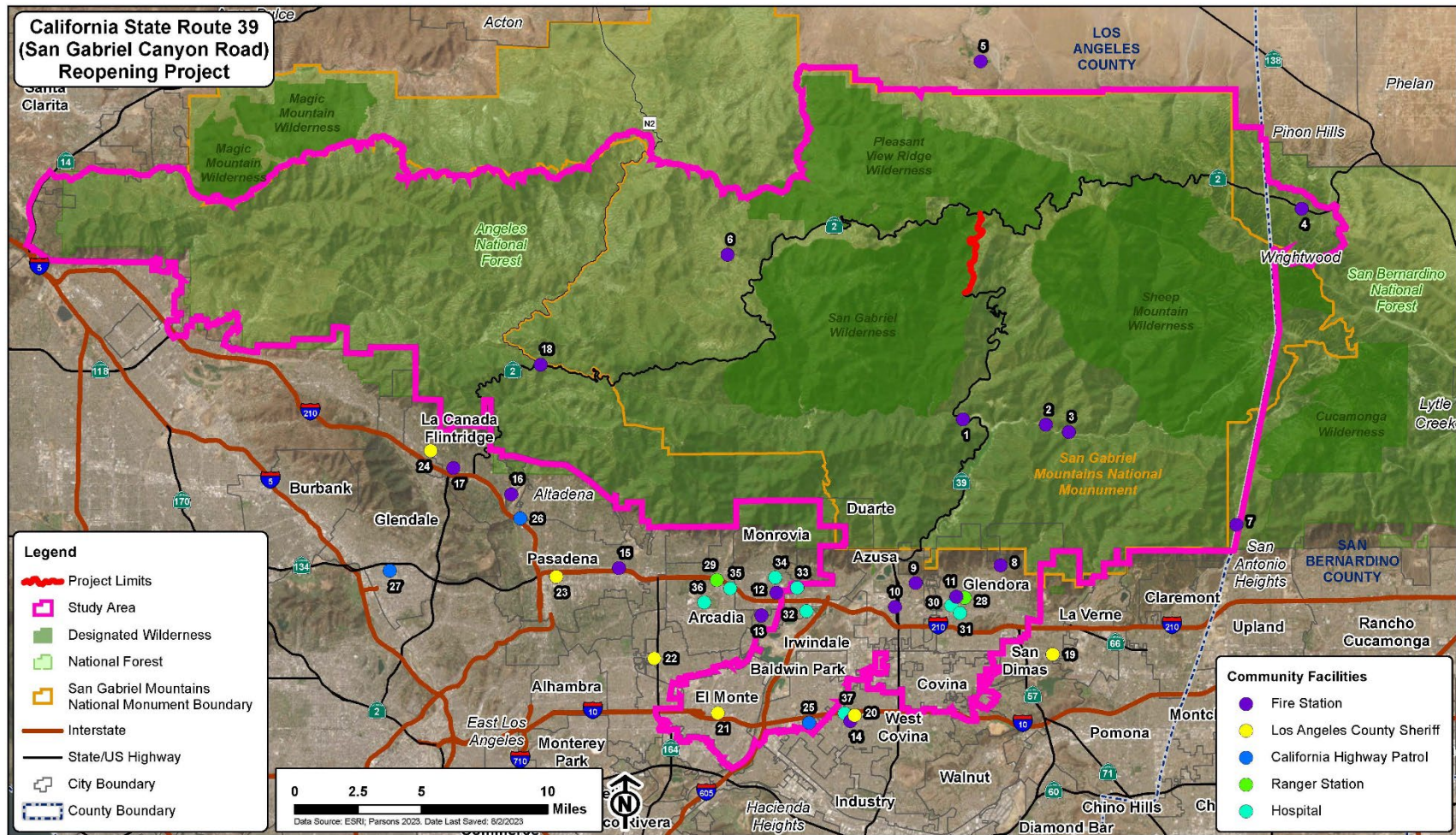
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Map No.	Facility Name	Facility Address	Direction from Project Area	Approximate Distance from Project Area (miles)
14	West Covina Fire Department Station #1	819 South Sunset Avenue West Covina, CA 91790	South, adjacent to I-10 west of SR-39, in West Covina	17
15	Pasadena Fire Department Station #32	2424 East Villa Street Pasadena, CA 91107	Southwest, adjacent to I-210 west of SR-39, in Pasadena	17
16	Los Angeles County Fire Department, Fire Camp 2	4810 North Oak Grove Drive La Canada Flintridge, CA 91011	Southwest, adjacent to I-210, east of SR-2	20
17	Los Angeles County Fire Department, Battalion 4, Station #19	1729 West Foothill Boulevard La Canada Flintridge, CA 91011	Southwest, adjacent to I-210, west of SR-2	21
18	USDA Forest Service Clear Creek Fire Station	701 Angeles Crest Highway Tujunga, CA 91042	West, adjacent to SR-2	17
Los Angeles County Sheriff				
19	Los Angeles County Sheriff Department, San Dimas Substation	270 South Walnut Avenue San Dimas, CA 91773	South, adjacent to SR-57 east of SR-39	14
20	Los Angeles County Sheriff	1427 West Covina Parkway, #127 West Covina, CA 91790	South, adjacent to I-10 west of SR-39, in West Covina	17
21	Los Angeles County Sheriff	11234 Valley Boulevard, #114 El Monte, CA 91731	Southwest, adjacent to I-10 west of SR-39, in El Monte	19
22	Los Angeles County Sheriff	8838 East Las Tunas Drive Temple City, CA 91780	Southwest, adjacent to SR-164	19
23	Los Angeles County Sheriff	300 East Walnut Street, #208 Pasadena, CA 91101	Southwest, adjacent to I-210 west of SR-39, in Pasadena	20
24	Los Angeles County Sheriff Department, Crescenta Valley Substation	4554 Briggs Avenue La Crescenta, CA 91214	Southwest, adjacent to I-210 west of SR-2	22
California Highway Patrol				
25	California Highway Patrol	14039 Francisquito Avenue Baldwin Park, CA 91706	South, adjacent to I-10 west of SR-39, in West Covina	18

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Map No.	Facility Name	Facility Address	Direction from Project Area	Approximate Distance from Project Area (miles)
26	California Highway Patrol	2130 North Windsor Avenue Altadena, CA 91001	Southwest, adjacent to I-210, east of SR-2	20
27	California Highway Patrol	411 North Central Avenue, #410 Glendale 91203	Southwest, adjacent to SR-134 west of SR-39	25
Ranger Station				
28	San Gabriel River Ranger District	110 North Wabash Avenue Glendora, CA 91741	South, adjacent to Foothill Drive east of SR-39	12
29	Angeles National Forest Office (Ranger Station)	701 North Santa Anita Avenue Arcadia, CA 91006	Southwest, adjacent to I-210 west of SR-39	15
Hospital				
30	Foothill Presbyterian Hospital	250 South Grand Avenue Glendora, CA 91741	South, adjacent to SR-66 east of SR-39	12
31	Glendora Community Hospital	150 West Route 66 Glendora, CA 91740	South, adjacent to SR-66 east of SR-39	12
32	City of Hope Hospital	1500 East Duarte Road Duarte, CA 91010	Southwest, adjacent to I-210 west of SR-39	14
33	Santa Teresita Medical Center and Hayden Child Care Center	819 Buena Vista Street Duarte, CA 91010	Southwest, adjacent to Huntington Drive west of SR-39	13
34	Monrovia Memorial Hospital	323 South Heliotrope Avenue Monrovia, CA 91016	Southwest, adjacent to I-210 west of SR-39, in Monrovia	13
35	Foothill Surgery Center	255 East Santa Clara Street, #240 Arcadia, CA 91006	Southwest, adjacent to I-210 west of SR-39	15
36	USC Arcadia Hospital	300 West Huntington Drive Arcadia, CA 91007	Southwest, adjacent to I-210 west of SR-39	16
37	Doctors Hospital	725 South Orange Avenue West Covina, CA 91790	South, adjacent to I-10 west of SR-39, in West Covina	17

Figure 2.1.7-1 Emergency Services within and surrounding the Study Area



Environmental Consequences

Utilities

There are no utilities within the proposed project area; therefore, there would be no impacts.

Emergency Services

Permanent Impacts

Alternative 1 would not involve any construction activities; therefore, it would not result in any improvements to SR-39, nor would it benefit emergency services or aid in the movement of emergency personnel within the project area and surrounding areas within the ANF.

Alternative 2 would allow for improved access to the currently closed portion of SR-39 for Caltrans, USFS, and emergency-response personnel because access to the roadway would be strictly limited to Caltrans, USFS, and emergency-response personnel only, with access to the roadway remaining closed to public highway traffic. Emergency response times for incidents within the project area and surrounding areas within the ANF would be reduced due to improved roadway conditions.

Alternative 3 would also provide improved access for emergency-response personnel and services. The presence of shuttles, bicycles, and pedestrians on the roadway may limit travel speeds for emergency vehicles along SR-39 within the project area; even so, emergency response times for incidents within and around the project area are expected to improve with Alternative 3.

Alternative 4 would reopen the closed segment of SR-39 as a two-lane highway to the general public and would allow unrestricted access to all through-traffic between I-210 and SR-2, while still serving as an access route for emergency-response personnel and services via the rehabilitated roadway or an adjacent viaduct. The presence of personal vehicles and bicycles on the roadway might limit travel speeds for emergency vehicles; however, emergency response times for incidents within the project area and surrounding areas within the ANF are expected to improve with Alternative 4 due to rehabilitation of the roadway.

Construction Impacts

Access to the closed segment of SR-39 during construction of Alternatives 2, 3, and 4, may be intermittently restricted; however, any issues regarding access on SR-39 would be minimized by use of a Traffic Management Plan, which will be developed in detail during the next phase of the project. Coordination with emergency response agencies

would also occur before the start of construction to prevent diminished response capacity by emergency services or the public and safe evacuation during construction (Caltrans Transportation Management Plan Guidelines 2020). Caltrans 2018 revised Standard Specification 7-1.02M (2) also mandates fire prevention procedures during construction, including cooperation with fire prevention authorities during performance of work and the implementation of a fire prevention plan, as required by the California Division of Occupational Safety and Health (commonly called Cal/OSHA). This emergency services coordination would allow Caltrans to ensure that no emergency-response or evacuation plans are being impaired due to the construction on SR-39.

During construction of Alternative 4, the roundabout at the junction with SR-2 would be constructed in phases, allowing SR-2 to remain open and accessible by emergency-response personnel.

Avoidance, Minimization, and/or Mitigation Measures

With implementation of the Project Features mentioned above, avoidance, minimization, and/or mitigation measures will not be required.

2.1.8 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

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

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

The California Department of Transportation (Caltrans) developed the Transportation Analysis Framework and Transportation Analysis under CEQA (TAC) to guide transportation impact analysis for projects on the State Highway System as part of the CEQA process and to aid in the implementation of Senate Bill 743, which outlines new methodologies needed to evaluate transportation impacts better aimed at achieving the state goal of reducing greenhouse gas emissions. These guidance documents establish Caltrans' processes for analyzing a transportation project's impacts under CEQA in respect to a project's impact on Vehicle Miles Traveled (VMT). The TAC details the screening process by identifying projects that can be screened due to their unlikely contribution to "measurable and substantial increases in vehicle travel" based on project type, thus not requiring their environmental analyses to include an induced-VMT analysis. These projects are determined to have a less than significant impact on VMT.

Affected Environment

This section was prepared using information from the Community Impact Assessment (ECORP, 2023), the SR-39 Reopening/Rehabilitation Project Alternate Transportation System Alternative Feasibility Study (ECORP, 2023), and the Traffic Operations Analysis Report for the project (Caltrans, 2023), as well as a review of the project area and its associated plans.

As a connection from the San Gabriel Valley to the Angeles Crest Highway (SR-2), SR-39 begins as two divided one-way roads (i.e., North San Gabriel Canyon Avenue and North Azusa Avenue) in the city of Azusa and then converges just north of Sierra Madre Avenue, where it quickly becomes a narrow, winding two-lane road in the mountainous terrain of the San Gabriel Mountains. The proposed project area is nestled between rocky outcroppings that give way to precipitously steep embankments consisting of loose rocks and boulders, which contribute to massive, recurring mudslides and rockslides that result from heavy rains and floods within the area. This leads to regular damage from landslides, flooding, falling rocks, and forest fires, resulting in continual damage to the 4.4-mile-long segment of SR-39 and an overall loss of integrity to the travel way. The currently closed segment of SR-39 poses safety hazards to those using the roadway and has therefore been closed since 1978, except to allow access for Caltrans, U.S. Forest Service (USFS), and emergency-response personnel.

Adherence to Existing Plans

Under the Angeles National Forest Land Management Plan's (ANFLMP) *Goal 3.1: Provide for Public Use and Natural Resource Protection*, the ANFLMP outlines goals for the roads and trail system of the ANF, with one of the main objectives being that both roads and trails be "well maintained" while offering the public access to recreational opportunities, allowing for special uses and adequate fire protection activities, and

aiding in the objectives of forest management. Restoring the closed segment of SR-39 would bring it into compliance with the California Streets and Highway Code by improving safety and long-term maintenance issues, while enabling movement for fire suppression forces and access to recreational opportunities for residents of the SGV and the surrounding communities. Furthermore, The San Gabriel Mountains National Monument (SGMNM) Plan also identifies transportation goals that advocate for the maintenance of roads to standard requirements and the improvement of “transportation connectivity to and from the monument”.

The project is identified in the latest conforming Federal Transportation Improvement Program as a lumpsum category of LALS02 for Pavement Resurfacing and/or Rehabilitation. It also aligns with the goal of the “fix-it-first” policy, which seeks to preserve and optimize the transportation system that is present by adequately maintaining the existing infrastructure, and enhancing the present road network through the prevention of further degradation to transportation facilities with the intention of maintaining safe, reliable access to California’s diverse landscapes, which include the scenic and recreational resources of the ANF.

The Mobility Element of the Los Angeles County General Plan designates the portions of SR-39 and SR-2 (East of Mt. Wilson Red Box Road) that are within the ANF as “Limited Secondary Highway”. This classification includes urban and rural routes that provide access to low-density areas. These highways are intended to maintain a rural appearance (i.e., no curbs, gutters, and/or sidewalks; minimizing the width of pavement to the extent possible; only using lighting and traffic signals when necessary) to reflect the rural character of various communities throughout Los Angeles County (Los Angeles County, 2022). In accordance with the Los Angeles County General Plan and the ANFLMP, the project seeks to maintain the rural appearance and natural environmental aesthetic of SR-39 by incorporating aesthetic treatments to several of the structures so that they can blend in naturally with the highway corridor. These context-sensitive solutions include the following:

- Designing the Rock Shed to compliment or match the existing San Gabriel Mountains scenery or adjacent theme of the route for a natural continuous look. These treatments would blend the structure into its surroundings, making for a more cohesive visual character.
- Designing retaining walls and rock catchment walls to match the natural landscape by adding colors and texture to the walls to match the existing rock or vegetation.
- Designing the viaducts with the appropriate treatments to be compatible with the context of the area. Treatments may include vegetation around the viaduct

structure, columns, and other viaduct components. Colors, patterns, and textures should be incorporated on the viaduct structure and its columns to ensure the visual impact of this large structure is minimized.

- The Midwest Guardrail System will be treated with an aged-patina stain to reduce shine and glare to ensure a more natural look with the existing environment.

Further discussion and concurrence with the USFS must occur to ensure that these context sensitive solutions are consistent with their Scenic Integrity Objectives within the ANFLMP. For more information on the proposed context sensitive solutions to minimize visual impacts that this project may have on the surrounding natural environment, please refer Chapter 2.1.9, *Visual/Aesthetics*.

Pedestrian/Bicycle Access

The nonmotorized trail system within the SGMNM currently consists of approximately 243 miles of trails that provide hiking, hunting, horseback riding, and mountain biking opportunities. The SGMNM has 87 miles of national trails, including the Pacific Crest National Scenic Trail and the Silver Moccasin, Gabrielino, and High Desert National Recreation Trails. All trails, except the Pacific Crest Trail and trails within wilderness areas, are open to mountain bikes. The West Fork National Scenic Bikeway parallels more than 8 miles of the West Fork San Gabriel River. This gated, paved road provides a relatively flat, paved route for bicyclists of all abilities (USFS, 2018). Reopening this portion of SR-39 would provide improved access to recreational areas within and beyond the project limits via personal vehicles, bicycles, and on foot. The impacts on recreation are discussed further in Chapter 2.1.3, *Parks and Recreation*.

Existing and Future Year Build Conditions

Reopening the highway would reduce the drive time to northern-central portion of the ANF. The proposed project is funded by the State Highway Operation and Protection Program Roadway Preservation Program under 201.150 and 201.2XX as Roadway and Roadside Preservation Programs, and as such, Alternatives 2, 3, and 4 are not anticipated to result in any meaningful changes to traffic volumes (increase of only up to 5,740 daily auto trips by 2042), vehicle mix, location of the existing facility relative to the No-Build Alternative (Alternative 1).

Due to the closure of this segment to public access for the past 45 years, no traffic data exists for the project limits. Additionally, no accident records are available; however, in 1977, before the closure, the Annual Average Daily Traffic (AADT) on SR-39 between Crystal Lake Road and SR-2 was 200 vehicles. Just south of the project area, the 2016 Traffic Volumes on California State Highways recorded an AADT of 1,850 vehicles at the lower portion of the canyon (Post Mile [PM] 25.7) and an AADT of 150 vehicles at

Crystal Lake Road (PM 38.1). From the 2009 Environmental Impact Report/Environmental Assessment for SR-39 Rehabilitation/Reopening Project, Los Angeles Regional Transportation Study 2030 Regional Transportation Plan modeling was performed and projected an AADT of 2,876 vehicles for the year 2030, assuming the flow of traffic continued through the closed segment of SR-39 to SR-2. More recent preliminary analysis of traffic projections show a forecasted daily volume of 1,542 vehicles on SR-39 south of SR-2 by the year 2045. There was no discernable peak period because this project would not induce additional traffic that exceeds what is already present on SR-39 and SR-2.

Impacts to Travel Types and Times

The intended purpose of the proposed project is to improve safety along SR-39 within the project limits, which would occur through roadway rehabilitation. The reopening of this portion of SR-39 would not provide new access to developed or developable lands where none previously existed because there are no developed/developable lands or recreational facilities adjacent to SR-39 due to the current land use designations of *protected*, *dedicated for back-country*, and *wilderness use* within and around the project area. Additionally, all developed recreational sites at the northern end of the project area are currently accessible via SR-2 without the reopening of the northern portion of SR-39. However, the proposed project may affect travel times for ANF visitors originating from the San Gabriel Valley within the southern portion of the study area.

To predict potential changes in users' choice of travel routes and, therefore, potential effects on travel patterns and traffic, travel times between the San Gabriel Valley and key destinations within the northern portion of the study area were estimated for each alternative based on mileage, posted speed limits, and free-flow traffic conditions. The travel modeling found that travel time to the Pacific Crest Trail (PCT) from the SGV was reduced by up to 45 minutes for Alternative 3 and 55 minutes for Alternative 4. According to the results of an SR-39 public survey that was distributed anonymously to more than 1,100 voluntary respondents residing in the Southern California Metro area, the PCT was the most popular travel destination in the ANF (selected by more than 40 percent of survey takers). Additionally, 41 percent of survey takers answered that they use SR-39 to reach their various intended travel destinations within the ANF. These results, coupled with the travel modeling, indicate that SR-39 would create benefits to travel in and out of the ANF. Travel times to the Mount Waterman Ski Lift may be reduced by as much as 30 minutes for Alternative 3 and 40 minutes for Alternative 4, with travel times also being reduced for Mountain High Ski Resort for those coming from La Canada instead of Wrightwood. A full list of travel modeling results can be found in Table 2.1.8-1 below, which compares the estimated travel times between the San Gabriel Valley and key destinations at the northern portion of the study area for each travel route option available under each project alternative. The shortest estimated

travel route options under each alternative are denoted in Table 2.1.8-1 by bolded text and the words “shortest option” in parentheses following the estimated travel time. Estimated travel times assume that all roadways for each route have all lanes open.

Table 2.1.8-1 Estimated Travel Times by Car from San Gabriel Valley to Key Destinations within Northern Portion of the Study Area

Destination	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Mount Waterman Ski Lift	State Route (SR) 2 via La Canada: 90 minutes (shortest option) SR-2 via Wrightwood: 105 minutes	SR-2 via La Canada: 90 minutes (shortest option) SR-2 via Wrightwood: 105 minutes	SR-2 via La Canada: 90 minutes SR-2 via Wrightwood: 105 minutes SR-39: 75 minutes (shortest option)*	SR-2 via La Canada: 90 minutes SR-2 via Wrightwood: 105 minutes SR-39: 65 minutes (shortest option)
Islip Saddle Day Use Area/Pacific Crest Trail	SR-2 via La Canada: 105 minutes SR-2 via SR-138/Wrightwood: 90 minutes (shortest option)	SR-2 via La Canada: 105 minutes SR-2 via SR-138/Wrightwood: 90 minutes (shortest option)	SR-2 via La Canada: 105 minutes SR-2 via SR-138/Wrightwood: 90 minutes SR-39: 60 minutes (shortest option)*	SR-2 via La Canada: 105 minutes SR-2 via SR-138/Wrightwood: 90 minutes SR-39: 50 minutes (shortest option)
Mountain High Ski Resorts	SR-2 via La Canada: 130 minutes SR-2 via SR-138/Wrightwood: 65 minutes (shortest option)	SR-2 via La Canada: 130 minutes SR-2 via SR-138/Wrightwood: 65 minutes (shortest option)	SR-2 via La Canada: 130 minutes SR-2 via SR-138/Wrightwood: 65 minutes (shortest option) SR-39: 85 minutes*	SR-2 via La Canada: 130 minutes SR-2 via SR-138/Wrightwood: 65 minutes (shortest option) SR-39: 75 minutes
Wrightwood	SR-2 via La Canada: 135 minutes SR-2 via SR-138: 60 minutes (shortest option)	SR-2 via La Canada: 135 minutes SR-2 via SR-138: 60 minutes (shortest option)	SR-2 via La Canada: 135 minutes SR-2 via SR-138: 60 minutes (shortest option) SR-39: 90 minutes*	SR-2 via La Canada: 135 minutes SR-2 via SR-138: 60 minutes (shortest option) SR-39: 80 minutes
Notes: * Estimated travel time for the shuttle service to each destination is provided; however, shuttle destinations beyond the project limits under Alternative 3 have not yet been determined. The proposed shuttle would travel at a speed of 15 miles per hour within the project limits and would follow the posted speed limit outside the project limits. Travel time estimates do not include the time that passengers may wait between shuttle arrivals at a stop.				

The proposed project would also affect the types of users (e.g., emergency responders, maintenance personnel, and general public) and the modes of transportation (i.e., transit, automobiles, bicycles, and pedestrians) within the project limits. As outlined in Table 2.1.8-2 below, emergency responders would have access to the roadway regardless of the preferred alternative; the public would only benefit from the project

with Alternatives 3 and 4, and only Alternative 4 would allow for personal vehicle travel within the proposed project area.

Table 2.1.8-2 Types of Users and Travel Modes Provided by Each Alternative

Alternative No.	Types of Users	Travel Modes
Alternative 1	<ul style="list-style-type: none"> • Emergency Responders • Maintenance Personnel 	<ul style="list-style-type: none"> • Emergency and maintenance vehicles
Alternative 2	<ul style="list-style-type: none"> • Emergency Responders • Maintenance Personnel 	<ul style="list-style-type: none"> • Emergency and maintenance vehicles
Alternative 3	<ul style="list-style-type: none"> • Emergency Responders • Maintenance Personnel • General public 	<ul style="list-style-type: none"> • Emergency and maintenance vehicles • Shuttle • Bicycles • Pedestrians
Alternative 4	<ul style="list-style-type: none"> • Emergency Responders • Maintenance Personnel • General public 	<ul style="list-style-type: none"> • Emergency and maintenance vehicles • Personal vehicles • Bicycles

Environmental Consequences

Permanent Impacts

No-Build Alternative

Under the No-Build Alternative (Alternative 1), SR-39 would remain closed to the public between PM 40.0 and PM 44.4. Although Caltrans, USFS, and emergency-response personnel would still have access to this segment of SR-39, roadway conditions would remain substandard, therefore continuing to pose safety concerns for personnel that need to utilize the roadway. Access from the San Gabriel Valley to key destinations within the study area would continue to be achieved only via SR-2 at the eastern and western boundaries of the ANF; there would be no changes to existing public transportation, nor would new transit facilities or services be provided. The No-Build Alternative would not result in changes to traffic patterns along SR-39 or SR-2.

Build Alternatives

For all the build alternatives, proposed improvements would improve public safety through the rehabilitation of the roadway and roadside features for Caltrans, USFS, and emergency-response personnel because SR-39 is an integral emergency access route that allows emergency services personnel to openly travel through the middle of the ANF from Azusa and other portions of the SGV. As identified in the TAC, “[r]ehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets” are considered screenable and

unlikely to contribute to an increase in vehicle travel. The proposed project is intended to restore the currently closed segment of State Route (SR) 39 by bringing the roadway into compliance with California Streets and Highway Code, which would improve the safety and operation of the roadway, while preserving the integrity of the facility. The two-lane conventional highway's capacity would remain unchanged, as there would be no improvements that would increase the capacity of SR-39. Furthermore, the proposed project may have the potential to shorten vehicle trips under the full opening (Alternative 4), as vehicles would not be forced to go out of their way when traveling from the Angeles National Forest (ANF) to the San Gabriel Valley (SGV) or vice versa. Although there would be increased traffic on this segment due to the reopening, as opposed to its closed state, traffic levels would be similar to those currently experienced on the southern portion of SR-39 and at SR-2. Recent preliminary analysis of traffic projections shows a forecasted daily volume of 1542 vehicles on SR-39 south of SR-2 by the year 2045. There was no discernable peak period as this project would not induce additional traffic beyond what is already present on SR-39 and SR-2. Therefore, this project would not contribute to induced traffic levels, and an induced VMT analysis would not be warranted.

Alternative 2 would continue to restrict public access from the San Gabriel Valley to key destinations within the northern portion of the ANF, thus having no improvement on traffic and transportation by way of opening SR-39 for public vehicles; therefore, no changes to traffic patterns would occur under Alternative 2.

Under Alternative 3, the proposed parking areas and shuttle service would allow visitors to park their car at either end of the project area and take the shuttle, walk, or ride their bicycles between the Crystal Lake Recreation Area and the Islip Saddle Day Use Area and Pacific Crest Trail; however, shuttle passengers may experience reduced travel times from the central San Gabriel Valley to the Islip Saddle Day Use Area, Pacific Crest Trail, and Mount Waterman Ski Lift compared to the No-Build Alternative (Alternative 1). It is also possible that the new shuttle service and reduced travel times to some key destinations via SR-39 may attract more visitors to the ANF and could encourage some drivers to access the ANF via SR-39 instead of via SR-138/SR-2. Changes to traffic patterns within Azusa and Wrightwood are expected to be negligible to minor.

Under Alternatives 3 and 4, the project would improve access for pedestrians, bicyclists, and public transportation within the project limits, thus providing greater access to a variety of sustainable, recreational, educational, and conservation opportunities. The proposed 4-foot-wide shoulders would provide room for drivers to pass bicyclists if the full reopening is chosen as the preferred alternative (Alternative 4) and would also allow recreational use of the road in tandem with the shuttle vehicle if Alternative 3 is

chosen. Alternative 4 would provide unrestricted access to the entirety of SR-39 for all vehicle types, causing some drivers to possibly experience reduced travel times from the central San Gabriel Valley to the Islip Saddle Day Use Area, Pacific Crest Trail, and Mount Waterman Ski Lift compared other routes. Due to the public closure of this segment, currently, people heading to Mount Wilson and Wrightwood for recreational activities must travel west to Pasadena and join SR-2 in La Canada Flintridge. Reduced travel times to Islip Saddle Day Use Area, Pacific Crest Trail, and Mount Waterman Ski Lift via SR-39 would likely encourage some drivers to access these destinations via SR-39 instead of via SR-2. Estimated travel time to Wrightwood and Mountain High Ski Resort would continue to be shorter via SR138/SR-2; however, some drivers headed to these destinations from the San Gabriel Valley may choose to take SR-39 in one direction for a scenic drive experience. This route, however, would likely be unattractive during or following winter storm events due to hazardous driving conditions and/or possible road closures. It is anticipated that changes to traffic due to the proposed project would range from none with the No-Build Alternative (Alternative 1) and Alternative 2, to negligible and minor for Alternatives 3 and 4.

Construction Impacts

SR-39 is not currently open to the general public and as such, construction on SR-39 would not impede existing traffic flow for any of the alternatives; therefore, the construction would have no impacts on traffic or transportation on the closed segment. Construction of the roundabout for Alternative 4 at the intersection of SR-2 and SR-39 would be constructed without having to close SR-2 or detour traffic to another route by constructing the roundabout in stages via shifting lanes and constructing pieces of the splitter islands and central island accordingly. Thus, construction would not have an impact on traffic and transportation on SR-2. Measures to diminish the impact of construction on emergency vehicle access is discussed further in Chapter 2.1.7, *Utilities/Emergency Services*.

Avoidance, Minimization, and/or Mitigation Measures

Under the build alternatives for the proposed project, construction activities would result in temporary, localized, site-specific activity in the vicinity of the proposed project. The following measures would be implemented to minimize impacts:

- TT-1: In coordination with the USFS, Caltrans will develop and implement a construction management program that maintains community access along routes adjacent to the project limits with signage, detours, and flag persons. In addition, Caltrans will develop and implement a community outreach and public involvement program to inform adjacent communities

and recreational sites and their users about planned construction activities.

TT-2: A Traffic Management Plan will be developed, and detour routes will be established in coordination with the California Highway Patrol, USFS, the Los Angeles Sheriff's Department, and the Los Angeles Fire Department.

2.1.9 Visual/Aesthetics

Regulatory Setting

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

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

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

Affected Environment

A Visual Impact Assessment (VIA) was prepared by the Caltrans District 7 Division of Landscape Architecture on December 7, 2023, per the guidelines set forth by the Federal Highway Administration. The following assessment of visual impacts satisfies the requirements of NEPA and the CEQA. The following section is based on the VIA dated December 7, 2023; it aims to define the visual environment of the proposed project area and identify viewer response to the potentially effected resources.

State Route (SR) 39 is not officially listed as a designated scenic highway, however, it is eligible for listing. The northern terminus of this project at Post Mile (PM) 44.4 will intersect with SR-2, which was officially designated as a scenic highway in March 1971.

With regard to the proposed project, Alternative 4 proposes to construct a single-lane roundabout at the junction where SR-39 meets SR-2.

Project Location and Setting

The project location and setting provide the context for determining the type and severity of changes to the existing visual environment. The terms *visual character* and *visual quality* are defined below and are used to further describe the visual environment. The project setting is also referred to as the *corridor* or *project corridor*, which is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way, and is determined by topography, vegetation, and viewing distance.

The proposed project is located on SR-39 and is located within the Angeles National Forest in Southern California. The landscape is characterized by diverse elevations, including forests composed primarily of dense chaparral. The land use within the corridor is primarily wilderness and includes recreational use and commuter traffic.

This segment of SR-39 proposed for reopening has been closed to public highway traffic since 1978 because the roadway is regularly damaged by landslides, flooding, rockfall, and forest fires. In February 2003, the closed highway was opened to emergency crews after a Caltrans study showed that reopening it would not harm wetlands, air and water quality, natural vegetation, or threatened plants and animals. Maintenance activities have included the removal of rocks and debris, the cleaning of drainage culverts, and the erection of a dirt berm. With these past improvements, the roadway is passable, but only accessible to Caltrans, U.S. Forest Service (USFS), and emergency-response personnel.

Portions of this segment are visible from the Pacific Crest Trail (California Section D) hiking trail, which is located on the eastern side of SR-39 and runs partially parallel to the roadway. The trail converges with the roadway at the SR-2 and SR-39 junction as it crosses the highway and connects again on the northern side of the Islip Saddle Day Use Area. Historical elements include the historic French wall located near PM 43.21. Portions of this wall are visible from the roadway and nearby turns. There will be no impact to this wall from any of the project alternatives.

SR-39 is not an officially designated State Scenic Highway but is an eligible State Scenic Highway; therefore, care must be taken to preserve its eligible status as part of the Scenic Highway System. The proposed project limits are within the segment of SR-39 that is an eligible State Scenic Highway. Alternatives 3 and 4 propose work within SR-2, which is a State Scenic Highway. Work within a Scenic Highway must not harm the scenic character or quality of the route.

Environmental Consequences

Visual Assessment and Resources

Landscape units provide a framework for understanding the visual effects of a proposed highway project. The project corridor is typically divided into a series of distinct visual assessment units, each with its own visual character and visual quality. Collectively, these visual assessment units provide a complete visual environment with certain characteristics that distinguish it from the next. The general landform and vegetative cover throughout the project site are visually consistent, and no atypical features are present. Within this context, the entire length of this segment of SR-39 will be analyzed as a single landscape unit.

Visual resources of the project setting are defined and identified by assessing visual character and visual quality in the project corridor. The *resource change* is assessed by evaluating the visual character and the visual quality of the visual resources that compose the project corridor before and after the construction of the proposed project. The *resource change* and *viewer response* to those changes determine the overall visual impacts.

Visual Character and Visual Quality

The existing visual character of the site is dominated by mountains and sharply curving roads. In most locations, steep slopes are present on one side of the roadway. In the foreground, large, coarse-textured rocky slopes and rock outcroppings of varied reflectance and hue stand out among swaths of rock debris. Vegetation is sparse, ranging from weeds and small plants near the roadway, to chaparral and coniferous forest further up on the slopes. Patches of snow can be long-lasting into late spring and even early summer. The winding drive allows a variety of views, some constrained between steep hillsides and others of more distant mountains and cliffs.

Visual quality in the corridor is vividly memorable and intact, with few intrusions of built structures or infrastructure, except for the highway itself.

Permanent Impacts

Resource Change

The No-Build Alternative (Alternative 1) will not change visual character or visual quality.

The three build alternatives (Alternatives 2, 3, and 4) involve cutting back short lengths of rocky hillsides to widen the roadway, as well as constructing retaining walls below the road. Flattened, cut slopes will reduce visual texture and increase reflectance.

Minimizing vertical linearity of cuts and avoiding flat planes will reduce the visual impact of these cuts. The proposed retaining walls will be seen mostly while travelling around

curves that have distant views. Due to the tendency for people to look out across gorges and valleys towards the mountains, the retaining walls will be a minor part of the view. Careful selection of materials and plantings can further minimize the visual impact of retaining walls below the road surface.

Alternatives 3 and 4 include the construction of viaducts, rock catchments walls, and a rock shed, in addition to the expansion of existing parking lots. The proposed viaducts and rock shed are large structures that will reduce vividness and intactness by obstructing existing views from the roadway. The scale of proposed structures under Alternatives 3 and 4 will compete with the vividness of existing views and will disrupt the unity of the natural environment. Examples of these large structures (i.e., rock shed, catchment walls, retaining walls, and viaducts), photographed in other locations, are presented in the figures below to illustrate the degree to which they contrast with their surroundings and the extent that they can fit in with the highway corridor. Alternative 3 also will include pavement rehabilitation and restriping of the existing parking lot within the SR-2 Scenic Highway. Parking lot rehabilitation will present a minimal visual impact. All work within the project limits should compliment the scenic quality of the landscape within the national forest and scenic highway guidelines.

Figure 2.1.9-1 shows an example of a rock shed in California on the Big Sur coast. A rock shed is a covered structure that is used to intercept and divert rockfall. The rock shed tunnel portals should be designed and colored to mimic the San Gabriel and San Bernardino Mountains, as shown in the figure below. By adding these aesthetic treatments, the structure would blend into its surroundings, making for a more cohesive visual character.

Figure 2.1.9-1 Proposed Visual Character and Quality of Rock Shed



Rock Shed Example in California on the Big Sur Coast (05-Mon-1 PM 21.0).

Figure 2.1.9-2 shows an example of catchment walls with aesthetic treatments that blend in with the existing environment. Alternatives 3 and 4 propose catchment walls at various locations. Mitigation measures for the catchment walls include matching existing design and color along SR-39 and SR-2. The affiliated parts should be colored and textured to match the existing rock, which would blend the structures into the environment, minimizing the impact that these structures would have on the visual quality of the surrounding environment.

Figure 2.1.9-2 Proposed Visual Character and Quality of Catchment Walls



Catchment Wall examples: colored concrete and steel posts (left), and timber lagging and steel posts (right).

Figure 2.1.9-3 shows an example of a retaining wall with aesthetic treatments that blend in with the existing environment. Alternatives 3 and 4 propose retaining walls at various locations. Measures for retaining walls include matching existing design and color along SR-39 and SR-2. The affiliated parts should be colored and textured to match the existing rock or nearby structure aesthetic treatments. Doing this would blend the structures into the environment, minimizing the impact that these structures would have on the visual quality of the surrounding environment.

Figure 2.1.9-3 Proposed Visual Character and Quality of Retaining Walls



Example from SR-39. Retaining walls should be colored to match existing rock or nearby structure aesthetic treatments.

Figure 2.1.9-4 shows an example of a viaduct on I-70 in Colorado. The colored concrete on the viaduct closely matches local rock in the background. Vegetation around viaduct columns visually integrates with the structure, and the bridge barrier architectural treatment is compatible with the adjacent bridges. Alternatives 3 and 4 propose multiple elevated viaducts, introducing an element to the project environment that would be out of scale with the existing visual character, reducing project coherence. The viaduct would be highly visible to motorists and hikers, reducing the natural harmony by blocking distant views of the San Gabriel Mountains and canyons. Appropriate treatments should be compatible with the context of areas adjacent to them. Treatments may include vegetation around viaduct structures, columns, and other viaduct components. Colors, patterns, and textures may be incorporated on viaduct structures and columns. These measures will incorporate architectural treatments and aesthetic preferences into the viaduct design, as well as require landscape treatments adjacent to the elevated viaduct.

Figure 2.1.9-4 Proposed Visual Character and Quality of Viaducts

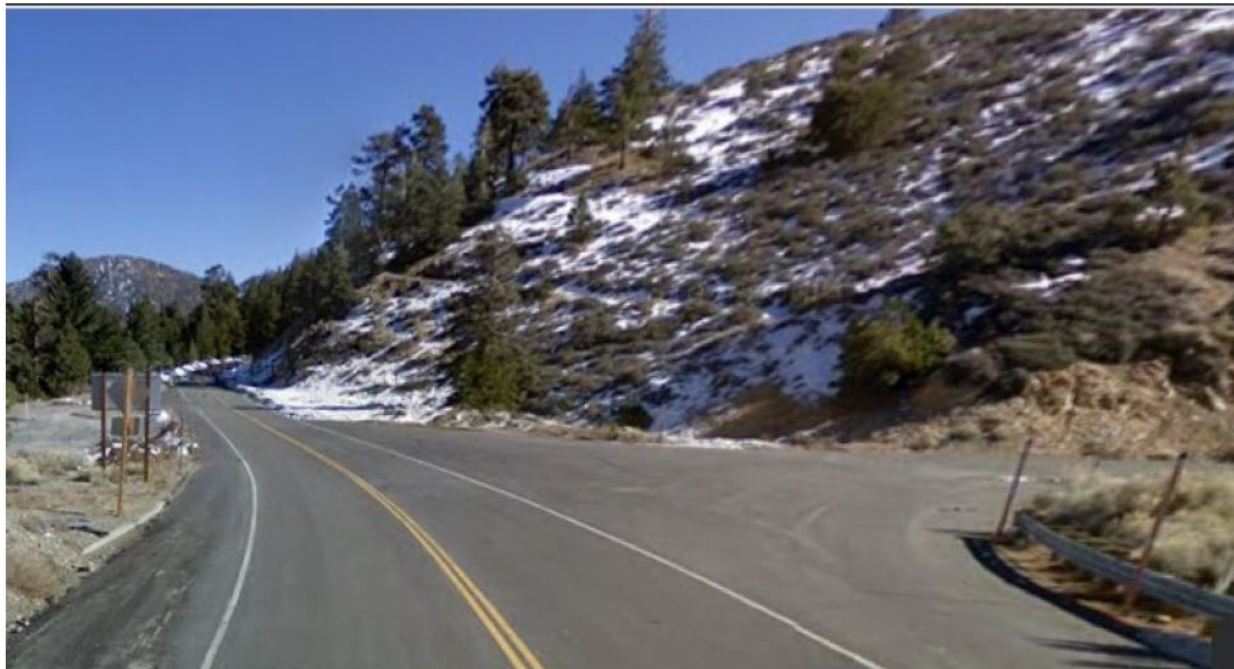


Viaduct examples on I-70 in Colorado. Colored concrete matches local rock. Vegetation around viaduct columns visually integrates structure. Bridge barrier architectural treatment is compatible with the adjacent bridges.

Alternative 4 also proposes constructing wildlife exclusionary fencing and a roundabout at the junction with the SR-2 Scenic Highway. The roundabout would draw the eye away from the scenery due to its distinct shape and built elements, such as splitter islands, central circle, and contrasting apron. The intersection would become a more visually distinct landmark than the current configuration. The addition of wildlife fencing

would have a slight negative impact in general. Distant views over the fencing would not be as greatly impacted compared to closer views; however, right-of-way fencing and/or private property owner fencing are commonly seen from and within highway corridors in rural areas. Refer to Figures 2.1.9-5 and 2.1.9-6 below for a visual representation of how the roundabout may affect the visual quality and character of the surrounding environment.

Figure 2.1.9-5 Existing Visual Character and Quality at SR-2/SR-39 Junction



View from roadway eastbound on SR-2 at SR-39 junction.

Figure 2.1.9-6 Proposed Visual Character and Quality of Roundabout



Example of roundabout in Lake Tahoe. Features include landscaping and colored concrete.

Figures 2.1.9-5 and 2.1.9-6 provide a visual representation of the potential impacts that a roundabout can have at this intersection. The roundabout will add more architectural elements to the natural scenery of this location, and treatments will be included during the design phase to decrease the impact of the built features by incorporating landscaping and colored concrete that are compatible with the context of the area.

The overall resource change for Alternative 2 is moderate. The overall resource change for Alternatives 3 and 4 is moderate-high.

VIEWERS AND VIEWER RESPONSE

The population affected by the project is composed of *viewers*. Viewers are people whose views of the landscape may be altered by the proposed project—either because the landscape itself has changed, or because their perception of the landscape has changed. There are two major types of viewer groups for this project: hikers, with views *to* the road; and highway users, with views *from* the road. Each viewer group has their own level of viewer exposure and viewer sensitivity, resulting in distinct and predictable visual concerns for each group, which help to predict their responses to visual changes.

The response viewers have to changes in their visual environment is one of two variables that determine the extent of visual impacts that will be caused by the construction and operation of the proposed project.

Viewer Response

Viewer response is a measure or prediction of the viewer's reaction to changes in the visual environment. Ultimately, viewers will see project elements for moderate to long durations of time and from relatively close distances. Their sensitivity to project elements will be high; however, the ability to use the roadway after more than four decades of the highway being closed to public use will lessen their response. Viewers will understand that the visual intrusions of the project elements are necessity for the safe use of the highway. It is anticipated that overall viewer response will be moderate-low.

Summary of Potential Project-Related Visual Impacts

Alternative 1 (No-Build Alternative) will not cause changes to visual character or visual quality. There will be no resource change, nor would there be viewer response; therefore, no visual impact would occur.

Alternative 2 (Evacuation Route [Minimal Build]) will have a low visual impact because viewers of the viewshed will be minimal; only Caltrans, USFS, and emergency-response personnel will have access to the closed segment of SR-39. In addition, the project features (i.e., retaining and gabion, soldier pile walls, and cut slopes) are similar to

existing features of the route and, therefore, only have a low visual impact on the character and quality of the existing environment. The overall visual impact will be low.

Alternative 3 (Active Transportation Access [Shuttle and bicycle path facilities]) will have moderate to high visual impact because it proposes three viaducts and a rock shed that will change the visual character and visual quality by interrupting the continuity of the natural environment. The proposed viaducts would be highly visible to motorists, bicyclists, and hikers, thereby reducing the natural harmony by blocking distant views, including those of the San Gabriel Mountains. The resource change under Alternative 3 will be moderate-high, and the viewer response will be moderate-low. The overall visual impact will be moderate.

Alternative 4 (Full Opening) proposes a roundabout, five viaducts, wildlife exclusionary fencing, and a rock shed that will change the visual character and visual quality by interrupting the continuity of the natural environment. Visual character will be impacted by the roundabout, viaducts, wildlife fencing, and rock shed. These proposed features impact roadway users and are partially visible to recreational users on Pacific Crest Trail. The continuity of the natural environment will be interrupted by the manufactured structures. The resource change under Alternative 4 will be moderate-high and the viewer response will be moderate-low. The overall visual impact will be moderate.

Visual impacts to the Scenic Highway (SR-2) will not affect the scenic designation because the work will be designed to fit the character of the surrounding environment and will occur in one spot location.

A summary of these visual impacts for each alternative is provided in Table 2.1.9-1 below.

Table 2.1.9-1 Summary of Impacts to Visual Resources by Alternative

Alternative No.	Is There a Clear Change to the Visual Environment?	Is the Project on a Designated Scenic Highway?	Is a Scenic Resource Adversely Affected?	Would the Project Create New Structures That Would Adversely Affect Views in The Area?
Alternative 1 No-Build Alternative	No	No	No	No
Alternative 2 Evacuation Route (Minimal Build)	Yes	No	No	No

Alternative No.	Is There a Clear Change to the Visual Environment?	Is the Project on a Designated Scenic Highway?	Is a Scenic Resource Adversely Affected?	Would the Project Create New Structures That Would Adversely Affect Views in The Area?
Alternative 3 Active Transportation Access (Shuttle and bicycle path facilities)	Yes	Yes	No	Yes
Alternative 4 Full Opening	Yes	Yes	No	Yes

Construction Impacts

Due to lack of public access to this segment of SR-39, construction impacts will not be significant. Temporary construction impacts to visual resources would be limited to construction crews; Caltrans, USFS, and emergency-response personnel; and highway users along SR-2 where it meets with SR-39. Temporary impacts that may occur as a result of construction of the build alternatives include the excavation, grading, and earthmoving activities that may alter the natural contours of the landscape and, therefore, temporarily change the visual appearance of the project area. The presence of construction equipment, machinery, and vehicles can cause visual impacts to the natural scenery during the construction phase. Construction activities may also generate dust and pollutants due to the excavation, grading, hauling, and other construction-related activities that can temporarily affect the air and visual quality of the surrounding environment. Dust may temporarily obstruct and obscure views, which may alter the visual character of the landscape. The installation of temporary structures, such as falsework for the construction of the viaducts, retaining walls, and rock sheds, may alter the visual aesthetics of the project area during construction. Temporary construction signage and safety barriers may also cause visual impacts. The clearing of vegetation for construction purposes can cause a temporary change in the visual character of the landscape, but the revegetation measures will offset this impact by restoring the impacted area to its natural state once construction is complete.

The construction of the roundabout at the SR-2/SR-39 junction has no potential to affect or impact the status of SR-2, which is officially designated as a State Scenic Highway. The State Scenic Highway program protects and enhances California’s natural scenic beauty by allowing county and city governments to apply to Caltrans to establish a scenic corridor protection program. The design of the proposed roundabout is consistent with that program because the roundabout is a low structure and has no potential to obstruct the visual character of the landscape from eye-level or from a

driver's point of view. View of the surrounding nature will not be obstructed by the roundabout because it is not an elevated structure. The roundabout will have no impacts to any potential scenic resources within the portion of the project's work area on SR-2. The roundabout will be built on the existing roadway, therefore, its area of impact will be within the built environment of the roadway. There is potential for temporary impacts during construction because staging areas will be located in areas adjacent to the roadway. The construction of Alternatives 3 and 4 may cause temporary impacts to hikers traversing through the PCT and Islip Saddle Day Use Area at this intersection because they will be guided through the construction area by temporary construction detours as they cross the road to connect with the other section of the trail. Visual impacts of the construction detour will be temporary during construction of the roundabout (Alternative 4) and the repaving of the parking lot at the Islip Saddle Day Use Area (Alternative 3). These impacts will be temporary and minor and will cause no long-term visual impacts to these resources.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would help offset visual impacts that would result from the structures proposed for this project. The purpose of these measures is to avoid, minimize, and/or mitigate adverse visual impacts. With the inclusion of these measures into the project, it is anticipated that this project would have a less than significant impact on the visual aesthetics of the surrounding environment.

- VIS-1: All measures proposed for replanting must follow the guidance in Section 92.3 of the Streets and Highways Code. Landscaping shall include drought resistant, native species, and climate appropriate vegetation whenever feasible.
- VIS-2: Coordination between Caltrans' Landscape Architect and the USFS must occur to ensure that no Avoidance and Minimization Measures or Mitigation Measures are missing, and the proper aesthetic treatments and context sensitive solutions have been considered.
- VIS-3: Replace impacted vegetation in kind and add planting to bare areas when feasible.
- VIS-4: Proposed plant list and locations will be reviewed and approved by the District Landscape Architect and concurred with by the USFS.
- VIS-5: Erosion control seed species, origin and application strategy would be determined by Caltrans Landscape Architects in consultation with Caltrans Biologists and USFS plant resource specialists.

- VIS-6: All disturbed slopes would be revegetated with native plant materials and erosion control.
- VIS-7: Realignment of the existing road would be revegetated after recontouring the landform.
- VIS-8: When appropriate and consistent with integrated pest management strategies as defined in subdivision (d) of Section 14717 of the Government Code, landscaping shall include California native wildflowers and native and climate-appropriate vegetation as an integral and permanent part of the planting design, with priority given to those species of wildflowers and native and climate-appropriate vegetation that will help rebuild pollinator populations.
- VIS-9: Removed trees would be replaced using an appropriate planting ratio and maintenance program determined by Caltrans Landscape Architects in consultation with Caltrans Biologists and USFS plant resource specialists.
- VIS-10: An appropriate number of felled trees and boulders would be saved, then placed at locations in disturbed areas to create a natural appearance, as determined by the Caltrans Landscape Architects.
- VIS-11: Minimize visual impacts using context sensitive aesthetic treatments. Proposed and replaced structures will incorporate aesthetic treatments that will be consistent with the existing visual characteristics of the location. Textures, colors, and patterns should reflect existing elements and forms found nearby. The chosen treatments must be approved by the Caltrans project Landscape Architect and reviewed and concurred with by USFS.
- VIS-12: New installed Midwest Guardrail System will be treated with patina to provide cohesiveness within the existing landscape.
- VIS-13: The proposed rock shed design to be coordinated by Structures Architects and District Landscape Architect to compliment or match the existing San Gabriel Mountains scenery or adjacent theme of the route for continuity and concurred with by the USFS.
- VIS-14: Catchment Wall timbers or fence and its affiliated parts should be colored, or powder coated a tan color to match the existing rock and concurred with by the USFS.

- VIS-15: Retaining walls should be colored a tan color to match existing rock or match nearby structure aesthetic treatments to maintain continuity and concurred with by the USFS.
- VIS-16: Replaced or disturbed concrete/bridge barriers should follow the existing or adjacent natural environment theme for continuity. Colors, and patterns will be incorporated that reflect existing elements and forms found in the natural environment.
- VIS-17: Proposed concrete/bridge barriers design will be determined by the District Landscape Architect and concurred with by the USFS.
- VIS-18: Viaduct structures would be designed to minimize their visual impact and to blend into and be visually compatible with the surrounding environment.
- VIS-19: Reflect existing landform transitions in proposed forms. Rock scaling proposed in the project will follow contour grading for aesthetically pleasing transitions to avoid conventional sharp edges and changes to the existing visual corridor. Use principles of contour grading when cutting back slopes. Avoid planar surfaces, creating varied and natural looking surfaces and edges.

2.1.10 Cultural Resources

Regulatory Setting

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

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, which is defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106

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

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

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

PRC Section 5024 requires state agencies to identify and protect state-owned Historical Resources that meet the NRHP listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with SHPO before altering, transferring, relocating, or demolishing state-owned Historical Resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding¹ between Caltrans and SHPO, effective

¹ The Memorandum of Understanding is located in the SER at <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf>

January 1, 2015. For most federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

Affected Environment

The following documents, prepared by ECORP Consulting Inc., provide information on Historic Resources within the Area of Potential Effects (APE) and serve as the basis for the analysis in this section:

- Historic Property Survey Report (December 2023)
- Archaeological Survey Report (December 2023)

Area of Potential Effects

In accordance with Section 106 PA Stipulation VIII.A, the APE for the project was established in consultation with Kimberly Harrison, Principal Investigator Prehistoric Archaeology, Co-Principal Investigator Historical Archaeology, and Environmental Branch Chief, on October 11, 2023.

The APE was established as the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of historic properties, if present. For this project, the approximately 89.6-acre APE includes the project area (i.e., where the project will take place), including a portion of the road shoulder for staging of equipment and materials. The horizontal APE extends as far as 570 feet away from the roadway at some points, though it is most often approximately 50 feet from the road edge. The project will affect land owned by the United States Forest Service (USFS) because the project is within USFS lands.

The maximum depth of excavation is anticipated to be as deep as 50 feet below the ground surface for the viaduct foundations. The maximum height of the elements associated with the bridge will not exceed 100 feet above the ground surface. The road surface activities would extend to a depth of approximately 1.9 feet below surface. Retaining wall excavations would vary depending on engineering needs.

Background Research

Initial research included a review of the cultural resource records from the California Historical Resources Identification System (CHRIS) and the Caltrans Cultural Resources Database. The CHRIS records search was conducted at the South Central Coastal Information Center at California State University, Fullerton on September 24, 2019.

The results of the record search indicate that the entire APE was previously surveyed for cultural resources at different times, by different consultants, and more than 14 years ago. The records search determined that 34 previously recorded pre-contact and historic-era cultural resources are within a 1-mile radius of the APE. Of these, one is believed to be associated with Native American occupation of the vicinity, and 33 are historic-era sites. One historic-era site, P-19-188271 (the French Wall), is located within the APE. Additionally, the entire Angeles National Forest resource (P-19-186535) fully encompasses the APE.

Documented in 1959, P-19-186535 (Angeles National Forest) is designated as a California Historical Landmark (CHL) No. 717. According to the California Office of Historic Preservation (OHP), CHL Nos. 1 through 769 do not meet California Register criteria (California Historical Resource Status Code 7L). Additionally, the project is not expected to affect the Angeles National Forest in a way that would disqualify it from eligibility if it does not meet the current standards. For these reasons, Caltrans is treating the Angeles National Forest as an administrative boundary.

Resource P-19-188271 (the French Wall) is a wall system composed of Mechanically Stabilized Earth that was documented in 2008. It was first used in 1972 as a support system for a failed section of State Route (SR) 39 in the San Gabriel Mountains and is the first instance of this type of use in the United States. The French Wall was found to be exceptionally important and was determined to be eligible before turning 50 years old. This resource has been evaluated as eligible for inclusion in the NRHP under Criterion C and was determined to be a Historical Resource for the purposes of the CEQA in 2008.

Cultural resource identification efforts also yielded the following results:

- The California OHP's Built Environment Resource Directory for Los Angeles County (accessed May 6, 2022) did not include any resources within the vicinity of the APE.
- The National Register Information System (National Park Service, 2022) did not list any Historic Properties within the APE.
- Resources listed as CHLs by the California OHP (2023) were reviewed on September 9, 2023. The nearest listed CHL is the Angeles National Forest (CHL No. 717), which encompasses and is therefore within the APE; the commemorative plaque is located approximately 5 miles west of the project area at the Clear Creek vista point on SR-2 (Post Mile 32.8) in La Cañada Flintridge.

- A review of Historic Spots in California (Kyle, 2002) did not identify any relevant historic places near the APE.
- Historic General Land Office land patent records from the Bureau of Land Management (BLM) patent information database (BLM, 2022) did not have any records available.
- The Caltrans Bridge Local Inventory (Caltrans, 2020) did not list any historic bridges within the APE.
- The Caltrans Bridge State Inventory (Caltrans, 2022b) did not list any historic bridges within the APE.
- The Handbook of North American Indians (Bean and Smith, 1978) states that, due to severe population decline, knowledge of settlement locations is nonexistent for the Gabrielino.

Field Surveys

ECORP archaeologists Julian E. Acuña and Rob Cunningham surveyed the APE on November 14, 2023. Mr. Acuña and Mr. Cunningham inspected the APE and the unpaved areas on each side of SR-39 and SR-2 for archaeological material using intensive pedestrian transects spaced 15 meters apart. The archaeologists located the previously recorded cultural resources within the APE, took digital photographs to show project overviews, and documented the environmental setting and disturbances within the APE. The surface visibility within the APE was good due to the paved roadways.

Based on geology of the area, and because the APE has been subjected to numerous rounds of modern disturbance due to road construction, landslides, rockfall, and flooding, the potential for intact buried archaeological deposits is low.

Native American Consultation

Native American consultation and coordination for the project was initiated on October 18, 2022 with a request to the Native American Heritage Commission (NAHC) for a Sacred Lands File search. In an email dated November 17, 2022, the NAHC reported that a search of the Sacred Lands File yielded a positive result for the presence of Native American cultural resources in the area of the project. The NAHC provided a list of Native American contacts for the project vicinity.

Caltrans sent AB 52 and Section 106 consultation letters to the Native American contacts listed by the NAHC between October 11 and December 12, 2022. Caltrans discussed the project with the Kizh Nation during their quarterly consultation on October 11, 2022 and sent the consultation letter to the Kizh Nation contact on that same day.

Subsequently, Caltrans sent the consultation letters to the remaining NAHC-listed Native American contacts on December 12, 2022. On February 8, 2023, follow-up emails were sent to individuals who had not yet responded. The responses, if any, are summarized below:

- Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Sandonne Goad, Gabrielino/Tongva Nation: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Robert Dorame, Gabrielino Tongva Indians of California Tribal Council: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Christina Conley, Gabrielino Tongva Indians of California Tribal Council: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Charles Alvarez, Gabrielino-Tongva Tribe: The email sent to Charles Alvarez was undeliverable.
- Ann Brierty, Morongo Band of Mission Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Manfred Scott, Quechan Tribe of the Fort Yuma Reservation: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Jill McCormick, Quechan Tribe of the Fort Yuma Reservation: Ms. McCormick replied via email on December 12, 2022, stating that they do not wish to comment on the project and that they defer to the more local tribes and support their determinations in this matter.
- Donna Yocum, San Fernando Band of Mission Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Jessica Mauck, San Manuel Band of Mission Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.

- Wayne Walker, Serrano Nation of Mission Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Mark Cochrane, Serrano Nation of Mission Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Isaiah Vivanco, Soboba Band of Luiseno Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Joseph Ontiveros, Soboba Band of Luiseno Indians: No response. A follow-up email was sent on February 8, 2023, which included an updated project description.
- Ryan Nordess, Yuhaaviatam of San Manuel Nation (YSMN; formerly known as San Manuel Band of Mission Indians): Mr. Nordess replied via email on January 13, 2023. He acknowledged the project's location within Serrano ancestral territory and its resulting interest to the Tribe; however, he stated that, due to the nature and location of the project, along with the current extent of known cultural resources in the area, YSMN does not have any concerns with the project's implementation as planned, at the time of the response. Mr. Nordess requested that specific wording be added to the project, permit, and/or plan conditions, in addition to a final copy of those conditions. He also stated that unless there is an unanticipated discovery of cultural resources during project implementation, consultation has been concluded.

Other Consultation

ECORP contacted the Angeles National Forest (USFS) on October 5, 2023 to request a permit for Archaeological Investigations for the Angeles National Forest. ECORP sent the permit application on October 12, 2023, and a special use permit was granted to ECORP on November 9, 2023.

Environmental Consequences

Permanent Impacts

Alternative 1 (No-Build Alternative)

Under Alternative 1 (No-Build Alternative), there would be no improvements to the project area. There would be no actions that would impact cultural resources within the project area. Therefore, there would be no impacts to cultural resources under Alternative 1.

Build Alternatives (Alternatives 2, 3, and 4)

The proposed project finding is No Historic Properties Affected. The build alternatives (i.e., Alternatives 2, 3, and 4) are not expected to affect any Section 4(f) Historic Properties.

Construction Impacts

Caltrans, pursuant to Section 106 PA Stipulation IX.A, has determined that a Finding of No Historic Properties Affected is appropriate for this undertaking because the following historic properties will not be affected by current project construction activities:

- P-19-188271 (the French Wall)

None of the proposed alternatives would affect the French Wall's integrity or structure. All proposed construction activities terminate south of the French Wall, and any additional improvements located away from the resource, to the southeast.

Avoidance, Minimization, and/or Mitigation Measures

With implementation of the following requirements, the proposed project would have no effect related to cultural resources:

- PF-CUL-1: If cultural materials are discovered during site preparation, grading, or excavation, the construction Contractor would divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. At that time, there would be coordination with the appropriate local agency.
- PF-CUL-2: If human remains are discovered during site preparation, grading, or excavation, California State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Claudia Harbert, Caltrans, District 7 Native American Coordinator, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A. To comply, the following must be analyzed:

- Practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

The California Department of Transportation (Caltrans) *Office of Stormwater and Landscape Architecture – Hydraulics* completed a Location Hydraulic Study dated June 30, 2023 for the proposed project to identify and evaluate the base floodplain within the limits of the proposed project and address the flow of water as it affects the state highway, the base floodplain, and the surrounding area. The following discussion has been formulated from the Location Hydraulic Study and from research performed by the Caltrans Division of Environmental Planning.

The Federal Emergency Management Agency (FEMA) provides information on flood hazards and frequency for cities and counties, based on its Flood Insurance Rate Maps (FIRMs). A FIRM is the official map of a community for which FEMA has delineated and shows how likely it is for an area to flood. Any place with a 1 percent or higher chance of experiencing a flood each year is considered to have a high risk. The 1 percent

annual chance flood is also referred to as the *base flood* or *100-year flood*. This project is not located within a 100-year base floodplain.

The project is located within an area that contains several natural springs and streams that run along the vicinity of the roadway. These waters collect in the drains and flow into the canyons below, contributing to the hydrological characteristics of the region. Several streams and rivers flow through the project area, contributing to the hydrological network. Notable waterways include the San Gabriel River and its tributaries, such as the East Fork San Gabriel River, Bear Creek, Walnut Creek, San Jose Creek, Coyote Creek, and numerous storm drains. These streams are fed by snowmelt, rainfall, and springs, which play a vital role in the hydrological system, supporting water supply and ecosystems.

The steep slopes and varied topography characterized by the project location can contribute to erosion and runoff during precipitation events. Rainfall and snowmelt can lead to increased surface runoff, especially in areas with limited vegetation cover. Runoff can transport sediment, nutrients, and pollutants, potentially impacting water quality and ecosystems downstream. The existing storm drains throughout the closed segment are often clogged with fallen debris, which can obstruct water flow, causing further erosion of the highway. Erosion occurs when the natural flow of water has been blocked and cannot flow into the canyons below. Because the storm drains become clogged regularly with fallen debris, water often overflows onto the roadway, causing severe degradation of the roadway through landslides and flooding. Regular maintenance is needed in order to prevent further and more severe damage to this closed segment.

Environmental Consequences

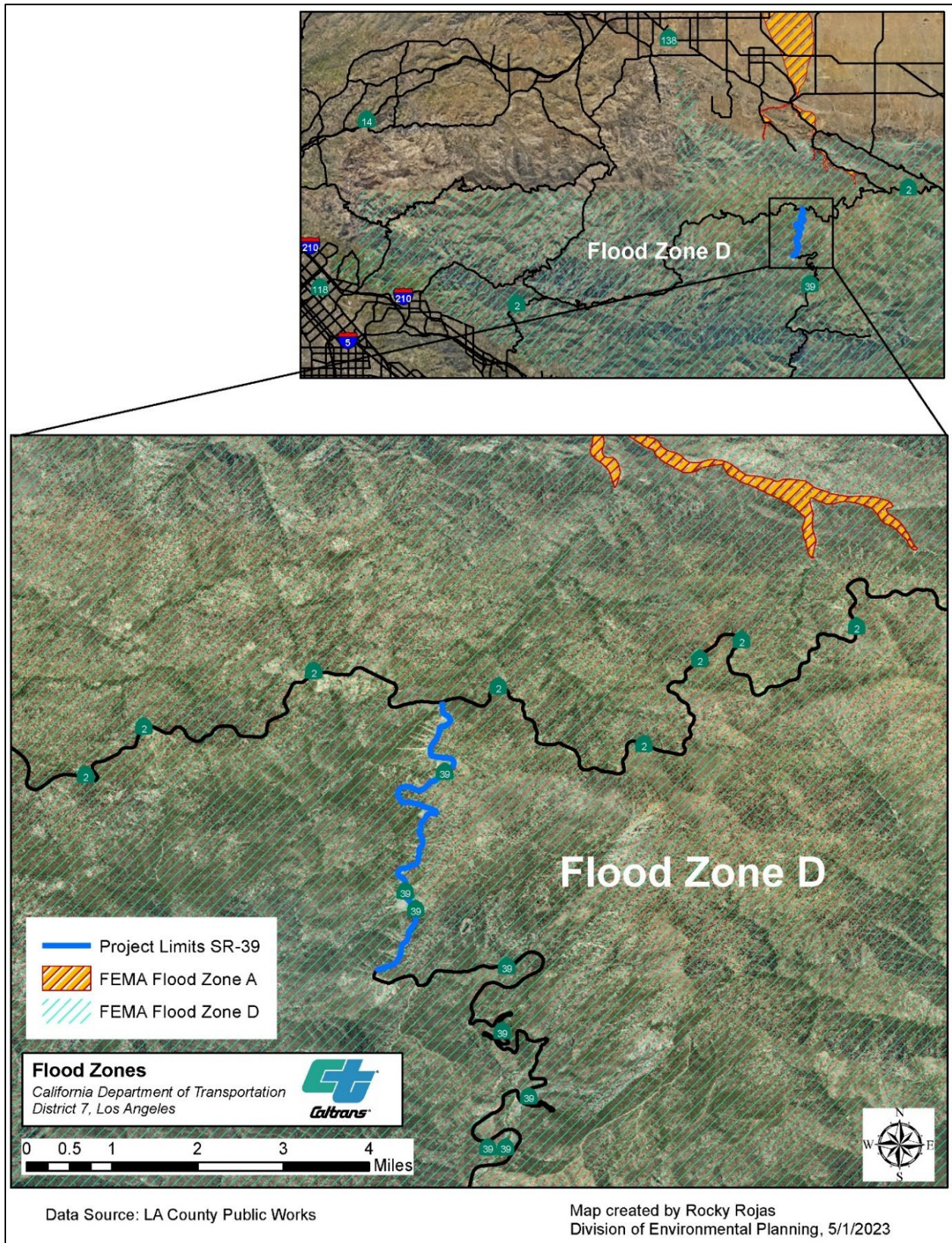
After evaluation of the proposed project, the Office of Hydraulic Engineering determined that this project does not constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q), which defines a *significant encroachment* as a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction or flood-related impacts:

- a significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route;
- a significant risk (to life or property); or
- a significant adverse impact on natural and beneficial floodplain values.

The Preliminary Location Hydraulic Study prepared on June 30, 2023 states that the proposed project and its alternatives will not support probable incompatible floodplain development. Risks associated with the proposed project are low, and the actions will not cause any significant floodplain encroachment. All wildlife crossings and the Snow Spring Viaduct (proposed for Alternatives 3 and 4) will have an elevation higher than the base (100-year) flood by a minimum of 10 feet. Therefore, there will be minimal impact on natural and beneficial floodplain value.

Additional assessment of FEMA flood maps also indicates that this project is located outside the limits of any flood hazard zones. The flood hazard boundary map (Figure 2.2.1-1) illustrates that the project location is located within Zone D, which is defined as areas in which flood hazards are undetermined, but possible. There are no Special Flood Hazard areas within the project's vicinity; therefore, given the current scope of work, any flood risks would be minimal and are not expected with the implementation of this project (Figure 2.2.1-1).

Figure 2.2.1-1 Flood Zone Map



Construction Impacts

No construction impacts to floodplains are anticipated because the proposed project is not located within a 100-year base floodplain. The project is located within FEMA Zone D, and no Special Flood Hazard areas exist within the project's vicinity.

Avoidance, Minimization, and/or Mitigation Measures

Routine construction procedures for special mitigation measures to minimize floodplain impacts and to restore and preserve the natural and beneficial floodplain values to the extent practicable would be specified in the construction contract. Common job site management to prevent water pollution include performing construction activities at least 50 feet outside from any floodplain.

2.2.2 Water Quality and Storm Water Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

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

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to Waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into Waters of the U.S. In California, this permitting program is administered by the Regional Water Quality Control Boards (RWQCBs). Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems.

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

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with the U.S. Environmental Protection Agency's (EPA) Section 404 (b)(1) Guidelines (40 CFR Part 230) and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (hereinafter referred to as *the Guidelines*) were developed by the EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (Waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a Least Environmentally Damaging Practicable Alternative (LEDPA) to the proposed discharge that would have lesser effects on Waters of the U.S. and would not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to Waters of the U.S. In addition, every permit from the USACE, even if not subject to the Guidelines, must meet general requirements (see 33 CFR 320.4). A discussion of the LEDPA determination, if any, for the document is included in Chapter 2.3.2, *Wetlands and Other Waters*.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the State. It predates the CWA and regulates discharges to Waters of the State. Waters of the State include more than just Waters of the U.S., such as groundwater and surface waters that are not considered Waters of the U.S. Additionally, the Porter-Cologne Act prohibits discharges of "waste", as defined; the act's definition is broader than the CWA's definition of

“pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

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

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the State by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

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

NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014), and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015), has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below).
2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges.
3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

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

Construction General Permit

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012), regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activities where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit. Construction activities that result in soil disturbances of less than 1 acre are subject to

this Construction General Permit if there is potential for significant water quality impairment resulting from the activity, as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); implement sediment, erosion, and pollution prevention control measures; and obtain coverage under the Construction General Permit.

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

Section 401 Permitting

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

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

Affected Environment

This section describes the affected environment for water quality and stormwater runoff within the project area and immediate vicinity. The discussion covers a range of topics related to water resources, including receiving bodies of water and water quality. The following discussion is based on multiple sources, including the Draft Storm Water Data Report prepared by the Caltrans Office of Design in August 2023, the Preliminary Location Hydraulic Study dated July 2, 2023, the District Preliminary Geotechnical

Report dated July 17, 2023, and independent research performed by the Caltrans Division of Environmental Planning.

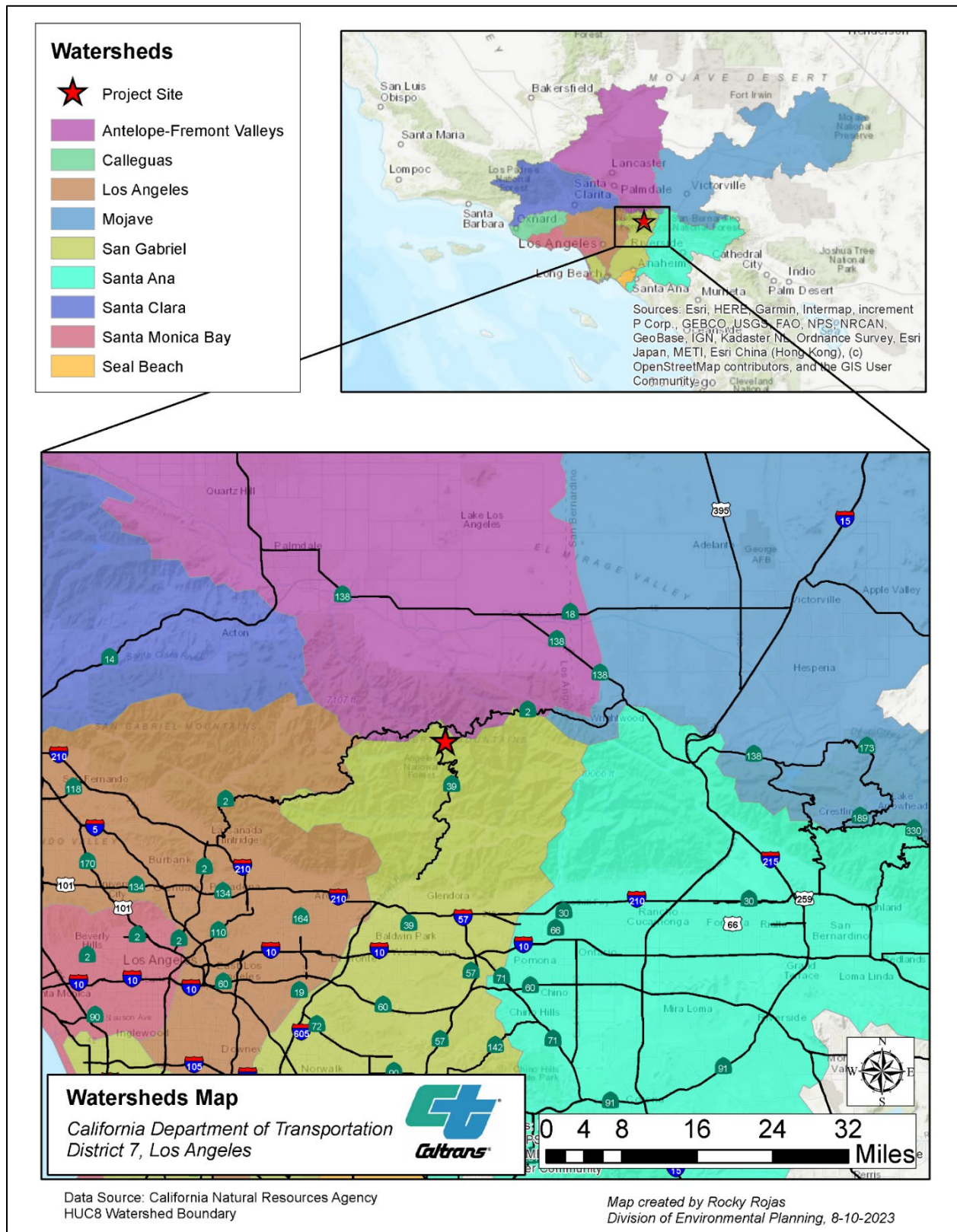
The proposed project is located within the San Gabriel River Watershed within the Angeles National Forest, between Crystal Lakes Road and State Route (SR) 2, and within the jurisdiction of the Los Angeles Regional Water Quality Control Board (Region 4). The distance from the proposed project to the nearest outfall is approximately 300 feet, and there are no known drinking water reserves or groundwater recharge facilities within the project limits.

The San Gabriel River Watershed is located in the eastern portion of Los Angeles County and is bound by the San Gabriel Mountains to the north, San Bernardino/Orange County to the east, the division of the Los Angeles River from the San Gabriel River to the west, and the Pacific Ocean to the south. The watershed is composed of 640 square miles of land that spans more than 35 cities, with its headwaters originating in the San Gabriel Mountains. The upper portion of the watershed consists of expansive areas of undisturbed riparian and woodland habitats, with much of the land designated as wilderness areas with a mix of recreational use areas. The upper portion of the watershed also contains a series flood-control dams with areas that are subject to heavy recreational use.

The watershed drains from the San Gabriel Mountains into the San Gabriel River, which flows southward for 58 miles until its confluence with the Pacific Ocean. Major tributaries to the San Gabriel River include Walnut Creek, San Jose Creek, Coyote Creek, and numerous storm drains from the 19 cities that the San Gabriel River passes through. Channel flows pass through different sections in the San Gabriel River, diverting from the riverbed into four different spreading grounds held behind several rubber dams for controlled flow and ground water recharge, and are controlled through 10 miles of concrete channel bottom from below Whittier Narrows Dam to past Coyote Creek.

Section 303(d) of the CWA requires states to identify waters that do not meet water quality standards after applying effluent limits for point sources other than Publicly Owned Wastewater Treatment Works (POTWs) that are based on the best practicable control technology currently available and effluent limits of POTWs based on secondary treatment. States are then required to prioritize waters/watersheds for a TMDL development. States are to compile this information in a list and submit it to the EPA for review and approval. This list is known as the 303(d) list of impaired waters. TMDLs are discussed in more detail following Figure 2.2.2-1 below, which illustrates the location of the proposed project within the San Gabriel River Watershed.

Figure 2.2.2-1 Watersheds Map



The watershed encompasses the Crystal Lake Recreation Area and smaller creeks that run adjacent to the project limits. The nearest receiving water body is Bear Creek, which is not on the 303(d) list of impaired receiving water bodies. Another receiving water body within the project limits is Crystal Lake, which is listed on the 303(d) list, with organic enrichment/low dissolved oxygen as a pollutant of concern.

Total Maximum Daily Loads

As previously discussed, states are required to develop lists of impaired waters under Section 303(d) of the CWA. These are waters that are too polluted or otherwise degraded to meet the water quality standards set by states. The law requires that these jurisdictions establish priority rankings for waters on the list and develop TMDLs for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards.

The project limits are close to the East Fork of San Gabriel River. The Trash TMDL for the East Fork of the San Gabriel River has been in effect since December 14, 2000. Caltrans is not the responsible party. The TMDLs for Indicator Bacteria in the San Gabriel River, Estuary, and Tributaries has been adopted by the Los Angeles Regional Water Quality Control Board (Region 4). The TMDL is effective as of June 14, 2016. The TMDL requires the Responsible Agencies, including Caltrans, to achieve compliance with waste load allocations in 20 years. Caltrans will be working with groups of Responsible Agencies, such as the Los Angeles Regional Water Quality Board and U.S. Army Corps of Engineers, to jointly comply with the TMDL. The Project Engineer shall consider treatment controls for the project and consult with the NPDES Storm Water Coordinator. The San Gabriel River and Impaired Tributaries Metals and Selenium TMDL was approved by the EPA on March 26, 2007. The TMDL assigns Dry Weather waste load allocations to MS4 Permittees and Caltrans for copper in San Gabriel River Estuary, Reach 1 and Coyote Creek, and for Selenium in San Jose Creek, Reaches 1 and 2. The TMDL assigns Wet Weather waste load allocations to MS4 Permittees and Caltrans for lead in San Gabriel River Estuary, Reach 2 and upstream reaches and tributaries, and for copper, lead and zinc in Coyote Creek and its tributaries. Regional Water Quality Control Board Agreements

The Caltrans Stormwater Management Program complies with NPDES Statewide Storm Water Permit Waste Discharge Requirements Order Number 2012-0011-DWQ, NPDES No. CAS000003. The Stormwater Management Program provides statewide policy direction, technical and regulatory information, guidance documents, specifications, and funding to integrate appropriate stormwater control activities. NPDES-Caltrans Statewide Permit (Order No. 99-06-DWQ; NPDES No. CAS000003) and Construction General Permit (Order No. 99-08-DWQ; NPDES No. CAS000002) apply to this project. Caltrans is regulated by a statewide storm water discharge permit that covers all

municipal storm water activities and construction activities. The Caltrans storm water permit authorizes storm water discharges from Caltrans properties such as the state highway system, park and ride facilities, and maintenance yards. The storm water discharges from most of these Caltrans properties and facilities eventually end up in either a city or county storm drain, which then discharges into the river.

Environmental Consequences

The proposed project is anticipated to result in a total DSA of approximately 14.9 acres. This estimate was calculated by accounting for the full structural reconstruction of roadway of the closed segment (4.4 miles) and the six proposed soldier pile walls. The New Impervious Surface (NIS) is estimated to be 14.88 acres. This value was calculated by adding the Net New Impervious Surface (NNI) to the Replaced Impervious Surface (RIS). Additionally, the DSA was calculated in consideration of the area within 5 feet of the project limits and throughout the length of the segment that the project proposes to rehabilitate and reopen. Within the project limits, SR-39 is classified within an Urban MS4 Area (Order No. 90-079; NPDES No. CAS0061654).

It is anticipated that the proposed project would discharge into a 303(d)-listed water body during construction, and because the proposed project's DSA is larger than 1 acre, it would require an SWPPP pursuant to the Clean Water Act (Section 402) to minimize water quality impacts.

Pursuant to the Clean Water Act (Sections 401 and 404), and at the State level pursuant to Fish and Game Code Section 1602, Caltrans will need to obtain a Water Quality Certification from the Regional Water Quality Control Board (Section 401), an Individual or Nationwide Permit from the U.S. Army Corps of Engineers (Section 404), and a Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife (Section 1602). This shall occur during the next phase of the project (i.e., the Design Phase). This California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) document shall be submitted during the application process.

The project is not required to implement treatment BMPs as per the Storm Water Data Report Evaluation Documentation Form, however, no proposed treatment BMPs were recommended by the Corridor Stormwater Management Study within the project limits. Funding has been allocated to incorporate permanent treatment BMPs into the project and will be determined during the next phase.

Construction Impacts

Construction of the build alternatives has the potential to impact water quality temporarily during construction. Soil disturbance activities, such as excavation and

trenching, soil compaction and moving, cut and fill, pavement rehabilitation at the sub-grade level, and grading, might have a potential impact to surface waters. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Chemical contaminants, such as oils, fuels, paints, solvents, nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages and ultimately into collecting waterways, creating short-term impacts, such as chemical degradation of water quality.

Construction materials, waste handling, and the use of construction equipment could also result in stormwater contamination and affect water quality. Spills or leaks from heavy equipment and machinery can result in oil and grease contamination. The removal of waste materials during construction could also result in tracking of dust and debris. Other sources of pollutants associated with construction activities include asphalt paving, asphalt striping and marking, concrete cement operations, and the use of metals during construction. Pesticide use associated with site preparation, which includes herbicides, fungicides, and rodenticides, is another potential source of stormwater contamination. Large pollutants, such as trash, debris, and organic matter, are also byproducts associated with construction activities. As such, the discharge of stormwater may cause or threaten to cause violations of water quality objectives. These pollutants would occur in both the stormwater discharges and non-stormwater discharges and could potentially cause chemical degradation and aquatic toxicity in the receiving waters.

Short-term impacts caused by each of the alternatives include potential increases in sediment loads due to the removal of existing groundcover and disturbance of soil during grading. The temporary residual increase in sediment loads from construction areas is unlikely to alter the hydraulic response (i.e., erosion and deposition) downstream in the hydrologic sub-area. The project would implement project design features to reduce short-term impacts to either a less than significant or no significant impact level. For example, implementation of a SWPPP is expected to minimize the amount of sediment released from the construction site and, subsequently, the sediment processes in these areas would be reduced because all disturbed soil areas would be protected with temporary construction site BMPs that are identified in the SWPPP. Therefore, with incorporation of temporary construction site BMPs, no adverse impacts are expected with implementation of the project.

Excavations could affect groundwater quality during dewatering activities if groundwater is encountered. If an excavation needs to be dewatered, groundwater would be disposed of according to NPDES dewatering permit requirements. The amount of dewatering, however, is likely to be relatively small. Therefore, no substantial changes to regional groundwater levels are anticipated.

Construction activities could result in accidental releases of construction-related hazardous materials that might affect groundwater. Excavations could provide a direct path for construction-related contaminants to reach groundwater. Excavations could disturb known, unknown, and undocumented soil or groundwater contaminants, resulting in the migration of contaminated groundwater further into the groundwater table. Particularly, Alternatives 2 and 3 would have this potential for inadvertent contamination of groundwater. However, these potential risks for groundwater contamination will be reduced by minimizing cut and fill areas. Per NPDES requirements, a dewatering plan would be prepared to guide the response to undocumented soil or groundwater contamination. Therefore, no substantial changes to groundwater quality are anticipated.

Alternatives 3 and 4 would add an estimated 14.88 acres of NIS area. The NIS area was calculated by adding the NNI to the RIS. The NNI estimated for this project is 0.2 acres. It was obtained by subtracting the post-project impervious surface by the pre-project impervious surface. The RIS estimated for this project is 14.88 acres. This figure was obtained by attributing the full structural roadway reconstruction (pavement and base) for the entire project limits. Because the NNI is not greater than 50 percent of the post project impervious area (14.88 acres), there will be no removal of existing treatment BMPs within the project limits. Therefore, no additional treatment area will be required. Although the project is not required to implement treatment BMPs as per the Evaluation Document Form within the Stormwater Data Report, funding has still been allocated to incorporate permanent treatment BMPs into the project, which will be determined during the next phase.

Avoidance, Minimization, and/or Mitigation Measures

The following measures are recommended for all build alternatives (i.e., Alternatives 2, 3, and 4). With inclusion of these measures into the project, it is anticipated that this project will have no impacts to water resources or water quality.

WQ-1: The contractor shall use all appropriate and necessary containment measures for work over waterways to ensure that no construction materials or debris from work enter any waterways. In addition, any contingencies shall be used related to accidental gas or oil releases, as dictated by approved utility relocation plans. The contractor shall use natural oils/lubricants and biodegradable hydraulic fluid when feasible.

WQ-2: The proposed project includes activities that will result in impacts to “Waters of the United States” and “Waters of the State”; therefore, prior to commencement of construction, a Section 404 of the Clean Water Act Permit will be required from the U.S. Army Corps of Engineers, a Section

401 and 402 of the Clean Water Act Permit will be required from the California Regional Water Quality Control Board, and a Section 1602 Lake and Streambed Alteration Agreement will be required from the California Department of Fish and Wildlife. The project shall adhere to any conditions required by these permits.

- WQ-3: Construction site BMPs will be deployed during construction activities to reduce stormwater discharges during construction and must be incorporated into the project specifications. Prior to the start of construction, all drain inlets must be protected with BMPs to prevent construction materials and debris from entering drainages. Temporary construction BMPs will be required, such as wind erosion control, sediment tracking control, street sweeping and vacuuming, construction roadway stabilization, spill prevention control, solid waste management, hazardous waste management, sanitary/septic waste management, material delivery and storage, material use, vehicle and equipment cleaning, vehicle and equipment fueling, and vehicle maintenance.
- WQ-4: Temporary construction staging areas and access roads will be used to minimize impacts to USACE, RWQCB, and California Department of Fish and Wildlife jurisdictional waters to the maximum extent feasible and are expected to be restored to pre-project conditions.
- WQ-5: All slopes shall be protected with fiber rolls, silt fences, temporary slope drains, and early slope paving or landscaping, as defined in the approved SWPPP, during the raining seasons of October 1 to May 1.
- WQ-6: All catchment basins and drainage inlets will include gravel bag berms or storm drain inlet protection.
- WQ-7: For all construction equipment, fuels, and toxic chemicals; spill prevention and spill control measures will be implemented before construction begins.
- WQ-8: A SWPPP shall be prepared for the project and will address all construction-related activities, equipment, and materials that have the potential to affect water quality.
- WQ-9: All Construction Site BMPs would be installed, inspected, and maintained to control and minimize the impacts of construction-related pollutants.
- WQ-10: Should an excavation need to be dewatered, groundwater would be disposed of according to NPDES dewatering permit requirements.

WQ-11: Per NPDES requirements, a dewatering plan would be prepared to guide the response to undocumented soil or groundwater contamination.

2.2.3 Geology/Soils/Seismic/Topography

Regulatory Setting

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

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

Affected Environment

The information in this section is based primarily on the District Preliminary Geotechnical Report prepared by Caltrans in July 2023 for the proposed project, which evaluates potential geologic hazards within the project area, existing site conditions, seismicity, and feasibility of identified geotechnical options for the proposed project.

Within the project area, the highway ascends from an elevation of 5,560 feet above mean sea level (AMSL) at the southern end to 6,670 feet AMSL at the northern end where it intersects with SR-2. The project area is located in the San Gabriel Mountains, within the Transverse Ranges geomorphic province, which is characterized by a complex series of mountain ranges and valleys with dominant east–west trends. Most of the roadway alignment and immediate area is predominantly underlain by slightly to moderately weathered and moderately to intensely fractured igneous intrusive bedrock (quartz monzonite, quartz diorite, and granodiorite) with a few feet of overlying colluvium, talus, or slope wash. Due to the geologic conditions, significant rockfall events have occurred at numerous locations throughout the project area.

At the surface, the highway traverses a very rugged west-facing slope that follows along the northeast-trending ridgelines (up to 2,000 feet above the highway) with slope inclinations as steep as 45 degrees at some locations and numerous debris tracks (constant sources of debris accumulation and slope erosion/failures) running directly

downslope. The locations of the debris tracks are shown on the geologic map in Figure 2.2.3-1. Various locations within the project area are susceptible to constant rockfall, and several landslides have occurred prior to and after (previous) project construction, as discussed further below. Below the surface, conditions vary considerably depending the location; however, the material encountered along the project limits generally consist of fill underlain by colluvium or Quaternary landslide/talus rubble material (QIs), and Mesozoic-age quartz diorite (qd) and granitic rocks (gr) (Dibblee, 2002). The fill, colluvium, and landslide/talus materials generally comprise poorly graded gravel with sand and well-graded sand with gravel. The depth to bedrock is generally shallow (i.e., less than 10 feet) but may be as deep as 100 feet in some cases. The rock quality designation for quartz diorite and granitic rocks generally does not increase with depth.

Fault Rupture

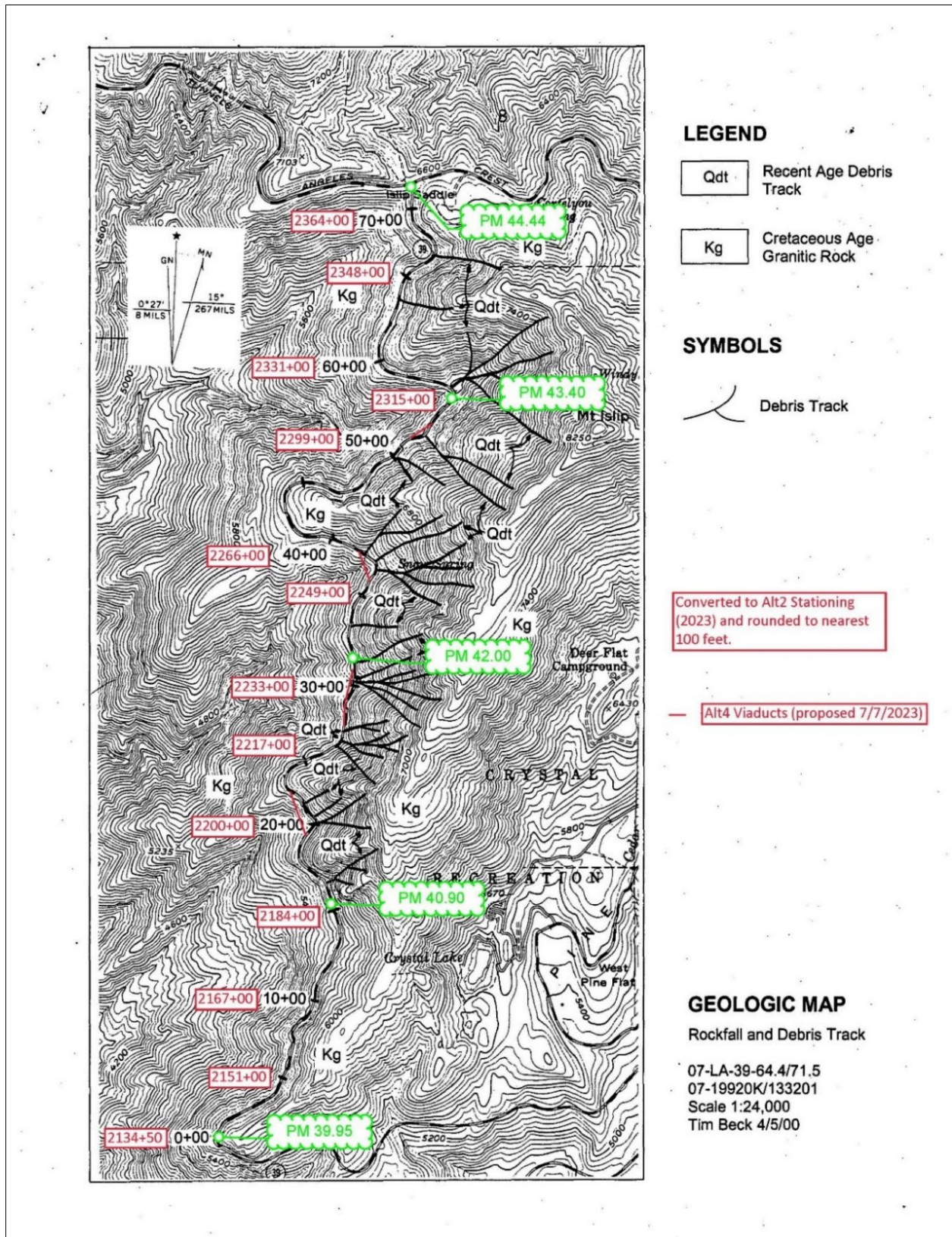
Major faults within the project vicinity include the San Andreas fault (5 miles north-northwest of Post Mile [PM] 44.4) and the San Gabriel fault (5 miles south of PM 40.0). Minor faults exist closer to the project limits, which include the Crystal Lake fault (0.3 miles east of PM 40.0) and an unnamed fault (as close as 0.1 miles west of PM 44.4) (Dibblee, 2002). No mapped faults exist within the project limits. The proposed features in the project area are not located within any Alquist-Priolo Fault Zones, as established by the California Geological Survey, and are not located within 1,000 feet of an active Holocene-age fault. Therefore, per Memo to Designers 20-10 (Caltrans, 2013), the structures are not considered susceptible to surface fault rupture hazards.

Landslides

Some very large rock avalanche deposits have been mapped in the general vicinity of the project area. Portions of the roadway cross the thick deposit of landslide debris containing very large, angular boulders in a matrix of coarse gravelly sand. Several landslides have occurred along this highway segment and within the project vicinity. Along with many small landslides that have occurred along this highway segment, three of the major landslides that have occurred in the area are as follows:

- PM 40.9 – Occurred prior to roadway construction.
- PM 42.3 (Snow Spring) – Occurred in January to February 1969 and reactivated in February to March 1978.
- PM 43.9 – Occurred in January to February 1969.

Figure 2.2.3-1 Debris Track Map



Liquefaction

According to the California Geological Survey, the project area is not susceptible to liquefaction (California State Geoportal, 2020). Furthermore, groundwater and/or loose sands were not encountered in previous subsurface investigations. Based on this information, liquefaction potential at the project area does not exist.

Rockfall Hazard

The cut slopes along this segment of the highway produce moderate to heavy amounts of rockfall. In some areas, rockfall also comes from the natural slopes beyond the cuts. Heavy rainfall, freeze-thaw cycles, and seismic activity are assumed to be the major causes of rockfall within the project area.

The project area crosses numerous debris tracks, which are narrow ravines that run downslope roughly perpendicular to contour and are situated at SR-39's highest point at an elevation of 6,500 feet AMSL. The project area regularly experiences massive rockslides due to heavy rains and floods that leave the roadway covered in loose rock, which then block or plug culverts, causing some culverts to be buried, therefore, diminishing the effectivity of the culverts, leading runoff to overtop and erode highway embankments. The runoff from rainfall and snowmelt flows downslope in the debris tracks, and heavy runoff moves the boulders and other debris downslope. Subsequently, during dry periods, downed trees, boulders as large as 6 feet in diameter, and other material collect in the debris tracks. Furthermore, much of the rockfall appears to land or roll onto the roadway, which either blocks the roadway or causes damage to it structurally. Previous rockfall and debris track hazard reports are summarized below:

- 1981 Engineering Geology Report (Caltrans) – Evaluated rockfall hazards and provided recommendations for several specific locations from PMs 40.8 to 42.3.
- 2000 Rockfall and Debris Track Mitigation Report (Caltrans) – Evaluated rockfall and debris track hazards using a modified Rockfall Hazard Rating System (RHRS) for the entire project limits (PMs 40.0 to 44.4). The project was divided into 80 rockfall sections for this evaluation. Modifications to the RHRS were made by not including average vehicle risk, roadway width, climate, and rockfall history. In addition, structural condition and rock friction were combined into one category. General recommendations were provided in the report for rockfall and debris track mitigation.
- 2006 Rockfall Hazard Investigation (URS Corporation) – Evaluated rockfall and debris track hazards using a modified RHRS for the entire project limits (PMs 40.0 to 44.4). The evaluation used the same 80 rockfall sections defined from the

2000 RHRS. Modifications to the RHRS were similar to the 2000 RHRS and did not include average vehicle risk, roadway width, and climate, but did include rockfall history. In addition, structural condition and rock friction were combined into one category. Note: the same Percent of Decision Site Distance values from the 2000 RHRS were used for this 2006 evaluation.

- 2008 RHRS Revision (Caltrans) – Attempted to create “unmodified” RHRS ratings by using the 2000 RHRS and including the previously removed categories. The 2008 Revised RHRS added the following categories to the 2000 RHRS: average vehicle risk, percent of decision sight distance (included again), roadway width, and rockfall history. It should be noted that the climate category was not included, and the structural condition/rock friction category was not separated into two categories.

Environmental Consequences

Due to the volatile environmental conditions of the project area, geological hazards are present and pose a risk to maintenance workers, emergency services personnel, and the traveling public for all build alternatives (Alternatives 2, 3, and 4). For the project area to be safely utilized, current slope failures, slope erosion, and retaining wall failures within the project area need to be reduced and ameliorated. Table 2.2.3-1 presents the different retaining wall types and locations, ranked in order of geotechnical recommendation, for each project alternative, based on the geological conditions present within the project area and the proposed scope of each alternative. Several aspects considered for wall type include: the geologic conditions, topography, durability, constructability, climate, and other environmental considerations.

Table 2.2.3-1 Recommended Retaining Wall Type and Locations by Alternative

Alternative No.	Post Mile	Reason	Wall/Embankment Type Options in Order of Geotechnical Recommendation		
			1	2	3
2	40.10	Slope Failure	Mechanically Stabilized Earth (Geogrid) embankment	Conventional Wall (Reinforced Concrete Cantilever)	–
3	40.10				
4	40.10				
2*	40.94	Slope Failure	Conventional Wall (Gravity)	Conventional Wall (Reinforced Concrete Cantilever)	Soldier Pile Wall
3	42.13	Slope Erosion	Mechanically Stabilized Earth (Geogrid embankment)	Conventional Wall (Reinforced Concrete Cantilever)	Soldier Pile Wall
4	42.10				
3	42.43	Slope Erosion	Soldier Pile Wall	Conventional Wall	–

Alternative No.	Post Mile	Reason	Wall/Embankment Type Options in Order of Geotechnical Recommendation		
			1	2	3
4	42.43				
2	42.83	Retaining Wall Failure	Soldier Pile Ground Anchor Wall	Conventional Wall	-
3	42.83				
4	42.83				
2	43.93	Slope Failure	Conventional Wall	Soldier Pile Wall	-
3	43.88				
4	43.87				
Note: All Post Miles are approximate. *Alternatives 3 and 4 are not shown because it is assumed this location will be bypassed with a viaduct.					

Additionally, several repairs are necessary to the existing retaining walls and embankments within the project area. These structural improvements are recommended to reduce the proposed project's susceptibility to geological hazards for each alternative, based on the geological conditions present within the project area and the proposed scope of each alternative. The Snow Spring Viaduct (PM 42.2) is also a structural improvement aimed at improving the safety and longevity of northern SR-39. The location is highly prone to slide debris and heavy runoff, therefore, by bypassing this slide area with the Snow Spring Slides Viaduct, runoff and debris would be able to pass underneath the viaduct instead of it filling the roadway, which would allow users of SR-39 to safely access the project area.

The existing cut slopes, some of the natural slopes above the highway, and any new cuts made for the project are expected to produce rockfall. In the future, heavy rainfall and the associated runoff from the debris tracks are likely to erode sections of the highway embankment. For Alternatives 3 and 4, which would allow the public to access the project area, the use of the northern portion of SR-39 would be much more frequent, requiring additional interventions aimed at reducing debris tracks and methods to prevent rockfall. The added level of construction that would occur from Alternatives 3 and 4 would require additional structures targeted towards rockfall and debris tracks. Viaducts proposed for Alternatives 3 and 4 would shift the roadway away from the mountainside at specific locations, allowing rocks to fall under the viaducts.

The RHRS is intended to be a tool that allows transportation agencies to address their rockfall hazards; it uses 10 rating categories that are rated from 1 to 100 and then totaled to determine the overall rating. Recommended rockfall and debris track remediation locations are based on three RHRS studies performed by Caltrans (2000 Rockfall and Debris Track Mitigation Report and the 2008 RHRS Revision) and URS

Corporation (2006 Rockfall Hazard Investigation). Recommendations considered the previous geotechnical recommendations (1981, 2000, 2007, 2008, and 2009 geotechnical reports), current project requirements based on the scope of each alternative, long-term performance, maintenance, and professional engineering and geology judgement. Table 2.2.3-2 below presents the locations and recommendation remediation methods for the top 18 (out of 80) ranked locations. Additional locations are recommended due to proximity, previous report recommendations, and based on the geological impact of the viaduct structures included for Alternatives 3 and 4.

Table 2.2.3-2 Summary of Recommended Rockfall and Debris Track Management for Alternatives 3 and 4

Post Mile	2008 RHRS Rank	Debris Track or Rockfall?	Management Methods in Order of Geotechnical Preference			
			1	2	3	4
39.95	10	Rockfall	Resloping/ Catchment Ditch	Cable Net Drapery	Catchment Wall	–
40.30	11	Rockfall	Resloping/ Catchment Ditch	Cable Net Drapery	Catchment Wall	–
40.35	15					
40.40	16					
40.98	29 ¹	Debris Track/Rockfall	Rock Shed	Tunnel	–	–
41.00	18					
41.01	17					
41.20	72 ²	Debris Track	Viaduct ²	–	–	–
41.68	52 ²	Debris Track/Rockfall	Viaduct ²	–	–	–
41.74	53 ²					
41.76	1	Rockfall	Re-alignment into turnout/Viaduct	Cable Net Drapery	Resloping/ Catchment Ditch	Catchment Wall
41.82	8					
41.84	30 ¹	Debris Track	Viaduct	Rock Passing Culvert	Catchment Basin	Catchment Wall
42.24	7	Debris Track/Rockfall	Re-alignment into turnout/Viaduct	Catchment Basin	-	-
42.83	27	Rockfall	Resloping/ Catchment Ditch	Cable Net Drapery	Catchment Wall	
43.05	14	Debris Track/Rockfall	Resloping/ Catchment Ditch	Catchment Wall (Flexible)	Cable Net Drapery	Rock Passing Culvert
43.12	5					
43.19	18	Debris Track/Rockfall	Re-alignment into turnout/Viaduct ³	Rock Passing Culvert	–	–
43.60	13	Rockfall	Resloping/ Catchment Ditch	Cable Net Drapery		Catchment Wall
43.68	6					

Post Mile	2008 RHRS Rank	Debris Track or Rockfall?	Management Methods in Order of Geotechnical Preference			
			1	2	3	4
43.73	2				Re-alignment into turnout	
43.83	4	Debris Track/Rockfall	Resloping/Catchment Ditch	Catchment Basin	Cable Net Drapery	Catchment Wall
44.1	12	Rockfall	Cable Net Drapery	Resloping/Catchment Ditch	Catchment Basin	–
44.25	9	Rockfall	Resloping/Catchment Ditch ⁴	Cable Net Drapery	Catchment Wall	–
44.33	3					
44.35	23 ²					
<p>Note: All Post Miles are approximate.</p> <p>¹ The 2008 modified RHRS rankings only re-ranked the top rockfall hazard scores (1 to 18 and 27). Rankings aside from these are based on the original 2000 RHRS study.</p> <p>² For Alternative 4 wildlife crossings</p> <p>³ For Alternative 4 only</p> <p>⁴ Resloping/catchment ditch feature is also proposed for Alternative 2 at PM 44.4</p>						

Avoidance, Minimization, and/or Mitigation Measures

No adverse impacts are anticipated in relation to ground shaking, ground rupture, or liquefaction. However, the following avoidance and minimization measures are recommended to be included in the project per the Caltrans Division of Engineering Services – Geotechnical Service to further minimize any potential rockfall risk. It should be noted that these recommendations and strategies for minimization are subject to change during the final design process.

- GEO-1: Rock scaling along unstable slopes would occur prior to opening the road. Scaling would greatly reduce the amount of rockfall for several years.
- GEO-2: Soldier pile walls will be constructed at various locations for all build alternatives to stabilize the slope at locations where the road has been undermined.
- GEO-3: Several existing soldier pile walls will be repaired where erosion has damaged the timber laggings or metal beam laggings.
- GEO-4: Existing masonry gravity walls at several locations will be repaired where erosion has undermined the base, making it structurally weak.

- GEO-5: Rock fall catchment walls will be constructed at various locations for Alternatives 3 and 4 to prevent falling rocks and large debris from entering the pedestrian-accessible and public roadway.
- GEO-6: A rock shed located at “Headache Alley” between PMs 40.94 and 41.07, where large-sized rocks and boulders consistently fall from overhead, is proposed to be constructed for Alternatives 3 and 4.
- GEO-7: A 700-foot-long viaduct at Snow Springs Slide (PM 42.2) will be constructed to bypass this very active and major debris slide area for Alternatives 3 and 4.
- GEO-8: Several other viaducts are proposed for Alternatives 3 and 4 that will serve to bypass other rockslide areas that may not be as active and will enable wildlife to safely cross underneath traffic.
- GEO-9: Cable net fencing constructed at grade or on the cuts would stop rockfall from reaching the roadway. The fence heights and energy-absorbing capacity must be determined by rockfall energy and trajectory analyses conducted during the design phase of this project.
- GEO-10: Draping the slope with wire mesh allows rocks as large as 0.6 meter (2 feet) in diameter to move down the slope slowly and come to rest at the toe of the slope. The drapery limits and anchor locations will have to be determined by additional field studies during the design phase. For those cuts being draped that also have rocks coming from the natural slopes above, a cable net fence placed at the top of the cut would also be required.
- GEO-11: The cheaper but less-reliable option would be constructing catchment basins. The basins would have to be cleaned periodically, and there would still be the possibility that they could be overwhelmed in a major storm event.
- GEO-12: The more reliable but more expensive option would be constructing rock-passing culverts. Rock passing culverts have a steep invert (greater than 38 degrees) and a diameter sufficient to pass large boulders and other debris.
- GEO-13: Cable net fences have been used successfully to stop debris flows. The cable nets stop boulders, gravel and other debris while allowing water to pass through.

GEO-14: Revegetation of graded slopes should be performed to minimize erosion, and runoff should be diverted from each slope face using earthen berms at the top of each slope, where feasible.

2.2.4 Hazardous Waste/Materials

Regulatory Setting

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

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

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

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

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government

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

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

Affected Environment

This section was prepared using information from the Initial Site Assessment (ISA) prepared for the project (Caltrans, 2023) to identify potential or known hazardous materials, hazardous waste, and contamination in the project area.

The ISA comprises a review of the project plans, cross sections, scope of work, a field visit, historical research on past project area land uses, and record searches, which include a review of the SWRCB's GeoTracker website and the California Department of Toxic Substances Control's EnviroStor database to find the current land uses and potential indicators of hazardous waste/groundwater contamination within the existing and potentially expanded Caltrans right-of-way of the project area. These regulatory databases of known hazardous materials releases, storage tank sites, legal and illegal dump sites, and remediation sites demonstrated that there is a lack of such sites within 1,000 feet of the project limits.

The ISA identified potential hazardous materials within the project area; therefore, a preliminary site investigation is required prior to the commencement of construction, which would be conducted during the design phase of the project to further analyze potential hazardous waste construction issues. The following sections describe the potential issues present within the project area.

Aerially Deposited Lead

Elevated lead concentrations exist in soils along older roadways because of Aerially Deposited Lead (ADL) resulting from the historical use of leaded gasoline. As vehicles traveled the highways, tiny particles of lead were emitted from the vehicles' exhaust and settled on the soils next to the freeways and roads. Subsequently, because lead often

does not move very far or fast in the environment due to how tightly it becomes bound to the soil, it accumulates alongside the freeways and roads on which the particles are deposited, therefore contributing to high levels of lead in roadside soils. It is generally found within 10 feet of the edge of pavement and within the top 6 inches of soil, but it can be found as deep as 2 to 3 feet below the surface and can extend more than 20 feet beyond the edge of pavement. Though, the project area has not been open to the traveling public since 1978, it was highly traversed during a time that leaded gasoline was still in widespread use, therefore, there is a potential for ADL to be present within the project area.

Naturally Occurring Asbestos

Naturally Occurring Asbestos (NOA) includes several types of naturally occurring fibrous minerals found in serpentine and ultramafic rocks. Asbestos is a known carcinogen and can be released from these rocks when they are broken and crushed or by weathering and erosion. When NOA is disturbed by construction, grading, and other surface activities, asbestos fibers can become airborne; these activities are regulated by the California Air Resources Board (CARB) to reduce dust emissions during construction-related activities. Rocky outcroppings that include metagabbro and diabase are known to contain small bodies of serpentinite/ultramafic rock locally.

Lead and Chromium in Yellow Thermoplastic Traffic Stripe and Pavement Marking

Yellow thermoplastic paint stripes contained lead chromate pigment prior to 2005 and, although most of the highway's striping has been removed or has worn off, there is no definitive assurance that pre-2005 paint striping is completely gone; therefore, all yellow paint stripes that would be disturbed during construction require specific handling and disposal specifications depending on the level of lead and chromium in the collected waste. Due to the inactivity of the project area, it is uncertain whether any remnants of yellow thermoplastic paint striping are still present on the roadway.

Asbestos-Containing Construction Material

The Department of Toxic Substances Control classifies Asbestos-Containing Construction Material as hazardous waste if it is "friable" (i.e., easily crumbled) and contains one percent or more asbestos as hazardous waste. The EPA does not regulate asbestos as hazardous waste under RCRA; therefore, it is considered to be a non-RCRA, or "California-only" hazardous waste. Asbestos-Containing Construction Materials commonly result from construction involving structures such as retaining walls or bridges because of asbestos' tensile strength and heat-resistant properties. When structures, such as retaining walls, are repaired, modified, or demolished, an investigation for asbestos is required.

Treated Wood Waste

Treated wood is wood that has gone through a treatment process with chemical preservatives to protect it against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood. Typically, treated wood is used in exterior applications where ground or water contact is likely. Common uses in the highway environment include signposts, Metal Beam Guardrail (MBGR) wood posts, and lagging on retaining walls. Treated Wood Waste (TWW) has the potential to be a hazardous waste if it contains elevated levels of one or more of the following constituents: arsenic, chromium, copper, pentachloride, or creosote. These chemical preservatives pose a risk to human health and the environment when they contaminate soil, surface water, and groundwater because they are known to be toxic or carcinogenic. TWW is a California Waste, and its handling, storage, transportation, and disposal are subject to California regulations.

Environmental Consequences

As stated above, further testing is required to ascertain whether hazardous materials are present within the project area and to what extent these materials pose a threat to the environment and the people involved in construction of the proposed project. The site investigation would involve testing for ADL, Asbestos-Containing Construction Materials, and NOA, and waste characterization for the yellow paint stripes and TWW would determine storage and disposal requirements.

Aerially Deposited Lead

ADL from the historical use of leaded gasoline exists along roadways throughout California. If encountered, soil with elevated concentrations of lead as a result of ADL on the state highway system right-of-way within the project limits would be managed under the July 1, 2016, ADL Agreement between Caltrans and the California Department of Toxic Substances Control. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

ADL levels are anticipated to be low due to the average daily traffic volumes of less than 2,000 during the project area's last publicly open period, in conjunction with 40 years of erosion and slides that have reduced the presence of ADL in the soil. However, ADL test results along SR-39 to the south of the project area found unregulated levels of ADL, and there is currently no data for lead concentrations within the soil of the project area due to the road's 45-year closure. The project would disturb existing soil while rebuilding retaining walls, drainage systems, and constructing safety improvements, therefore, each of the build options (Alternatives 2, 3, and 4) would require varying degrees of excavation; potential hazards from ADL may therefore exist at the project

location. Further testing would be used to determine what avoidance and minimization measures would be needed, if any, to construct the project with the presence of ADL. At minimum, a lead compliance plan is required for work that disturbs soils, as described in Caltrans Standard Specifications.

Naturally Occurring Asbestos

A review of Caltrans Office of Geographic Information Systems (GIS), NEPA Assignment, Environmental Management Systems, Innovation, and Staff Development database indicates the presence of possible NOA rock formations from the SR-2/SR-39 junction to 0.6 miles south along SR-39 (see Figure 2.2.4-1 below). Additional sampling during the Design Phase would be necessary to determine the asbestos concentrations present and, if NOA is confirmed, additional worker protection measures would be needed during construction.

Lead and Chromium in Yellow Thermoplastic Traffic Stripe and Pavement Marking

Residue from the removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking contains lead chromate in varying concentrations depending upon color, type, and year of manufacture. Caltrans considers residue from the removal of this material to be a department-generated hazardous waste. Yellow traffic stripe and pavement marking may be removed as part of the project, and striping removal would generate residue with concentrations of lead and chromium that exceed hazardous waste levels in California. The residue must be disposed of at a California permitted Class I landfill. A lead compliance plan is also required for striping removal, and appropriate funds for disposal of waste from the removal of yellow traffic stripe as non-RCRA (California) hazardous waste and the California Department of Tax and Fee Administration fee are required.

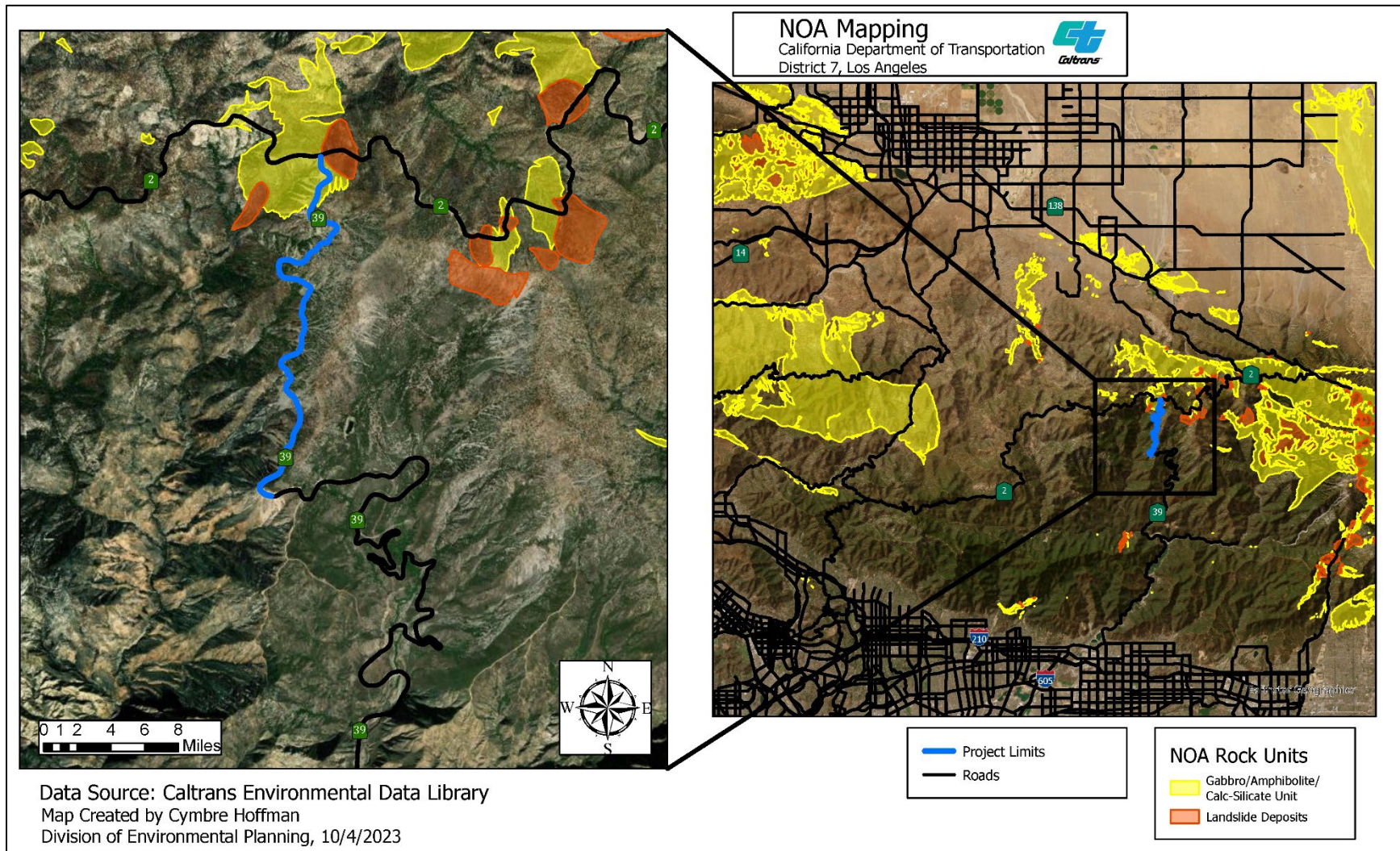
Asbestos Containing Construction Material

The project would also remove structural concrete while reconstructing damaged retaining walls. Structural concrete needs to be tested for asbestos, and an asbestos investigation would be conducted in conjunction with the lead investigation. A detailed investigation of the retaining walls would be necessary during the Design Phase.

Treated Wood Waste

Lastly, timber lagging would be removed as part of the project, and the wood lagging used is a potential source of hazardous material due to the chemical preservatives that are used to preserve the wood. Appropriate funds for the disposal of TWW and the California Department of Tax and Fee Administration fee are required if the generated quantity is greater than 5 tons per year.

Figure 2.2.4-1 Naturally Occurring Asbestos Map



Construction Impacts

Temporary construction activities, such as demolition and reconstruction of the existing roadway, excavation of soils that contain elevated levels of ADL, removal of existing MBGR that may contain treated wood waste, and construction/repair of retaining walls, may have the potential to generate contaminated hazardous materials. However, these impacts will be temporary and minor because Caltrans will comply with local, state, and federal policies, standards, and laws, which would avoid or minimize effects related to hazardous waste and materials. These Avoidance, Minimization, and/or Mitigation Measures are outlined below.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is necessary. Compliance with local, state, and federal policies, standards, and laws would avoid or minimize effects related to hazardous waste and materials. The following avoidance and minimization measures provide project-specific direction and would be implemented prior to and during construction, consistent with applicable regulations.

- HAZ-1: Site investigations performed at the properties for the project will be completed during the Project Specifications and Estimates phase to determine whether more extensive subsurface investigation will be needed.
- HAZ-2: If hazardous materials contamination or sources are suspected or identified during project construction activities, the construction contractor will be required to cease work in the area and to have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans Construction Manual (2020). Adequate protection for construction workers will be provided with the implementation of a Health and Safety Plan and Soil Management Plan.
- HAZ-3: If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance with the Caltrans Construction Manual (2020), Chapter 7, Section 7-107, Hazardous Waste and Contamination.
- HAZ-4: A Lead Compliance Plan shall be prepared prior to the start of construction activities.
- HAZ-5: Appropriate funds for disposal of TWW and the CDFTA fee is required if the generated quantity is greater than 5 tons/year. Timber lagging would

be removed as part of the project and is a potential source of hazardous material due to the chemical preservatives used to preserve the wood.

2.2.5 Air Quality

Regulatory Setting

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

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

Conformity

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

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

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for CO, NO₂, O₃, particulate matter (PM₁₀ and PM_{2.5}), and in some areas (although not in California), SO₂. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except for SO₂, in addition to a nonattainment area for lead; however, the FCAA does not currently require lead to be covered in transportation conformity analyses. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization, FHWA, and Federal Transit Administration make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

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

Affected Environment

The following discussion is based on the Air Quality and Greenhouse Gas Assessment (dated January 10, 2024) that was conducted by the Caltrans Office of Environmental Engineering, Air Quality Branch, with research performed by the Caltrans Division of Environmental Planning.

Climate, Meteorology, and Topography

The proposed project is located within the Angeles National Forest in the San Gabriel Mountains, which is within the South Coast Air Basin (SCAB). The SCAB comprises all of Orange County and parts of Los Angeles, Riverside, and San Bernardino counties.

This basin is bounded by the Pacific Ocean to the west and a series of mountain ranges to the east, including the San Gabriel Mountains where the proposed project is located. The San Gabriel Mountains trend east–west, but the hills along the San Andreas fault trend west–northwest. The Angeles National Forest is characterized by rugged terrain and elevations ranging from 500 to 6,000 feet. The higher elevations can experience cooler temperatures and more precipitation compared to lower elevations. The mountainous topography can also affect wind patterns, causing localized variations in wind speed and direction. Additionally, the presence of canyons, slopes, and ridges in the area can influence local microclimates, resulting in variations in temperature, precipitation, and wind patterns.

The climate in and around the project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high pressure system cell over the Pacific Ocean. This region generally experiences a Mediterranean climate characterized by mild, wet winters and warm, dry summers. It maintains moderate temperatures and comfortable humidity and limits precipitation to a few storms during the winter season. Temperatures are normally mild, except in the summer months, which commonly bring substantially higher temperatures. In all, the local climate is characterized by hot, dry summers and mild-to-cold winters with seasonal heavy precipitation (ranging from 20–40 inches) that occurs primarily during the winter months. However, due to the higher elevation and mountainous terrain of the project location, the climate in this specific area can experience cooler and more variable weather conditions compared to lower elevations. Given the higher elevation and colder temperatures during the winter, snowfall is common in the Angeles National Forest. The exact amount of snowfall can vary significantly from year to year, but it is not uncommon for snow to accumulate several feet during the winter months.

Winds in the project area are usually driven by the dominant land/sea circulation system. California lies within the zone of prevailing westerlies and on the eastern side of the semi-permanent high-pressure area of the northeast Pacific Ocean. Generally, the westerly winds blow from the west or northwest during most of the year but are often influenced by the larger-scale weather patterns and air movements in the region. Additionally, wind direction in the Angeles National Forest can vary depending on the specific location and elevation. The mountainous topography can affect wind patterns, causing localized variations in wind speed and direction. The presence of canyons, steep slopes, and sharp ridges in the area can influence local microclimates, resulting in variations in temperature, precipitation, and wind patterns. For example, wind direction can be altered by local canyons, with wind tending to flow parallel to the canyons.

The coastal influences, such as the marine layer and cool ocean breezes, can help reduce air pollution by introducing cleaner and fresher air into the area. These

influences are more prominent closer to the coast but can still have some effect on air quality in the Angeles National Forest. However, as you move further inland and gain elevation, the impact of coastal influences diminishes.

Southern California frequently has temperature inversions that inhibit the dispersion of pollutants. Inversions may be either low or elevated. Low inversions or stagnant conditions can negatively impact air quality by trapping pollutants near the surface due to radiational cooling and are most severe during clear, cold, early winter mornings. Under these low-inversion conditions, pollutants emitted from local sources, such as vehicles, industries, or wildfires, may accumulate without being dispersed effectively. This can result in higher concentrations of pollutants and poorer air quality, particularly in valleys and basins within or near the forested area. Elevated inversions can be generated by a variety of meteorological phenomena and act as a lid or upper boundary, restricting vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over SCAB and is responsible for the high levels of ozone observed during summer months in the air basin.

Santa Ana winds have a strong effect on the local climate as well. They are strong, extremely dry offshore winds that characteristically sweep through Southern California and northern Baja California from late fall into winter and can often create ideal wildfire conditions in the project study area and in the Angeles National Forest in general. These winds can range from hot to cold depending on the prevailing temperatures in the source regions (i.e., the Great Basin and upper Mojave Desert). However, the winds are most known for the hot, dry weather that they bring in the fall. Wildfires are often a result of Santa Ana wind events and are a major contributor to “bad air days” throughout the SCAB.

Criteria Pollutants

The FCAA requires the EPA to set NAAQS for six (6) common air pollutants, otherwise known as “criteria air pollutants”, which include: O₃, CO, particulate matter (PM_{2.5} and PM₁₀), NO₂, SO₂, and lead. These pollutants are found throughout the U.S. and have the potential to harm human health, the environment, and even property. The FCAA identifies two types of national ambient air quality standards: primary standards and secondary standards. Primary standards provide protection for public health, while secondary standards provide public welfare protection, such as protection against decreased visibility and damage to vegetation, animals, or property. Table 2.2.5-1 presents the current state and national ambient air quality standards, and Table 2.2.5-2 summarizes the sources and health effects of the six criteria pollutants, as well as other pollutants regulated in the State of California.

Table 2.2.5-1 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary _{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non- Dispersive Infrared Photometry	35 ppm (40 mg/m ³)	—	Non- Dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemilumine scence	100 ppb (188 µg/m ³)	—	Gas Phase Chemilumine scence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectro- photometry (Pararo- saniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and

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Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	Atomic Absorption
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards	No National Standards	No National Standards
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography	No National Standards	No National Standards	No National Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence	No National Standards	No National Standards	No National Standards
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography	No National Standards	No National Standards	No National Standards

Source: California Air Resources Board, May 4, 2016

Notes: µg/m³ = micrograms per cubic meter

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; parts per million (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.

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Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
<p>8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.</p> <p>9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.</p> <p>10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.</p> <p>11. On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.</p> <p>12. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p> <p>13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.</p> <p>14. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.</p> <p>15. Greenhouse Gases and Climate Change: Greenhouse gases do not have concentration standards for that purpose. Conformity requirements do not apply to greenhouse gases.</p>						

Table 2.2.5-2 Air Pollution Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Ozone (O ₃)	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic Volatile Organic Compound (VOC) may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds and nitrogen oxides (NO _x) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
Carbon Monoxide (CO)	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Respirable Particulate Matter (PM ₁₀)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic & other aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
Fine Particulate Matter (PM _{2.5})	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter—a toxic air contaminant—is in the PM _{2.5} size range. Many toxic and other aerosol and solid compounds are part of PM _{2.5} .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants, including NO _x , sulfur oxides (SO _x), ammonia, and reactive organic gases.
Nitrogen Dioxide (NO ₂)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the “NO _x ” group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
Sulfur Dioxide (SO ₂)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
Lead	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead-based paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
Sulfates	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.

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Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Hydrogen Sulfide	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Causes headaches and nausea. Strong odor.	Industrial processes such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
Visibility Reducing Particles	Reduces visibility. Produces haze. Note: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.
Vinyl Chloride	Causes neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes

Source: CARB, 2016

Notes: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

- California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10} , $\text{PM}_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- Federal standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the EPA for further clarification and current national policies.
- On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. Transportation conformity applies in newly designated nonattainment areas for the 2015 national 8-hour ozone primary and secondary standards on and after August 4th, 2019 (see *Transportation Conformity Guidance for 2015 Ozone NAAQS Nonattainment Areas*).
- ppm = parts per million
- Transportation conformity requirements for CO no longer apply after June 1, 2018 for the following California Carbon Monoxide Maintenance Areas (see *EPA CO Maintenance Letter*).
- On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- The $65 \mu\text{g}/\text{m}^3$ $\text{PM}_{2.5}$ (24-hr) NAAQS was not revoked when the $35 \mu\text{g}/\text{m}^3$ NAAQS was promulgated in 2006. The $15 \mu\text{g}/\text{m}^3$ annual $\text{PM}_{2.5}$ standard was not revoked when the $12 \mu\text{g}/\text{m}^3$ standard was promulgated in 2012. Therefore, for areas designated nonattainment or nonattainment/maintenance for the 1997 and or 2006 $\text{PM}_{2.5}$ NAAQS, conformity requirements still apply until the NAAQS are fully revoked.
- Final 1-hour NO_2 NAAQS published in the Federal Register on 2/9/2010, effective 3/9/2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot spot analysis

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
	<p>requirements do not currently exist. Near-road monitoring starting in 2013 may cause re-designation to nonattainment in some areas after 2016.</p> <ul style="list-style-type: none"> • On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. • Secondary standard, the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant rather than health. Conformity and environmental analysis address both primary and secondary NAAQS. • CARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM₁₀ and, in larger proportion, PM_{2.5}. Both CARB and EPA have identified lead and various organic compounds that are precursors to ozone and PM_{2.5} as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong. • Lead NAAQS are not considered in Transportation Conformity analysis. • In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively. 	

The primary agencies responsible for regulations to improve air quality in the SCAB are the South Coast Air Quality Management District (SCAQMD) and CARB. The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD because it is the designated metropolitan planning authority for the area and produces estimates of anticipated future growth and vehicular travel in the basin, which are used for air quality planning. The SCAQMD sets and enforces regulations for non-vehicular sources of air pollution in the basin and works with SCAG to develop and implement Transportation Control Measures, which are intended to reduce and improve vehicular travel and associated pollutant emissions.

CARB was established in 1967 by the California Legislature to attain and maintain healthy air quality, conduct research into the causes and solutions to air pollution, and systematically attack the serious problem caused by motor vehicles, which are the major causes of air pollution in the State. CARB sets and enforces emissions standards for motor vehicles, fuels, and consumer products. It sets health-based California Ambient Air Quality Standards and monitors air quality levels throughout the State. The board identifies and sets control measures for toxic air contaminants. The board also performs air-quality-related research, provides compliance for businesses, and produces education and outreach programs and materials. CARB provides assistance for local air quality districts such as SCAQMD.

The EPA is the primary federal agency for regulating air quality. The EPA implements the provisions of the FCAA, which establishes the NAAQS that are applicable nationwide. Air quality in the region is defined by whether the area has attained or not attained state and federal standards, which would be determined by the EPA through monitoring, modeling, and data collection. If the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area (designated “attainment/unclassifiable”); areas that do not meet the national standard are called non-attainment areas. In some cases, EPA is not able to determine an area’s status after evaluating the available information—those areas are designated “unclassifiable”. Regions that are in non-attainment are required to prepare plans and implement measures that will bring the region into attainment. When an area has been reclassified from non-attainment to attainment for a federal standard, the status is identified as “maintenance”. When the area is deemed a maintenance area there must be a measure and a plan established that will preserve the region in attainment for the following 10 years. The EPA designates an area as “unclassified” if, based on available information, it cannot be classified as either meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. The project is in an area that is designated as “unclassified” due to incomplete air quality data, which does not support a designation of attainment or non-attainment. The designations for the state and federal criteria air pollutants are presented in Table 2.2.5-3 below.

Table 2.2.5-3 State and Federal Criteria Air Pollutant Standards and Status

Pollutant	Averaging Time	State Standard	Federal Standard	State Project Area Attainment Status	Federal Project Area Attainment Status
Ozone	1 hour	0.09 ppm	N/A	Non-Attainment	N/A
Ozone	8 hours	0.070 ppm	0.070 ppm (4 th highest in 3 years)	Non-Attainment	Non-attainment (extreme)
Carbon Monoxide	1 hour	20 ppm	35 ppm	Attainment	Attainment (Maintenance)
Carbon Monoxide	8 hours	9.0 ppm	9 ppm	Attainment	Attainment (Maintenance)
Carbon Monoxide	8 hours (Lake Tahoe)	6 ppm	N/A	N/A	N/A
PM ₁₀	24 hours	50 µg/m ³	150 µg/m ³ (expected number of days above standard < or equal to 1)	Non-Attainment	Attainment (Maintenance)

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Pollutant	Averaging Time	State Standard	Federal Standard	State Project Area Attainment Status	Federal Project Area Attainment Status
PM ₁₀	Annual	20 µg/m ³	N/A	Non-Attainment	N/A
PM _{2.5}	24 hours	N/A	35 µg/m ³ vi	N/A	Non-Attainment (Serious)
PM _{2.5}	Annual	12 µg/m ³	12.0 µg/m ³	Non-Attainment	Non-Attainment (Serious)
Nitrogen Dioxide	1 hour	0.18 ppm	0.100 ppm	Attainment	Attainment-Unclassified
Nitrogen Dioxide	Annual	0.030 ppm	0.053 ppm	Attainment	Attainment (Maintenance)
Sulfur Dioxide	1 hour	0.25 ppm	0.075 ppm (99 th percentile over 3 years)	Attainment	Designation pending
Sulfur Dioxide	3 hours	N/A	0.5 ppm	N/A	Designation pending
Sulfur Dioxide	24 hours	0.04 ppm	0.14 ppm (for certain areas)	Attainment	Attainment-Unclassified
Sulfur Dioxide	Annual	N/A	0.030 ppm (for certain areas)	N/A	Attainment-Unclassified
Lead	Monthly	1.5 µg/m ³	N/A	Attainment	N/A
Lead	Calendar Quarter	N/A	1.5 µg/m ³ (for certain areas)	N/A	Non-attainment
Lead	Rolling 3-month average	N/A	0.15 µg/m ³	N/A	Non-attainment
Sulfates	24 hours	25 µg/m ³	N/A	Attainment	N/A
Hydrogen Sulfide	1 hour	0.03 ppm	N/A	Attainment	N/A
Visibility Reducing Particles	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70 percent	N/A	Attainment	N/A
Vinyl Chloride	24 hours	0.01 ppm	N/A	Attainment	N/A
PM ₁₀ = Particulate Matter Less than 10 Microns in Diameter; PM _{2.5} = Particulate Matter Less than 2.5 Microns in Diameter; ppm = parts per million; µg/m ³ = micrograms per cubic meter					

Environmental Consequences

Regional Conformity

This project is included in the latest conforming financially constrained 2023 FTIP Amendment No. 23-00 (LALS02). The FTIP is prepared to implement projects and programs listed in the RTP/Sustainable Communities Strategy (SCS) and is developed in compliance with state and federal requirements. The 2023 FTIP was adopted by SCAG's Regional Council on October 6, 2022 and was federally approved on December 16, 2022.

Based on the proposed scope of work, this project is considered exempt from conformity requirements pursuant to 40 CFR 93.126. The proposed project is funded by the State Highway Operation and Protection Program (SHOPP) Roadway Preservation Program under 201.150 and 201.2XX as Roadway and Roadside Preservation Programs. The project is identified in the latest conforming Federal Transportation Improvement Program (2023 FTIP) as a lumpsum category of LALS02 for Pavement Resurfacing and/or Rehabilitation (Attachment A). The proposed project is deemed listed in Table 2 under the subtitle "Safety" and classifications "Pavement resurfacing and/or rehabilitation" and "Widening narrow pavements or reconstructing bridges (no additional travel lanes)." Furthermore, the Southern California Association of Governments (SCAG) indicated that the segment of SR-39 within the project limits is not included in their regional travel demand model. Based on a review of the project and project components as well as the coordination with SCAG, this project is deemed classified and is exempt from the requirement to determine conformity pursuant to 30 CFR 93.126. It is anticipated that the project will not have regional impacts and will not interfere with the implementation of any Transportation Control Measures adopted in the State Implementation Plan for the SCAG nonattainment area.

Project Level Conformity

Sensitive Receptors

SCAQMD defines a sensitive receptor as a person in the population who is particularly susceptible to health problems resulting from exposure to air pollutants (e.g., persons at schools, playgrounds, childcare centers, hospitals, retirement homes, or residences) (SCAQMD, 2005). Residential areas are considered sensitive to air pollution because residents, including children and the elderly, tend to be at home for extended periods of time, resulting in sustained exposure to pollutants.

The proposed project is located in a remote mountainous area within the Angeles National Forest and, more specifically, within the San Gabriel Mountains National Monument. The nearest communities include Azusa and Wrightwood, which are more

than 10 miles from the project limits. These communities, being positioned near the entrances to the Angeles National Forest (ANF) on SR-39 and SR-2, serve as gateways to the ANF. The existing land use in the immediate vicinity of the proposed project area includes the San Gabriel Wilderness (“Existing Wilderness”) to the west of SR-39. To the south, the area is characterized by “Back Country Non-Motorized” land use areas. To the east, there is both “Developed Area Interface” and Back Country Non-Motorized” land uses, particularly in the area surrounding Crystal Lake Recreation Area. To the north, at the junction of SR-39 and SR-2, the area is characterized by “Developed Area Interface” and “Critical Biological” land use zones. The “Critical Biological” land use zone is just north of the SR-39 and SR-2 junction.

According to the U.S. Forest Service (USFS), there are no plans for residential, commercial, or any other development in the immediate vicinity of the proposed project. There are no private in-holding properties in the nearby area; all of the surrounding land is owned by the federal government, and private development is generally not allowed. For the reasons expressed above, there are no sensitive receptors of concern that will be impacted by any increase in air pollutants that this project may produce.

Carbon Monoxide Analysis

The Transportation Project-Level Carbon Monoxide Protocol (published by Institute of Transportation Studies, University of California, Davis, Revised December 1997) indicates that a project-level air quality analysis is not required for projects exempt pursuant to 40 CFR 93.126. Although Alternative 4 is proposed to open this segment of SR-39 to public traffic and forecast to add 1,542 daily auto trips by 2045; it is unlikely that the proposed project will result in an adverse impact to ambient CO, or cause or contribute to any new violations of CO standards.

Particulate Matter Analysis

The proposed project is located in Los Angeles County within the SCAB which is in a federal nonattainment area for PM_{2.5} and maintenance area for PM₁₀. The proposed project is exempt from the conformity requirements PM_{2.5} and PM₁₀ per 40 CFR 93.126, and the proposed project is on a winding and narrow two-lane road within the National Forest where there are alternate routes available in close proximity. Heavy duty trucks would be very difficult to maneuver through these roadway curves, configuration, and slope; therefore, it is not anticipated to involve a significant number of or result in an increase in the number of diesel vehicles or increase in vehicle idling. The proposed project is expected to have a neutral influence on PM₁₀ and PM_{2.5} emissions; and thus, is not anticipated to be of air quality concern for PM₁₀ and PM_{2.5}. The proposed project is unlikely to result in adverse impacts to ambient PM₁₀ and PM_{2.5}; cause or contribute to new violations of PM₁₀; or worsen the current PM_{2.5} violations.

Naturally Occurring Asbestos

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, however, other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by CARB in 1986. All types of asbestos are hazardous and may cause lung disease and cancer.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released into the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and from quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos-bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

Serpentinite may contain chrysotile asbestos, especially near fault zones. Ultramafic rock—a rock closely related to serpentinite—may also contain asbestos minerals. Asbestos can also be associated with other rock types in California, though much less frequently than serpentinite and ultramafic rock. Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties and are particularly abundant in counties that include the Sierra Nevada foothills, Klamath Mountains, and Coast Ranges. The California Department of Conservation, Division of Mines and Geology developed a map that shows the general location of ultramafic rock in the state (Department of Conservation, 2000).

Though not required for a project-level air quality analysis, it is routine and an established local practice in Caltrans District 7 to include a discussion pertaining to NOA. This discussion is limited to NOA and the *Memorandum Addressing Naturally Occurring Asbestos in CEQA Documents* that was released by the Governor's Office of Planning and Research. Discussions relating to all other types of asbestos are deferred to Caltrans' hazardous waste or other environmental reports.

The purpose of the discussion is to establish the impact of NOA disturbance during construction. As stated above, the most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Serpentinite may contain chrysotile asbestos, especially near fault zones. Ultramafic rock, a rock closely related to serpentinite, may also contain asbestos minerals. The project is

located in Los Angeles County, which is among the counties listed as containing serpentine and ultramafic rock. However, occurrences of these rocks in Los Angeles County are only known to be located on Catalina Island, which is not near the project site.

A review of the Caltrans Office of GIS, NEPA Assignment, Environmental Management Systems, Innovation, and Staff Development database indicates the presence of possible NOA rock formations from the SR-2/SR-39 junction to 0.6 miles south along SR-39 (see Figure 2.2.4-1 in the previous section). Additional sampling during the Design Phase would be necessary to determine the asbestos concentrations present and if NOA is confirmed, additional worker protection measures would be needed during construction.

Lead

The proposed project is located in a federal and state nonattainment area for lead. Lead is a stable compound, which persists and accumulates both in the environment and in animals. Since 1975, lead emissions have been in decline due in part to the introduction of catalyst-equipped vehicles and the decline in production of leaded gasoline. In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant and is not applied to transportation projects. If applicable, disturbance of lead-based paint must meet EPA and air district rules (Caltrans Standard Specifications 14-9.02, 2022) as well as any applicable local district rules that apply to sandblasting and other activities related to lead-based paint removal or disturbances.

Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, the EPA also regulates *air toxics*. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse

health outcomes when exposed to large doses. The EPA is in the process of assessing the risk of various kinds of exposures to these pollutants. The EPA's Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. This agency has assessed an expansive list in their latest rule on the Control of Hazardous Air Pollutants from mobile sources and identified a group of 93 compounds emitted from mobile sources that are listed in IRIS. In addition, the EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These nine prioritized organic-based MSATs comprise the following:

- Acrolein
- 1,3 – Butadiene
- Formaldehyde
- Acetaldehyde
- Diesel Particulate Matter
- Naphthalene
- Benzene
- Ethylbenzene
- Polycyclic Organic Matter

According to the FHWA's Interim Guidance this project is classified as a category 1 project (Projects with Low Potential MSAT Effects). This project is expected to meet this category for the following reasons:

The proposed project is not anticipated to result in any meaningful changes to traffic volumes (preliminary analysis shows a forecasted daily volume of 1542 vehicles on SR-39 south of SR-2 by 2045 with no discernable peak period), vehicle mix, location of the existing facility, or any other factors that would cause an increase in MSAT emissions impacts relative to the no-build alternative (Alternative 1). The project is identified as exempt from conformity requirements according to 40 CFR 93.126. Pursuant to the FHWA's Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents dated January 18, 2023, projects that are categorically excluded under 23 CFR 771.117 (c) or are exempt under the Clean Air Act pursuant to 40 CFR 93.126, do not require an analysis or discussion of MSAT.

The purpose of this project is to reopen the closed segment of SR-39, thereby restoring access between I-210 and SR-2, by constructing several structures and safety elements that will bring this segment up to current roadway safety standards. This project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in the project's MSAT impacts from that of the no-build alternative.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES3 model forecasts a combined reduction of greater than 76 percent in the total annual emissions rate for the priority MSAT from 2020 to 2060 while vehicle-miles of travel are projected to increase by 31 percent (Federal Highway Administration, 2023). This will reduce both the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

Construction Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include CO, nitrogen oxides (NO_x), Volatile Organic Compounds (VOCs), directly emitted particulate matter (PM₁₀ and PM_{2.5}), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM₁₀ and PM_{2.5}, in addition to small amounts of CO, SO₂, NO_x, and VOCs, to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the project site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activities and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the number of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the EPA to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by as much as 50 percent. Caltrans' Standard Specifications (Section 14) on dust minimization require use of water or dust palliative compounds and will reduce potential fugitive dust emissions during construction.

In addition to dust-related PM₁₀ emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs, and some soot particulate (PM₁₀ and PM_{2.5}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

SO₂ is generated by oxidation during the combustion of organic sulfur compounds contained in diesel fuel. Under California law and CARB regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (i.e., not more than 15 parts per million of sulfur); therefore, SO₂-related issues due to diesel exhaust will be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site(s). Such odors would quickly disperse to below detectable levels as distance from the site(s) increases.

The Caltrans District 7 Air Quality Branch completed an estimate of construction emissions based on construction activity data in the Draft Project Report dated December 2023. The Caltrans Construction Emissions Tool (*CAL-CET2021*), which is a Caltrans-developed spreadsheet tool that estimates pollutant emissions from activities occurring during construction of transportation projects, was also used to help estimate potential emission from temporary construction activities. Construction-related emissions for the proposed project are presented in Table 2.2.5-4 for Build Alternative 2, Table 2.2.5-5 for Build Alternative 3, and Table 2.2.5-6 for Build Alternative 4. The emissions presented are based on the best information available at the time of calculations and represent construction emissions that would be generated from across the project construction site.

Table 2.2.5-4 Build Alternative 2 Construction Emissions Estimate

Construction Phases	ROG	CO	NO _x	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.000	0.003	0.003	0.203	0.020	1
Roadway Excavation & Removal	0.073	0.488	0.493	0.240	0.057	112
Structural Excavation & Removal	0.001	0.002	0.003	0.203	0.020	1
Base/Subbase/Imported Borrow	0.033	0.243	0.225	0.220	0.038	49
Structure Concrete	0.005	0.014	0.023	0.001	0.001	6
Paving	0.067	0.203	0.495	0.036	0.036	94
Drainage/Environment/Landscaping	0.013	0.037	0.082	0.006	0.006	16
Traffic Signalization/Signage/Striping/Painting	0.023	0.103	0.172	0.011	0.011	69
Other Operation	0.000	0.000	0.000	0.000	0.000	0

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

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Total	0.215	1.093	1.497	0.919	0.189	347
Note: ROG, CO, NOx, PM ₁₀ , and PM _{2.5} , are measured in parts per million; CO _{2e} is measured in tons. CO _{2e} = carbon dioxide (CO ₂) equivalents consisting of CO ₂ , methane, nitrous oxide, black carbon, and hydrofluorocarbons; ROG = reactive organic gases; CO = carbon monoxide; NOx = nitric oxides; PM ₁₀ = particulate matter less than 10 microns in diameter; PM _{2.5} = particulate matter less than 2.5 microns in diameter						

Table 2.2.5-5 Build Alternative 3 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.018	0.108	0.112	0.210	0.028	28
Roadway Excavation & Removal	0.125	0.838	0.848	0.267	0.084	189
Structural Excavation & Removal	0.166	0.491	0.863	0.258	0.075	243
Base/Subbase/Imported Borrow	0.303	2.233	2.072	0.364	0.180	447
Structure Concrete	0.791	2.412	3.858	0.234	0.230	845
Paving	0.047	0.141	0.347	0.025	0.025	63
Drainage/Environment/Landscaping	0.071	0.204	0.453	0.034	0.034	85
Traffic Signalization/Signage/Striping/Painting	0.108	0.473	0.789	0.049	0.049	312
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	1.629	6.901	9.342	1.443	0.704	2214
Note: ROG, CO, NOx, PM ₁₀ , and PM _{2.5} , are measured in parts per million; CO _{2e} is measured in tons. CO _{2e} = carbon dioxide (CO ₂) equivalents consisting of CO ₂ , methane, nitrous oxide, black carbon, and hydrofluorocarbons; ROG = reactive organic gases; CO = carbon monoxide; NOx = nitric oxides; PM ₁₀ = particulate matter less than 10 microns in diameter; PM _{2.5} = particulate matter less than 2.5 microns in diameter						

Table 2.2.5-6 Build Alternative 4 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.023	0.136	0.142	0.213	0.030	36
Roadway Excavation & Removal	0.158	1.056	1.068	0.284	0.101	239
Structural Excavation & Removal	0.209	0.619	1.089	0.272	0.089	308
Base/Subbase/Imported Borrow	0.381	2.812	2.610	0.406	0.221	564
Structure Concrete	0.996	3.038	4.860	0.295	0.289	1066
Paving	0.059	0.177	0.436	0.032	0.032	80
Drainage/Environment/Landscaping	0.090	0.256	0.570	0.043	0.042	106
Traffic Signalization/Signage/Striping/Painting	0.136	0.596	0.994	0.062	0.061	394
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	2.052	8.691	11.768	1.607	0.866	2791
Note: ROG, CO, NOx, PM ₁₀ , and PM _{2.5} , are measured in parts per million; CO _{2e} is measured in tons.						

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
CO _{2e} = carbon dioxide (CO ₂) equivalents consisting of CO ₂ , methane, nitrous oxide, black carbon, and hydrofluorocarbons; ROG = reactive organic gases; CO = carbon monoxide; NOx = nitric oxides; PM ₁₀ = particulate matter less than 10 microns in diameter; PM _{2.5} = particulate matter less than 2.5 microns in diameter						

Avoidance, Minimization, and/or Mitigation Measures

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

- AQ-1: The construction contractor must comply with Caltrans' Standard Specifications in Section 14. Section 14 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. Section 14 is also directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18. Non-Standard Specifications are also required and must be followed by the contractor, specifically NSSP 14-9.05.
- AQ-2: Water or dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible dust" criterion either at the point of emissions or at the right-of-way line, depending on local regulations.
- AQ-3: Soil binder will be spread on any unpaved roads used for construction purposes and on all project construction parking areas.
- AQ-4: Trucks will be washed as they leave the right-of-way, as necessary to control fugitive dust emissions.
- AQ-5: Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel, as required by California Code Regulations Title 17, Section 93114.
- AQ-6: A dust-control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes, as needed to minimize construction impacts to existing communities.

- AQ-7: Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.
- AQ-8: Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.
- AQ-9: All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (i.e., space from the top of the material to the top of the truck) will be provided to minimize emission of dust (particulate matter) during transportation.
- AQ-10: Dust and mud that are deposited on paved public roads due to construction activity and traffic will be promptly and regularly removed to decrease particulate matter.
- AQ-11: To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- AQ-12: Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulates in the area.
- AQ-13: To the extent feasible, establish Environmentally Sensitive Areas for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.
- AQ-14: During construction of the proposed project, the property owner/development and its contractors shall be required to comply with regional rules, which shall assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emissions source. Two options are present in Rule 403: monitoring of particulate concentrations and/or active control. Monitoring involves a sampling network around the project with no additional control measures unless specified concentrations are exceeded. The active control option does not require any monitoring but requires that a list of measures be implemented starting with the first day of construction. This project will be in full compliance with both Rule 402 and Rule 403.

Climate Change

Neither the United States Environmental Protection Agency (EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

2.2.6 Noise

Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

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

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include Noise Abatement Criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dB or dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2.2.6-1 below lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 2.2.6-1 Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, Hourly A- Weighted Noise Level, Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ¹	67 (Exterior)	Residential.
C ¹	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in Categories A, B, C, D, or F.
F	No Noise Abatement Criteria—Reporting Only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No Noise Abatement Criteria—Reporting Only	Undeveloped lands that are not permitted.
¹ Includes undeveloped lands permitted for this activity category.		

Figure 2.2.6-1 lists the noise levels of common activities—this information can be used to compare the actual and predicted highway noise levels discussed further in this section to the noise levels of common activities.

Figure 2.2.6-1 Noise Levels of Common Activities

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

According to Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2020*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC.

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

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dBA at an impacted (sensitive) receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Affected Environment

The proposed project is a Type III project, as defined in the 2020 Traffic Noise Analysis Protocol; therefore, a detailed noise study was not required. However, because findings from the prior Environmental Impact Report found that the ANF would experience a temporary increase in noise levels from construction and a permanent noise level increase because of the re-opening, a Wildlife Impact Noise Study Report was prepared and is the primary source used for environmental determinations of this section. The Wildlife Impact Noise Study Report was prepared to determine existing ambient noise conditions and both predicted construction and operational noise emissions for the proposed SR-39 reopening. Because there are no impacted receptors within the project limits, and because the project does not fall under the Type I or Type II classifications, this section focuses on the existing ambient noise and expected construction noise levels. Furthermore, several special-status wildlife species have been identified in the vicinity of the project, and adverse effects caused by construction noise activities must be considered to avoid impacts to the protected wildlife species in the vicinity of the project.

For this project, Caltrans Noise and Vibration Investigation Branch personnel performed a field survey of the entire project area. The survey included field inspection of the project area to identify land uses within the project limits and to select the noise measurement sites. Due to the topographical location of SR-39, noise level sites were limited to areas immediately adjacent to or directly on the roadway. However, because SR-39 has been closed to the public since 1978, any location along the 4.4-mile closed segment can be considered representative of the existing noise environment.

The existing land use within the project limits comprises mainly undeveloped, San Gabriel Mountains wilderness areas. The noise environment within the project area is

dominated by geophysical and biological sounds. Anthropogenic sounds are relatively absent, only occasionally occurring when Caltrans, USFS, and emergency-response personnel access the closed segment of SR-39. The existing noise environment in the project area was determined by performing short-term (15 to 30-minute) noise monitoring using Larson Davis Type 831 sound level meters placed 5 feet above the ground on a tripod. Existing ambient noise levels were found to range from 29 to 66 dBA-Leq (which is the hourly average of noise) and existing traffic noise levels for the currently open SR-39 roadway were found to typically range between 39 and 48 dBA-Leq(h), as shown in Table 2.2.6-2 below.

Table 2.2.6-2 Existing Ambient and Traffic Noise Levels

Noise Measurement Station Location (Latitude/Longitude)	Post Mile	Measured Existing Noise Leq _{avg} /Leq _{max} dBA	Predicted Existing Noise Leq _{avg} /Leq _{max} dBA
S1+ (34°18'15.44"N, 117°50'44.48"W)	36.861	43/48	–
S2+ (34°18'18.26"N, 117°50'46.66"W)	36.913	48/72	–
S3+ (34°18'49.73"N, 117°49'59.94"W)	37.979	39/57	–
S4* (34°18'42.50"N, 117°50'26.90"W) San Gabriel Canyon Road Lookout	38.465	52/74	86/89
S5* (34°18'38.80"N, 117°51'10.60"W)	39.192	29/48	86/89
S6* (34°19'23.10"N, 117°51'22.90"W)	40.965	37/59	92/95
S7* (34°19'37.25"N, 117°51'28.81"W)	41.297	38/60	92/95
S8* (34°20'27.00"N, 117°51'31.40"W)	42.622	37/74	86/89
S9* (34°20'41.64"N, 117°51'00.76"W)	43.270	46/57	92/95
S10* (34°21'01.50"N, 117°51'08.20"W)	43.854	36/51	92/95
S11* (34°21'23.41"N, 117°51'04.32"W) SR-2/SR-39 Junction	44.375	49/56	92/95
+ Measured noise includes typical daytime existing vehicular traffic on SR-39			
* Measured noise in closed SR-39 segment – no vehicular traffic present			

Environmental Consequences

There are no impacted receptors within the project limits, and the project does not fall under the Type I or Type II classifications. The proposed project would not increase volume, speed, or change the alignment of the roadway; therefore, the noise study only quantifies construction noise emissions.

Permanent Impacts

The 4.4-mile-long closed segment of SR-39 would be subject to typical noise levels, similar to those emitted by traffic on the open section of the highway. Overall noise would be strictly dependent on the composition of vehicles and the traffic volume and speed. The current ambient noise environment is extraordinarily quiet, and re-

introducing vehicular traffic and human presence to the closed segment of SR-39 will increase noise to levels similar to that of other open roadways within the ANF. Future traffic noise levels are not expected to significantly differ compared to those of the open segment of SR-39. Traffic noise impacts are not expected to result from this project because traffic volume capacity and speed would be maintained and would be similar to those of the currently open segments of SR-39. There are no residential areas, hotels, motels, or schools within the project area, and although there are commercial/industrial zones adjacent to the project area, no sensitive receptors were identified in these areas.

FHWA regulations (23 CFR 772) state that noise abatement will usually be necessary where noise impacts are predicted, only where frequent human use occurs, and where a lowered noise level would be of benefit. No impact criteria have been established for the various wildlife species in the project area. However, the construction activities that are expected to be necessary for this project will have high-level noise emissions. Therefore, effective construction noise management should be utilized to reduce noise as much as possible. Additionally, habitat mitigation for the affected wildlife species may be required as part of this project. Specifics for such mitigation are discussed further in Chapter 2.3.4, *Animal Species* and Chapter 2.3.5, *Threatened and Endangered Species*.

Construction Impacts

Construction operations would be the primary source of high noise levels from the proposed project. The characteristics of the noise emission from construction equipment would depend on several factors, such as the type of equipment, type of work, and type of material interacting with the equipment. The intermittent and extremely high noise emissions from impact-type activities (e.g., jackhammering, pile driving) would dominate existing noise levels and can have a startling effect on wildlife. The construction noise impact analysis results determined that the expected noise levels from the construction activities—particularly those that involve heavy and loud equipment used for concrete cutting and breaking, material hauling operations, and any pile drilling or pile driving work—would increase ambient noise levels by as much as 42 to 64 dBA at locations adjacent to the roadway. Figures 2.2.6-2 through 2.2.6-4 below provide the construction noise modeling maps for Alternative 4, which is the alternative that has the potential to cause the most noise during construction.

There are no established levels of noise reduction that would be beneficial for wildlife populations; however, construction noise management that can achieve noise level reductions of 10 dBA or greater, especially for high-noise activities, would be considerable because that is approximately equivalent to a decrease in noise by half. Additionally, project work schedules can be tailored to avoid times when wildlife species of concern would be the most sensitive and would be most impacted. During the

construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans Standard Specifications, *Section 14-8.02 Sound Control Requirements*. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

Figure 2.2.6-2 Alternative 4 Construction Noise Modeling

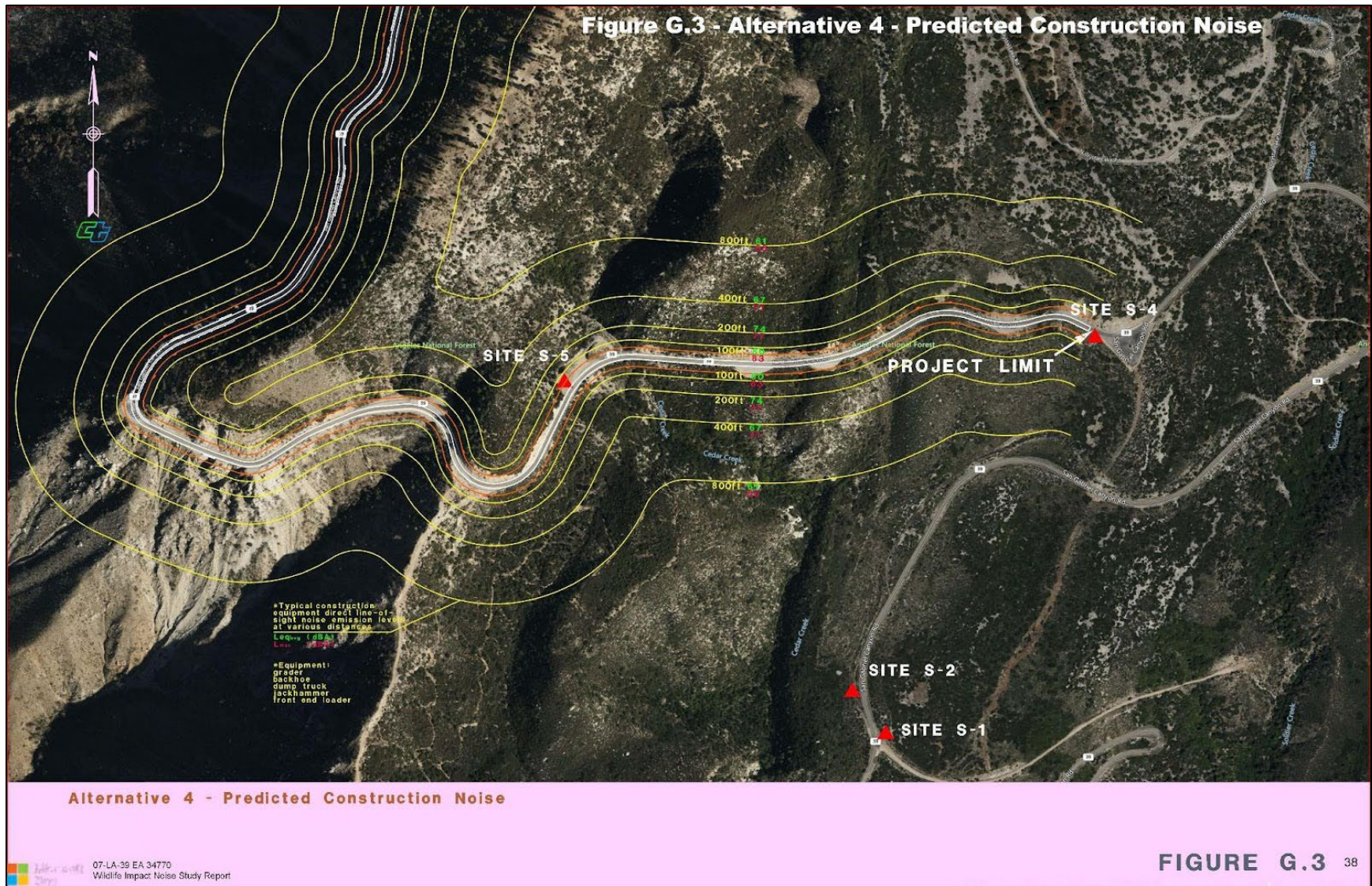


Figure 2.2.6-3 Alternative 4 Construction Noise Modeling

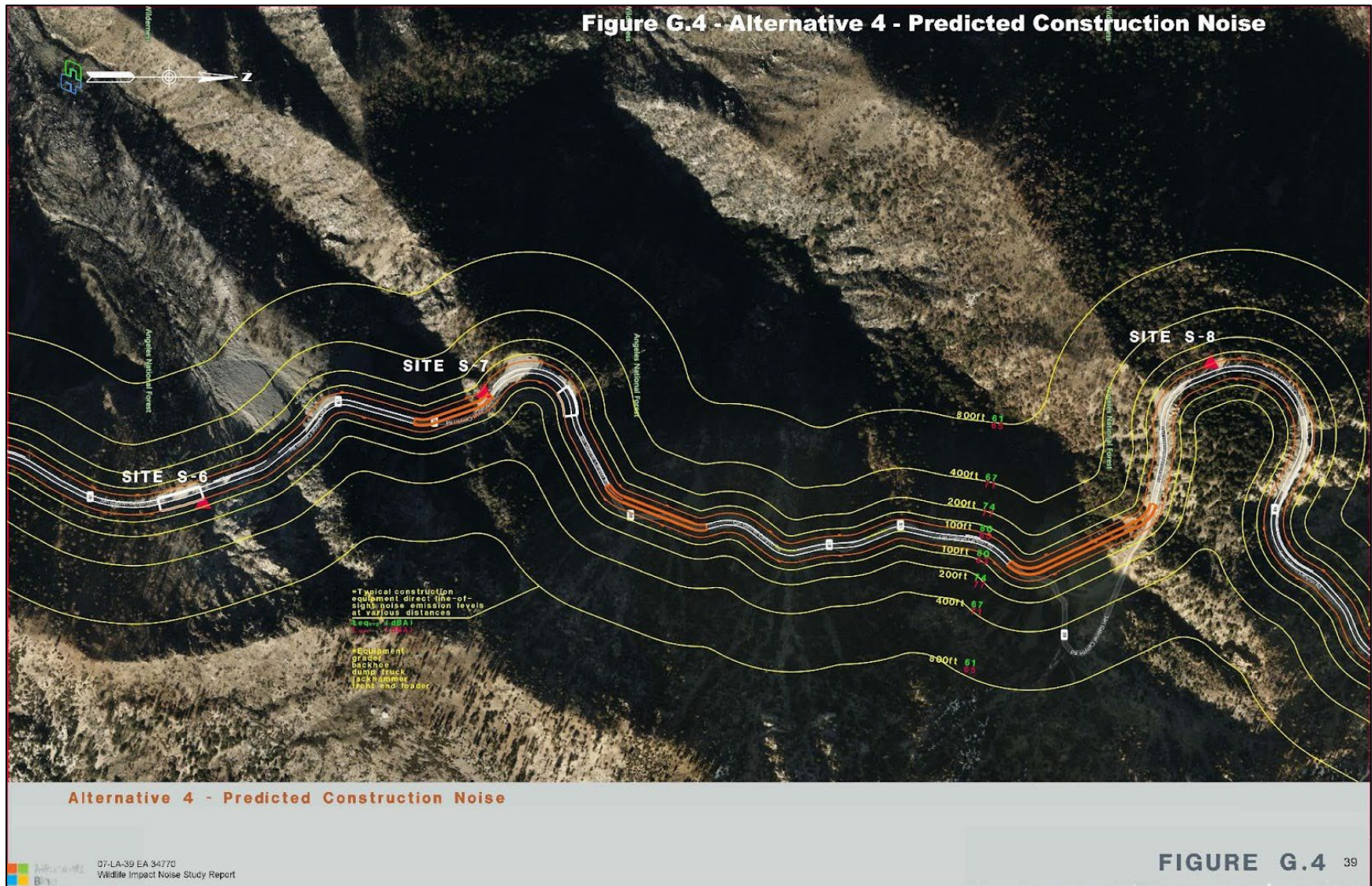


Figure 2.2.7-4 Alternative 4 Construction Noise Modeling



Avoidance, Minimization, and/or Abatement Measures

Implementing the following measures would minimize temporary construction noise impacts:

- NOI-1: Equipment noise control is needed to reduce the noise emissions from construction sites by mandating specified noise levels for designing new equipment and updating old equipment with new noise control devices and techniques.
- NOI-2: In-use site noise control is necessary to prevent existing equipment from producing noise levels above specified limits. Any equipment that produces noise levels less than the specified limits would not be affected. However, those exceeding the limit would be required to meet compliance by repair, retrofit, or elimination. New equipment with the latest noise-sensitive components and noise-control devices are generally quieter than older equipment, if properly maintained and inspected regularly. They should be repaired or replaced if necessary to maintain the in-use noise limit. All equipment applying the in-use noise limit would achieve an immediate noise reduction, if properly enforced.
- NOI-3: Site restrictions should be applied to achieve noise reduction through different methods, resulting in an immediate reduction of noise emitted to the community without requiring any modification to the source noise emissions. The methods include shielding with barriers for equipment and site, truck rerouting and traffic control, time scheduling, and equipment relocation. The effectiveness of each method depends on the type of construction involved and the site characteristics.
- NOI-4: Personal Training of operators and supervisors is needed to ensure that they become more aware of the construction site noise problem and are given instructions on methods that they can implement to improve conditions in the local community. Educating contractors and their employees to be sensitive to noise impact problems and noise control methods is also needed. This may be one of the most cost-effective ways to help operators and supervisors become more aware of the construction site noise problem and implement the various methods of improving the conditions. A training program for equipment operators is recommended to instruct them in methods of operating their equipment to minimize environmental noise. Many training programs are currently conducted for job safety, and these can be extended to include the impact due to noise and methods of abatement.

NOI-5: Construction noise is regulated by Caltrans Standard Specifications, Section 14-8.02 Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.

2.2.7 Energy

Regulatory Setting

NEPA (42 United States Code Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

CEQA Guidelines Section 15126.2(b) and Appendix F, *Energy Conservation*, require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

Affected Environment

This section is based on a review of the project scope, timeline, and proposed bill of materials, which were used to inform operational and construction energy consumption data. Energy, in a resource context, generally pertains to the use or conservation of fossil fuels, which are a finite resource. Transportation energy is generally described in terms of direct energy, comprising energy from mobile sources (operational energy) and construction activities, and indirect energy, comprising energy from equipment required to operate and maintain the proposed project. No quantification of energy from mobile sources was conducted because the project is intended to improve safety on the closed portion of SR-39 via rehabilitation of the roadway and its appurtenant facilities and would accommodate existing traffic demand but would not create new demand. Preliminary analysis shows a forecasted daily volume of 1,542 vehicles on SR-39 south of SR-2 by 2045. There is no discernable peak period, therefore, increased traffic demand is not anticipated. Other than the two proposed parking lots for Alternative 3, which are proposed to be constructed in previously disturbed areas that are currently paved, no land use changes would occur because of the proposed project.

The proposed project is on a winding and narrow two-lane road amidst mountainous terrain, with its primary uses being recreational travel and access for emergency response personnel. The windy nature of the road reduces maneuverability for heavy freight trucks; therefore, reopening this portion of SR-39 is not anticipated to involve a significant number of diesel vehicles, nor would it result in an increase in the number of diesel vehicles, thus not largely contributing to energy consumption. Pavement within the project limits shows signs of distress and alligator-cracking, which reduces the

smoothness of traffic flow and may result in increased energy consumption; therefore, pavement rehabilitation may help to lessen energy consumption from mobile sources within the project limits.

Environmental Consequences

Permanent Impacts

One of the objectives of this project is to restore the facility to such a condition that only minimal and necessary maintenance would be required to maintain the integrity of the highway infrastructure. Therefore, the project would not include maintenance activities that would result in long-term indirect energy consumption by equipment required to operate and maintain the roadway. It is expected that the reduction in maintenance frequency would result in a lower indirect energy consumption. Additionally, none of the project alternatives would increase vehicle capacity within the project area or provide congestion relief. The project is also included for programming in the 2024 SHOPP project list, and the selection process for SHOPP projects is specified in the Transportation Asset Management Plan created by Caltrans in consultation with the California Transportation Commission pursuant to Senate Bill 486. The goals and objectives established in the Transportation Asset Management Plan for SHOPP includes conserving natural resources and reducing greenhouse gasses and other pollutants, therefore, because the project is part of SHOPP, it has been identified by Caltrans and approved by the California Transportation Commission as necessary to preserve and protect the assets of the state highway system and would not result in a wasteful, inefficient, or unnecessary consumption of energy.

Under Alternative 1 (the no-build alternative), there would be no changes to the project area. Therefore, construction activities would not take place, and SR-39 would remain in its current condition. No impacts on energy resources would be expected.

Alternative 2 would restrict access to the currently closed portion of SR-39 to Caltrans, USFS, and emergency-response personnel only. Alternative 3 would similarly restrict access to Caltrans, USFS, and emergency-response personnel only, but would also include a onsite public shuttle service, which would use trained drivers to transport park visitors through the restricted roadway while adhering to a maximum speed of 15 mph. Therefore, operational energy due to mobile sources for both alternatives would be negligible due to the lack of mobile sources using the roadway within the project limits.

Alternative 4 would include a full reopening of SR-39 to the general public within the project limits, which entails unrestricted access to through-traffic between I-210 (Foothill Freeway) and SR-2 (Angeles Crest Highway). This would substantially reduce the out-of-direction travel, which would reduce operational energy consumption. Currently,

motorists must take I-210 to travel to/from the San Gabriel Valley to/from the ANF, thus increasing drive time and energy consumption. Although Alternative 4 would contribute to mobile source energy consumption via the use of the currently closed portion of SR-39, the reduction in out-of-direction travel in conjunction with the rehabilitated pavement contributing to enhanced mobility would diminish a large amount energy consumption from mobile sources.

Construction Impacts

The main source of energy consumption for the project would consist of energy consumed during construction by vehicles and equipment. This energy comprises one-time, non-recoverable energy costs associated with construction of roadways and structures. To decrease energy consumption from diesel fuels, the application of newer and more fuel-efficient truck vehicles would result in an overall lower potential for an increase in energy consumption.

Overall, construction fuel consumption for the proposed project was estimated from the equipment and vehicles that would be employed for construction activities. As noted in Tables 2.2.7-1 through 2.2.7-3 below, which present the direct, one-time expenditure of fuel consumption associated with construction activities for each build alternative (Alternatives 2, 3 and 4), energy use associated with proposed project construction is estimated to result in a total short-term consumption (depending on the chosen alternative) of 53,555 to 294,307 gallons from diesel-powered equipment, 16,037 to 87,130 gallons from gasoline-powered equipment, and 12,120.234 to 65,986.812 kilowatt hours (kWh) from electric-powered equipment; however, demand will cease once construction is complete.

Table 2.2.7-1 Annual Construction Energy Consumption–Alternative 2

Construction Year	Fuel Consumption (gallons)		Electricity (kWh)
	Diesel Equipment	Gasoline Equipment	Electric Equipment
2027	17,434	3,262	1,578.736
2028	15,924	3,718	2,415.795
2029	13,949	5,044	4,219.189
2030	6,248	18,914	3,906.514
Total	53,555	16,037	12,120.234

Table 2.2.7-2 Annual Construction Energy Consumption–Alternative 3

Construction Year	Fuel Consumption (gallons)		Electricity (kWh)
	Diesel Equipment	Gasoline Equipment	Electric Equipment
2027	82,161	14,984	7,292.209
2028	75,437	17,401	11,364.254
2029	65,811	23,642	19,725.426
2030	29,468	18,914	18,348.260
Total	252,876	74,941	56,730.149

Table 2.2.7-3 Annual Construction Energy Consumption–Alternative 4

Construction Year	Fuel Consumption (gallons)		Electricity (kWh)
	Diesel Equipment	Gasoline Equipment	Electric Equipment
2027	95,710	17,443	8,499.424
2028	87,700	20,174	13,165.783
2029	76,499	27,440	22,874.166
2030	34,399	22,073	21,447.440
Total	294,307	87,130	65,986.812

Construction for the project would primarily consume diesel and gasoline through operation of heavy-duty construction equipment, material deliveries, debris hauling, and vehicle commutes during construction. Construction-related energy effects would likely be greatest during the site preparation phase because of energy use associated with the excavation, handling, and transport of soils to and from the project site. It is unlikely that all pieces of equipment would operate every day during the phased construction work. Although construction would result in short-term energy use, construction design features would help conserve energy long-term. Furthermore, the one-time expenditure of fuel is not considered a wasteful or inefficient use of nonrenewable resources because the fuel is being used to replace existing infrastructure with infrastructure that meets Caltrans’ current structural standards and is safe to allow for the continued use of the traveling public and/or emergency-response personnel and maintenance crews.

Avoidance, Minimization, and/or Mitigation Measures

E-1: Application of newer and more fuel-efficient truck vehicles used during construction of the project.

2.3 Biological Environment

The Biological Environment Section of this Environmental Impact Report/Environmental Assessment comprises the following subsections:

- Chapter 2.3.1, *Natural Communities*
- Chapter 2.3.2, *Wetlands and Other Waters*
- Chapter 2.3.3, *Plant Species*
- Chapter 2.3.4, *Animal Species*
- Chapter 2.3.5, *Threatened and Endangered Species*
- Chapter 2.3.6, *Invasive Species*

For each of the above-mentioned subsections, the analysis begins with a discussion of the regulatory setting, followed by a discussion of the affected environment, which then is followed by a discussion of the environmental consequences. Each subsection ends with a discussion of the project's avoidance, minimization, and/or mitigation measures.

The environmental consequences discussions focus on the effects of implementation of the proposed project on plant communities, common and special-status plant and wildlife species, special-status habitats and wildlife movement corridors, and whether these effects exceed a threshold of significance. Because most biological resources are dependent upon the characters of specific habitat types, impacts on these resources are generally discussed in terms of the effect of project-related activities on plant communities. Direct impacts to specific plant and wildlife species are evaluated and discussed when impacts could be considered significant.

Three build alternatives and one no-build alternative have been designed for the proposed project. Alternative 1 is the no-build alternative, and Alternatives 2, 3, and 4 (the build alternatives) include variations of improvements at numerous locations along State Route (SR) 39 between Post Miles (PMs) 40.0 and 44.4. Because Alternative 1 would have no effect on the existing conditions of the environment, this impact analysis and discussion will apply to Alternatives 2, 3, and 4.

The entire Biological Environment Chapter is based on the Natural Environment Study Report (biological technical study) dated January 19, 2024 that was prepared by the California Department of Transportation (Caltrans).

2.3.1 Natural Communities

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

Wetlands and other waters are discussed in Chapter 2.3.2, *Wetlands and Other Waters*. Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in Section 2.3.5, *Threatened and Endangered Species*.

Affected Environment

Because most biological resources are dependent upon the characteristics of specific habitat types, impacts on these resources are generally discussed in terms of the effect of project-related activities on plant communities.

The specific impact zone of the proposed project varies in width along SR-39 based on the locations of specific improvements. At the widest point, direct impacts, including both temporary and permanent, are less than 100 feet from the edge of the existing roadway. Although minor modifications to the design could occur in the future, it is not expected that these changes would result in impacts to an area greater than 100 feet from the existing roadway. Therefore, for the purpose of the biological studies, the Biological Study Area (BSA) comprises the project area plus 100 feet on both sides of the existing roadway edge between PM 40.0 and PM 44.0, with a total area of approximately 56 acres.

Information on natural communities was obtained from numerous previous studies in the area, with focused plant community assessments being conducted in 2008 and from 2020 to 2023. From the studies, it was determined that no sensitive natural communities exist within the BSA; however, six non-sensitive community types are present. The natural communities that compose the BSA are discussed further in the following sections.

Plant Communities

The classification of plant communities that follows is based on the *List of California Terrestrial Natural Communities* developed by California Department of Fish and Wildlife (CDFW) (June 2023), which is based on the detailed classification put forth in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 2009).

Mixed Coniferous Forest

Portions of the BSA above the cliff areas and below the existing road are composed of mixed coniferous forest, which is characterized by pine and fir species, including Ponderosa pine (*Pinus ponderosa*), sugar pine (*Pinus lambertiana*), white fir (*Abies concolor*), incense cedar (*Calocedrus decurrens*), Coulter pine (*Pinus coulteri*), and big-cone Douglas fir (*Pseudotsuga macrocarpa*). Canyon live oak (*Quercus chrysolepis*) is also present in this community. In more mesic areas (i.e., areas that contain a moderate amount of moisture), big leaf maple (*Acer macrophyllum*) and Mexican elderberry (*Sambucus mexicana*) are present but uncommon.

The shrub layer of this coniferous forest, typically in more open areas, is composed of curl-leaf mountain mahogany (*Cercocarpus ledifolius*), Parry's manzanita (*Arctostaphylos parryana*), coffee berry (*Rhamnus californica*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Sierra gooseberry (*Ribes roezlii*), and California brickellbush (*Brickellia californica*). During the surveys, whitethorn ceanothus (*Ceanothus cordulatus*) was commonly found at higher elevations, and great basin sagebrush (*Artemisia tridentata*) was occasionally spotted.

The understory contains several forbes and grasses, including golden yarrow (*Eriophyllum confertiflorum*), naked-stemmed buckwheat (*Eriogonum nudum*), western wallflower (*Erysimum capitatum*), Martin's paintbrush (*Castilleja applegatei* ssp. *martini*), short-stemmed buckwheat (*Eriogonum wrightii* ssp. *subscaposum*), Grinnell's penstemon (*Penstemon grinnellii*), happy plant (*Gayophytum* sp.), late lupine (*Lupinus hyacinthinus*), spear-leaved agoseris (*Agoseris retrorsa*), and California fuchsia (*Epilobium canum*). Grasses present included cheat grass (*Bromus tectorum*), Malpais blue grass (*Poa secunda*), California brome (*Bromus carinatus*), and squirreltail (*Elymus elymoides*).

Canyon Live Oak Woodland

Portions of the slopes below the highway are dominated by stands of canyon live oak with a scattering of pine and big-cone Douglas fir. The shrub layer consists of curl-leaf mountain mahogany, rubber rabbitbrush, rosemary flat-topped buckwheat (*Eriogonum fasciculatum* ssp. *polifolium*), snow bush, Parry's manzanita, hairy yerba santa (*Eriodictyon trichocalyx*), chaparral bedstraw (*Galium angustifolium*), southern deer brush (*Ceanothus integerrimus*), orangebush monkey flower (*Mimulus aurantiacus*), California brickellbush, chaparral yucca (*Yucca whipplei*), and sand wash butterweed (*Senecio flaccidus*).

The ground cover within the openings of the shrub layer consists of Martin's paintbrush, happy plant, Malpais blue grass, giant blazing star (*Mentzelia laevicaulis*), golden yarrow, California brome, prickly phlox (*Leptodactylon pungens*), cheat grass,

Davidson's buckwheat (*Eriogonum davidsonii*), prickly cryptantha (*Cryptantha muricata*), speckled-pod rock cress (*Arabis sparsiflora*), Parish's tauschia (*Tauschia parishii*), squirreltail, Pacific fescue (*Vulpia microstachys*), Nevin's birds beak (*Cordylanthus nevinii*), and naked-stemmed buckwheat.

Mixed Montane Chaparral

The co-dominant plants found in this community are southern deer brush, Parry's manzanita, chaparral whitethorn (*Ceanothus leucodermis*), and rosemary flat-topped buckwheat. Subdominant plants are chaparral yucca, poodledog bush (*Turricula parryi*), rubber rabbitbrush, California brickellbush, orangebush monkey flower, snow bush, deerweed (*Lotus scoparius*), and curl-leaf mountain mahogany. Another plant uncommonly found in this community is canyon live oak.

The understory comprises Martin's paintbrush, Grinnell's penstemon, cheat grass, white everlasting (*Gnaphalium canescens*), golden yarrow, Malpais blue grass, giant blazing star, foxtail fescue (*Vulpia myuros*), Davidson's buckwheat, splendid gilia (*Gilia splendens*), common muilla (*Muilla maritima*), cobweb thistle (*Cirsium occidentale*), prickly cryptantha, field suncup (*Camissonia hirtella*), and strigose lotus (*Lotus strigosus*).

Xeric and Mesic Cliff Faces

Steep cliffs located above the existing road characterize most of the BSA. Most of these steep cliffs are covered by only rock, some of it loose. At some locations of drier exposures, there are open, mostly very sparse shrub covers of canyon live oak, curl-leaf mountain mahogany, rubber rabbit brush, rosemary flat-topped buckwheat, California brickellbush, chaparral yucca, Parry's manzanita, and snow bush.

Grasses and forbes on these steep slopes included California fuchsia, Parish's buckwheat (*Eriogonum parishii*), prickly poppy (*Argemone munita*), speckled-pod rock cress, Parish's catchfly (*Silene parishii*), western mountain phlox (*Phlox austromontana*), splendid gilia, Parish's spinebract (*Oxytheca parishii*), chicory leaved wreath plant (*Stephanomeria cichoriacea*), Mojave linanthus (*Linanthus breviculus*), Davidson's buckwheat, prickly phlox, and cheat grass.

The mesic slopes have many similar species including canyon live oak, rubber rabbitbrush, California brickellbush, and curl-leaf mountain mahogany. Other shrub species that are more restricted to these aspects include rock spirea (*Holodiscus microphyllus*), pink-flowered- currant (*Ribes nevadense*), orangebush monkey flower, coffee berry, pipestem virgin's bower (*Clematis lasiantha*), hairy yerba santa, chaparral bedstraw, cuneate-leaved goldenbush (*Ericameria cuneata*), mountain mahogany (*Cercocarpus betuloides*), and sand wash butterweed.

Herbaceous species on these slopes consist of Green's cinquefoil (*Potentilla glandulosa*), golden yarrow, prickly phlox, coastal wood fern (*Dryopteris arguta*), bushy spike moss (*Selaginella bigelovii*), Davidson's phacelia (*Phacelia davidsonii*), happy plant, few branched dudleya (*Dudleya cymosa*), imbricate phacelia (*Phacelia imbricata*), California goldenrod (*Solidago californica*), California brome, California fuchsia, Malpais blue grass, Grinnell's penstemon, prickly phlox, cheat grass, and rock buckwheat (*Eriogonum saxatile*).

Riparian Herb and Scrub

Several of the ephemeral drainages and seeps have an herbaceous riparian community. This habitat is characterized by dense growths of Durango root (*Datisca glomerata*) and sedges (*Carex* spp.) Other species in these areas include scarlet monkey flower (*Mimulus cardinalis*), green willow herb (*Epilobium ciliatum*), Hooker's evening primrose (*Oenothera elata*), California goldenrod, showy monkey flower (*Mimulus floribundus*), rosilla (*Helenium puberulum*), blue wild rye (*Elymus glaucus*), cheat grass, common dandelion (*Taraxacum officinale*), rushes (*Juncus* spp.), weedy cudweed (*Gnaphalium luteoalbum*), rubber rabbitbrush, mulefat (*Baccharis salicifolia*), and pipestem virgin's bower.

Riparian scrub was observed along the two perennial springs and some of the larger drainages along the BSA; however, this was downslope and outside of the impact area of the proposed project. This community consists of fairly dense stands of arroyo willow (*Salix lasiolepis*), narrow-leaved willow (*Salix exigua*), mulefat, Mexican elderberry, pipestem virgin's bower, and pink-flowered currant. Sub-dominant species include white alder (*Alnus rhombifolia*), California bay laurel (*Umbellularia californica*), and Fremont cottonwood (*Populus fremontii*). White alderscrub was observed within a few drainages, but these were confined to areas below the existing roadway. Herbaceous species in these riparian areas include sedges, scarlet monkey flower, showy monkey flower, California goldenrod, Durango root, Greene's cinquefoil, Hooker's evening primrose, green willow herb, and white yarrow (*Achillea millefolium*).

Ruderal (Invasive)

Invasive plant species are present within the project area adjacent to existing roadways due to the presence of bare soil from heavy ground disturbance. For further information about invasive plant species within the project area, refer to Chapter 2.3.6, *Invasive Species*.

U.S. Department of Agriculture Forest Service Wilderness Areas

The U.S. Congress has designated Wilderness Areas within the Angeles National Forest (ANF). These areas were established to protect and preserve significant natural

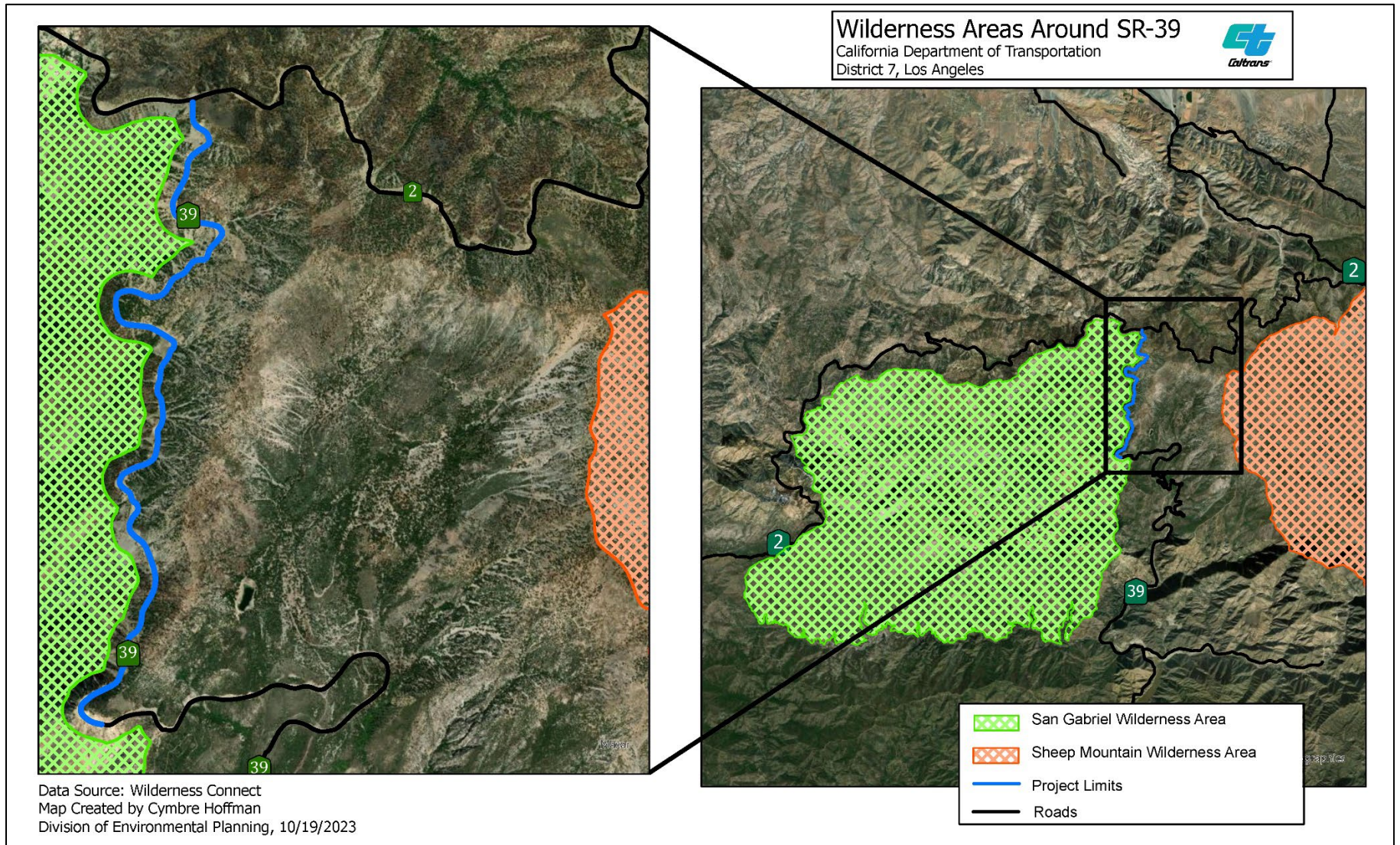
resources and are managed differently than the rest of the ANF. As shown in Figure 2.3.1-1 below, the San Gabriel Wilderness Area is located approximately 100 meters west of SR-39, and the Sheep Mountain Wilderness Area is located several hundred meters to the east. All human activities that alter wilderness characteristics are prohibited within these Wilderness Areas, unless permitted by the ANF.

Wildlife Corridors

Wildlife movement corridors are linkages of natural habitat between larger areas that are not contiguous or otherwise connected. The purpose of these linkages is to prevent isolating wildlife populations, to provide for seasonal travel routes, or to connect important resources. The proposed project site is located within a large contiguous open space area of the ANF in the San Gabriel Mountains. As such, there are no regional corridors linking two or more non-contiguous areas of natural habitat within the region of the project site. Corridors within a contiguous open space could exist for a particular species if physical barriers are present, such as mountain ranges, rivers, or impenetrable habitats, which could act to funnel or channel wildlife. In the situation with Nelson's bighorn sheep, an overgrown plant community, particularly chaparral, could create such a barrier and act as a funnel, directing individuals into or away from certain areas. However, no data has been collected to indicate that a localized corridor exists within the vicinity of the project site.

There are large mammals, such as bighorn sheep, that use the area seasonally and move through it while traveling to adjacent areas. Bighorn sheep in the vicinity of the project site travel from winter-spring ranges at lower elevations to summer ranges at higher elevations within or near the project site, and, once on that summer range, make daily movements within or near the project site in search of important resources. During the breeding season (early October through the middle of December) adult males travel into and out of the area in search of female mates. Bighorn sheep have been observed on numerous occasions within 250 feet of SR-39 and, therefore, presumably occasionally cross it or use it as a travel route. On a few occasions during field investigations, bighorn sheep, black bear, and coyote have been observed walking along SR-39. However, bighorn sheep have also been observed on numerous occasions using other travel routes well away (more than 250 feet) from SR-39. It should be noted that SR-39 could be used to a greater extent than other travel routes because of the ease of use. Little evidence is available to support any conclusion about the use of SR-39 as a travel route by large mammals.

Figure 2.3.1-1 Wilderness Areas Around SR-39



Because of the contiguous open space that occurs in all directions around the project site, in addition to the availability of numerous other travel routes in the vicinity, SR-39 itself should not be considered a wildlife movement corridor that links two otherwise disconnected open spaces but rather one of many possible localized travel routes available to large mammals. However, in a letter from U.S. Forest Service (USFS) District Ranger Marty Dumpis to Caltrans Deputy District Director Ronald Kosinski dated March 4, 2003, Mr. Dumpis states that “the area near Snow Springs Slide, which is outside the project limits, was identified as a specific movement corridor for this animal [bighorn sheep].” It is unknown how this area of Snow Springs Slide became identified as such. The letter further states, “. . .we feel that there is a need to verify that the Snow Springs Slide area is in fact the primary movement corridor for bighorn sheep between Sheep Mountain and San Gabriel Wilderness areas. It is recommended that Caltrans conduct a three-to-five-year study to answer this important question.” It is for this reason, in part, that Caltrans initiated the ongoing multi-year study of the Nelson’s bighorn sheep. Data collected during Phase I of Caltrans’ focused study of the bighorn sheep revealed no sheep observations at the Snow Springs area along SR-39. If a specialized bighorn sheep movement corridor is identified at the Snow Springs slide area near SR-39, the project design would be modified to accommodate and preserve the corridor.

Movement between ewe groups (groups of related female sheep) does occur at times by rams (male sheep) and occasionally by ewes (female sheep) (Holl, 2004). This movement would require an east–west travel route to or from the Iron Mountain subgroup, which is generally located to the east of the project site. Daily movement between important resources might also require movement in an east–west fashion. Because SR-39 is generally oriented north–south, sheep might have a need to cross it to access adjacent groups and during daily movements. As such, SR-39 could potentially act as a barrier for sheep travel, thereby isolating open spaces or groups. The potential for this to occur would depend on the amount of vehicle traffic along SR-39 at certain times of day.

Environmental Consequences

The BSA for the permanent and temporary impact zone of the proposed project is approximately 100 feet on each side of the existing roadway from PM 40.0 to PM 44.4. This total area is approximately 56 acres. No special-status plant communities were identified on the proposed project site. Therefore, no impacts would occur to special-status plant communities or plants with the implementation of the proposed project.

Summaries of impacts to each natural plant community within the BSA are listed in Table 2.3.1-1 below. It should be noted that impacts to plant communities due to the

construction of the proposed project would occur mostly within an easement maintained by Caltrans.

Table 2.3.1-1 Permanent and Temporary Impacts to Natural Plant Community by Build Alternative

Plant Community	Alternative 2		Alternative 3		Alternative 4	
	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)
Mixed Coniferous Forest	1.0	1.5	1.6	2.3	1.9	2.6
Canyon Live Oak Woodland	0.0	0.0	0.0	0.0	0.0	0.0
Xeric and Mesic Cliff Faces	0.4	0.0	0.6	0.0	0.9	0.0
Riparian Herb and Scrub	0.0	0.0	0.0	0.0	0.0	0.0
Mixed Montane Chaparral	1.5	3.0	2.4	3.4	2.6	3.7
TOTALS	2.9	4.5	4.6	5.7	5.4	6.3

Permanent Impacts

The proposed project would permanently impact between 2.9 and 5.4 acres of natural plant communities, depending on the build alternative selected. The area of impact generally increases with each alternative (i.e., Alternative 2 would have the smallest area of impact and Alternative 4 would have the largest area of impact). Impacts to common habitat types are discussed below.

Mixed Coniferous Forest

The existing mixed coniferous forest habitat has experienced low to moderate disturbance along the road shoulders where the proposed project construction activities would occur. The amount of permanent impacts ranges from 1.0 to 1.9 acres, as shown in Table 2.3.1-1. This impact is considered less than significant.

Canyon Live Oak Woodland

As indicated in Table 2.3.1-1, there would be no impact to this plant community from any of the build alternatives.

Xeric and Mesic Cliff Faces

This plant community has been disturbed previously during the original construction of the highway and occasionally during routine maintenance activities. Because of this disturbance, it does not currently support populations of special-status plant or wildlife species. Direct, permanent impacts to this community would range from 0.4 to 0.9 acres depending on the build alternative selected. Because this community within the project area does not currently support populations of special-status plant or wildlife species, in addition to its previously disturbed nature, the loss of this habitat due to the implementation of the proposed project would be a less than significant impact.

Riparian Herb and Scrub

The implementation of the proposed project is not expected to directly impact this plant community. However, impacts could occur due to erosion from water runoff and potential rockslides caused by construction activities. Because this habitat is typically associated with jurisdictional resources, and because special-status species could occur here in the future, there is a potential for a significant impact if excessive water runoff or rockslides occur during the construction phase. The construction design has incorporated measures to reduce the potential for runoff of sediment during the construction phase by installing silt fencing and berms. With these measures incorporated into the project design, no impact is expected to this plant community due to the implementation of the proposed project.

Mixed Montane Chaparral

The permanent impact on mixed montane chaparral would range from 1.5 to 2.6 acres, depending on the build alternative selected. No special-status plant or animal species were observed within this habitat type. Because no special-status plant or animal species were observed during field studies, because this community is not considered to be sensitive by resources agencies, and because the amount of habitat affected is relatively small when compared to the surrounding area, the impact is not considered a substantial loss of wildlife habitat. Therefore, this loss is not considered a significant impact.

Ruderal (Invasive Species)

See Chapter 2.3.6, *Invasive Species* for impacts to this community.

U.S. Department of Agriculture Forest Service Wilderness Areas

No work would occur within any designated Wilderness Areas. As discussed in Chapter 2.1.1, *Existing and Future Land Use*, land use along SR-39, SR-2, and within the areas

immediately adjacent to both sides of these roadways is designated as “Developed Area Interface”; therefore, the proposed project would not impact the San Gabriel Wilderness Area or the Sheep Mountain Wilderness Area.

Wildlife Corridors

The project site is not a part of a known regional wildlife movement corridor, as stated previously. Therefore, implementation of the proposed project would not impact a known wildlife movement corridor. However, opening SR-39 would reintroduce vehicular traffic to an area that has been closed to public access since 1978 and, although emergency and maintenance vehicles travel SR-39 occasionally, an increase in public traffic could impact the Nelson’s bighorn sheep and other wildlife in several ways. The physical presence alone (due to noise and lighting from vehicles along a roadway) are known stressors for wildlife. Several studies have been conducted to evaluate the flight and avoidance reactions that wildlife have toward human disturbances. These studies concluded that mule deer and bighorn sheep are less likely to flee from motor vehicles and mountain bikers than they are with hikers, presumably because the former activities are habitual in nature and the latter are less predictable, which pose more of a threat (Papouchis et al., 2001). Typically, wildlife can detect the presence of vehicles for some distance depending on the type and volume of traffic. On relatively larger thoroughfares that allow for trucks and larger vehicles and that have a more consistent traffic flow, such as major interstate routes, noise levels are higher, and the ambient light from vehicles is brighter. It can be assumed that noise and bright lights would disturb wildlife, and they would tend to avoid such areas. In situations like this, a major highway would become a barrier to natural wildlife movement. Still, avoidance of these areas does not appear to occur when wildlife migrates between seasonal ranges or must cross a road to reach a specific resource, such as water or a mineral lick.

A study conducted by the Arizona Transportation Research Center along U.S. Route (US) 93 in Arizona indicated that a well-traveled roadway, such as US 93, can be a barrier for wildlife, especially to bighorn sheep. The study found that 41 percent of radio-collared sheep did cross the highway, and because US 93 in Arizona has much higher traffic volumes with higher vehicles speeds than SR-39, it is expected that SR-39 would pose less of a barrier than US 93. Conversely, in rural locations with smaller, less traveled roads, wildlife would not detect vehicles at such a distance and would be expected to approach closer than with larger, multi-lane highways. With intermittent traffic, wildlife would have the opportunity to cross such a highway without detecting a vehicle. SR-2 is an example of this kind of two-lane highway, and it intersects the portion of SR-39 that is proposed for re-opening. Wildlife have been observed crossing SR-2 during many of the field investigations. Furthermore, the bighorn sheep population in the vicinity of the project site has been observed on both the northern and southern

sides of SR-2 and, therefore, presumably have crossed it successfully, which is further supported by the lack of existing bighorn sheep roadkill data from Caltrans, CDFW, and/or USFS. Because the current state of SR-39 is a rural, mountainous two-lane roadway with predicted traffic patterns to be like that of SR-2, including relatively low and intermittent traffic, and because wildlife is known to successfully cross SR-2, the presence of vehicles traveling on SR-39 is not expected to create a barrier to wildlife that are attempting to cross it.

However, relatively low volumes of intermittent traffic in rural environments present a potential for direct impacts to wildlife. As wildlife attempt to cross a roadway, they are at risk of being struck by a vehicle, and the potential for this to occur depends on the speed of the vehicle, among other things. It is reasonable to assume that the faster a vehicle is traveling with limited sight conditions, such as around a curve or at night, the less time a driver would have to react to avoid a collision. Bighorn sheep collisions are known to occur every year along US 93 near the border between Arizona and Nevada. Within a 17-mile section of roadway, more than three collisions between vehicles and bighorn sheep occurred each year from 1980 and 2002 (McKinney and Smith, 2007). This stretch of highway in Arizona is traveled significantly more than what is expected along SR-39 and has gentle curves allowing vehicle speeds of 55 mph or greater. With a reduced vehicle speed limit, which would be naturally determined by the winding roadway of SR-39, collisions with wildlife would be decreased. Included as part of the proposed project design, the speed limit would be reduced to 30 mph along the straight portions of the highway to further reduce the potential for wildlife collisions. Signage indicating wildlife crossings would also be installed to remind drivers of the potential hazard.

Another factor that could affect the potential for direct impact to wildlife is the ability for wildlife to escape approaching vehicles. Median separators could prevent crossing of most wildlife and effectively channel them along the roadway to a point of crossing. As part of the design of the proposed project, Alternative 4 would include a roundabout at the intersection of SR-2 and SR-39. The design on the roundabout would include a center island with splitter islands at each of the three approaches. These islands can potentially act as safe havens for wildlife crossing the intersection by allowing them to escape approaching vehicles, promoting a safe crossing for animals at this location. Alternatives 3 and 4 also propose to construct several viaduct structures along the route, with some in locations where bighorn sheep were identified; these structures may provide a safe crossing for wildlife underneath the highway. Direct impacts to individual wildlife attempting to cross SR-39 would be considered a less than significant impact.

SR-39 has been closed to public traffic for approximately 45 years. During that time, wildlife have had the opportunity to become accustomed to using SR-39 as a travel

route. With the re-opening to public traffic, wildlife would be forced to use other routes paralleling SR-39. During the period immediately after re-opening SR-39, any wildlife accustomed to using SR-39 could be at a greater risk of vehicle collisions until they became familiar with using a parallel route. The construction phase of the proposed project would expose the wildlife to a gradual increase in traffic flow along SR-39, and to further moderate the increasing rate of traffic flow, SR-39 would be opened to the public in a controlled way (such as a “soft” opening [i.e., not announced to the public immediately]). Because of the measures included in the project design and those implemented during and after the construction phase, the potential direct impact to individual wildlife resulting from use of SR-39 as a travel route would be considered a less than significant impact.

Because the project is not part of a movement corridor and would not impact a movement corridor, and because the re-opening of SR-39 is not expected to create a barrier to the movement of wildlife that are accustomed to traversing the highway or using it as a travel route, the implementation of the proposed project and re-opening of the highway would not be considered a significant impact. Potential direct and indirect impacts specific to bighorn sheep are further discussed in Chapter 2.3.4, *Animal Species*.

Construction (Temporary) Impacts

Impacts to plant communities due to the construction of the proposed project would take place mostly within an easement maintained by Caltrans. As indicated in Table 2.3.1-1, between 4.5 and 6.3 acres of natural plant communities would be temporarily impacted by the proposed project, depending on the build alternative selected. Temporary impacts for each community generally increase with each alternative and would be as follows:

- Mixed Coniferous Forest: 1.5 to 2.6 acres.
- Canyon Live Oak Woodland: 0.0 acres
- Xeric and Mesic Cliff Faces: 0.0 acres
- Riparian Herb and Scrub: 0.0 acres
- Mixed Montane Chaparral: 3.0 to 3.7 acres
- Ruderal (Invasive Plant Species): see Chapter 2.3.6, *Invasive Species*.

Temporarily impacted areas would be replanted with native plant species that are typical of the plants within each natural community. Details of the planting plan would be

provided in a separate document and would be coordinated with the ANF. Although none of the natural communities are special-status and, therefore, do not require preservation or replanting to achieve “no net loss” under state or federal law, the project area is surrounded by a National Forest. Therefore, replanting would occur on temporarily impacted areas within Caltrans’ Right-of-Way to preserve the scenic views and recreational value of the National Forest for which the highway was originally constructed.

The total area of natural plant communities temporarily impacted would range from 4.5 to 6.3 acres.

Due to the unique environment of the project location, construction activities may have the potential to cause water runoff or potential rockslides that can cause further erosion to the existing environment. However, construction design has incorporated measures to reduce the potential for the run-off of sediment during the construction phase by installing silt fencing and berms. With these measures incorporated into the project design, no impact is expected with the implementation of the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

- NC-1: Temporarily impacted areas would be replanted with native plant species that are typical of the plants within each natural community. Details of the planting plan would be provided in a separate document and would be coordinated with the ANF. Although none of the natural communities are special-status and, therefore, do not require preservation or replanting to achieve “no net loss” under state or federal law, the project area is surrounded by a National Forest. Therefore, replanting would occur on temporarily impacted areas within Caltrans’ Right-of-Way to preserve the scenic views and recreational value of the National Forest for which the highway was originally constructed.
- NC-2: Silt fencing and berms will be installed to reduce the potential for run-off of sediment during the construction phase.
- NC-3: The construction phase of the proposed project would expose wildlife to a gradual increase in traffic flow along SR-39 and to further moderate the increasing rate of traffic flow, SR-39 would be opened to public use in a controlled way (such as a “soft” opening [i.e., not announced to the public immediately]).
- NC-4: Included as part of the proposed project design, the speed limit would be reduced to 30 miles per hour along the straight portions of the highway to

further reduce the potential for wildlife collisions. Signage indicating wildlife crossings would also be installed to remind drivers of the potential hazard.

NC-5: Included as part of the proposed project design, Alternatives 3 and 4 propose to construct several viaducts along the segment of SR-39 to bypass major slide debris and heavy runoff locations, as well as provide a safe crossing underneath the highway for wildlife within the project vicinity.

2.3.2 Wetlands and Other Waters

Regulatory Setting

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

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

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual Permits. There are two types of Individual Permits: Standard Permits and Letters of Permission. For Individual Permits, the USACE decision to approve is based on compliance with [EPA's Section 404\(b\)\(1\) Guidelines \(40 Code of Federal Regulations Part 230\)](#), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines (hereinafter referred to as the Guidelines) were developed by the EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (e.g., Waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a Least Environmentally Damaging Practicable Alternative to the proposed discharge that would have lesser effects on Waters of the U.S., and not have any other significant adverse environmental consequences.

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

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

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already

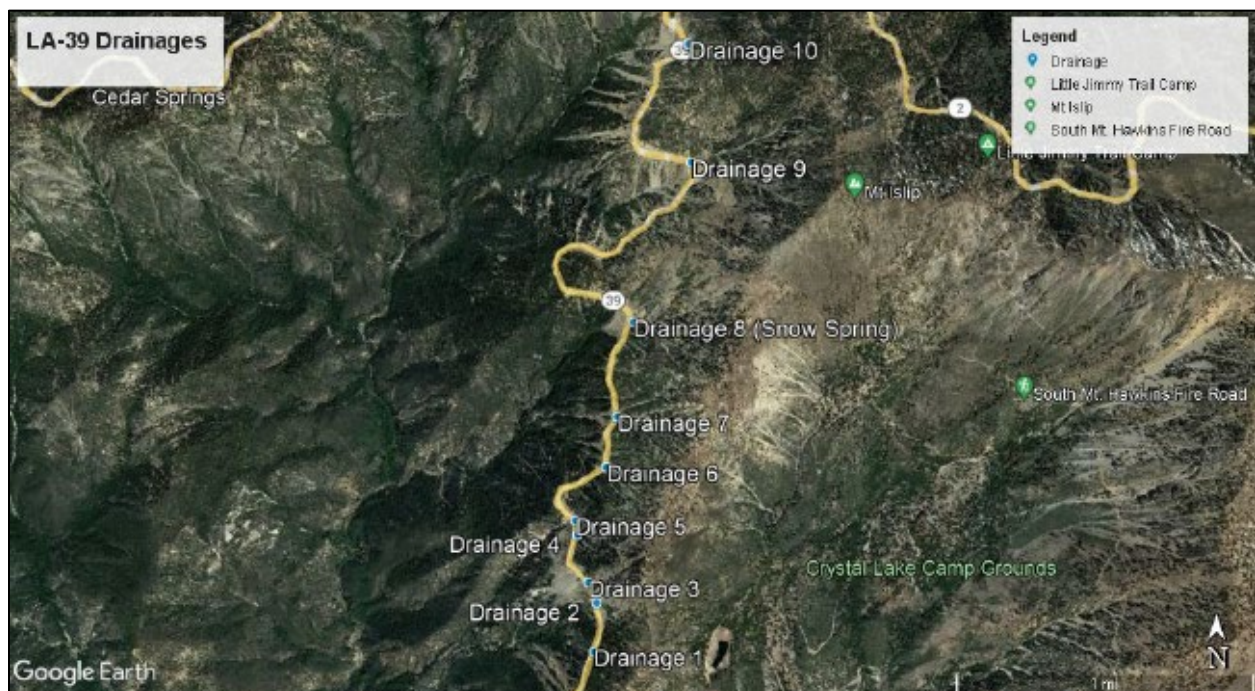
permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities that may result in a discharge to Waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see Chapter 2.2.2, *Water Quality and Storm Water Runoff* for more details.

Affected Environment

The following section is based on the Natural Environment Study completed on January 19, 2024, which was derived from general biological surveys conducted by qualified Caltrans biologists. A jurisdictional determination was conducted for the proposed project limits. This segment of State Route (SR) 39 extends below the ridgeline of Mount Islip within the drainage area of Bear Creek. Ten ephemeral and perennial drainages cross this portion of the highway. Many of the slopes have large scree chutes both above and below the existing highway. Smaller seeps or springs were observed alongside this segment of the highway, and some are small and may not flow in drier years. Much of the area east of the road consists of steep cliffs formed when the road was constructed. These cliffs may extend greater than 100 feet above the road and have slopes exceeding 100 percent.

Ten drainages occur within the proposed project area that are under the jurisdictional authority of the USACE, RWQCB, and CDFW. The locations of these drainages are shown in Figure 2.3.2-1 below.

Figure 2.3.2-1 Location of Jurisdictional Drainages



Drainages 1 through 7, 9, and 10 are ephemeral streambeds, and Drainage 8 is a natural spring known as Snow Spring. The following describes the drainages and the amount of USACE and CDFW jurisdiction that occurs within the Biological Study Area (BSA).

- Drainage 1 is ephemeral and is located at Post Mile (PM) 40.72. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.02 acres (800 square feet), and the CDFW jurisdiction is 0.09 acres (4,000 square feet).
- Drainage 2 is ephemeral and is located at PM 40.83. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.005 acres (200 square feet) and the CDFW jurisdiction is 0.05 acres (2,100 square feet).
- Drainage 3 is ephemeral and is located at PM 40.96. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.03 acres (1,300 square feet), and the CDFW jurisdiction is 0.05 acres (2,100 square feet).
- Drainage 4 is ephemeral and is located at PM 41.20. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.02 acres (800 square feet), and the CDFW jurisdiction is 0.04 acres (1,700 square feet).
- Drainage 5 is ephemeral and is located at PM 41.26. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction is 0.02 acres (800 square feet) and the CDFW jurisdiction is 0.04 acres (1,700 square feet).
- Drainage 6 is ephemeral and is located at PM 41.61. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.05 acres (2,100 square feet) and the CDFW jurisdiction is 0.10 acres (4,300 square feet).
- Drainage 7 is ephemeral and is located at PM 41.83. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.04 acres (1,700 square feet) and the CDFW jurisdiction is 0.08 acres (3,500 square feet).
- Drainage 8 is a perennial streambed that is fed by an active spring known as Snow Spring. It is located at PM 42.23. The drainage occurs on both sides of the

highway and is 200 feet in length within the BSA. Snow Spring is located approximately 100 feet east of SR-39 and flows to a gravel/sand area directly adjacent to the highway. At this point, the flow of water disappears and presumably flows subsurface under SR-39 to the southwest, where it eventually meets with Bear Creek. The USACE jurisdiction of this streambed is 0.02 acres (800 square feet) and the CDFW jurisdiction is 0.09 acres (4,000 square feet).

- Drainage 9 is ephemeral and is located at PM 43.45. It occurs on the western side of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.05 acres (2,100 square feet) and the CDFW jurisdiction is 0.09 acres (4,000 square feet).
- Drainage 10 is ephemeral and is located at PM 44.15. It occurs on both sides of the highway and is 200 feet in length within the BSA. The USACE jurisdiction of this streambed is 0.03 acres (1,300 square feet) and the CDFW jurisdiction is 0.07 acres (3,000 square feet).

Environmental Consequences

Implementation of Alternative 2 would result in a total permanent and temporary impact of 0.170 acres of USACE jurisdiction and a permanent and temporary impact of 0.340 acres of CDFW jurisdiction.

Implementation of Alternative 3 would result in a total permanent and temporary impact of 0.185 acres of USACE jurisdiction and a total permanent and temporary impact of 0.370 acres of CDFW jurisdiction.

Implementation of Alternative 4 would result in a total permanent and temporary impact of 0.205 acres of USACE jurisdiction and a total permanent and temporary impact of 0.410 acres of CDFW jurisdiction. These impact areas are summarized in Table 2.3.2-1 below.

Table 2.3.2-1 Jurisdictional Impacts

Drainage No.	Alternative 2				Alternative 3				Alternative 4			
	USACE Impacts		CDFW Impacts		USACE Impacts		CDFW Impacts		USACE Impacts		CDFW Impacts	
	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)
1	0.008	0.008	0.016	0.016	0.010	0.010	0.019	0.019	0.012	0.012	0.023	0.023
2	0.007	0.007	0.014	0.014	0.009	0.009	0.017	0.017	0.011	0.011	0.021	0.021
3	0.009	0.009	0.018	0.018	0.011	0.011	0.021	0.021	0.013	0.013	0.025	0.025
4	0.008	0.008	0.016	0.016	0.010	0.010	0.019	0.019	0.012	0.012	0.023	0.023
5	0.008	0.008	0.016	0.016	0.010	0.010	0.019	0.019	0.012	0.012	0.023	0.023
6	0.011	0.011	0.022	0.022	0.013	0.013	0.025	0.025	0.015	0.015	0.029	0.029
7	0.013	0.013	0.026	0.026	0.015	0.015	0.029	0.029	0.017	0.017	0.033	0.033
8	0.006	0.006	0.012	0.012	0.008	0.008	0.015	0.015	0.010	0.010	0.019	0.019
9	0.090	0.090	0.180	0.180	0.092	0.092	0.183	0.183	0.094	0.094	0.187	0.187
10	0.010	0.010	0.020	0.020	0.012	0.012	0.023	0.023	0.014	0.014	0.027	0.027
TOTALS	0.170	0.170	0.340	0.340	0.185	0.185	0.370	0.370	0.205	0.205	0.410	0.410

Avoidance, Minimization, and/or Mitigation Measures

Prior to the start of initial site clearance, all required permits and agreements shall be obtained from the USACE, RWQCB and CDFW. All conditions within these permits and agreements would be adhered to. Areas that would be temporarily impacted would be replanted after the construction phase is completed. A mitigation and monitoring plan would be prepared that addresses planting procedures, location, success criteria and maintenance. Mitigation for areas that would be permanently impacted would be achieved by purchasing similar habitat within the region of the project site at a ratio of 5:1. This land would be turned over for management in perpetuity to an organization that is approved by CDFW and U.S. Forest Service (USFS).

WW-1: Impacted vegetated areas would be replanted with native plant species that are typical of the plants within each natural community.

WW-2: A mitigation and monitoring plan would be prepared that addresses planting procedures, location, success criteria and maintenance.

WW-3: Mitigation for areas that would be permanently impacted would be achieved by purchasing similar habitat within the region of the project site at a ratio of 5:1. This land would be turned over for management in perpetuity to an organization that is approved by CDFW and USFS.

2.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. Special-status species are selected for protection because they are rare and/or subject to population and habitat declines. "Special status" is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species, which are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please refer to Chapter 2.3.5, *Threatened and Endangered Species*, for detailed information about these species.

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

The regulatory requirements for FESA can be found at 16 United States Code Section 1531, et seq. (see also 50 Code of Federal Regulations Part 402). The regulatory

requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. California Department of Transportation projects are also subject to the Native Plant Protection Act per California Fish and Game Code Sections 1900–1913, and the California Environmental Quality Act per California Public Resources Code Sections 21000–21177.

Affected Environment

This section is based on the Natural Environment Study (NES) prepared on January 19, 2024. A review of the 2023 update of the California Natural Diversity Database and the 2023 CNPS electronic database, as well as other relevant literature, identified 19 special-status plant species that are known to occur in the project’s vicinity (Table 2.3.3-1). Focused field surveys were subsequently conducted to determine if they were present, or potentially present, within the project footprint. Each of these plants is listed on the California Native Plant Society Inventory of Rare and Endangered Plants. None of these species are formally listed as threatened or endangered by the USFWS or CDFW. A complete list of plant species observed during field surveys can be found in Appendix C of the NES.

Table 2.3.3-1 Special Status Plant Species Potentially Occurring in the Vicinity of the Project Site

Common Name (<i>Scientific Name</i>)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale
California muhly (<i>Muhlenbergia californica</i>)	CNPS List 4.3	Coastal sage scrub, yellow pine forest, chaparral, wetland- riparian	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Grey-leaved violet (<i>Viola pinetorum</i> <i>ssp. grisea</i>)	CNPS List 1B.2	Subalpine coniferous forest, upper montane coniferous forest, meadows and seeps, within dry mountain peaks and slopes	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Hot springs fimbristylis (<i>Fimbristylis thermalis</i>)	CNPS List 2B.2	Meadows and seeps (alkaline), near hot springs	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.

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Common Name (<i>Scientific Name</i>)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale
Lemon lily (<i>Lilium parryi</i>)	CNPS List 1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest; found in wet, mountainous terrain, on shady edges of streams	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Peirson's spring beauty (<i>Claytonia peirsonii</i> ssp. <i>peirsonii</i>)	CNPS List 1B.2	Upper montane coniferous forest, subalpine coniferous forest, within granitic scree slopes, often with a sandy or fine soil component	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Plummer's mariposa- lily (<i>Calochortus plummerae</i>)	CNPS List 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Robbins' nemacladus (<i>Nemacladus secundiflorus</i>)	CNPS List 1B.2	Chaparral, valley and foothill grassland within dry, sandy or gravelly slopes	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Rock Creek broomrape (<i>Aphyllon validum</i> ssp. <i>validum</i>)	CNPS List 1B.2	Chaparral, pinyon and juniper woodland, within slopes of loose decomposed granite; parasitic on various chaparral shrubs	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
San Bernardino aster (<i>Symphotrichum defoliatum</i>)	CNPS List 1B.2	Freshwater wetlands, coastal sage scrub, southern oak woodland	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.

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Common Name (<i>Scientific Name</i>)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale
San Bernardino grass- of-Parnassus (<i>Parnassia cirrata</i> var. <i>cirrata</i>)	CNPS List 1B.3	Lower montane coniferous forest, upper montane coniferous forest, meadows and seeps	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
San Gabriel linanthus (<i>Linanthus concinnus</i>)	CNPS List 1B.2	Lower montane coniferous forest, upper montane coniferous forest, chaparral	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
San Gabriel Mountains monardella (<i>Monardella australis</i> ssp. <i>gabrielensis</i>)	CNPS List 1B.2	Broadleaved upland forest, chaparral, lower mountain coniferous forest within granitic openings and outcrops	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
San Gabriel manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>)	CNPS List 1B.2	Found in the San Gabriel Mountains in chaparral	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
San Gabriel River dudleya (<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>)	CNPS List 1B.2	Chaparral, on granite cliffs and outcrops surrounded by scrub	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Scalloped moonwort (<i>Botrychium crenulatum</i>)	CNPS List 2B.2	Meadows, freshwater- marsh, bogs/fens	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Slender mariposa-lily (<i>Calochortus clavatus</i> var. <i>gracilis</i>)	CNPS List 1B.2	Chaparral, coastal scrub, valley and foothill grassland	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.

Common Name (<i>Scientific Name</i>)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale
Southern alpine buckwheat (<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>)	CNPS List 1B.3	Alpine boulder and rock fields, subalpine coniferous forest, within dry granitic gravel	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Western sedge (<i>Carex occidentalis</i>)	CNPS List 2B.3	Yellow-pine forest, meadows and seeps	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.
Woolly mountain-parsley (<i>Oreonana vestita</i>)	CNPS List 1B.3	Upper montane coniferous forest, lower montane coniferous forest, found on high ridges; on scree, talus, or gravel	Absent	The habitat associated with this species does not occur within the project area, and the micro-habitat within the project limits is marginal at best; therefore, the species is not expected to occur within the project area.

STATUS KEY:

CNPS List Designation Definitions:

1A = Presumed Extirpated or Extinct — Plants presumed extirpated in California and either rare or extinct elsewhere.

1B = Rare or Endangered — Plants rare, threatened, or endangered in California and elsewhere.

2A = Extirpated in California — Plants presumed extirpated in California but common elsewhere.

2B = Rare or Endangered in California — Plants rare, threatened, or endangered in California but common elsewhere.

3 = Needs Review — Plants about which more information is needed.

4 = Uncommon in California — Plants of limited distribution, a watch list.

List .1, .2 and .3 extension definitions:

.1 = Seriously threatened in California — greater than 80 percent of occurrences threatened/high degree and immediacy of threat

.2 = Moderately threatened in California — 20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat

.3 = Not very threatened in California — less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known

Source: California Native Plant Society, 2024

Historical biological studies of the project site were reviewed, and field surveys were conducted for special-status plants. No special-status plant species were detected during focused surveys, and suitable habitat for these species was also absent. Therefore, none of these species are expected to occur on the project site.

Environmental Consequences

No special-status plant species or their habitat were observed during surveys, and they are not expected to be present within the project area; therefore, no impacts will occur.

Construction Impacts

No construction impacts will occur.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals that are not listed or proposed for listing under the federal or state Endangered Species Acts. Species listed or proposed for listing as threatened or endangered are discussed in Chapter 2.3.5, *Threatened and Endangered Species*. All other special-status animal species are discussed in this section, including CDFW fully protected species and species of special concern, and USFWS or National Marine Fisheries Service candidate species.

The federal laws and regulations that are relevant to wildlife include the following:

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

The state laws and regulations that are relevant to wildlife include the following:

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

In addition to federal and state laws that regulate impacts to wildlife, there are often local regulations that need to be considered when developing projects. If work is being done on federal land (e.g., Bureau of Land Management or U.S. Forest Service [USFS]), then those agencies' regulations, policies, and habitat conservation plans must be followed.

Affected Environment

This section is based on the Natural Environment Study prepared on January 19, 2024.

Common Wildlife

Discussed below are representative common wildlife species (those not provided a sensitivity status by regulatory agencies) that were observed within the project area during the field surveys. Because wildlife typically utilize a variety of plant communities, wildlife species observed or likely to occur within the project area are described by taxonomic group. See Appendix C of the California Department of Transportation (Caltrans)-prepared Natural Environment Study Report (biological technical study) for a complete list of wildlife species observed within the project area.

Amphibians and Reptiles

The project site has 10 perennial and ephemeral drainages, including one natural spring (Snow Spring) along State Route (SR) 39. Because the project site is located at or very near the headwaters, water generally occurs in the drainages only after recent rains and remains for a relatively short period of time. The natural spring along SR-39 provides a source of water throughout the spring, summer, and fall and likely becomes limited during the winter due to snowfall and periodic freezing temperatures. This spring and others in the surrounding area provide a constant source of water throughout the amphibian breeding period; however, the springs are relatively small and provide a limited resource for breeding.

Amphibian populations within the project area are expected to be low or non-existent due to the lack of sufficiently large bodies of continuously available water. If present, they are expected to be localized to the available water sources. No amphibian species were heard or otherwise observed during any of the surveys. Common reptile species observed within the project area include western whiptail (*Cnemidophorus tigris*), sagebrush lizard (*Sceloporus graciosus*), and side-bloched lizard (*Uta stansburiana*).

Birds

The diversity of structure and plant communities present within the project area provides both foraging and nesting habitat for several locally occurring common bird species. Some species are known to be closely associated with specific plant communities, whereas other species utilize a variety of habitat types for foraging and breeding. Birds that were regularly observed in the mixed coniferous habitats include: Clark's nutcracker (*Nucifraga columbiana*), Stellar's jay (*Cyanocitta stelleri*), mountain chickadee (*Poecile gambeli*), and White-breasted nuthatch (*Sitta carolinensis*). Several species, including mourning dove (*Zenaida macroura*), red-shafted flicker (*Colaptes auratus*), and western scrub jay (*Aphelocoma californica*), were also observed regularly. Few raptor species

were observed within the project area; however, red-tailed hawk (*Buteo jamaicensis*) was observed.

Mammals

A variety of mammal species occur in the vicinity of the project area. Large species including Nelson’s bighorn sheep, mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and black bear (*Ursus americanus*) were observed or detected via scat, tracks, and/or during historic field surveys. Other mammal species observed and known to occur in the vicinity of the project area include bobcat (*Felis rufus*), coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), western gray squirrel (*Sciurus griseus*), and Merriam’s chipmunk (*Eutamias merriami*).

Most of the locally occurring bat species typically feed on insects over aquatic habitats. A few bat species (*Myotis* spp.) could potentially forage and temporarily roost within the project area. However, because the project site does not support ideal roosting habitat and is not situated adjacent to permanent open water, bat species known to occur in the project vicinity would not be expected to utilize onsite resources on more than an infrequent basis.

Special Status Species

A list of special-status animal species known to occur in the region was obtained by conducting searches of the most recent (2023) California Natural Diversity Database (CDFW 2023) and the USFWS species list. Based on this information and an evaluation of onsite habitat compared to each species’ life history requirements, a total of 16 special-status animal species were identified that have the potential to occur or are known to occur within the project area. Of these, 10 are federally and/or state-listed as endangered, threatened, or candidate species and are discussed in Chapter 2.3.5, *Threatened and Endangered Species*. The remaining 6 species are listed in Table 2.3.4-1.

Table 2.3.4-1 Special Status Animal Species Potentially Occurring in the Vicinity of the Project Site

Common Name (Scientific Name)	Status	General Habitat Description	Habitat: Potential/Absent	Conclusion and Rationale
Arroyo chub (<i>Gila orcuttii</i>)	CA: SSC	Streams of Southern California, slow flowing or backwater areas with sand or mud substrate	Absent	General habitat for this species is present within the project quadrangle, however, no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.

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Common Name (Scientific Name)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale										
Santa Ana speckled dace <i>(Rhinichthys osculus)</i>	CA: SSC USFS: SS	Headwaters of Santa Ana and San Gabriel Rivers, requires permanent flowing streams, typically inhabiting shallow cobble and gravel riffles	Absent	General habitat for this species is present within the project quadrangle, however, no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.										
Coast horned lizard <i>(Phrynosoma blainvillii)</i>	CA: SSC	Lowlands along sandy washes with scattered bushes	Absent	General habitat for this species is present within the project quadrangle, however, no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.										
San Gabriel slender salamander <i>(Batrachoseps gabrieli)</i>	USFS: SS	Within the San Gabriel Mountains under rocks, wood, and fern fronds near creeks	Potential	Low quality habitat within project area. Not observed during focused surveys and not expected to occur.										
Two-striped gartersnake <i>(Thamnophis hammondi)</i>	CA: SSC	Riparian scrub, riparian woodland, wetland	Absent	General habitat for this species is present within the project quadrangle, however, no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.										
Nelson's bighorn sheep <i>(Ovis canadensis nelsoni)</i>	CA: CFP	Rocky slopes and cliffs, canyons, washes and alluvial fans; prefer rugged and open habitats with grasses and forbs for grazing	Present	This species is known to occur in the project vicinity and on occasion crosses State Route 39.										
<p>Status Key:</p> <table border="0"> <tr> <td><u>Federal (US)</u></td> <td><u>State (CDFW)</u></td> </tr> <tr> <td>FE = Federally Endangered</td> <td>CE = California Endangered</td> </tr> <tr> <td>FT = Federally Threatened</td> <td>CT = California Threatened</td> </tr> <tr> <td>FC = Federal Candidate</td> <td>SSC = California Species of Special Concern</td> </tr> <tr> <td>SS = USDA Forest Service Sensitive Species</td> <td>CFP = California Fully Protected</td> </tr> </table>					<u>Federal (US)</u>	<u>State (CDFW)</u>	FE = Federally Endangered	CE = California Endangered	FT = Federally Threatened	CT = California Threatened	FC = Federal Candidate	SSC = California Species of Special Concern	SS = USDA Forest Service Sensitive Species	CFP = California Fully Protected
<u>Federal (US)</u>	<u>State (CDFW)</u>													
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SS = USDA Forest Service Sensitive Species	CFP = California Fully Protected													

Based on an assessment of the habitat requirements of these species, a review of pertinent literature about their known geographic ranges, and on-site field surveys, only

the San Gabriel slender salamander and Nelson's bighorn sheep have the potential to occur within the project area.

Nelson's bighorn sheep (*Ovis canadensis nelsoni*)

Protected Status

Nelson's bighorn sheep (BHS) are found in relatively small numbers within the Transverse, Peninsular, and other desert mountain ranges of California; the Transverse Ranges include the San Gabriel Mountains, which is where the proposed project is located.

Within the San Gabriel Mountains, BHS are considered a sensitive species by the USFS², which means that the species shows evidence of decline and potential sensitivity to national forest activities and management. Special attention is provided to sensitive species by USFS to avoid contributing to their continued decline and eventual need for listing under the federal Endangered Species Act.

BHS in the San Gabriel Mountains are also considered a fully protected species by CDFW. Fully protected is a special status that was created in the 1960s, before the California Endangered Species Act (CESA) was established; it was the State's first attempt to protect animals that were rare or faced possible extinction. Although most fully protected species have since been listed as threatened or endangered under CESA, the BHS has not. Except under limited circumstances (see Fish and Game Code Sections 3511, 4700, 5050, and 5515) the Fish and Game Code does not allow for the "take" of any fully protected species, including BHS. However, Senate Bill (SB) 147 was signed into law by Governor Gavin Newsom on July 10, 2023. SB 147 amended California's "fully protected species" statuses. It refers to bighorn sheep as a fully protected species, except for the Nelson's bighorn sheep subspecies. At this time, it is unknown how impacts, or take, to a Nelson's bighorn sheep will be permitted; however, it is expected to be similar to the process used when impacting a listed species under CESA.

Habitat and Population Status

BHS have specific habitat requirements. Grazing occurs on a variety of plants, but browsing is preferred. Feeding areas are open habitats that are located near steep terrain, which allow for escape from predators. Areas with overgrown vegetation are

² Because of genetic studies and changes in taxonomy, the previously known subspecies *O. c. cremnobates*, which is the population of bighorn sheep that occurred within the Peninsular ranges and was listed as endangered by the USFW and threatened by CDFW, was united with *O. c. nelsoni* under one subspecies, coined Nelson's bighorn sheep (*O. c. nelsoni*). However, the population occurring within the Peninsular ranges is currently identified as a Distinct Vertebrate Population Segment and only this population of *O. c. nelsoni* is listed as endangered by USFWS and threatened by CDFW.

less suitable and can limit the distribution of local sheep populations (Bleich et al., 2008). BHS will also use the steep rugged terrain for bedding and lambing. Water sources are important and occur within the boundaries and in vicinity of the project site. Mineral licks have been identified as important resources, are used by BHS in the San Gabriel Mountains (Holl and Bleich, 1987), and may be present within the project area. Travel routes are required, linking these various areas of foraging, lambing, bedding, watering, and mineral licks.

BHS are active during the day. The San Gabriel Mountains population is active year-round, with some individuals making seasonal migrations between lower elevation winter-spring ranges and higher elevation summer-fall ranges. Ewes and adult rams may use different areas. Ewes in the vicinity of the project area have been observed individually or in sub-groups of two to six. There is no defense of a particular territory; however, ewes generally stay within a range. Rams are polygamous and may travel between ewe groups and sub-groups, especially during the rut (mating season), which is early October to mid-December.

The BHS within the San Gabriel Mountains population are distributed among four groups: Cucamonga group, Mount San Antonio group, Iron Mountain group, and Twin Peaks group. Sheep from the Twin Peaks group, which is the westernmost of the four groups, use the areas around or within the project area. The winter-spring range for this group is in the San Gabriel Wilderness, with summer ranges on Twin Peaks, Mount Waterman, Kratka Ridge, the tunnel areas above SR-2, and the steep slopes along the northern portion of SR-39. The remaining three groups are located east of the project site (Holl, 2002).

Little is known about the population of the BHS within the San Gabriel Mountains prior to 1975. Previous studies (Light et al., 1967; Weaver et al., 1972) suggest that bighorn sheep were abundant, with a stable population estimated at 500 individuals. In 1976, the population had increased to 665, and the population further increased from 1976 to 1982, with the highest estimate being in 1980 at 740 (± 49). The entire population declined to about 501 (± 30) in 1989 and continued to decline until 1995 when it was estimated at 130 individuals; the population has increased since then (Holl and Bleich, manuscript) and is currently estimated at slightly more than 300 individuals.

In 1972, the population of the Twin Peaks group, which utilizes the area near SR-39, was estimated to be 140 (Weaver et al., 1972). That number had increased to 160 individuals by 1982 (Holl and Bleich, 1983). However, surveys conducted from 2001 to 2006 and in 2011 (ECORP Consulting, Inc., 2012) indicated a substantial decline in numbers, down to a steady population of 18 individuals.

Population estimates for the San Gabriel Mountains and the Twin Peaks group of sheep indicated that population declines occurred after 1983. The consistency of population

estimates from 2001 to 2011 in the Twin Peaks group, however, indicates that the abundance of sheep in that group did not recover after 1995, as other groups of sheep in the San Gabriel Mountains had (Holl and Bleich, 2009). Thus, the Twin Peaks group currently remains well below earlier population estimates.

Changes in population numbers of BHS in the San Gabriel Mountains between 1976 and 2006 have been associated with wildfire history and mountain lion predation (Holl et al., 2004; Holl and Bleich, 2010).

It is thought that fires improve habitat quality for BHS by reducing vegetation cover, allowing more suitable conditions for predator escape, and providing for the higher value plant growth, which occurs in the initial stages of vegetation succession (Holl et al., 2004; Bleich et al., 2008). The largest population increases that occurred after 1995 occurred in the Iron Mountain and Cucamonga groups, which occupy areas that burned in 1997 and 2003, respectively (Holl and Bleich, 2012). Habitat on the eastern side of Mt. Islip burned in 2002 or 2003 and is high suitability habitat. Additionally, the Bobcat Fire of 2020 burned 115,796 acres within the Angeles National Forest (ANF), including areas just west of the project limits that contain high suitability habitat.

San Gabriel Mountains slender salamander (*Batrachoseps gabrieli*)

San Gabriel Mountains slender salamander has no formal protected status but is considered a sensitive species by the USFS. It is endemic to select locations in the San Gabriel Mountains of Los Angeles County and the western end of the San Bernardino Mountains of San Bernardino County at elevations ranging from approximately 1,200 to 5,085 feet. One known location in the vicinity of the project area is near the Crystal Lake Campground.

This salamander is found under rocks, wood, fern fronds, and on soil at the base of talus slopes located near a stream. It is most active on the surface in winter and early spring. Although there are numerous talus slopes or scree slopes within the project area, sufficient water sources are limited. According to USFS biologists, there is a potential for this species to occur near Snow Spring because of its known presence near the Crystal Lake Campground.

Environmental Consequences

Common Wildlife

Due to the relatively low amount of habitat that would be impacted within the surrounding forest, in addition to the relatively common nature of the species present within the project area, no significant impacts are expected to occur to common animal species.

During the period immediately after re-opening SR-39, any wildlife accustomed to using SR-39 could be at a greater risk of vehicle collisions until they become familiar with using a parallel route. However, the construction phase of the proposed project would expose the wildlife to a gradual increase in traffic flow along SR-39. To further moderate the increasing rate of traffic flow, SR-39 would be opened to public use in a controlled fashion (such as a “soft” opening [i.e., not announced to the public immediately]). Because of the measures included in the project design and those implemented during and after the construction phase, the potential direct impact to individual wildlife resulting from use of SR-39 as a travel route would be considered a less than significant impact.

Nelson’s Bighorn Sheep

The implementation of the proposed project has the potential to impact BHS in several ways. Potential direct and indirect impacts to bighorn sheep and their habitat are discussed in the following paragraphs. Impact analysis on the movement of bighorn sheep is discussed above in Chapter 2.3.1, *Natural Communities*, in the subsection titled *Permanent Impacts*, subsection *Wildlife Corridors*.

Since 1975, the bighorn sheep population in the San Gabriel Mountains has fluctuated between 130 to 740 individuals. Holl (2004) presented a hypothesis for population fluctuation—the population increase in the late 1970’s is attributed to the increased quality of sheep forage habitat resulting from wildfires that occurred between 1968 and 1979. The decrease in the population that occurred after 1982 was associated with a decline in habitat suitability due to the lack of wildfires. After 1989, a sharp decline occurred due to increased mountain lion predation that culminated in a bighorn sheep population estimate of 130 individuals in 1995 (Holl and Bleich, manuscript). The population then increased in response to lower predation rates and two large fires that improved habitat suitability (Holl and Bleich, 2012).

There is mention in literature (Weaver, 1975; McQuivey, 1978) that the San Gabriel population is the largest of all BHS populations in Southern California, and that CDFW has used this population as a source for relocation efforts to repopulate historically unoccupied areas from 1983 to 1987 (Holl, 2004). The current population estimate is approximately 300 individuals (Barboza, pers. comm.), which is approaching the goals described in a management plan titled *Implementation Strategy to Restore the San Gabriel Mountains Bighorn Sheep Population* (2006). It is thought that the BHS population responded positively to the wildfires that occurred in the eastern San Gabriel Mountains in 1997 and 2003 because the most significant increases of sub-populations came in the area of the wildfires (Holl and Bleich, 2012; Barboza, pers. comm.).

Stephen Holl, in a 2004 paper titled *Population dynamics of bighorn sheep in the San Gabriel Mountains, California, 1967-2002*, states that viability of subgroups on individual

winter-spring ranges and the entire population within the San Gabriel Mountains is questionable by citing reviews of other bighorn sheep populations, which revealed that smaller populations are more susceptible to extinction than larger populations (Berger, 1990), and estimated populations with fewer than 15 females had a 60 to 70 percent probability of extinction after 5 years (Ernst et al., 2002). As of 2002, the four subgroups within the San Gabriel Mountains totaled approximately 90 individuals. Although more recent population estimates have indicated an increase in numbers, any loss of an individual bighorn sheep before the goals described within the recovery plan are met should be considered a potentially significant impact.

A collaborative effort of an interagency team, including CDFW, USFS, and Los Angeles County Fish and Game Commission, with the leadership of professional expert Steve Holl, resulted in the preparation of an "Implementation Strategy to Restore The San Gabriel Mountains Bighorn Sheep Population." The purpose of the implementation strategy is to "identify management actions that are expected to result in the restoration of a well distributed, self-sustaining population of bighorn sheep (*Ovis canadensis nelsoni*) in the San Gabriel Mountains." The document identifies "Limiting Factors" for the recovery of the population as: (1) reduced habitat suitability from post-fire succession on chaparral-dominated winter/spring ranges, and (2) mountain lion predation. It further describes a restoration objective:

Restoration Objective: Restore the San Gabriel Mountains bighorn sheep population to a self-sustaining level that provides diverse recreation and educational opportunities.

- **Establish a self-sustaining population.** A self-sustaining population will be established when both criteria described below have been achieved. At this point, the population would be sufficiently large enough that it would not qualify for listing as a federal threatened or endangered species.
 - **Criterion 1.** Based on monitoring results, at least 30 ewes are present in each of South Fork Lytle Creek; Deer, Cucamonga, and Barrett-Cascade Canyons; Cattle Canyon, East Fork San Gabriel River, and San Gabriel Wilderness, and 15 ewes are present in the Middle Fork of Lytle Creek for 6 consecutive years.
 - **Criterion 2.** Based on monitoring results, at least 322 bighorn sheep are well distributed among the groups of bighorn sheep for 6 consecutive years.
- **Remove the Population from the USFS Sensitive Species List.** The San Gabriel bighorn sheep population should be removed from the USFS Sensitive Species list when the criterion described below is achieved.

- **Criterion 1.** Based on monitoring results, at least 500 bighorn sheep are well distributed among the subpopulations, for 6 consecutive years. Well-distributed means at least 260 bighorn sheep in the Cucamonga Peak group and at least 80 bighorn sheep in each of the Mount San Antonio, Iron Mountain, and Twin Peaks groups.

The document goes on to state that the “Actions Needed” to meet the goals of the strategic plan are as follows:

- The population has been stable from 1995–2002, apparently limited by adult mortality. Therefore, mortality must be reduced by reducing the incidence of predation. Concurrently, habitat availability and suitability must be increased on winter-spring ranges to increase adult and lamb survivorship. Additionally, potential impacts from recreation, primarily during summer, must be evaluated and mitigation implemented where necessary.

The strategic plan specifically identifies the need to evaluate the opening of SR-39 and the potential impacts to bighorn sheep, especially the potential impact it could have as a barrier to sheep movement. The strategic plan also suggests prohibiting new roads and trails within 300 feet of mineral licks. No mineral licks have been identified within 300 feet of SR-39 during the studies conducted by Caltrans and its’ consultants. Therefore, the implementation of the proposed project would have no conflict with this implementation strategy.

The implementation strategy plan also identifies the need for USFS to conduct prescribed burns in various areas to improve habitat suitability. Holl (2004) states that “[p]rescribed fire is the only practical tool available to improve habitat conditions for bighorn sheep in the San Gabriel Mountains.” Monitoring of various aspects is also outlined in the strategic plan.

As stated in Chapter 2.3.1, *Natural Communities*, between 4.5 and 6.3 acres of natural plant communities (natural habitat) would be temporarily impacted, and between 2.9 and 5.4 acres of natural habitat would be permanently impacted by the proposed project (the actual impact areas depend on which build alternative is selected). Bighorn sheep could use any of the plant communities within the project area for feeding, traveling, and escaping predators. Therefore, any loss of habitat within the project area should be considered a loss of bighorn sheep habitat and a potentially significant impact.

To mitigate impacts to BHS habitat and any short-term direct impacts resulting from vehicle collisions, if they occur, Caltrans would contribute funds to USFS for the implementation of the strategic plan to improve habitat quality and bighorn sheep population monitoring in the vicinity of the proposed project site.

During a bighorn sheep Technical Advisory Committee meeting on December 17, 2008, USFS representatives presented the realities of conducting a controlled burn in the ANF. Because of the constraints in preparing for one in a highly populated area such as Los Angeles County, it cannot be guaranteed that a controlled burn would be conducted within any given period. USFS representatives presented an alternative to improving bighorn sheep habitat quality—a mechanical mulcher could be used to thin overgrown vegetation, the result of which would be similar to that of a fire. The mechanical mulcher would be used to improve habitat quality at a ratio of 5:1 acres of impacted sheep habitat. With the implementation of this proposed mitigation, the impact to bighorn sheep habitat would be reduced to a less than significant level.

An investigation of the listing status of Nelson's bighorn sheep and ensuing discussion at the Technical Advisory Committee meeting on December 17, 2008 has raised a question about Caltrans' ability to fully mitigate the potential impact to a sheep attempting to cross SR-39. This impact analysis and the proposed mitigation measures are based on the assertion that a loss of one individual is considered to be a potentially significant impact, depending on if the size of the population is above or below the self-sustaining threshold. Potential impacts resulting from reasonably unexpected events or illegal acts cannot be evaluated, and the results of such incidents are not part of this impact evaluation. The mitigation measures presented in this report are adequate to reduce the potential impact to an individual bighorn sheep attempting to cross SR-39 to a level such that no impact is expected to occur.

The proposed project alternatives have measures in place to avoid or minimize the potential for any harm to BHS to occur as a result of this project. However, Caltrans would work closely with CDFW to obtain an Incidental Take Permit (ITP), including appropriate mitigation measures, pursuant to SB 147 in the event that a "take" of BHS does occur. Caltrans is committed to mitigating impacts to Nelson's bighorn sheep to a less than significant level by any reasonable means, including biological monitoring during construction and habitat enhancement.

San Gabriel Mountain Slender Salamander

As stated previously, this salamander is found under rocks, wood, fern fronds, and on soil at the base of talus slopes located near a stream. Although there are numerous talus slopes or screen slopes within the project boundaries, the quality of this habitat is low, and this species is not expected to occur within the project limits. Therefore, no impact to the San Gabriel Mountain slender salamander is expected to occur.

Construction Impacts

Initial construction activities could temporarily disturb common wildlife species on and immediately adjacent to the project site; however, most of the construction impacts would be temporary, and most of the permanent improvements would be within the

shoulders of an existing highway. Many of the high-mobility species would be expected to relocate to suitable habitat in the vicinity. However, species of low mobility have a higher vulnerability to mortality, and those that can relocate would be subjected to higher competition for resources and predation.

Construction activities could result in the direct loss of a bird nest or the abandonment of an active nest. Depending on the number of nests lost and the particular species, the loss of active bird nests could be a potentially significant impact. Also, the Migratory Bird Treaty Act prohibits the “take” of any active bird nests of most avian species. However, the project design would include measures to reduce or eliminate the potential for “take” of any active nest. A qualified biologist would conduct a pre-construction nesting bird survey within 3 days of the initial ground clearance and monitor any active nests found until fledglings are no longer dependent on the nest site.

Temporary impacts to plant communities due to the construction of the proposed project would take place mostly within the easement maintained by Caltrans. As indicated in Table 2.3.1-1 in Chapter 2.3.1, *Natural Communities*, between 4.5 and 6.3 acres of natural plant communities would be temporarily impacted by the proposed project. Bighorn sheep could use any of the plant communities within the project area for feeding, traveling, and escaping predators. Therefore, any loss of habitat within the project area should be considered a loss of bighorn sheep habitat and a potentially significant impact. However, impacted areas would be replanted with native plant species that are typical of the plants within each natural community. Details of the planting plan would be provided in a separate document and would be coordinated with the ANF. Although none of the natural communities are special-status and thus do not require preservation or replanting to achieve “no net loss” under state or federal law, the project area is surrounded by a National Forest. Therefore, replanting would occur on temporarily impacted areas within Caltrans’ Right-of-Way to restore habitat and preserve the scenic views and recreational value of the National Forest for which the highway was originally constructed.

SR-39 has been closed to public traffic for approximately 45 years. During that time, wildlife have had the opportunity to become accustomed to using the road as a travel route, with little human disturbance. Construction of this project increases the chances that wildlife accustomed to using SR-39 would be at greater risk of vehicle collisions until they become familiar with the human/vehicle presence and move to alternate locations. However, the construction phase of the proposed project would expose wildlife to a gradual increase in traffic, with the presence of construction crews and their equipment occupying portions of the highway and generally moving at slower speeds. During this time, wildlife (predominantly the Nelson’s bighorn sheep) would have an opportunity to become accustomed to human activity. The slow introduction of vehicles on this segment of road, along with mitigation and standard measures proposed for the

complete design of the project, would be included to minimize potential harm to the sheep. Caltrans is committed to fully mitigating impacts to Nelson's bighorn sheep to a less than significant level by any reasonable means, including the use of biological monitoring during construction and habitat enhancements.

As stated in the previous discussions of this section, no San Gabriel slender salamanders were found during field surveys, and only low-quality suitable habitat is present within the project area; therefore, this species is not expected to occur within the limits of the project area. However, according to USFS biologists, there is a potential for this species to occur near Snow Spring. Because this species has been found near the project site at the Crystal Lake Campground, presence/absence surveys would be conducted prior to the initiation of construction-related activities. Any individuals found within the project limits would be relocated to nearby appropriate habitat within the ANF. Best Management Practices (BMPs) have been incorporated into the project design, such as the use of siltation fences and berms, to prevent erosion or slides from reaching natural drainages outside the project impact footprint.

Construction activities would also expose wildlife within the project limits to temporary noise, dust, vibration, and traffic from construction vehicles and crews. Measures included in the project design and those implemented during and after the construction phase would minimize the potential for direct impacts to individual wildlife. Additionally, a bioacoustic study was conducted for the proposed project to anticipate the level of noise that would be produced during the construction phase and the normal operation of the finished highway. Based on the findings of that study, the level of impact to wildlife from construction related noise is expected to be less than significant. See Chapter 2.2.6, *Noise and Vibration*, for further details about the analyses conducted.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will work closely with CDFW to obtain an ITP for BHS and will continue to investigate and use all appropriate BMPs to avoid and minimize impacts to this species. It is anticipated that the ITP would still require extensive mitigation to ensure that populations of bighorn sheep are protected and maintained. Caltrans is committed to fully mitigating impacts to BHS to a less than significant level by any reasonable means, including biological monitoring during construction and habitat enhancement.

AS-1: Pre-construction surveys for sensitive animal species, including the San Gabriel Mountain slender salamanders, least Bell's vireo, southwestern willow flycatcher, and mountain yellow-legged frog, within the project area must be conducted by a qualified biologist prior to construction. Any individuals observed within the project limits will be relocated to nearby suitable habitat (within the Angeles National Forest), prior to construction.

- AS-2: The Migratory Bird Treaty Act prohibits the take of any active bird nests of most avian species. However, the project design has included measures to reduce or eliminate the potential for “take” of any active nest. A qualified biologist would conduct a pre-construction nesting bird survey within 3 days of the initial ground clearance and monitor/protect any active nests found until the fledglings are no longer dependent on the nest site.
- AS-3: Biological monitoring shall occur during construction and habitat enhancements to ensure that wildlife, including sensitive animal species, are not adversely impacted to a significant degree.
- AS-4: Alternative 3 will implement bighorn sheep crossing signs every 0.25 mile along the restricted segment to warn highway users of the potential for crossing wildlife in an effort to avoid any potential collisions or “take” of sheep or other wildlife.
- AS-5: Upon completion of the project, but prior to the reopening of the project area to public traffic, Caltrans Maintenance shall increase its vehicular trips within the project area for a period of 1 week in order to provide a slow and gradual increase in traffic leading up to the highway’s reopening. Then, the highway shall be reopened to public traffic, but the official reopening public announcement shall be delayed by 1 week. This slow, gradual, 2-week increase in traffic will provide for a “soft” reopening, thereby allowing the bighorn sheep to acclimate to the increased traffic.
- AS-6: To mitigate impacts to bighorn sheep habitat and any short-term direct impacts resulting from vehicle collisions, if they occur, Caltrans would contribute funds to USFS for the implementation of the strategic plan to improve habitat quality and bighorn sheep population monitoring in the vicinity of the proposed project site.

2.3.5 Threatened and Endangered Species

Regulatory Setting

The primary federal law that protects threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code Section 1531, et seq. (see also 50 Code of Federal Regulations Part 402). This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of FESA, federal agencies, such as the Federal Highway Administration (and the California Department of Transportation [Caltrans], as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) National

Marine Fisheries Service (which is commonly referred to as NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of FESA defines “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level: the California Endangered Species Act (CESA; California Fish and Game Code Section 2050, et seq.) CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA that require a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising: (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

The following section is based on the Natural Environment Study, completed on January 19, 2024. A list of threatened and endangered species was obtained from the USFWS and CDFW (from the California Natural Diversity Database). The findings summarized in this section were based on extensive research and field surveys for special-status species in the biological study area and its vicinity.

The reference material cited below indicated that a total of 10 federal and/or State endangered, threatened, or candidate species have the potential to occur within the project area. Based on the field surveys conducted for this project, it was determined that suitable habitat is only present for the southern mountain yellow-legged frog. This information is summarized below in Table 2.3.5-1.

However, as previously stated in Chapter 2.3.4, *Animal species*, Caltrans has been advised to evaluate potential impacts to the following special status wildlife species that could be located within a riparian system downstream of the project site: least Bell’s vireo, southwestern willow flycatcher, southern mountain yellow-legged frog, and San Gabriel Mountain slender salamander. The San Gabriel Mountain slender salamander was discussed in Chapter 2.3.4, *Animal Species*. The remaining three species are discussed below.

Table 2.3.5-1 Threatened and Endangered Species Potentially Occurring in the Project Area

Common Name (<i>Scientific Name</i>)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale
Crotch bumblebee (<i>Bombus crotchii</i>)	CA: CE	open grassland, scrub habitats	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.
Western monarch butterfly (<i>Danaus plexippus plexippus</i>)	U.S.: FC	found west of the Rocky Mountains; adults nectar on flowering plants, larval monarchs dependent on native milkweed plants	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	U.S.: FE	patchy scrublands restricted to Riverside and San Diego counties	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.
Santa Ana sucker (<i>Catostomus santaanae</i>)	U.S.: FT	shallow portions of flashy rivers or streams; prefers substrates consisting of gravel, rubble, and boulders with growths of algae	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys . The species is not expected to be present within the project area.

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Common Name (<i>Scientific Name</i>)	Status	General Habitat Description	Habitat: Potential/ Absent	Conclusion and Rationale										
Foothill yellow- legged frog (<i>Rana boylei</i>)	U.S.: FE CA: CE	partly shaded shallow streams & riffles with rocky substrate	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys. The species is not expected to be present within the project area.										
Southern mountain yellow-legged frog (<i>Rana muscosa</i>)	U.S.: FE, SS CA: CE	rocky streams and narrow canyons	Potential	Low quality habitat occurs within the study area but outside the project impact area. No individuals were observed and species is not expected to occur.										
Southwestern pond turtle (<i>Actinemys pallida</i>)	U.S.: FT CA: SSC	occur in permanent and intermittent waters, including marshes, streams, rivers, ponds, and lakes. They favor habitats with large numbers of emergent logs or boulders, where they aggregate to bask.	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys. The species is not expected to be present within the project area.										
California condor (<i>Gymnogyps californianus</i>)	U.S.: FE CA: CE	coastal mountains, gorges, hillsides	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys. The species is not expected to be present within the project area.										
California spotted owl (<i>Strix occidentalis occidentalis</i>)	U.S.: FT CA: SSC	riparian/hardwood forests & woodlands, live oak/big cone fir forests	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys. The species is not expected to be present within the project area.										
Southwestern Willow flycatcher (<i>Empidonax traillii extimus</i>)	U.S.: FE CA: CE	riparian woodlands	Absent	General habitat for this species is present within the project quadrangle, however no habitat was observed within the project area during field surveys. The species is not expected to be present within the project area.										
<p>Status Key:</p> <table> <tr> <td><u>Federal (US)</u></td> <td><u>State (CDFW)</u></td> </tr> <tr> <td>FE: Federally Endangered</td> <td>CE: California Endangered</td> </tr> <tr> <td>FT: Federally Threatened</td> <td>SSC: California Species of Special Concern</td> </tr> <tr> <td>FC: Federal Candidate</td> <td></td> </tr> <tr> <td>SS: U.S. Forest Service Sensitive Species</td> <td></td> </tr> </table>					<u>Federal (US)</u>	<u>State (CDFW)</u>	FE: Federally Endangered	CE: California Endangered	FT: Federally Threatened	SSC: California Species of Special Concern	FC: Federal Candidate		SS: U.S. Forest Service Sensitive Species	
<u>Federal (US)</u>	<u>State (CDFW)</u>													
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Least Bell's Vireo (Vireo bellii pusillus)

Least Bell's vireo is a migrant that summers in Southern California. They inhabit low riparian growth in the vicinity of water or in dry river bottoms below 2,000 feet in elevation. Although the project site is located much higher in elevation, and no observations of least Bell's vireo have been noted in the California Natural Diversity Database (CNDDDB) within the region, focused protocol surveys were conducted for this species in conjunction with southwestern willow flycatcher because they typically occur in similar habitat. The focused protocol survey was conducted by Peter H. Bloom in 2001 to determine presence/absence of the southwestern will flycatcher. Although no suitable habitat was identified within the project area, potential habitat was noted in the Bear Creek drainage several hundred meters away from the project site. No least Bell's vireo was observed within the project area or in the Bear Creek drainage. Therefore, this species is not expected to occur within the project area or within the drainage immediately downstream.

Southwestern Willow Flycatcher (Empidonax traillii extimus)

Southwestern willow flycatcher most often occurs in broad, open river valleys or large mountain meadows with lush growth and shrubby willows. Several observations of this species occurring downstream from the project site were noted in the CNDDDB. Mr. Bloom conducted focused protocol surveys in 2001 to determine presence/absence for this species within the project area or in the immediate vicinity. No suitable habitat occurs within the project area, and the nearest potential habitat for this species is located within a drainage approximately 200 yards downslope of the project, at Post Mile (PM) 42.3. No Southwestern willow flycatchers were noted during the surveys within the project area or within the drainage below PM 42.3, and no southwestern willow flycatcher is expected to occur within or near the project area.

Southern Mountain Yellow Legged Frog (Rana muscos)

Isolated locations of southern mountain yellow-legged frog (*Rana muscosa*; MYLF) are found in Southern California in the San Gabriel Mountains, San Bernardino Mountains, San Jacinto Mountains, and Mount Palomar. The nearest observation of yellow-legged frog noted in the CNDDDB is approximately 2 miles northwest from the project site, in a separate drainage known as Little Rock Creek. This area is closed to the public for the protection of the frog. The CNDDDB also notes that suitable habitat occurs approximately 6 miles downstream from the proposed project site.

Southern mountain yellow-legged frogs inhabit rocky, open streams and lake edges with a gentle slope that ranges from 984 to greater than 12,000 feet in elevation. Water depth of 2 to 3 inches is preferred. These frogs are active during the day, and emerge from their burrows just after snow melt in the spring. They are generally found within a few feet of a suitable water source. A closely related subspecies, *Rana muscosa sierra*, occurs in the Sierra Nevada mountains. Studies have indicated that this population's

numbers are in rapid decline due to impacts from native transplanted fish and contaminants in the water. Because amphibians breathe through their skin, they take in contaminants in the water more readily than air-breathing animals and are, therefore, more susceptible to health problems.

Presence/absence surveys for MYLF were conducted for Caltrans in 2011 (ECORP Consulting, Inc., 2012) within suitable habitat areas along the closed portion of State Route (SR) 39 and in a reach of Bear Creek, immediately downslope of SR-39. The habitats present along the closed portion of SR-39 lacked the appropriate breeding, basking, and migratory habitats that are typically associated with MYLF. Bear Creek contains appropriate habitat for MYLF; however, no MYLF were detected during the survey.

Environmental Consequences

Threatened and Endangered Plant Species

As indicated in Table 2.3.5-1, suitable conditions for threatened and endangered plant species are not present within the limits of construction or impact zone, and no species were observed during field surveys; therefore, no impact will occur.

Threatened and Endangered Animal Species

Least Bell's Vireo

As previously stated, focused protocol surveys did not identify any least Bell's vireos within the project area or within the Bear Creek drainage, which was noted to contain potential habitat. Because this species is not expected to occur within the project area or within the drainage immediately downstream, there would be no impact to the least Bell's vireo due to the proposed project.

Southwestern Willow Flycatcher

A few observations of this species that occur approximately 1 mile downstream are noted in the CNDDDB. Also, marginal habitat for this species is located a few hundred yards downslope of the project site. Although no individuals or their habitat were observed within the project area and no individuals are expected to occur on the site, a potential exists to affect individuals and their habitat further downstream. During the construction phase of the proposed project, there is potential for rockslides and erosion to occur, thereby potentially impacting habitat downstream. Best Management Practices (BMPs), such as the use of siltation fences and berms, have been incorporated into the project design to prevent erosion or slides from reaching natural drainages outside the project impact footprint.

Southern mountain Yellow-legged Frog

The federal government listed the MYLF as Endangered in 2002, and critical habitat was designated in September 2006. Critical habitat does not exist within the project area; however, it is located within nearby drainages 0.25 mile to the north and west, but not within the same drainage or downstream of the proposed project. Therefore, there will be no effect to critical habitat of this species. Because no habitat for this species exists within the project area, there will be no loss of habitat as a result of the implementation of the proposed project.

There was one observation of an individual MYLF noted in the CNDDDB approximately 2 miles downslope of the proposed project in a separate drainage for Soldier Creek, and additional observations in a drainage to the north and west known as Little Rock Creek. The CNDDDB also notes that potential habitat for the species exists approximately 6 miles further downstream from the project site, near the confluence of the West Fork and East Fork of the San Gabriel River. Due to the distance and relative location in a separate drainage from the proposed project site, there is no potential for impacts to the individual noted in Soldier Creek, its surrounding habitat, or the Little Rock Creek area. Also, there is no potential for effects from sedimentation or contaminants generated from the construction phase of the proposed project to reach potential habitat further downstream due to the project design and the distance of 6 miles. Because no individual MYLFs are expected to occur within the project area or immediately downstream, there will be no effects to this species.

Construction Impacts

There is a potential for rockslides and erosion to occur due to construction activities. These activities could potentially impact the downstream habitat of least Bell's vireo, southwestern willow flycatcher, and mountain yellow-legged frog. As a result, BMPs, such as the use of siltation fences and berms, have been incorporated into the project design to prevent erosion or slides from reaching natural drainages outside the project impact footprint.

Avoidance, Minimization, and/or Mitigation Measures

AS-1: Pre-construction surveys for sensitive animal species, including the San Gabriel Mountain slender salamanders, least Bell's vireo, southwestern willow flycatcher, and mountain yellow-legged frog, within the project area must be conducted by a qualified biologist prior to construction. Any individuals observed within the project limits will be relocated to nearby suitable habitat (within the Angeles National Forest), prior to construction.

2.3.6 Invasive Species

Regulatory Setting

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

Affected Environment

This section is based on the Natural Environment Study prepared by Caltrans on January 19, 2024. Invasive exotic plant species are located along the edges of the existing roadway. As discussed in Chapter 2.3.3, *Plant Species*, ruderal, non-native plant species within the Biological Study Area (BSA) include cheat grass, Jerusalem oak (*Chenopodium botrys*), ripgut brome (*Bromus diandrus*), yard knotweed (*Polygonum arenastrum*), Fremont’s goosefoot (*Chenopodium fremontii*), foxtail fescue, jimson weed (*Datura wrightii*), summer mustard (*Brassica geniculata*), Russian thistle (*Salsola tragus*), weedy cudweed, and Indian tree tobacco (*Nicotiana glauca*). Ruderal, native plant species within the project area include rubber rabbitbrush, Parish’s buckwheat, prickly poppy, California fuchsia, Nevada lotus (*Lotus nevadensis*), happy plant, Mojave linanthus, and rock buckwheat. The large number of invasive plants present within the BSA is typical of heavily disturbed roadsides in California.

Environmental Consequences

Table 2.3.6-1 below summarizes the permanent and temporary impacts to invasive plant species for each build alternative. The permanent impact areas range from 4.0 to 7.6 acres. The existing habitat is highly disturbed by past construction activities and infrequent maintenance. Although small amounts of ruderal vegetation exist, there is no available habitat within the project area for animals to nest or roost, and little opportunity for wildlife to forage. Due to the low biological value of this area, and because no special-status resources occur in this area, the loss of this habitat would not be considered a significant impact.

Table 2.3.6-1 Ruderal Plant Community Impacts

Plant Community	Alternative 2		Alternative 3		Alternative 4	
	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)
Ruderal (Invasive Plant Species)	4.0	5.3	6.5	9.2	7.6	9.8

When evaluating impacts regarding invasive plant species, the effect that the proposed project would have on increasing the propagation of non-native invasive plant species must be considered. Following a disturbance to the soil of any natural habitat, a plant succession follows over time. As is typical with most areas within the region of the project site, more aggressive, rapid-growth non-native species would become established instead of native species after a soil disturbance, such as with the construction of the proposed project or routine maintenance. These non-native pioneer plants would then alter conditions and make it difficult for native plants to re-grow. Because the project proposes improvements within areas that have been previously disturbed by the construction of the existing road and ongoing maintenance, with a few relatively minor exceptions, no significant intrusion of non-native plant species is expected into areas that have not already been disturbed. Therefore, no significant impact due to non-native species is expected with the implementation of the proposed project and implementation of measures to replant impacted areas with native species.

In compliance with the EO on Invasive Species (EO 13112) and guidance from the FHWA, the landscaping and erosion control included in the project would not use species listed as invasive. None of the species on the California list of invasive species are used by Caltrans for erosion control or landscaping. All equipment and materials would be inspected for the presence of invasive species and cleaned, if necessary. In particularly sensitive areas, extra precautions would be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented if an invasion occurs. Project features incorporated into the Project would minimize the potential for the introduction and spread of invasive plants through worker environmental awareness training, implementing construction site management practices to minimize impacts to sensitive habitats, restoring disturbed areas, revegetating temporary impact areas, and implementing invasive weed control measures.

Construction (Temporary) Impacts

As shown in Table 2.3.6-1, temporary impacts to ruderal plant communities would range from 5.3 to 9.8 acres, depending on the build alternative selected. Temporarily impacted areas would be replanted with native plants species that are typical of surrounding

native plant communities. Details of the planting plan would be provided in a separate document and would be coordinated with the U.S. Forest Service (USFS).

Although the existing ruderal plant species are not special-status and do not require preservation or replanting to achieve a “no net loss” under state or federal law, the project site is surrounded by a National Forest. The replanting would occur on temporarily impacted areas within Caltrans’ Right-of-Way to preserve the scenic views and recreational value of the National Forest for which the highway was originally constructed.

Avoidance, Minimization, and/or Mitigation Measures

- IS-1: Temporarily impacted areas would be replanted with native plant species that are typical of the plants within the surrounding plant community. Approved plant palettes would be coordinated with USFS biologists.
- IS-2: In compliance with the EO on Invasive Species (EO 13112) and guidance from the FHWA, the landscaping and erosion control included in the project would not use species listed as invasive. None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping.
- IS-3: All equipment and materials would be inspected for the presence of invasive species and cleaned, if necessary. In particularly sensitive areas, extra precautions would be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

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

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land-use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology,

contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations Section 1508.7.

2.4.2 Methodology

In 2005, the California Department of Transportation (Caltrans), in conjunction with the Federal Highway Administration (FHWA) and U.S. Environmental Protection Agency (EPA), developed a guidance document entitled *Guidance for Preparers of Cumulative Impact Analysis*, which advises environmental practitioners to consider the potential cumulative impacts associated with a proposed action by identifying appropriate resources to analyze, defining the geographic and temporal parameters of the analysis, selecting the appropriate method (list approach, projection approach, or hybrid), and deriving conclusions about cumulative significance. The analysis in this section follows the eight-step cumulative impact analysis methodology developed in the above-mentioned guidance:

- Step 1: Identify the project-specific resources to consider in a cumulative effect analysis.
- Step 2: Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.
- Step 3: Describe the current health and the historical context of each resource.
- Step 4: Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.
- Step 5: Identify the set of other current and reasonably foreseeable future actions or projects and their associated environmental impacts to include in the cumulative impact analysis.
- Step 6: Assess the potential cumulative impacts.
- Step 7: Report the results of the cumulative impact analysis.

- Step 8: Assess the need for mitigation and/or recommendations for actions by other agencies to address a cumulative impact.

As stated in the guidance, if a project would not cause a direct or indirect impact on a particular resource, then it would not contribute to a cumulative impact on that resource, thus, further evaluation is not required. The following resources would have no project-related direct or indirect impacts under all build alternatives (Alternatives 2, 3, and 4) and are therefore not discussed further in the section:

- Land Use
- Coastal Zone
- Wild and Scenic Rivers
- Farmlands and Timberlands
- Growth
- Community Character and Cohesion
- Relocations and Real Property Acquisitions
- Utilities/Emergency Services
- Hydrology and Floodplain
- Paleontology
- Wildfire

Per the 2005 FHWA/EPA guidance, a cumulative impact analysis should focus on resources that would be substantially impacted by a proposed project or resources that are currently in poor or declining health. Additionally, Section 15130 of the CEQA Guidelines states that when an incremental effect is not “cumulatively considerable,” the effect can be dismissed as not significant, provided that it can be substantiated with a basis for the determination that an incremental effect is not cumulatively considerable. The following resources have less-than-significant impacts; are currently in good/stable health; and when combined with the anticipated impacts of other past, present, and future projects in the area, would not result in a significant impact. Thus, it was determined that the following resources would not require detailed cumulative impact analyses for the reasons described under each resource area (described below):

- Parks and Recreational Facilities

- Environmental Justice
- Cultural Resources
- Water Quality
- Geology, Soils, Seismicity and Topography
- Hazardous Waste
- Air Quality
- Noise and Vibration
- Energy
- Greenhouse Gas Emissions
- Traffic and Transportation
- Visual Aesthetics
- Biological Resources

2.4.3 Affected Environment

This section discusses the cumulative impacts on given resources, defined by RSA. Each resource has a specific RSA, which is delineated to include the project area and areas outside of the project where the proposed project's activities, in combination with activities of the other projects in the area, could contribute to cumulative impacts on the resource. Table 2.4-1 below lists the current and proposed planned developments in the general vicinity of the project area. Potential cumulative impacts on each resource are evaluated for both construction and operation of the proposed project. For the purpose of this analysis, the build alternatives are considered to have similar cumulative impacts given their similar project footprint. Cumulative impacts identified for the proposed project result from the past, present, and foreseeable future actions within the Angeles National Forest (ANF) and nearby cities and towns, such as Wrightwood, Azusa, and the greater San Gabriel Valley.

Table 2.4-1 Current and Proposed Planned Developments in the General Vicinity of the Project Area

Name	Location	Agency	Description	Status
Canyon City Business Center	Sierra Madre Avenue and North Todd Avenue, Azusa	City of Azusa	Demolish the existing Colorama Wholesale Nursery (approximately 13,465 square feet) and construct seven industrial buildings with associated surface parking, landscaping, and infrastructure improvements.	Final Environmental Document (FED)–Final Environmental Impact Report (FEIR) (May 2018)
Big Dalton Dam, No. 32-0	Big Dalton Reservoir, Glendora	California Department of Water Resources	Replacement of the existing sluice gate, repair of the sluiceway pipeline, installation of a new regulating valve at the sluiceway outlet, replacement of the Outlet 1 riser gate, and installation of the water line for Penstock 1.	FED–Notice of Exemption (NOE) (May 2018)
El Encanto Azusa River Wilderness Park Trail Extension Improvements Project	Off SR-39 at Old San Gabriel Canyon Road, Azusa	Watershed Conservation Authority	Construct the El Encanto Azusa River Wilderness Park Trail extension and other path improvements.	FED–NOD (June 2018)
Repair of Azusa Conduit Between Tunnels 23/24	San Gabriel Canyon at Morris Dam, Azusa	California Department of Fish and Wildlife, Region 5	Repairing the Azusa Conduit in the San Gabriel Canyon to restore water conveyance within the conduit.	FED–NOE (July 2018)
California Grand Village Project	West Sierra Madre Avenue and North Todd Avenue, Azusa	City of Azusa	Redevelop an approximately 4.48-acre area of the Azusa Greens Country Club by constructing a residential community of 253 residences for seniors	FED–FEIR (November 2018)
San Gabriel River Confluence with Cattle Canyon Improvements Project	On Camp Bonita Road, 1.2 miles east of Camp Williams Resort	Watershed Conservation Authority	Development of new picnic areas, pedestrian trails, river access points, and upgrades to existing facilities, improvements to paved and unpaved roadways, parking improvements, restrooms and refuse disposal improvements, restoration of riparian and upland vegetation communities of the East Fork of the San Gabriel River and Cattle Canyon Creek.	FED–Notices of Determination (NOD) (November 2018)

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

Name	Location	Agency	Description	Status
SR-39 Road Realignment and Bridge Replacement Project Amendment (Lake or Streambed Alteration Agreement No. 1600-2016-0002-RS)	At the San Gabriel River Bridge No. 53-2245 on SR-39 (PM 32.1)	California Department of Fish and Wildlife	Replacement of the San Gabriel River Bridge No. 53-2245 on SR-39, realignment of the existing road approach and departure for the new bridge, and demolition of the existing structure. Riparian vegetation will be cleared for approximately 100 feet upstream and 200 feet downstream below the existing bridge.	FED–NOD (December 2019)
Fire Camp 19 Life Safety Improvement Project	At 22550 East Fork Road, Azusa, Los Angeles County, CA 91702	State Water Resources Control Board	Upgrades to existing potable water system and replacing wastewater treatment system.	FED (NOE) (January 2020)
Dhammakaya International Meditation Center Environmental Impact Report (EIR)	At Monrovia Place and Palm Drive, Azusa	City of Azusa	Demolition of several existing on-site structures located on the Dhammakaya International Meditation Center site and reconstruction.	NOD for Addendum No. 2 (December 2020)
Covina Bowl Specific Plan Project	At West San Bernardino Road, North Rimsdale Avenue, and West Badillo Street, Covina.	City of Covina	Implementation of a new Specific Plan on approximately 7.5 acres, which includes mixed use, residential, and commercial land uses.	FED–NOD (March 2021)
Upper San Gabriel River Watershed Urban Greening Project	Within communities across the Upper San Gabriel River Watershed - Azusa, Baldwin Park, Claremont, Covina, El Monte, Glendora, La Verne, Pomona, San Dimas, West Covina	California State Coastal Conservancy	The project consists of planting approximately 500 trees using resident volunteers who will receive environmental education in the process of the tree plantings	FED–NOE (April 2021)
Seismic Monitoring Station	In the ANF, 1.3 miles east of Falling Springs.	California Governor's Office of Emergency Services	U.S. Geological Survey plans to install and operate an outdoor seismic monitoring station in a roughly 36-square-foot area, consisting of two small structures.	FED–NOE (July 2021)

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

Name	Location	Agency	Description	Status
Upgrade Metal Beam Guardrails (MBGRs) (07-32760)	On SR-39 in Azusa from the Coldbrook Campground to the San Gabriel Canyon Road Lookout (PM 32.2/38.4)	Caltrans	Upgrade MBGR to Midwest Guardrail System (MGS)	In construction (March 2022)
City of Azusa 2021-2029 Housing Element Update	Citywide	City of Azusa	The Housing Element identifies the following: 1) housing needs, 2) constraints to housing development, 3) housing resources (available sites and funding sources), and 4) a housing plan, with goals, policies, and implementation actions that further housing opportunities for Azusa residents.	FED–NOD (March 2022)
Old Schoolhouse Removal	403 North Angeleno Avenue, Azusa, CA 91702	Azusa Unified School District	Demolish the Old Schoolhouse structure and replace with grass lawn or parking lot.	FED–NOD In construction (May 2022)
Grand Estates	On Grand Avenue north of Palm Drive, east of North Silent Ranch Drive, and west of Rainbow Drive in Glendora.	City of Glendora	Development of a 27-acre hillside property into a gated single-family residential community and open space.	FED–Mitigated Negative Declaration (MND) (June 2022)
Citrus, Forbes, and Walnut Rubber Dams Replacement Project	At Citrus, Forbes, and Walnut Spreading Grounds.	Los Angeles County Flood Control District	Replacement of the existing rubber dam bodies used for groundwater recharge at the spready grounds.	FED–NOE (January 2023)
East San Gabriel Valley Area Plan	Within 24 unincorporated communities within Los Angeles County with a boundary of Irwindale to Pomona and Glendora to Rowland Heights	Los Angeles County Department of Regional Planning	A plan to enhance, guide, and support the long-term growth, development, and maintenance of 24 unincorporated communities in the East San Gabriel Valley planning area. It consists of 6 elements (Land Use Element, Economic Development Element, Community Character and Design Element, Natural Resources and Conservation Element, Mobility Element, Parks and Recreation Element).	FED–FEIR (February 2023)

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

Name	Location	Agency	Description	Status
Mel Canyon Debris and Sediment Basin	Within the San Gabriel Mountain foothills at Brookridge Road and Melcanyon Road	City of Duarte	Construct a debris and sediment catchment basin in Mel Canyon to prevent rock, sand, silt, and organic debris from flowing downslope onto Melcanyon Road and surrounding streets.	FED–MND (April 2023)
LA 39 3W7301 FY1920 2021 (07-3W730)	On SR-39 from the Azusa Wilderness Park to the San Gabriel Canyon Road Lookout (PM 17.8/38.2)	Caltrans	Slurry seal and localized resurfacing of existing asphalt concrete.	Construction Closeout (June 2023)
SR-2/I-210 Sustainability Climate Change (07-37930)	Along SR-2 from Glendale to 5 miles east of Wrightwood (PM R17.0/R75.24)	Caltrans	Construct various Treatment BMPs for implementation of Total Maximum Daily Loads.	Program Project (June 2023)
LA-002-Digouts (07-0W430)	On SR-2 from northern Monrovia to Wrightwood (PM 46.0/82.2)	Caltrans	Asphalt Concrete Overlay, Shoulder Backing, Dig out failed areas, and Seal random cracks.	In Environmental Assessment, Project Specifications, and Estimates Phase (June 2023)
Cypress Villas Project	At North Azusa Avenue and Cypress Street, Covina	City of Covina	An 8-acre mixed commercial and residential development.	FED–FEIR (August 2023)
Angeles Crest Hwy Drainage (07-34900)	On SR-2 from 1 mile south of Dawson Saddle Trailhead to Wrightwood (PM 68.1/82.1)	Caltrans	Rehabilitate culverts	In Environmental Assessment, Project Specifications, and Estimates Phase (September 2023)
LA 2 MBGR (07-33250)	On SR-2 from La Canada Flintridge to 5 miles east of Wrightwood (PM 26.40/79.80)	Caltrans	Upgrade MBGR to MGS	In construction (December 2023)

Parks and Recreational Facilities

The RSA for Parks and Recreational Facilities comprises a 1-mile buffer around the project area due to the expansive nature of the ANF and its many recreational opportunities that exist far outside the developed portion of the roadway. There are

seven resources near the project location: Pacific Crest Trail (PCT), Islip Saddle Day Use Area, Jarvi Memorial Vista, Pine Hollow Picnic Area, Little Jimmy Camp Trail, San Gabriel Canyon Road Lookout, and Crystal Lake Recreational Area. Build Alternative 2 would not require any work outside of the Caltrans Right-of-Way (ROW); however, Alternatives 3 and 4 would result in a permanent easement and amendment of the existing Special Use Permit (SUP) that Caltrans has with the U.S. Forest Service (USFS), which would utilize areas outside of the current ROW where viaducts are proposed, and a portion of the Islip Saddle Day Use Area parking lot. The portion of new ROW acquired would be minor. Furthermore, the amendment of the SUP would not affect how users interact with and utilize the recreational resources in and around the project location because present resources are plentiful and in good health. Temporary impacts would be addressed through preparation of a Traffic Management Plan and compliance with standard noise-reducing and air quality measures incorporated as part of the project design. With the implementation of the design measures outlined in Chapter 2.1.3, *Parks and Recreational Facilities*, the operation of all build alternatives (Alternatives 2, 3, and 4) would not contribute to cumulative impacts on parks and recreational facilities within the RSA.

Environmental Justice

The RSA for Environmental Justice comprises the project area, surrounding lands within the ANF (Census Tract 9304), Wrightwood, and portions of the San Gabriel Valley in the vicinity of State Route (SR) 39, including Azusa, Duarte, El Monte, Covina, Glendora, Irwindale, and Baldwin Park. Minority populations and low-income communities are present within the RSA; however, any project effects, whether adverse or beneficial, would occur to minority and low-income populations proportionally, thus the proposed project would not have negative disparate impacts on minority populations, and there would not be disparate positive impacts primarily accrued by nonminority populations. Construction-related impacts from noise, traffic, access, and air quality emissions would be temporary and would be diminished with the use of standard project features and best management practices discussed in Chapter 1. Therefore, the project would not contribute to cumulative impacts on environmental justice populations.

Cultural Resources

The RSA for Cultural Resources covers approximately 89.6 acres, which comprises the project area and a portion of the road shoulder where staging of equipment and materials is expected to take place. The horizontal extent of the RSA extends as far as 570 feet away from the roadway at some points, though it is often approximately only 50 feet from the edge of the road in most cases. A records search has determined that 34 previously recorded pre-contact and historic-era cultural resources are within a 1-mile radius of the RSA. Of these, one is believed to be associated with Native American

occupation of the vicinity and 33 are historic-era sites. One site, P-19-188271 (the French Wall), is located within the RSA. Additionally, the entire Angeles National Forest resource (P-19-186535) was recorded and fully encompasses the RSA. Documented in 1959, P-19-186535 (Angeles National Forest) is designated as California Historical Landmark No. 717. According to the California Office of Historic Preservation, State Historical Landmarks 1 through 769 do not meet California Register criteria (California Historical Resource Status Code 7L). Additionally, this project and future projects within the RSA are not expected to affect the Angeles National Forest in a way that would disqualify it from eligibility if it does not meet the current standards. For these reasons, Caltrans is treating the Angeles National Forest as an administrative boundary.

Resource P-19-188271 (the French Wall) is a wall system composed of Mechanically Stabilized Earth at Post Mile 43.4 that was documented in 2008. It was first used in 1972 as a support system for a failed section of SR-39 in the San Gabriel Mountains and is the first instance of this type of use in the United States. However, it was determined that all build alternatives for this project would not affect the Historic Resource because the official finding was *No Historic Properties Affected*. The historic significance of P-19-188271 (the French Wall), in addition to the proper treatment of this resource and the other 33 recorded resources near the RSA, would be taken into account for this project and all future projects. Therefore, due to the precautions and measures outlined in Chapter 2.1.10, *Cultural Resources* to preserve this and other historic and cultural resources, no cumulative impacts are anticipated.

Water Quality

The RSA for Water Quality comprises the Bear Creek subwatershed, which contains the project area and the nearest receiving water body (Bear Creek) and its tributaries. Bear Creek and its tributaries are not on the 303 (d) list of impaired receiving water bodies. These water bodies are in good health and are solely used as cold, freshwater habitat for aquatic life; there are no drinking water reservoirs or recharge facilities within the project limits. Though the velocity and volume of flow would increase downstream from the increase impervious surface area, there would be minimal impact on water quality due to the length of the project. The project would be subject to the requirements of Caltrans' Construction General Permit and would therefore implement Treatment Best Management Practices (Treatment BMPs) in accordance with the Stormwater Pollution Prevention Plan. The project would also acquire a Section 404 of the Clean Water Act Permit from the U.S. Army Corps of Engineers, a Section 401 and 402 of the Clean Water Act Permit from the California Regional Water Quality Control Board, and a Section 1602 Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife; all conditions required for each permit would be met prior to construction. Therefore, cumulative impacts on water quality and stormwater runoff would not be cumulatively considerable.

Geology, Soils, Seismicity, and Topography

The RSA for Geology, Soils, Seismicity, and Topography comprises only the highway segment and immediately adjacent areas due to the localized nature of potential impacts and the widely varied subsurface conditions surrounding the project area. Due to the geologic conditions at the project site, significant rockfall events have occurred at numerous locations throughout the project area. Numerous slide debris locations have been identified along the route, which may increase the probability of landslides occurring due to the composition of the loose soils. Major faults in the project vicinity include the San Andreas fault (5 miles north-northwest of Post Mile [PM] 44.4) and the San Gabriel fault (5 miles south of PM 40.0). Minor faults exist closer to the project limits, including the Crystal Lake fault (0.3 miles east of PM 40.0) and an unnamed fault (as close as 0.1 miles west of PM 44.4) (Dibblee, 2002). No mapped faults exist within the project limits.

During construction and operation of the project, there would be the potential for disturbance to existing geologic resources in the project vicinity. Potential geologic, soil, and seismic impacts would be addressed through incorporation of geotechnical recommendations, engineering standards, and applicable regulations and practices. Additional structures such as a rock shed, viaducts, and site-specific earth retaining features would reduce the proposed project's susceptibility to geological hazards for each alternative. It is anticipated that similar adjacent projects would adhere to similar standards, and as a result, no cumulative impacts would occur. Adjacent communities and developments are of a sufficient distance from the proposed project that they would not be affected by cumulative geologic and soil impacts caused by the project. The proposed project would include standard design measures that are intended to verify proper geological conditions of the construction site and excavation techniques to minimize adverse effects. As such, the project would not contribute to cumulative geological effects. The project is in a seismically active portion of Southern California and is likely to experience moderate to severe ground shaking. Moderate seismic shaking can be effectively addressed through appropriate design specifications. However, because there is still potential for the project to be affected by a major seismic event, there is a probability for an unavoidable cumulative impact regarding seismicity.

Hazardous Waste

The RSA for Hazardous Waste comprises a 1,000-foot radius around the project area, per the Initial Site Assessment. There is a potential for hazardous materials and hazardous waste to be present within the RSA in the form of aerially deposited lead, naturally occurring asbestos, lead and chromium, asbestos-containing construction materials, and treated wood waste, each of which will be assessed further in the final design phase in order to determine the appropriate mitigation measures that would ensure impacts from these materials are contained. The transportation, use, storage,

and disposal of hazardous waste and materials are highly regulated by local, state, and federal laws, and, therefore, impacts associated with hazardous waste and materials would be localized. Additionally, project features, BMPs, and standard specifications would reduce the impact of any potential hazardous materials. There are no hazardous waste sites, sites from the DTSC's Hazardous Waste and Substances Sites (Cortese) List, water wells, or any other additional sources of hazardous waste or hazardous materials within the RSA. Future similar projects in the area would also implement the same standards and abide by local, state, and federal laws. Therefore, the project would not contribute to cumulative hazardous materials impacts.

Air Quality

The RSA for Air Quality includes Los Angeles County, which is located within the South Coast Air Basin. Projects within the South Coast Air Basin that could potentially affect the air quality would contribute to cumulative air quality impacts. The proposed project is located within the jurisdiction of the South Coast Air Quality Management District and is required to comply with all applicable regulations and Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project, as applicable and appropriate.

Construction activities due to the proposed project and related projects within the same general area would cause temporary air quality impacts. Criteria pollutants, such as oxides of nitrogen, carbon monoxide, and fugitive dust, would be generated by all highway-related construction activities. Due to potentially overlapping schedules of related projects in the area, a cumulative impact would occur at the time of construction. However, this impact would be temporary and controlled to the extent practicable by control measures, such as sound construction practices, and preventative measures required by law and regulations.

The project is not expected to induce traffic on the highway. Although the proposed project would result in greenhouse gas (GHG) emissions during construction, it is anticipated that the project would not result in any increase in operational GHG emissions. A Vehicle Miles Traveled analysis dated November 1, 2023 was conducted by the Caltrans Division of Planning, and the preliminary analysis shows a forecasted daily volume of 1,542 vehicles on SR-39 south of SR-2 by 2045. The analysis showed no discernable peak period, and no induced travel is anticipated. Operational GHG emissions would remain consistent with those currently produced for the southern segment of SR-39 and at SR-2, both of which are not causing significant impacts to the surrounding natural environment. However, the construction of this project in conjunction with other possible projects of similar scope within the general area of the ANF, could have a minimal cumulative impact on air quality in the region.

Noise and Vibration

The RSA for Noise and Vibration comprises an 800-foot radius around the project segment, which is based on the estimated extent of noise propagation for the project due to noise-source factors and other environmental factors. Traffic noise is considered an unfixed noise source because, when viewed over an interval of time, the movement of the vehicles makes the source of the sound appear to emanate from a line rather than a point, and the geometric spreading of noise is that of a cylindrical pattern. Based on the analysis, construction activities, particularly the use of impact, high-speed cutting, and large or heavy equipment, would significantly increase noise levels in the immediate area along the SR-39 during construction. However, implementation of standard measures would reduce the impacts of construction noise. Once construction is complete, noise levels would be similar to those of the open portions of SR-39. There are no impacted human receptors within the project limits, nor does the project fall under the Type I or Type II classifications. Therefore, the project would not contribute to cumulative noise effects in the project area.

Energy

The RSA for Energy comprises the project area due to the prevalence of energy consumption in the transportation sector. The build alternatives would not add capacity to the roadway and would improve traffic flow due to the pavement rehabilitation, thereby reducing energy consumption; therefore, it is not likely that the project would increase operational energy through increased fuel usage. The project does not have any unusual characteristics that would necessitate the use of construction equipment, building materials, or methods that would be less energy efficient than at comparable construction sites in the region or state. Construction-related fuel use is temporary and would cease upon completion of construction activities, and the implementation of project features would further reduce energy consumption during construction. Furthermore, the proposed project would not include maintenance activities that would result in long-term indirect energy consumption by equipment required to operate and maintain the roadway. Therefore, the project would not contribute to cumulative energy impacts within the project area.

Greenhouse Gas Emissions

The analysis of GHG Emissions is, by its nature, cumulative. No individual project is of sufficient size to be the sole reason for climate change; instead, climate change is the result of millions of activities that emit GHGs. The analysis of the proposed project's GHG emissions is within the context of statewide efforts to minimize the impacts of climate change. See Chapter 3.4, *Climate Change* for the discussion of cumulative impacts efforts to reduce contributions to GHGs.

Traffic and Transportation

The RSA for Traffic and Transportation comprises the project area, the City of Azusa, and the census-designated place of Wrightwood. Construction of the proposed project would not cause any lane closures or impede traffic in the region due to the fact that this segment of SR-39 has been closed to the public since 1978. Under Alternatives 3 and 4, there may be temporary impacts on SR-2 due to the construction of the roundabout and repaving of the Islip Saddle Day Use Area parking lot. However, these impacts are not expected to cause significant delays in traffic because the roundabout would be constructed in stages via shifting lanes and constructing pieces of the splitter islands and central island accordingly. Thus, construction would not have an impact on traffic and transportation on SR-2.

Once operational, the project could have a cumulative impact on traffic in the communities surrounding the project location, such as Wrightwood and Azusa. The affected communities would gain improved access to the ANF and would have a through-connection between I-210 and SR-2 via SR-39. Reopening the highway could potentially reduce the drive time to the northern-central portion of the ANF, depending on the location that the driver is commuting from, as discussed in Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. Although there would be increased traffic on this segment due to the reopening compared to its closed state, traffic levels would be similar to those currently experienced on the southern portion of SR-39 and at SR-2. Recent preliminary analysis of traffic projections shows a forecasted daily volume of 1,542 vehicles on SR-39 south of SR-2 by the year 2045. There was no discernable peak period because this project would not induce additional traffic beyond what is already present on SR-39 and SR-2. The reopening of SR-39 would also give pedestrians greater access to the ANF so that they may enjoy various recreational activities, in addition to active transportation via bike or shuttle bus. With proper planning and management, the proposed project and other similar projects would have an overall beneficial cumulative impact on traffic and transportation in the region.

Visual Aesthetics

The RSA for Visual Aesthetics comprises the immediate landscape surrounding the project limits, which makes up the natural environment of the ANF. Due to the relatively mountainous terrain and steep valleys, views of the project site are very limited from locations other than the roadway itself. Partial views of the project from offsite locations only occur at the Islip Saddle Day Use Area, at certain lookout points on the PCT, and at Jarvi Memorial Vista Point located along SR-2, approximately 0.5 miles west of the SR-2/SR-39 junction. Although the Islip Saddle Day Use Area does not provide a clear view of the entire segment of the SR-39 project area, it does provide a view of the newly proposed roundabout at the SR-2/SR-39 junction. The PCT also provides views of the junction as it crosses SR-2 and rejoins it at the Islip Saddle Day Use Area. The Jarvi

Memorial Vista Point provides visitors with a wide-angle view of a segment of SR-39 as they look east toward the San Gabriel Wilderness. As a result, minimal impacts to the visual character of the project location are expected due to the construction of several proposed built structures. Although the visual impacts for this project were determined to be less than significant with minimization measures and specific design features for the structures, future projects that may want to add to the stability and safety of the roadway in this geologically unstable section may contribute to cumulative visual impacts in the future. As more of the surrounding environment and cliffsides erode over time, more structures may be needed to provide stability and safety to the roadway and its users in the future. As a result, the potential for cumulative impacts on visual resources in the future does exist.

Biological Resources

The RSA for the Biological Resources for this project comprises the ANF, particularly within the San Gabriel National Monument.

A total of six plant communities were observed along the 4.4-mile-long portion of SR-39 during a biological study that was conducted by a qualified biologist. The six communities are: (1) mixed coniferous forest, (2) canyon live oak woodland, (3) xeric and mesic cliff faces, (4) riparian herb and scrub, (5) mixed montane chaparral, and (6) ruderal (invasive species). A review of the onsite habitat characteristics compared to the California Natural Diversity Database classification system did not identify special-status plant communities within the Biological Study Area. With design specifications, construction being limited to the ROW and new easements granted by the USFS, avoidance measures, landscaping with native plants, and other projects in the area following similar measures, a cumulative impact on plant communities is not anticipated.

Amphibian populations at the project site are expected to be low or non-existent due to the lack of sufficiently large bodies of continuously available water. If present, amphibians are expected to be localized to the available water sources. No amphibian species were recorded during any of the biological surveys. With BMPs, avoidance measures, and other projects in the area taking the same precautionary measures, a cumulative impact on amphibian populations is not expected to occur.

The diversity of structure and plant communities present onsite provides both forage and nesting habitat for several locally occurring bird species. Some species are known to be closely associated with specific plant communities, whereas other species utilize a variety of habitat types for foraging and breeding. With frequent biological surveys and avoidance measures, the proposed project is not anticipated to have a cumulative impact on bird communities.

A variety of mammals occur within the project area, one of which is considered a sensitive species: Nelson's bighorn sheep. Nelson's bighorn sheep in the vicinity of the project area travel seasonally between summer and winter ranges and daily between important resources. SR-39 could potentially be used as a travel route for seasonal movement because of its upslope/downslope orientation or for daily movements between local resources. However, due to the vast contiguous open space that occurs in all directions around the project area and numerous other travel routes in the vicinity, SR-39 itself should not be considered a wildlife movement corridor that links two otherwise disconnected open spaces, but rather one of many possible localized travel routes available to large mammals. Data collected during Phase I of Caltrans' focused study of the Nelson's bighorn sheep revealed no sheep observations at the Snow Spring area along SR-39. If, in the future, a specialized Bighorn sheep movement corridor is identified at the Snow Springs slide area near SR-39, the project's design would be modified to accommodate and preserve the corridor. Several project features are proposed to protect wildlife movement that may occur along the roadway. The protective features for Alternatives 3 and 4 include continuous barrier fencing (Alternative 4), wildlife crossing signage (Alternative 3), viaducts/wildlife crossings (Alternatives 3 and 4), a rock shed (Alternatives 3 and 4), and a roundabout at the SR-2/SR-39 junction (Alternative 4). With the proposed project features and avoidance and monitoring measures, an adverse cumulative effect on the Nelson's bighorn sheep and wildlife movement within the region is not expected to occur. Similar future projects that may install additional wildlife protection devices and/or structures may aid in the preservation of local wildlife and bring beneficial cumulative impacts to wildlife in the ANF.

Taking this discussion into account, it is not anticipated that a cumulative impact to biological resources would occur during the construction or operation of the proposed project. Once operational, the project would not contribute to long-term cumulative impacts to biological resources in the region.

2.4.4 Avoidance, Minimization, and/or Mitigation Measures

With implementation of standard minimization measures and mitigation measures proposed in each topical section within this Environmental Impact Report/Environmental Assessment, project contributions to cumulative impacts would be considered less than cumulatively considerable, and no additional mitigation measures are required.

Chapter 3 California Environmental Quality Act (CEQA) Evaluation

3.1 DETERMINING SIGNIFICANCE UNDER CEQA

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, conducted by Caltrans pursuant to 23 United States Code Section 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

One of the primary differences between CEQA and NEPA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS) or a lower level of documentation will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated, and judgment of its individual significance is not deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, requires the identification of each "significant effect on the environment" that results from the project, in addition to ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated, if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A “No Impact” answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to California Environmental Quality Act (CEQA), not National Environmental Policy Act (NEPA), impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most California Department of Transportation (Caltrans) projects, such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Sections 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

3.2.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Aesthetics

a, b, c) Less Than Significant Impact

The project is located in the San Gabriel Mountains, which is an area valued for its scenic landscapes and views. The sections of State Route (SR) 39 and SR-2 within the project limits are either eligible for listing as a state scenic highway (SR-39) or are already listed (SR-2). Project features and design elements have been included in the project to help avoid and/or minimize impacts to the scenic views common in this area.

Most of the large structures proposed under the build alternatives (Alternatives 2, 3, and 4) would only be visible by users of SR-39; there are few trails or other vantage points from which the large structures would be visible, with the exception of where the Pacific Crest Trail (PCT) approaches SR-2. In addition, these structures would include context-sensitive solutions and aesthetic treatments that allow them to blend into the surrounding environment as much as possible. Many of the structures would not obstruct views from SR-39 due to their design and placement along the roadway. Retaining walls and catchment walls would be built abutting the steep cliffs or downslope of the roadway; views of these structures from the road or other areas would be minimal. The viaducts proposed under Alternatives 3 and 4 would be built level with the existing roadway; the existing visual character looking westward from the roadway would be preserved. Wildlife fencing proposed for the eastern side of SR-39 under

Alternative 4 would include aesthetic treatments to help it blend in with the background; the fencing on the western side would be below the roadway and out of view. The rock shed proposed under Alternatives 3 and 4 would be designed with the smallest footprint possible, without compromising safety, and would include treatments that minimize its visual impact.

Alternatives 3 and 4 would expand the existing parking lot adjacent to SR-2 near its junction with SR-39. Alternative 4 would also include a portion of SR-2 with the construction of the proposed roundabout at the junction of SR-39 and SR-2. These elements would generally alter existing paved areas and would be designed to fit the character of the surroundings. The qualities that contributed to the designation of SR-2 as a scenic resource would not be adversely affected.

The proposed project also includes replanting impacted vegetation in-kind with native and locally sourced plant species within the project area, resulting in no net loss of trees or native vegetation within the project area.

Viewers from the roadway would see these project elements for moderate to long durations and from relatively close distances. Their sensitivity would be high; however, the ability to use the roadway after decades of it being closed to the public would temper their response, and they would understand that the visual intrusions of the project elements are a necessity for the safe use of the highway. Hikers using the PCT may be more sensitive to any changes to existing visual resources because they are generally more in tune with their natural surroundings. However, awareness of proposed work for the project would be limited to views from the PCT as it approaches SR-2 because most of the structures proposed for this project would not be visible elsewhere.

Overall, the response of viewers is expected to be moderate-low. The project would not have a substantial adverse effect on a scenic vista, substantially damage scenic resources, or substantially degrade the visual character or quality of the area.

d) No Impact

The proposed project would not include new lighting elements in an area where there is currently no lighting; therefore, no impacts would occur.

3.2.2 Agriculture and Forest Resources

<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p>				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Agriculture and Forest Resources

a, b, c, d, e) No Impact

There are no farmlands or agricultural uses within the project area.

The project is located on a highway easement within the Angeles National Forest (ANF). All build alternatives would either remain completely within that easement or would extend slightly beyond the easement in isolated locations. The terrain within the project limits is steep and rocky, with very limited vegetation and only a few scattered

trees. The minimal amount of vegetation that might be removed during construction would be replanted in a suitable onsite location. There are no areas within the project limits that are actively managed for timber production or designated as Timber Production Zones. All work would be done in coordination with the U.S. Forest Service (USFS) to ensure that there are no adverse effects to forest land. Therefore, no impacts would occur.

3.2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Air Quality

a, b) Less Than Significant Impact

The proposed project is located within the South Coast Air Basin and is therefore under the jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board. The SCAQMD is the primary agency responsible for writing the Air Quality Management Plan (AQMP) in cooperation with the Southern California Association of Governments (SCAG), local governments, and the private sector. The AQMP provides the blueprint for meeting state and federal ambient air quality standards. As discussed in Chapter 2.2.5, *Air Quality*, this project is not a capacity-increasing transportation project. It would have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction with the implementation of standard minimization measures. The proposed project is included in SCAG’s most recent Regional Transportation Plan and Regional Transportation Improvement Program, both of which were found to be conforming (see Chapter 2.2.5, *Air Quality*). Therefore, the proposed project would not conflict with the AQMP, violate any air quality standard, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

c) No Impact

There are no primary sensitive receptors (e.g., hospitals, schools, convalescent facilities, or residential areas) within or near the project limits that would be affected by construction activities. Therefore, no impacts would occur.

d) No Impact

Temporary construction activities could generate fugitive dust from the operation of construction equipment. The project would comply with construction standards adopted by the SCAQMD, as well as Caltrans' standardized procedures for minimizing air pollutants during construction. The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Therefore, no impacts would occur.

3.2.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Biological Resources

a) Less Than Significant with Mitigation Incorporated

A full discussion of sensitive plants and animals evaluated for this project, including avoidance, minimization, and/or mitigation measures, can be found in Sections 2.3.1, *Natural Communities*; 2.3.3, *Plant Species*; 2.3.4, *Animal Species*; and 2.3.5, *Threatened and Endangered Species*.

The biological evaluation for this project identified the following candidate, sensitive, and special-status species as being potentially present within the project area (or of particular interest to the USFS) and were therefore evaluated for potential impacts from the project:

- Nelson's bighorn sheep (*Ovis canadensis nelsoni*)
 - USFS Sensitive Species
 - California Fully Protected
- San Gabriel Mountains slender salamander (*Batrachoseps gabrieli*)
 - USFS Sensitive Species
- Least Bell's Vireo (*Vireo bellii pusillus*)
 - Federal Endangered
 - California Endangered
- Southwestern Willow Flycatcher (*Empidonax traillii extimus*)
 - Federal Endangered
 - California Endangered
- Southern Mountain Yellow-Legged Frog (*Rana muscosa*)
 - Federal Endangered
 - California Special Concern

The evaluation concluded that there would be no impacts to the San Gabriel Mountains slender salamander, least Bell's vireo, or southern mountain yellow-legged frog. It was also concluded that, although impacts to southwestern willow flycatcher habitat downslope from the project are possible, appropriate BMPs have been incorporated into the project design to avoid any impacts. As a precaution, pre-construction surveys for these species will also be conducted and any individuals observed within the project limits will be relocated to nearby suitable habitat (within the ANF), prior to construction.

Nelson's bighorn sheep is present in the project area and could be impacted either directly through human/vehicle-induced mortality or changes in movement patterns, or indirectly through loss of habitat. It was noted in Chapter 2.3.4, *Animal Species*, that any loss of an individual bighorn sheep before the goals described in its recovery plan are

met should be considered a potentially significant impact. It was also noted that any loss of habitat within the project area should be considered a loss of bighorn sheep habitat and a potentially significant impact. Chapter 1, *Proposed Project*, outlines the features that have been incorporated into the project alternatives, such as wildlife fencing, viaducts for wildlife crossing, and wildlife crossing signs, that will avoid or minimize these impacts.

Even so, it is likely that impacts to bighorn sheep cannot be completely avoided. Additionally, questions have been raised about Caltrans' ability to fully mitigate the potential impacts to a sheep attempting to cross SR-39. Caltrans is committed to mitigating impacts to Nelson's bighorn sheep to a less than significant level by any reasonable means, including biological monitoring during construction and habitat enhancement.

To mitigate impacts to bighorn sheep habitat and any short-term direct impacts resulting from vehicle collisions, if they occur, Caltrans would contribute funds to the USFS for the implementation of the strategic plan to improve habitat quality and bighorn sheep population monitoring in the vicinity of the proposed project site. Caltrans would also work closely with California Department of Fish and Wildlife (CDFW) to obtain an incidental take permit, including appropriate mitigation measures, pursuant to Senate Bill (SB) 147 in the event that a "take" of bighorn sheep does occur.

Based on the analysis described above and in the referenced chapters of this Environmental Impact Report/Environmental Assessment, it is concluded that impacts to sensitive species and their habitat would be less than significant with mitigation incorporated.

b) Less Than Significant Impact

A full discussion of riparian habitat and natural communities evaluated for this project, including avoidance, minimization, and/or mitigation measures, can be found in Sections 2.3.1, *Natural Communities*, and 2.3.2, *Wetlands and Other Waters*.

Six plant communities were observed along the portion of SR-39 within the study area. The six communities are: (1) mixed coniferous forest, (2) canyon live oak woodland, (3) xeric and mesic cliff faces, (4) riparian herb and scrub, (5) mixed montane chaparral, and (6) ruderal (invasive species). None of these are considered sensitive by CDFW or USFS, nor are they identified as sensitive in any local or regional plans, policies, or regulations. Therefore, no impacts to special-status plant communities would occur due to the proposed project.

Ten drainages and their associated habitat are located within the project area and would be affected by the project. Permanent and temporary impacts to U.S. Army Corps

of Engineers (USACE) and CDFW jurisdictional resources would vary, depending on the alternative selected (Table 3.2-1).

Table 3.2-1 Permanent and Temporary Impacts to USACE and CDFW Jurisdictional Resources

Alternative No.	Permanent Impacts (acres)		Temporary Impacts (acres)	
	USACE	CDFW	USACE	CDFW
Alternative 2	0.170	0.340	0.170	0.340
Alternative 3	0.185	0.370	0.185	0.370
Alternative 4	0.205	0.410	0.205	0.410

Caltrans would obtain and abide by the necessary regulatory permits (i.e., Sections 1602, 404, and 401), including any measures to minimize harm and restoration/re-vegetation of the temporarily affected areas to ensure that impacts are managed properly.

There would be a less than significant impact.

c) Less Than Significant with Mitigation Incorporated

As noted above and in Sections 2.3.1, *Natural Communities* and 2.3.2, *Wetlands and Other Waters*, 10 drainages have been identified that cross the proposed project location. A jurisdictional determination has been conducted to identify the areas that are under USACE and CDFW jurisdiction, and a jurisdictional delineation is in progress and will be completed by the end of 2024.

Impacts to jurisdictional resources are potentially significant. Prior to the start of construction, all required permits and agreements shall be obtained from the USACE, Regional Water Quality Control Board (RWQCB), and CDFW. Areas that would be temporarily impacted would be replanted after the construction phase is completed. A mitigation and monitoring plan would be prepared that addresses planting procedures, location, success criteria and maintenance. Mitigation for areas that would be permanently impacted would be achieved by purchasing similar habitat within the region of the project at a ratio of 5:1, or as required by the permits. This land would be transferred to an organization that is approved by CDFW and USFS for management in perpetuity.

A Section 1602 Streambed Alteration Agreement from CDFW, a Section 404 permit from USACE, and a Section 401 permit from the RWQCB would be required prior to project initiation. With implementation of the measures below, the impacts to state and federal wetlands would be less than significant with mitigation incorporated.

- WW-1: Impacted vegetated areas would be replanted with native plant species that are typical of the plants within each natural community.
- WW-2: A mitigation and monitoring plan would be prepared that addresses planting procedures, location, success criteria and maintenance.
- WW-3: Mitigation for areas that would be permanently impacted would be achieved by purchasing similar habitat within the region of the project site at a rate of 5:1. This land would be transferred to an organization that is approved by CDFW and USFS for management in perpetuity.

d) Less Than Significant Impact

A full discussion of wildlife movement and corridors as they relate to this proposed project can be found in Sections 2.3.1, *Natural Communities* and 2.3.4, *Animal Species*.

The project site is not a part of a known regional wildlife movement corridor. Therefore, migratory wildlife corridors would not be affected by the proposed project. The reintroduction of vehicular traffic does, however, create the potential to adversely affect the movement of the Nelson's bighorn sheep as individuals migrate between seasonal ranges or cross the road to reach a specific resource, such as water or a mineral lick.

The introduction of a limited amount of activity and traffic during construction and a "soft" opening of the road (i.e., not announcing the reopening to the public for 1 week) would provide some time to allow the sheep to acclimate to the presence of humans and vehicles in the area.

Features incorporated into the project design, such as wildlife fencing that funnels sheep and other animals to viaduct/animal crossing areas where sheep are known to cross SR-39, would also help animals move from one side of the road to the other and reduce impacts on wildlife movement.

With these project features in place, the impacts of the proposed project would be less than significant.

e) No Impact

This project would not conflict with any local policies or ordinances protecting biological resources. Therefore, no impacts would occur.

f) No Impact

There are no habitat or natural community conservation plans that apply to the project area. Therefore, no impacts would occur.

3.2.5 Cultural Resources

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

CEQA Significance Determinations for Cultural Resources

a) No Impact

As detailed in Chapter 2.1.10, *Cultural Resources*, P-19-188271 (the French Wall), which is a wall composed of mechanically stabilized earth, is determined eligible for listing in the National Register of Historic Places under Criterion C for its distinctive characteristics of a type and method of construction as the first modern mechanically stabilized earth wall in the United States. Resource P-19-188271 is also eligible for the California Register of Historical Resources under Criterion 3 and is considered a Historical Resource under CEQA. This project does not propose any improvements or work to be done on the French Wall; therefore, the entire wall system will not be disturbed as a result of the project. Temporary vibration may occur as a result of construction of the nearby viaduct at Post Mile (PM) 43.21 for Alternatives 3 and 4, however, this will cause no effects to the French Wall. Roadway work will involve removing the existing pavement section that runs parallel to the French wall. Excavation of the existing roadway will extend 1 to 2 feet below the existing ground, and the new alignment for SR-39 will shift the road between 2 and 20 feet away from the French Wall. The contractor will then fill-in the excavated pavement section and grade a slope (with a minimum ratio of 4:1) to the French Wall's limits. Midwest Guardrail would be installed along the edge of the pavement nearest to the French Wall; the associated posts are 6 feet in length with 3.5 feet of depth below ground. The existing asphalt concrete berm and guardrail currently near the French Wall will be protected in place to avoid any impacts to the resource. As a result of keeping construction to a minimum around P-19-188271 (the French Wall), there will be no impacts that would cause a change in the significance of the resource.

b) No Impact

No archaeological resources have been recorded or discovered within the project's Area of Potential Effect (APE; i.e., the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of Historic Properties, if present). A records search of several historical sources was conducted, which covered the project limits and a 1-mile radius around it. The records search identified six previously conducted cultural resource studies within the APE, all of which did not identify any archaeological resources within the project limits. A pedestrian survey conducted on November 14, 2023 using intensive pedestrian transects spaced 15 meters apart inspected the APE and unpaved areas on each side of SR-39 and SR-2 for archaeological material. The archaeologists located the previously recorded cultural resources within the APE, took digital photographs to show project overviews, and documented the environmental setting and disturbances within the APE. The surface visibility within the APE was good due to the paved roadways.

These surveys only identified a single historic resource: P-19-188271 (the French Wall), which is eligible for listing in the National Register/California Register of Historical Resources (California Register) under Criterion C/3. Therefore, this project would have no impacts to archaeological resources because none have been identified within the project limits and APE.

c) No Impact

There are no human remains expected to be disturbed during construction. In the case of unanticipated discoveries of human remains during site preparation, grading, or excavation, California State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought by the Coroner to be Native American, the Coroner will notify the Native American Heritage Commission, who, pursuant to Public Resources Code (PRC) Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the Caltrans District 7 Environmental Branch Chief for Cultural Resources and the District Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed, as applicable. Therefore, no impacts would occur.

3.2.6 Energy

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Energy

a) No Impact

The proposed project construction would primarily consume diesel and gasoline through the operation of heavy-duty construction equipment, material deliveries, debris hauling, and vehicle commutes during construction. Construction-related energy effects would likely be greatest during the site preparation phase due to the energy use associated with the excavation, handling, and transport of soils to and from the site. Although construction would result in short-term energy use, the construction design features help conserve energy. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. Furthermore, the one-time expenditure of fuel is not considered a wasteful or inefficient use of nonrenewable resources because the fuel would be used to repair or replace an existing structure with one that meets Caltrans' current structural standards and is safe to allow for the continued use of the traveling public and/or emergency personnel and maintenance crews. Therefore, no impacts would occur.

b) No Impact

There will be no conflicts or obstructions with state or local plans for renewable energy or energy efficiency. Therefore, no impacts would occur.

3.2.7 Geology and Soils

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

CEQA Significance Determinations for Geology and Soils

a) i) No Impact

Major faults within the project vicinity include the San Andreas fault (5 miles north-northwest of PM 44.4) and the San Gabriel fault (5 miles south of PM 40.0). Minor faults exist closer to the project limits, including the Crystal Lake fault (0.3 miles east of PM

40.0) and an unnamed fault (as close as 0.1 miles west of PM 44.4) (Dibblee, 2002). No mapped faults exist within the project limits. The proposed project is not located within an Alquist-Priolo Fault Zone, as established by the California Geological Survey, and is not located within 1,000 feet of an active Holocene-age fault. Therefore, per Memo to Designers 20-10, the structures are not considered susceptible to surface fault rupture hazards; no impacts would occur.

ii) Less Than Significant Impact

Although the project is not located within or adjacent to any earthquake fault zones, shaking from a large enough earthquake may be felt within the project limits. The project would include the construction of several viaduct structures under Alternatives 3 and 4, which could be affected by ground shaking in the event of a large earthquake. However, the project would be constructed to meet current seismic design criteria and would not increase exposure to existing hazards in the area. Therefore, impacts are anticipated to be less than significant.

iii) No Impact

The project area has not been identified as being susceptible to liquefaction by the California Geological Survey. Furthermore, groundwater and/or loose sands were not encountered in previous subsurface investigations. Based on the above information, liquefaction potential at the project area does not exist. Therefore, no impacts would occur.

iv) Less Than Significant Impact

Several very large rock avalanche deposits have been mapped in the general vicinity of the project area. Portions of the roadway cross the thick deposit of landslide debris containing very large, angular boulders in a matrix of coarse gravelly sand. Several landslides have occurred along this highway segment and within the project vicinity. Three of the major landslides that have occurred in the area are as follows:

- PM 40.9 – Occurred prior to roadway construction
- PM 42.3 (Snow Spring) – Occurred in January to February 1969 and reactivated in February to March 1978
- PM 43.9 – Occurred in January to February 1969

Smaller slides also occur frequently in many areas within the project limits. These slides are a major reason this section of road has been closed since 1978.

During construction, temporary sediment control and soil stabilization devices would be installed to reduce the potential for slope instability. Additionally, several project

features, such as structural improvements and installations, are included to reduce the proposed project's susceptibility to geological hazards for each alternative, based on the geological conditions present within the project area and the proposed scope of each alternative. These project features include the construction of viaducts, retaining walls, rock catchment walls, a rock shed, and rock scaling at locations where slope instability is weak, or landslides are most probable. Rock Scaling is an important element to the stabilization and management of the proposed project location. Scaling consists of removing loose rock from slope by means of hand tools and/or mechanical equipment. Scaling the cuts prior to opening the road is recommended. Scaling is a low cost, short-term rockfall mitigation measure that would greatly reduce the amount of rockfall for several years. See the discussion of project alternatives in Chapter 1.4, *Project Alternatives* for more details regarding the benefits of each of the project features.

In addition, the project would be designed and constructed to meet all current seismic design and geologic hazard standards. Therefore, impacts would be less than significant.

b) Less Than Significant Impact

The structural improvements proposed for this project that are recommended to reduce the proposed project's susceptibility to geologic hazards may result in temporary soil erosion or loss of topsoil during construction. Widening of the roadway shoulders and installation of Midwest Guardrail System (MGS) may require soil disturbance and vegetation clearing. The proposed project also includes areas of steep cuts along the sides of SR-39 that would require the construction of retaining walls to reduce slope length and steepness and provide stability to the roadway and hillsides.

Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas per the Erosion Control Plan. The existing cut slopes, some of the natural slopes above the highway, and any new cuts made for this project are expected to produce rockfall. However, cut and fill areas would be minimized to avoid these impacts. Soil cut slope excavation would be carefully controlled during the wet season, and slopes that are susceptible to erosion would be immediately protected when exposed. There would not be a substantial amount of erosion or loss of topsoil, therefore, the impact is less than significant.

c) Less Than Significant Impact

The current conditions of the project site experience unstable slopes, which is a critical aspect to be addressed for this project. The cut slopes along this segment of the highway produce moderate to heavy amounts of rockfall. In some areas, the rockfall is also coming from the natural slopes beyond the cuts. Heavy rainfall, freeze/thaw cycles, and seismic activity are assumed to be the major causes of rockfall within the project area.

This project is located along a highway that traverses a very rugged, west-facing slope that runs along the northeast-trending ridgelines (as high as 2,000 feet above the highway), with slope inclinations as steep as 45 degrees at some locations and numerous debris tracks (constant sources of debris accumulation and slope erosion/failures) running directly downslope. Various locations within the project area are susceptible to constant rockfall and several landslides have occurred prior to and after (previous) project construction, as discussed in Chapter 2.2.3, *Geology, Soils, Seismicity, and Topography*. Below the surface, conditions vary depending on the PM, but the material encountered along the project limits generally consist of fill, underlain by colluvium or Quaternary landslide/talus rubble material (Qls), and Mesozoic age quartz diorite (qd) and granitic rocks (gr) (Dibblee, 2002). The fill, colluvium, and landslide/talus materials are generally composed of poorly graded gravel with sand and well-graded sand with gravel. The depth to bedrock is generally shallow (i.e., less than 10 feet) but may be as high as 100 feet in some cases. The rock quality designation for quartz diorite and granitic rocks generally does not increase with depth. Additionally, the project area has not been mapped for liquefaction by the California Geological Survey. Groundwater and/or loose sands were not encountered in previous subsurface investigations. Therefore, the project area does not have any potential for liquefaction, nor does it have any potential for lateral spreading.

To create a safer and more reliable environment for roadway users on this segment of SR-39, several project features and stabilization measures have been proposed to minimize the potential for geologic disasters, such as rockfall and landslides. These features include the following:

- Construction of several viaducts
- Construction of retaining walls
- Construction of rock catchment walls
- Repairs and rehabilitation to existing retaining walls in poor condition
- Construction of a rock shed
- Rock scaling and re-sloping

These structural improvements are recommended to reduce the proposed project's susceptibility to geological hazards for each alternative, based on the geological conditions present within the project area and the proposed scope of each alternative. Each of these devices and project features are intended to protect highway users from the geologic dangers of this area and improve the current conditions that exist at the project location. A description of these project features and their benefits for the project

is provided in Chapter 1.4, *Alternatives*. An in-depth discussion regarding the structural improvements proposed to address the potential geologic dangers of this area is provided in Chapter 2.2.3, *Geology, Soils, Seismicity, and Topography*.

The implementation of this project is intended to improve the existing conditions at the project site and offer more stability to the adjacent slopes and reliability of the roadway for its users. This project would not contribute to ongoing erosion or cause adverse cumulative impacts to the surrounding geologic makeup of the project location. Therefore, it was concluded that this project, with the avoidance and minimization measures, would have a less than significant impact.

d) No Impact

Expansive soils are fine-grained clay material that tends to rise or sink unevenly when exposed to large amounts of water. The project area consists of imported fill, colluvium (material that accumulates at the foot of a steep slope, mostly sand and gravel), and quartz or granitic rocks (Dibblee, 2002). Because the project is not located in an area known to contain expansive soils, as defined in Table 18-1-B of the Uniform Building Code, no impacts would occur.

e) No Impact

The proposed project does not include the construction of septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

f) No Impact

There are no unique paleontological resources or unique geological features within or adjacent to the project limits. Therefore, no impacts would occur.

3.2.8 Greenhouse Gas Emissions

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Greenhouse Gas Emissions

a) Less Than Significant Impact

The primary greenhouse gas (GHG) emissions produced by the transportation sector are carbon dioxide (CO₂), methane, nitrous oxide, black carbon, and hydrofluorocarbons. CO₂ emissions are a product of the combustion of petroleum-based products, such as gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbon emissions are produced by 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 Association 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 GHG must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions of GHG

This Project is deemed exempt from conformity requirements pursuant to 40 Code of Federal Regulations 93.126. It is not anticipated to result in an increase in operational GHG emissions because no additional roadway capacity will be added.

Construction Emissions of GHG

Construction GHG emissions would result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as pavement with a long operation life, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset by longer intervals between maintenance and rehabilitation activities.

The emissions from temporary construction activities have been estimated for each alternative using the Caltrans Construction Emissions Tool (CAL-CET2021) v1.0.2. and are summarized in Tables 3.2-2, 3.2-3, and 3.2-4 below.

Table 3.2-2 Build Alternative 2 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.000	0.003	0.003	0.203	0.020	1
Roadway Excavation & Removal	0.073	0.488	0.493	0.240	0.057	112
Structural Excavation & Removal	0.001	0.002	0.003	0.203	0.020	1
Base/Subbase/Imported Borrow	0.033	0.243	0.225	0.220	0.038	49
Structure Concrete	0.005	0.014	0.023	0.001	0.001	6
Paving	0.067	0.203	0.495	0.036	0.036	94
Drainage/Environment/Landscaping	0.013	0.037	0.082	0.006	0.006	16
Traffic Signalization/Signage/Striping/Painting	0.023	0.103	0.172	0.011	0.011	69
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	0.215	1.093	1.497	0.919	0.189	347

Note: ROG, CO, NOx, PM₁₀, and PM_{2.5}, are measured in parts per million; CO_{2e} is measured in tons. CO_{2e} = carbon dioxide (CO₂) equivalents consisting of CO₂, methane, nitrous oxide, black carbon, and hydrofluorocarbons; ROG = reactive organic gases; CO = carbon monoxide; NOx = nitric oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter

Table 3.2-3 Build Alternative 3 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.018	0.108	0.112	0.210	0.028	28
Roadway Excavation & Removal	0.125	0.838	0.848	0.267	0.084	189
Structural Excavation & Removal	0.166	0.491	0.863	0.258	0.075	243
Base/Subbase/Imported Borrow	0.303	2.233	2.072	0.364	0.180	447
Structure Concrete	0.791	2.412	3.858	0.234	0.230	845
Paving	0.047	0.141	0.347	0.025	0.025	63

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Drainage/Environment/Landscaping	0.071	0.204	0.453	0.034	0.034	85
Traffic Signalization/Signage/Striping/Painting	0.108	0.473	0.789	0.049	0.049	312
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	1.629	6.901	9.342	1.443	0.704	2,214

Note: ROG, CO, NOx, PM₁₀, and PM_{2.5}, are measured in parts per million; CO_{2e} is measured in tons.
CO_{2e} = carbon dioxide (CO₂) equivalents consisting of CO₂, methane, nitrous oxide, black carbon, and hydrofluorocarbons; ROG = reactive organic gases; CO = carbon monoxide; NOx = nitric oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter

Table 3.2-4 Build Alternative 4 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.023	0.136	0.142	0.213	0.030	36
Roadway Excavation & Removal	0.158	1.056	1.068	0.284	0.101	239
Structural Excavation & Removal	0.209	0.619	1.089	0.272	0.089	308
Base/Subbase/Imported Borrow	0.381	2.812	2.610	0.406	0.221	564
Structure Concrete	0.996	3.038	4.860	0.295	0.289	1066
Paving	0.059	0.177	0.436	0.032	0.032	80
Drainage/Environment/Landscaping	0.090	0.256	0.570	0.043	0.042	106
Traffic Signalization/Signage/Striping/Painting	0.136	0.596	0.994	0.062	0.061	394
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	2.052	8.691	11.768	1.607	0.866	2,791

Note: ROG, CO, NOx, PM₁₀, and PM_{2.5}, are measured in parts per million; CO_{2e} is measured in tons.
CO_{2e} = carbon dioxide (CO₂) equivalents consisting of CO₂, methane, nitrous oxide, black carbon, and hydrofluorocarbons; ROG = reactive organic gases; CO = carbon monoxide; NOx = nitric oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 2.5 microns in diameter

According to the estimates provided by the Caltrans Construction Emissions Tool, Alternative 2 is expected to generate a total of 347 tons of carbon dioxide equivalent (CO_{2e}), Alternative 3 is expected to generate a total of 2,214 tons of CO_{2e}, and Alternative 4 is expected to generate a total of 2,791 tons of CO_{2e}.

The project GHG emissions would have a less than significant impact on the environment. GHG reduction measures are proposed in Chapter 3.4, *Climate Change*, as part of the project-level GHG reduction strategies.

Although the proposed project would result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. A Vehicle Miles Traveled (VMT) analysis dated November 1, 2023 was conducted by the Caltrans Division of Planning; the analysis shows a forecasted daily volume of 1,542

vehicles on SR-39 south of SR-2 by 2045. The analysis showed no discernable peak period, and no induced travel is anticipated. The capacity of the two-lane conventional highway would be unchanged because no additional lanes would be added. Operational GHG emissions would remain consistent with those currently produced for the southern segments of SR-39 and SR-2, both of which are not causing significant impacts to the surrounding natural environment.

With implementation of construction GHG reduction measures discussed in Chapter 3.4, *Climate Change*, the impact would be less than significant.

b) No Impact

The implementation of this project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, no impacts would occur.

3.2.9 Hazards and Hazardous Materials

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

CEQA Significance Determinations for Hazards and Hazardous Materials

a) No Impact

Chapter 2.2.4, *Hazardous Waste/Materials* has identified the potential for the project area to contain: aerially deposited lead, naturally occurring asbestos in certain rock formations, hazardous concentrations of lead and chromium in yellow thermoplastic traffic stripes and pavement markings, asbestos containing construction materials within

existing retaining walls, and treated wood waste. All local, state, and federal policies, standards, and laws related to hazardous waste and materials would be complied with. In addition, all Caltrans standard BMPs and Standard Special Provisions would be followed for the removal and transport of materials to an appropriate disposal facility. Therefore, no impacts would occur.

b) Less Than Significant Impact

All the hazardous or potentially hazardous materials present within this project will be accounted for with Caltrans standard specifications or standard special provisions and applicable laws. A detailed site investigation during the Design Phase will help determine which actions, if any, need to occur during construction to protect the public and the environment from the release of hazardous materials. Project construction could potentially result in the accidental release of hazardous substances into the environment, such as spilling petroleum-based fuels used for construction equipment. However, construction contractors would be required to comply with applicable federal and state environmental and workplace safety laws and implement BMPs to be used onsite to contain hazardous materials and avoid exposure to workers, the public, and the surrounding environment. Due to Caltrans' requirement of utilizing standard specifications and standard special provisions for all hazardous materials, the project would not create a significant hazard to the public or the environment from the release of hazardous materials; therefore, the impact would be less than significant.

c) No Impact

The proposed project is not located within 0.25 mile of an existing or proposed school; therefore, no impact would occur. The nearest school facilities are Wrightwood Elementary School (20 miles) and Victor Hodge Elementary School (24 miles). Therefore, no impacts would occur.

d) No Impact

The project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, no impacts would occur.

e) No Impact

The project is not located within 2 miles of a public airport or public-use airport, nor is it within an airport land use plan. Therefore, no impacts would occur.

f) No Impact

This project would employ a Traffic Management Plan to minimize disruptions to emergency services during construction. There would be coordination and communication with the USFS, Los Angeles County, California Highway Patrol, and

California Department of Forestry and Fire Protection (CAL FIRE) to ensure that the project would not impair an existing emergency response plan or emergency evacuation plan for this area during construction. Caltrans 2023 Standard Specification 7-1.02M(2) also mandates fire protection procedures during construction, including cooperation with fire-prevention authorities in performance of the work and the implementation of a fire prevention plan required by the California Division of Occupational Safety and Health.

Additionally, the Wrightwood Community Wildfire Protection Plan states in their Community Hazard Reduction Priorities that its goal is to establish safe egress routes, such as SR-2 and SR-39, through the plan area and remove potential ignition sources from the major transportation corridors in the ANF to reduce wildfire risk (Wrightwood Community Wildfire Protection Plan 2005). The proposed project would improve access to SR-39 that the community of Wrightwood could utilize in the event of an evacuation.

Each of the build alternatives would result in improvements in safety and access for emergency responders and would therefore not interfere with any emergency response or evacuation plan.

No impacts would occur.

g) Less Than Significant Impact

Alternatives 3 and 4 would provide public access to an area of SR-39 and adjacent National Forest land that has been restricted for several decades. However, the risk would be no greater than what people are exposed to in any other portion of the San Gabriel Mountains. Additionally, improvements to the road would substantially improve the ability of the public to evacuate the area in the event of a wildfire.

This project also proposes several project features that may reduce wildfire risk. The newly paved road and wider shoulder areas may act as a firebreak, reduce vegetation adjacent to the roadside (fire fuel), and provide additional areas for emergency response vehicle staging. The wider lanes would provide improved access for emergency vehicles, and vegetation disturbed during construction would be replanted with native fire-resistant species, potentially reducing the risk posed by wildfires. Fire resistant elements such as MGS and steel corrugated culvert piping would also reduce the risk due to spreading wildfire.

Therefore, the impact is considered less than significant.

3.2.10 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Hydrology and Water Quality

a) Less Than Significant Impact

The proposed project would be required to follow the conditions of Caltrans’ Statewide National Pollutant Discharge Elimination System (NPDES) Permit, issued by the State Water Resources Control Board. This statewide permit defines waste discharge requirements for storm water and non-storm water discharges from Caltrans’ properties and facilities, and discharges associated with operation and maintenance of the State

Highway System. In addition, because land disturbance for the project is anticipated to exceed 1 acre, the project would be regulated by the Statewide NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, which is also referred to as the Construction General Permit (CGP). Both permits (Caltrans NPDES Permit and the CGP) require the adherence to water quality specifications, the implementation of BMPs (to the maximum extent practicable) in order to reduce and/or eliminate pollutant discharges to waterways and for the protection of water resources (including groundwater), regular project site inspections to verify functionality of BMPs, and corrective measures to address BMP deficiencies. This project would also require Sections 401, 402, 404, and 1602 certifications under the Clean Water Act to ensure that any stormwater discharge is in compliance with the NPDES permit. As a result, the impact in this category has been determined to be less than significant.

b) No Impact

Project construction would require the use of water for dust suppression activities, which would be minimal and short term. Once operational, the Project would not require the use of water. Therefore, no impacts would occur.

c, i, ii, ii, iv) Less Than Significant Impact

The build alternatives would include the addition of impervious surface areas through the paving and widening of travel lanes and/or shoulders. They would also include the restoration/replacement of damaged drainage culverts and installation of new culverts to facilitate the movement of stormwater runoff away from the roadway and reduce erosion of the highway and its supporting structures.

The implementation and construction of this project would not result in substantial erosion or siltation on- or off-site due to its design and the implementation of construction site BMPs. The proposed project would require coverage under the CGP due to the extent of soil disturbance, which requires the development and implementation of an effective Stormwater Pollution Prevention Plan (SWPPP) because the total disturbed soil area is greater than 1 acre. BMP measures and field implementation strategies would be outlined in the Contractor-prepared and Caltrans-approved SWPPP to prevent soil discharges and erosion from the construction site due to the project's potential to mobilize pollutants and discharge into waterbodies or watersheds. However, it has been confirmed that there will be no discharges into water bodies with beneficial use, and the nearest receiving water body is Bear Creek, which is not on 303(d) list of impaired receiving water bodies. Therefore, the potential for soil erosion or siltation within water bodies of beneficial use is diminished.

Sediment and erosion-control measures are required to be implemented to prevent receiving water pollution due to construction activities and/or project operations. BMPs

will be used during construction to reduce the discharge of sediment from the construction site through soil stabilization and sediment control. Construction site BMPs recommended for this project include the following:

- SWPPP
- Job Site Management
- Storm Water Pollution Prevention Plan
- Storm Water Annual Report
- Storm Water Sampling and Analysis Day
- Street Sweeping
- Temporary Fiber Roll
- Temporary Concrete Washout
- Temporary Construction Entrance
- Temporary Drainage Inlet Protection
- Clear Water Diversion System
- Material Delivery and Storage
- Paving, Sealing, Sawcutting, and Grinding Operations
- Stockpile Management
- Water Conservation Practices
- Spill Prevention and Control
- Solid Waste Management
- Hazardous Waste Management
- Contaminated Soil Management
- Concrete Waste Management
- Vehicle Equipment Fueling and Maintenance

- Concrete Curing
- Concrete Finishing
- Material Use
- Sanitary/Septic Waste Management
- Illicit and illegal connection reporting

With the implementation of effective temporary BMPs, regular site inspections, and corrective measures (where applicable), it is not anticipated that substantial erosion or siltation will occur (on- or off-site); therefore, the impact determination is less than significant.

Based on the increase in impervious surface area, the project may have some effect on downstream flow. Velocity and volume of flow may increase due to the addition of 0.022 acres of impervious area. However, increased flow velocity and volumes, if any, will be quantified and mitigation measures will be detailed in Caltrans-required programmatic documents during the Design Phase of the project. It is anticipated that drainage system design will focus on perpetuating existing highway drainage conditions to the greatest extent feasible. At this time, it is not anticipated that the project would substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the impact is anticipated to be less than significant.

This project would maintain the existing roadway drainage pattern. Existing culverts would undergo repairs and/or be replaced, and new culverts would be installed at various locations, where needed. Additional stormwater runoff is expected due to the additional impervious surfaces resulting from widened shoulders and the installation of viaduct structures. However, it was estimated that impervious surface area would increase by 0.2 acres, which is only 1.3 percent of the post-project impervious area. Therefore, the project is not expected to significantly increase stormwater runoff. The project would preserve the existing vegetation on the slope and other related surroundings to the maximum extent practical. Drainage appurtenances within the project limits would be designed to accommodate the anticipated change in flow. Although there have not been any proposed treatment BMPs that were recommended by the Corridor Stormwater Management Study within the project limits, funding has been allocated to incorporate permanent treatment BMPs into the project, which will be determined during the next phase. The implementation of BMPs meant to treat general pollutants will be evaluated, and an analysis of site characteristics to optimize water quality volume/water quality flow and maximize site perviousness will be performed. With the implementation of temporary and permanent stormwater BMPs to mitigate pollutants of concern (typically found in stormwater), it is not anticipated that polluted

runoff would be substantially increased due to project activities or the project in general. Therefore, the potential impact for this category has been determined to be less than significant.

Based on the increase in impervious surface area, it is anticipated that the project would have some effect on downstream flow. Increased flow velocity and volumes, if any, will be quantified and addressed during the Design Phase of the project. This project is not expected to increase the potential of pollutant release that would degrade water quality during inundation. The proposed project would repair all road surfaces and damaged drainage culverts within the project limits, thereby improving road surface drainage and reducing the occurrence of soil erosion on unpaved shoulders and adjacent rocky slopes. Repairing culverts, outlets, and inlets that are in fair or poor condition would improve the flow of water within the project area and during times of higher water volumes. The enhanced regulation of water flow will contribute to the operational efficiency of drainage features and ensure that any roadway pollutants are properly drained. Where possible, stormwater would be directed in such a way as to sheet flows across vegetated slopes, thereby providing filtration of any potential pollutants. As a result, the project would not impede or redirect flood flows; therefore, the impact is less than significant.

d) No Impact

The proposed project is not in an area at risk of flooding, tsunamis, or seiches. Therefore, no impacts would occur.

e) Less Than Significant Impact

The proposed project would not utilize or affect groundwater during construction or operation. Any temporary impacts to localized water quality that may occur would be minimized and/or avoided through implementation of Project Features PF-WQ-1 through PF-WQ-4 and standard BMPs. Impacts would be less than significant.

3.2.11 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Land Use and Planning

a) No Impact

This project would not divide an established community. In contrast, it would enhance accessibility between communities in the San Gabriel Valley and Wrightwood by reopening the northern segment of SR-39. Therefore, no impacts would occur.

b) No Impact

The project area is within a designated Developed Area Interface area of the ANF, which includes roadways and areas adjacent to development or concentrated use areas that are managed for motorized public access. There would be no change to land uses within or adjacent to the project area. Ongoing coordination with the USFS will continue to ensure that the project is in compliance with the ANF Land Management Plan. Therefore, no impacts would occur.

3.2.12 Mineral Resources

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

CEQA Significance Determinations for Mineral Resources

a, b) No Impact

Based on a review of the California Department of Conservation Mines Online web application, no mineral resources that would be of value to the region and the residents of the State are known to occur in the vicinity of the project area. Likewise, there are no locally-important mineral resource recovery sites delineated on any local general plan, specific plan, or other land use plan in the vicinity of the project. Therefore, no impacts would occur.

3.2.13 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Noise

a) Less Than Significant Impact

To determine if a noise impact is significant under CEQA, the baseline noise level is compared against the build noise level. The CEQA noise analysis is completely independent of the NEPA analysis that is discussed in Chapter 2.2.6, *Noise and Vibration*, which is centered on noise abatement criteria. Under CEQA, the assessment entails analyzing the setting of the noise impact and then how large or perceptible any noise increase would be in the area. Key considerations include the uniqueness of the setting, the sensitivity of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

The project is located in a remote region of the ANF that has been closed to public access since 1978. Because of this, the adjacent areas have relatively few visitors. People that do visit the area are generally there for outdoor recreational activities such as hiking, camping, and other nature-based activities. These visitors would be expected to be more aware of their surroundings and, therefore, potentially more aware of any loud or intrusive noise.

The existing noise environment within the project area is dominated by geophysical and biological sounds, such as those generated by wind, water, and various animals. Human-generated sounds are relatively absent, only occasionally occurring when

Caltrans, USFS, and emergency-response personnel access the closed segment of SR-39. However, noise from vehicle traffic south of the project area on SR-39 and to the north on SR-2 is present. Due to the terrain and the generally low ambient noise level, artificially generated sounds can carry further and be perceived as more intrusive than in some other, more urban environments. The terrain can also lead sound to travel in a more directional nature, rather than spreading outward from the source equally in all directions.

The proposed project is not expected to generate a substantial increase in traffic volumes through the project area—under Alternative 2, the road would remain closed to public traffic; under Alternative 3, the highway would only experience additional use from the occasional shuttle buses; and under Alternative 4, only an estimated 1,542 vehicles per day would use the currently closed segment of SR-39 by 2045. This is lower than many other roads in the ANF, and re-introducing vehicular traffic and human presence to this segment of SR-39 would be expected to increase noise to levels similar to, or lower than, what currently exists along other open roadways within the ANF.

During project construction, noise from construction activities may intermittently dominate the noise environment in the immediate area, and the characteristics of that noise will depend on several factors, such as type of equipment, type of work and material interacting with equipment. Construction noise is regulated by Caltrans standard specifications, Section 14-8.02 Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations. Several measures have been identified to minimize temporary construction noise impacts—these involve controlling the noise generated by equipment; restrictions on the time, place, or method of operation of the equipment; and training for the operators of the equipment. These measures are identified in Appendix C, *Avoidance, Minimization, and/or Mitigation Summary*.

Impacts related to construction and operation of the project would be less than significant.

b) Less Than Significant Impact

Ground-borne vibrations typically originate from construction activities such as blasting, pile driving, jackhammering, and operating heavy-duty equipment. These effects are usually experienced indoors and are typically limited to a 100-foot radius around the source. There are no sensitive receptors within or immediately adjacent to the project limits that would be impacted by these construction activities.

Ground-borne noise generated by the use of these types of equipment would likely be intense but short-term. Impacts would be minimized as described above in the response

to question a), including through the use of the following strategies: turning off idling equipment, and installing acoustic barriers around stationary construction noises.

Impacts related to ground-borne vibration and noise would be less than significant.

c) No Impact

The project is not located in the vicinity of a private airstrip or an airport land use plan, nor is it within 2 miles of a public airport or public-use airport. Therefore, no impacts would occur.

3.2.14 Population and Housing

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

CEQA Significance Determinations for Population and Housing

a) No Impact

The proposed project would not influence growth in the vicinity of the project area due to land use protections afforded by the ANF, San Gabriel Mountains National Monument (SGMNM), and Los Angeles County General Plan, in addition to the steep mountain topography that makes development adjacent to the roadway difficult.

Alternatives 1 and 2 would have no effect on the accessibility of recreational opportunities within the ANF for residents residing in the central San Gabriel Valley and mountain and “High Desert” communities. Alternatives 3 and 4 would improve access to the ANF for these residents by reducing travel times to some recreational sites. This improved access would contribute to the quality of life within these communities but would not influence growth. Therefore, no impacts would occur.

b) No Impact

This project would not result in the displacement of existing people or housing, and therefore, would not necessitate the construction of replacement housing elsewhere. No impacts would occur.

3.2.15 Public Services

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

CEQA Significance Determinations for Public Services

a) i, ii, iii, iv, and v) No Impact

Alternatives 3 and 4 would increase travel to and through the project area and would potentially increase the need for law enforcement and fire-protection personnel to patrol the area to ensure public safety. However, any increase in patrols would be negligible and would not be sufficient to require additional facilities to be constructed to maintain service ratios, response times, or other performance objectives. By contrast, the improvements to roadway conditions and safety proposed in each of the build alternatives (Alternatives 2, 3, and 4) would enhance access and improve response times for public-safety personnel who currently utilize this section of road at some risk due to the existing conditions.

The proposed project would have no effect on schools, parks, or other public facilities.

No impacts would occur.

3.2.16 Recreation

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

CEQA Significance Determinations for Recreation

a) Less Than Significant Impact

The proposed project is located in the San Gabriel National Monument within the ANF. The build alternatives would reopen a segment of roadway that has been closed since 1978 and would, therefore, increase traffic through this region of the ANF. Various recreational areas near the project limits, including the Pacific Crest Trail, Islip Saddle Day Use Area, Crystal Lake Recreational Area, and San Gabriel Canyon Road Lookout would become more accessible by vehicle, bicycle, or by foot, and would likely experience an increase in use.

As discussed in Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, Alternative 4 is estimated to increase vehicle traffic to 1,542 vehicles per day by 2045; most of these vehicles would be passing through and not stopping to utilize these recreational facilities. Alternatives 2 and 3 would result in even less traffic to/through the area. Although it is not possible to quantify the level of increase in usage that these recreational facilities would receive, the minimal increase in traffic on SR-39 would not be sufficient to lead to or accelerate their physical deterioration.

Impacts would be less than significant.

b) Less Than Significant Impact

There is one recreational resource that would be partially impacted by the proposed project under Alternatives 3 and 4: the Islip Saddle Day Use Area, which would be affected by the rehabilitation of the existing parking lot located north of the SR-39/SR-2 intersection (Alternative 3), and construction of the roundabout at the SR-39/SR-2 junction (Alternative 4). Under Alternative 3, it is anticipated that the northern parking lot

would be repaved in sections to prevent the need for a temporary closure of the entire parking lot. Limited parking will be available during construction to avoid a full closure of the lot. Repaving the parking lot in sections would allow hikers and other visitors to use the parking lot to park their vehicles for the day, allowing for continuous access even during construction. Under Alternative 4, construction of the roundabout will cause permanent impacts to the parking lot at the Islip Saddle Day Use Area, because the parking lot would have to be modified slightly to accommodate the design of the roundabout. The roundabout structure will protrude partially into the parking lot causing permanent impacts the existing parking lot. However, these impacts will be minor, and the existing parking spaces would be adjusted slightly to maintain the same number of parking spaces that currently exist. Therefore, the parking lot would still be able to accommodate the same number of visitors as before, causing no difference in accessibility.

The PCT is another recreational resource that is located near the proposed work for Alternatives 3 and 4 described above. However, it has been confirmed that there will be no permanent impacts or relocation of the PCT at the SR-39/SR-2 junction or the portion of the PCT that reconnects at the Islip Saddle Day Use Area. The trail will remain untouched. However, there will be temporary construction detours for hikers as they cross the road (to connect with the other section of the trail) during construction of the roundabout (Alternative 4) or the repaving of the parking lot at the Islip Saddle Day Use Area (Alternative 3).

The recreational facilities that will be impacted will only be temporarily impacted during construction; they will then be returned to their original state after construction in the area has finished. The project would not contribute to an expansion of recreational facilities due to development within the project area being constrained due to Los Angeles County and ANF zoning designations. As a result, impacts to recreational facilities will be less than significant.

3.2.17 Transportation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Significance Determinations for Transportation

a) Less Than Significant Impact

Under Goal 3.1, *Provide for Public Use and Natural Resource Protection* in the ANF Land Management Plan, the plan outlines goals for the roads and trail system of the ANF, one of the main objectives being that both roads and trails be “well maintained” while offering the public access to recreational opportunities, allowing for special uses and adequate fire protection activities, and aiding in the objectives of forest management. The SGMNM Plan also identifies transportation goals that advocate for the maintenance of roads to standard requirements and the improvement of “transportation connectivity to and from the monument”.

The project is identified in the latest conforming Federal Transportation Improvement Program (2023) as a lumpsum category of LALS02 for Pavement Resurfacing and/or Rehabilitation. It also aligns with the goal of the “fix-it-first” policy that was established as a result of SB 1 (signed in to law by Governor Brown in 2017), which seeks to preserve and optimize the transportation system by adequately maintaining the existing infrastructure and enhancing the present road network through the prevention of further degradation to transportation facilities with the intention of maintaining safe, reliable access to California’s diverse landscapes, including the scenic and recreational resources of the ANF.

SR-39 and SR-2 (East of Mt. Wilson Red Box Road), within the ANF, are each designated as a “Limited Secondary Highway” in the Mobility Element of the Los

Angeles County General Plan. This classification includes urban and rural routes that provide access to low-density areas. These highways are intended to maintain a rural appearance (i.e., without curb, gutter, and/or sidewalk; minimized width of pavement to the extent possible; and only using lighting and traffic signals when necessary) to reflect the rural character of various communities throughout Los Angeles County (Los Angeles County, 2022).

Furthermore, the Caltrans Complete Streets policy (DP-37) establishes Caltrans' organizational policy to encourage the use of complete streets and multi-modal transportation options (See Appendix H). Additionally, the California Streets and Highway Code (Sections 91 and 100) mandates that Caltrans shall improve and maintain state highways and requires Caltrans to monitor the cumulative impacts of fragmented gaps in the State Highway System to identify safety and long-term maintenance issues.

Each of the build alternatives satisfies the objectives of the above-mentioned programs, plans, ordinances, and policies to varying degrees. The objectives are partially satisfied by Alternatives 2 and 3 due to their limitations on access for all modes of travel. The objectives are fully satisfied by Alternative 4, which, furthermore, provides full access to the closed segment of SR-39. Therefore, it is concluded that Alternatives 2 and 3 would have a less than significant impact; Alternative 4 would have no impact.

b) No Impact

CEQA Guidelines Section 15064.3, Subdivision (b) states that “transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact.”

The proposed project would not conflict or be inconsistent with these guidelines because it is considered a screenable project pursuant to Section 5 of the Transportation Analysis under the CEQA guidance document, which lists projects that are not likely to lead to a measurable and substantial increase in VMT. This project was screened from preparing an induced travel analysis, in accordance with Caltrans Transportation Analysis Under CEQA Section 5.1.1, subsection ii, *Project Types Not Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel*, bullet number one: “Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets” (Caltrans Transportation Analysis Under CEQA 2020). Therefore, no impacts would occur.

c) No Impact

The proposed project would be designed to meet Caltrans' safety standards and would not contain or increase hazards due to geometrical design features. This project would decrease the hazards of this mountain road by installing and rehabilitating several

safety structural features to protect vehicles on the roadway from locations prone to rockfall or debris tracks. The roadway along some existing curves would be realigned to improve sight distance, and reduced speed limits would be posted to improve safety. There are no existing or proposed driveways, intersections, or traffic signals within the proposed project limits. Alternative 4 proposes to install a roundabout at the SR-39/SR-2 junction as a traffic-calming feature, which would decrease the hazards and improve safety at that intersection. Therefore, no impacts would occur.

d) Less Than Significant Impact

SR-39 is an integral emergency access route that allows emergency-response personnel to openly travel through the middle of the ANF from Azusa and other portions of the San Gabriel Valley. The proposed improvements for all build alternatives would improve public safety through the rehabilitation of the roadway and roadside features, which would enhance access and reduce response times for emergency-response and maintenance personnel.

During construction, there may be slight delays in emergency access due to construction of structural elements and rehabilitation of the entire roadway. However, traffic control plan requirements would be implemented to provide continuous emergency access throughout the project limits, if needed. Therefore, the impact to emergency access would be less than significant.

3.2.18 Tribal Cultural Resources

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

CEQA Significance Determinations for Tribal Cultural Resources

a, b) No Impact

“No Impact” determinations in this section are based on the scope, description, and location of the proposed project, as well as the Historic Property Survey Report and Archaeological Survey Report dated December 2023. Archeological and cultural studies, which included background research, literature review, and in-person field surveys, were conducted by Caltrans staff; as a result of these studies, potential impacts to tribal cultural resources are not anticipated.

In addition to the records search, the Native American Heritage Commission (NAHC) was contacted to ascertain whether any Native American sacred lands or Traditional Cultural Properties were located within or near the project area. Caltrans District 7 requested a review of the Sacred Land Files on October 18, 2022. The NAHC responded on November 17, 2022, indicating that a search of the Sacred Lands File yielded a positive result for the presence of Native American cultural resources. The NAHC provided a list of Native American contacts for the project vicinity.

Caltrans sent AB 52 and Section 106 consultation letters to the Native American contacts listed by the NAHC between October 11 and December 12, 2022. Caltrans discussed the project with the Kizh Nation during their quarterly consultation on October 11, 2022 and sent the consultation letter to the Kizh Nation contact on that same day.

Subsequently, Caltrans sent the consultation letters to the remaining NAHC-listed Native American contacts on December 12, 2022. On February 8, 2023, follow-up emails were sent to individuals who had not yet responded. A record of all correspondence is provided in Chapter 4, *Comments and Coordination*. The following were all contacted for individual/organization consultation:

- Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians
- Sandonne Goad, Gabrielino/Tongva Nation
- Robert Dorame, Gabrielino Tongva Indians of California Tribal Council
- Christina Conley, Gabrielino Tongva Indians of California Tribal Council
- Charles Alvarez, Gabrielino-Tongva Tribe
- Ann Brierty, Morongo Band of Mission Indians
- Manfred Scott, Quechan Tribe of the Fort Yuma Reservation
- Jill McCormick, Quechan Tribe of the Fort Yuma Reservation
- Donna Yocum, San Fernando Band of Mission Indians
- Jessica Mauck, San Manuel Band of Mission Indians
- Wayne Walker, Serrano Nation of Mission Indians
- Mark Cochrane, Serrano Nation of Mission Indians
- Isaiah Vivanco, Soboba Band of Luiseno Indians
- Joseph Ontiveros, Soboba Band of Luiseno Indians
- Ryan Nordess, Yuhaaviatam of San Manuel Nation (YSMN; formerly known as San Manuel Band of Mission Indians)

Jill McCormick replied via email on December 12, 2022, stating that they do not wish to comment on the project, and that they defer to the more local tribes and support their determination in this matter.

Ryan Nordess replied via email on January 13, 2023. He acknowledged the project's location within Serrano ancestral territory and its resulting interest to the tribe, but due to the nature and location of the project, along with the current extent of known cultural resources in the area, YSMN does not have any concerns with the project's

implementation as planned, at the time of response. YSMN requested specific wording be added to the project, permit, and plan conditions, and requested a final copy of those conditions. He also stated that unless there is an unanticipated discovery of cultural resources during project implementation, consultation is now concluded.

No responses were received from the other above-mentioned contacts.

3.2.19 Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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??	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Utilities and Service Systems

a) Less than Significant Impact

The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. This project does propose to restore damaged drainage culverts and install new culverts at various locations within the project limits to improve road surface drainage. The effects of this were evaluated as part of the overall project and were determined to not result in substantial impacts.

The impacts would be less than significant.

b) No Impact

The project would not require the ongoing use of water during its operational lifespan. The use of water during construction would be limited to the project area for dust control. The amount of water used would be minimal and would cease upon completion of construction. Therefore, no impacts would occur.

c) No Impact

This project would generate minimal to no wastewater. Any wastewater generated would primarily be sanitary waste generated by construction workers, which would be transported and treated off-site. Therefore, no impacts would occur.

d) No Impact

The proposed project operation would not result in the regular generation of solid waste or surpass any State or local solid waste standards. Therefore, no impacts would occur, and no mitigation would be required. Any solid waste generated during construction would be recycled (when possible) and would not exceed standards or local landfill capacities per Caltrans Standard Specification 14-10 (Solid Waste Disposal and Recycling), which requires the submittal of annual solid waste disposal and recycling reports to show the types and amounts of project-generated solid waste taken to or delivered from landfills or reused on the project.

e) No Impact

The project would fully comply with all statutes and regulations related to solid waste per Caltrans Standard Specification 14-10 (Solid Waste Disposal and Recycle) along with other standards that govern the use of recycled materials and solid waste. Therefore, no impacts would occur.

3.2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CEQA Significance Determinations for Wildfire

Per the CAL FIRE website (<https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps>), the project is located in a very high fire hazard severity zone within a federal responsibility area (Figures 3.2-1 and 3.2-2). Additional information for each of the responses below is provided in Chapter 3.3, *Wildfire*.

Figure 3.2-1 State Responsibility Area Fire Hazard Severity Zones

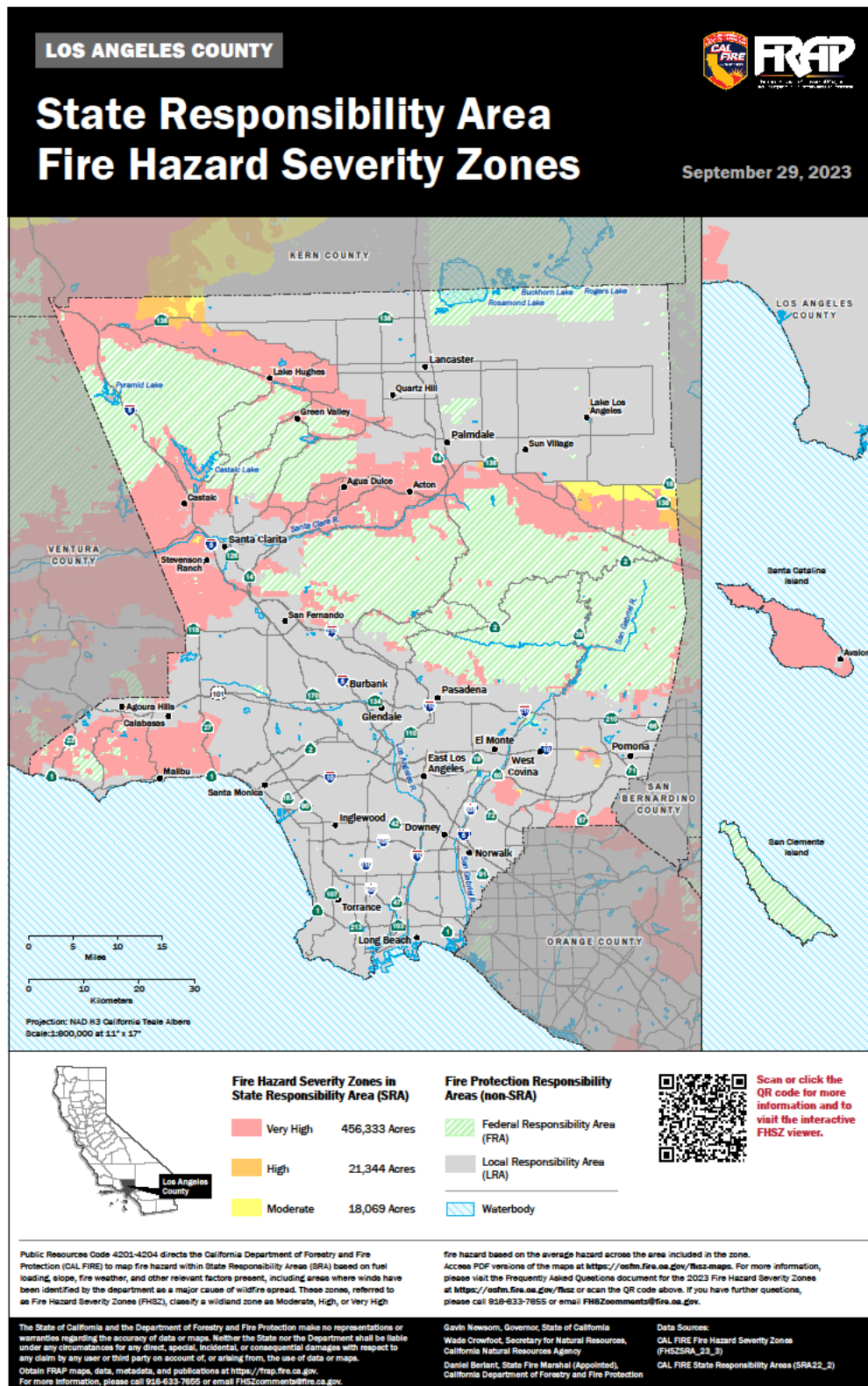
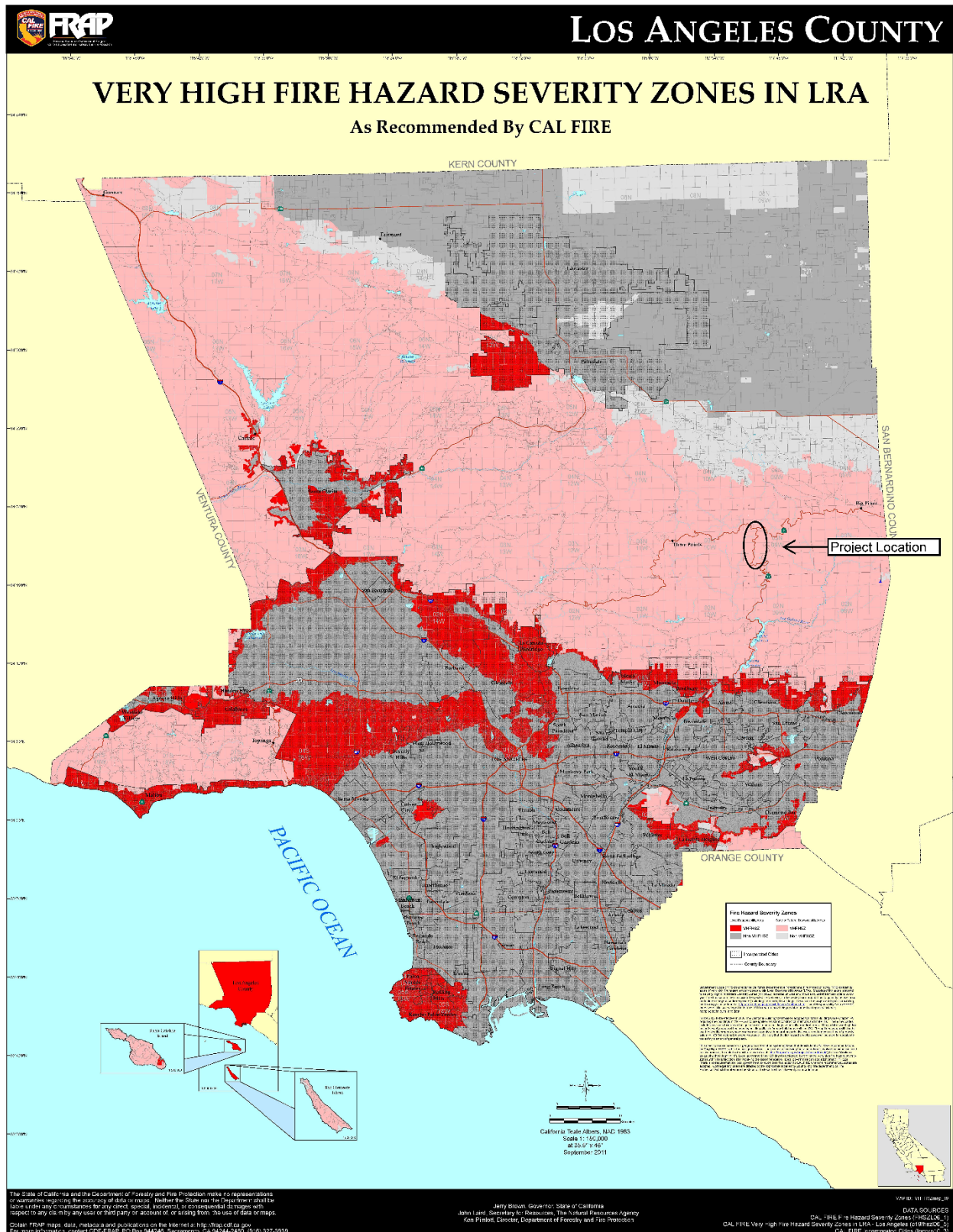


Figure 3.2-2 Fire Hazard Severity Zones in Local Responsibility Areas



a) No Impact

This project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

This project would implement a Traffic Management plan to minimize disruptions to emergency services during construction. There would be coordination and communication with the USFS, Los Angeles County, California Highway Patrol, and CAL FIRE to ensure that the project would not impair emergency response activities. In addition, Caltrans' 2023 Standard Specification 7-1.02M(2) mandates that fire protection procedures be implemented during construction, including cooperation with fire prevention authorities, and the implementation of a fire prevention plan as required by the California Division of Occupational Safety and Health.

Additionally, the Wrightwood Community Wildfire Protection Plan states in their Community Hazard Reduction Priorities that its goal is to establish safe egress routes, such as SR-2 and SR-39, through the plan area and remove potential ignition sources from the major transportation corridors in the ANF to reduce wildfire risk (Wrightwood Community Wildfire Protection Plan 2005). The improvements proposed by each of the build alternatives would assist in meeting this goal by creating an additional egress route that could be utilized in the event of an emergency.

Therefore, no impacts would occur.

b) Less than Significant Impact

The project is located in a mountainous area with steep slopes that is prone to seasonal Santa Ana winds. These strong winds blow hot, dry desert air toward the coast through the mountain passes of Southern California, generally from September through May, and are a known risk factor for spreading wildfires.

Most wildfires in Southern California are human-caused, and the increased human presence that would result from Alternatives 2, 3, and 4 would result in some increased risk. However, given the remote location and the relatively low traffic projections cited in Chapter 2.1.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, the increased usage of the area would not likely pose a substantial increase in risk.

Also, although the project area is within a National Forest, the rocky, steep terrain severely limits the amount of vegetation that can grow near the road, and which might be susceptible to catching on fire. The widened paved road would also create a small buffer between any vehicles and the edge of pavement where any vegetation could grow.

Finally, the greatest wildfire risk occurs from September through May. Similar to SR-2 in this region, it is anticipated that this segment of SR-39 would be closed during most of

this period each year due to snow. Although it is generally agreed that “fire season” in Southern California is not a year-round phenomenon, the increase in human presence during what could be called the “peak fire season” would be minimal.

The proposed Project would not provide a new ignition source (such as additional vegetation) that would exacerbate wildfire risks, nor would it increase infrastructure, housing, or businesses that could experience impacts from pollutant concentrations from a wildfire. Therefore, the project would not exacerbate wildfire risks, nor would it expose project occupants to pollutant concentrations. Impacts would be less than significant.

c) No Impact

This project proposes to reopen the closed segment of SR-39 with multiple safety features and roadway improvements, as described in Chapter 1.3, *Project Description*. Roadway rehabilitation and maintenance proposed for this project may reduce fire risk. The newly paved road and wider shoulder areas may act as a firebreak, reduce vegetation adjacent to the roadside (fire fuel), and provide additional areas for emergency response vehicle staging. The wider lanes would provide improved access for emergency vehicles. There are no utilities present within the project limits, and none of the alternatives for this project include the installation or repair of utilities or electrical systems along the roadway. Therefore, no impacts would occur.

d) No Impact

Existing site conditions within the project area were evaluated and, as a result, several structural features and repairs to existing structures were proposed to help reduce and avoid the geological hazards that currently exist within the project area. The structures for this project were proposed to protect people from various geological hazards, including downslope flooding, landslides, rockfall, roadway debris slides due to erosion, and post-fire slope instability. Therefore, no impacts are anticipated with the inclusion of these safety features and structures.

3.2.21 Mandatory Findings of Significance

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

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant with Mitigation Incorporated

Depending on the alternative selected, the proposed project would result in 2.9 to 5.4 acres of permanent impacts and 4.5 to 6.3 acres of temporary impacts to natural, terrestrial plant communities. An additional 0.340 to 0.410 acres of aquatic habitat would be permanently and temporarily impacted; 0.340 to 0.410 acres would be temporarily impacted. The size of the impact would be small, especially in light of the large amount of habitat available adjacent to the project area. Additionally, temporarily impacted areas would be restored, and permanent impacts to aquatic habitats would be offset as required by resource agency permits.

The Nelson’s bighorn sheep is the only sensitive species likely to be adversely impacted by the proposed project. As discussed in Sections 2.3.1, *Natural Communities* and 2.3.4, *Animal Species*, significant impacts are avoidable with the inclusion of project

features designed to minimize impacts and appropriate mitigation measures that would compensate for impacts that could not be avoided.

This project would have no potential impacts pertaining to the elimination of important examples of the major periods of California history or prehistory.

The proposed project would have a less than significant impact with mitigation incorporated.

b) Less Than Significant Impact

Chapter 2.4, *Cumulative Impacts* discusses the cumulative impacts of the build alternatives (Alternatives 2, 3, and 4), taking into account past, present, and reasonably foreseeable future projects in the area. The build alternatives would result in improved safety and reliability of the SR-39 segment from PMs 40.0 to 44.4. It was determined that the build alternatives would not contribute to cumulative adverse effects to each of the resource areas. Cumulative impacts to environmental resources as a result of the proposed project were determined not to be cumulatively considerable due to the implementation of BMPs, various project features and design elements, and avoidance and minimization measures. Therefore, the impacts of the project would be less than significant.

c) Less Than Significant Impact

With incorporation of project features and avoidance and minimization measures identified throughout this Environmental Document, all potential impacts would be less than significant. The proposed Project would not result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Therefore, these impacts would be less than significant, and no mitigation would be required.

3.3 Wildfire

3.3.1 Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the *CEQA Checklist* for the inclusion of questions related to fire hazard impacts for projects located on lands classified as *very high fire hazard severity zones*. The 2018 updates to the CEQA Guidelines expanded this to include projects “near” these very high fire hazard severity zones.

3.3.2 Affected Environment

This project is located on steep rocky terrain in the upper elevations of the Angeles National Forest in Los Angeles County. Wildfire at the project site may be a potential issue given its location within a national forest. The California Department of Forestry and Fire Protection has gathered data and produced maps to illustrate areas within Los Angeles County that have designated ratings of Fire Hazard Severity Zones (FHSZs) in State Responsibility Areas (SRAs), Local Responsibility Areas (LRAs), and Federal Responsibility Areas (FRAs). The FHSZ maps are developed using a science-based and field-tested model that assigns a hazard score based on the factors that influence fire likelihood and behavior. Many factors are considered, such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. There are three levels of hazard in the SRAs: moderate, high, and very high. Though SRAs have three classifications for FHSZs, the LRAs and FRAs classify FHSZs under “Very High” and “Non-Very High” classifications.

The FHSZ maps evaluate “hazard” rather than “risk”. “Hazard” is based on the physical conditions that create a likelihood and expected fire behavior over a 30- to 50-year period without considering mitigation measures such as home hardening, recent wildfire, or fuel reduction efforts. “Risk” is the potential damage that a fire can cause to an area under existing conditions, accounting for any modifications such as fuel reduction projects, defensible space, and ignition resistant building construction.

According to the California Department of Forestry and Fire Protection, this project is located within an FRA, which means that the federal government has administrative responsibility for wildland fire protection and prevention in this area. The land on which the project is located is classified as a Very High Fire Hazard Severity Zone (VHFHSZ). Please refer to Figure 3.2-2, *Fire Hazard Severity Zone Map* for a visual representation of the project location within the VHFHSZ.

3.3.3 Environmental Consequences

Consistency with Emergency Response Plans/Evacuation Plans

Most transportation projects, particularly those on existing alignments, will be unlikely to exacerbate wildfire risks or post-fire flooding/landslides. A primary consideration for work on existing alignments will be the potential to disrupt emergency response or evacuation routes during construction. Consequently, there may be temporary disruptions or restrictions within the project limits that may impact response times for emergency services and fire crews if an emergency were to occur during the construction period. However, this segment of road, as it currently exists, is frequently obstructed (at least partially) by fallen rocks and debris and is less than ideal for use in emergency situations. Also, the proposed project is required to have a traffic

management plan, which includes implementations aimed at reducing traffic delays that may occur due to lane restrictions or closures during the construction of a project. This process involves coordination with emergency service providers within the project area, including advance notification and adequate alternative access for emergency service vehicles. Coordination with emergency response agencies would also occur before the start of construction to prevent diminished response capacity by emergency services or the public and safe evacuation during construction. Caltrans 2023 Standard Specification 7-1.02M(2) also mandates fire protection procedures during construction, including cooperation with fire prevention authorities and the implementation of a fire prevention plan required by the California Division of Occupational Safety and Health.

Additionally, the Wrightwood Community Wildfire Protection Plan states in their Community Hazard Reduction Priorities that it intends to establish safe egress routes, such as State Route (SR) 2 and SR-39, through the plan area and remove potential ignition sources from the major transportation corridors in the Angeles National Forest (ANF) to reduce wildfire risk (Wrightwood Community Wildfire Protection Plan, 2005). The proposed project would create an additional egress route that the community of Wrightwood could use and add to their evacuation plan, thereby ensuring that major roads and infrastructure are more effective in the event of an evacuation. The project also includes clearing the roadway of all fallen debris and potential hazards and the rehabilitation of several drainage features within the project limits, which would enhance their hydraulic capacity and efficiency. Therefore, this project would meet the requirements and guidelines presented in the local emergency response plan prepared by Wrightwood.

This project would employ a Traffic Management Plan (TMP) to minimize disruptions to emergency services during construction. There would need to be coordination and communication with the U.S. Forest Service, Los Angeles County, California Highway Patrol, and the California Department of Forestry and Fire Protection to ensure that the project would not impair the existing emergency response plan or emergency evacuation plan for this area during construction. Potential measures such as providing alternative routes for emergency vehicles, coordinating the construction schedule to avoid peak emergency response seasons/times, or ensuring that emergency response teams are informed of any temporary road closures, may help minimize disruptions during construction. During the next phase of this project, the design would be refined and may include designated emergency access roads to facilitate the passage of emergency vehicles during construction, if feasible, as outlined in the TMP. Effective communication between Caltrans and resource agencies is needed to ensure that the roadway is still accessible to emergency services during construction and is still consistent with emergency-response plans and evacuation plans in the region.

Although construction may cause temporary impacts to emergency services, the reopening and improvements to the closed segment of SR-39 may lead to quicker emergency response times by providing through-access from I-210 to SR-2 via SR-39. This project would enhance the emergency response plans and emergency evacuation plans that are currently in place for this area by reestablishing the connection of a system of highways that has been closed to the public for 45 years. SR-2 and I-210 are designated as primary disaster routes in Los Angeles County (Los Angeles County, Department of Public Works, 2023). The reopening of SR-39 would establish a through connection between these disaster routes and would improve the existing system of evacuation disaster routes in Los Angeles County.

Wildfire Risk

The proposed project would repair all road surfaces and damaged drainage culverts within the project limits, thereby improving road surface drainage and reducing the occurrence of soil erosion on unpaved shoulders and adjacent rocky slopes. Improved drainage would also reduce the risk of wildfires due to enhanced regulation of water flow contributing to the increase in operational efficiency of drainage features. The project would not expose nearby residents or structures to increased risk of wildfire pollutants or exacerbate wildfire risk.

This project would take place mostly on the existing roadway alignment, with the exception of Alternatives 3 and 4 at locations where viaducts/wildlife crossings are proposed. These viaducts would extend outside of the current roadway alignment and encroach upon forest lands classified as VHFHSZs. However, these elevated viaduct structures would have a height clearance ranging from 30 to 100 feet from the sloped rocky terrain below. Impacts to the existing vegetation during construction of the viaducts would be minimized through the use of standard Caltrans construction practices, and impacted areas would be restored to their natural state after construction of the viaducts has concluded. Vegetation would be replanted with native fire-resistant species, which would reduce the risk of exacerbating wildfires. It is a standard condition, as outlined in the Caltrans Highway Design Manual, that projects in high fire risk areas do the following:

- Create fire-resistant zones and defensible spaces to minimize the spread of wildfire.
- Remove dead and dying vegetation.
- Minimize or eliminate vegetative fire ladders.
- Select plants with low sap or resin content and high moisture content.

- Select plants with prostrate growth and minimal fuel volume.
- Select nonflammable or low fuel inert materials for ground surface cover.

No utilities are present within the project limits, and this project would not require the installation of associated infrastructure that would require power lines or other utilities, including new lighting, conduits, and associated utility cabinets, that could exacerbate wildfire risk

Geological Risk

A District Preliminary Geotechnical Report (DPGR) was prepared for this project to evaluate potential geological hazards within the project area, existing site conditions, seismicity, and the feasibility of options for addressing geotechnical issues associated with the proposed build alternatives. The DPGR included an evaluation of the existing site conditions of the project area and proposed several structural features and repairs to existing structures to help reduce and avoid the geological hazards that currently exist within the project limits. The structures for this project were proposed to protect traffic and people from various geological hazards, including downslope flooding, landslides, rockfall, and roadway debris slides due to erosion. The construction of some of these structures would require new cuts into the slope to provide a foundation footing for the proposed viaducts/wildlife crossings and new retaining walls. However, these structures are required to be constructed in accordance with Section 19 of the 2023 Standard Specifications, including specifications for earthwork, structure excavation, and backfill, which include current construction methods and sustainable materials to be used. The recommendations provided in the DPGR are used to refine the design of the proposed project, to ensure that people or structures are not exposed to significant risks, including downslope or downstream flooding or landslides, due to runoff, post-fire instability, or drainage changes.

Project features that may reduce Wildfire risk:

- The project would take place mostly on the existing roadway alignment, with very few structures constructed outside of the existing alignment. Therefore, this project would be unlikely to exacerbate wildfire risks or post-fire flooding/landslides.
- Alternatives 3 and 4 propose to pave and widen shoulder areas, which would increase the width of the road and act as a firebreak, reduce vegetation adjacent to the roadside, and provide additional areas for emergency response vehicle staging. Wider lanes will provide improved access for emergency vehicles.

- Park and Ride lots under Alternative 3 could provide areas for emergency vehicle staging during wildfires and other emergencies.
- The reopening of the northern segment of SR-39 might improve the travel times for visitors to access various areas of the ANF and could decrease emergency-response times. The project would also establish a through route between SR-2 and I-210, which are designated disaster routes in Los Angeles County.
- The installation of Midwest Guardrail System with steel posts, under Alternatives 3 and 4, as opposed to Metal Beam Guardrail with wooden posts would offer a higher level of fire resistance, which is essential in areas prone to wildfires. In the event of a wildfire, wooden guardrail posts could become highly flammable, posing a risk not only to the integrity of the guardrail, but also to the safety of motorists and the surrounding environment. By using steel posts, the project would ensure that the guardrail system could withstand wildfires and would eliminate the potential for the posts to catch fire. These steel posts might also reduce the likelihood of fires spreading to adjacent natural habitats of critical local wildlife.
- Restoration and installation of existing and new drainage culverts would improve road surface drainage, thus reducing the occurrence of soil erosion on unpaved shoulders and adjacent rocky slopes. Improved drainage would also reduce the risk of wildfires due to enhanced regulation of water flow, contributing to an increase in operational efficiency of drainage features.
- All build Alternatives for this project (Alternatives 2, 3, and 4) would provide better access for maintenance to clear road debris, dead or fallen trees, and overgrown vegetation that could potentially contribute to fire fuel. Regular maintenance and clearing of the roadway and debris may reduce the hazards and risk of potential wildfires in the area.

Construction Impacts

Certain construction activities within the project limits have the potential to ignite a wildfire if proper precautions are not taken. Construction activities, such as equipment operation and land disturbance, can be potential ignition sources for wildfires. Construction activities such as grinding, welding, or cutting can generate sparks, especially when working with metal surfaces. If not properly controlled, these sparks can ignite nearby vegetation or other combustible materials. Any construction activity involving open flames, such as torching, cutting, or soldering, can be a fire hazard if not managed carefully. Proper construction site management and adherence to fire safety protocols are essential to reduce this risk. This project would also require vegetation clearing along the roadway for various roadway repairs, and foundation/structure

installations. Cleared vegetation must be handled and disposed of properly to avoid potentially catching fire after removal because the large amounts of debris can contribute to fire fuel. These risks would be avoided and minimized by implementing standard measures and procedures during construction.

There is also a potential to disrupt emergency response or evacuation routes during construction. Any disruption would be minimized through early coordination with emergency response personnel and adherence to Caltrans 2023 Standard Specification 7-1.02M(2), as described above.

3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, and on the discussion provided in this chapter, mitigation measures have not been proposed for the project.

The project would implement a traffic management plan, in addition to standard measures and construction methods that Caltrans routinely follows for all projects. These standard measures would ensure the safety of workers and the surrounding environment through modern practices and procedures that limit the potential for any wildfires or delays in emergency response times during construction.

3.4 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. In the past, climate change has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists within recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG, and although it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional human-generated CO₂, which is the main driver of climate change. In the U.S. and California, transportation is the largest source of GHG emissions, which comprise mostly CO₂.

GHGs differ in how much heat each traps in the atmosphere; this is referred to as *global warming potential*. CO₂ is the most important GHG, therefore, amounts of other gases are expressed relative to CO₂ using a metric called carbon dioxide equivalent (CO_{2e}). The global warming potential of CO₂ is assigned a value of 1, and the global warming potential of other gases is assessed as multiples of CO₂.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and severe fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce GHG emissions. In the context of climate change (as distinct from California Environmental Quality Act [CEQA] and National Environmental Policy Act [NEPA]), “mitigation” involves actions to reduce GHG emissions or to enhance the “sinks” that store them (such as forests and soils) to lessen adverse impacts. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

3.4.1 Regulatory Setting

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

Federal

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

NEPA (42 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, 2022). 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.

The federal government has taken steps 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), as amended by the Energy Independence and Security Act of 2007 and Corporate Average Fuel Economy (CAFE) Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation (USDOT) National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The U.S. Environmental Protection Agency (EPA) calculates average fuel economy levels for manufacturers and also sets related GHG emissions standards under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (USDOT, 2014).

The EPA published a final rulemaking on December 30, 2021 that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. The updated GHG emissions standards will avoid more than 3 billion tons of GHG emissions through 2050. In April 2022, NHTSA announced corresponding new fuel economy standards for model years 2024 through 2026, which will reduce fuel use by more than 200 billion gallons through 2050 compared to the old standards and will reduce fuel costs for drivers (EPA, 2022a).

State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate Bills (SBs), Assembly Bills (ABs), and Executive Orders (EOs), including, but not limited to, the following:

Executive Order S-3-05 (June 1, 2005)

The goal of this EO S-3-05 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 passing of Assembly Bill (AB) 32 in 2006 and SB 32 in 2016.

Assembly Bill 32, Chapter 488, Núñez and Pavley, The Global Warming Solutions Act of 2006 (2006)

Assembly Bill 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (CARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective

reductions of greenhouse gases.” The Legislature also intended that the existing statewide GHG emissions limit continue and be used to maintain reductions and further reduce emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-01-07 (January 18, 2007)

Executive Order S-01-07 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. CARB 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 California’s 2030 and 2050 GHG-reduction goals (described further under EO B-30-15, below).

Senate Bill 375, Chapter 728, Sustainable Communities and Climate Protection (2008)

Senate Bill 375 requires CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a Sustainable Communities Strategy (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, California Transportation Plan (2009)

Senate Bill 391 requires California’s long-range transportation plan to identify strategies to address the State’s climate change goals under AB 32.

Executive Order B-16-12 (March 23, 2012)

Executive Order B-16-12 orders State entities under the direction of the Governor, including CARB, 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.

Senate Bill 743, Chapter 386 (2013)

Senate Bill 743 changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on Vehicle Miles Traveled (VMT), 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.

Executive Order B-30-15 (April 29, 2015)

Executive Order B-30-15 establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure that 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 CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). Finally, it requires natural resources agencies to update the State’s climate adaptation strategy, *Safeguarding California*, every 3 years, in addition to ensuring that its provisions are fully implemented.

Senate Bill 32, Chapter 249 (2016)

Senate Bill 32 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.

Senate Bill 1386, Chapter 545 (2016)

Senate Bill 1386 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.”

Senate Bill 150, Chapter 150, Regional Transportation Plans (2017)

Senate Bill 150 requires CARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional GHG emission-reduction targets.

Executive Order B-55-18 (September 10, 2018)

Executive Order B-55-18 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.

Assembly Bill 1279, Chapter 337, The California Climate Crisis Act (2022)

Assembly Bill 1279 mandates carbon neutrality by 2045 and establishes an emissions reduction target of 85 percent below 1990 level as part of that goal. This bill solidifies the goal of EO B-55-18 to achieve and maintain carbon neutrality no later than 2045. It requires CARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to

identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

3.4.2 Environmental Setting

The proposed project is located within the ANF, in an unincorporated area of Los Angeles County. The project area comprises a mix of land uses, including “Special Management Areas,” defined as land requiring additional development regulations to prevent the loss of life and property and to protect the natural environment and important resources and “Open Space Resources Areas,” which are defined as areas that include public and private lands and waters that are preserved in perpetuity or for long-term open space and recreational uses. State Route (SR) 39 and SR-2 are the main transportation routes in the project area, however, the last 4 miles of the northern segment of SR-39 has been closed to the public since 1978 for both passenger and commercial vehicles. Restricted access to this segment has been granted to California Department of Transportation (Caltrans), U.S. Forest Service (USFS), and emergency-response personnel. The nearest alternate route is SR-2, which connects with SR-39 at its northern terminus. Traffic counts at this segment are currently low due to limited access to the roadway. The Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) guides transportation development in the project area.

GHG Inventories

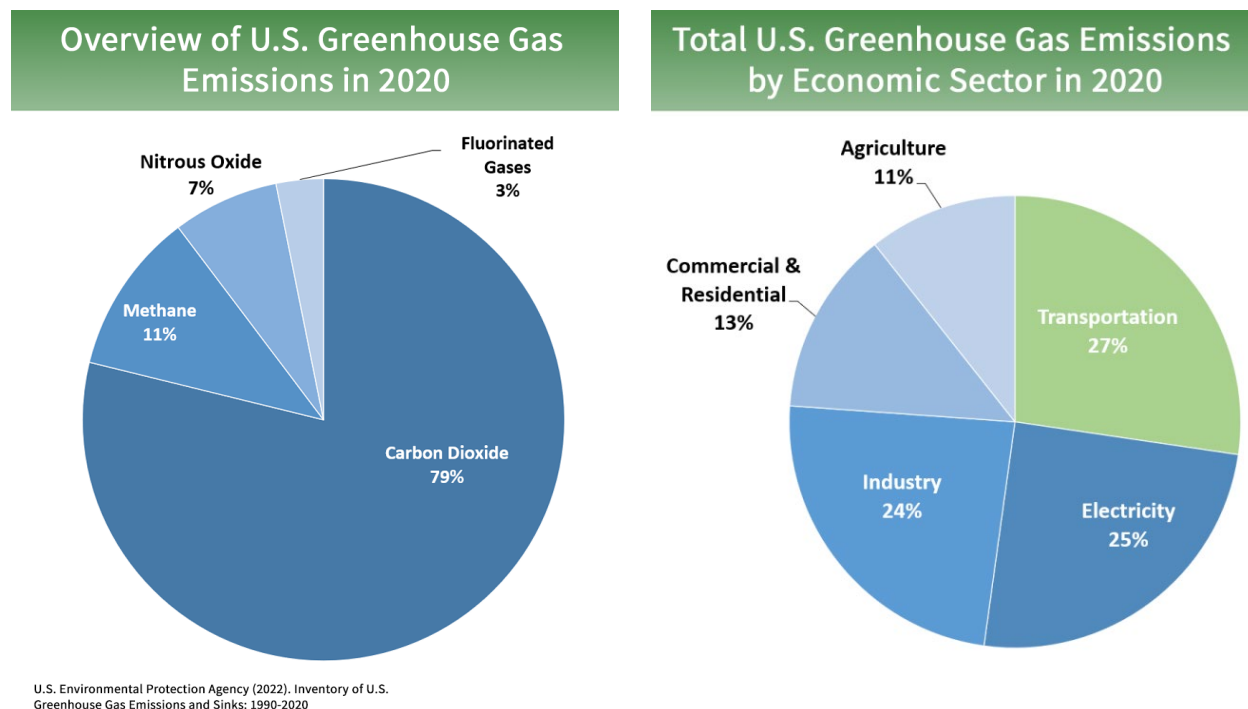
A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The EPA is responsible for documenting GHG emissions nationwide, and CARB is responsible for the State, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction plans and/or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total GHG emissions from all sectors in 2020 were 5,222 million metric tons, factoring in deductions for carbon sequestration in the land sector. Of these, 79 percent were CO₂, 11 percent were CH₄, and 7 percent were N₂O; the balance consisted of fluorinated gases. Total GHGs in 2020 decreased by 21 percent from 2005 levels and 11 percent from 2019. The change from 2019 resulted primarily from less demand in the transportation sector during the Coronavirus Disease 2019 (COVID-19) pandemic. The

transportation sector was responsible for 27 percent of total U.S. GHG emissions in 2020 (Figure 3.4-1)—more than any other sector—and for 36 percent of all CO₂ emissions from fossil fuel combustion. Transportation CO₂ emissions for 2020 decreased by 13 percent from 2019 to 2020 but were 7 percent higher than transportation CO₂ emissions in 1990 (EPA, 2022b).

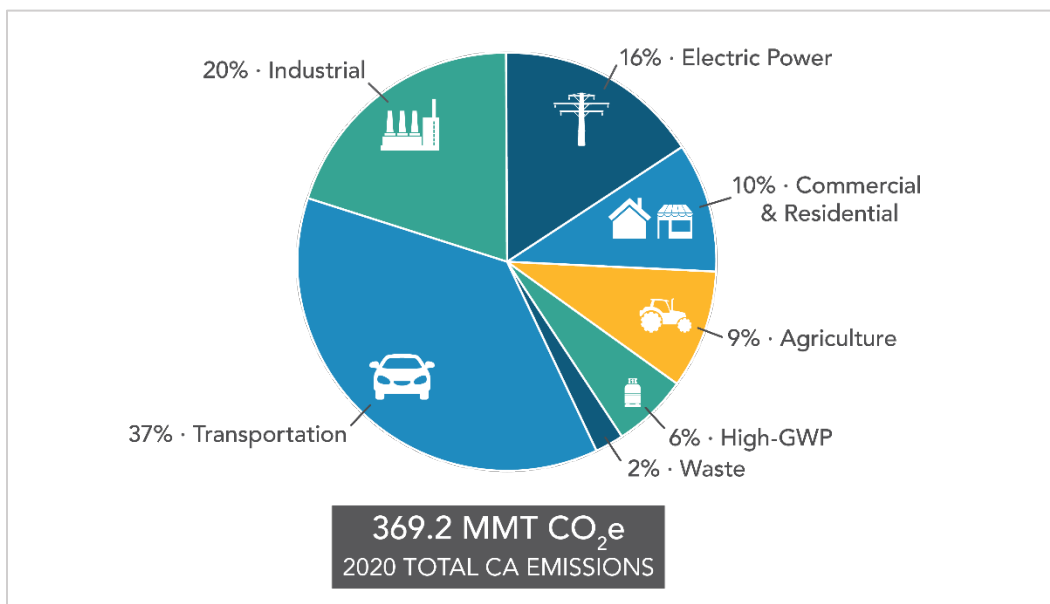
Figure 3.4-1 U.S. 2020 Greenhouse Gas Emissions (Source: EPA, 2022b)



State GHG Inventory

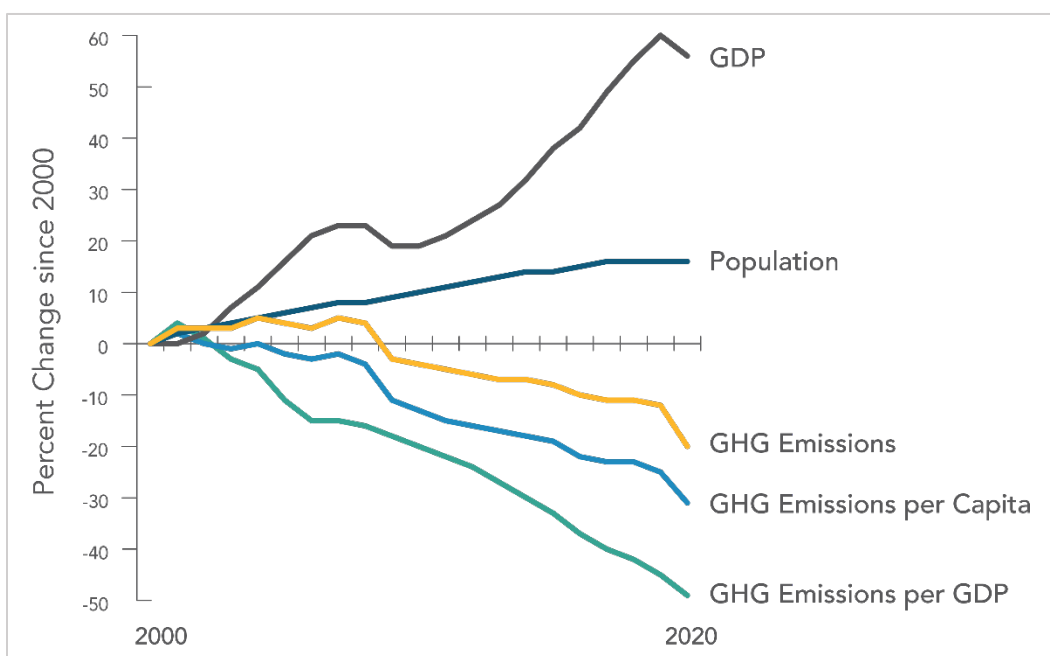
CARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the State’s progress in meeting its GHG reduction goals. The 2022 edition of the GHG emissions inventory reported emissions trends from 2000 to 2020. Total California GHG emissions in 2020 were 369.2 MMTCO_{2e}—a reduction of 35.3 MMTCO_{2e} from 2019 and 61.8 MMTCO_{2e} below the 2020 statewide limit of 431 MMTCO_{2e}. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector, during which VMT declined due to stay-at-home orders and reductions in goods movement. Nevertheless, transportation remained the largest source of GHG emissions, accounting for 37 percent of statewide emissions (Figure 3.4-2). Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for approximately 47 percent of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.

Figure 3.4-2 California 2020 Greenhouse Gas Emissions by Scoping Plan Category (Source: CARB, 2022a)



California’s gross domestic product (GDP) and GHG intensity (i.e., GHG emissions per unit of GDP) both declined from 2019 to 2020 (Figure 3.4-3). It is expected that total GHG emissions will increase as the economy recovers over the next few years (CARB, 2022a).

Figure 3.4-3 Change in California Gross Domestic Product, Population, and GHG Emissions since 2000 (Source: CARB 2022a)



AB 32 required CARB 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, in addition to updating the plan every 5 years. CARB 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 draft *2022 Scoping Plan Update* additionally lays out a path for achieving carbon neutrality by 2045 (CARB, 2022b).

Regional Plans

CARB sets regional GHG reduction targets for California’s 18 MPOs to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the RTP/SCS. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the RTP/SCS for SCAG. The regional reduction target for SCAG is 8 percent by 2020 and 13 percent by 2035 (CARB, 2022c). Table 3.4-1 below provides the regional and local GHG reduction plans and summarizes their policies and strategies.

Table 3.4-1 Regional and Local Greenhouse Gas Reduction Plans

Title	Greenhouse Gas Reduction Policies and/or Strategies
Southern California Association of Governments (SCAG) 2020-2045 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties (adopted September 3, 2020)	<ul style="list-style-type: none"> • Focus growth near destinations and mobility options. • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of GHG emissions. • Leverage technology innovations. • Support Implementation of sustainability policies. • Integrated multi-modal network. • Expand the public transit network. • Strategic capacity and technology enhancements to existing highways. • Identify a list of projects that will add and enhance walking and biking facilities. • Transportation Systems Management measures. • Transportation Demand Management.

Title	Greenhouse Gas Reduction Policies and/or Strategies
<p>Unincorporated Los Angeles County Community Climate Action Plan (August 2015)</p>	<ul style="list-style-type: none"> • Construct and improve bicycle infrastructure to increase biking and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and “end-of-trip” facilities. • Collaborate with the Los Angeles County Metropolitan Transportation Authority (commonly referred to as <i>Metro</i>) on a transit program that prioritizes transit by creating bus priority lanes, improving transit facilities, reducing transit-passenger time, and providing bicycle parking near transit stations. • Encourage ride- and bike-sharing programs and employer sponsored vanpools and shuttles. • Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation. • Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment. • Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes. Manage stormwater, reduce potential treatment, and protect local groundwater supplies. • For the County’s unincorporated areas, adopt a waste diversion goal to comply with all state mandates associated with diverting from landfill disposal at least 75% of the waste by 2020. • Restore and re-vegetate previously disturbed land and/or unused urban and suburban areas. • Encourage the protection of existing land conservation areas. • Renewable Energy and Clean Fuels Program. • Energy Efficiency Programs. • Alternative Renewable Energy Programs. • Wastewater Treatment Plant Biogas. • Energy Efficiency Retrofits of Wastewater Equipment. • Landfill Biogas.
<p>Los Angeles County General Plan 2035 (July 12, 2022)</p>	<ul style="list-style-type: none"> • Facilitate the implementation and maintenance of the community Climate Action Plan to ensure that the County reaches its climate change and GHG emission reduction goals. • Reduce energy consumption in County operations by 20 percent by 2035. • Reduce water consumption in County operations. • Participate in local, regional, and state programs to reduce GHG emissions. • Encourage energy conservation in new development and municipal operations. • Support rooftop solar facilities on new and existing buildings. • Support and expand urban forest programs within the unincorporated areas. • Develop, implement, and maintain countywide climate change adaptation strategies to ensure that the community and public services area resilient to climate change impacts.

3.4.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operational emissions) 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 burning gasoline or diesel fuel in internal combustion engines, which also produces relatively small amounts of CH₄ and N₂O. A small amount of HFC emissions related to refrigeration are also attributed to the transportation sector.

The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (PRC Section 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 reopen the closed segment of SR-39, which would restore through access between I-210 and SR-2 by reconstructing the existing roadway surface and adding improved safety elements to ensure the reliability of the existing facility. This project will not increase the vehicle capacity of the roadway because no additional lanes or vehicle capacity measures are proposed. Preliminary analysis shows a forecasted daily volume of 1,542 vehicles on SR-39 south of SR-2 by 2045. There is no discernable peak period, and no induced travel is anticipated. Based on this information, it was determined that a quantitative analysis for VMT is not required. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR-39, no increase in VMT would occur. Operational GHG emissions would remain consistent with those currently produced at SR-2 and for the southern segment of SR-39, both of which are not causing significant impacts to the surrounding natural environment. Although some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

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

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction emissions were estimated using the latest Caltrans' Model: CAL-CET2021. The emissions are based on the best information available at the time of calculations. Construction-related emissions generated by the construction phase for the proposed project are presented below in Tables 3.4-2, 3.4-3, and 3.4-4 for Alternatives 2, 3, and 4, respectively.

Table 3.4-2 Build Alternative 2 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.000	0.003	0.003	0.203	0.020	1
Roadway Excavation & Removal	0.073	0.488	0.493	0.240	0.057	112
Structural Excavation & Removal	0.001	0.002	0.003	0.203	0.020	1
Base/Subbase/Imported Borrow	0.033	0.243	0.225	0.220	0.038	49
Structure Concrete	0.005	0.014	0.023	0.001	0.001	6
Paving	0.067	0.203	0.495	0.036	0.036	94
Drainage/Environment/Landscaping	0.013	0.037	0.082	0.006	0.006	16
Traffic Signalization/Signage/Striping/Painting	0.023	0.103	0.172	0.011	0.011	69
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	0.215	1.093	1.497	0.919	0.189	347
Note: ROG, CO, NOx, PM ₁₀ , and PM _{2.5} , are measured in parts per million; CO _{2e} is measured in tons. CO _{2e} = carbon dioxide (CO ₂) equivalents consisting of CO ₂ , methane, N ₂ O, black carbon, and hydrofluorocarbons.						

Table 3.4-3 Build Alternative 3 Construction Emissions Estimate

Construction Phases	ROG	CO	NOx	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.018	0.108	0.112	0.210	0.028	28
Roadway Excavation & Removal	0.125	0.838	0.848	0.267	0.084	189
Structural Excavation & Removal	0.166	0.491	0.863	0.258	0.075	243
Base/Subbase/Imported Borrow	0.303	2.233	2.072	0.364	0.180	447
Structure Concrete	0.791	2.412	3.858	0.234	0.230	845

Paving	0.047	0.141	0.347	0.025	0.025	63
Drainage/Environment/Landscaping	0.071	0.204	0.453	0.034	0.034	85
Traffic Signalization/Signage/Striping/Painting	0.108	0.473	0.789	0.049	0.049	312
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	1.629	6.901	9.342	1.443	0.704	2214
Note: ROG, CO, NO _x , PM ₁₀ , and PM _{2.5} , are measured in parts per million; CO _{2e} is measured in tons. CO _{2e} = carbon dioxide (CO ₂) equivalents consisting of CO ₂ , methane, N ₂ O, black carbon, and hydrofluorocarbons.						

Table 3.4-4 Build Alternative 4 Construction Emissions Estimate

Construction Phases	ROG	CO	NO _x	PM ₁₀	PM _{2.5}	CO _{2e}
Land Clearing/Grubbing	0.023	0.136	0.142	0.213	0.030	36
Roadway Excavation & Removal	0.158	1.056	1.068	0.284	0.101	239
Structural Excavation & Removal	0.209	0.619	1.089	0.272	0.089	308
Base/Subbase/Imported Borrow	0.381	2.812	2.610	0.406	0.221	564
Structure Concrete	0.996	3.038	4.860	0.295	0.289	1066
Paving	0.059	0.177	0.436	0.032	0.032	80
Drainage/Environment/Landscaping	0.090	0.256	0.570	0.043	0.042	106
Traffic Signalization/Signage/Striping/Painting	0.136	0.596	0.994	0.062	0.061	394
Other Operation	0.000	0.000	0.000	0.000	0.000	0
Total	2.052	8.691	11.768	1.607	0.866	2791
Note: ROG, CO, NO _x , PM ₁₀ , and PM _{2.5} , are measured in parts per million; CO _{2e} is measured in tons. CO _{2e} = carbon dioxide (CO ₂) equivalents consisting of CO ₂ , methane, N ₂ O, black carbon, and hydrofluorocarbons.						

Caltrans standard specifications include the requirement to minimize or eliminate dust through application of water or dust palliatives. Control measures will be implemented as specified in *Caltrans 2018 Standard Specifications* Section 10-5, *Dust Control*; Section 14-9, *Air Quality*; and Section 18, *Dust Palliatives*. All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, *Emissions Reduction*, require contractors to comply with all laws applicable to the project and to certify that they are aware of and will comply with all CARB emission-reduction regulations. Section 14-9.02, *Air Pollution Control*, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations that reduce construction vehicle emissions (such as equipment idling restrictions) also help reduce GHG emissions.

CEQA Conclusion

Although 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 plans, policies, or regulations

adopted for the purpose of reducing the emissions of GHGs. 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.

3.4.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, low-carbon, and cleaner future, while maintaining a robust economy (CARB, 2022d).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research (OPR) identified five sustainability pillars in a 2015 report: (1) increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) reducing petroleum use by as much as 50 percent by 2030; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR, 2015). OPR later added strategies related to achieving statewide carbon neutrality by 2045 in accordance with EO B-55-18 and AB 1279 (OPR, 2022a).

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 the reduction of VMT. Reducing today's petroleum use in cars and trucks by 50 percent is a key State goal for reducing GHG emissions by 2030 (California Environmental Protection Agency, 2015).

Trees and vegetation in forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter. SB 1386, therefore, established the protection and management of such natural and working lands as state policy and requires state agencies to consider that policy in their own decision making.

Subsequently, Governor Gavin Newsom issued EO N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities, and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency (2022a) released *Natural and Working Lands Climate Smart Strategy*, with a focus on nature-based solutions.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as CARB works to implement EO S-3-05 and EO S-01-07 and helps 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.

Climate Action Plan for Transportation Infrastructure

The *California Action Plan for Transportation Infrastructure* (CAPTI) builds on EOs signed by Governor Newsom in 2019 and 2020 that were targeted at reducing GHG emissions in transportation, which account for greater than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the State will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency, 2021).

California Transportation Plan

The California Transportation Plan is a statewide, long-range transportation plan to meet future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The California Transportation Plan 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans, 2021a).

Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans, 2021b).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30, *Climate Change* (June 22, 2012), established a Caltrans policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans, 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Caltrans-controlled emission sources, in support of Departmental and State goals.

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.

- To the extent feasible, design features and/or additional methods will adjust the posted speed limit to the optimum speed for less GHG emissions.
- The project will use rubberized asphalt recycled from rubber and rubber tires and will recycle old overhead signs, structures, light poles, and old changeable message sign structures and panels.
- Temporary access roads, construction easements, and staging areas that were previously vegetated will be restored to a natural contour and revegetated with regionally appropriate native vegetation.
- Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- For improved fuel efficiency from construction equipment: maintain equipment in proper tune and working condition, use right-sized equipment for the job, and use equipment with new technologies.
- Use alternative fuels such as renewable diesel for construction equipment (where feasible and available).

- Supplement existing construction environmental training with information on methods to reduce GHG emissions related to construction.
- Improve drainage systems to adapt to localized flooding risks.
- Reduce construction waste (e.g., reuse or recycle construction and demolition waste, which reduces consumption of raw materials, reduces waste and transportation to landfill, and saves costs).
- Use corrosion-resistant materials.
- Improve drainage and drainage systems to adapt to localized flooding risks.
- Use recycled water or reduce consumption of potable water for construction. The use of reclaimed water helps conserve energy, which reduces GHG emissions from electricity production.

3.4.5 Adaptation

Reducing GHG emissions is only one part of the 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, storm surges and their intensity, and 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; and 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 *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."

The USDOT Policy Statement on Climate Adaptation in June 2011 committed the USDOT to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of USDOT 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” (USDOT, 2011). The USDOT Climate Action Plan of August 2021 followed up with a statement of policy to “accelerate reductions in greenhouse gas emissions from the transportation sector and make our transportation infrastructure more climate change resilient now and in the future,” following these guiding principles (USDOT, 2021):

- Use best-available science.
- Prioritize the most vulnerable.
- Preserve ecosystems.
- Build community relationships.
- Engage globally.

USDOT developed its climate action plan pursuant to the federal EO 14008, *Tackling the Climate Crisis at Home and Abroad* (January 27, 2021). EO 14008 recognized the threats of climate change to national security and ordered federal government agencies to prioritize actions on climate adaptation and resilience in their programs and investments (White House, 2021).

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 (FHWA, 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California’s Fourth Climate Change Assessment (Fourth Assessment) (2018) is the State’s effort to “translate the state of climate science into useful information for action.” It provides information that will help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state’s people, infrastructure, natural systems, working lands, and waters. California’s approach

recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or sooner, the State is projected to experience: an increase of 2.7 to 8.8 degrees Fahrenheit in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77-percent increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67 percent of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California, 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; the San Francisco airport is already at risk. The number of miles of coastal highways that are vulnerable to flooding in a 100-year storm event will triple to 370 miles by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

In 2008, then-Governor Arnold Schwarzenegger issued EO S-13-08, which focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and subsequently updated in 2013 and 2017. The 2017 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. This EO also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the *California Climate Adaptation Strategy*, incorporating key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio*, and the CAPTI (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency, 2022b).

EO B-30-15, signed on April 29, 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that the effects of climate change and 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.

AB 2800 created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the State address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. 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 (Climate Change Infrastructure Working Group, 2018)

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the SHS that are vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

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 guide the analysis of at-risk assets and the development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

Sea Level Rise

The proposed project is located in the upper elevations of the ANF and is well outside of the coastal zone; therefore, it is not in an area that is subject to sea level rise. Accordingly, direct impacts to transportation facilities due to projected sea level rise are not expected.

Precipitation and Flooding

The project area is characterized by steep rocky slopes, narrow drainages that are nestled amongst the mountainous terrain, and a mixture of rocky terrain, debris tracks, and dense vegetation along the shoulders of the roadway. No flood plain impacts are expected under the proposed project because the project is located outside of a designated floodplain. An assessment of the Federal Emergency Management Agency flood maps indicate that this project is located outside the limits of any flood hazard zones. The flood hazard boundary map, provided in Chapter 2.2.1, *Hydrology and*

Floodplain, illustrates that the project location is located within Zone D, which is defined as areas in which flood hazards are undetermined, but possible. No Special Flood Hazard areas exist within the project's vicinity, therefore, flood risks would be minimal and are not expected with the implementation of this project, given the current scope of work.

The Caltrans Climate Change Vulnerability Assessment for District 7 assessed the potential climate impacts to the district's portion of the SHS and created a database composed of climate stressors and their relative geospatial data to gauge the vulnerability of the SHS and other Caltrans assets to these stressors. To determine impacts to the SHS due to precipitation and flooding, the 100-year storm was assessed to help explain how 100-year storm rainfall is predicted to change. For the proposed project area, the 100-year storm rainfall event is projected to have the greatest increase in 100-year storm depth in the ANF and Los Padres National Forest regions. The expected trend is that the 100-year storm precipitation depth will increase over the coming century by anywhere from 0 to 20 percent in District 7. Utilization of 100-year storm data is beneficial for designing infrastructure that can accommodate heavier storm events because it is often applied in designing transportation facilities and is a design consideration in the 2020 Caltrans Highway Design Manual.

For the proposed project, the existing drainage system would be rehabilitated along with the construction of additional culverts to accommodate the slight increase in impervious surfaces due to the widening of shoulders and construction of several viaducts along the route for Alternatives 3 and 4. The restoration and installation of existing and new drainage culverts will improve road surface drainage, thereby reducing the occurrence of soil erosion on unpaved shoulders and adjacent rocky slopes. Improved drainage would enhance the regulation of water flow that contributes to the increase in operational efficiency of drainage features. Several slope/surface protection systems were proposed for this project, such as rock scaling at certain locations, which may alter the existing slope, and ensuring that vegetation on sloped surfaces will be preserved, minimally disturbed, and restored post-construction. Caltrans Erosion Control Policy will be implemented for re-vegetation of disturbed areas and rock blankets; paving or additional hard surfaces will be avoided to limit additional impervious surfaces within the project limits. The Caltrans Highway Design Manual requires that slopes be designed as flat as is reasonable to minimize erosion and to promote plant growth; therefore, cut slopes for the proposed project will be no greater than 4:1, which is ideal for reducing water velocity and erosive power.

Wildfire

Based on integrated wildfire projection summaries derived from the MC2 - EPA Climate Impacts Risk Assessment USFS model, the MC2 - Applied Climate Science Lab at the University of Idaho model, and the University of California Merced model, the entire

project area would be located on a portion of roadway that is exposed to the occurrence of wildfires that may result from conditions caused by the effects of climate change. The likelihood of wildfires based on projected percentages of area burned over time is very high in this area. The classification for the percent of area burned within the project area is expected to be greater than 100 percent for most of the project limits, with some portions classified at 50 to 100 percent for the projected wildfires that may occur through the year 2085 within the project area (Caltrans, 2021a).

Caltrans Standard Specifications mandate fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction (Caltrans, 2023). The project is therefore expected to be resilient to the risk of wildfire. Most of the drainage features that would be restored for this project are currently rated as being in fair to poor condition. Improving these drainage features would restore drainage to the adequate conditions needed to reduce the risk of flooding, which may cause slope instability and landslides if future wildfires were to occur and leave slopes exposed. Furthermore, most of the drainage modifications would comprise corrugated steel pipe, which would prevent damage in case of a wildfire because they would be less vulnerable to destruction from wildfires due to greater resistance of high temperatures. Midwest Guardrail System (MGS) with steel posts is also proposed at various locations within the project limits. The steel posts of the MGS will offer a high level of fire resistance, as opposed to metal beam guardrail with wooden posts, which is essential within the project location because the area is prone to wildfires. By using steel posts, the project ensures that the guardrail system can withstand wildfires and eliminates the potential for the posts to catch fire. These steel posts may also reduce the likelihood of fires spreading to adjacent natural habitats of critical local wildlife.

Temperature

Temperature affects the choice of pavement materials, the design of foundations and retaining walls in terms of ground moisture conditions, and the need for expansion/contraction of bridge joints. During operations and maintenance, higher temperatures will affect the safety of employees working outdoors, the survival of landscaping and vegetation in the right-of-way, and the pavement condition, which could require more frequent maintenance. Because the project is located within the high elevations of the ANF, temperatures for the surrounding environment are expected to fluctuate dramatically throughout the year; therefore, special consideration of the materials used for structures and the roadway that can handle temperature fluctuations must be considered.

The Caltrans Climate Change Vulnerability Assessment for District 7 uses climate data provided by the Scripps Institution of Oceanography to project average maximum temperature increases over the course of 7 consecutive days throughout District 7. The project area reflects an average weekly temperature increase of approximately 11 to 12

degrees Fahrenheit through the year 2085. The average minimum temperature increase was also projected to be 4 to 5 degrees Fahrenheit through 2055 and 8 to 9 degrees Fahrenheit through 2085.

Design aspects for this project that were chosen due to temperature considerations are as follows:

- The pavement binder (PG 64-16) selection was based on climate region, which ensures performance grading designed to withstand specific temperature ranges within the project location.
- Rubberized hot mix asphalt pavement will be used to resist thermal stresses created by wide temperature fluctuations; however, this can only be used at elevations below 3,000 feet.
- Jointed plain concrete pavement will be used for the higher elevations, which is dowelled at the joints to account for blowups from high temperatures.

Additionally, thick asphalt layers composed of varying layers provide greater flexibility because they can be easily modified over time to accommodate climate change impacts without affecting the underlying structure (USDOT, 2015).

Chapter 4 Comments and Coordination

4.1 Introduction

Scoping is a process in which input from public agencies and members of the public is sought out to collaboratively design the purpose, need, scope, and alternatives of a proposed project. This process is vital to the development of a project because it helps to ensure that issues or concerns are adequately addressed and that the level of analysis chosen is sufficient to analyze a project's potential impacts. Early and ongoing collaboration with public agencies and the public is a major tenet of the environmental process due to its impact on the quality of decisions about the environment and the community. Agency/tribal consultation and public participation for this project have been accomplished through an extensive public outreach process, which includes mailed notices to elected officials, stakeholders, and property/business owners; postcards and posters placed at several locations and events throughout the surrounding communities; public meetings; newspaper advertisements in various publications; and weekly eblasts. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

4.2 Scoping Process

The State Route (SR) 39 Reopening Project Scoping Outreach included targeted activities in Wrightwood, Azusa, Duarte, El Monte, Covina, Glendora, Irwindale, Baldwin Park, and unincorporated areas of Los Angeles County. A stakeholder contact database was developed for the following groups with a total of 492 contacts: project partners, business and civic organizations, emergency response agencies, neighborhood and/or community-based organizations, and other interested and affected stakeholders. Registrants for the scoping meeting were also added to the database for future use in public information and input during the environmental process.

Outreach occurred from November 30, 2022 until December 15, 2022, which was the date of the Scoping Meeting. The Notice of Preparation (NOP), included in Appendix E, was posted at the State Clearing House (No. 2022120019) on December 1, 2022, thus commencing the Public Comment Period, which was extended to January 16, 2023. The following list summarizes the outreach efforts that occurred to distribute the scoping notice letters and NOPs to the public and stakeholders.

- A total of 16,625 Scoping Notice Letters with an attachment of the NOP were mailed to residents, property owners, and stakeholders within a 0.5-mile radius of the proposed project.

- Letters were mailed to appropriate local, state, and federal agencies and elected officials representing the project study area.
- Twenty-eight 12-by-18-inch posters and 1,485 8.5-by-5.9-inch postcards were distributed at a total of 33 events.
- A total of 275 postcards were dropped off at 19 community events.
- Seven San Gabriel Valley-focused newspapers contained ads (with Quick Response [QR] codes) detailing registration information for the scoping meeting.
- Weekly “eblasts” were sent to the Stakeholder contact list promoting the Scoping Meeting registration and how to submit Public Comments.
- A virtual public Scoping Meeting was held, and 113 people attended the meeting.

4.2.1 Scoping Meeting

On December 1, 2022, a Scoping Notice Letter and NOP was mailed to agency partners and federal, state, and local government elected officials. Property and business owners within the 0.5-mile radius of the proposed project, including those located along SR-39, SR-2, and in Wrightwood, also received the Scoping Notice Letter. The letter and NOP included a summary of the proposed project, detailing the purpose, need, and proposed alternatives, along with the lead agency’s intent to prepare an Environmental Impact Report (EIR)/Environmental Assessment (EA), with a request for comments from interested parties during the 46-day comment period from December 1, 2022, to January 16, 2022. On December 1, 2022, the Scoping Notice Letter and NOP were mailed to 68 elected officials, 250 stakeholders, and 16,625 property/business owners.

Postcards and posters in both English and Spanish were distributed and placed at high-traffic locations in the East San Gabriel Valley, including recreation centers, senior centers, libraries, city halls, the Chamber of Commerce, and public events. The scoping meeting was announced at the City of Azusa City Council Meeting on December 5, 2022, and postcards were distributed. Postcards and posters were distributed 2 weeks before the scoping meeting date and continuing up to the meeting date, as shown in Table 4-1 below.

Table 4-1 Postcard and Poster Distribution

Location of Event	Number of Postcards	Number of Posters	Location of Postcards	Date
Covina Public Library	1	50	Community bulletin at entrance	November 29, 2022

Chapter 4 Comments and Coordination

Location of Event	Number of Postcards	Number of Posters	Location of Postcards	Date
Azusa City Library	1	50	Community bulletin behind north side desk	November 29, 2022
City of Glendora Library	1	50	Bulletin board on right hand side of library entrance	November 28, 2022
Duarte Library	1	50	Front desk and bulletin board	November 30, 2022
City of Irwindale Public Library	1	50	Bulletin board by fountain and restroom	November 29, 2022
El Monte Library	1	50	Bookcase and shelf	December 1, 2022
Norwood Library	1	50	Side front counter	November 30, 2022
Wrightwood Library	1	50	Reference desk and front entrance	December 5, 2022
Azusa Senior Center	1	50	Posted by side table and poster on hallway	November 30, 2022
Azusa City Hall (west wing)	1	50	Information center	November 29, 2022
Azusa Parks and Recreation Center	1	50	Bulletin board at front entrance	November 30, 2022
Covina Senior & Community Center	1	50	Bulletin board at front entrance	November 28, 2022
El Monte Historical Society	1	15	On counter at entrance	December 3, 2022
Baldwin Park Library	1	50	Bookcase and shelf	December 1, 2022
La Historia Historical Society	1	50	Check-in table	December 3, 2022
Esther Snyder Community Center	2	50	Postcards on both ends of the entrance counter and posters on both ends of the plexiglass counter shield	December 1, 2022
Baldwin Park Teen Center and Skate Park	1	50	On the counter at entrance	December 9, 2022
Teri G. Muse Family Service Center	1	50	On the table in the waiting area	December 2, 2022
Barnes Park Family Recreation Center	1	50	In literature rack at entrance	December 8, 2022
Arts and Recreation Center	1	50	Postcards on the table, posters on the wall	December 1, 2022
Julia McNeill Senior Center	1	50	In literature rack at the entrance and on entrance counter	December 1, 2022
Baldwin Park Police Dept	0	50	On entrance counter	December 9, 2022
City Marquee, BP Bl & Ramona	-	-	Marquee	November 29, 2022
City of Glendora City Hall	1	50	Dropped at Planning Office Desk	December 7, 2022

Location of Event	Number of Postcards	Number of Posters	Location of Postcards	Date
Duarte Chamber of Commerce	1	50	Bulletin shelf front	November 30, 2022
Duarte Farmers Market	1	50	Chamber of Commerce table booth	November 30, 2022
Duarte City Hall	1	50	Side bulletin lounge	November 30, 2022
Duarte Senior Center	1	50	Bulletin lounge	December 8, 2022
Mountain High Ski Resort	1	75	Guest services office front window and inside rack	December 5, 2022
Terecita Pines	0	25	Camp Manager for board	December 5, 2022
Wrightwood Business Center	0	50	Front table	December 5, 2022
Bigfoot Bowls (Wrightwood)	0	20	Cashier	December 5, 2022
Total Postcards & Posters Distributed	28	1,485	–	–

There were 19 events at which more than 275 postcards were distributed, as shown in Table 4-2 below.

Table 4-2 Community Outreach Events

Meeting/Events	Date of Event
Irwindale Lions Club Meeting	November 22, 2022
SGV Economic Partnership Merry Mingle	December 1, 2022
Baldwin Park Woman's Club Meeting	December 2, 2022
City of El Monte Holiday House	December 3, 2022
El Monte La Historia Historical Society Photo with Santa	December 3, 2022
Baldwin Park Christmas Parade	December 3, 2022
Azusa City Council Meeting	December 5, 2022
SGV Progressives	December 5, 2022
Walmart Baldwin Park Santa Clothes	December 6, 2022
El Monte Chamber of Commerce Toy Distribution & Mixer	December 7, 2022
Duarte Farmers Market	December 7, 2022
Baldwin Park Business Association Mixer	December 8, 2022
Assemblymember Rubio Mixer & Toy Drive (Irwindale)	December 8, 2022
Picture w/Santa City of Duarte	December 9, 2022
Nature for All Hike	December 10, 2022
Azusa City Tree Lighting	December 10, 2022
Duarte Holiday in the Park	December 11, 2022
El Monte Chamber Ambassador Meeting	December 13, 2022

Meeting/Events	Date of Event
Chamber Breakfast Food & Toy Drive Azusa	December 15, 2022

English- and Spanish-language print ads ran in San Gabriel Valley-focused newspapers. A QR code was included to direct readers to the registration page for the December 15, 2022 Scoping Meeting. Table 4-3 below summarizes outreach efforts via San Gabriel Valley publications.

Table 4-3 Newspaper Advertisements

Publication	Published	Ad Run Date
San Gabriel Valley Tribune/Whittier Daily News/Pasadena	–	–
Star News	Daily	November 28, 2022, and December 5, 2022
LA Times - San Gabriel Valley Edition (Wednesday only)	Wednesday	November 30, 2022, and December 7, 2022
San Gabriel Examiner (Tuesday only)	Tuesday	November 29, 2022, and December 6, 2022
Glendora City News (Online only)	Daily	November 28, 2022 through December 8, 2022
Excelsior – Los Angeles County (Saturday Spanish only)	Saturday	November 26, 2022, and December 3, 2022
Mountaineer Progress (Thursday only)	Thursday	December 1, 2022, and December 8, 2022

The virtual Public Scoping Meeting was conducted with simultaneous Spanish interpretation (instructions for accessing Spanish translation channels was also given in Spanish). The Scoping Meeting event was held via Zoom on Thursday, December 15, 2022 at 6:30 pm. The presentation lasted 30 minutes, followed by a 50-minute public comment period. There were 23 speakers who were given 3 minutes each to provide comments. The recording is available on the California Department of Transportation (Caltrans) YouTube channel.

4.2.2 Scoping Comments

A total of 23 verbal comment submissions were received at the public scoping meeting and 317 comment responses were received via letter or email during the comment period. Of the total 340 comments received, six comments were received by government agencies, two were received by community-based nonprofit groups, and 332 were submitted by residents or community members. Comment submissions often addressed a range of issues in multiple comment topics, with the most common comment received by any commenter pertaining to Transportation and Traffic. The range of comment topics received by government agencies, nonprofits, and the general public is described in the subsections below.

Government Agency and Non-Profit Organization Comments

Six governmental agencies at the state and federal levels and two non-profit organizations with a personal stake in the proposed project's potential impact on the environment sent letters to Caltrans regarding the reopening of SR-39. Although some agencies did not identify a preferred alternative, their concerns and comments are discussed in Table 4-4 below. Comments and concerns from the two non-profit organizations are discussed in Table 4-5 below.

Table 4-4 Summary of Agency Stakeholder Scoping Comments

Agency	Comment	Comment Topics	Alternative Recommended
California Department of Fish and Wildlife (CDFW)	As a California state agency concerned with protecting wildlife, the CDFW states that Alternatives 2 through 6 would significantly impact wildlife, particularly the Bighorn Sheep. According to CDFW, Project Alternatives 2 through 6 "will have temporary and long-term impacts on local bighorn sheep populations. CDFW cannot permit the 'taking' of this species. Therefore, CDFW recommends the No-Build Alternative to avoid taking of the fully protected species. CDFW recommends the [Draft EIR] thoroughly discuss the potential impacts the proposed alternatives would have on bighorn sheep. CDFW also recommends including a detailed analysis of construction and the expected increase of long-term human disturbance the Project will have on this species relative to the No-Build Alternative."	<ul style="list-style-type: none"> • Traffic/ Access • Water Runoff • Forest Fires/ Evacuation • Bighorn Sheep/ Wildlife • Air Pollution/ Climate Change 	Alternative 1
Los Angeles County Sheriff's Department	Although the Sheriff's Department does not have a preference for the preferred alternative, the department "recommends a maintenance landscaping program at various vista points/stop over parking areas to reduce opportunities for criminal activities" and by "employing physical design features that discourage anti-social behavior." In addition, the Sheriff's Department, in coordination with Caltrans, "shall prepare a traffic management plan to ensure that the SR-39 remains passable for emergency services during construction," given that it is the only passable and travelable route to Angeles Crest Highway ([State Route] 2)."	<ul style="list-style-type: none"> • Traffic/ Access • Forest Fires/ Evacuation • Public Safety 	N/A

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Agency	Comment	Comment Topics	Alternative Recommended
Los Angeles County Department of Public Works	Public Works favors a full reopening of SR-39 with the expectation that the “roadway will remain part of the State highway system.” Public Works supports Alternative 4 because the reopening “aligns with the County’s strategic plan goal to expand access to recreational and cultural opportunities in the Angeles National Forest” and to provide residents “access to safe transportation infrastructure.” The county agency also noted their concerns with Alternative 6, which “would create conditions that could result in conflicts between vehicles, pedestrians/hikers, and bicyclists” because Alternative 6 proposed a single lane.	<ul style="list-style-type: none"> • Recreational • Traffic/ Access • Forest Fires/ Evacuation 	Alternative 4
U.S. Environmental Protection Agency (EPA)	The EPA’s letter makes recommendations to address environmental mitigation, as well as the recommendation to coordinate with CDFW. Specifically, the letter mentions issues such as habitat connectivity and wildlife movement, emergency evacuations, air quality, water resources, and equity and environmental justice for minority populations. The EPA “recommends that Caltrans identify the desired outcomes of the project in the context of the existing and anticipated needs, and the context of the historical multiple massive mud and rockslides, avalanches, landslides, erosion, steep terrain, canyon adjacency, project geology, slope instability, and a high potential for road ‘washouts.’ Specifically, for the alternatives providing full public access, Caltrans should clearly state what needs to warrant opening the road to the general public given the extreme historical impacts causing the road to be unsafe and impassable, recognizing extreme weather events contributing to such impacts may likely continue.”	<ul style="list-style-type: none"> • Cultural/ Indigenous • Traffic/ Access • Bicycles/ Alternative Transit • Water Runoff • Forest Fires/ Evacuation • Bighorn Sheep/ Wildlife • Air Pollution/ Climate Change • Geology 	N/A

Agency	Comment	Comment Topics	Alternative Recommended
U.S. Forest Service (USFS)	The tone of the USFS’s letter indicates support for reopening and coordinating with other state and federal agencies. The USFS believes that “the Project is consistent with our Land Management Plan.” In particular, the plan has a Transportation strategy: “Implement landscape scale transportation analysis on a priority basis. Coordinate with state governments, other agencies, and the public.” The San Gabriel Mountains National Monument Management Plan also includes a Management Approach to “Coordinate with Caltrans to improve transportation and wildlife connectivity within the Monument while minimizing adverse resource effects.” While the Forest Service does support a full reopening, the agency acknowledges the challenge of addressing Nelson’s Bighorn Sheep with CDFW. Nevertheless, this federal agency looks forward to “participating fully in developing appropriate mitigations to protect Nelson’s Bighorn Sheep and other wildlife species.”	<ul style="list-style-type: none"> • Traffic/ Access • Bighorn Sheep/ Wildlife 	N/A
Native American Heritage Commission (NAHC)	The NAHC recommends “consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as soon as possible to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.”	<ul style="list-style-type: none"> • Cultural/ Indigenous • Recreational • Air Pollution/ Climate Change 	N/A

Table 4-5 Summary of Non-Profit Organization Stakeholder Scoping Comments

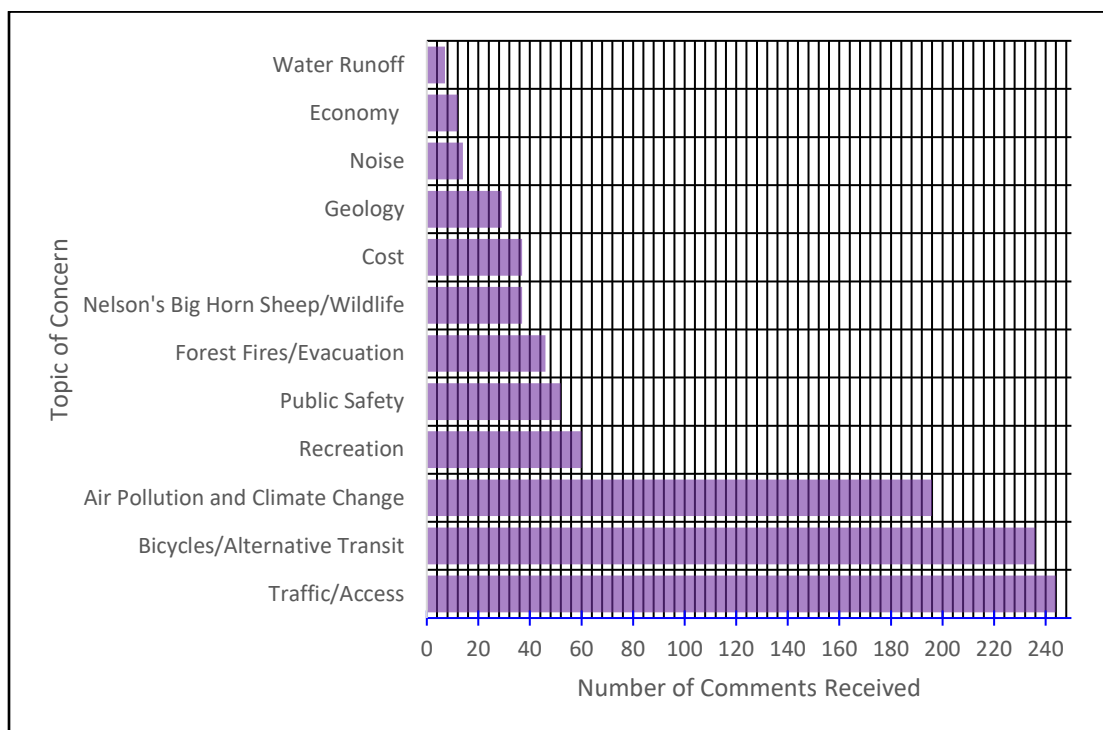
Non-Profit Organization	Comment	Comment Topics	Alternative Recommended
Active San Gabriel Valley (Active SGV)	According to the letter, Active SGV supports Alternative 3 because "it is a multimodal approach that accommodates people on transit, bike, and foot, as well as endangered wildlife. Alternative three aligns with Caltrans' Complete Streets Policy and California's goals relating to [Vehicle Miles Traveled] reduction. Community members have expressed a desire for a public transit connection to the San Gabriel Mountains National Monument, and some projects are currently working towards this goal. Alternative 3 could potentially complement those projects." Active SGV also supports "Alternative 2, the least intrusive build project and the most affordable to realize and operate. Alternative 2 would address safety concerns for first responders." Additionally, Active SGV members filed more than 150 additional letters to Caltrans supporting Alternative 3, which leads to it being the preferred alternative for most respondents.	<ul style="list-style-type: none"> • Bicycles/ Alternative Transit • Bighorn Sheep/ Wildlife • Air Pollution/ Climate Change • Public Safety • Cost 	Alternative 3

Non-Profit Organization	Comment	Comment Topics	Alternative Recommended
Pacific Crest Trail Association	More information was requested for the following subject areas: Current traffic numbers for SR-2 in this area; anticipated traffic numbers for Alternatives 3, 4, 5, and 6 for both SR-2 and SR-39 because increased traffic associated with these alternatives may create safety concerns for Pacific Crest National Scenic Trail (PCT) hikers and horseback riders crossing SR-2; maps of the viaduct and bridge sections for their respective alternatives to evaluate visual, scenic, and auditory impacts, mockup of any additional parking areas; mockup of roundabout proposed in Alternative 4; the study, data, and analysis on auditory impacts of construction and auto usage; and analysis of visual impacts on the PCT for both construction and final product.	<ul style="list-style-type: none"> Traffic/ Access Geology 	N/A

Community Member Comments

The public provided written and spoken comments on a wide array of topics. The primary topic of interest from all the comments was Traffic/Access. Figure 4-1 represents the number of comments received by topics of concern.

Figure 4-1 Comment Topics Specified by the General Public



As shown in Figure 4-1, the three topics of highest concern were: traffic, which was the number one issue for reopening SR-39 (244 responses); bicycles and alternative modes of transportation (236 responses); and climate change/air pollution (196). Issues of least

concern by respondents were noise (14 respondents), economy (12 respondents), and water runoff (7 respondents).

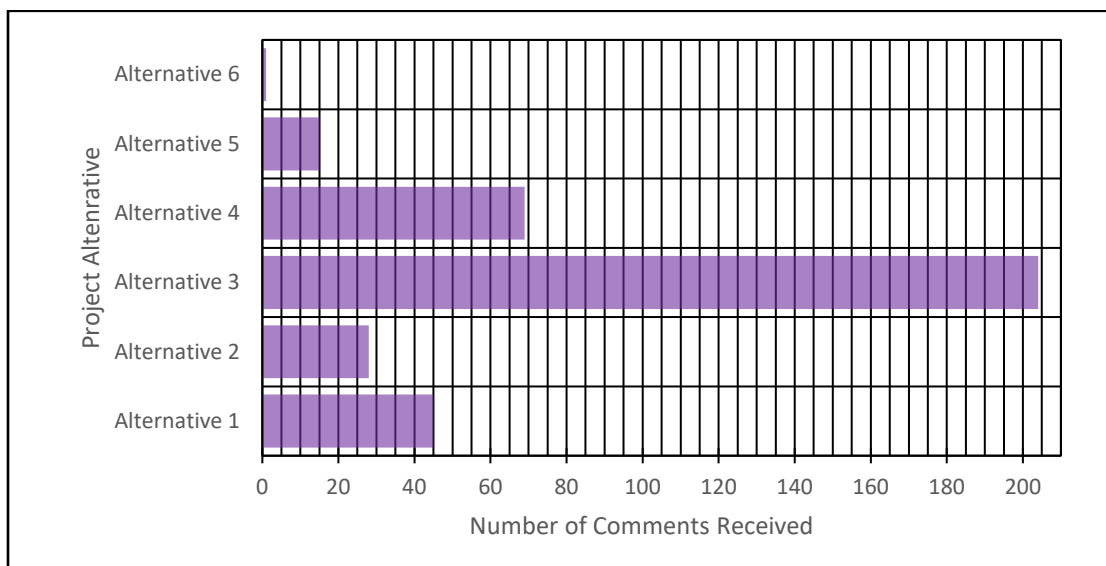
Traffic was the number one issue for most respondents. Increased traffic or traffic alleviation were concerns by both supporters and opponents of the SR-39 Reopening Project. Supporters of the reopening state that traffic would be alleviated because it would reduce vehicle miles traveled/local traffic near homes. On the other hand, opponents of the project cite that more access to remote locations in the mountains would increase traffic, diminishing the enjoyment of nature.

Many individuals were focused on the proposed project's potential to provide alternative forms of transportation on SR-39. Active transportation advocates overwhelmingly supported Alternative 3 because they felt that cars take away from the natural environment, stating, "Cars already take so much away from our local nature sites: they kill animals, pollute our air, and make the roads much riskier for pedestrians and cyclists. California needs to find ways to cut down on vehicle emissions; let this be a major step forward, so that people can escape to nature without needing a car."

Both supporters and opponents of the reopening were concerned about the potential impact to air quality and climate change. Respondents that supported the full reopening mentioned that reopening the road would create shorter distances to the mountains, resulting in fewer vehicle miles traveled and reducing greenhouse gases, while respondents opposed to the reopening cited heavier traffic and more vehicles traveling to the forest, thereby increasing greenhouse gases. Respondents who preferred a limited reopening favored comprehensive modes of transportation (i.e., bikes, pedestrians, and cars) to comply with California's carbon dioxide emission reduction goals.

Slightly greater than 75 percent of the total commenters favored Alternative 3, with as many as 157 respondents having submitted comments using a similar form letter. Most of the commenters at the scoping meeting favored a full reopening of SR-39 (Alternative 4), followed by active transportation access only (Alternative 3), and lastly, the no-build alternative (Alternative 1). Many commenters supported either a full reopening because it would provide more access to recreation and emergency vehicles, as well as provide traffic relief or active transportation access because it would reduce pollution/lessen climate change. The third highest number of commenters were those that opposed the reopening and favored the no-build alternative due to concerns about traffic, pollution, public safety, and cost. There was only one individual who supported Alternative 6, and thus, this alternative was removed from further consideration. Figure 4-2 indicates the total number of responses by project alternative preference.

Figure 4-2 Number of Comments by Alternative



4.2.3 Consultation and Coordination with Public Agencies and Tribal Governments

Native American Coordination Letters and Responses

Native American consultation and coordination for the project was initiated on October 18, 2022, with a request to the NAHC for a Sacred Lands File (SLF) search for information regarding the presence of sacred lands and cultural resources within or near the project’s Area of Potential Effect.

On November 17, 2022, the NAHC responded that the SLF search result indicated a positive result for the presence of Native American cultural resources in the vicinity of the project area and provided a list of Native American representatives for further information regarding tribal cultural resources within or near the project area. Caltrans contacted the following Native American representatives via letters and emails between October 11, 2022 and February 8, 2023:

- Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians
- Sandonne Goad, Gabrielino/Tongva Nation
- Robert Dorame, Gabrielino Tongva Indians of California Tribal Council
- Christina Conley, Gabrielino Tongva Indians of California Tribal Council
- Charles Alvarez, Gabrielino-Tongva Tribe
- Ann Brierty, Morongo Band of Mission Indians

- Manfred Scott, Quechan Tribe of the Fort Yuma Reservation
- Jill McCormick, Quechan Tribe of the Fort Yuma Reservation
- Donna Yocum, San Fernando Band of Mission Indians
- Jessica Mauck, San Manuel Band of Mission Indians
- Wayne Walker, Serrano Nation of Mission Indians
- Mark Cochrane, Serrano Nation of Mission Indians
- Isaiah Vivanco, Soboba Band of Luiseno Indians
- Joseph Ontiveros, and Soboba Band of Luiseno Indians
- Ryan Nordess, Yuhaaviatam of San Manuel Nation (YSMN; formerly known as San Manuel Band of Mission Indians)

Caltrans received responses from two of the groups contacted:

- Ms. Jill McCormick replied via email on December 12, 2022 stating that they do not wish to comment on the project, and that they defer to the more local tribes and support their determinations in this matter.
- Mr. Ryan Nordess replied via email on January 13, 2023. He acknowledged the project's location within Serrano ancestral territory and its resulting interest to the tribe, but due to the nature and location of the project, along with the current extent of known cultural resources in the area, YSMN does not have any concerns with the project's implementation as planned, at the time of the response. YSMN requested specific wording be added to the project/permit/plan conditions, and requested a final copy of those conditions. He also stated that unless there is an unanticipated discovery of cultural resources during project implementation, consultation is now concluded.

Public Agencies

U.S. Fish and Wildlife Service; California Department of Fish and Wildlife; U.S. Forest Service

Caltrans organized a Technical Advisory Committee (TAC) to assist with the evaluation of impacts to large mammals, particularly Nelson's bighorn sheep, and their habitat. Several resources agencies participated on this TAC, including California Department of Fish and Wildlife (Chanelle Davis, Scott Harris, Jeff Villapique, Rebecca Barbosa, Randy Rodriguez), U.S. Forest Service (Leslie Welch, Karen Fortus, Esmeralda

Bracamonte, Fred Duncan), professional expert Steve Holl (Steve Holl Consulting) and a citizen advocate, John Aziz. Meetings for the TAC were held on September 16, 2004, December 5, 2005, April 12, 2007, and December 17, 2008.

Consultation with U.S. Fish and Wildlife Service or National Marine Fisheries Service is not required because there will be no effect to any species listed as Endangered, Threatened, or proposed as Endangered or Threatened under the Federal Endangered Species Act with the implementation of the proposed project.

A list of species with protection under the Federal Endangered Species Act that have a potential to occur within the vicinity of the proposed project was requested from the U.S. Fish and Wildlife Service on November 30, 2000 and again on October 7, 2008.

Status of Nelson's bighorn sheep under the California Endangered Species Act (CESA) and California Fish and Game Code, particularly whether it was a California Fully Protected species, as listed in Section 4700, was in question. After a detailed review of CESA and the California Fish and Game Code, Caltrans understood that the San Gabriel Mountains population of Nelson's bighorn sheep was not afforded protection under CESA or the California Fish and Game Code. A letter to confirm this position was sent to CDFW on October 7, 2008 and CDFW responded via email on October 31, 2008.

However, on July 10, 2023, California Governor Newsom signed Senate Bill (SB) 147, allowing for permits to take "fully protected" species, which includes 37 species identified in different sections of the California Fish and Game Code. SB 147 establishes certain conditions that must be satisfied before an incidental take permit may be issued. This bill would, until December 31, 2033, authorize the Department of Fish and Wildlife to issue a permit under CESA that would authorize the take of a fully protected species resulting from impacts attributable to the implementation of specified projects if certain conditions are satisfied, including, among others, the conditions required for the issuance of an incidental take permit. The bill would require the department to develop a plan on or before July 1, 2024, to assess the population status of each fully protected species. The bill would also require the department, on or before July 1, 2025 and annually thereafter, to prepare and submit a report to certain committees of the Legislature regarding the implementation of the authorization to issue these permits for the take of fully protected species. The bill would also remove the American peregrine falcon, brown pelican, and thickettail chub as fully protected species. This bill would declare that it is to take effect immediately as an urgency statute.

A Biological Resources Assessment and Biological Evaluation will be produced by Caltrans and submitted to the U.S. Forest Service. The U.S. Forest Service would need to issue a permit to Caltrans prior to construction activities within National Forest boundaries.

United States Army Corps of Engineers; Regional Water Quality Control Board

A Section 1602 Streambed Alteration Agreement with the Department of Fish and Game, Section 404 permit from Army Corps of Engineers, and a Section 401 permit from the Regional Water Quality Control Board are required prior to project initiation.

State Historic Preservation Officer

Resource P-19-188271 (the French Wall) has been evaluated as eligible for inclusion on the National Register of Historic Places under Criterion C and was determined to be a Historical Resource for the purposes of the California Environmental Quality Act in 2008. The finding was transmitted to the State Historic Preservation Officer and resulted in concurrence on October 16, 2009.

4.2.4 Comments and Responses

Once the Draft EIR/EA has been approved for public circulation, the Draft EIR/EA and a public notice will be distributed to local agencies, regional agencies, and utility providers affected by the project. In addition, property owners directly affected by the project will also be provided with a public notice of the document. There will be a 60-day public review period.

If comments are received on the Draft EIR/EA during the public review period and/or during the public hearing(s), the Final EIR/EA will be modified to reflect all substantive comments and responses to those comments.

Chapter 5 List of Preparers

California Department of Transportation (Caltrans)

Adam Avila, Environmental Scientist. B.A., Environmental Studies with Minor in Spatial Studies, University of California Santa Barbara. 6 years of environmental planning/analysis experience. Contribution: Author and preparer of Environmental Document.

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Christopher Laurel, Environmental Scientist and Caltrans District 7 Paleontological Coordinator. B.A., Environmental Studies, California State University Monterey Bay; 6 years of experience in environmental planning. Contribution: National Environmental Policy Act (NEPA) Quality Control reviewer; Quality Assurance and Quality Control.

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Eric Ni, Transportation Engineer. B.S., Structural Engineering, University of California San Diego. 2.5 years of design experience and 3 years of Hydraulics experience. Contribution: Location Hydraulic Study and Hydraulic Cost Estimate.

James Majors, Transportation Engineer. M.S., Structural Engineering, University of California San Diego; B.S., Civil Engineering, California State Polytechnic University Pomona; 13 years of experience in civil and geotechnical engineering. Contribution: Geotechnical reports.

Jeff Johnson, Environmental Scientist (Biology). Contribution: Biological technical reports.

Jin Lee, Senior Transportation Engineer. B.S., Civil Engineering, University of Washington. 33 years of experience in civil and environmental engineering. Contribution: Bioacoustic Report Noise Study Report.

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Roland E. Cerna, Transportation Engineer. B.S., Civil Engineering, California State University Los Angeles. 20 years of experience in environmental engineering and traffic noise impact studies. Contribution: Bioacoustic Noise Study Report.

Samer Momani, Associate Environmental Planner. M.S., Environmental Studies, California State University; Fullerton; 16 years of experience in environmental planning. Contribution: NEPA Quality Control reviewer and document editing.

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Stewart Fong, Transportation Engineer. B.S., California State University Northridge; 25 years of experiences in plan review and hazardous waste analysis. Contribution: Review proposed alternatives for Hazardous Waste impacts.

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Charter Oak USD
Lori Mikesell
Executive Assistant
20240 E. Cienaga Ave.
Covina, CA 91724

Citrus College
Greg Schultz
President
1000 W. Foothill Blvd.
Glendora, CA 91741

Citrus College
Christine Link
Executive Secretary
1000 W. Foothill Blvd.
Glendora, CA 91741

Citrus College
Raquel Perez
Administrative Assistant
1000 W. Foothill Blvd.
Glendora, CA 91741

Citrus College
Melissa Utsuki
Communication & External Relations
1000 W. Foothill Blvd.
Glendora, CA 91741

City of Azusa Adult Education
Anthony Contreras
Principal
1040 E. Gladstone St.
Azusa, CA 91702

Covina Valley USD
Elizabeth Eminhizer, Ed.D.
Superintendent
519 E. Badillo St.
Covina, CA 91723

Covina Valley USD
Penni Welch
Executive Assistant
519 E. Badillo St.
Covina, CA 91723

Covina Valley USD
Ana Mendez
Administrative Secretary
519 E. Badillo St.
Covina, CA 91723

El Monte City School District
Maribel Garcia
Principal
3540 N. Lexington Ave.
El Monte, CA 91731

El Monte – Rosemead Adult School
Trina Cardona
Principal
10807 Ramona Blvd.
El Monte, CA 91731

El Monte Union High School District
Edward A. Zuniga
Superintendent
3537 Johnson Ave.
El Monte, CA 91731

Hodge Elementary PTA
Carissa Mendez
President
700 W. 11th St.
Azusa, CA 91702

Maryvale Family Resource and
Education Center
Steve Gunther
CEO
2502 E. Huntington Dr.
Duarte, CA 91010

Mountain View School District
Raymond Andry
Superintendent
3320 Gilman Road
El Monte, CA 91732

Mountain View School District
Michele Earle
Public Information Officer
3320 Gilman Road
El Monte, CA 91732

Mount San Antonio College
Martha Garcia
President
100 Grand Ave.
Walnut, CA 91789

Opportunities for Learning
Melissa Martinez
Manager
12731 Ramona Blvd.
#201
Irwindale, CA 91706

Opportunities for Learning
Richard Moreno
Executive Director
1202 E. Huntington Dr.
Duarte, CA 91010

Options for Learning
David Wilbur
Chair
885 S. Village Oaks Dr.
Covina, CA 91724

Qual Valley Middle School
Tony Bennett
Principal
10050 Arrowhead Road
Baldy Mesa, CA 92371

Wrightwood Elementary
John Garner
Principal
1175 Hwy 2
Wrightwood, CA 92397

6.10 Business Associations

A1 Rentals
Chet Fortney
Owner
251 E. Front St.
Covina, CA 91723

A1 Rentals
Rene Martinez
COO
251 E. Front St.
Covina, CA 91723

Chapter 6 Distribution List

Alice's Vintage Cottage
Alice Braune
Owner
1255 Apple St.
Wrightwood, CA 92397

Applewood Court
Renee Marline
Owner
1309 Evergreen Road
Wrightwood, CA 92397

Azusa Chamber of Commerce
Lonnie De La Garza
Chair
240 W. Foothill Blvd.
Azusa, CA 91702

Azusa Chamber of Commerce
Steve Castro
CEO
240 W. Foothill Blvd.
Azusa, CA 91702

Baldwin Park Business Association
Jerry Briseno
President
3100 Big Dalton Ave.
Ste. 170, #263
Baldwin Park, CA 91706

Blue Ridge Inn Restaurant
Chuck Lyons
Owner
6060 Park Dr.
Wrightwood, CA 92397

Brier Rose Design
Collette Budd
Owner
6045 Park Dr.
Wrightwood, CA 92397

Cabin Fever
Terri Briot
Owner
6047 Park Dr.
Wrightwood, CA 92397

Cardon Media/SGV Now Magazine
Carlos Puente
Distribution
5545 Welland Ave.
Temple City, CA 91780

City of Azusa Economic & Community
Development Department
Matt Marquez
Director
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Liz Cortez
Development Services Assistant
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Betty Gallardo
Development Services Assistant
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Brent Hale
Community Improvement Inspector
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Jeff Barnes
Community Improvement Inspector
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Yadira Cardenas
Community Improvement Inspector
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Ernesto Bobadilla
Community Improvement Inspector
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Carina Campos
Economic Development Specialist
213 E. Foothill Blvd.
Azusa, CA 91702

City of Azusa Economic & Community
Development Department
Manuel Muñoz
Planning Manager
213 E. Foothill Blvd.
Azusa, CA 91702

Covina Chamber of Commerce
Dawn Nelson
President/CEO
1041 N. Grand Ave. #351
Covina, CA 91724

Covina Chamber of Commerce
Andy McIntyre
Board Chairman
370 E. Rowland St.
Covina, CA 91723

Covina Downtown Merchants
Association
Galen Metz
President
160 W. Badillo St.
Covina, CA 91723

Covina Rotary
Maggie Salazar
President
Country Life Realty
Richard & Cathy Jones
Owners
6050 Park Dr.
Wrightwood, CA 92397

Crystal Lake Café
Adam Samrah
Owner
9877 N. Crystal Lake Road
Crystal Lake, CA 91741

Duarte Chamber of Commerce
Shoshana Puccia
Executive Director
1735 Huntington Dr.
Duarte, CA 91010

Elks Lodge
Irene Lozano
Exalted Ruler
2436 Huntington Dr.
Duarte, CA 91010

El Monte Chamber of Commerce
Ken Rausch
Executive Director
1903 N. Durfee Ave.
Suite 4
El Monte, CA 91733

El Monte Rotary Club
11718 Ramona Blvd.
El Monte, CA 91731

eXp Realty of California Inc.
Kashawna Berg
Real Estate Agent
2603 Camino Ramon
Suite 200
San Ramon, CA 94583

G.A. Mercantile (Golden Acorn)
Debra Hordyk
Owner
1453 Hwy 2
Wrightwood, CA 92397

Glendora Chamber of Commerce
Joe Cina
President
224 N. Glendora Ave.
Glendora, CA 91741

Glendora Chamber of Commerce
Ashley Rozatti
Board Chair
224 N. Glendora Ave.
Glendora, CA 91741

Glendora Chamber of Commerce
Michele Street
Membership and Events Coordinator
224 N. Glendora Ave.
Glendora, CA 91741

Grizzly Café
Leo Hordyk
Restaurant General Manager
1455 Hwy 2
Wrightwood, CA 92397

Happy Kat Party Rentals and Supplies
Katherine David Simmons
Owners
6063 Park Dr.
Wrightwood, CA 92397

Highway 2 Antiques and Collectibles
Scott Pratt
Owner
1407 Hwy 2
Wrightwood, CA 92397

Huy Fong Foods
Donna Lam
Executive Operating Officer
4800 Azusa Canyon Dr.
Azusa, CA 91706

Irwindale Chamber of Commerce
Nicole Shahenian
CEO
16102 Arrow Hwy
Irwindale, CA 91706

JEDeWitt, Inc.
John DeWitt
1903 Durfee Ave, Ste. 1
South El Monte, CA 91733

Jensen's Finest Foods
Rick Cronk
Manager
1340 Hwy 2
Wrightwood, CA 92397

La Historia Historical Society Museum
Rosa Pena
Administrator
3240 Tyler Ave.
El Monte, CA 91731

Lawrence Company
2034 N. Peck Road
South El Monte, CA 91733

Mile High Pizza
Adam & Rachel Wiley
Owners
5996 Cedar St.
Wrightwood, CA 92397

Mountain Hardware
Michael Troeger
Owner
1390 Hwy 2
Wrightwood, CA 92397

Nancy Smith Notary
Nancy Smith
Notary
6295 Lucerne Pl.
Wrightwood, CA 92397

Park Place Reality
Daniel J. Fisher
Realtor
6039 Park Dr.
Wrightwood, CA 92397

Paulysworld
Paul Samenfeld
Art Owner
P.O. Box 1142
Wrightwood, CA 92397

Peter Nelson King, Attorney at Law
5495 Summit Dr.
Wrightwood, CA 92397

Pharmacy Boardshop
Donny Damron
Owner
1433 Hwy 2
Wrightwood, CA 92397

Randy Ward Realty
Randy Ward
Realtor
6053 Park Dr., #1855
Wrightwood, CA 92397

R. E. Chaffee Construction, Inc.
Ronnie Chaffee
General Contractor
7987 Sage St.
Wrightwood, CA 92397

Ready Pack Foods
Violet Bailey
Customer Service
4401 Foxdale St.
Irwindale, CA 91706

REI
214 N. Santa Anita Ave.
Arcadia, CA 91006

Rotary Club
Basil Kruger
President
P.O. Box 13
Duarte, CA 91009

Rotary Club of Azusa
Mayra Rico
President
P.O. Box 65
Azusa, CA 91702

Royal Coaches
Bill Salazar
Owner
14728 Ramona Blvd.
Baldwin Park, CA 91706

SCE Federal Credit Union
George Silva
Branch Manager
12701 Schabarum
Irwindale, CA 91706

SGV Hispanic Chamber of Commerce
Carlos Paez
President
1740 Gillette Road, Suite 202
Pomona, CA 91768

SGV Chamber of Commerce
Anthony Duarte
CEO
1722 Desire Ave., Suite 207
Rowland Heights, CA 91748

SGV Chamber of Commerce
Sally Martinez
Executive Assistant
1722 Desire Ave., Suite 207
Rowland Heights, CA 91748

SGV Economic Partnership
Luis Portillo
Executive Director
P.O. Box 1027
Arcadia, CA 91066

SGV Economic Partnership
Bob Machuca
Business Assistance
4900 Rivergrade Road
Irwindale, CA 91706

Susie's Qloset
Susie Hellwig
Owner
1263 Evergreen Road
Wrightwood, CA 92397

Timberline Lions Club
Jill Carlton-Payne
President
P.O. Box 3630
Wrightwood, CA 92397

Timberline Lions Club
Nancy Smith
Secretary
P.O. Box 444
Wrightwood, CA 92397

Trinity West/Trinity Financial Partners
Mal Youngblood
Owner
P.O. Box 1233
Wrightwood, CA 92397

Whole Life Soaps
Bill McConnell
Owner
1257 Apple Ave.
Wrightwood, CA 92397

Wrightwood Auto Services
Victor Rebollar
Principal Owner
1415 Hwy 2
Wrightwood, CA 92397

Wrightwood Brew Co.
Kenneth Bergon
Owner
1257 Apple Ave.
Wrightwood, CA 92397

Wrightwood Brew Co.
Todd Grijava
Co-Owner
1257 Apple Ave.
Wrightwood, CA 92397

Wrightwood Carpets and Flooring
Rudi Charles Koppen Jr.
Sole Proprietor
1253 Evergreen Road
Wrightwood, CA 92397

Wrightwood Certified Farmers Market
Ron Frank, D.H.M.
1275 Park Dr.
Wrightwood, CA 92397

Wrightwood Chamber of Commerce
Renee Merline
President
1350 Hwy 2, Suite E
Wrightwood, CA 92397

Wrightwood Chamber of Commerce
Nancy Kupka
Board Member (PR/Advertising)
P.O. Box 416
Wrightwood, CA 92397

Wrightwood Littlest Pet Shop
Elisha Gorman
Owner
6032 Cedar St.
Wrightwood, CA 92397

Wrightwood Market
Patrick & William Boyle
Owners
1315 Hwy 2
Wrightwood, CA 92397

Wrightwood Mountain Realty
Delene Rodenborn
Broker
1350 Hwy 2, Ste. A
Wrightwood, CA 92397

The Yodeler
Bonnie Walde
Owner
6046 Park Dr.
Wrightwood, CA 92397

6.11 Interest Groups

Active San Gabriel Valley (Active SGV)
David Diaz
Executive Director
10900 Mulhall St.
El Monte, CA 91731

Angeles Volunteer Association
P.O. Box 611
Glendora, CA 91740

Azusa Beautiful
Maricela Cueva
President
27 Sagebrush Wy.
Azusa, CA 91702

Baldwin Park Woman's Club
Refugio Rodriguez
3817 Baldwin Park Blvd.
Baldwin Park, CA 91706

Council for Watershed Health

Eileen Alduenda
Executive Director
700 Alameda St., Unit 8
Los Angeles, CA 90012

Covina Woman's Club

Brenda Newbold
President
128 S. San Jose Ave.
Covina, CA 91723

Day One

Christy Zamani
Executive Director
10900 Mulhall St., Unit 7
El Monte, CA 91731

Duarte Woman's Club

Ann Valleroy
President
P.O. Box 88
Duarte, CA 91009

El Monte Woman's Club

Jackie Morales
President
3130 Tyler Ave.
El Monte, CA 91731

Friends of Duarte Library

Steve Hernandez
President
1301 Buena Vista St.
Duarte, CA 91010

Hispanic Access Foundation

Maite Arce
Director
1030 15th St. NW, Suite B/1 #150
Washington D.C. 20005

Latino Outdoors

Luis Villa
Executive Director
354 Pine St., Suite 700
San Francisco, CA 94104

Latino Roundtable of the San Gabriel
and Pomona Valley

Jose Zapata Calderon
President
1460 E. Holt
Pomona, CA 91776

Nature for All

Belén Bernal
Executive Director
201 W. Garvey Ave., Suite 102-506
Monterey Park, CA 91754

Nature for All

Bryan Matsumoto
Project Manager
201 W. Garvey Ave., Suite 102-506
Monterey Park, CA 91754

Pacific Crest Trail Association (PCTA)

2150 River Plaza Dr. Sacramento, CA
95833

Pine Needles Quilt Guild

Carol Gaines
President
P.O. Box 2800
Wrightwood, CA 92397

Outward Bound Adventures

Charles Thomas
Director
P.O. Box 202
Pasadena, CA 91102

Pomona Pride Center
Frank Guzman
Executive Director
386 S. Thomas St.
Pomona, CA 91766

Pomona Pride Center
Jesus Garcia-Torres
Outreach and Linguistics Coordinator
386 S. Thomas St.
Pomona, CA 91766

San Gabriel Mountains Community
Collaborative
Dania Gutierrez
Senior Project Manager
Building 27, Suite 3
Fort Missoula Road
Missoula, MT 59804

SGV Conservation Corps
Norma Quinones
Director
10900 Mulhall St., Unit 7
El Monte, CA 91731

SGV Pride Center
Camila Camaleón
Executive Director
P.O. Box 1395
Monrovia, CA 91017

Spirit Family Centers
Israel Cobos
Board President
8000 Painter Ave.
Whittier, CA 90602

The Sierra Club Los Angeles Chapter
Morgan Goodwin
Sr. Chapter Director
3250 Wilshire Blvd, Unit 1106
Los Angeles, CA 90010

The Wilderness Society
Daniel Rossman
Deputy Director
One Kaiser Plaza, Suite 1450
Oakland, CA 94612

The Wrightwood Blues Society
Dr. Greg Jones
President
P.O. Box 3432
Wrightwood, CA 92397

Trust for Public Lands
Guillermo Rodriguez
California Director
135 W. Green St., 2nd floor
Pasadena, CA 91105

Wrightwood Friends of the Library
Robin Cornett
Chair
6011 Pine St.
Wrightwood, CA 92397

Wrightwood Historical Society
Morgan Owen
President
6000 Cedar St.
Wrightwood, CA 92397

6.12 Medical Institutions

City of Hope
Rene Powers
VP/Foundation Relations
4920 Rivergrade Road
Irwindale, CA 91706

El Monte Comprehensive Health Center
Christina Ghaly
Director
10953 Ramona Blvd.
El Monte, CA 91731

El Monte Comprehensive Coral Itzcalli
Director of Communications
Director
10953 Ramona Blvd.
El Monte, CA 91731

El Proyecto Del Barrio, Inc.
Jacqueline Carpio
Administrator
3942 Maine Ave.
Baldwin Park, CA 91706

Emanate Health-Inter Community
Hospital
Roger Sharma
CEO/President
943 N. Grand Ave.
Covina, CA 91723

Kaiser Permanente
Reyna Del Haro
Director of Public Affairs
1011 Baldwin Park Blvd.
Baldwin Park, CA 91706

Methodist Hospital
Clifford Daniels
Senior VP/Chief Strategy Officer
300 W. Huntington Dr.
Duarte, CA 91007

Planned Parenthood
Diane Padilla
Manager
4070 Sterling Wy.
Baldwin Park, CA 91706

Planned Parenthood Pasadena & SGV
Glendora Health Center
Leticia Giulliani
Health Center Manager
130 W. Route 66, Ste. 100
Glendora, CA 91740

6.13 Service Groups

Action Food Pantry – Grace Luthern
Church
Steve Otte
Pastor
17880 E. Covina Blvd.
Covina, CA 9172

Assistance League of Covina Valley
Stacy La Fountain-Alatorre
1st Vice President
636 E. San Bernardino Road
Covina, CA 91723

Assistance League of Covina Valley
April Luchonok
President
636 E. San Bernardino Road
Covina, CA 91723

Azusa Cub Scout Pack 777
Xilonin Cruz-Gonzales
Scout Leader
389 E. Sierra Madre
Azusa, CA 92703

Baldwin Park Senior Center
Irma Garcia
Program Coordinator
4100 Baldwin Park Blvd.
Baldwin Park, CA 91706

Boys & Girls Club of SGV
JR Dzubak
CEO
328 S. Ramona Ave.
Monterey Park, CA 91754

Boys & Girls Club of the Foothills
John Wilson
Executive Director
600 S. Shamrock Ave.
Monrovia, CA 91016

Buddhist Tsu Chi Foundation
Debra Boudreaux
Executive Director
9620 Flair Dr.
El Monte, CA 91731

Calvary Chapel San Gabriel Valley
Leon Scott
Pastor
430 N. Angeleno Ave.
Azusa, CA 91702

Catholic Charities Los Angeles SGV
Region
Xochitl Zendejas
Regional Director
1307 Warren St.
Los Angeles, CA 90033

Charter Oak Lighthouse
Laurence Blanchard
Pastor
4337 N. Sunflower
Covina, CA 91723

Charter Oak Lighthouse
Michael Galindo
Associate Pastor
4337 N. Sunflower
Covina, CA 91723

Christ Extended Hand
Elmer Jackson
Pastor
13212 Francisquito
Baldwin Park, CA 91706

Christ First Baptist Church – Covina
James Laing
Pastor
200 N. 2nd Ave.
Covina, CA 91723

Church of Jesus Christ of Latter-Day
Saints
Mark Melnyk
Bishop
656 S. Grand Ave.
Covina, CA 91723

Church of Jesus Christ of Latter-Day
Saints
Bishop Quinn
Bishop
888 Hwy 2
Wrightwood, CA 92397

Covina Community Church
Rev. Lee Yates
Pastor
1551 E. Old Badillo St.
Covina, CA 91724

Covina Lions Club
Rosie Richardson
President
216 S. Citrus, #275
West Covina, CA 91791

Covina/South Hills Kiwani
Mitch Chatfield
President
258 E. Badillo
Covina, CA 91723

Duarte Coordinating Council
Dorothy Smith
President
P.O. Box 1122
Duarte, CA 910

Duarte Education Foundation
Margaret Finley
President
P.O. Box 497
Duarte, CA 91009

El Monte Educational Center (Rio
Hondo)
Yolanda Emerson
Dean
3017 Tyler Ave.
El Monte, CA 91731

El Monte Police Officer Association
Mark Gonzalez
Vice President
P.O. Box 4577
El Monte, CA 91734

Elim Community Pantry
Myra Monzon
Manager
550 S. Hollenbeck Ave.
Covina, CA 91723

Essential Church
James Abraham
Pastor
630 N. Dalton Ave.
Azusa, CA 91702

Family Christian Church
Albert Alfonso
Pastor
4830 N. Vincent Ave.
Irwindale, CA 91706

Family Christian Church
Annie Alfonso
Pastor's Wife
4830 N. Vincent Ave.
Irwindale, CA 91706

Family Christian Church
Lem Policarpio
Assistant Pastor
4830 N. Vincent Ave.
Irwindale, CA 91706

Foothill Family Services
Daneta Calderon-Vital
Site Director
530 W. Badillo
Covina, CA 91723

Glendora Lassie League Baseball
Henry Ojeda
President
P.O. Box 361
Glendora, CA 91740

Glendora National Little League
Eli Economou
President
P.O. Box 144
Glendora, CA 91741

Grace Lutheran Church
Steve Otte
Pastor
17880 E. Covina
Covina, CA 91723

Habitat for Humanity SGV
Daniel T. Carney
Board President
724 E. Huntington Dr.
Monrovia, CA 91016

Happy Camper Foundation
Jacob Strom
President
P.O. Box 664
West Covina, CA 91793

Hillside Church
Terry Morrow, Ph.D.
Senior Pastor
P.O. Box 1564
Wrightwood, CA 92397

Irwindale Lions Club
Lisa Mayo
Treasurer
P.O. Box 2093
Irwindale, CA 91706

Irwindale Senior Center
Rebecca Bardales
Assistant Director
16116 Arrow Hwy
Irwindale, CA 91706

Irwindale Sister Cities
Grace Cox
President
1129 Essex St.
Glendora, CA 91706

Kare Youth League – Covina
David Carson
Director of Development
735 N. Glendora Ave.
Covina, CA 91724

Kiwanis
Javier Vargas
President
14129 Ohio
Baldwin Park, CA 91706

Kiwanis
Kristi Lopez
President
P.O. Box 46
Duarte, CA 91009

Luminate Church
Christina Pelliccino
Operations
250 E. San Bernardino Road
Covina, CA 91722

Luminate Church
Tommy & Asenath Casarez
Interim Pastors
250 E. San Bernardino Road
Covina, CA 91722

Masonic Center for Youth and Families
(MCYAF)

Lisa Goodwin
L.C.S.W. Senior Director
1650 E. Old Badillo St. #B3
Covina, CA 91724

NAHREP of San Gabriel Valley

Frank Navazi
President
2375 Northside Dr., Suite 360
San Diego, CA 92108

Neighborhood Connections at Azusa

City Library
Yasmin Cardona
Outreach Specialist
729 N. Dalton Ave.
Azusa, CA 91702

Neighborhood Connections at Azusa

City Library
Malvina Rincon
Outreach Specialist
729 N. Dalton Ave.
Azusa, CA 91702

Neighborhood Homework Azusa

Jennifer Hicks
Executive Director
P.O. Box 0093
Azusa, CA 91702

Neighborhood Homework House

Stephanie D'Avirro
Director of Programs
777 E. Alostia Ave.
Azusa, CA 91702

Options for Learning Child Care
Services

Kelly O'Connell
Director
13100 Brooks Dr.
Baldwin Park, CA 91703

Options for Learning Child Care
Services

Zinnia Voong
Director
885 S. Village Oaks Dr.
Covina, CA 91724

Our Lady of the Snows Church

Rev. Joachim Lechukwu
Pastor
975 Lark Road
Wrightwood, CA 92397

Our Lady of Guadalupe Church

Fr. Hector William Rodriguez
Pastor
16025 Cypress St.
Irwindale, CA 91706

Our Lady of Guadalupe Church

Fr. Julio Ramos
Pastor Clergy
11859 Coffield Ave.
El Monte, CA 91781

Our Lady of Guadalupe Church

Elena Hernandez
Business Manager
11859 Coffield Ave.
El Monte, CA 91781

Peregrinos de Emaus

Leo
447 N. Soldano Ave.
Azusa, CA 91702

Sacred Heart Catholic
William Easterling
Reverend
344 W. Workman St.
Covina, CA 91723

Sacred Heart Catholic
Jose de la Rosa
Bulletin Editor/Admin. Assistant
344 W. Workman St.
Covina, CA 91723

San Gabriel Valley Consortium on
Homelessness
Lee Kane
Program Manager
1760 W. Cameron Ave.
West Covina, CA 91790

Shepherd's Pantry
Jhoana Hirasuna
Executive Director
504 Rimgrove Dr.
La Puente, CA 9170

St. Frances of Rome Church
Fr. Rev. Richard Vega
Pastor
501 E. Foothill Blvd.
Azusa, CA 91702

St. Johns Catholic Church
Fr. Ismael Robles
Administrator
3883 Baldwin Park Blvd.
Baldwin Park, CA 91706

St. Louise De Marillac Catholic
Robert Fulton
Pastor
1728 E. Covina Blvd.
Covina, CA 91723

St. Louise De Marillac Catholic
Mary Curtis
Office Manager
1728 E. Covina Blvd.
Covina, CA 91723

The STEAM Center
Ray Bryson
CEO
770 Hwy 2
Wrightwood, CA 92397

United Methodist
Lily Villamin
Lead Pastor
437 W. San Bernardino Road
Covina, CA 91723

United Methodist
Jasmine Platon
Secretary
437 W. San Bernardino Road
Covina, CA 91723

United Methodist Church
Tonia Rios
Pastor
3970 Maine Ave.
Baldwin Park, CA 91706

Wrightwood Community United
Methodist Church
David Conrad
Pastor
1543 Barbara St., P.O. Box 62
Wrightwood, CA 92397

Wrightwood Little League
Cole Taylor
President
P.O. Box 1393
Wrightwood, CA 92397

Wrightwood Property Owner's
Association
John Kozra
President
P.O. Box 487
Wrightwood, CA 92397

Volunteers of America SGV
Mario Estrada
Manager
4501 Santa Anita Ave.
El Monte, CA 91731

YMCA SGV
Eddie Apodaca
Youth Sports Ref
1225 E. Cameron Ave.
West Covina, CA 91790

YWCA SGV
Debra Ward
CEO
101 S. Barranca Ave.
Covina, CA 91723

6.14 Emergency Responders

Azusa Police Department
Chris Grant
Captain - Administrative Division
724 N. Alameda Ave.

Azusa, CA 91702
Azusa Police Department
Robert Landeros
Captain - Operations
724 N. Alameda Ave.
Azusa, CA 91702

Baldwin Park Police Department
Robert A. Lopez
Chief of Police
14403 E. Pacific Ave.
Baldwin Park, CA 91706

Duarte Public Safety
Brian Villalobos
Public Safety Services Director
1042 E. Huntington Dr.
Duarte, CA 91010

Duarte Public Safety
Larry Breceda
Public Safety Manager
1600 Huntington Dr.
Duarte, CA 91010

El Monte Police Department
Christopher Williams
Administrative Services Captain
11333 Valley Blvd.
El Monte, CA 91731

El Monte Police Department
Ben Lowry
Chief of Police
11333 Valley Blvd.
El Monte, CA 91731

El Monte Police Department
David Vautrin
Field Services
11333 Valley Blvd.
El Monte, CA 91731

Irwindale Police Department
Rob Castro
Chief of Police
5050 N. Irwindale Ave.
Irwindale, CA 91706

Irwindale Police Officers Association
Manny Campos
President
16102 Arrow Hwy
Irwindale, CA 91706

Glendora Police Department
Matt Egan
Chief of Police
150 S. Glendora Ave.
Glendora, CA 91741

Los Angeles County Fire Department
Station 29
Sean Gomez
Captain
14334 Los Angeles St.
Baldwin Park, CA 91706

Los Angeles County Fire Department
Station 32
605 N. Angeleno Ave.
Azusa, CA 91702

Los Angeles County Fire Department
Station 44
1105 Highland Ave.
Duarte, CA 91010

Los Angeles County Fire Department
Station 48
Cesar Gonzalez
Captain
15546 E. Arrow Hwy.
Irwindale, CA 91722

Los Angeles County Fire Department
Station 85
650 E. Gladstone St.
Glendora, CA 91741

Los Angeles County Fire Department
Station 86
520 S. Amelia Ave.
Glendora, CA 91741

Los Angeles County Fire Department
Station 151
231 W. Mountain View Ave.
Glendora, CA 91741

Los Angeles County Fire Department
Station 166
Fred Bland
Battalion Fire Chief
3615 Santa Anita Ave.
El Monte, CA 91731

Los Angeles County Fire Department
Station 166
Nick Duvally
Battalion Fire Chief
3615 Santa Anita Ave.
El Monte, CA 91731

Los Angeles County Fire Department
Station 166
Jeff Kaliher
Battalion Fire Chief
3615 Santa Anita Ave.
El Monte, CA 91731

Los Angeles County Fire Department
Station 166
Anderson Mackey
Battalion Fire Chief
3615 Santa Anita Ave.
El Monte, CA 91731

Los Angeles County Sherriff's
Department
Mark Reyes
Captain
Sheriff's Department
1042 E. Huntington Dr.
Duarte, CA 91010

Palmdale Sherriff Station
Ronald Shaffer
Captain
750 E. Q Ave.
Palmdale, CA 93550

San Bernardino County Fire Department
Station 14
Mike McClintock
Battalion Chief
5980 Elm St.
Wrightwood, CA 92397

San Bernardino Sherriff's Department
Jeremy Martinez
Captain
4050 Phelan Road #2
Phelan, CA 92371

6.15 Native American Groups

KIZH Nation - Gabrieleño Band of
Mission Indians
Andrew Salas
President
P.O. Box 393
Covina, CA, 91723

KIZH Nation - Gabrieleño Band of
Mission Indians
Brandy Salas
Gabrieleno Administration
P.O. Box 393
Covina, CA, 91723

6.16 Recreation

Applewood Inn
Sydney Nelson
Inn Host
997 Rivera Dr.
Wrightwood, CA 92397

Camp Wrightwood
Caitlyn Anderson
Organizer
1401 Linnett Road
Wrightwood, CA 92397

Burro Canyon Shooting Park
Deb Cavanaugh
Owner
22100 E. East Fork Road
Azusa, CA 91702

Canyon Creek Inn
Elizabeth La Forte
Owner
6059 Pine St.
Wrightwood, CA 92397

City of Glendora Sports and Recreation
John Aguirre
Director of Community Services
116 E. Foothill Blvd.
Glendora, CA 91741

Cedar Lodge
Mike & Terri Livreri
Owners
5995 Cedar St.
Wrightwood, CA 92397

City of Azusa Recreation & Family
Services
Miki Carpenter
Director of Community Resources
320 N. Orange Pl.
Azusa, CA 91702

Grand Pines Cabins
Gilbert A. Vela
Manager
6045 Pine St.
Wrightwood, CA 92397

Holistic Health Day Spa & Lodging
Novel Vasquez
Owner
26645 Big Pines Hwy
Wrightwood, CA 92397

Lions Camps at Teresita Pines
David Garry
Camp Manager
P.O. Box 98
Wrightwood, CA 92397

Lions Camps at Teresita Pines
Larry Wehage
Board President
16645 Grand Ave.
Bellflower, CA 90702

6.17 Utilities

Athens Services
Gary Clifford
Executive Vice President
5355 S. Vincent
Irwindale, CA 91706

Mountain High Reunited
Karl Kapuscinski
CEO
24510 Hwy 2
Wrightwood, CA 92397

Saint Edward Retreat Center
Kenny Lund
Board President
P.O. Box 99
Wrightwood, CA 92397

The Wrightwood Arts Center
Joan McCandless
President
6020 Park Dr.
Wrightwood, CA 92397

Wrightwood / Phelan Search and
Rescue (SBSD)
P.O. Box 292000
Phelan, CA 92371

Ziplines at Pacific Crest
Patti Thibodeu
General Manager
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Wrightwood, CA 92397

Athens Services
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Vice President of Government Affairs
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Azusa Light & Power
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Assistant Director – Customer Service
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Azusa, CA 91702

Southern California Edison
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Azusa Light & Power
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729 N. Azusa Ave.
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Waste Management
Teri Muse
Community Relations
13940 Live Oak Ave.
Baldwin Park, CA 91706

Azusa Light & Power
Hien Vuong
Assistant Director – Electric Operations
729 N. Azusa Ave.
Azusa, CA 91702

Azusa Light & Power
Jared Macias
Assistant Director – Water Operations
729 N. Azusa Ave.
Azusa, CA 91702

Azusa Light & Power
Dave Patterson
Electric Distribution Supervisor
729 N. Azusa Ave.
Azusa, CA 91702

Azusa Light & Power
Liza Sagun
Environmental Programs Specialist
729 N. Azusa Ave.
Azusa, CA 91702

Charter Communications
Peter Hidalgo
Government Relations
4781 Irwindale Ave.
Irwindale, CA 91706

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Appendix A Title VI/Non-Discrimination Policy Statement

Appendix A Title VI/Non-Discrimination Policy Statement

DEPARTMENT OF TRANSPORTATION

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*Making Conservation
a California Way of Life.*

August 2020

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."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

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/civil-rights/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 Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at [<Title.VI@dot.ca.gov>](mailto:Title.VI@dot.ca.gov).

Original signed by
Toks Omishakin
Director

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

DEPARTMENT OF TRANSPORTATION

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Septiembre de 2021

**DECLARACIÓN DE POLÍTICA
DE NO DISCRIMINACIÓN**

El Departamento de Transporte de California, bajo el Título VI de la Ley de Derechos Civiles de 1964, asegura que *"Ninguna persona en los Estados Unidos, debido a su raza, color u origen nacional, será excluida de participar, ni se le negarán los beneficios, o será objeto de discriminación, en ningún programa o actividad que reciba ayuda financiera federal."*

Caltrans hará todos los esfuerzos para asegurar que no exista discriminación en ninguno de sus servicios, programas y actividades, ya sea que reciban fondos del gobierno federal o no, y que los servicios y beneficios sean justamente distribuidos a todas las personas sin importar su raza, color, u origen nacional. Adicionalmente, Caltrans facilitará la participación significativa en el proceso de planeación de los programas de transporte de manera no discriminatoria.

Los estatutos federales relacionados, los remedios, y la ley estatal refuerzan estas protecciones para incluir el sexo, la discapacidad, la religión, la orientación sexual y la edad.

Para información u orientación sobre cómo presentar una queja o para obtener más información relacionada con el Título VI, por favor comuníquese con el Gerente del Título VI al teléfono (916) 324-8379 o visite la siguiente página de internet: <https://dot.ca.gov/programs/civil-rights/title-vi>.

Para obtener esta información en un formato alternativo como el Braille o en un lenguaje diferente al inglés, por favor póngase en contacto con la Oficina de Derechos Civiles del Departamento de Transporte de California, al 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; al teléfono (916) 324-8379 (Teléfono de Texto TTY: 711); o al email: Title.VI@dot.ca.gov

A handwritten signature in blue ink, appearing to read "Toks Omishakin".

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B Glossary of Technical Terms

Appendix B Glossary of Technical Terms

This appendix briefly explains technical terminology used in the EIR/EA.

TERM	DEFINITION OR EXPLANATION
Ambient Noise	Refers to surrounding, external sound from all sources, near and far.
Area of Potential Effect	A term used in section 106 of the national historic preservation act to describe the geographic area in which the character of historic resources may be directly or indirectly affected by a federal undertaking
Attainment Area	A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (national ambient air quality standard, or NAAQS) for the pollutant. An area may have an acceptable level for one criteria air pollutant but may have unacceptable levels for others. Thus, an area could be both attainment and nonattainment at the same time. Attainment areas are defined using federal pollutant limits set by the U.S. EPA.
Annual Average Daily Traffic (AADT)	The average volume of vehicles using a road, ramp, or intersection during a 24-hour period. The volume is taken during a stated period divided by the number of days in that period. Unless otherwise stated, the period is a year.
Beneficial Use	A use of a natural water resource that enhances the social, economic, and environmental well-being of the user. Twenty-one beneficial uses are defined for the waters of California, ranging from municipal and domestic supply to fisheries and wildlife habitat.
Best Management Practice	Any program, technology, process, operating method, measure, or device that controls, prevents, removes, or reduces pollution.
Biological Study Area	The project footprint and adjacent aquatic and terrestrial areas with biological resources that could be affected indirectly by the proposed project, either temporarily or permanently.
California Environmental Quality Act (CEQA)	State legislation enacted in 1970 and subsequently amended. It requires public agencies to regulate activities which may affect the quality of the environment so that major consideration is given to preventing damage to the environment.
California Transportation Commission (CTC)	A State Commission, established by State Assembly Bill 402 (AB 402) with nine appointed member and two ex-officio members, responsible for the programming and allocating of funds for the construction of highway, passenger rail, and transit improvements throughout California. The CTC also provides guidance and recommendations on transportation policies.
Catchment Wall	Barriers designed to catch falling rocks and debris before they can reach infrastructure or people. Catch fences typically consist of a steel or wire mesh netting that is suspended between steel posts or other support structures.
Census Tract	Small, relatively permanent statistical subdivisions of a county that are uniquely numbered with a numeric code
Cofferdam	Temporary watertight enclosure from which water is pumped-out to expose the bottom of a body of water and permit construction.
Council Of Governments (COG)	A voluntary consortium of local governments formed to cooperate on problem solving, e.g., regional transportation planning and programming. Some RTPAs and MPOs are COGs.

Appendix B Glossary of Technical Terms

TERM	DEFINITION OR EXPLANATION
Culvert	Any structure other than a bridge, which provides an opening under a roadway for drainage or other purposes.
Cut Slopes	Soil cuts are excavated along natural hillsides, through ridges and mesas, and into existing embankment. Any slope excavated into existing fill, alluvium, colluvium, residual soils, or weak sedimentary formation is considered a soil cut slope. Slopes excavated into highly fractured and weathered rock may also be considered soil cut slopes.
Encroachment (floodplain)	Construction, placement of fill, or similar alteration of topography in the floodplain that reduces the area available to convey floodwaters. FHWA definition: An action within the limits of the base floodplain.
Environmental Assessment	Environmental document prepared to comply with NEPA. An Environmental Assessment is conducted to determine whether a project would have a significant impact(s). The EA leads to either a decision to do an Environmental Impact Statement or Finding of No Significant Impact.
Environmental Impact Report	Environmental document prepared to comply with CEQA. An Environmental Impact Report informs the public of the significant environmental effects associated with the proposed project and measures used to avoid, minimize, or mitigation project impacts.
Ephemeral (Water)	Areas that remain flooded for short periods of time during a year but may not hold water for several years if the rainfall regime is not suitable to produce flooding.
Erosion	The wearing a way of a surface by some external force. In the case of drainage terminology, it generally refers to the wearing away of the earth's surface by flowing water. It can also refer to the wear on a structure surface by flowing water, and to the material carried away. Wind and water forces cause most erosion.
Excavation	The process of removing native material from the existing ground or an open pit in the ground other than a trench.
Expansive Soil	Soil deposits that have the capacity or a tendency to expand during weather or seismic events.
Federal State Transportation Improvement Program (FSTIP)	A multiyear statewide, financially constrained, intermodal program of projects that is consistent with the statewide transportation plan (CTP) and regional transportation plans (RTPs). The FSTIP is developed by the California Department of Transportation and incorporates all of the MPOs and RTPAs FTIPs by reference. Caltrans then submits the FSTIP to FHWA.
Finding of No Significant Impact	A document by a federal agency briefly presenting the reasons why an action, not otherwise categorically excluded, will not have a significant effect on the human environment and therefore does not require the preparation of an EIS.
Floodplain	The position occupied by the water surface of a stream during a particular flood. Sometimes used to describe the elevation of the water surface at various points along the stream during a particular flood.
Friable	The term used for any asbestos containing material that can be crushed, crumbled, pulverized or turned to powder with the ordinary force of a human hand.

Appendix B Glossary of Technical Terms

TERM	DEFINITION OR EXPLANATION
Fugitive Dust	Small particles that are suspended in the air, such as from exhaust or wind erosion.
Hot-Mix Asphalt	A mixture of aggregate rock and asphalt with varying mixing or placing temperatures. Hot mix asphalt is the material used for paved roadways and is also known as asphalt concrete.
Impervious Surface	A stratum of surface material that impedes water flow under normal hydrostatic pressure.
K-Rail	A safety shaped concrete barrier temporarily used as a traffic control device by placement in a construction zone to channelize traffic and prevent vehicles from colliding with fixed objects, driving into excavated areas, or driving off the pavement.
Lead Agency	The governmental entity responsible for preparing environmental documents.
Liquefaction	The loss in the shearing resistance of a cohesionless soil, caused by an earthquake wave. The soil is turned into a fluid mass.
Maintenance Area	A federal term to describe any geographic region of the United States designated non-attainment pursuant to the Clean Air Act Amendments of 1990 (CAAA) and subsequently re-designated to attainment subject to the requirement to develop a maintenance plan under Section 175A of the CAAA
Mechanically Stabilized Earth	Systems, whose elements may be proprietary, employ either metallic (strip or grid type) or geosynthetic (geotextile, strip, or geogrid) tensile reinforcements in the soil mass, and a facing element which is vertical or near vertical to stabilize unstable slopes and retain the soil on steep slopes and under crest loads.
Metal Beam Guard Rail	A safety barrier constructed of metal rail elements bolted to wood or steel posts to prevent vehicles from driving off the roadbed in high fills, or from colliding with fixed objects on the roadway
Metropolitan Planning Organization (MPO)	A federal designation for the forum for cooperative transportation decision-making for an urbanized area with population of more than 50,000.
Mitigation	A term for CEQA describing the process of compensating for impacts by replacing or providing substitute resources or environments. Mitigation can include avoiding impacts by not taking a certain action, minimizing impacts by limiting the degree of an action, or rectifying impacts by repairing or restoring the affected environment.
Non-attainment	Any geographic region of the United States that the U.S. Environmental Protection Agency (U.S. EPA) has designated as a nonattainment area for a transportation related pollutant(s) for which a National Ambient Air Quality Standard (NAAQS) exists
Particulate Matter	Refers to airborne particles that are less than 10 microns in diameter (PM ₁₀) and less than 2.5 microns in diameter (PM _{2.5}), respectively
Perennial (Water)	Areas that hold water throughout the year.
Plans, Specifications, And Estimates (PS&E)	Plans, Specifications, and Estimates are the final design packages sent to the Office Engineer and includes all elements of design that the contractor

Appendix B Glossary of Technical Terms

TERM	DEFINITION OR EXPLANATION
	and Resident Engineer need to know to build a roadway which prepare a highway project for contract advertising.
Post Miles	A number designating a unique location on the roadway, measured in miles from the county line.
Project Development Team	An interdisciplinary group of managers, professionals, and technicians responsible for directing project studies, planning, developing and evaluating alternatives, and participation in community iteration regarding a proposed highway project.
Receptors	Term used in air quality and noise technical studies that refers to houses or businesses that could be affected by a project.
Regional Transportation Plan	Long-term plan that identifies and analyzes the region's transportation needs and develops a project priorities framework. It is prepared by the Metropolitan Transportation Commission, the regional agency responsible for transportation planning and funding.
Regional Transportation Improvement Plan (RTIP)	The annual plan of transportation improvements for an urban area that is adopted by a regional agency responsible for area wide transportation planning.
Retaining Wall	A solid vertical structure that supports the adjacent material, preventing it from sliding or eroding onto the roadbed
Revegetation	The replacement of natural vegetation that has been removed to accommodate construction, including provisions for temporary irrigation when required.
Right-of-Way	The land the State must own to construct, repair, operate, maintain and access existing transportation facilities.
Riparian	Along banks of rivers and streams, riverbank forests are often called gallery forests
Rock shed	These structures are characterized by a highly reinforced concrete roof slab covered by a soil layer used as a shock absorbing cushion. They shelter the road in areas prone to rockfall to protect rocks from falling onto the road.
Scoping	NEPA defines scoping as an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR §1501.7). Under CEQA, scoping is designed to examine a proposed project early in the EIR environmental analysis/review process and is intended to identify the range of issues pertinent to the proposed project and feasible alternatives or mitigation measures to avoid potentially significant environmental effects.
Shoulder Backing	Material that is placed adjacent to the outside edge of the shoulder surfacing to protect the edge from spalling and to provide edge support.
Significance (CEQA)	CEQA defines a "significant effect on the environment" as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining

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TERM	DEFINITION OR EXPLANATION
	<p>whether the physical change is significant” (CEQA Guidelines Section 15382). CEQA requires the lead agency identify each “significant effect on the environment” that will result from the project and avoid or mitigate it.</p>
Significance (NEPA)	<p>To determine the potential for significance, one must consider both the context in which the action takes place and the intensity of its effect. Section 1508.27 of the CEQ regulations defines the term “significantly” as:</p> <p>A.Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.</p> <p>B. Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:</p> <ol style="list-style-type: none"> 1.Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. 2.The degree to which the proposed action affects public health or safety. 3.Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. 4.The degree to which the effects on the quality of the human environment are likely to be highly controversial 5.The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks 6.The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration 7.Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. 8.The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. 9.The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. 10.Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. [43 FR 56003, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979].
Special-Status Species	<p>Plant or animal species that are either (1) federally listed, proposed for or a candidate for listing as threatened or endangered; (2) bird species protected under the federal Migratory Bird Treaty Act; (3) protected under</p>

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TERM	DEFINITION OR EXPLANATION
	state endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies; or (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).
Special Use Permit	Occupancy of USFS or other federal land for highway related use outside of the public road or highway easement that has been given authorization
Storm Water Pollution Prevention Plan (SWPPP)	A SWPPP is prepared to evaluate sources of discharges and activities that may affect storm water runoff and implement measures or practices to reduce or prevent such discharges.
Traffic Management Plan (TMP)	An approach for alleviating or minimizing work-related traffic delays by the effective application of traditional traffic handling practices and an innovative combination of various strategies.
Type I Project	A proposed federal or federal-aid highway project for the construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes.
Vehicle Miles Traveled (VMT)	The number of miles traveled by motor vehicles on roadways in a given area over a given time period, depending on the complexity of the work or magnitude of anticipated traffic impacts,
Viaduct	A specific type of bridge that consists of a series of arches, piers, or columns supporting a long-elevated railway or road. Typically, a viaduct connects two points of roughly equal elevation, allowing direct overpass across a wide valley, road, river, or other low-lying terrain features and obstacles
Watershed	The area of land that drains into a specific waterbody
Wetlands	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Appendix C Avoidance, Minimization and/or Mitigation Summary

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
HUMAN ENVIRONMENT										
Parks and Recreational Facilities										
Avoidance and Minimization Measures										
PR-1:	During project construction of Alternative 3, Caltrans shall rehabilitate and repave the Islip Saddle Day Use Area's parking lot in sections to prevent a temporary closure of the entire parking lot. Limited parking will be available during construction to avoid a full temporary closure of the lot to allow hikers and other visitors to access the park for the day.	Resident Engineer	Pre-Construction/ Construction							
PR-2:	Caltrans shall implement temporary construction detours for hikers as they cross the road (to connect with the other section of the trail) during construction of the roundabout (Alternative 4) and the repaving of the Parking lot at the Islip Saddle Day Use Area (Alternative 3).	Resident Engineer	Pre-Construction/ Construction							
Environmental Justice										
Avoidance and Minimization Measures										
EJ-1:	Caltrans would actively and effectively engage all segments of the affected community. A community outreach and public involvement program would be developed and implemented to inform the community about project construction activities and address concerns should they arise.	Resident Engineer	Pre-Construction							
Utilities/ Emergency Services										
Project Features										
PF-UES-2:	All temporary ramp and arterial roadway closures and detour plans will be coordinated with law enforcement, fire protection, and emergency medical service providers.	Resident Engineer	Pre-Construction							
Traffic and Transportation/ Pedestrian and Bicycle Facilities										
Project Features										
PF-T-1:	A Final Transportation Management Plan (TMP) shall be developed in detail during final design.	Project Engineer, Design	PS&E/ Before RTL							

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Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
Avoidance and Minimization Measures										
TT-1:	In coordination with the USFS, Caltrans will develop and implement a construction management program that maintains community access along routes adjacent to the project limits with signage, detours, and flag persons. In addition, Caltrans will develop and implement a community outreach and public involvement program to inform adjacent communities and recreational sites and their users about planned construction activities.	Resident Engineer	Pre-Construction							
TT-2:	A Traffic Management Plan will be developed, and detour routes will be established in coordination with the California Highway Patrol, USFS, the Los Angeles Sheriff's Department, and the Los Angeles Fire Department.	Resident Engineer	Pre-Construction/ Construction							
Visuals/ Aesthetics										
Avoidance and Minimization Measures										
VIS-1:	All measures proposed for replanting must follow the guidance in Section 92.3 of the Streets and Highways Code. Landscaping shall include drought resistant, native species, and climate appropriate vegetation whenever feasible.	Resident Engineer	Construction							
VIS-2:	Coordination between Caltrans' Landscape Architect and the USFS must occur to ensure that no Avoidance and Minimization Measures or Mitigation Measures are missing, and the proper aesthetic treatments and context sensitive solutions have been considered.	Landscape Architect, Resident Engineer	Pre-Construction/ Construction							
VIS-3:	Replace impacted vegetation in kind and add planting to bare areas when feasible.	Resident Engineer	Construction							
VIS-4:	Proposed plant list and locations will be reviewed and approved by the District Landscape Architect and concurred with by the USFS.	Landscape Architect, Resident Engineer	Pre-Construction/ Construction							
VIS-5:	Erosion control seed species, origin and application strategy would be determined by Caltrans Landscape Architects in consultation with Caltrans Biologists and USFS plant resource specialists.	Landscape Architect, District Biologist, Resident Engineer	Pre-Construction/ Construction							
VIS-6:	All disturbed slopes would be revegetated with native plant materials and erosion control.	Resident Engineer	Construction							

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Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
VIS-7:	Realignment of the existing road would be revegetated after recontouring the landform.	Resident Engineer	Construction							
VIS-8:	When appropriate and consistent with integrated pest management strategies as defined in subdivision (d) of Section 14717 of the Government Code, landscaping shall include California native wildflowers and native and climate-appropriate vegetation as an integral and permanent part of the planting design, with priority given to those species of wildflowers and native and climate-appropriate vegetation that will help rebuild pollinator populations.	Resident Engineer	Construction							
VIS-9:	Removed trees would be replaced using an appropriate planting ratio and maintenance program determined by Caltrans Landscape Architects in consultation with Caltrans Biologists and USFS plant resource specialists.	Landscape Architect, District Biologist, Resident Engineer	Pre-Construction/ Construction							
VIS-10:	An appropriate number of felled trees and boulders would be saved, then placed at locations in disturbed areas to create a natural appearance, as determined by the Caltrans Landscape Architects.	Landscape Architect, Resident Engineer	Construction							
VIS-11:	Minimize visual impacts using context sensitive aesthetic treatments. Proposed and replaced structures will incorporate aesthetic treatments that will be consistent with the existing visual characteristics of the location. Textures, colors, and patterns should reflect existing elements and forms found nearby. The chosen treatments must be approved by the Caltrans project Landscape Architect and reviewed and concurred with by USFS.	Landscape Architect, Resident Engineer	Pre-Construction/ Construction							
VIS-12:	New installed Midwest Guardrail System will be treated with patina to provide cohesiveness within the existing landscape.	Resident Engineer	Construction							
VIS-13:	The proposed rock shed design to be coordinated by Structures Architects and District Landscape Architect to compliment or match the existing San Gabriel Mountains scenery or adjacent theme of the route for continuity and concurred with by the USFS.	Landscape Architect, Structure Design, Resident Engineer	Pre-Construction/ Construction							
VIS-14:	Catchment Wall timbers or fence and its affiliated parts should be colored, or powder coated a tan color to match the existing rock and concurred with by the USFS.	Resident Engineer	Construction							

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Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
VIS-15:	Retaining walls should be colored a tan color to match existing rock or match nearby structure aesthetic treatments to maintain continuity and concurred with by the USFS.	Resident Engineer	Construction							
VIS-16:	Replaced or disturbed concrete/ bridge barriers should follow the existing or adjacent natural environment theme for continuity. Colors, and patterns will be incorporated that reflect existing elements and forms found in the natural environment.	Resident Engineer	Construction							
VIS-17:	Proposed concrete/ bridge barriers design will be determined by the District Landscape Architect and concurred with by the USFS.	Landscape Architect, Resident Engineer	Pre-Construction							
VIS-18:	Viaduct structures would be designed to minimize their visual impact and to blend into and be visually compatible with the surrounding environment.	Design, Resident Engineer	PS&E/ Pre-Construction							
VIS-19:	Reflect existing landform transitions in proposed forms. Rock scaling proposed in the project will follow contour grading for aesthetically pleasing transitions to avoid conventional sharp edges and changes to the existing visual corridor. Use principles of contour grading when cutting back slopes. Avoid planar surfaces, creating varied and natural looking surfaces and edges.	Resident Engineer	Construction							
Cultural Resources										
Project Features										
PF-CUL-1:	If cultural materials are discovered during site preparation, grading, or excavation, the construction Contractor would divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find. At that time, there would be coordination with the appropriate local agency.	Cultural Resources Staff, Resident Engineer	Construction							
PF-CUL-2:	If human remains are discovered during site preparation, grading, or excavation, California State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the Los Angeles County Coroner shall be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Claudia Harbert, Caltrans, District 7 Native American Coordinator, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.	Cultural Resources Staff, Resident Engineer	Construction							

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Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
PHYSICAL ENVIRONMENT										
<i>Water Quality and Storm Water Runoff</i>										
Project Features										
PF-WQ-1:	The proposed project will comply with the provisions of the Caltrans National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit (Order No. 2012-0011-DWQ, as amended by Order WQ 2014-0006-EXEC, Order WQ 2014-0077-DWQ, and order WQ 2015-0036-EXEC, NPDES No. CAS000003) and the NPDES General Permit for Storm Water Discharges of Storm Water Runoff Associated with Construction Activities (Order No. 2009-0009-DWQ, as amended by 2012-0006-DWQ), and any subsequent permits in effect at the time of construction.	Resident Engineer	Pre-Construction/ Construction							
PF-WQ-2:	A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to impact water quality. It shall be prepared per the requirements stated in the NPDES General Permit for Storm Water Discharges of Stormwater Runoff Associated with Construction Activities and any subsequent permit in effect at the time of construction. The SWPPP shall identify the sources of pollutants that may affect the quality of storm water and include the construction site BMPs to control pollutants such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs. All construction site BMPs shall follow the latest editions of the Caltrans Project Planning and Design Guide (PPDG) (2019) and Caltrans Construction Manual (2020). These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.	Resident Engineer	Pre-Construction/ Construction							
PF-WQ-3:	Caltrans-approved Design Pollution Prevention BMPs shall be implemented to the maximum extent practicable (MEP), consistent with the requirements of the Caltrans Permit.	Resident Engineer	Pre-Construction/ Construction							
PF-WQ-4:	Caltrans-approved Treatment BMPs shall be implemented to the maximum extent possible (MEP), consistent with the requirements of the Caltrans Permit.	Resident Engineer	Pre-Construction/ Construction							
Avoidance and Minimization Measures										
WQ-1:	The contractor shall use all appropriate and necessary containment measures for work over waterways to ensure that no construction materials or debris from work enter any waterways. In addition, any contingencies shall be used related to accidental gas or oil releases, as dictated by approved utility relocation plans. The contractor shall use natural oils/ lubricants and biodegradable hydraulic fluid when feasible.	Resident Engineer	Pre-Construction/ Construction							

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
WQ-2:	The proposed project includes activities that will result in impacts to "Waters of the United States" and "Waters of the State"; therefore, prior to commencement of construction, a Section 404 of the Clean Water Act Permit will be required from the U.S. Army Corps of Engineers, a Section 401 and 402 of the Clean Water Act Permit will be required from the California Regional Water Quality Control Board, and a Section 1602 Lake and Streambed Alteration Agreement will be required from the California Department of Fish and Wildlife. The project shall adhere to any conditions required by these permits.	Resident Engineer	Pre-Construction/ Construction							
WQ-3:	Construction site BMPs will be deployed during construction activities to reduce stormwater discharges during construction and must be incorporated into the project specifications. Prior to the start of construction, all drain inlets must be protected with BMPs to prevent construction materials and debris from entering drainages. Temporary construction BMPs will be required, such as wind erosion control, sediment tracking control, street sweeping and vacuuming, construction roadway stabilization, spill prevention control, solid waste management, hazardous waste management, sanitary/ septic waste management, material delivery and storage, material use, vehicle and equipment cleaning, vehicle and equipment fueling, and vehicle maintenance.	Resident Engineer	Pre-Construction/ Construction							
WQ-4:	Temporary construction staging areas and access roads will be used to minimize impacts to USACE, RWQCB, and California Department of Fish and Wildlife jurisdictional waters to the maximum extent feasible and are expected to be restored to pre-project conditions.	Resident Engineer	Pre-Construction/ Construction							
WQ-5:	All slopes shall be protected with fiber rolls, silt fences, temporary slope drains, and early slope paving or landscaping, as defined in the approved SWPPP, during the raining seasons of October 1 to May 1.	Resident Engineer	Pre-Construction/ Construction							
WQ-6:	All catchment basins and drainage inlets will include gravel bag berms or storm drain inlet protection.	Resident Engineer	Pre-Construction/ Construction							
WQ-7:	For all construction equipment, fuels, and toxic chemicals; spill prevention and spill control measures will be implemented before construction begins.	Resident Engineer	Pre-Construction/ Construction							
WQ-8:	A SWPPP shall be prepared for the project and will address all construction-related activities, equipment, and materials that have the potential to affect water quality.	Resident Engineer	Pre-Construction/ Construction							
WQ-9:	All Construction Site BMPs would be installed, inspected, and maintained to control and minimize the impacts of construction-related pollutants.	Resident Engineer	Pre-Construction/ Construction							

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Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
WQ-10:	Should an excavation need to be dewatered, groundwater would be disposed of according to NPDES dewatering permit requirements.	Resident Engineer	Pre-Construction/ Construction							
WQ-11:	Per NPDES requirements, a dewatering plan would be prepared to guide the response to undocumented soil or groundwater contamination.	Resident Engineer	Pre-Construction/ Construction							
Geology/ Soils/ Seismic/ Topography										
Project Features										
GEO-1:	Rock scaling along unstable slopes would occur prior to opening the road. Scaling would greatly reduce the amount of rockfall for several years.	Resident Engineer	Construction							
GEO-2:	Soldier pile walls will be constructed at various locations for all build alternatives to stabilize the slope at locations where the road has been undermined.	Resident Engineer	Construction							
GEO-3:	Several existing soldier pile walls will be repaired where erosion has damaged the timber laggings or metal beam laggings.	Resident Engineer	Construction							
GEO-4:	Existing masonry gravity walls at several locations will be repaired where erosion has undermined the base, making it structurally weak.	Resident Engineer	Construction							
GEO-5:	Rock fall catchment walls will be constructed at various locations for Alternatives 3 and 4 to prevent falling rocks and large debris from entering the pedestrian-accessible and public roadway.	Resident Engineer	Construction							
GEO-6:	A rock shed located at "Headache Alley" between PMs 40.94 and 41.07, where large-sized rocks and boulders consistently fall from overhead, is proposed to be constructed for Alternatives 3 and 4.	Resident Engineer	Construction							
GEO-7:	A 700-foot-long viaduct at Snow Springs Slide (PM 42.2) will be constructed to bypass this very active and major debris slide area for Alternatives 3 and 4.	Resident Engineer	Construction							
GEO-8:	Several other viaducts are proposed for Alternatives 3 and 4 that will serve to bypass other rockslide areas that may not be as active and will enable wildlife to safely cross underneath traffic.	Resident Engineer	Construction							
GEO-9:	Cable net fencing constructed at grade or on the cuts would stop rockfall from reaching the roadway. The fence heights and energy-absorbing capacity must be determined by rockfall energy and trajectory analyses conducted during the design phase of this project.	Resident Engineer	Construction							

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
GEO-10:	Draping the slope with wire mesh allows rocks as large as 0.6 meter (2 feet) in diameter to move down the slope slowly and come to rest at the toe of the slope. The drapery limits and anchor locations will have to be determined by additional field studies during the design phase. For those cuts being draped that also have rocks coming from the natural slopes above, a cable net fence placed at the top of the cut would also be required.	Resident Engineer	Construction							
GEO-11:	The cheaper but less-reliable option would be constructing catchment basins. The basins would have to be cleaned periodically, and there would still be the possibility that they could be overwhelmed in a major storm event.	Resident Engineer	Construction							
GEO-12:	The more reliable but more expensive option would be constructing rock-passing culverts. Rock passing culverts have a steep invert (greater than 38 degrees) and a diameter sufficient to pass large boulders and other debris.	Resident Engineer	Construction							
GEO-13:	Cable net fences have been used successfully to stop debris flows. The cable nets stop boulders, gravel and other debris while allowing water to pass through.	Resident Engineer	Construction							
GEO-14:	Revegetation of graded slopes should be performed to minimize erosion, and runoff should be diverted from each slope face using earthen berms at the top of each slope, where feasible.	Resident Engineer	Construction							
Hazardous Waste/ Materials										
Project Features										
PF-HAZ-1:	Site investigations performed at the properties for the project will be completed during the Design Phase to determine whether more extensive subsurface investigation will be needed.	Resident Engineer, Hazardous Waste	Construction							
PF-HAZ-2:	If hazardous materials contamination or sources are suspected or identified during project construction activities, the construction contractor will be required to cease work in the area and have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans Construction Manual (2020). Adequate protection to construction workers will be provided with the implementation of a Health and Safety Plan and Soil Management Plan.	Resident Engineer, Hazardous Waste	Construction							
PF-HAZ-3:	If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance with the Caltrans Construction Manual (2020), Chapter 7, Section 7-107, Hazardous Waste and Contamination.									
PF-HAZ-4:	A Lead Compliance Plan shall be prepared prior to the start of construction activities.									

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
Avoidance and Minimization Measures										
HAZ-1:	Site investigations performed at the properties for the project will be completed during the Project Specifications and Estimates phase to determine whether more extensive subsurface investigation will be needed.	Design, Project Engineer, Environmental Planning	Pre-Construction/ Construction							
HAZ-2:	If hazardous materials contamination or sources are suspected or identified during project construction activities, the construction contractor will be required to cease work in the area and to have an environmental professional evaluate the soils and materials to determine the appropriate course of action, consistent with the Unknown Hazards Procedures in Chapter 7 of the Caltrans Construction Manual (2020). Adequate protection for construction workers will be provided with the implementation of a Health and Safety Plan and Soil Management Plan.	Resident Engineer	Pre-Construction							
HAZ-3:	If hazardous materials are discovered, the construction contractor will remove and properly dispose of any materials in accordance with the Caltrans Construction Manual (2020), Chapter 7, Section 7-107, Hazardous Waste and Contamination.	Resident Engineer, Hazardous Waste	Construction							
HAZ-4:	A Lead Compliance Plan shall be prepared prior to the start of construction activities.									
HAZ-5:	Appropriate funds for disposal of TWW and the CDFTA fee is required if the generated quantity is greater than 5 tons/ year. Timber lagging would be removed as part of the project and is a potential source of hazardous material due to the chemical preservatives used to preserve the wood.									
Air Quality										
Avoidance and Minimization Measures										
AQ-1:	The construction contractor must comply with Caltrans' Standard Specifications in Section 14. Section 14 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. Section 14 is also directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18. Non-Standard Specifications are also required and must be followed by the contractor, specifically NSSP 14-9.05.	Resident Engineer	Construction							

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
AQ-2:	Water or dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible dust" criterion either at the point of emissions or at the right-of-way line, depending on local regulations.	Resident Engineer	Construction							
AQ-3:	Soil binder will be spread on any unpaved roads used for construction purposes and on all project construction parking areas.	Resident Engineer	Construction							
AQ-4:	Trucks will be washed as they leave the right-of-way, as necessary to control fugitive dust emissions.	Resident Engineer	Construction							
AQ-5:	Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel, as required by California Code Regulations Title 17, Section 93114.	Resident Engineer	Construction							
AQ-6:	A dust-control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes, as needed to minimize construction impacts to existing communities.	Resident Engineer	Construction							
AQ-7:	Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.	Resident Engineer	Construction							
AQ-8:	Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.	Resident Engineer	Construction							
AQ-9:	All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (i.e., space from the top of the material to the top of the truck) will be provided to minimize emission of dust (particulate matter) during transportation.	Resident Engineer	Construction							
AQ-10:	Dust and mud that are deposited on paved public roads due to construction activity and traffic will be promptly and regularly removed to decrease particulate matter.	Resident Engineer	Construction							
AQ-11:	To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.	Resident Engineer	Construction							
AQ-12:	Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulates in the area.	Resident Engineer	Construction							
AQ-13:	To the extent feasible, establish Environmentally Sensitive Areas for sensitive air receptors within which construction activities involving extended idling of diesel equipment would be prohibited.	Resident Engineer	Construction							

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
AQ-14:	During construction of the proposed project, the property owner/ development and its contractors shall be required to comply with regional rules, which shall assist in reducing short-term air pollutant emissions. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off-site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emissions source. Two options are present in Rule 403: monitoring of particulate concentrations and/ or active control. Monitoring involves a sampling network around the project with no additional control measures unless specified concentrations are exceeded. The active control option does not require any monitoring but requires that a list of measures be implemented starting with the first day of construction. This project will be in full compliance with both Rule 402 and Rule 403.	Resident Engineer	Construction							
Noise and Vibration										
Avoidance and Minimization Measures										
NOI-1:	Equipment noise control is needed to reduce the noise emissions from construction sites by mandating specified noise levels for designing new equipment and updating old equipment with new noise control devices and techniques.	Resident Engineer	Construction							
NOI-2:	In-use site noise control is necessary to prevent existing equipment from producing noise levels above specified limits. Any equipment that produces noise levels less than the specified limits would not be affected. However, those exceeding the limit would be required to meet compliance by repair, retrofit, or elimination. New equipment with the latest noise-sensitive components and noise-control devices are generally quieter than older equipment, if properly maintained and inspected regularly. They should be repaired or replaced if necessary to maintain the in-use noise limit. All equipment applying the in-use noise limit would achieve an immediate noise reduction, if properly enforced.	Resident Engineer	Construction							
NOI-3:	Site restrictions should be applied to achieve noise reduction through different methods, resulting in an immediate reduction of noise emitted to the community without requiring any modification to the source noise emissions. The methods include shielding with barriers for equipment and site, truck rerouting and traffic control, time scheduling, and equipment relocation. The effectiveness of each method depends on the type of construction involved and the site characteristics.	Resident Engineer	Construction							

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
NOI-4:	Personal Training of operators and supervisors is needed to ensure that they become more aware of the construction site noise problem and are given instructions on methods that they can implement to improve conditions in the local community. Educating contractors and their employees to be sensitive to noise impact problems and noise control methods is also needed . This may be one of the most cost-effective ways to help operators and supervisors become more aware of the construction site noise problem and implement the various methods of improving the conditions. A training program for equipment operators is recommended to instruct them in methods of operating their equipment to minimize environmental noise. Many training programs are currently conducted for job safety, and these can be extended to include the impact due to noise and methods of abatement.	Resident Engineer	Pre-Construction/ Construction							
NOI-5:	Construction noise is regulated by Caltrans Standard Specifications, Section 14-8.02 Sound Control Requirements. These requirements state that noise levels generated during construction shall comply with applicable local, state, and federal regulations.	Resident Engineer	Construction							
Energy										
Avoidance and Minimization Measures										
E-1:	Application of newer and more fuel-efficient truck vehicles used during construction of the project.	Resident Engineer	Construction							
BIOLOGICAL ENVIRONMENT										
Natural Communities										
Project Features										
PF-BIO-1:	To avoid impacts to nesting birds, any native or exotic vegetation removal or tree-trimming activities shall occur outside the nesting season (February 1st through September 1st). If vegetation clearing is necessary during the nesting season, a preconstruction survey will be conducted by a qualified biologist within 3 days of commencement of vegetation removal or the beginning of construction activities to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the biologist.	Project Biologist, Resident Engineer	Pre-Construction							
PF-BIO-2:	The construction contractor shall inspect and clean construction equipment at the beginning of each day and prior to transporting equipment from one project location to another. Any plants removed, or soil disturbed during the course of construction should be contained and properly disposed of offsite. All mulch, topsoil, seed mixes, or other plantings used during landscaping activities and erosion-control BMPs implemented shall be free of invasive plant species seeds or propagules listed in the California Invasive Plant Council (Cal-IPC) inventory. City tree planting and removal requirements will also be adhered to.									

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
Avoidance and Minimization Measures										
NC-1:	Temporarily impacted areas would be replanted with native plant species that are typical of the plants within each natural community. Details of the planting plan would be provided in a separate document and would be coordinated with the ANF. Although none of the natural communities are special-status and, therefore, do not require preservation or replanting to achieve "no net loss" under state or federal law, the project area is surrounded by a National Forest. Therefore, replanting would occur on temporarily impacted areas within Caltrans' Right-of-Way to preserve the scenic views and recreational value of the National Forest for which the highway was originally constructed.	Resident Engineer	Construction/ Post-Construction							
NC-2:	Silt fencing and berms will be installed to reduce the potential for run-off of sediment during the construction phase.	Resident Engineer	Construction							
NC-3:	The construction phase of the proposed project would expose wildlife to a gradual increase in traffic flow along SR-39 and to further moderate the increasing rate of traffic flow, SR-39 would be opened to public use in a controlled way (such as a "soft" opening [i.e., not announced to the public immediately]).	Resident Engineer	Construction/ Post-Construction							
NC-4:	Included as part of the proposed project design, the speed limit would be reduced to 30 miles per hour along the straight portions of the highway to further reduce the potential for wildlife collisions. Signage indicating wildlife crossings would also be installed to remind drivers of the potential hazard.	Resident Engineer	Construction							
NC-5:	Included as part of the proposed project design, Alternatives 3 and 4 propose to construct several viaducts along the segment of SR-39 to bypass major slide debris and heavy runoff locations, as well as provide a safe crossing underneath the highway for wildlife within the project vicinity.	Resident Engineer	Construction							
Wetlands										
Avoidance and Minimization Measures										
WW-1:	Impacted vegetated areas would be replanted with native plant species that are typical of the plants within each natural community.	Resident Engineer	Construction							
WW-2:	A mitigation and monitoring plan would be prepared that addresses planting procedures, location, success criteria and maintenance.	Project Biologist, Project Manager	Pre-Construction							

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
WW-3:	Mitigation for areas that would be permanently impacted would be achieved by purchasing similar habitat within the region of the project site at a rate of 5:1. This land would be transferred to an organization that is approved by CDFW and USFS for management in perpetuity.	Resident Engineer, Project Manager	Construction/ Post-Construction							
Animal Species										
Avoidance and Minimization Measures										
AS-1:	Pre-construction surveys for sensitive animal species, including the San Gabriel Mountain slender salamanders, least Bell's vireo, southwestern willow flycatcher, and mountain yellow-legged frog, within the project area must be conducted by a qualified biologist prior to construction. Any individuals observed within the project limits will be relocated to nearby suitable habitat (within the Angeles National Forest), prior to construction.	Project Biologist, Resident Engineer	Pre-Construction							
AS-2:	The Migratory Bird Treaty Act prohibits the take of any active bird nests of most avian species. However, the project design has included measures to reduce or eliminate the potential for "take" of any active nest. A qualified biologist would conduct a pre-construction nesting bird survey within 3 days of the initial ground clearance and monitor/protect any active nests found until the fledglings are no longer dependent on the nest site.	Project Biologist, Resident Engineer	Pre-Construction							
AS-3:	Biological monitoring shall occur during construction and habitat enhancements to ensure that wildlife, including sensitive animal species, are not adversely impacted to a significant degree.									
AS-4:	Alternative 3 will implement bighorn sheep crossing signs every 0.25 mile along the restricted segment to warn highway users of the potential for crossing wildlife in an effort to avoid any potential collisions or "take" of sheep or other wildlife.									
AS-5:	Upon completion of the project, but prior to the reopening of the project area to public traffic, Caltrans Maintenance shall increase its vehicular trips within the project area for a period of 1 week in order to provide a slow and gradual increase in traffic leading up to the highway's reopening. Then, the highway shall be reopened to public traffic, but the official reopening public announcement shall be delayed by 1 week. This slow, gradual, 2-week increase in traffic will provide for a "soft" reopening, thereby allowing the bighorn sheep to acclimate to the increased traffic.									
AS-6:	To mitigate impacts to bighorn sheep habitat and any short-term direct impacts resulting from vehicle collisions, if they occur, Caltrans would contribute funds to USFS for the implementation of the strategic plan to improve habitat quality and bighorn sheep population monitoring in the vicinity of the proposed project site.									

Appendix C Avoidance, Minimization and/ or Mitigation Summary

Task	Brief Description	Responsible Branch, Staff	Timing, Phase	NSSP Req.	Action Taken to Comply with Task	Task Completed		Remarks	Environmental Compliance	
						Initials	Date		Initials	Date
<i>Invasive Species</i>										
Avoidance and Minimization Measures										
IS-1:	Temporarily impacted areas would be replanted with native plant species that are typical of the plants within the surrounding plant community. Approved plant palettes would be coordinated with USFS biologists.	Project Biologist, Landscape Architect, Resident Engineer	Construction/ Post Construction							
IS-2:	In compliance with the EO on Invasive Species (EO 13112) and guidance from the FHWA, the landscaping and erosion control included in the project would not use species listed as invasive. None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping.	Project Biologist, Landscape Architect, Resident Engineer	Construction/ Post Construction							
IS-3:	All equipment and materials would be inspected for the presence of invasive species and cleaned, if necessary. In particularly sensitive areas, extra precautions would be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.	Resident Engineer	Pre-Construction							

Appendix D List of Acronyms and Abbreviations

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
µg/m ³	micrograms per cubic meter
AADT	Average Annual Daily Traffic
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
AMSL	Above Mean Sea Level
ANF	Angeles National Forest
ANFLMP	Angeles National Forest Land Management Plan
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
ARPA	Archaeological Resources Protection Act
ATS	Alternate Transportation System
BHS	bighorn sheep
BLM	Bureau of Land Management
BMP	Best Management Practice
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Caltrans Occupational Safety and Health
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CAPTI	California Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CE	California Endangered
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
CFP	California Fully Protected
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	methane
CHL	California Historical Landmarks
CHRIS	California Historical Resources Information System
CIA	Critical Issues Assessment
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
COVID-19	Coronavirus Disease 2019
CRHR	California Register of Historical Resources
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DPGR	District Preliminary Geotechnical Report
DSA	Disturbed Soil Area
EA	Environmental Assessment
ECORP	ECORP Consulting, Inc.
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FC	Federal Candidate
FCAA	Federal Clean Air Act
FE	Federal Endangered

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
FED	Final Environmental Document
FEIR	Final EIR
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FONSI	Findings of No Significant Impacts
FRA	Federal Responsibility Area
FT	Federal Threatened
FTIP	Federal Transportation Improvement Program
GDP	General Development Plan
GHG	greenhouse gas
GIS	Geographic Information Systems
H&SC	California State Health and Safety Code
HF	Chydrofluorocarbon
IRIS	Integrated Risk Information System
ISA	Initial Site Assessment
ITP	Incidental Take Permit
LARWQCB	Los Angeles Regional Water Quality Control Board
LCFS	Low Carbon Fuel Standard
LEDPA	Least Environmentally Damaging Practicable Alternative
LRA	Local Responsibility Area
MBG	Metal Beam Guardrail
MBGR	Metal Beam Guardrail
MEP	maximum extent practicable
MGS	Midwest Guardrail System
MLD	Most Likely Descendant
MMTCO ₂ e	million metric tons of carbon dioxide equivalent

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxic
MYLF	southern mountain yellow-legged frog
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NIS	New Impervious Surface
NNI	Net New Impervious Surface
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NOD	Notices of Determination
NOE	Notice of Exemption
NOP	Notice of Preparation
NO _x	nitric oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
O ₃	Ozone
OHP	California Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
PA	Programmatic Agreement
PCT	Pacific Crest Trail

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
PM	Post Mile
PM ₁₀	Particulate Matter Less than 10 Microns in Diameter
PM _{2.5}	Particulate Matter Less than 2.5 Microns in Diameter
POTW	Publicly Owned Wastewater Treatment Works
Ppb	parts per billion
PPDG	Caltrans Project Planning and Design Guide
Ppm	parts per million
PRC	Public Resources Code
PS&E	Plans, Specifications, and Estimates
RCRA	Resource Conservation and Recovery Act
RHRS	Rockfall Hazard Rating System
RIS	Replaced Impervious Surface
ROG	Reactive Organic Gases
ROW	Right-of-Way
RSA	Resource Study Area
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SGMNM	San Gabriel Mountains National Monument
SGV	San Gabriel Valley
SHOPP	State Highway Operation and Protection Program
SHPO	State Historic Preservation Officer
SHS	State Highway System
SIP	State Implementation Plan

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
SO ₂	sulfur dioxide
SR	State Route
SRA	State Responsibility Area
SS	Sensitive Species
SSC	California Species of Special Concern
SUP	Special Use Permit
SWMP	Statewide Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TDM	Transportation Demand Management
TMD	total maximum daily load
TMDL	total maximum daily load
TMP	Traffic Management Plan
TSM	Tentative Subdivision Map
TWW	Treated Wood Waste
US	United States Route
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VHFHSZ	Very High Fire Hazard Severity Zones
VIA	Visual Impact Analysis
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WDR	Waste Discharge Report

Appendix D List of Acronyms and Abbreviations

Acronym and/or Abbreviation	Description
WQ	Water Quality
YSMN	Yuhaaviatam of San Manuel Nation

Appendix E Notice of Preparation

Appendix E Notice of Preparation

Notice of Preparation

Notice of Preparation

To: Responsible and Trustee Agencies From: California Department of Transportation, District 7, Division of Environmental Planning
 _____ 100 S Main Street, MS 16A
 _____ Los Angeles, CA 90012
 (Address) (Address)

Subject: Notice of Preparation of a Draft Environmental Impact Report

The California Department of Transportation (Caltrans D-7) will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (is is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Karl Price, Division of Environmental Planning at the address shown above. We will need the name for a contact person in your agency.

Project Title: SR-39 Reopening Project

Project Applicant, if any: _____

Date: December 1, 2022 Signature: Karl Price Digitally signed by Karl Price
Date: 2022.11.22 12:46:25 -08'00'
 Title: Karl Price, Senior Environmental Planner
 Telephone: (213)266-3822

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, and 15375.

Revised 2011

CALIFORNIA STATE TRANSPORTATION AGENCY

GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DISTRICT 7
100 SOUTH MAIN STREET, SUITE 100 | LOS ANGELES, CA 90012
PHONE (213) 897-0362 | FAX (213) 897-0360 TTY 711
www.dot.ca.gov



December 1, 2022

Agencies, Organizations, and Individuals
Interested in the SR-39 Reopening Project

File: 07-LA-39-PM 40.0/44.4
EA 07-34770-0
EFIS 0718000117
SR-39 Reopening Project

Notice of Scoping/Initiation of Studies

This is to advise you that the California Department of Transportation (Caltrans), as the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) lead agency, is formally initiating studies for improvements to State Route 39 (SR-39) in Los Angeles County to restore the highway's connection from west of Crystal Lake Road to State Route 2 (Angeles Crest Highway, or SR-2) in the Angeles National Forest. The proposed alternatives could make the highway accessible to public highway traffic throughout the year, with seasonal closures during times of inclement weather.

The purpose of this project is to restore access and provide a through-traffic connection between Interstate-210 (Foothill Freeway, or I-210) and SR-2, in order to enhance access for fire suppression forces, search and rescue, and emergency response personnel, including the USFS and the Los Angeles Sheriff's Department. It also aims to improve the safety and operation of the roadway, while preserving the integrity of the existing facility. Consistent with Caltrans' Complete Streets policy (DD 64-R2), this project would also improve access for patrons of the numerous recreation areas within the national forest and provide an economic benefit to the forest and local businesses.

Preliminary environmental resources studies indicate that an Environmental Impact Report/Environmental Assessment (EIR/EA) is the appropriate environmental document. Caltrans will prepare an EIR/EA to evaluate the anticipated environmental effects and recommend measures to mitigate those effects pursuant to CEQA and NEPA.

During the course of the project, Caltrans will work closely with the public to assure that all pertinent factors and viable alternatives are considered. We welcome any comments or suggestions you may have concerning possible alternatives or potential social, economic, and environmental impacts as they pertain to the proposed project.

A virtual scoping meeting will be held on **December 15, 2022, at 6:30 PM** to provide you an opportunity to obtain first-hand project information and to express your comments and concerns about the proposed project.

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Appendix E Notice of Preparation

December 1, 2022

<Page 2

The link to the virtual public scoping meeting is
<https://tinyurl.com/sr-39scoping> or scan the code to register



All comments received will become part of the project record and will provide valuable input to our environmental and design personnel. Scoping comments must be submitted by **Monday, January 16th, 2023.**

Comments can be submitted via regular mail, email, or at the scoping meeting.

Mail comments to:

Karl Price
Division of Environmental Planning (Project EA 07-34770-0)
California Department of Transportation, District 7
100 South Main Street, MS 16A
Los Angeles, CA 90012

Email comments to: karl.price@dot.ca.gov

If you have any questions, please contact Karl Price, Division of Environmental Planning, at (213) 266-3822 or karl.price@dot.ca.gov. Thank you for your interest in this important transportation project.

Sincerely,







RONALD KOSINSKI
Deputy District Director
Division of Environmental Planning
Caltrans, District 7

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Appendix F Alternative Layouts







Legend

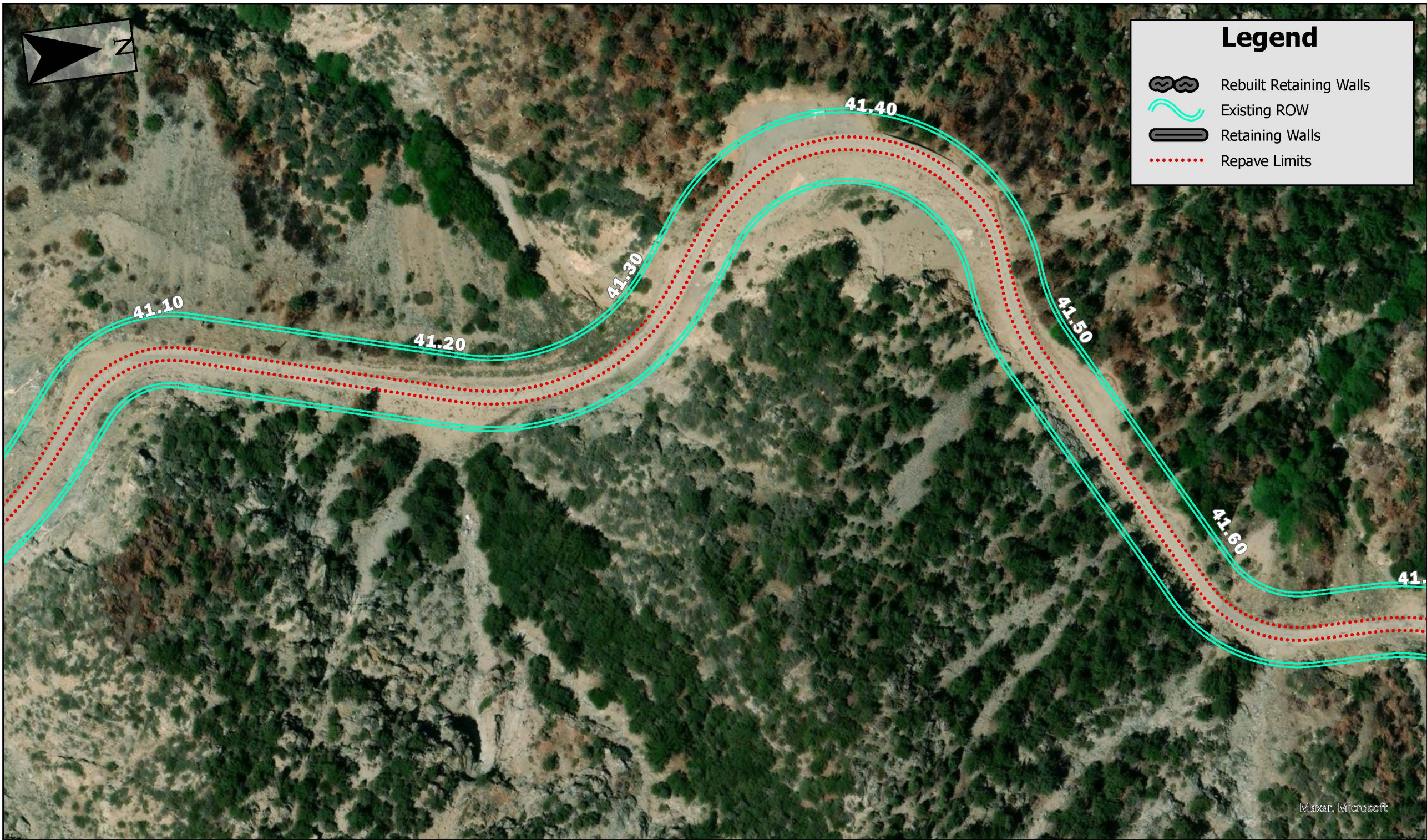
-  Rebuilt Retaining Walls
-  Existing ROW
-  Retaining Walls
-  Repave Limits





Legend





-  Rebuilt Retaining Walls
-  Existing ROW
-  Retaining Walls
-  Repave Limits



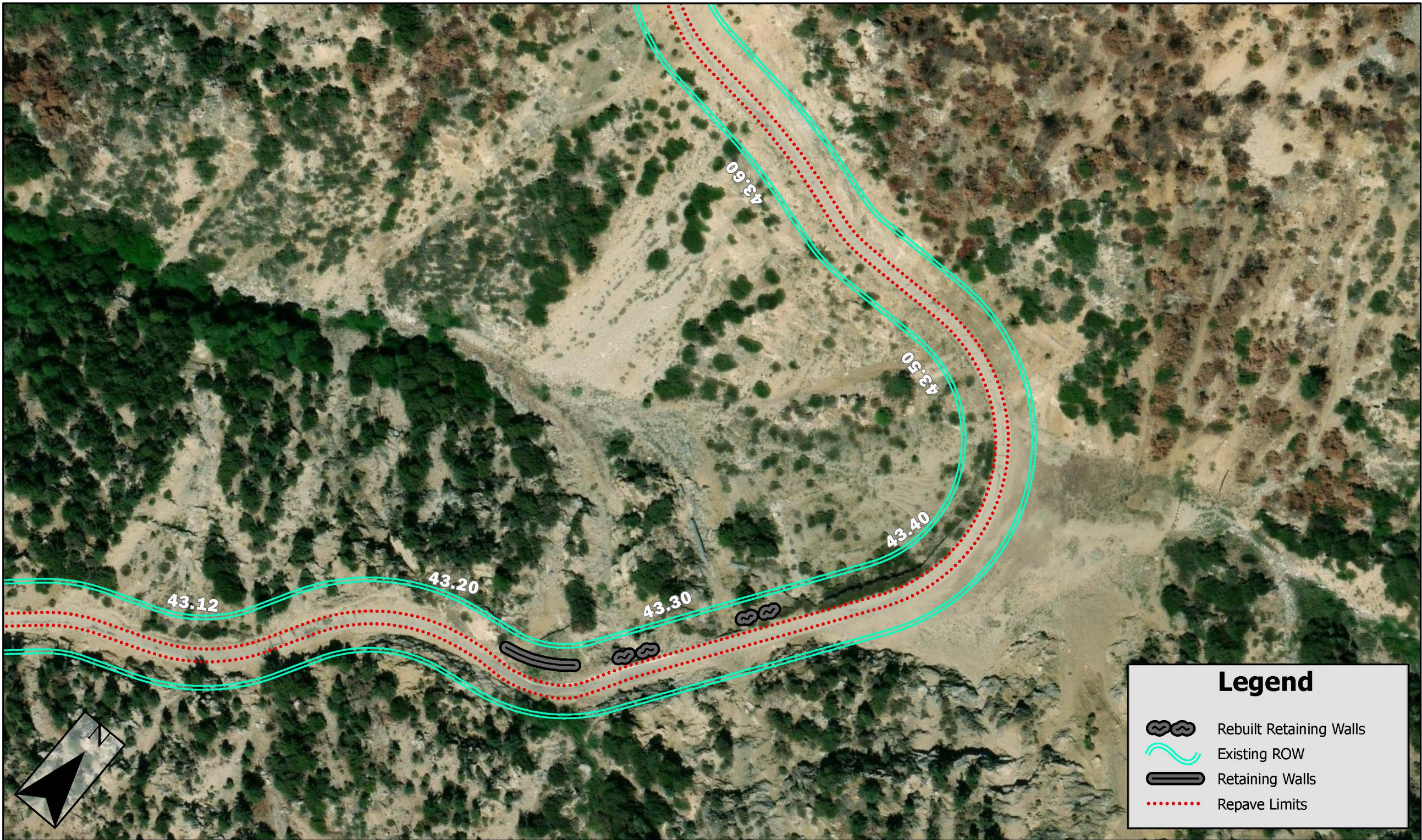




Legend

-  Rebuilt Retaining Walls
-  Existing ROW
-  Retaining Walls
-  Repave Limits











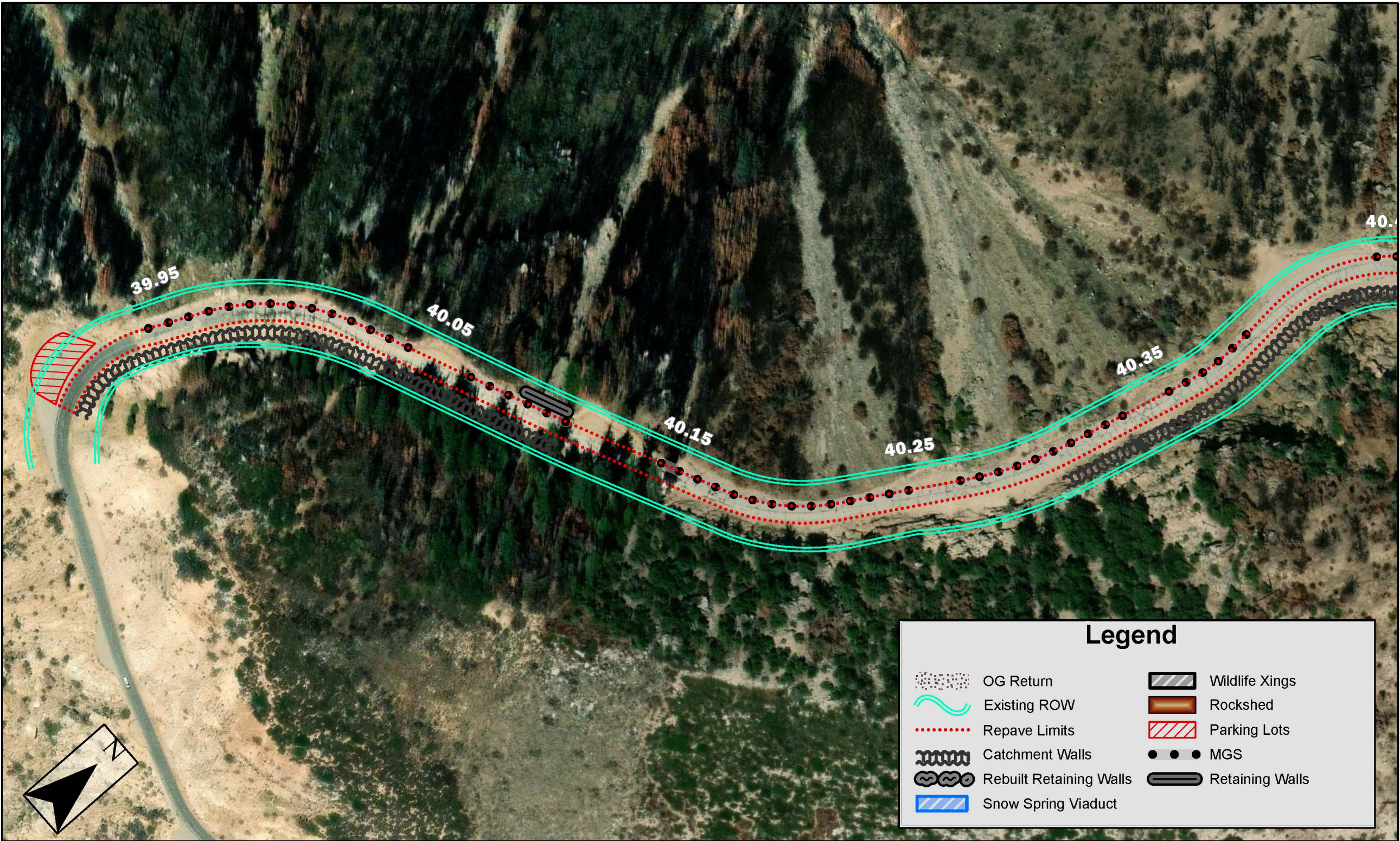


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-  Rebuilt Retaining Walls
-  Existing ROW
-  Retaining Walls
-  Repave Limits

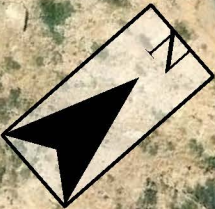


Maxar, Microsoft



Legend

	OG Return		Wildlife Xings
	Existing ROW		Rockshed
	Repave Limits		Parking Lots
	Catchment Walls		MGS
	Rebuilt Retaining Walls		Retaining Walls
	Snow Spring Viaduct		



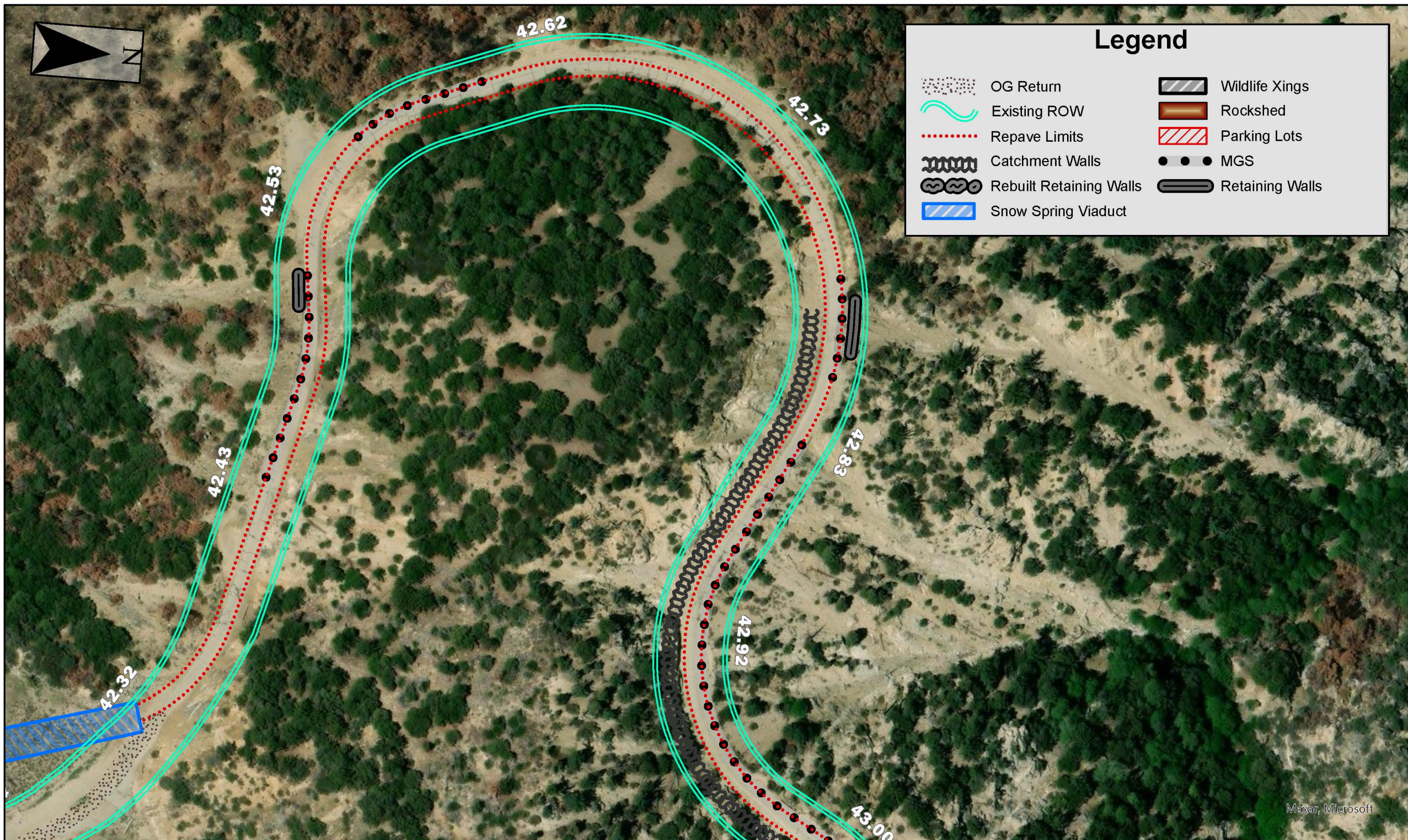

















Legend

	OG Return		Wildlife Xings
	Existing ROW		Rockshed
	Repave Limits		Parking Lots
	Catchment Walls		MGS
	Rebuilt Retaining Walls		Retaining Walls
	Snow Spring Viaduct		





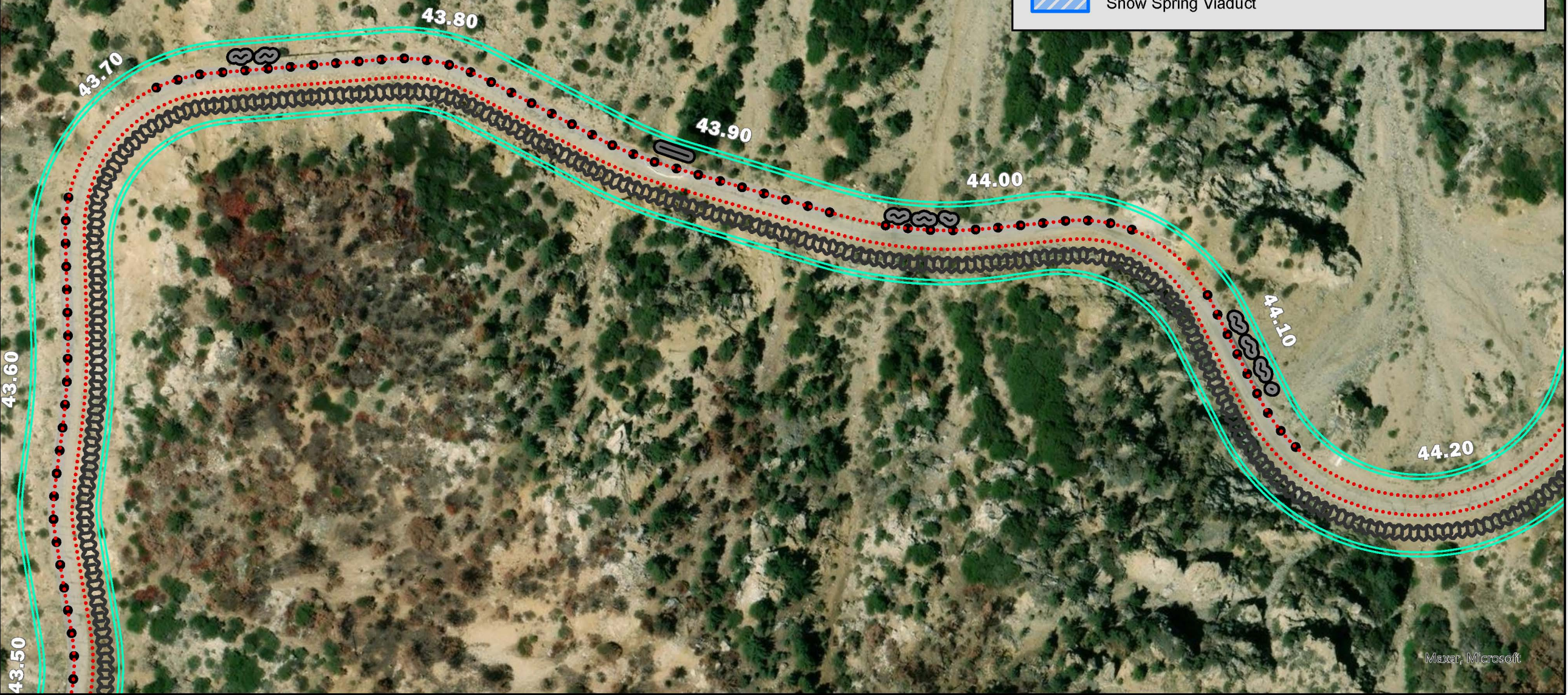
Legend

-  OG Return
-  Existing ROW
-  Repave Limits
-  Catchment Walls
-  Rebuilt Retaining Walls
-  Snow Spring Viaduct
-  Wildlife Xings
-  Rockshed
-  Parking Lots
-  MGS
-  Retaining Walls



Legend

	OG Return		Wildlife Xings
	Existing ROW		Rockshed
	Repave Limits		Parking Lots
	Catchment Walls		MGS
	Rebuilt Retaining Walls		Retaining Walls
	Snow Spring Viaduct		



Maxar, Microsoft

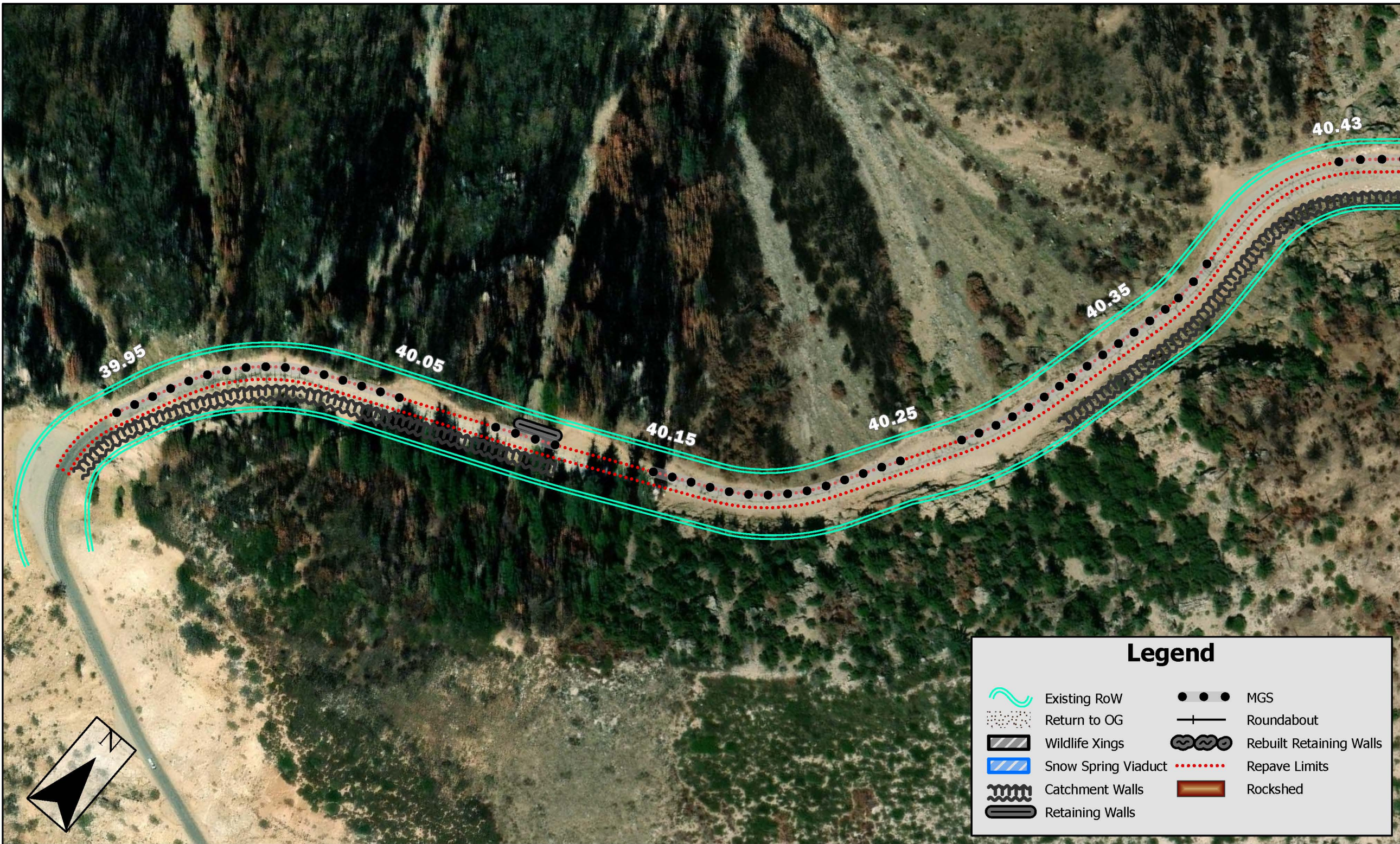


Legend

	OG Return		Wildlife Xings
	Existing ROW		Rockshed
	Repave Limits		Parking Lots
	Catchment Walls		MGS
	Rebuilt Retaining Walls		Retaining Walls
	Snow Spring Viaduct		














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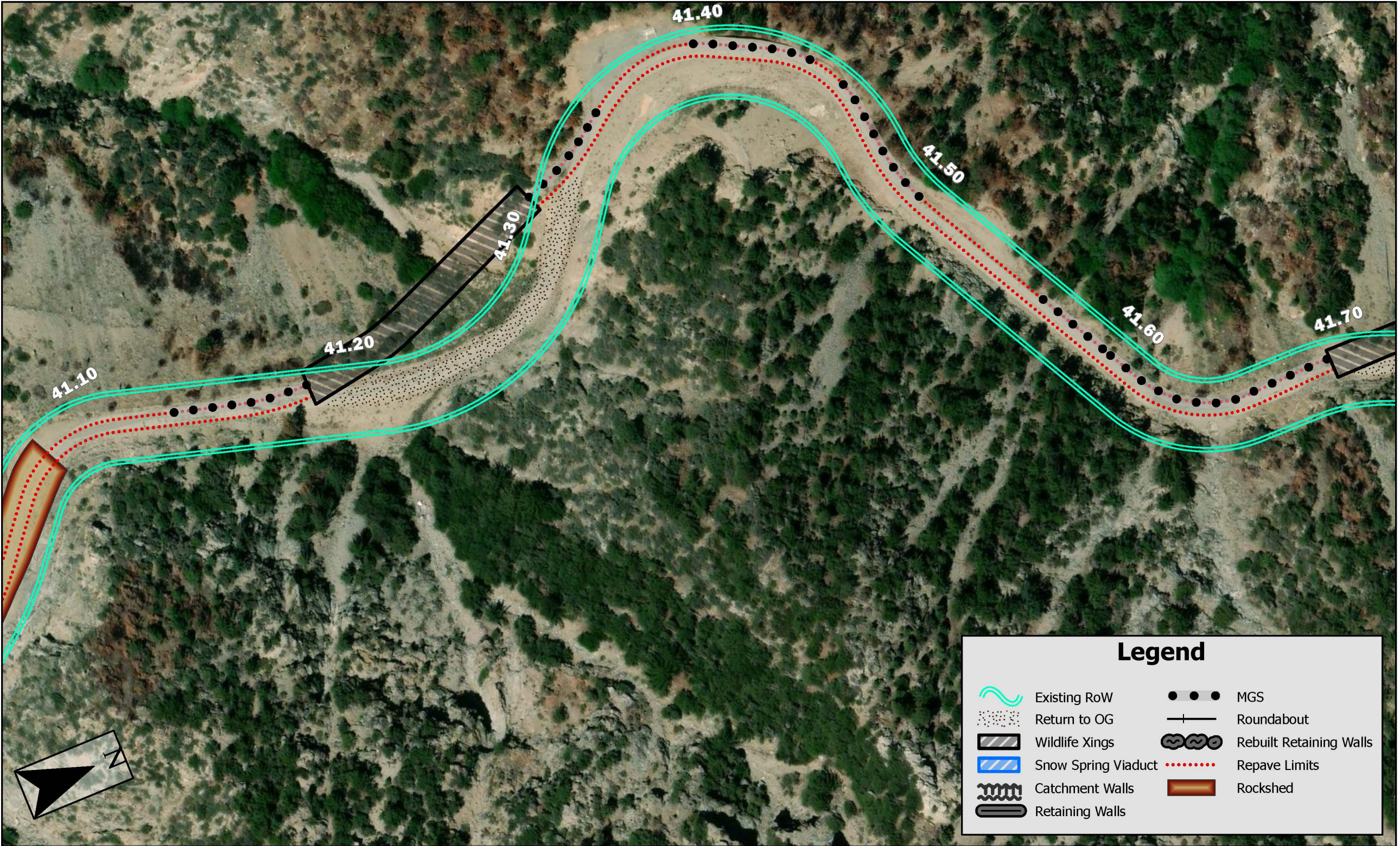













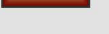

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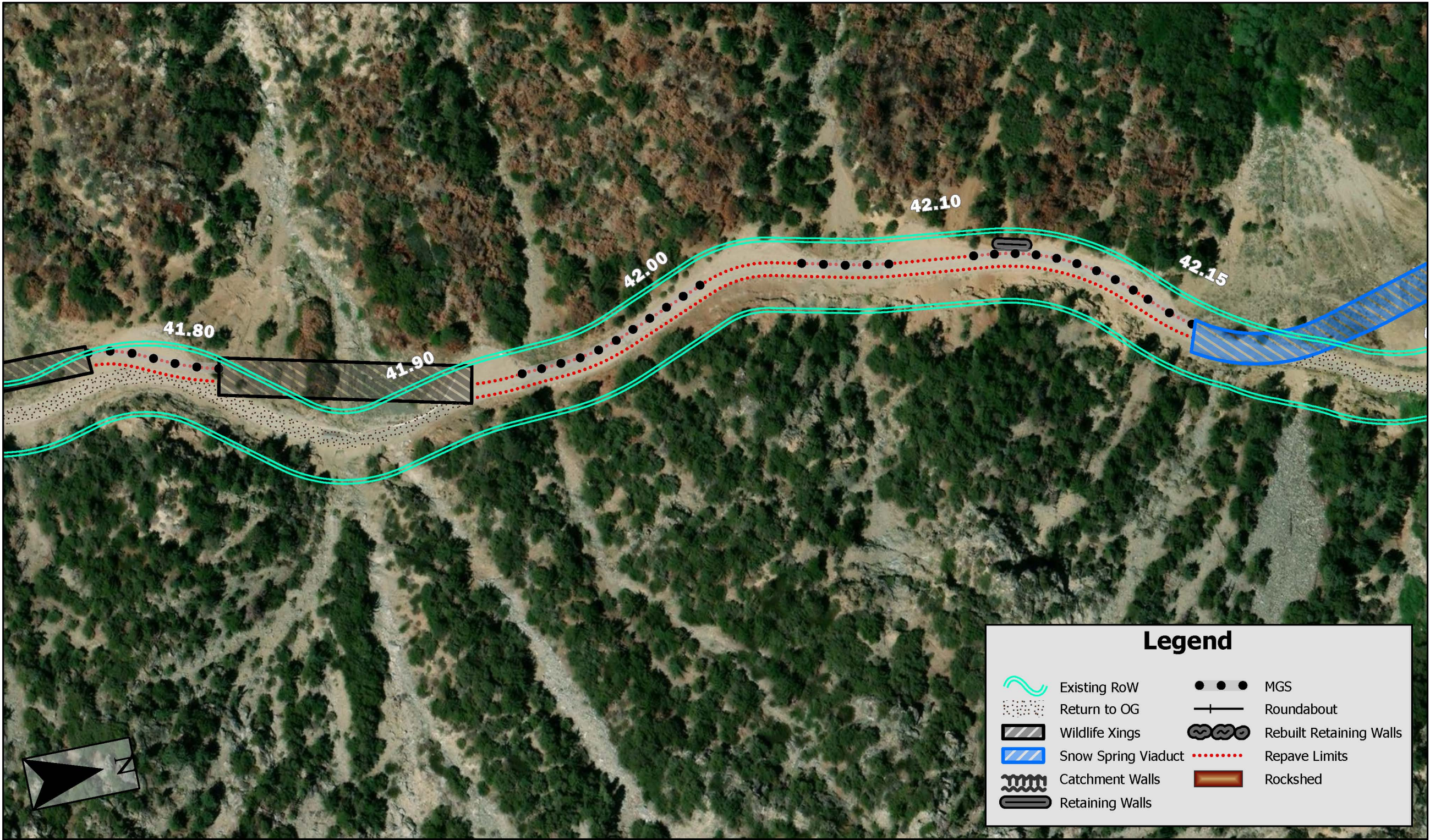
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|  | Wildlife Xings |  | Rebuilt Retaining Walls |
|  | Snow Spring Viaduct |  | Repave Limits |
|  | Catchment Walls |  | Rockshed |
|  | Retaining Walls | | |
















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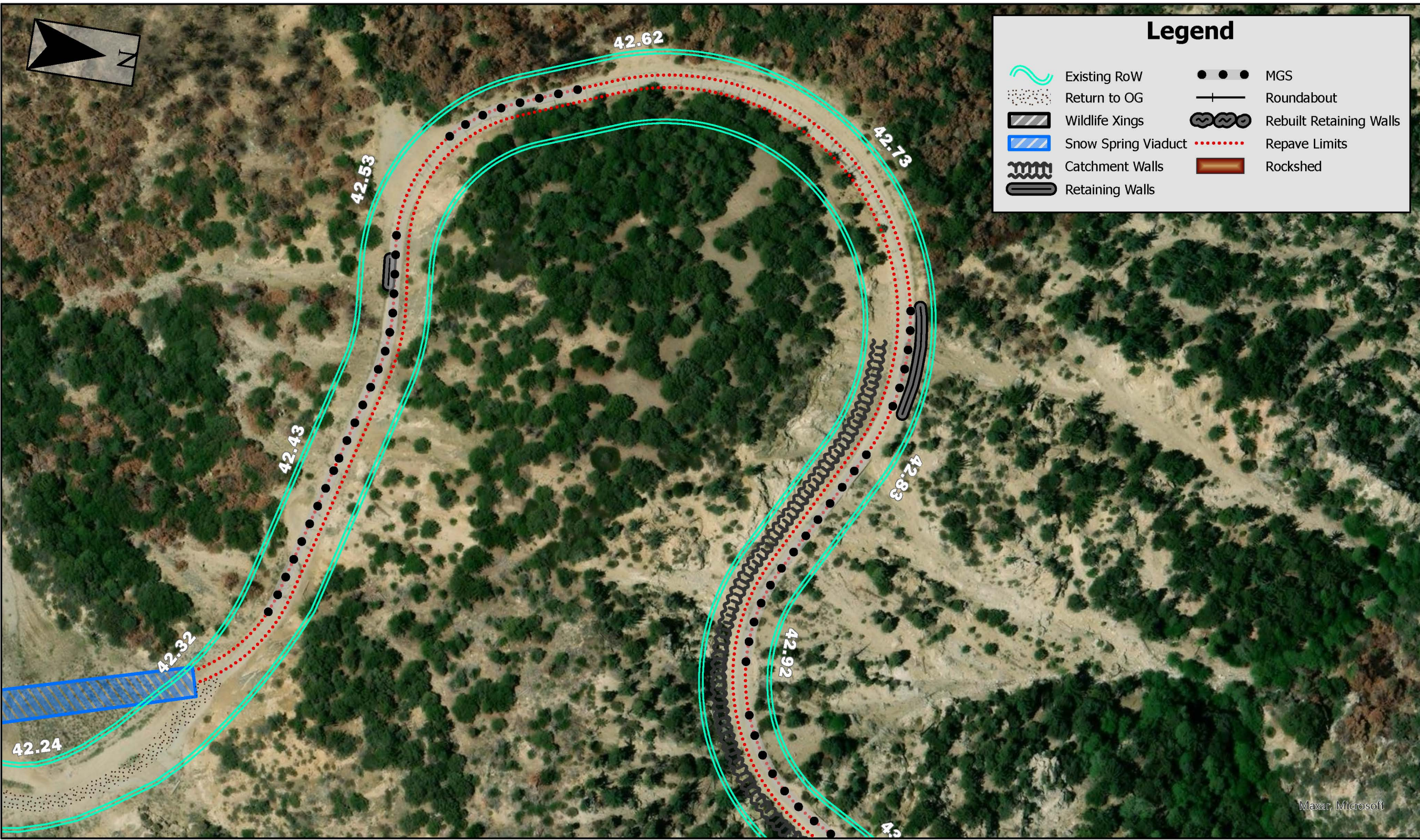
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	Retaining Walls		



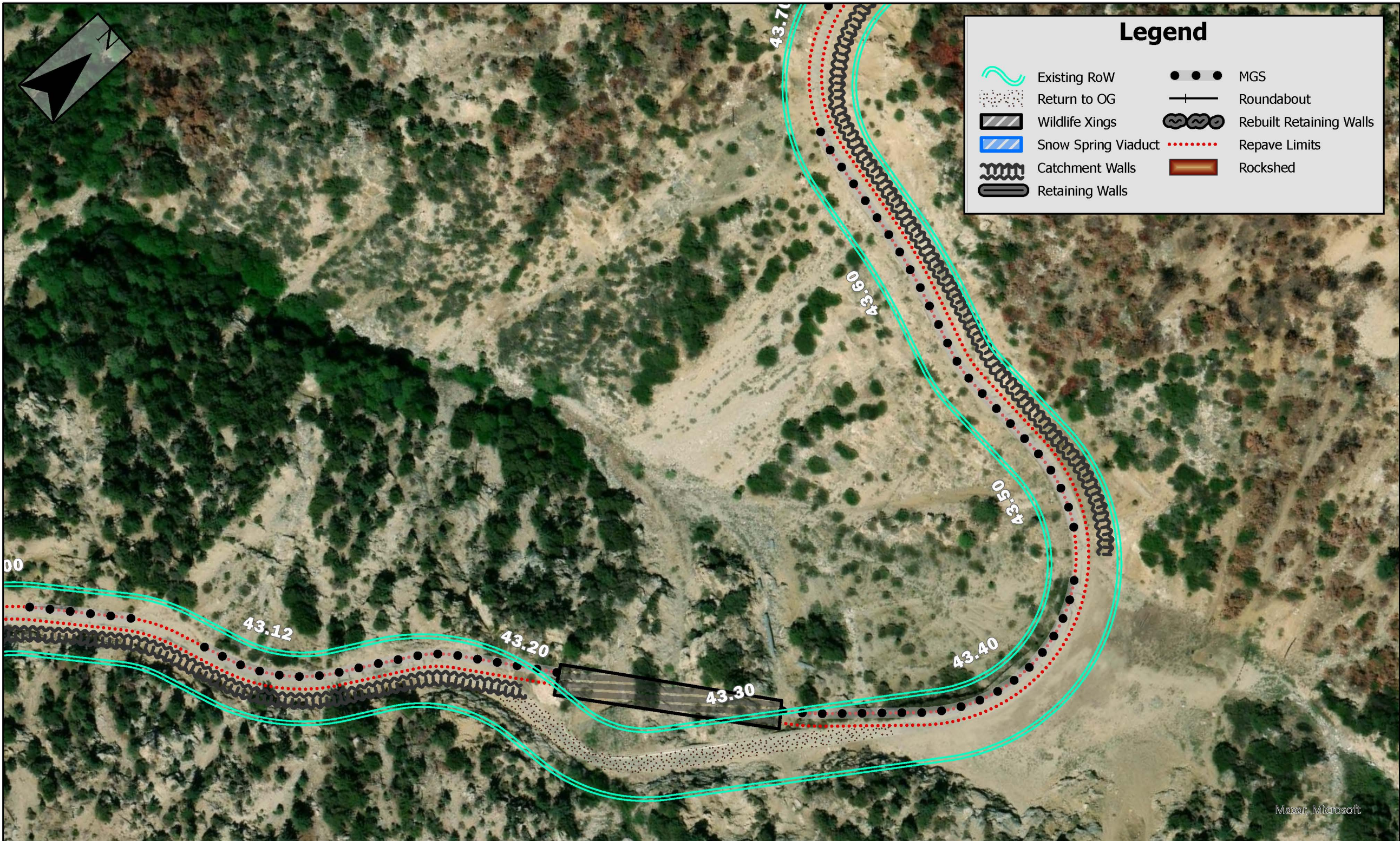


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











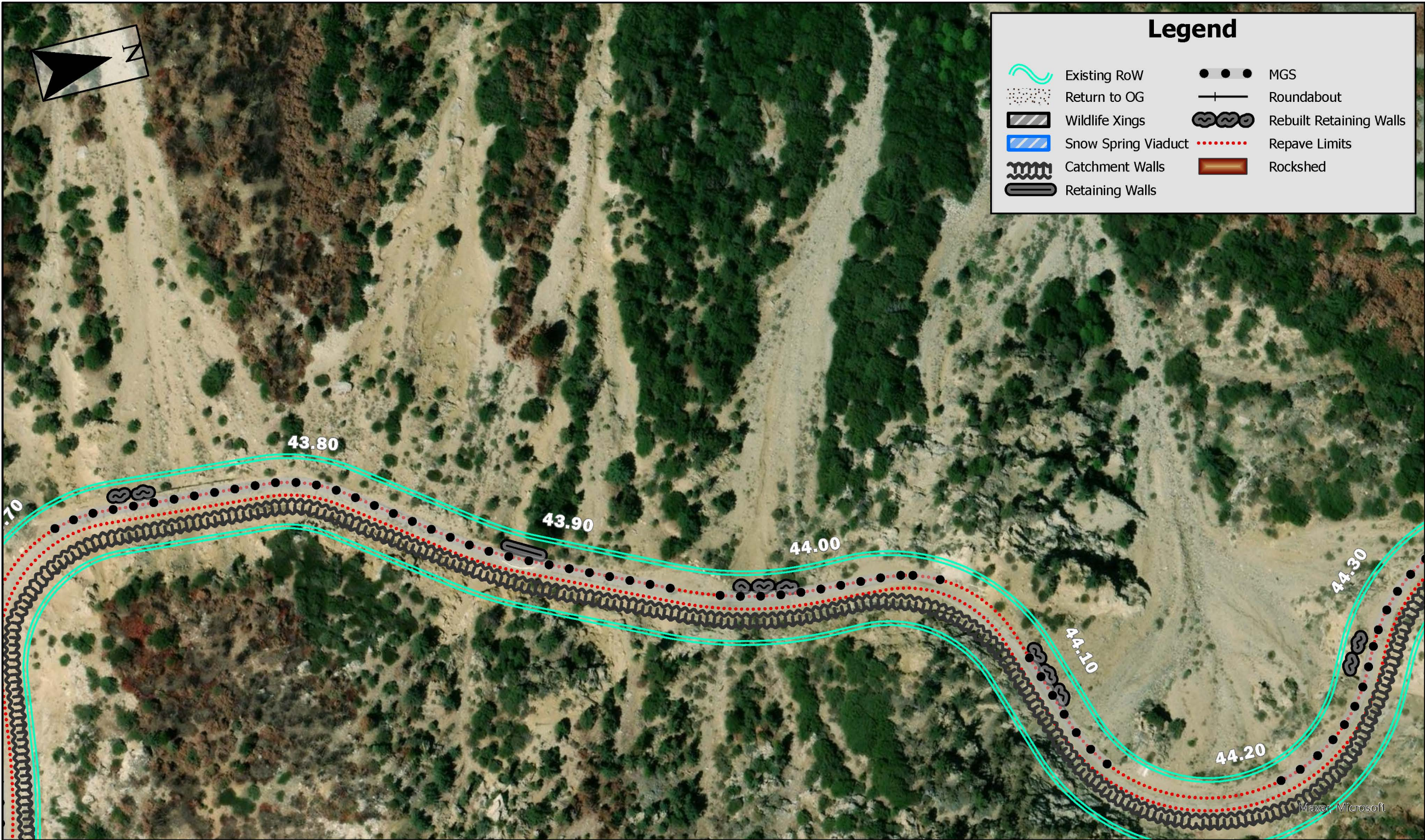
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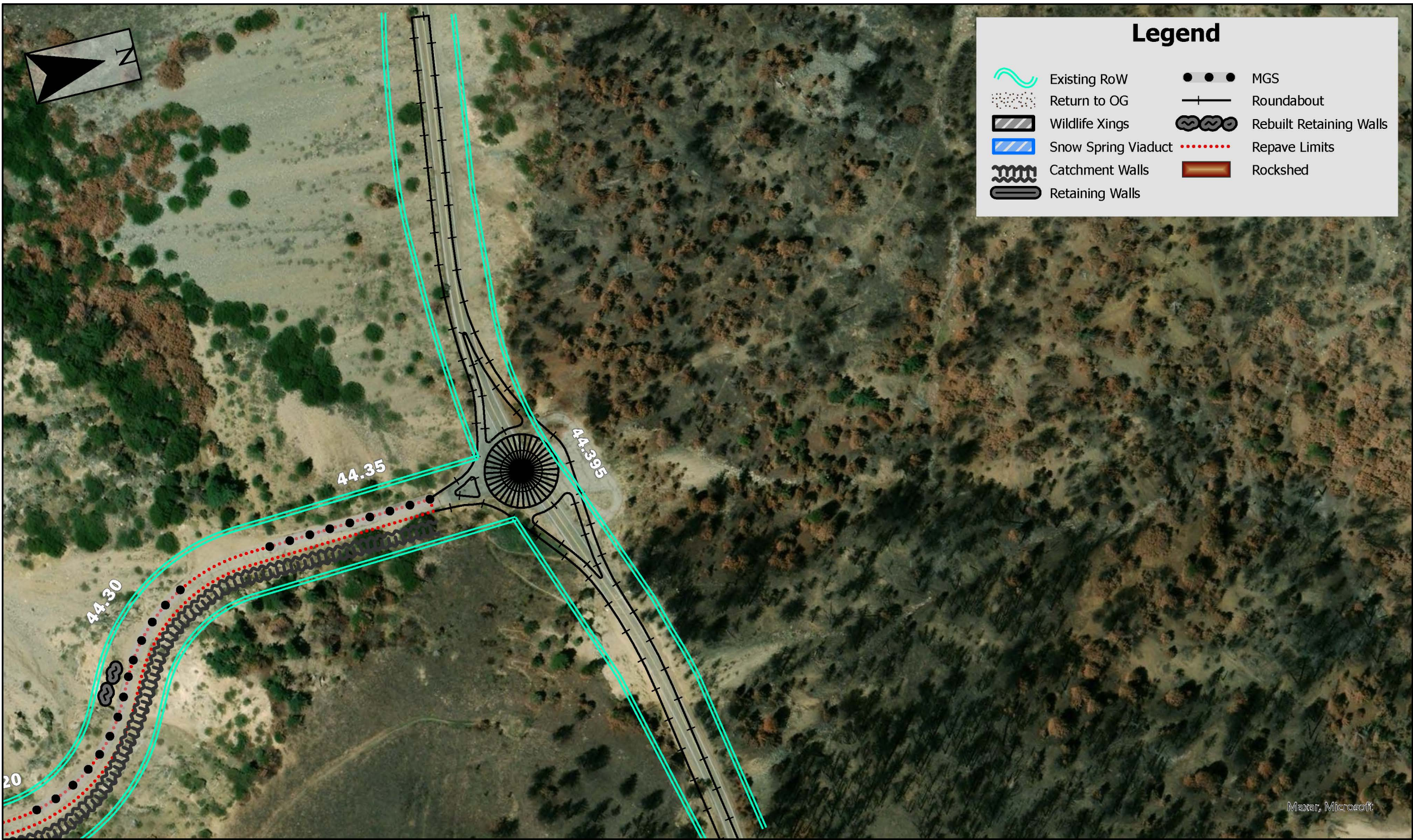


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	Existing RoW		MGs
	Return to OG		Roundabout
	Wildlife Xings		Rebuilt Retaining Walls
	Snow Spring Viaduct		Repave Limits
	Catchment Walls		Rockshed
	Retaining Walls		

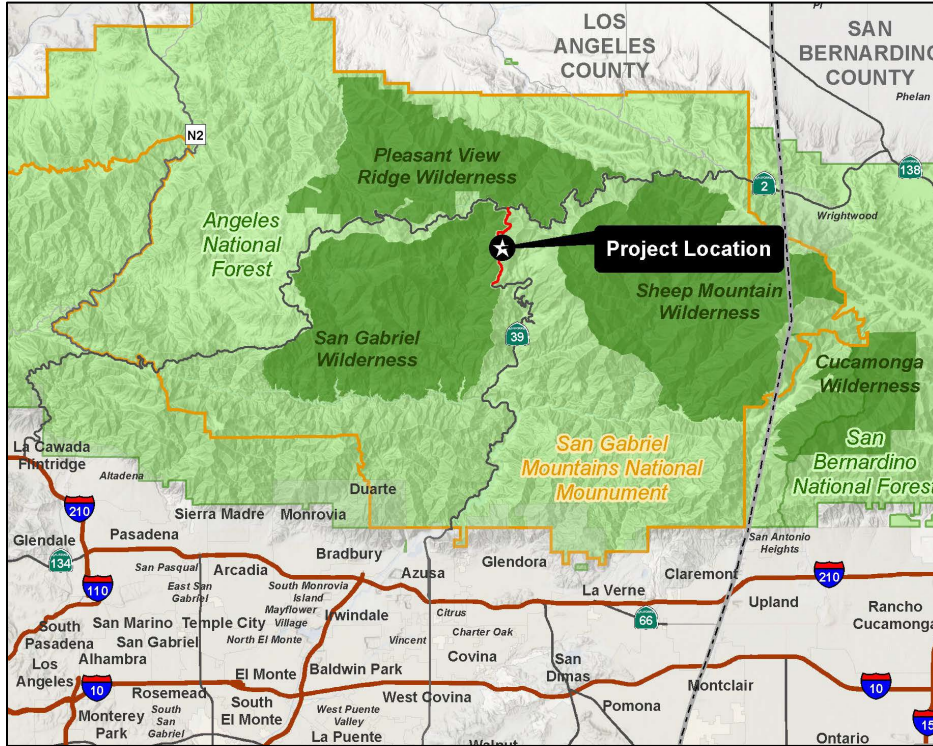


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**Appendix G Section 4(f) De Minimus
Determination**

California State Route 39 (San Gabriel Canyon Road) Reopening Project Los Angeles County, California



Draft *De Minimis* Section 4(f) Evaluation

07-LA-39-PM 40.0-44.4
EA: 07-34770-0

January 2024



The environmental review, consultation, and any other actions required by applicable Federal laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.



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1.0 Introduction

Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, codified in federal law at 49 United States Code (U.S.C.) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) also requires consultation with the Department of the Interior (DOI) and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in planning and developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

The proposed project is a transportation project that may receive federal funding and/or discretionary approvals through USDOT; therefore, documentation of compliance with Section 4(f) is required. This Section 4(f) analysis provides an overview of parks, recreational facilities, wildlife refuges, and historic properties found within 0.5 mile of the proposed project, in accordance with the requirements of Section 4(f).

2.0 Description of Proposed Project and Alternatives

2.1 Project Background

State Route (SR) 39 is a narrow, winding, two-lane highway through the southern foothills of the San Gabriel Mountains, connecting the San Gabriel Valley to the Angeles Crest Highway (SR-2). Within the Angeles National Forest (ANF), the California Department of Transportation (Caltrans) holds a Special Use Permit (SUP) from the United States Forest Service (USFS) for the area that extends 66 feet both ways from the centerline of the SR-39 roadway and proposes to rehabilitate and reopen a 4.4-mile-long segment of SR-39 from post miles (PM) 40.0 to 44.4. This roadway segment starts approximately 1.8 miles west of Crystal Lake Road and runs northerly to the end of SR-39 at its intersection with SR-2. Under Alternatives 3 and 4, the restored connection



would be made accessible to public highway traffic throughout the year, with seasonal closures during times of inclement weather.

This segment of SR-39 has been closed to the public since 1978 because the roadway was damaged by landslides, flooding, falling rocks, and forest fires. In February 2003, the closed highway was opened to emergency crews after a Caltrans study showed reopening it would not harm wetlands, air and water quality, natural vegetation, or threatened plants and animals. Maintenance activities have included the cleaning of drainage culverts and the erection of a dirt berm. With these past improvements, the roadway is passable, but it is only open to emergency service vehicles, and it is constricted as it approaches its northerly terminus. The proposed project would reconstruct the 4.4-mile-long stretch of roadway by installing roadway features to prevent future landslides from damaging the roadway and promote public safety. See Figure 1 for the regional location map and Figure 2 for the vicinity map.

2.2 Purpose and Need

The purpose of this project is to reopen the closed section of State Route 39, thereby restoring access between Interstate 210 and State Route 2. This 4.4-mile portion of SR-39 has remained closed since 1978, from approximately 0.3 mile west of Crystal Lake Road to the junction where SR-39 meets SR-2. The project would preserve the integrity of the existing facility and provide improved access for fire suppression, search and rescue, and emergency response personnel, including the USFS and the Los Angeles County Sheriff's Department. It would also provide safe access for Caltrans maintenance crews, Los Angeles County Public Works, and local city personnel.

Consistent with Caltrans Complete Streets policy (DD 64-R2), this project would improve access for pedestrians, bicyclists, and public transportation along the 4.4-mile project limits by providing greater access to a variety of sustainable recreational, educational, and conservation activities for those in the community who do not have personal vehicles. Restoring and reopening the closed segment of SR-39 would bring this roadway into compliance with the California Streets and Highway Code, Sections 91 and 100 which mandates that Caltrans shall improve and maintain state highways as provided in the code. They also require Caltrans to monitor the cumulative impacts of fragmented gaps in the State Highway System (SHS) to identify safety and long-term maintenance issues. Caltrans maintenance crews currently work in perilous conditions with the constant threat of rocks and boulders falling onto vehicles or persons. With implementation of the proposed project, these safety concerns would be resolved via rehabilitation/reconstruction of the roadway and its appurtenant facilities, and a regional traffic circulation connection would be restored with the reopening of this segment of SR-39. The project would also provide enhanced access for the Los Angeles County Sheriff's Department and other emergency personnel during search and rescue activities by reducing response times.

Figure 1. Regional Location Map

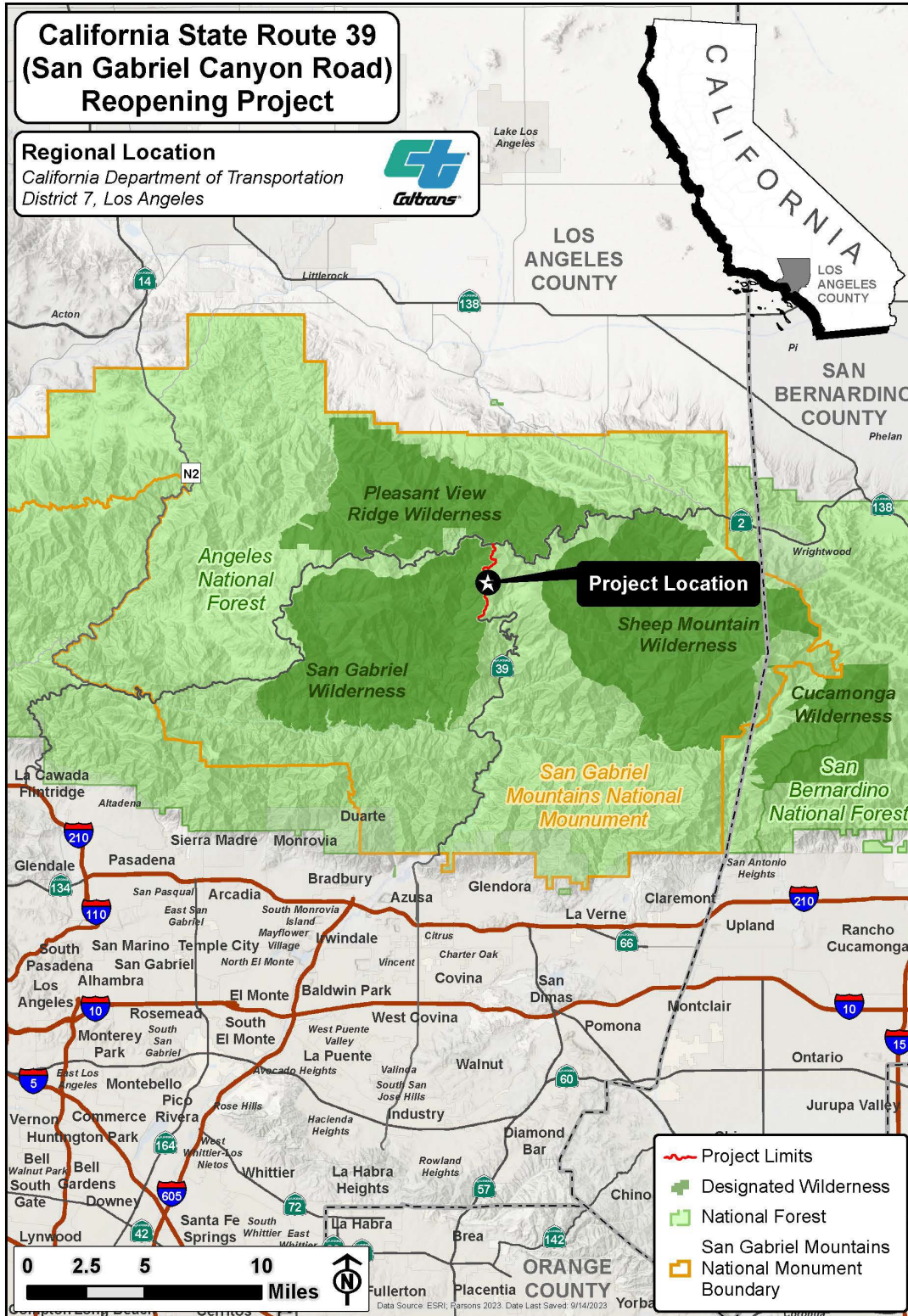
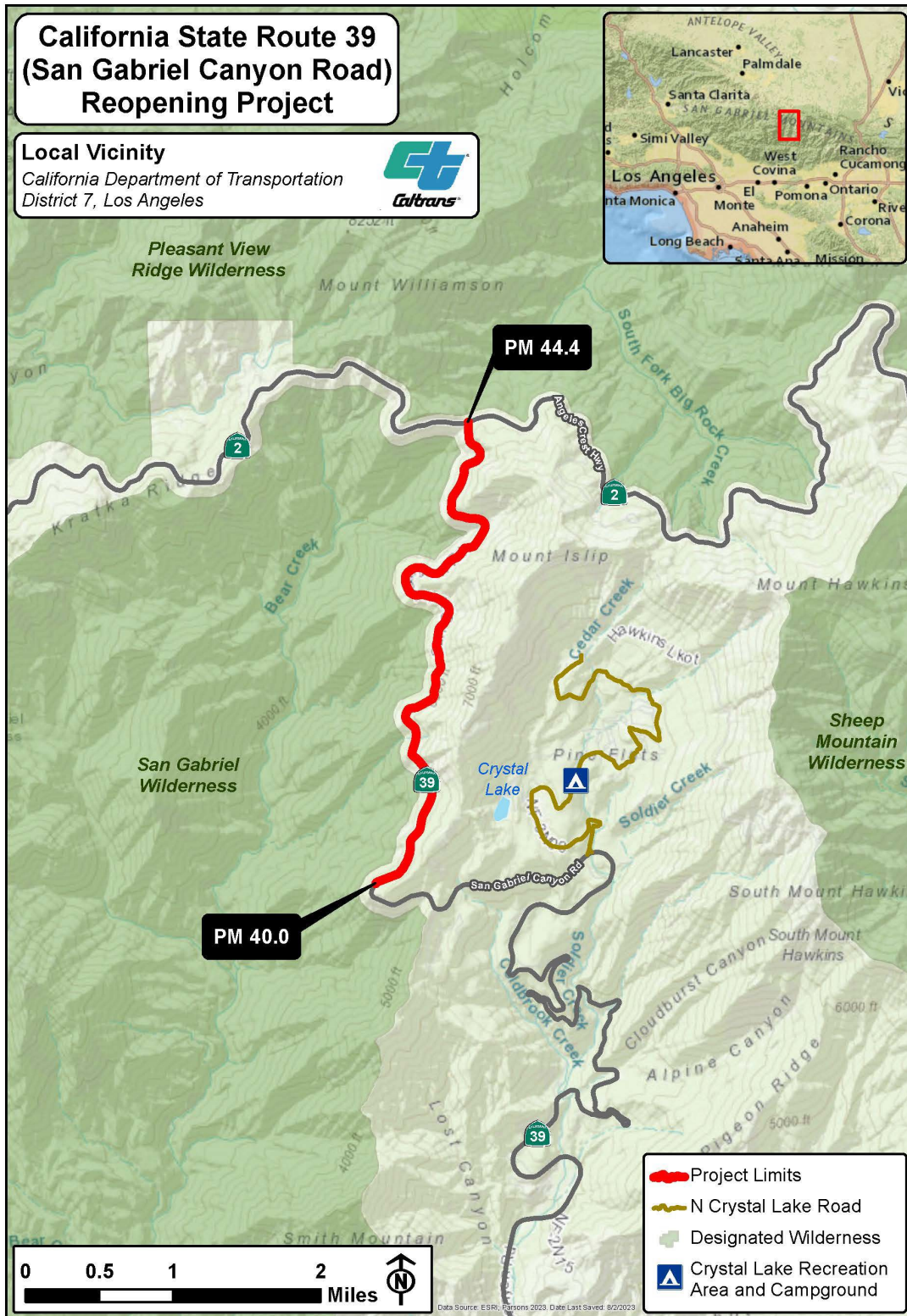


Figure 2. Vicinity Map





2.3 Alternatives under Consideration

One No Build Alternative and five build alternatives are currently being considered:

2.3.1 Alternative 1 – No-Build

The No-Build Alternative proposes to maintain the existing condition of the roadway without any improvements. SR-39, from PM 40.0 to PM 44.4, would remain closed to the public with no vehicle traffic, pedestrians or bicyclists allowed. However, Caltrans maintenance crews would continue to clear rockslides and debris from the roadway on a regular basis. Only USFS personnel, emergency/rescue workers, and Caltrans maintenance staff would have access to the closed section of SR-39. No change in the extent of the area under Caltrans' SUP through the ANF is needed under this alternative.

2.3.2 Alternative 2 – Evacuation Route (Minimum Build)

This alternative proposes limited roadway pavement restoration, along with drainage restoration, minor rock cut/resloping, soldier pile wall and retaining wall repairs, guardrail upgrades, and six new earth retaining systems (soldier pile walls (SPW) or mechanically stabilized embankment (MSE) walls) to be constructed at scattered locations along SR-39. Access to the roadway would remain strictly for USFS personnel, emergency service responders, and maintenance crews. Regular maintenance of the roadway would be required to remove boulders, fractured rock, vegetation, trees, and debris that slides down from the adjacent mountain slopes. Maintenance crews would typically work on the roadway once a month to clear roadside obstructions. The roadway would continue to be closed to public highway traffic. See Figure 3 for the proposed Alternative 2 layout. No change in the extent of the area under Caltrans' SUP is needed under this alternative.

2.3.3 Alternative 3 –Active Transportation Access (Shuttle and Bicycle Path Facilities)

This alternative proposes to rebuild the closed section of SR-39 to current standards. However, it would restrict access to the roadway to recreational-related activities and allow public access only via shuttle buses/vans. SR-39, from PM 40.0 to 44.4, would still be closed to private vehicles and only shuttle buses/vans, and the vehicles of USFS personnel, emergency service responders, and maintenance crews with Caltrans and LA County would have access to the road. Shuttle buses/vans would adhere to a maximum speed of 15 miles per hour (mph) within the currently closed project segment beginning at PM 40.0 once it is rehabilitated and opened, and shuttles would be required to exercise extreme caution at well-marked wildlife crossings. This alternative also proposes two public parking areas at the ends of the project segment (at PM 40.0 and PM 44.4) for visitors to park their vehicles and bikes. The Islip Saddle Day Use Area will be used as the northern parking lot (i.e., repaved and restriped) under



Alternative 3. A pullout at the southern end of the project segment would be paved for use as the southern parking lot.

This alternative would include roadway pavement reconstruction and roadway centerline realignment. The main structural features under this alternative include one major viaduct structure at Snow Springs (PM 42.20 to 42.37), two other viaduct structures (PM 41.8 and 43.3), one rockshed, five new earth retaining systems (SPW or MSE walls), and four catchment walls with rock-scaling sections. In addition, drainage restoration, soldier pile wall and retaining wall repairs, new or upgraded guardrail systems, and wildlife crossing signs are proposed along the project segment. See Figure 3 for the main project features proposed under Alternative 3.

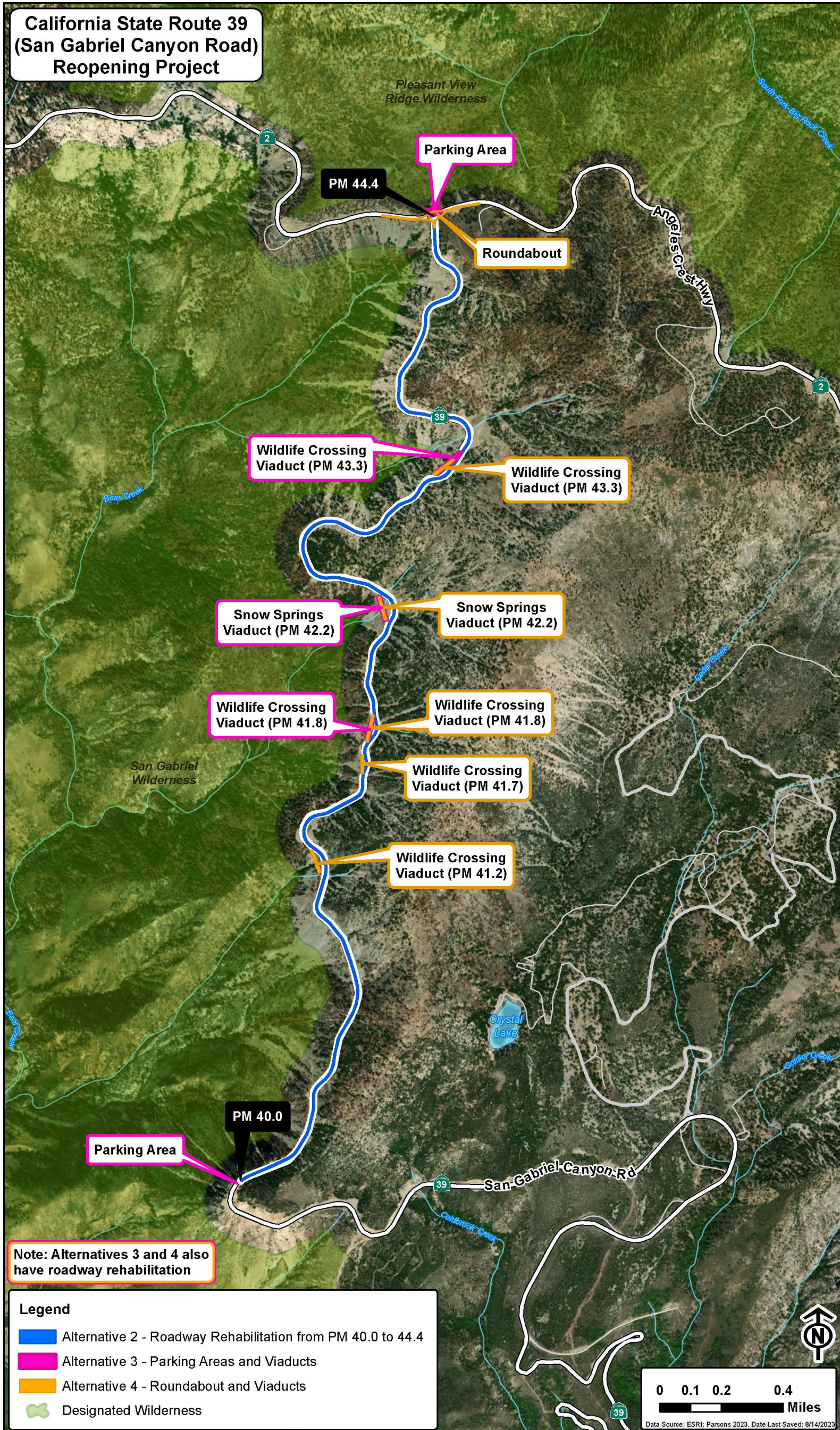
Under Alternative 3, an approximately 0.6-acre area would need to be added into the SUP from USFS at the north end of the SR-39/SR-2 intersection for use as the northern parking area (with an existing pullout at PM 40.0 to be used as the southern parking area), a 0.25-acre area at the southwest corner of the SR-39/SR-2 intersection for shuttle bus parking, a 1.4-acre aerial area for the proposed viaduct structure at Snow Springs, and a 1.0-acre area for two other viaducts would need to be added into the SUP from USFS. An amendment to the USFS SUP would be needed under this alternative.

2.3.4 Alternative 4 – Full Opening

This alternative proposes to rebuild and reopen the closed segment of SR-39 to public traffic and provide unrestricted access and a through-traffic connection between I-210 (Foothill Freeway) and SR-2 (Angeles Crest Highway). The road would be open to the public throughout the year, with seasonal closures during times of inclement weather. Two 12-foot-wide lanes and 4-foot-wide shoulders on each side of the roadway would be provided under this alternative. A single-lane roundabout (with a 90-foot radius and a raised center island) and 50- to 80-foot splitter islands at the three legs would be constructed at the SR-2/SR-39 intersection. The main structural features include one major viaduct structure at Snow Springs, four other viaduct/wildlife crossing structures (at PMs 41.2, 41.7, 41.8, and 43.3), one rockshed, five earth retaining systems (SPW or MSE walls), four catchment walls with rock-scaling sections, and wildlife fencing along the entire 4.4-mile segment. In addition, drainage restoration, soldier pile wall and retaining wall repairs, and new/upgraded guardrail systems are also proposed along the project segment. No parking lots are proposed under this alternative. See Figure 3 for the main project features proposed under Alternative 4.

Under Alternative 4, an approximately 0.305 area would have to be added into the SUP from USFS is needed for the proposed roundabout at the SR-39/SR-2 intersection. In addition, a 1.4-acre area for the proposed viaduct structure at Snow Springs (PM 42.18 to 42.32), and a 1.75-acre area for four other viaduct/wildlife crossing structures would need to be added into the SUP from USFS. An amendment to the USFS SUP would be needed under this alternative.

Figure 3. Alternatives Layout





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The Build alternatives (Alternatives 2 through 4) would meet some or all of the project purposes for restored access between I-210 and SR-2; enhanced access for emergency responders; improved access for pedestrians, bicyclists, and public transportation; improved roadway safety and operation; reduced vehicle congestion in the ANF; and increased parking capacity. The project is also intended to assist in meeting the goals and policies in the ANF Land Management Plan. More details about each alternative is provided in Chapter 1 of the Environmental Document (ED).

3.0 Regulatory Setting

Section 4(f) of the Department of Transportation Act

A brief summary of Section 4(f) of the USDOT Act is provided in Section 1 above. This evaluation identifies the Section 4(f) resources in the study area, describes the nature and extent of the project's potential effects on these properties, evaluates each of the build alternatives with respect to the use of Section 4(f) resources, and describes measures to minimize harm to the affected resources.

3.1 Identification of Section 4(f) Resources

Properties that are to be preserved and protected under Section 4(f) of the USDOT Act include:

- Public parks, schools with publicly accessible recreational areas, and publicly owned fairgrounds
- Recreational areas of national, state, or local significance
- Portions of federally designated wildlife or waterfowl refuges
- Historic sites of national, state, or local significance (i.e., sites listed or eligible for listing in the *National Register of Historic Places* (NRHP) and/or archaeological sites that warrant preservation in place as determined by the officials with jurisdiction)

Identifying Section 4(f) properties involves first determining if Section 4(f) applies to the project. Because the proposed project will be federally funded, Section 4(f) applies to the project. Next, determining and identifying the Section 4(f) properties within the project vicinity is discussed in Section 4. The analysis if there is a “use” of the Section 4(f) property is provided in Section 5. This includes determining if there is an exception to the “use” of the Section 4(f) property and the level of approval required for the “use.”

3.2 Section 4(f) Use

As defined in 23 *Code of Federal Regulations* (CFR) 774.17, a “use” of a protected Section 4(f) resource occurs when:

- Direct Use – Land is permanently incorporated into a transportation facility.



- Temporary Use – When there is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose, as determined by the criteria in 23 CFR 774.13(d).
- Constructive Use – When there is a constructive use of a Section 4(f) property, as determined by the criteria in 23 CFR 774.15.

3.2.1 Direct Use

A direct use of a Section 4(f) property occurs when a property that has been designated for protection under Section 4(f) is permanently incorporated into a transportation facility. This may occur as a result of partial or full acquisition (fee simple acquisition), a permanent easement (for the use or maintenance of some portion of the property that disrupts its Section 4(f) function), or a temporary easement that exceeds the regulatory limits for temporary use, as noted below.

Where multiple use lands (e.g., national forests, state forests, Bureau of Land Management lands) are involved, Section 4(f) will apply only to those portions of such lands that now function as, or are designated in, an official management plan as being for significant Section 4(f) purposes. Section 4(f) applies to the federal Wild and Scenic River System, but only to the portions of the wild and scenic areas that are in fact being used or designated in an approved land management plan for use, as a park; recreational area; wildlife or waterfowl refuge; or is a historic site. These specific land uses must apply on the land needed for highway purposes.

3.2.2 Temporary Use

A temporary use of a Section 4(f) property occurs when there is temporary occupancy of a Section 4(f) property for construction-related activities and when that temporary occupancy is considered adverse. A temporary use of a Section 4(f) property may be necessary for activities such as the regrading of adjacent slopes or to provide staging or access areas. Once the temporary use of the disturbed area is no longer needed, the Section 4(f) property must be restored to the condition in which it was originally found (e.g., through regrading or revegetating the affected area).

In some instances, the temporary use may be so minimal as to not constitute a use if the conditions set forth in 23 CFR Section 774.13(d) can be satisfied:

- The duration of the use must be temporary (i.e., less than the time needed for construction of the project), and there should be no change in ownership of the land;
- The scope of the work must be minor (i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal);
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;



- The land being used must be fully restored (i.e., the property must be returned to a condition that is at least as good as that which existed prior to the project); and
- There must be a documented agreement of the officials with jurisdiction over the Section 4(f) resource regarding the above conditions.

3.2.3 Constructive Use

A constructive use of a Section 4(f) property occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

Substantial impairment occurs only if the protected activities, features, or attributes of the Section 4(f) property are substantially diminished by the indirect adverse impacts of the project (23 CFR Section 774.15[a]). Generally, a constructive use occurs under the following circumstances:

- The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a property protected by Section 4(f);
- The proximity of the proposed project substantially impairs aesthetic features or attributes of a property protected by Section 4(f);
- The project results in a restriction of access that substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site;
- The vibration impact from construction or operation of the project substantially impairs the use of a Section 4(f) property; or
- The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes with the access to a wildlife and waterfowl refuge when such access is necessary for established wildlife migration or critical life cycle processes, or substantially reduces the wildlife use of a wildlife and waterfowl refuge.

A constructive use does not occur under the following conditions:

- Section 106 compliance for proximity impacts (36 CFR 800.5) resulted in an agreement of "no historic properties affected" or "no adverse effect;"
- The projected traffic noise levels of the proposed highway project on noise-sensitive Section 4(f) activities do not exceed the Federal Highway Administration (FHWA) noise abatement criteria (NAC) described in 23 CFR 772, or if the projected noise levels exceed the NAC but the increase is barely perceptible (3 A-weighted decibels [dBA] or less);



- There are proximity impacts, but the location of the transportation project was officially approved before the designation of the Section 4(f) property, except that "potential" historic sites should be treated as historic sites for Section 4(f) purposes. [23 CFR 774.15(f)(4)];
- The combined proximity impacts do not substantially impair the characteristics that qualify the property for protection under Section 4(f);
- The proximity impacts will be mitigated to a condition equivalent or better than prior to the project, as determined by the official with jurisdiction;
- A change to access will not substantially diminish the use of the property; or
- The vibration impacts are mitigated to avoid substantial impairment of protected characteristics of the property.

3.3 *De Minimis* Impacts

A *de minimis* impact on a Section 4(f) property is a minimal impact that would not be considered adverse on the activities, features, or attributes of the resource. The *de minimis* impact finding is based on the level of impact, including any avoidance, minimization, and mitigation or enhancement measures that are incorporated into the project to avoid or reduce impacts to the use of the Section 4(f) property. *De minimis* impact findings are expressly conditioned upon the implementation of measures that would reduce a project impact to a *de minimis* level.

For historic sites, a *de minimis* impact means that Caltrans, with SHPO concurrence, has made a finding of “no adverse effect,” in accordance with 36 CFR Part 800 (i.e., that no historic property is affected by the project or that the project will have “no adverse effect” on the historic property). For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

A temporary use or occupancy, including temporary construction easements, and other temporary project activities are typically considered *de minimis* impacts if they do not exceed the conditions set forth in 23 CFR Section 774.13(d), as discussed above. A *de minimis* finding cannot be made for a constructive use of a Section 4(f) property.

For a *de minimis* impact finding for properties where a use would occur, the officials with jurisdiction over the Section 4(f) property must provide written concurrence to Caltrans that the project would not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f). In addition, the public must be afforded the opportunity to review and comment on the effects of the project on the identified Section 4(f) resources.

3.4 Programmatic Evaluations

When a *de minimis* impact finding cannot be made, a Programmatic Section 4(f) Evaluation may be necessary. FHWA has developed five nationwide programmatic



evaluations for Section 4(f) properties that may be used only for projects designed to improve operational characteristics, safety, and/or the physical condition of an existing highway on essentially the same alignment (i.e., the Section 4(f) lands must be located adjacent to the existing highway). The five types of programmatic evaluations are:

- Minor Involvements with Parklands, Recreation Lands, and Wildlife and Waterfowl Refuges
- Minor Involvements with Historic Sites
- Historic Bridges
- Bikeways and Walkways
- Net Benefit

With the use of a programmatic evaluation, there is no requirement to circulate the evaluation to the DOI, Department of Agriculture, or Department of Housing and Urban Development. There is also no need for a legal sufficiency review. However, coordination with the official with jurisdiction over the Section 4(f) property is required.

4.0 Section 4(f) Properties within the Project Area

Section 4(f) properties include publicly owned land of a public park or recreation area, such as trails (e.g., bicycle, pedestrian, and equestrian trails) and schools with publicly accessible recreational areas. Some parks and recreational areas may require a user fee to enter or use the facility, such as public golf courses, and may also be considered as Section 4(f) properties. Public wildlife and waterfowl refuges of national, state, or local significance are also considered Section 4(f) properties. Section 4(f) also applies to all historic sites that are publicly or privately owned historic properties of national, state, or local significance that are listed in or determined eligible for listing in the NRHP. Section 4(f) regulations exempt archaeological sites, except when the sites warrant preservation in place.

Public multiple use land holdings, by definition, are comprised of multiple areas that serve different purposes. Generally, these properties are large in size and are usually established by legislation to serve a variety of functions, some of which are protected by Section 4(f) and some of which are not. For these kinds of properties (frequently these are State or National Forests, large tracts of conservation lands, or Water Management District properties), Section 4(f) does not apply to those areas within a multiple-use public property that function primarily for any purpose other than significant park, recreation, or refuge purposes or which are significant historic sites. For example, within a National Forest, there can be areas that qualify as Section 4(f) resources (e.g., campgrounds, trails, picnic areas) while other areas of the property function primarily for purposes other than park, recreation, or a refuge, such as timber sales or mineral extraction.

Section 4(f) properties that are located in or near the project segment and that may be subject to direct use, temporary use, and/or constructive use are identified below.



4.1 Recreational Areas

The ANF is within the unincorporated area of Los Angeles County and is designated as Open Space – National Forest in the Los Angeles County General Plan 2035 and Antelope Valley Area Plan. The Land Management Plan (Forest Plan) for the ANF, which was last revised in 2006 (with Alternative 4a Selected), sets the program and management strategies that are used by USFS to conserve or restore the health of the national forest and regulates land uses in the ANF.

The Forest Plan shows that most of the development in the ANF has occurred and roadways have been built, with not much expansion expected. Review of the Forest Plan for potential Section 4(f) properties shows that in the Land Use Zones Map of the Forest Plan, the area along the project segment and to the southeast are designated as Developed Area Interface, which are areas adjacent to communities or concentrated use areas and developed sites with more scattered or isolated community infrastructure and developed with recreation facilities, recreation and non-recreation special-uses facilities, and national forest administrative facilities. To the west of the project segment, land is designated Existing Wilderness (San Gabriel Wilderness), which is managed for the use and enjoyment of people while preserving its wilderness character and natural condition. The areas to the east and south of SR-39 are designated as Back Country Non-Motorized, which includes areas that are undeveloped with few, if any, roads. Dispersed recreation activities are minimal and generally limited to trails and signage.

To the north, the area along SR-2 is designated as Developed Area Interface, with the areas farther north as Back Country Non-Motorized. A Critical Biological zone is found to the northeast along the South Fork of Big Rock Creek, which is managed for the protection of sensitive plant and animal species and where facilities are minimal to discourage human use. Figure 4 shows the Land Use Zones for the project area.

The ANF Forest Plan divides the ANF into Places, which refer to geographical units or landscape characters with specified desired conditions and program emphasis for each. The project segment is located at the western edge of the Place called Angeles High Country, with the Angeles Uplands (East) to the west. The Angeles High Country is a year-round forested mountain recreation area and is managed by USFS with an emphasis on protecting forest health, including community protection from fire while maintaining the natural landscape. Additional emphasis is placed on sustainable use, minimal impacts to plant and wildlife species, exotic species eradication, providing scenic routes, maintaining historic character, and managed use of recreation areas and facilities. Figure 4 also shows the designated Places for the project area.

The project corridor is located in a sparsely populated area of the ANF, with no nearby public parks, schools with publicly accessible recreational areas, or publicly owned fairgrounds. Table 1 lists recreational facilities located within 0.5 mile of the proposed project site (Figure 5 shows their locations).



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Table 1. Recreational Resources within the Vicinity of the Proposed Project

Name	Location	Facilities
Pacific Crest Trail	At southeast and north corners of SR-39/SR-2 intersection	Trail
Islip Saddle Day Use Area	North of SR-39/SR-2 intersection	Trailhead, picnic area
San Gabriel Canyon Road Lookout	At PM 38.5 on SR-39	Trailhead, scenic outlook
Crystal Lake Recreation Area	0.4 mile east of SR-39	Campgrounds, trails, trailheads, fishing lake, visitor center, cabins, picnic areas, amphitheater
Jarvi Memorial Vista	0.5 mile west of SR-39/SR-2 intersection	Trailhead, picnic area, trail, scenic overlook
Pine Hollow Picnic Area	0.8 mile east of SR-39	Picnic area
Little Jimmy Trail Camp	1.0 mile east of SR-39	Trail and campground
See Figure 5 for the location of these resources.		

The Pacific Crest Trail is a 2,650-mile-long National Scenic and National Historic Trail (for hikers, skiers, and equestrians) that extends from the border of Mexico to Canada through California, Oregon, and Washington, and it is part of America’s National Trails System. In the ANF, the trail passes on the east side of the SR-2/SR-39 intersection and through the Islip Saddle Day Use Area, which serves as a trailhead for the Pacific Crest Trail. The trail’s south leg is southeast of the SR-2/SR-39 intersection, and its north leg is northwest of the Islip Saddle Day Use Area and SR-2/SR-39 intersection.

As stated in 23 CFR 774.13, exemptions to the requirement for Section 4(f) approval include “(f) Certain trails, paths, bikeways, and sidewalks.... (2) National Historic Trails and the Continental Divide National Scenic Trail, designated under the National Trails System Act...”. Because the Pacific Crest Trail is part of the National Trails System, the trail is exempt from Section 4(f) approval.

The Islip Saddle Day Use Area is a trailhead and day use area located just north of the SR-2/SR-39 intersection. It has picnic tables, vault toilets, trash bins, and a parking area. This area is operated by USFS, and it is considered a Section 4(f) resource.

The San Gabriel Canyon Road Lookout at PM 38.0 of SR-39 is a scenic lookout offering views of the San Gabriel Canyon and surrounding mountains. It includes a paved parking area and is used as a trailhead/starting point for hikers and bicyclists. Various other pullouts along SR-39 also serve as informal trailheads/starting points for hikers and bicyclists. However, lookouts and pullouts are secondary to the primary transportation function of SR-39 and are not specifically managed for recreational use. Only properties where the primary purpose of the land is for a park, recreation area, or refuge; or historic sites that are listed, or eligible for inclusion, in the NRHP at the local, state, or national level of significance require a Section 4(f) evaluation. As such, the



lookouts and pullouts on SR-39 do not meet the qualifying criteria for protection under Section 4(f) of the USDOT Act.

The Crystal Lake Recreation Area is developed with campgrounds, trails, trailheads, fishing lake, visitor center, cabins, picnic areas, store/cafe, amphitheater, restrooms, and parking areas. The trails go through the western ridge of Mount Islip and offer scenic views of the surrounding forest. Crystal Lake and portions of several trails (e.g., Mount Islip Trail and Big Cienega Trail) in this area are within 0.5 mile of SR-39, although the main recreational facilities are located more than 0.5 mile from SR-39. This area is operated by USFS and it is considered a Section 4(f) resource.

The Jarvi Memorial Vista, located west of the SR-39/SR-2 intersection, provides a paved parking area, picnic tables, vault toilets, trash bins, and an adjacent trail. The picnic areas and trail offer views of the San Gabriel Wilderness and surrounding mountains to the south. This memorial vista and picnic area is operated by USFS and it is considered a Section 4(f) resource.

The Pine Hollow Picnic Area is a sparsely vegetated area off SR-2 that is for day use only. This picnic area is operated by USFS and it is considered a Section 4(f) resource. However, at its distance of approximately 0.8 mile from SR-39, it is unlikely to be impacted by the project. Thus, it is not subject to further analysis.

The Little Jimmy Trail Camp, located east of SR-39, includes a road with a roughly parallel trail from SR-2 that leads to a campground with picnic tables, fire rings, vault/composting toilets, and vintage backcountry ovens. This camp is operated by USFS and it is considered a Section 4(f) resource. However, at its distance of 1.0 mile from SR-39, it is unlikely to be impacted by the project. Thus, it is not subject to further analysis.

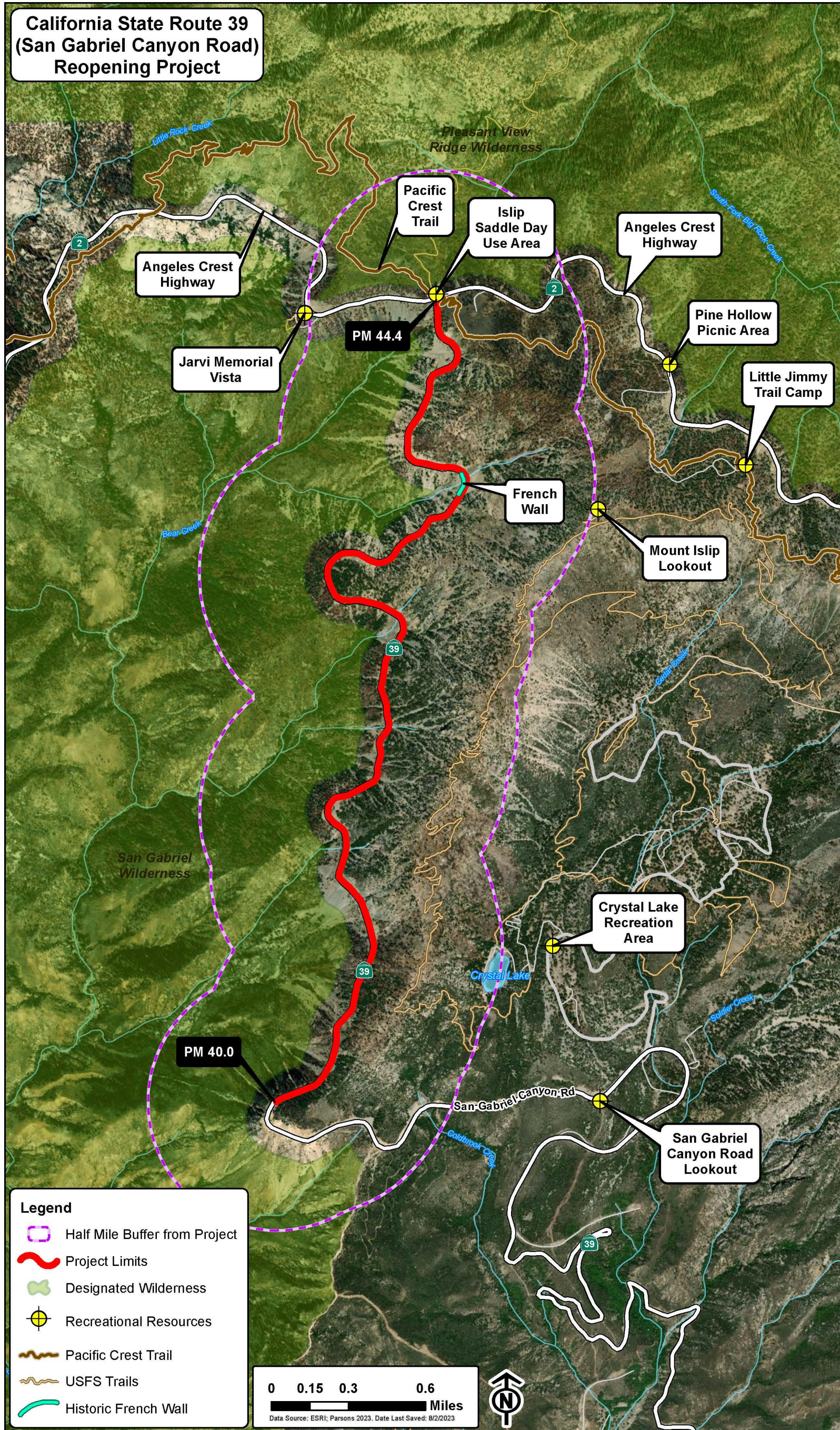
While there are numerous other recreational areas and facilities throughout the ANF and several private recreational facilities in the area (e.g., ski lifts and campgrounds), there are no other nearby public parks, publicly owned school playgrounds, publicly owned fairgrounds, wildlife or waterfowl refuges, Wild and Scenic Rivers¹, or historic bridges² that would be considered Section 4(f) properties.

The Islip Saddle Day Use Area, Crystal Lake Recreation Area (Crystal Lake and portions of Mount Islip Trail and Big Cienega Trail), and Jarvi Memorial Vista are considered recreational resources under Section 4(f) of the USDOT and impacts to these resources are analyzed below.

¹ The ANF Forest Plan identifies eligible Wild and Scenic Rivers (including Little Rock Creek and the North and East Forks of the San Gabriel River) in the ANF, but none are located near the project segment.

² There are no bridges along the SR-39 project segment, and adjacent bridges on SR-39 are not listed as historic bridges in the 2015 Caltrans Statewide Historic Bridge Inventory Update.

Figure 5. Recreational and Historic Resources within the Vicinity of the Proposed Project





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4.2 Historic and Archaeological Sites

The entire Angeles National Forest (Resource P-19-186535) is designated as California Historical Landmark (CHL) No. 717. In addition, there are five historic sites within the ANF and near the Cultural Resources Study's Area of Potential Effects (APE) for the proposed project (see Table 2 and Figure 5).

Table 2. Historical Resources within the Project Area

Name	Location	Facilities
Angeles National Forest	San Gabriel Mountains	National Forest
French Wall	PM 43.35 to 43.46 on SR-39	Wall
Mount Islip Lookout (FS# 05-01-51-88)	Mountain ridge 0.55 mile east of SR-39	Remains of lookout and cabin
Crystal Lake Recreation Area	East of SR-39	Lake, campground, trails
Angeles Crest Highway	Along northern end of SR-39	Highway
Old Short Cut	Chilao Visitor Center, 8.0 miles west of SR-39	Ranger station
See Figure 5 for the location of these resources, except for the Old Short Cut.		

The ANF is a historic period resource as the second national forest in the United States and the first in California, by proclamation on December 20, 1892. There is only one manufactured structure within the forest: a plaque commemorating the forest's creation, located at the Clear Creek Vista Point on SR-2 (PM 32.8, approximately 5 miles west of SR-39). As CHL 717, the ANF has been determined to not meet the criteria for inclusion into the California Register of Historical Resources (CRHR, Status Code 7L). And while the ANF would be considered a Section 4(f) resource, there are no specific features that are located near the project segment that define the historic qualities of the ANF, aside from the commemorative plaque and its administrative boundaries, which are both located 5 miles or more from the project segment.

The French Wall (Resource P-19-188271) is a historical site located at PM 43.35 to 43.46 along SR-39. This mechanically stabilized earth (MSE) wall was the first MSE wall built in the United States in 1972. It was determined to be eligible for listing in the NRHP in 2008. This wall is considered a Section 4(f) resource.

The Mount Islip Lookout is located at the ridge of Mount Islip and was built in 1927 and was in use until 1938. It was a 22-foot high, non-battered, open galvanized steel angle iron X-brace tower that has since been relocated to South Mount Hawkins and a stone cabin that has been demolished. Only the remains of the tower footings and cabin ruins are present at the site. This site was evaluated in 2003 and determined to be ineligible for listing in the NRHP. Thus, this lookout is not considered a Section 4(f) resource.

As the Crystal Lake Recreation Area was used as a campground since the 1920s before the USFS took over in 1946, it was also evaluated for historical significance in



2004 but determined to be ineligible for listing in the NRHP. However, the Towhee comfort station building was determined to be eligible for listing. This building is located approximately 1.3 miles east of the project segment. While this building is considered a Section 4(f) resource, at its distance from SR-39, it is unlikely to be impacted by the project. Thus, it is not subject to further analysis.

The Angeles Crest Highway was envisioned as a picturesque mountain road in 1912, and construction started in 1929 and continued intermittently until 1956. The historical significance of the highway was evaluated in 2007 and determined to be ineligible for listing in the NRHP. Thus, this road is not considered a Section 4(f) resource.

Another historical site within the ANF is the Old Short Cut, which is California's first ranger station, built in 1900 along the Short Cut Canyon Trail. This historic building is designated as a California Historic Landmark (No. 632). It has since been restored and moved to the Chilao Visitor Center, approximately 8.5 miles west of the project segment. This resource is not listed in the NRHP nor considered eligible for listing in the NRHP. As such, it is not considered a Section 4(f) resource.

The ANF and the French Wall are considered historical resources under Section 4(f) of the USDOT. However, the project is not expected to affect the ANF in a way that would alter its historic qualities or disqualify it from eligibility for listing. Thus, only project impacts to the French Wall are analyzed below.

5.0 Impacts on Section 4(f) Properties

Table 3 lists the recreational and historical resources near SR-39 and if each one meets the qualifying criteria for protection under Section 4(f) of the USDOT Act. In addition, notes are provided that help determine if the Section 4(f) resource is evaluated for potential impacts from the project.

Table 3. Section 4(f) Resources

Name	Location	Section 4(f) Resource?	Notes	Evaluated for project impacts?
Pacific Crest Trail	At southeast and north corners of SR-39/SR-2 intersection	No	Part of the National Trails System; exempt from Section 4(f) approval	No
Islip Saddle Day Use Area	North of SR-39/SR-2 intersection	Yes	USFS facility	Yes
San Gabriel Canyon Road Lookout	At PM 38.5 on SR-39	No	Secondary use to highway	No
Crystal Lake at Crystal Lake Recreation Area	0.4 mile east of SR-39	Yes	USFS facility	Yes



Table 3. Section 4(f) Resources

Name	Location	Section 4(f) Resource?	Notes	Evaluated for project impacts?
Portions of Mount Islip Trail and Big Cienega Trail at Crystal Lake Recreation Area	Within 0.5 east of SR-39	Yes	USFS facility	Yes
Jarvi Memorial Vista	0.5 mile west of SR-39/SR-2 intersection	Yes	USFS facility	Yes
Pine Hollow Picnic Area	0.8 mile east of SR-39	Yes	Too far to be affected by the project	No
Little Jimmy Trail Camp	1.0 mile east of SR-39	Yes	Too far to be affected by the project	No
Angeles National Forest	San Gabriel Mountains	Yes, CHL 717	Commemorative plaque and forest boundaries are too far to be affected by the project	No
French Wall	PM 43.35 to 43.46 on SR-39	Yes	Eligible for listing in the NRHP	Yes
Mount Islip Lookout (FS# 05-01-51-88)	Mountain ridge 0.55 mile east of SR-39	No	Ineligible for listing in the NRHP	No
Crystal Lake Recreation Area	East of SR-39, Towhee building is 1.3 miles east of SR-39	No for entire Crystal Lake Recreation Area but Yes for Towhee building	Too far to be affected by the project	No
Angeles Crest Highway	Along northern end of SR-39	No	Ineligible for listing in the NRHP	No
Old Short Cut	Chilao Visitor Center; 8.0 miles west of SR-39	No	Ineligible for listing in the NRHP	No

The impacts of each alternative on recreational areas and historical sites located near the SR-39 project segment that could be affected by the project and that are considered Section 4(f) properties are discussed below. These impacts include the project's potential direct use, temporary use, and/or constructive use of a Section 4(f) property, as well as proximity impacts in terms of the following:

- The facilities, functions, and/or activities potentially affected
- Access



- Visual impacts³
- Noise and vibration
- Vegetation and wildlife⁴
- Air quality
- Water quality

The following subsections discuss the potential impacts to various Section 4(f) resources that may occur under each alternative implementation.

5.1 No Build Alternative (Alternative 1)

Under Alternative 1, no improvements are proposed on SR-39, and the project segment would continue to be restricted to its use by emergency responders and maintenance crews only, with informal use of the project segment by hikers and bicyclists. No change in the facilities, functions, and/or activities at nearby Section 4(f) properties, access to these properties, or in impacts related to views/visual impacts, noise and vibration, vegetation and wildlife, air quality, and water quality during construction would occur. Thus, no direct use, temporary use or constructive use of Section 4(f) resources or adverse proximity impacts to nearby Section 4(f) properties would occur under Alternative 1.

5.2 Evacuation Route (Minimum Build) (Alternative 2)

5.2.1 Direct Use

Under Alternative 2, the proposed roadway restoration, drainage restoration, guardrail upgrades, and retaining walls would not require a change in the area under Caltrans' SUP from USFS. Thus, no direct effect on any of the Section 4(f) recreational sites and facilities in the ANF would occur. While the Islip Saddle Day Use Area is located at the north end of the project segment, no construction activities or changes to this Section 4(f) property are proposed under Alternative 2. Thus, no direct impacts to the Islip Saddle Day Use Area would occur. Also, no direct impacts to Crystal Lake and portions of Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area and Jarvi Memorial Vista would occur with Alternative 2.

The French Wall is within the project limits and is currently part of the SR-39 highway infrastructure, but the project does not propose any improvements on or near this wall, aside from roadway pavement reconstruction and proposed Midwest guardrail system adjacent to the vicinity of the wall. However, the French Wall would be adjacent to construction work area. Caltrans had previously made a NHPA Section 106 Finding of

³ SR-2 is an adopted Scenic Highway and SR-39 is an eligible Scenic Highway. In the ANF Forest Plan, the areas along SR-39 and to the west and the areas north of SR-2 are identified as having High Scenic Integrity, and the San Gabriel Wilderness to the west of the project segment has Very High Scenic Integrity.

⁴ ANF serves as a regional wildlife linkage.



Effect (FOE) for this Section 4(f) resource that concluded the proposed project would not lead to a substantial adverse change to the French Wall. With no improvements proposed to the French Wall and immediately adjacent area, Caltrans has made a Finding of No Historic Properties Affected for the current project proposal. Thus, no direct use to this Section 4(f) resource would occur under Alternative 2.

5.2.2 Temporary Use

Proposed construction activities would limit the informal use of the project segment by bicyclists and hikers during the construction period. Various other trails and trailheads are available throughout the ANF that could be used by bicyclists and hikers during this time. After construction, use of the project segment by bicyclists and hikers would continue to be informally allowed. The temporary unavailability of the project segment is minimal and is not considered a temporary use because the availability of other nearby trails would avoid adverse impacts to the recreational activities of bicyclists and hikers. In addition, there is no change in ownership of the land and no permanent change in the future use of SR-39 by the bicyclists and hikers. Also, no temporary impacts to nearby Section 4(f) resources (Islip Saddle Day Use Area, Crystal Lake and the Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area, Jarvi Memorial Vista, and French Wall) would occur.

5.2.3 Constructive Use

Alternative 2 would not result in the constructive use of Section 4(f) resources located near the project segment because the proposed improvements would be confined to the closed section of SR-39.

Accessibility – No change in access to nearby Section 4(f) resources would occur, although temporary access constraints would occur on trails and trailheads along the project segment and on SR-39 because it is currently informally used by bicyclists and hikers. This access would be restored after construction; therefore, it is not considered a constructive use. No impacts to access to nearby Section 4(f) resources would occur.

Views – Visual impacts during construction (e.g., fencing, disturbed areas, equipment, material stockpiles, staging areas) would be typical of roadway projects and occur only near construction activities. These would be temporary because disturbed areas would be returned to pre-project conditions once construction is completed. Because construction would be largely confined to the existing roadway, these visual changes would not be considered a constructive use. Alternative 2 is also not expected to affect the scenic views from the Islip Saddle Day Use Area and Jarvi Memorial Vista, and along SR-39 or the scenic qualities of and scenic views from the surrounding areas due to the distance of most viewers from SR-39 and the availability of other similar views throughout the ANF.

Air Quality and Noise – Pollutant emissions and noise that would occur during construction could impact nearby Section 4(f) resources; however, these impacts would



be temporary and would be located at select segments of SR-39, and limited improvements are proposed near the Islip Saddle Day Use Area. Air pollutant and noise impacts may occur from construction trucks on SR-39 and SR-2 and may also affect users of the Islip Saddle Day Use Area and Jarvi Memorial Vista, but not those at Crystal Lake and the trails in the Crystal Lake Recreation Area since these latter resources are not located near any potential haul roads. To minimize these impacts, this alternative would be constructed in compliance with applicable South Coast Air Quality Management District (SCAQMD) rules (e.g., those relating to fugitive dust control, volatile organic compounds [VOC] emissions, and objectionable odors). In addition, a number of noise control measures would be implemented during construction, including equipment noise controls; equipment type, location, and operation restrictions; personnel training; noise barriers/shielding; truck routing; and other activity controls. After construction, the same limits on the use of SR-39 by emergency vehicles and maintenance crews only would not result in long-term air quality and noise impacts. Thus, the air quality and noise impacts of Alternative 2 would not be considered a constructive use.

Vibration – Construction activities have the potential to generate vibration along the project segment. With limited improvements proposed near the Islip Saddle Day Use Area, no vibration impacts are expected with this alternative, and vibration impacts would not be considered a constructive use. No long-term vibration impacts would occur during the continued use of SR-39 by emergency vehicles and maintenance crews.

Vegetation and Wildlife – Impacts to biological resources in the area would be limited because the proposed improvements under Alternative 2 would remain within the paved and disturbed areas and the area included in Caltrans' SUP for SR-39. Wildlife linkages in the ANF would also not be affected by this alternative. Therefore, there would be no vegetation or wildlife impacts at nearby Section 4(f) resources that would result in a constructive use.

Water Quality – Potential pollutant sources from construction activities may impact stormwater runoff quality from the project segment. However, best management practices (BMP) that would be implemented by the project would avoid impacts to the Islip Saddle Day Use Area. Proposed drainage improvements and viaduct structures and the revegetation of disturbed areas would also reduce erosion and sedimentation in the long term along SR-39 and in adjacent areas in the ANF. Temporary stormwater pollutants would be controlled through the implementation of stormwater BMPs during construction, such as street sweeping, the use of fiber rolls, concrete washout, drainage inlet protection, clean water diversions, and other BMPs that would be included in the Stormwater Pollution Prevention Plan (SWPPP) for the project. Thus, Alternative 2 would not substantially impair the activities, features, and/or attributes of the Islip Saddle Day Use Area and French Wall that are Section 4(f) resources at or near the construction site. No water quality impacts to Crystal Lake and the Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area and the Jarvi Memorial Vista



would occur due to their distance from the construction site. Water quality impacts under Alternative 2 would not result in a constructive use.

Based on the above discussion, no constructive use impacts on Section 4(f) properties (Islip Saddle Day Use Area, Jarvi Memorial Vista, Crystal Lake and trails at the Crystal Lake Recreation Area, and French Wall) would occur under Alternative 2.

5.3 Active Transportation Access (Shuttle and Bicycle Path Facilities) (Alternative 3)

5.3.1 Direct Use

Under Alternative 3, the proposed use of the project segment by shuttle buses/vans would require roadway restoration, drainage restoration, guardrail upgrades, three viaduct structures, rockshed, retaining walls, and two parking lots, requiring a change in the area under Caltrans' SUP from USFS. It is anticipated that the Islip Saddle Day Use Area would be used as the northern parking lot. The approximately 0.6-acre day use area would only be rehabilitated (i.e., repaved and restriped) under this alternative. The Islip Saddle Day Use Area and its facilities would remain in place. Thus, Alternative 3 would have a direct effect on this Section 4(f) property. Since Alternative 3's proposed northern parking area at the Islip Saddle Day Use Area would only involve the repaving and restriping of this day use area and retention of its existing use, Alternative 3 would avoid permanent impacts to this resource. As such, the impact to the direct use of this resource would be considered *de minimis*.

Alternative 3 does not propose any improvements to the French Wall that would result in any demolition or alteration to the wall, aside from roadway pavement reconstruction and the proposed Midwest guardrail system adjacent to the wall. No adverse effect on the qualities of the French Wall that make it eligible for the NRHP or that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association would occur with these improvements. Caltrans has made a Finding of No Historic Properties Affected for the current project proposal. Thus, no direct use of this Section 4(f) resource would occur under Alternative 3.

5.3.2 Temporary Use

Under Alternative 3, proposed construction activities would limit the informal use of the project segment by bicyclists and hikers during the construction period. This temporary unavailability of the project segment is minimal and is not considered a temporary use because the availability of other nearby trails would avoid adverse impacts to the recreational activities of bicyclists and hikers. However, project construction activities at the Islip Saddle Day Use area would make this Section 4(f) resource unavailable for public use when it is being repaved and restriped. The parking lot will be repaved in sections to prevent a temporary closure of the entire parking lot. Limited parking will be available during this time. This would be considered a *de minimis* temporary impact. No



improvements to the French Wall are proposed, aside from roadway pavement reconstruction and the proposed Midwest guardrail system adjacent to the wall. Thus, no impact to the protected activities, features, or attributes of the wall would occur. Thus, construction activities near the French Wall would not result in any temporary use. Also, no temporary impacts to Crystal Lake and portions of Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area and Jarvi Memorial Vista would occur with Alternative 3.

5.3.3 Constructive Use

Alternative 3 would not result in the constructive use of Section 4(f) resources located near the project segment because the proposed improvements would avoid permanent impacts to adjacent Section 4(f) resources.

Accessibility – No change in access to nearby Section 4(f) resources would occur, although temporary access constraints would occur on trails and trailheads along the project segment and on SR-39 because it is currently informally used by bicyclists and hikers. This access would be restored after construction; therefore, it is not considered a constructive use. While access to the Islip Saddle Day Use Area would be limited as sections of it are repaved and restriped, this impact to access is temporary and not considered a constructive use.

Views – Visual impacts during construction (e.g., fencing, disturbed areas, equipment, material stockpiles, staging areas) would be typical of roadway projects and occur only near the construction site. This would also be temporary because disturbed areas would be returned to pre-project conditions once construction is completed. The proposed parking lots at PM 40.0 and PM 44.4 would be paved areas with parked vehicles and buses, and they would be visible to hikers, bicyclists, and visitors of the ANF. The proposed viaduct structures and retaining walls would also present new visual features in the existing landscape; however, adding aesthetic treatments would allow the structures to better blend into the surrounding natural environment. Also, differences in elevations and intervening trees and hillsides would obscure views of these structures from most vantage points in the ANF. Alternative 3 is also not expected to affect the scenic views from the Islip Saddle Day Use Area, Jarvi Memorial Vista, Crystal Lake and trails at the Crystal Lake Recreation Area, and along SR-39 nor affect the scenic qualities of and scenic views from the surrounding areas due to the distance of most viewers from SR-39 and the availability of other similar views throughout the ANF. Thus, these visual changes would not be considered a constructive use.

Air Quality and Noise – Pollutant emissions and noise that would occur during construction could impact nearby Section 4(f) resources; however, these impacts would be temporary and would be located at select segments of SR-39, and with the improvements proposed at the Islip Saddle Day Use Area, sections of the Islip Saddle Day Use Area would not be available for use during repaving and restriping of the parking lot and a limited number of users (who may be exposed to air pollutants and noise) would be present. Air pollutant and noise impacts may occur from construction



trucks on SR-39 and SR-2 may also affect users of the Jarvi Memorial Vista, but not those at Crystal Lake and the trails in the Crystal Lake Recreation Area since these latter resources are not located near any potential haul roads. To minimize these impacts, this alternative would be constructed in compliance with applicable SCAQMD rules (e.g., those relating to fugitive dust control, VOC emissions, and objectionable odors). In addition, a number of noise control measures would be implemented during construction, including equipment noise controls; equipment type, location and operation restrictions; personnel training; noise barriers/shielding; truck routing; and other activity controls. After construction, the operation of shuttle service would generate air quality and noise impacts. However, the diversion of private vehicle use to shuttle services is anticipated to reduce overall air quality and noise impacts in the ANF. As such, the air quality and noise impacts of Alternative 3 would not be considered a constructive use.

Vibration – Construction activities have the potential to generate vibration along the project segment. With improvements proposed at the Islip Saddle Day Use Area limited to repaving and restriping and future use of the day use area as a shuttle bus parking area, vibration impacts would be temporary and minimal, and they would not be considered a constructive use. No long-term vibration impacts would occur during the use of SR-39 by emergency vehicles, maintenance crews, and shuttle buses.

Vegetation and Wildlife – Impacts to biological resources in the area would be limited where the proposed improvements would occur within the existing pavement of SR-39. The proposed parking lots would be located in highly disturbed areas, and shuttle buses would be required to exercise extreme caution at well-marked wildlife crossings. The proposed viaducts would affect biological resources in the area during construction, but it would allow wildlife crossing under the viaducts after construction. No special status plant species are present within the limits of construction. This alternative also proposes the removal of existing pavement on sections that would be replaced by viaducts and their restoration to natural conditions with native plant materials. USFS' use of a mechanical mulcher and Caltrans contribution of funds for the *Implementation Strategy to Restore the San Gabriel Mountains Bighorn Sheep Population* would reduce impacts to Nelson's bighorn sheep. Stormwater BMPs would minimize impacts to downstream drainage systems that serve as habitat for the Mountain Yellow-legged Frog, San Gabriel Mountain slender salamander, Southwestern Willow Flycatcher. Relocation of San Gabriel Mountain slender salamander if observed in the disturbance area, to nearby appropriate habitat would avoid direct impacts to this species. Thus, no permanent impacts to wildlife species and linkages in the ANF would occur under this alternative. Therefore, vegetation or wildlife impacts at nearby Section 4(f) resources would be temporary and would not result in a constructive use.

Water Quality – Potential pollutant sources from construction activities may impact stormwater runoff quality from the project segment; however, BMPs would be implemented under this alternative to avoid impacts to the Islip Saddle Day Use Area. Proposed drainage improvements and the viaduct structures and revegetation of



disturbed areas would also reduce erosion and sedimentation in the long term along SR-39 and in adjacent areas in the ANF. Temporary stormwater pollutants would be controlled through the implementation of stormwater BMPs during construction, such as street sweeping, the use of fiber rolls, concrete washout, drainage inlet protection, clean water diversions, and other BMPs that would be included in the SWPPP for the project. Thus, the project would not substantially impair the activities, features, and/or attributes of the Islip Saddle Day Use Area and French Wall that are considered Section 4(f) resources in and near the construction site. No water quality impacts to Crystal Lake and the Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area and the Jarvi Memorial Vista would occur due to their distance from the construction site. Water quality impacts under Alternative 3 would not result in a constructive use.

Based on the above discussion, no constructive use impacts on Section 4(f) properties (Islip Saddle Day Use Area, Jarvi Memorial Vista, Crystal Lake and trails at the Crystal Lake Recreation Area, and French Wall) would occur under Alternative 3.

5.4 Full Opening Alternative (Alternative 4)

5.4.1 Direct Use

Under Alternative 4, the proposed roundabout at the SR-39/SR-2 intersection would encroach into the southern section of the Islip Saddle Day Use Area, requiring a change in the area under Caltrans' SUP for SR-2 from USFS. Under this alternative, the parking lot of the Islip Saddle Day Use Area will be modified slightly to maintain the same number of parking spaces that are currently in the lot, while accommodating the proposed roundabout. However, there will not be any major work on the day use area itself. Still, Alternative 4 would have a direct effect on this Section 4(f) property. The reconstruction of the affected parking spaces would avoid permanent impacts to this Section 4(f) property. As such, with the limited change to the Islip Saddle Day Use Area, the impact to the direct use of this resource would be considered *de minimis*.

No improvements are proposed to the French Wall but roadway pavement reconstruction and a Midwest guardrail system are proposed adjacent to the wall.. Caltrans has made a Finding of No Historic Properties Affected for the current project proposal. No direct use of this Section 4(f) resource would occur under Alternative 4.

5.4.2 Temporary Use

Similar to Alternative 3, proposed construction activities under Alternative 4 would limit the use of the Islip Saddle Day Use Area and informal use of the project segment by bicyclists and hikers during the construction period. The temporary unavailability of SR-39 to hikers and bicyclists and limits to the use of informal trails and trailheads along SR-39 is minimal and is not considered a temporary use of Section 4(f) properties because the availability of other nearby trails would avoid adverse impacts to the recreational activities of bicyclists and hikers.



However, construction activities at the Islip Saddle Day Use area would make this Section 4(f) resource unavailable for public use until the parking spaces are modified/adjusted. This would be considered a *de minimis* temporary impact. Scheduling the parking lot modification at the Islip Saddle Day Use Area at the earliest time would minimize obstructions to the facilities and use of this Section 4(f) resource.

While improvements to the French Wall are proposed, no impact to the protected activities, features, or attributes of the wall would occur. Also, construction activities near the French Wall would not result in any temporary use. In addition, no temporary impacts to Crystal Lake and portions of Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area and Jarvi Memorial Vista would occur with Alternative 4.

5.4.3 Constructive Use

Alternative 4 would not result in the constructive use of Section 4(f) resources located near the project segment because the proposed improvements would avoid permanent impacts to adjacent Section 4(f) resources.

Accessibility – While changes in access to nearby Section 4(f) resources (such as the Islip Saddle Day Use Area) would occur with the proposed roundabout, the proposed construction activities at the day use area would maintain long-term access to this Section 4(f) resource. Thus, while access to the Islip Saddle Day Use Area would not be available until after the parking spaces are modified/adjusted, this impact to access is temporary and not considered a constructive use. Although temporary access constraints would also occur on trails and trailheads along the project segment and on SR-39 as it is currently informally used by bicyclists and hikers, this access would be restored after construction. This is not considered a constructive use. Also, no access impacts to other nearby Section 4(f) resources (Crystal Lake and the Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area, Jarvi Memorial Vista, and French Wall) would occur.

Views – Visual impacts during construction (e.g., fencing, disturbed areas, equipment, material stockpiles, staging areas) would be typical of roadway projects and occur only near the construction site. This would also be temporary because disturbed areas would be returned to pre-project conditions once construction is completed. The proposed roundabout at PM 44.4 would be visible to hikers, bicyclists, and visitors of the ANF who pass through the SR-39/SR-2 intersection. The proposed wildlife exclusionary fencing along SR-39 would be a common and minor visual feature visible to users of the project segment. The proposed viaduct structures and retaining walls would also present new visual features in the existing landscape. However, adding aesthetic treatments would allow the structures to better blend into the surrounding natural environment. Also, differences in elevations and intervening trees and hillsides would obscure views of these structures from most vantage points in the ANF. Thus, these visual changes would occur along the existing highway in the developed areas of the ANF and would be limited to those with near views. The permanent views along the improved segment of SR-39 would be largely similar to the views offered by other roadways in the ANF.



Alternative 4 is also not expected to affect the scenic views from the Islip Saddle Day Use Area, Jarvi Memorial Vista, Crystal Lake and trails at the Crystal Lake Recreation Area, and along SR-39 nor affect the scenic qualities of and scenic view from the surrounding areas due to the distance of most viewers from SR-39 and the availability of other similar views throughout the ANF. Thus, these visual impacts would not be considered a constructive use.

Air Quality and Noise – Pollutant emissions and noise that would occur during construction could impact nearby Section 4(f) resources; however, these impacts would be temporary and would be located at select segments of SR-39. The Islip Saddle Day Use Area would not be available for use during construction of the proposed roundabout and modification/adjustment of the parking spaces. Air pollutant and noise impacts may occur from construction trucks on SR-39 and SR-2 may also affect users of the Jarvi Memorial Vista, but not those at Crystal Lake and the trails in the Crystal Lake Recreation Area since these latter resources are not located near any potential haul roads. To minimize these impacts, this alternative would be constructed in compliance with applicable SCAQMD rules (e.g., those relating to fugitive dust control, VOC emissions, and objectionable odors). In addition, a number of noise control measures would be implemented during construction, including equipment noise controls; equipment type, location, and operation restrictions; personnel training; noise barriers/shielding; truck routing; and other activity controls. After construction, the opening of SR-39 would generate air quality and noise impacts. With only minor increases in vehicle trips through SR-39, minor increases in pollutant emissions and noise would be expected. In addition, the diversion of vehicles from the south and east of the ANF and those currently using SR-2 to the use of the reopened section of SR-39 as a shorter route to ANF areas is anticipated to reduce overall air quality and noise impacts in the ANF. As such, the air quality and noise impacts of Alternative 4 would not be considered a constructive use.

Vibration – Construction activities have the potential to generate vibration along the project segment. The Islip Saddle Day Use Area would not be available for use during construction of the proposed roundabout and modification of the parking spaces at the day use area. As such, vibration impacts would be temporary and minimal, and they would not be considered a constructive use. No long-term vibration impacts would occur during the reopening of SR-39 under Alternative 4.

Vegetation and Wildlife – Impacts to biological resources in the area would occur where the proposed improvements would be located outside existing pavement and highly disturbed areas of SR-39. The proposed roundabout and associated modification of parking spaces at the Islip Saddle Day Use Area and construction of the proposed viaducts and retaining walls would affect biological resources in these areas during construction. Disturbed areas would be restored to pre-project conditions (including the removal of existing pavement on sections that would be replaced by viaducts and restoration to natural conditions). Wildlife fencing would be provided along the entire segment to prevent roadkill. At the same time, the proposed viaducts would allow



wildlife crossing, and no permanent impacts to wildlife linkages in the 33ND would occur under this alternative. Measures to reduce biological resource impacts would also be implemented as part of the project. These include USFS' use of a mechanical mulcher, Caltrans contribution of funds for the *Implementation Strategy to Restore the San Gabriel Mountains Bighorn Sheep Population*, stormwater BMPs, relocation of any observed San Gabriel Mountain slender salamander. Therefore, vegetation or wildlife impacts at nearby Section 4(f) resources would be temporary and would not result in a constructive use.

Water Quality – Potential pollutant sources from construction activities may impact stormwater runoff quality from the project segment; however, BMPs would be implemented under this alternative to avoid impacts to the Islip Saddle Day Use Area. Proposed drainage improvements and viaduct structures and the revegetation of disturbed areas would also reduce erosion and sedimentation in the long term along SR-39 and in adjacent areas in the 33ND. Temporary stormwater pollutants would be controlled through the implementation of stormwater BMPs during construction, such as street sweeping, the use of fiber rolls, concrete washout, drainage inlet protection, clean water diversions, and other BMPs that would be included in the SWPPP for the project. Thus, the project would not substantially impair the activities, features, and/or attributes of the Islip Saddle Day Use Area and French Wall that are considered Section 4(f) resources in and near the construction site. No water quality impacts to Crystal Lake and the Mount Islip Trail and Big Cienega Trail at the Crystal Lake Recreation Area and the Jarvi Memorial Vista would occur due to their distance from the construction site. Water quality impacts under Alternative 4 would not result in a constructive use.

Based on the above discussion, no constructive use impacts on Section 4(f) properties (Islip Saddle Day Use Area, Jarvi Memorial Vista, Crystal Lake and trails at the Crystal Lake Recreation Area, and French Wall) would occur under Alternative 4.

Table 4 summarizes the impacts of each project alternative to Section 4(f) resources.

Table 4. Section 4(f) Impact Summary for Each Alternative

Section 4(f) Resource	No Build – Alternative 1	Evacuation Route – Alternative 2	Active Transportation Access – Alternative 3	Full Opening – Alternative 4
Islip Saddle Day Use Area				
Direct Use	No	No	<i>De minimis</i>	<i>De minimis</i>
Temporary Use	No	No	<i>De minimis</i>	<i>De minimis</i>
Constructive Use	No	No	No	No
Crystal Lake at Crystal Lake Recreation Area				
Direct Use	No	No	No	No
Temporary Use	No	No	No	No
Constructive Use	No	No	No	No



Table 4. Section 4(f) Impact Summary for Each Alternative

Section 4(f) Resource	No Build – Alternative 1	Evacuation Route – Alternative 2	Active Transportation Access – Alternative 3	Full Opening – Alternative 4
Mount Islip Trail and Big Cienega Trail at Crystal Lake Recreation Area				
Direct Use	No	No	No	No
Temporary Use	No	No	No	No
Constructive Use	No	No	No	No
Jarvi Memorial Vista				
Direct Use	No	No	No	No
Temporary Use	No	No	No	No
Constructive Use	No	No	No	No
French Wall				
Direct Use	No	No	No	No
Temporary Use	No	No	No	No
Constructive Use	No	No	No	No

6.0 Applicability of *De Minimis* Section 4(f) Evaluation

As shown in Table 4 above, the No Build Alternative (Alternative 1) and Evacuation Route Alternative (Alternative 2) would not have any impacts on Section 4(f) properties. The Active Transportation Access Alternative (Alternative 3) and the Full Opening Alternative (Alternative 4) would result in potential impacts on Section 4(f) properties, as discussed above. However, these two build alternatives would only result in *de minimis* impacts to the Islip Saddle Day Use Area and no impacts to the French Wall, which are Section 4(f) properties in and near the project segment.

7.0 Avoidance Alternatives and Other Findings

7.1 Avoidance Alternatives

Avoidance alternatives for each Section 4(f) property are discussed below.

Islip Saddle Day Use Area

Improvements proposed at the SR-39/SR-2 intersection include a parking area under Alternative 3 and a roundabout under Alternative 4. While proposed improvements are limited to the repaving and restriping of the parking spaces at the Islip Saddle Day Use Area under Alternative 3 and modification of the parking area to retain the same number of spaces under Alternative 4, impacts to the Islip Saddle Day Use Area would be avoided by locating the northern parking lot at another location under Alternative 3 and locating the proposed roundabout away from the Islip Saddle Day Use Area (slightly



south of the SR-39/SR-2 intersection) or not including a roundabout at the SR-39/SR-2 intersection under Alternative 4. No impacts to the Islip Saddle Day Use Area would occur, as proposed by the following alternatives:

- No Build Alternative (Alternative 1)
- Evacuation Route (Minimum Build) (Alternative 2)

Jarvi Memorial Vista

All alternatives would have no effect on the facilities and users of the Jarvi Memorial Vista that is located 0.5 mile west of SR-39.

Crystal Lake Recreation Area

All alternatives would have no effect on the recreational facilities and users of the Crystal Lake Recreation Area, which include Crystal Lake and portions of the Mount Islip Trail and Big Cienega Trail that are located within 0.5 mile of SR-39.

French Wall

Because no alteration or improvements are proposed to the French Wall, Caltrans has made a Finding of No Historic Properties Affected to this resource. The No Build and Build alternatives would have no adverse effect on this Section 4(f) property.

ANF Recreation Areas

Alternatives that would not alter areas outside of the area under the existing SUP of Caltrans for SR-39 would have no effect on the recreational areas in the ANF. These include the following alternatives:

- No Build Alternative (Alternative 1)
- Evacuation Route (Minimum Build) (Alternative 2)

7.2 Findings

The following findings are made regarding the impacts on Section 4(f) properties under each of the project alternatives:

1. The No Build Alternative (Alternative 1) would have no effect on Section 4(f) properties but would not meet the project purpose and need.
2. The Evacuation Route (Minimum Build) (Alternative 2) would have no impact on Section 4(f) properties. This alternative would not meet the project purpose and need.
3. The Active Transportation Access (Shuttle and Bicycle Path Facilities) (Alternative 3) would have *de minimis* impacts on the Islip Saddle Day Use Area



and no impacts on the French Wall, which are Section 4(f) properties. This alternative would partially meet the project purpose and need.

4. The Full Opening Alternative (Alternative 4) would have *de minimis* impacts on the Islip Saddle Day Use Area and no impacts on the French Wall, which are Section 4(f) properties, but would result in a net benefit to Section 4(f) properties by improving the facilities at the Islip Saddle Day Use Area. This alternative would meet the project purpose and need.

This *De Minimis* Section 4(f) Evaluation has been prepared for the proposed rehabilitation and reopening of SR-39, which would improve the segment from PM 40.0 to 44.4 and would use minor amounts of recreation lands in the ANF that are adjacent to the existing highway. This evaluation satisfies the requirements of Section 4(f) for the project because it meets FHWA's applicability criteria, and no Programmatic or Individual Section 4(f) Evaluation is needed for the project. Specifically,

- The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of the existing highway facilities on essentially the same alignment of SR-39. The project includes resurfacing; restoration; rehabilitation; reconstruction; safety improvements, such as shoulder widening and the correction of substandard curves; intersection channelization; and bridge replacements on the same alignment.
- The Section 4(f) resources include publicly owned recreation facilities in the ANF located adjacent to SR-39.
- The amount and location of the land to be used shall not impair the use of the remaining Section 4(f) land, in whole or in part, for its intended purpose. This determination will be made in concurrence with the USFS, as officials having jurisdiction over the Section 4(f) lands. The total amount of land to be utilized by the project at the Islip Saddle Day Use Area is less than 10 percent of the total size of the ANF, and the affected area and facilities at the day use area would only be rehabilitated and modified to maintain the same number of parking spaces.
- The proximity impacts of the project on the remaining Section 4(f) land would not impair the use of Crystal Lake and trails at the Crystal Lake Recreation Area and in the ANF for their intended purposes. In addition, impacts related to noise, air quality, water pollution, wildlife and habitat effects, aesthetic values, and/or other potential impacts would be avoided, minimized, or mitigated.
- After SHPO concurrence that the French Wall is eligible for the NRHP in October 2008, Caltrans submitted its Finding of Effect in December 2008. No response or comment from SHPO was received. With the re-initiation of the project



approval and environmental clearance process for the project, the currently proposed alternatives do not include any improvements to the French Wall. While SHPO is the official with jurisdiction over the French Wall as a Section 4(f) property, Caltrans has made a Finding of No Historic Properties Affected to this resource.

- USFS, as the official with jurisdiction over the Section 4(f) properties, will need to agree with the assessment of the impacts of the proposed project on, and the proposed avoidance, minimization and mitigation measures for, the Section 4(f) lands and resources.
- The project would have no effect on parks or recreational lands or improvements to parks and recreational lands funded by the Land and Water Conservation Fund Act, the Federal Aid in Fish Restoration Act (Dingell-Johnson Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act), and similar laws, or on lands that are otherwise encumbered with a federal interest (e.g., former federal surplus property).

8.0 Measures to Minimize Harm to the Section 4(f) Property

With concurrence from USFS, several measures would be implemented as part of the different alternatives to the project and would minimize harm to Section 4(f) properties. These include:

Aesthetics

- Aesthetic treatments (in terms of textures, colors and patterns) and Context Sensitive Solutions to reflect existing landform transitions
- Use of drought resistant, native species, and climate appropriate vegetation
- Replacement of impacted vegetation and planting of bare areas with native plant materials
- Erosion control measures
- Tree replacement

Air Quality

- Compliance with applicable SCAQMD Rules during construction of Alternatives 2 through 4

Biological Resources

- Construction of wildlife fencing along the project segment under Alternative 4
- Construction of viaduct structures that would allow wildlife movement through the project area under Alternatives 3 and 4



- Restriction on shuttle service buses/vans to a maximum speed to 15 mph and a requirement to exercise extreme caution at well-marked wildlife crossings under Alternative 3
- Compliance with the permit conditions contained in resource agency permits for impacts to riparian areas, wetlands, and waters/streambeds
- USFS' use of a mechanical mulcher to improve habitat for Nelson's bighorn sheep
- Caltrans contribution of funds for the Implementation Strategy to Restore the San Gabriel Mountains Bighorn Sheep Population
- Pre-construction nesting bird survey
- Stormwater best management practices (BMP), such as siltation fences and berms, bermed areas for parking, staging and refueling, and spill control measures
- Relocation of San Gabriel Mountain slender salamander to nearby appropriate habitat

Community Impacts

- Reconstruction of the Islip Saddle Day Use Area's picnic areas and parking spaces farther to the east and/or northeast of the day use area under Alternatives 3 and 4

Cultural Resources

- Compliance with applicable standards in the Secretary of the Interior's Standards for the Treatment of Historic Properties for proposed improvements on and near the French Wall under Alternatives 2 through 4
- Diversion of earthmoving activity away from the immediate discovery area of cultural materials and evaluation of the find
- Compliance with California State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 upon the discovery of human remains

Noise

- Equipment noise control for old and new equipment to meet specified noise levels (such as mufflers, sealed and lubricated tracks for crawler mounted equipment, lowering exhaust pipe exit height, repair, retrofit, or elimination of equipment not meeting specified limits, and/or other state of the art noise control technology for old and new equipment)
- In-Use noise control where existing equipment is not permitted to produce noise levels in excess of specified limits.
- Site restrictions to achieve noise reduction through modifying the time, place, or method of operation of a particular noise source (i.e., shielding with barriers for equipment and site, truck routing and traffic control, time scheduling of activities, and equipment location or relocation).



- Personnel training for equipment operators and construction supervisors to become more aware of construction site noise problems and noise control methods to improve noise conditions in the local community.

Water Quality

- Implementation of Stormwater BMPs during construction of Alternatives 2 through 4, such as street sweeping, the use of fiber rolls, concrete washout, drainage inlet protection, clean water diversions, and other BMPs that would be included in the SWPPP for the project.
- Construction of drainage improvements and retaining walls to reduce erosion as part of Alternatives 2 through 4.

The cost of implementing these measures is considered a reasonable public expenditure as the measures will avoid or reduce the adverse impacts of the project on Section 4(f) properties and on various environmental issues and resources in the area.

9.0 Coordination

Prior to public review of the Draft Environmental Impact Report/Environmental Assessment (EIR/EA), coordination was conducted with the officials with jurisdiction over properties protected by Section 4(f) of the USDOT Act of 1966.

9.1 Consultations

Section 4(f) of the USDOT Act requires coordination with officials that have jurisdiction over park and historic resources that may be impacted by the project prior to the approval of Section 4(f) impact findings. The regulations require written concurrence from these officials prior to:

- Making *de minimis* impact findings
- Applying an exception for temporary occupancies
- Applying an exception for transportation enhancement and mitigation activities

For parks, recreational areas, and wildlife and waterfowl refuges, the officials with jurisdiction over the property must be informed of the intent to make a *de minimis* impact determination, after which an opportunity for public review and comment must be provided.

Because USFS manages most of the recreational areas and land in the ANF that are near the project segment, Caltrans and USFS have been coordinating on the proposed roadway improvements and potential shuttle services on SR-39. These consultations have included the following:

- On April 13, 2023, staff from Caltrans, USFS, Metro, Nature for All, and other consultants held a Transit to Trails Partners Kickoff Meeting. The meeting/call



discussed transit opportunities in the ANF that would increase public access to recreational areas in the ANF, past shuttle service pilot projects, the proposed SR-39 rehabilitation and reopening, existing shuttle services at other National Parks in the country, a case study for the proposed Mount Wilson shuttle service, and participant input on projects, resources, and issues for future transit services in the ANF.

- On June 9, 2023, staff from USFS, Caltrans, Nature for All, and consultants had a meeting on the proposed Mount Wilson shuttle and reopening of SR-39. The needed coordination and approvals from Caltrans and USFS were discussed, along with background on the SR-39 reopening, recreational facilities along SR-2 and SR-39, previously known environmental issues, potential shuttle service stops and routes, and information sources.
- On June 28, 2023, consultants for Caltrans requested information from Ricardo Lopez of the USFS on residential structures, inholdings, and visitors. On July 27, additional information of recreational facilities and historic sites was requested. Information on residential structures, inholdings, and visitors was received from Ricardo Lopez on July 27 and information on recreational facilities and historic sites was provided by David Peebles on July 31, 2023.
- On November 16, 2023, staff from the USFS, Caltrans, and consultants for Caltrans (Ecorp and Parsons) discussed several issues, including:
 - Project purpose and need and Alternatives to the project
 - Project status (at about 65%)
 - Scoping survey on alternative preferences
 - Proposed wildlife crossings and fencing
 - Parking use at Islip Saddle Day Use Area
 - Potential impacts to Section 4(f) resources and Draft Section 4(f) report
 - Increase in recreational traffic and beneficial impacts on recreation
 - Rerouting of Pacific Crest Trail
 - USFS cultural record search
 - Viaduct design in compliance with the Land Management Plan (Forest Plan) and Scenic Quality objectives for the ANF
 - Potential for USFS to serve as cooperating agency on the project
 - Future coordination efforts
- Additional meetings with USFS will be periodically arranged, as necessary.

Email correspondence with USFS are provided in Attachment A.1.

Previous consultation with SHPO was made in accordance with the National Historic Preservation Act (NHPA) Section 106 process. These consultations have included the following:

- In September 2008, Caltrans initiated consultation for the previous project and on October 16, 2008, SHPO concurred that the French Wall is eligible for the NRHP under Criterion C.



- In December 2008, Caltrans transmitted a Finding of No Effect for the French Wall but no response or comment was received from SHPO within 30 days.

With the reinitiation of the project approval and environmental clearance process in 2023, the previously proposed improvements on and immediately adjacent to the French Wall have been eliminated from the project design. Caltrans has made a Finding of No Historic Properties Affected for the current project alternatives. Previous correspondence with SHPO is provided in Attachment A.2.

9.2 Public Review

After the Preliminary Section 4(f) Finding is proposed for the SR-39 project, Caltrans will send a coordination letter to USFS and SHPO to inform them of the formal consultation process. The public will also be provided an opportunity to review and comment on the Preliminary Section 4(f) Finding for a minimum of 45 days, concurrent with public circulation of the Draft EIR/EA.



10.0 List of Preparers

Caltrans

- Karl Price, Senior Environmental Scientist
- Adam Avila, Environmental Scientist
- Cymbre Hoffman, Environmental Scientist

Parsons Transportation Group Inc.

- Anne Kochaon, Environmental Program Director
- Josephine Alido, Project Planner, Principal Report Author
- Danielle Gresham, Environmental Project Planner, Peer Reviewer
- Gregory King, Senior Project Planner, Peer Reviewer
- Katherine Ryan, Senior Planner/GIS Specialist
- Elizabeth Koos, Technical Editor



Appendix A – References and Additional Sources of Information

Regulations

- 23 CFR 774 – Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4[f])
- 49 U.S.C. 303 – Section 4(f) of the USDOT Act of 1966
- 23 U.S.C. 138 – Preservation of Parklands
- 36 CFR 59.1-59.4 – Land and Water Conservation Fund Program

Caltrans Policy and Guidance

- Standard Environmental Reference, Chapter 20
- FHWA Section 4(f) Policy Paper, July 20, 2012
- FHWA Section 4(f) Nationwide Programmatic

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Appendix B – Letters and Other Correspondence

A.1 – USFS Correspondence

From: Peebles, David - FS, CA <david.peebles@usda.gov>
Sent: Monday, July 31, 2023 10:48 AM
To: Gresham, Danielle [US-US] <Danielle.Gresham@parsons.com>; Lopez, Ricardo - FS, CA <ricardo.lopez2@usda.gov>
Cc: Kochoan, Anne [US-US] <Anne.Kochoan@parsons.com>; King, Gregory [NN-US] <Gregory.King@parsons.com>; Adam.Avila@dot.ca.gov; Freddie Olmos <Folmos@ecorpconsulting.com>; Alido, Josephine [US-US] <Josephine.Alido@parsons.com>; Ryan, Katherine [US-US] <Katherine.Ryan@parsons.com>; Seastrand, Justin - FS, CA <Gary.Seastrand@usda.gov>
Subject: [EXTERNAL] RE: [External Email]SR-39 Reopening/Rehabilitation Project Community Impact Assessment Questions

See below for my input in red...had my first discussion with Ecorps cultural staff just last week, so this input isn't conclusive, or a result of this current undertaking/project...

Dave



David S. Peebles
Angeles NF Heritage and Tribal Relations
Program Manager

Forest Service
Pacific Southwest Region Office

p: 626-574-5273
c: 626-698-8313

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usda.gov twitter.com facebook.com

Caring for the land and serving people

From: Lopez, Ricardo - FS, CA <ricardo.lopez2@usda.gov>
Sent: Friday, July 28, 2023 1:49 AM
To: Gresham, Danielle [US-US] <Danielle.Gresham@parsons.com>
Cc: Kochoan, Anne [US-US] <Anne.Kochoan@parsons.com>; King, Gregory [NN-US] <Gregory.King@parsons.com>; Adam.Avila@dot.ca.gov; Freddie Olmos <Folmos@ecorpconsulting.com>; Alido, Josephine [US-US] <Josephine.Alido@parsons.com>; Ryan, Katherine [US-US] <Katherine.Ryan@parsons.com>; Seastrand, Justin - FS, CA <Gary.Seastrand@usda.gov>; Peebles, David - FS, CA <david.peebles@usda.gov>
Subject: [EXTERNAL] RE: [External Email]SR-39 Reopening/Rehabilitation Project Community Impact Assessment Questions

Hi Danielle.

My apologies – I thought I had already responded but I just saw that I only drafted a response to allow my colleagues time to respond back to me. Here is what I've come up with on your initial questions:

1. "There are approximately five residential structures south of the project limits along SR-39 that are seasonal recreational residences under permit of the USFS." On SR-39, we are aware of some residence structures south of the closed section including Soldier Creek tract and some residence cabins on the North Fork, east of the highway. Our understanding is that they are classified as recreation cabins under special use permits.
2. "No private inholding properties are located within the project area." We are not aware of any private inholdings in the area of the closed section of SR-39.
3. "According to the USFS, the majority of the approximately 3 million visitors to ANF annually are residents from adjacent communities." We are not aware of specific data on visitations from adjacent communities but agree with the approximate figure. Overall, per the latest USDA Forest Service statistics (2021), the Angeles National Forest received more recreation-based visits from the public (4.59 million) than Grand Canyon National Park (4.53 million) or Yosemite National Park (3.29 million) in the same year.

For your additional questions, I have added my colleagues Justin Seastrand and Dave Peebles as they may be able to address your questions regarding recreational facilities and historic sites.

Justin and Dave – see the questions below.

Ricardo Lopez
ANF Forest Engineer
ricardo.lopez2@usda.gov 626-632-0666



Please note I will be OFF on 7/28, 8/01-02, & 8/08-10

From: Danielle.Gresham@parsons.com <Danielle.Gresham@parsons.com>
Sent: Thursday, July 27, 2023 1:49 PM
To: Lopez, Ricardo - FS, CA <ricardo.lopez2@usda.gov>
Cc: Anne.Kochaon@parsons.com; Gregory.King@parsons.com; Adam.Avila@dot.ca.gov; Freddie Olmos <Folmos@ecorpconsulting.com>; Josephine.Aldo@parsons.com; Katherine.Ryan@parsons.com
Subject: RE: [External Email]SR-39 Reopening/Rehabilitation Project Community Impact Assessment Questions

Hi Ricardo.

Have you had a chance to check the accuracy of the three statements in my first email?

We would also like to request your assistance with some questions regarding recreational and historic sites for our Section 4(f) analysis.

We have identified the following recreational facilities and historic sites within 0.5 mile of the project segment: (Mt. Islip Lookout (FS# 05-01-51-88) remains and locations of Fire lookout built in 1927. Evaluated and determined not eligible in 2003).

- Pacific Crest Trail
 - Islip Saddle Day use Area
 - Jarvi Memorial Vista
 - Crystal Lake Recreational Area (trails and Crystal Lake). (The Rec Area was evaluated and found not eligible in 2004, excluding the Towhee comfort station bldg. which remained eligible)
 - French Wall Historic Site (evaluated in 2008 by Caltrans and determined eligible for the National Register).
1. Does the USFS have other recreational facilities and historic sites near the site (within 0.5 mile) that may be subject to USDOT Section 4(f) protection? (Angeles Crest Highway is a recorded resource, evaluated and determined not eligible in 2007).
 2. Are there recreational facilities funded by Section 6(f) of the Land and Water Conservation Fund Act within 0.5 mile of the project segment?
 3. What would be involved or what are the requirements for getting an amendment to the USFS permit for the Caltrans easement for SR-39 through the ANF?

Thanks!

Danielle

Danielle Gresham
Cell: 619.252.7748
danielle.gresham@parsons.com



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A.2 – Previous SHPO Correspondence

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



October 16, 2008

Reply To: FHWA080922C

Gary Iverson
District Environmental Branch Chief
Division of Environmental Planning
California Department of Transportation, District 7
100 Main Street, Suite 100
Los Angeles, CA 90012-3606

Re: Determination of Eligibility for the Proposed Reopening of State Route 39, San Gabriel Canyon Road, Los Angeles County, CA

Dear Mr. Iverson:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

The California Department of Transportation (Caltrans) is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, that the French Wall (07-LA-39 PM 43.4) is eligible for the National Register of Historic Places (NRHP) under Criterion C for its distinctive characteristics of a type and method of construction. The wall is a prototypical example of modern mechanically reinforced earth in the United States, a unique method of construction when it was first erected. As a demonstration project the French Wall was extensively monitored, researched, and published. The French Wall is also unique in the application of elliptical galvanized steel skin, which was imported from France. It does not appear on other Reinforced Earth walls built in the United States as the steel wall was later replaced by a concrete panel system. The French Wall also meets Criteria Consideration G because it introduced reinforced earth technology to the United States and was subsequently improved upon with additional methods. Several new patents were awarded as a direct result of the research that was performed on the Route 39 wall.

Based on my review of the submitted documentation, I concur that the French Wall is eligible for the NRHP under Criterion C for the reasons stated above. Please note that this also constitutes our comments pursuant to PRC 5024(f).

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 654-0631 or e-mail at nlindquist@parks.ca.gov.

Sincerely,

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

Appendix H Complete Streets

Director's Policy

Number: DP-37

Effective Date: December 7, 2021

Supersedes: DD-64-R2 (10/16/2014)

Responsible

Programs: Finance
Maintenance & Operations
Planning and Modal Programs
Project Delivery
Safety Programs
Sustainability

Title Complete Streets

Policy

The California Department of Transportation (Caltrans) recognizes that walking, biking, transit, and passenger rail are integral to our vision of delivering a brighter future for all through a world-class transportation network. Additionally, Caltrans recognizes that streets are not only used for transportation but are also valuable community spaces.

Accordingly, in locations with current and/or future pedestrian, bicycle, or transit needs, **all transportation projects funded or overseen by Caltrans will provide comfortable, convenient, and connected complete streets facilities for people walking, biking, and taking transit or passenger rail unless an exception is documented and approved.**

When decisions are made not to include complete streets elements in capital and maintenance projects, the justification will be documented with final approval by the responsible District Director.

Opportunities for complete streets exist in all phases of project development from planning and design to construction, operations, and maintenance. Complete streets projects should prioritize underserved communities that have been historically harmed and segmented by the transportation network and should serve people of all ages and abilities. Furthermore, Caltrans commits to removing unnecessary policy and procedural barriers and partnering with communities and agencies to ensure projects on local and state transportation systems improve the connectivity to existing and planned pedestrian, bicycle, and transit facilities, and accessibility to existing and planned destinations, where possible.

"Provide a safe and reliable transportation network that serves all people and respects the environment."

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Intended Results

This policy establishes Caltrans' organizational priority to encourage and maximize walking, biking, transit, and passenger rail as a strategy to not only meet state climate, health, equity, and environmental goals but also to foster socially and economically vibrant, thriving, and resilient communities. To achieve this vision, Caltrans will maximize the use of design flexibility to provide context-sensitive solutions and networks for travelers of all ages and abilities.

Definitions

Complete Street

A complete street is a transportation facility that is planned, designed, constructed, operated, and maintained to provide comfortable and convenient mobility, and improve accessibility and connectivity to essential community destinations for all users, regardless of whether they are travelling as pedestrians, bicyclists, public transportation riders, or drivers. Complete streets are especially attuned to the needs of people walking, using assistive mobility devices, rolling, biking, and riding transit. Complete streets also maximize the use of the existing right-of-way by prioritizing space-efficient forms of mobility, such as walking and biking, while also facilitating goods movement in a manner with the least environmental and social impacts. Complete streets shift the focus of transportation planning and project development from vehicle movement as the primary goal to the movement of people and goods.

All Ages and Abilities

The "all ages and abilities" concept strives to serve all users—regardless of age, gender, race, or ability and inclusive of the mobility needs of children, older adults, and people with disabilities—by embodying national and international best practices related to traffic calming, speed reduction, universal design, and roadway design to increase user safety and comfort, as well as accessibility for people with disabilities. This approach also includes the use of traffic calming elements or facilities separated from motor vehicle traffic, both of which can offer a greater feeling of security and appeal to a wider spectrum of the public.

Design Flexibility

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Caltrans policy supports designers in their application of guidance to achieve our goals of developing complete facilities to serve all members of the community.

Design flexibility refers to the ability to develop a design suited to its users and context, and to employ professional judgment and experience to interpret, apply, and adapt appropriate design standards and guidance. Flexibility in design is essential to achieving Caltrans' goals of putting safety first, enhancing and connecting the multimodal network, leading on climate action, and advancing equity and livability in all communities. Design flexibility includes consideration of diverse user needs, assessment of risk, review of applicable guidance, and documentation of design decisions.

Underserved Community

Underserved communities include low-income, frontline environmental justice, and vulnerable communities, including but not limited to Black and Indigenous peoples, communities of color, people experiencing homelessness, people with disabilities, older adults, and youth. Refer to guidance from the Caltrans Office of Race and Equity for the most current definition.

Accessibility (Access to Destinations)

Accessibility is the ease by which travelers can reach – or access – desired destinations such as work, shopping and other retail, school, health care, and recreation. Accessibility reflects the number and proximity of destinations, as well as the directness and condition of walking, biking, and transit facilities. This is distinct from accessibility in the context of the Americans with Disabilities Act (ADA); refer to Deputy Directive 42 for more information on ADA and State Disability Laws.

Connectivity

A connected multimodal network allows people to travel by whichever mode they choose and provides convenient, accessible connections between different modes.

State Transportation Network (STN)

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Refers to the State Highway System (SHS) and all other multimodal facilities, including parallel and intersecting paths, frontage roads, and other facilities not directly on the SHS mainline.

Responsibilities

All employees in the following functional groups have specific responsibilities related to implementation of this policy in their program areas:

Director's Office – Headquarters Sustainability

- Lead, coordinate, and facilitate development of implementation plan for this policy in coordination with appropriate functional groups.
- Facilitate alignment of policy, guidance, and training to meet state's climate, health, equity, walking, biking, transit, and passenger rail goals.
- Facilitate coordination, information sharing, and collaboration among Divisions and Districts on topics related to complete streets.
- Track, monitor, report, and communicate Caltrans' progress toward meeting its policy and strategic goals related to walking, biking, transit, and passenger rail.
- Establish and facilitate internal/external advisory committees to provide technical input, strategic direction, and implementation guidance to Caltrans policies related to complete streets.

Planning and Modal Programs

Headquarters

- Develop, maintain, and update state plans, training, and resources to assist in the identification and prioritization of pedestrian, bicycle, transit, and passenger rail needs and recommended improvements on or across the SHS.
- Develop guidance for integrating pedestrian, bicycle, transit, and passenger rail needs from the corridor planning process into future complete streets projects.
- Identify best practices for increased and meaningful engagement with partners, stakeholders, and communities during the development of plans and projects that facilitate the inclusion of complete streets elements as appropriate.
- Work with local and regional transit and rail partners to identify and implement first mile/last mile solutions, both on and off the STN.
- Provide technical support and guidance to internal and external stakeholders on enhancing rail and transit reliability and operations related to complete streets within and adjacent to the STN.
- Promote Caltrans policies related to complete streets in rail and transit planning documents and grant program guidelines.

Districts

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- Develop, maintain, and update plans, tools, and other planning documents to identify and prioritize pedestrian, bicycle, and transit needs and recommended improvements on or across the SHS.
- Verify that proposed projects are in alignment with local, regional, and state planning documents detailing pedestrian, bicycle, transit, and passenger rail needs on or across the SHS.
- Integrate pedestrian, bicycle, transit, and passenger rail improvements from the corridor planning process into projects.
- Include complete streets elements in projects during the pre-Project Initiation Document (pre-PID) and PID phases.
- Participate in Project Development Teams (PDTs) to assist in delivering complete streets elements identified in PID phase.
- Develop and implement strategy for meaningful engagement with partners, stakeholders, and communities during the development of plans and projects that facilitate the inclusion of complete streets elements as appropriate.
- Identify and pursue partnerships and funding opportunities with local, regional, and state agencies.
- Work with local and regional transit and rail partners to identify and implement first mile/last mile solutions, both on and off the STN.
- Promote pedestrian, bicycle, and transit improvements and land uses supportive of these modes in local projects through the Local Development-Intergovernmental Review process.

Project Delivery

Headquarters

- Develop, maintain, and update policy, procedures, guidance, and standards pertaining to the design and construction of complete streets facilities in alignment with Caltrans and state walking, biking, transit, and passenger rail goals, including but not limited to temporary access during construction.
- Provide training and guidance to promote the use of "world-class" design best practices related to complete streets throughout Caltrans, including the adoption of design flexibility guidance, contextual guidance, and others.
- Cultivate subject-matter expertise for design excellence of complete streets facilities in projects on or across the STN.
- Designate a complete streets asset manager to track and monitor progress of complete streets statewide as an asset in the State Highway System Management Plan (SHSMP) and develop funding and performance targets for complete streets in the State Highway Operation and Protection Program (SHOPP).
- Establish and oversee processes for documenting decisions related to complete streets elements.

Districts

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- Implement project delivery strategies and best practices to further enhance the delivery of complete streets, including coordination of community engagement efforts.
- Implement "world-class" design best practices related to complete streets.
- Cultivate subject-matter expertise for design excellence of complete streets facilities in projects on or across the STN.
- Promote and exercise design flexibility throughout project development process.
- Document decisions related to complete streets elements.
- Implement and oversee use of standard plans and specifications, as well as best practices, for temporary pedestrian, bicycle, and transit access routes during construction.

Maintenance

Headquarters

- Develop, maintain, and update policy, procedures, guidance, manuals, training and standards pertaining to the maintenance of complete streets facilities.
- Work with Districts to determine equipment needs for maintenance of current and future complete streets facilities, including application-specific equipment such as sweepers for sidewalks and bikeways where standard maintenance equipment cannot be used.
- Coordinate with Division of Equipment to procure complete streets maintenance equipment.
- Develop and provide training to Maintenance staff on maintenance best practices for complete street facilities.
- Facilitate collection and maintenance of active transportation facility inventory and condition data to inform maintenance decisions.
- Develop, maintain, and update maintenance agreement templates for complete streets facilities.

Districts

- Maintain complete streets facilities on the SHS in accordance with maintenance policy, procedures, guidance, manuals, and standards.
- Develop, execute, and update, as needed, maintenance agreements with local agencies for complete street facilities that are mutually beneficial to both entities and protect the investments made in new infrastructure.
- Collaborate with Headquarters Divisions of Maintenance and Equipment to purchase or lease equipment necessary to maintain current and future complete streets facilities, including application-specific equipment such as sweepers for sidewalks and bikeways where standard maintenance equipment cannot be utilized.
- Maintain and use active transportation facility inventory and condition data to inform maintenance decisions.

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- Collaborate with Planning, Safety, and Complete Streets Coordinators to identify opportunities for complete streets improvements in Highway Maintenance projects.

Traffic Operations

Headquarters

- Develop, maintain, and update policy, procedures, guidance, and standards pertaining to the operations of facilities to improve access to destinations by walking, biking, transit, and passenger rail, including but not limited to temporary access during construction.
- Develop policy and framework for collecting and maintaining current pedestrian and bicycle count data.
- Develop, maintain, and update training, guidance, and procedures to improve encroachment permit application process for local agency-sponsored complete streets projects that are on or cross the SHS.
- Identify and develop proposals to address policy and procedural barriers to implementing locally-sponsored complete streets projects on and across the SHS.

Districts

- Collect and maintain current pedestrian and bicycle count data.
- Identify opportunities to leverage traffic control devices, where needed, to better facilitate the throughput of people walking, biking, and taking transit.
- Implement standard plans and specifications for temporary pedestrian, bicycle, and transit access routes during construction.
- Support the delivery of complete streets improvements in capital projects.
- Identify strategies to streamline the approval process for complete streets projects seeking encroachment permits.

Safety Programs

Headquarters

- Develop, maintain, and update policy, procedures, guidance, plans, documents, and technical assistance to proactively or responsively identify pedestrian and bicycle safety needs on the SHS.
- Develop and administer programs to investigate locations and provide recommendations for improvements at locations with pedestrian and bicycle safety needs.
- Identify opportunities to leverage traffic control devices, where needed, to better facilitate the throughput of people walking, biking, and taking transit.

Districts

- Develop and implement innovative, context-sensitive solutions to address the safety of vulnerable roadway users.

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- Investigate and implement countermeasures at locations with pedestrian and/or bicycle safety concerns/needs.
- Engage with internal functions and seek input from external stakeholders on pedestrian and bicycle safety needs during investigations.

Equipment

- Procure and provide training on equipment needed to maintain current and future complete streets facilities.
- Track and share with districts the national state of the practice for equipment used to maintain pedestrian, bicycle, and transit features.

Asset Management

Headquarters

- Track, monitor, and report on progress of complete streets as an asset in the SHSMP.
- Finalize funding and SHSMP performance targets for complete streets in the SHOPP.
- Support Districts in tracking and reporting on complete streets assets.

Districts

- Compile identified complete streets needs into SHOPP projects to support Districts in meeting performance targets.
- Regularly update Asset Management Tool with complete streets assets identified in all projects.
- Track and monitor progress of complete streets as an asset in the SHSMP and report progress to Headquarters Asset Management and Complete Streets Program Manager.

Local Assistance

Headquarters

- Provide support and technical assistance to local and regional agencies and Caltrans Districts applying for state or federal active transportation funding.
- Provide tools, training, and resources to support the successful delivery of local and regional active transportation projects on time, in scope, and within budget.

Districts

- Provide support and technical assistance to local and regional agencies and Caltrans Districts applying for state or federal active transportation funding.
- Provide tools, training, and resources to support the successful delivery of local and regional active transportation projects on time, in scope, and within budget.

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Legal

- Provide counsel and support on legal issues pertaining to complete streets policies, procedures, and projects.

District-Designated Complete Streets Coordinator(s)

- District Directors will designate complete streets coordinator(s).
- Work with PDTs to maximize opportunities for inclusion of complete streets in all project phases by actively participating in the pre-scoping, project initiation, and project development phases.
- Support the asset manager in tracking and monitoring complete streets assets.
- Assist with identifying project-specific complete streets needs throughout project planning, development, and delivery.
- Review and provide concurrence to decision documents related to complete streets.
- Work with other functions to provide technical assistance to local agency sponsored projects that are on or cross the SHS to incorporate complete streets elements.
- Collaborate with local and regional partners, advocacy and community groups, and District engineers to identify pedestrian, bicycle, and transit gaps to incorporate into planning documents and projects.
- Provide recommendations for partnerships and funding opportunities with local, regional, and state agencies.

Applicability

This policy applies to all Caltrans employees.



Taks Omishakin
Director

12/07/2021

Date Signed

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Appendix I USFWS Species List



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901

In Reply Refer To:
Project Code: 2024-0026450
Project Name: LA-39 Reopening

December 13, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location 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, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

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 Code 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:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

PROJECT SUMMARY

Project Code: 2024-0026450

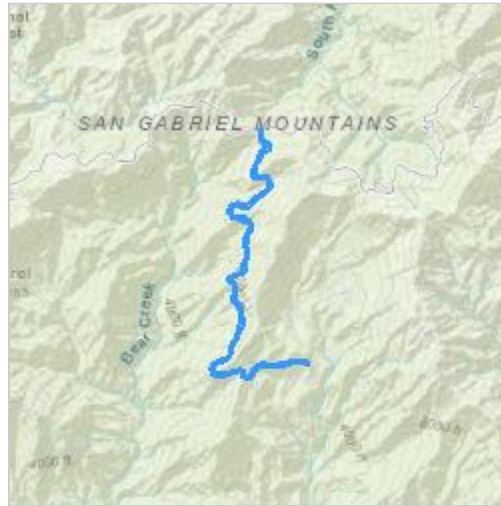
Project Name: LA-39 Reopening

Project Type: Road/Hwy - Maintenance/Modification

Project Description: Reopening of LA-39

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.3328879,-117.85446216473035,14z>



Counties: Los Angeles County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 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.

BIRDS

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: U.S.A. only, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
California Spotted Owl <i>Strix occidentalis occidentalis</i> Population: Coastal-Southern California No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7266	Proposed Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

REPTILES

NAME	STATUS
Southwestern Pond Turtle <i>Actinemys pallida</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4768	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Foothill Yellow-legged Frog <i>Rana boylei</i> Population: South Coast Distinct Population Segment (South Coast DPS) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5133	Endangered
Mountain Yellow-legged Frog <i>Rana muscosa</i> Population: Southern California DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8037	Endangered

FISHES

NAME	STATUS
Santa Ana Sucker <i>Catostomus santaanae</i> Population: 3 CA river basins There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 7

Name: Andrew Johnstone

Address: 100 S Main Street

City: Los Angeles

State: CA

Zip: 90012

Email: ajohnstone2006@gmail.com

Phone: 2133350056



Multiple Occurrences per Page
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (Crystal Lake (3411737))

<i>Batrachoseps gabrieli</i>		Element Code: AAAAD02110
San Gabriel slender salamander		
Listing Status:	Federal: None	CNDDDB Element Ranks: Global: G2G3
	State: None	State: S2S3
	Other: IUCN_DD-Data Deficient, USFS_S-Sensitive	
Habitat:	General: KNOWN ONLY FROM THE SAN GABRIEL MTNS. FOUND UNDER ROCKS, WOOD, AND FERN FRONDS, AND ON SOIL AT THE BASE OF TALUS SLOPES.	
	Micro: MOST ACTIVE ON THE SURFACE IN WINTER AND EARLY SPRING.	

Occurrence No.	1	Map Index: 43783	EO Index: 43783	Element Last Seen:	1995-03-31
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1995-03-31
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	2000-09-18

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.31487 / -117.83230	Accuracy:	non-specific area
UTM:	Zone-11 N3797382 E423422	Elevation (ft):	5000
PLSS:	T03N, R09W, Sec. 28 (S)	Acres:	215.2

Location: VICINITY OF SOLDIER CREEK, SLOPES ABOVE SOLDIER CRK, & HWY 39. ~0.7 MI SE OF CRYSTAL LAKE. CRYSTAL LAKE RECREATION AREA.
Detailed Location: COLLECTION SITES: SLOPES ABOVE SOLDIER CR,ELEV 5000 FT;CRYSTAL LK REC AREA,N FORK SAN GABRIEL RIVER,ELEV 5000 FT;.7 AIR MI ESE CRYSTAL LK ALONG SOLDIER CR,ELEV 5500 FT;.7 AIR MI ESE CRYSTAL LK,ELEV 5100 FT;.7 MI ESE CRYSTAL LK, ELEV 5700FT.

Ecological:
General: MVZ PARATYPES #S 178631-178646 COLLECTED 11 MAR 1982, #S 195577-196463 COLLECTED 31 MAR 1985. #S 215938-215948 COLLECTED 19 FEB 1989. #222957 COLLECTED 3 APR 1994. #S 222958-222961 COLLECTED 31 MAR 1995.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	2	Map Index: 43784	EO Index: 43784	Element Last Seen:	1997-02-04
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1997-02-04
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	2000-09-18

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.29120 / -117.83865	Accuracy:	non-specific area
UTM:	Zone-11 N3794762 E422816	Elevation (ft):	3600
PLSS:	T02N, R09W, Sec. 05 (S)	Acres:	617.0

Location: ADJACENT TO HIGHWAY 39, ABOUT 2 MILES SOUTH OF THE CRYSTAL LAKE GUARD STATION IN THE CRYSTAL LAKE RECREATION AREA.
Detailed Location: COLLECTION SITES IN ROCKBOUND CYN, ALPINE CYN & CLOUDBURST CYN. ALL SITES CLOSE TO HWY 39.
Ecological:
General: MVZ COLLECTIONS #S 223570-223571 COLLECTED 29 MAR 1996. MVZ #S 225947-225952 & 226686-226687 COLLECTED 17 JAN TO 4 FEB 1997.
Owner/Manager: USFS-ANGELES NF



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<i>Rana boylei</i> pop. 6		Element Code: AAABH01056	
foothill yellow-legged frog - south coast DPS			
Listing Status:	Federal: Endangered	CNDDB Element Ranks:	Global: G3T1
	State: Endangered		State: S1
	Other: BLM_S-Sensitive, USFS_S-Sensitive		
Habitat:	General: SOUTHERN COAST RANGES FROM MONTEREY BAY SOUTH THROUGH SAN GABRIEL MOUNTAINS; WEST OF THE SALINAS RIVER IN MONTEREY CO, SOUTH THROUGH TRANSVERSE RANGES, AND EAST THROUGH SAN GABRIEL MOUNTAINS. HISTORICALLY MAY HAVE RANGED TO BAJA CALIFORNIA.		
	Micro: PARTLY SHADED SHALLOW STREAMS AND RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS. NEEDS AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING AND AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS.		

Occurrence No.	73	Map Index:	A9692	EO Index:	111549	Element Last Seen:	1950-06-08
Occ. Rank:	None	Presence:	Extirpated	Site Last Seen:	2014-XX-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Decreasing	Record Last Updated:	2018-06-26		

Quad Summary: Glendora (3411727), Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long: 34.25024 / -117.86142 **Accuracy:** non-specific area

UTM: Zone-11 N3790238 E420683 **Elevation (ft):** 1750

PLSS: T02N, R09W, Sec. 19 (S) **Acres:** 147.0

Location: NORTH FORK SAN GABRIEL RIVER, 1 MI NORTH OF CAMP RINCON RANGER STATION, SAN GABRIEL MOUNTAINS, ANGELES NATIONAL FOREST.

Detailed Location: VICINITY OF BENCH MARK 1657 AND HOOT OWL FLAT UPSTREAM ABOUT 0.6 MILES TO DUE WEST OF BURRO PEAK. MAPPED TO SPECIMEN LOCALITIES AND WITH RESPECT TO 1940 TOPOGRAPHIC MAP.

Ecological: R. BOYLII WAS FIRST DISCOVERED IN THE SAN GABRIEL MOUNTAINS IN 1940 (EAST FORK). THIS POPULATION WAS STUDIED IN THE 1940S & 1950S BY ZWEIFEL AND SCHOENHERR. EXPERT OPINION IS THAT THEY WERE EXTIRPATED FROM HERE AROUND 1975-1978.

General: COLLECTED IN THIS AREA IN 1940 AND 1950. NOT FOUND BY INDEPENDENT RESEARCH CREWS IN SOUTHERN CALIFORNIA IN 1981-1993, 1988-1991, 2000, AND 2011-2014.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	74	Map Index:	A9700	EO Index:	111555	Element Last Seen:	1951-04-26
Occ. Rank:	None	Presence:	Extirpated	Site Last Seen:	2014-XX-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Decreasing	Record Last Updated:	2018-06-18		

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long: 34.26879 / -117.84551 **Accuracy:** non-specific area

UTM: Zone-11 N3792283 E422165 **Elevation (ft):** 2376

PLSS: T02N, R09W, Sec. 8 (S) **Acres:** 136.0

Location: NORTH FORK SAN GABRIEL RIVER, FROM BICHOTA MESA TO ABOUT 1 MILE N OF BICHOTA MESA, SAN GABRIEL MOUNTAINS, ANGELES NF.

Detailed Location: HISTORICALLY BOTH RANA BOYLII AND RANA MUSCOSA CO-OCCURRED HERE; NOW BOTH LIKELY EXTIRPATED.

Ecological: R. BOYLII WAS FIRST DISCOVERED IN THE SAN GABRIEL MOUNTAINS IN 1940 (EAST FORK). THIS POPULATION WAS STUDIED IN THE 1950S BY ZWEIFEL AND SCHOENHERR. EXPERT OPINION IS THAT THEY WERE EXTIRPATED FROM HERE AROUND 1975-1978.

General: COLLECTED IN THIS AREA IN 1950 AND 1951. NOT FOUND BY INDEPENDENT RESEARCH CREWS IN SOUTHERN CALIFORNIA IN 1981-1993, 1988-1991, 2000, AND 2011-2014.

Owner/Manager: USFS-ANGELES NF

<i>Rana muscosa</i>		Element Code: AAABH01330	
southern mountain yellow-legged frog			



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Listing Status:	Federal: Endangered	CNDDB Element Ranks:	Global: G1
	State: Endangered		State: S2
	Other: CDFW_WL-Watch List, IUCN_EN-Endangered, USFS_S-Sensitive		
Habitat:	General: DISJUNCT POPULATIONS KNOWN FROM SOUTHERN SIERRAS (NORTHERN DPS) AND SAN GABRIEL, SAN BERNARDINO, AND SAN JACINTO MTNS (SOUTHERN DPS). FOUND AT 1,000 TO 12,000 FT IN LAKES AND CREEKS THAT STEM FROM SPRINGS AND SNOWMELT. MAY OVERWINTER UNDER FROZEN LAKES.		
	Micro: OFTEN ENCOUNTERED WITHIN A FEW FEET OF WATER. TADPOLES MAY REQUIRE 2 - 4 YRS TO COMPLETE THEIR AQUATIC DEVELOPMENT.		

Occurrence No.	3	Map Index: 40551	EO Index: 35558	Element Last Seen:	2011-08-25
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2011-08-25
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2014-07-01
Quad Summary:	Crystal Lake (3411737), Waterman Mtn. (3411738)				
County Summary:	Los Angeles				

Lat/Long:	34.35759 / -117.88935	Accuracy:	non-specific area
UTM:	Zone-11 N3802164 E418214	Elevation (ft):	6040
PLSS:	T03N, R10W, Sec. 11 (S)	Acres:	185.0
Location:	LITTLE ROCK CREEK NEAR RATTLESNAKE SPRING, ABOUT 0.5 MI N OF CEDAR SPRINGS, AND 1 MI SW OF MOUNT WILLIAMSON, ANGELES NF.		
Detailed Location:	MAPPED TO PROVIDED COORDINATES AND MAPS. POPULATION NUMBERS ARE THE MINIMUM NUMBER OF ADULT, JUVENILE, AND/OR METAMORPHS CONFIRMED PER YEAR. 10 FROGS DETECTED DURING 1993-1999 SURVEYS, NO SPECIFIC DATA PROVIDED.		
Ecological:	HABITAT CONSISTS OF A ROCKY PERENNIAL STREAM WITH MANY POOLS; OVERSTORY CONSISTED OF WILLOWS, ALDERS, CEDARS, AND BIG CONE SPRUCE. FISH REMOVAL BARRIERS PLACED IN 2001. TWO-STRIPED GARTER SNAKES ALSO OBSERVED. TADPOLES OBSERVED REGULARLY.		
General:	15 FROGS OBSERVED IN 1993. 11 OBS 1995. 15+ (1 COLLECTED) OBS 1998. 5+ OBS 2000. 8+ OBS 2001. 11+ OBS 2002. 24+ OBS 2003. 26 OBS 2004. 2+ OBS 2005. 25+ OBS 2006. 19+ OBS 2007. 63+ OBS 2008. 137+ OBS 2009. 179+ OBS 2010. 95+ OBS 2011.		
Owner/Manager:	USFS-ANGELES NF		

Occurrence No.	61	Map Index: 42659	EO Index: 42659	Element Last Seen:	1970-XX-XX
Occ. Rank:	None		Presence: Possibly Extirpated	Site Last Seen:	1994-XX-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-04-23
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				

Lat/Long:	34.25761 / -117.75314	Accuracy:	80 meters
UTM:	Zone-11 N3790976 E430658	Elevation (ft):	2200
PLSS:	T02N, R08W, Sec. 18 (S)	Acres:	0.0
Location:	SAN GABRIEL RIVER BETWEEN SHOEMAKER CANYON AND LAUREL GULCH, SAN GABRIEL MOUNTAINS.		
Detailed Location:			
Ecological:			
General:	OBSERVATION IN 1970, NO RANA MUSCOSA FOUND WITHIN MILES OF THIS LOCATION DURING 1994 SURVEY.		
Owner/Manager:	USFS-ANGELES NF		



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Occurrence No.	62	Map Index:	42660	EO Index:	42660	Element Last Seen:	1975-XX-XX
Occ. Rank:	None	Presence:	Possibly Extirpated	Site Last Seen:			2009-08-05
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:			2012-10-15

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.30693 / -117.76315	Accuracy:	non-specific area
UTM:	Zone-11 N3796452 E429778	Elevation (ft):	4000
PLSS:	T03N, R08W, Sec. 31 (S)	Acres:	61.0

Location: IRON FORK AND LOWER END OF SOUTH FORK, ABOUT 1.2 MILES SSW OF ROSS MTN. & 2.6 MILES E OF SOUTH MT. HAWKINGS, ANGELES NF.

Detailed Location: MAPPED TO PROVIDED MAP. IRON FORK IS A TRIBUTARY OF THE SAN GABRIEL RIVER. ACCORDING TO JENNINGS, FISH WERE FOUND WITHIN THIS AREA. 1975 FROGS REFERENCED AS BEING OBSERVED BY T. FORD.

Ecological:

General: 2 OBSERVATIONS IN 1975 ATTRIBUTED TO T. FORD. 0 OBSERVED IN 2000 AND ON 5 AUG 2009.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	63	Map Index:	42663	EO Index:	42663	Element Last Seen:	1970-XX-XX
Occ. Rank:	None	Presence:	Possibly Extirpated	Site Last Seen:			2001-XX-XX
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:			2014-03-04

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.27182 / -117.84552	Accuracy:	non-specific area
UTM:	Zone-11 N3792619 E422166	Elevation (ft):	2800
PLSS:	T02N, R09W, Sec. 08 (S)	Acres:	128.7

Location: NORTH FORK SAN GABRIEL RIVER, FROM ABOUT BICHOTA MESA NORTH TO ABOUT 0.3 MILE BELOW COLDBROOK GUARD STATION.

Detailed Location: MAPPED TO PROVIDED MAP AND AREA DESCRIPTION. ZWEIFEL COLLECTIONS GIVE LOCALITY AS "N. FORK SAN GABRIEL RIVER, 3.7 MI FROM CAMP RINCON." RINCON STATION ABOUT 3 AIR MILES TO THE SOUTH.

Ecological:

General: 2 COLLECTED 14 APR 1950. 4 OBSERVED IN 1970. 0 DETECTED DURING 1993 SURVEYS. 0 DETECTED 12 OCT 2000. 0 DETECTED DURING 2001 SURVEYS.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	64	Map Index: 42667	EO Index: 42667	Element Last Seen:	1970-XX-XX
Occ. Rank:	None		Presence: Possibly Extirpated	Site Last Seen:	1970-XX-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-04-23

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.30022 / -117.83751	Accuracy:	80 meters
UTM:	Zone-11 N3795762 E422930	Elevation (ft):	3800
PLSS:	T03N, R09W, Sec. 32 (S)	Acres:	0.0

Location: SOLDIER CREEK BELOW FALLING SPRINGS, 1.5 MI SOUTH OF CRYSTAL LAKE RECREATION AREA. ANGELES NF.

Detailed Location:

Ecological:

General: OBSERVATION IN 1970.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	65	Map Index: 42668	EO Index: 42668	Element Last Seen:	1970-XX-XX
Occ. Rank:	None		Presence: Possibly Extirpated	Site Last Seen:	1970-XX-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-04-23

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.30099 / -117.84654	Accuracy:	non-specific area
UTM:	Zone-11 N3795854 E422099	Elevation (ft):	4000
PLSS:	T03N, R09W, Sec. 32 (S)	Acres:	57.3

Location: COLDBROOK CREEK AND UNNAMED TRIBUTARY, 1.5 MILES SOUTH OF CRYSTAL LAKE RECREATION AREA.

Detailed Location:

Ecological:

General: 1970 OBSERVATION FROM COLDBROOK CREEK. OBSERVATION IN UNNAMED TRIBUTARY STATES ONLY THAT IT IS AN "OLD MUSEUM RECORD".

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	109	Map Index:	73966	EO Index:	74962	Element Last Seen:	2012-08-21
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:		2012-08-21	
Occ. Type:	Natural/Native occurrence	Trend:	Stable	Record Last Updated:		2014-07-01	
Quad Summary:	Crystal Lake (3411737), Valyermo (3411747)						
County Summary:	Los Angeles						
Lat/Long:	34.38159 / -117.83064			Accuracy:	non-specific area		
UTM:	Zone-11 N3804780 E423635			Elevation (ft):	5020		
PLSS:	T03N, R09W, Sec. 04 (S)			Acres:	130.0		
Location:	SOUTH FORK BIG ROCK CREEK, UPSTREAM (SOUTH) FROM SOUTH FORK CAMPGROUND, AND 1.5 MILES WNW OF MT LEWIS, ANGELES NF.						
Detailed Location:	MAPPED TO PROVIDED COORDINATES & MAPS ALONG PORTION OF S FK BIG ROCK CREEK & TRIB UP MT LEWIS. USGS MONITORING SITE. POPULATION #S ARE THE MINIMUM NUMBER OF ADULT, JUVENILE, AND/OR METAMORPHS CONFIRMED PER YEAR. TADPOLES WERE ALSO OBSERVED.						
Ecological:	TWO-STRIPPED GARTER SNAKE (THAMNOPHIS HAMMONDII) ALSO OBSERVED IN 2001 AND 2004. STREAM SHIFTED IN 2003, ALLOWING TROUT TO BYPASS FISH BARRIER. MAJORITY OF POPULATION LOCATED IN UPPER REACHES, ABOVE FISH BARRIER, ALONG TRIBUTARY.						
General:	2 OBS 2000. 15+ OBSERVED IN 2001. 74 OBS IN 2002. 85+ AND 3 EGG MASSES OBS IN 2003. 100+ OBS IN 2004. 17+ OBS IN 2005. 197+ OBS IN 2006. 20+ OBS IN 2007. 12+ OBS IN 2008. 110+ OBS IN 2009. 123+ OBS IN 2010. 66+ OBS IN 2011. 70+ OBS IN 2012.						
Owner/Manager:	USFS-ANGELES NF						

<i>Empidonax traillii extimus</i>		Element Code: ABPAE33043
southwestern willow flycatcher		
Listing Status:	Federal: Endangered	CNDDB Element Ranks: Global: G5T2
	State: Endangered	State: S3
	Other:	
Habitat:	General: RIPARIAN WOODLANDS IN SOUTHERN CALIFORNIA.	
	Micro:	

Occurrence No.	72	Map Index:	86073	EO Index:	87110	Element Last Seen:	1997-07-09
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1997-07-09	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-07-09	
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.33840 / -117.85380			Accuracy:	1/5 mile		
UTM:	Zone-11 N3800008 E421465			Elevation (ft):	6130		
PLSS:	T03N, R09W, Sec. 20 (S)			Acres:	0.0		
Location:	IN THE VICINITY OF SNOW SPRING, ABOUT 1.3 AIR MI S OF SR2 AT SR39, ANGELES NATIONAL FOREST.						
Detailed Location:	MAPPED TO PROVIDED MAP AND LOCATION DESCRIPTION "SNOW SPRING."						
Ecological:	HABITAT CONSISTED OF WILLOW-ALDER RIPARIAN FOREST.						
General:	2 PAIRS (ONE LOCATED NEST) OBSERVED BETWEEN 21 MAY & 9 JUL 1997.						
Owner/Manager:	USFS-ANGELES NF						



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<i>Gila orcuttii</i>		Element Code: AFCJB13120	
arroyo chub			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G2
	State: None		State: S2
Other:	AFS_VU-Vulnerable, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive		
Habitat:	General: NATIVE TO STREAMS FROM MALIBU CREEK TO SAN LUIS REY RIVER BASIN. INTRODUCED INTO STREAMS IN SANTA CLARA, VENTURA, SANTA YNEZ, MOJAVE AND SAN DIEGO RIVER BASINS.		
	Micro: SLOW WATER STREAM SECTIONS WITH MUD OR SAND BOTTOMS. FEEDS HEAVILY ON AQUATIC VEGETATION AND ASSOCIATED INVERTEBRATES.		

Occurrence No.	18	Map Index: 02738	EO Index: 32426	Element Last Seen:	2003-07-15
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2003-07-15
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2004-04-07

Quad Summary: Mt. Baldy (3411726), Glendora (3411727), Mount San Antonio (3411736), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.25100 / -117.75914	Accuracy:	specific area
UTM:	Zone-11 N3790247 E430101	Elevation (ft):	2000
PLSS:	T02N, R08W, Sec. 19 (S)	Acres:	851.5

Location: EAST FORK SAN GABRIEL RIVER AND CATTLE CANYON CREEK (AKA CATTLE CREEK), TRIBUTARY TO SAN GABRIEL RESERVOIR.
Detailed Location: 2003: ONLY 1 CAPTURED IN SAMPLE STATION BY COYOTE FLAT. NONE TAKEN IN STATIONS IN CATTLE CANYON CREEK OR IN EAST FORK SAN GABRIEL BY SUSANNA CANYON.
Ecological: HABITAT CONSISTS OF A MONTANE STREAM, WITH COBBLE, BOULDERS, AND GRAVEL; NARROW AND DEEP IN PLACES. VEGETATED BY WILLOWS, ALDERS, AND OTHER OVERHANGING TREES. SANTA ANA SUCKER, SPECKLED DACE, AND RAINBOW TROUT ALSO FOUND AT THIS SITE.
General: 1999: 4 CAPTURED FROM 3 SAMPLE SECTIONS IN EAST FORK SAN GABRIEL & CATTLE CYN CR ON 18 JUN. 6 CAPTURED IN EAST FORK SAN GABRIEL ON 14 SEP. 4 CAPTURED IN EAST FORK SAN GABRIEL ON 14 DEC. 2003: 1 CAPTURED IN ELECTROFISHING SURVEY ON 15 JUL.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	31	Map Index: 02611	EO Index: 41925	Element Last Seen:	2003-07-10
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2003-07-10
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2004-04-06

Quad Summary: Glendora (3411727), Azusa (3411728), Crystal Lake (3411737), Waterman Mtn. (3411738)
County Summary: Los Angeles

Lat/Long:	34.24055 / -117.88430	Accuracy:	specific area
UTM:	Zone-11 N3789182 E418566	Elevation (ft):	1600
PLSS:	T02N, R10W, Sec. 24 (S)	Acres:	1242.9

Location: N & W FORKS SAN GABRIEL RIVER, ALSO BIG MERMAIDS CANYON CREEK & BEAR CREEK, D/S OF COGSWELL RES, 8 MILES N OF AZUSA.
Detailed Location: 2003: NONE OBSERVED IN 2 SAMPLING STATIONS IN WEST FORK SAN GABRIEL RIVER OR IN 2 SAMPLING STATIONS IN NORTH FORK SAN GABRIEL RIVER. 6 OBS IN LOWER BEAR CREEK.
Ecological: 1975: RIPARIAN COVER: ALDER, WILLOW, & OAK. 1999: RIPARIAN WITH POPULUS SP, PLATANUS RACEMOSA & SALIX SP. 2003: STREAM VARIES FROM WIDE & SHALLOW TO NARROW & DEEP.
General: 1999: 2 OBSERVED AT CONFLUENCE WITH BEAR CREEK. SPECKLED DACE AND SANTA ANA SUCKER ARE PRESENT THROUHGOUT BUT BECOME UNCOMMON AS ONE MOVES TOWARD COGSWELL DAM. 2003: 6 OBSERVED IN LOWER BEAR CREEK.
Owner/Manager: USFS-ANGELES NF



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Rhinichthys osculus ssp. 8		Element Code: AFCJB3705K	
Santa Ana speckled dace			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G5T1
	State: None		State: S1
Other:	AFS_TH-Threatened, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive		
Habitat:	General: HEADWATERS OF THE SANTA ANA AND SAN GABRIEL RIVERS. MAY BE EXTIRPATED FROM THE LOS ANGELES RIVER SYSTEM.		
	Micro: REQUIRES PERMANENT FLOWING STREAMS WITH SUMMER WATER TEMPS OF 17-20 C. USUALLY INHABITS SHALLOW COBBLE AND GRAVEL RIFFLES.		

Occurrence No.	3	Map Index: 41458	EO Index: 41458	Element Last Seen:	2003-07-15
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2003-07-15
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-11-19

Quad Summary:	Glendora (3411727), Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.23814 / -117.76509	Accuracy:	non-specific area		
UTM:	Zone-11 N3788826 E429542	Elevation (ft):	2000		
PLSS:	T02N, R08W, Sec. 19 (S)	Acres:	142.4		

Location:	SAN GABRIEL RIVER (EAST FORK), HEATON FLAT AREA, & LOWER END OF CATTLE CANYON CREEK. ENE OF SAN GABRIEL RESERVOIR DAM.				
Detailed Location:	2003: ELECTROFISHING SURVEY IN COYOTE FLAT AREA & LOWER CATTLE CYN CR. 2000 - 2001 SURVEY AT HEATON FLAT. 1999: SURVEYED BETWEEN COORDINATES: N 34 DEGREES 14'40.1", W 117 DEGREES 45' 43.6"; & N 34 DEGREES 14' 06.5", W 117 DEGREES 45' 58.5".				
Ecological:	MOUNTAINOUS STREAM WITH COBBLE, BOULDERS, & GRAVEL. WILLOWS, ALDERS & OTHER OVERHANGING TREES. NARROW & DEEP IN PLACES. CATOSTOMUS SANTAANAE & GILA ORCUTTI ALSO PRESENT.				
General:	FISH PRESENT 1970 - 1993. 1998: 166 OBS IN DEC. 1999: 280 OBS IN MAR, 245 IN JUN, 347 IN SEP & 267 IN DEC. 207 ADULTS, 214 JUV & 24 FRY OBS JUN 2000 - SEP 2001. 2003: 25 TAKEN IN ELECTROFISH SURVEY 26 JUN & 76 TAKEN ON 15 JULY.				
Owner/Manager:	UNKNOWN				

Occurrence No.	8	Map Index: 75008	EO Index: 41924	Element Last Seen:	2004-10-10
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2004-10-10
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2009-05-12

Quad Summary:	Glendora (3411727), Azusa (3411728), Crystal Lake (3411737), Waterman Mtn. (3411738)				
County Summary:	Los Angeles				
Lat/Long:	34.24065 / -117.88389	Accuracy:	specific area		
UTM:	Zone-11 N3789193 E418604	Elevation (ft):	1600		
PLSS:	T02N, R10W, Sec. 24 (S)	Acres:	830.0		

Location:	WEST FORK SAN GABRIEL RIVER (WFSGR), NORTH FORK SAN GABRIEL RIVER (NFSGR) & BEAR CREEK (BC), ANGELES NF.				
Detailed Location:	S1=WFSGR AT BC. S2=WFSGR AT LITTLE MERMAIDS CYN. S3=WFSGR BETWEEN NFSGR & RESERVOIR. S4=BC NEAR WFSGR. S5=BC AT LOWER BEAR CAMP. S6=BC AT WFBC. S7=BC 1 KM N OF WFBC. S8= BC 2 KM N OF WFBC. S9=NFSGR 1.1 MI N OF WFSGR. S10=NFSGR AT MAPLE CYN.				
Ecological:	1975: RIPARIAN COVER WAS ALDER, WILLOW & OAK. 1999: RIPARIAN WITH POPULUS SP, PLATANUS RACEMOSA & SALIX SP; SANTA ANA SUCKER & ARROYO CHUB ALSO PRESENT. 2003: STREAM VARIES FROM WIDE & SHALLOW TO NARROW & DEEP.				
General:	HISTORICALLY ABUNDANT IN WF&NF-SGR. WELLS OBS 20 AT S5, 7 AT S6, 16 AT S7, 34 AT S8, 56 AT S9 & 9 AT S10 IN 1975. DAVIS OBS 82 IN 1999. CHAPMAN OBS 51 IN 2001, 443 IN 2003, & 232 IN 2004. ALLY OBS 5 AT S2, 9 AT S4, & 0 AT S3 & NFSGR IN 2003.				
Owner/Manager:	USFS-ANGELES NF				



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Catostomus santaanae		Element Code: AFCJC02190	
Santa Ana sucker			
Listing Status:	Federal: Threatened	CNDDB Element Ranks:	Global: G1
	State: None		State: S1
	Other: AFS_TH-Threatened, IUCN_EN-Endangered		
Habitat:	General: ENDEMIC TO LOS ANGELES BASIN SOUTH COASTAL STREAMS.		
	Micro: HABITAT GENERALISTS, BUT PREFER SAND-RUBBLE-BOULDER BOTTOMS, COOL, CLEAR WATER, AND ALGAE.		

Occurrence No.	2	Map Index: 02738	EO Index: 14835	Element Last Seen:	2006-08-XX
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2006-08-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-11-19

Quad Summary: Mt. Baldy (3411726), Glendora (3411727), Mount San Antonio (3411736), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.25100 / -117.75914	Accuracy:	specific area
UTM:	Zone-11 N3790247 E430101	Elevation (ft):	2000
PLSS:	T02N, R08W, Sec. 19 (S)	Acres:	851.5

Location: EAST FORK SAN GABRIEL RIVER (EFSGR) & CATTLE CANYON/CREEK (CC).
Detailed Location: S1 = EFSGR, E SIDE OF CAMP OAK GROVE. S2 = EFSGR AT COYOTE FLAT. S3 = EFSGR ABOUT 0.7 MI N OF COYOTE FLAT. S4 = CC NEAR JUNCTION WITH DIME CANYON. EFSGR-N = EFSGR NORTH OF CC. SWIFT OBS THROUGHOUT EFSGR & CC. ALSO SEE OCC#3 FOR SKI OBS.
Ecological: MONTANE STREAM WITH COBBLE, BOULDERS, GRAVEL. OVERHANGING TREE CANOPY OF WILLOWS, ALDERS, AND MISC OTHERS. SKIDMORE MARKED HABITAT AS 'GOOD,' CHAPMAN, MARTIN & SAIKI MARKED IT AS 'EXCELLENT.'
General: '75: OBS IN CC & EFSGR-N. '97: 236 OBS IN EFSGR & 107 IN CC. '99: 369 OBS AT S2 & 164 AT S3. '00-'02: 300+ OBS AT HEATON FLAT. '03: 9 OBS AT S1, 22 AT S2 & 4 AT S4. '04: 376 OBS AT S1. '06: 16,496 OBS IN EF & WFSGR (SKI).
Owner/Manager: USFS-ANGELES NF

Occurrence No.	3	Map Index: 75007	EO Index: 28610	Element Last Seen:	2006-08-XX
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2006-08-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-05-06

Quad Summary: Glendora (3411727), Azusa (3411728), Crystal Lake (3411737), Waterman Mtn. (3411738)
County Summary: Los Angeles

Lat/Long:	34.24265 / -117.91970	Accuracy:	specific area
UTM:	Zone-11 N3789444 E415308	Elevation (ft):	1600
PLSS:	T02N, R10W, Sec. 22 (S)	Acres:	1293.0

Location: N FORK SAN GABRIEL RIVER, W FORK SAN GABRIEL RIVER, FROM 1 KM BELOW MOUTH OF E FORK, & BEAR CREEK (BC), ANGELES NF.
Detailed Location: S1=WFSGR AT BEAR CREEK. S2=WFSGR JUST WEST OF LITTLE MERMAIDS CYN. S3=WFSGR BETWEEN NFSGR & RESERVOIR. S4=WFSGR AT GLEN CAMPGROUND. S5=BC NEAR WFSGR. S6=BC 1.6 KM ABOVE WFSGR. S7=BC AT WEST FORK BC. S8=NFSGR 1.1 MI N OF WFSGR.
Ecological: 1975: RIPARIAN OF ALDER, WILLOW, & OAK. 1999: RIPARIAN W/ POPULUS, PLATANUS RACEMOSA & SALIX. 2003: STREAM VARIES FROM WIDE/SHALLOW TO NARROW/DEEP. ASSOC W/ SPECKLED DACE, RAINBOW TROUT N FORK; ASSOC W/ RAINBOW TROUT, BLACK BULLHEAD W FORK.
General: 1974: 4 OBS AT S4. 45 OBS IN '75. '99: 3 @ S1. '00: UNK # AT S3 & MANY JUV'S @ E FORK BRIDGE. '01: 15 @ S1. '02: 600+ LARV, JUV'S & YOY MOUTH OF W & E FORKS TO HWY 39. '03: 545 @ MULT STATIONS. '04: 74 AT S1. '06:16,496 AT EF&WFSGR (OCC#2).
Owner/Manager: USFS-ANGELES NF



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<i>Ovis canadensis nelsoni</i>		Element Code: AMALE04013	
desert bighorn sheep			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4T4
	State: None		State: S3
	Other: BLM_S-Sensitive, CDFW_FP-Fully Protected, USFS_S-Sensitive		
Habitat:	General: WIDELY DISTRIBUTED FROM THE WHITE MTNS IN MONO CO. TO THE CHOCOLATE MTS IN IMPERIAL CO.		
	Micro: OPEN, ROCKY, STEEP AREAS WITH AVAILABLE WATER AND HERBACEOUS FORAGE.		

Occurrence No.	11	Map Index:	02840	EO Index:	12418	Element Last Seen:	1986-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1986-XX-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Increasing	Record Last Updated:		1997-02-24	

Quad Summary: Mt. Baldy (3411726), Glendora (3411727), Mount San Antonio (3411736), Crystal Lake (3411737)
County Summary: Los Angeles, San Bernardino

Lat/Long:	34.27202 / -117.70587	Accuracy:	specific area
UTM:	Zone-11 N3792543 E435022	Elevation (ft):	6000
PLSS:	T02N, R08W, Sec. 10 (S)	Acres:	21043.8

Location: IRON MOUNTAIN AND AREA IN ROUGHLY A 4 MILE RADIUS, SAN GABRIEL MOUNTAINS.
Detailed Location: TOTAL POPULATION FOR THE ENTIRE MOUNTAIN RANGE IS APPROXIMATELY 715 INDIVIDUALS. TWO WINTER RANGES ARE INCLUDED WITHIN THE AREA.
Ecological:
General: POPULATION ESTIMATE OF 168 INDIVIDUALS. THE SAN GABRIEL MOUNTAIN RANGE HERDS ACT AS A SOURCE OF SHEEP FOR USE IN RELOCATION PROJECTS.
Owner/Manager: USFS-ANGELES NF



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<i>Phrynosoma blainvillii</i>		Element Code: ARACF12100	
coast horned lizard			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4
	State: None		State: S4
	Other: BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern		
Habitat:	General: FREQUENTS A WIDE VARIETY OF HABITATS, MOST COMMON IN LOWLANDS ALONG SANDY WASHES WITH SCATTERED LOW BUSHES.		
	Micro: OPEN AREAS FOR SUNNING, BUSHES FOR COVER, PATCHES OF LOOSE SOIL FOR BURIAL, AND ABUNDANT SUPPLY OF ANTS AND OTHER INSECTS.		

Occurrence No.	114	Map Index:	02648	EO Index:	28093	Element Last Seen:	1950-03-17
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1950-03-17	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-10-30	
Quad Summary:	Glendora (3411727), Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.23687 / -117.83090		Accuracy:	1 mile			
UTM:	Zone-11 N3788732 E423480		Elevation (ft):	1500			
PLSS:	T02N, R09W, Sec. 21 (S)		Acres:	0.0			
Location:	VICINITY OF SAN GABRIEL RIVER AT CONFLUENCE WITH MINERO CANYON, NE ARM OF SAN GABRIEL RESERVOIR.						
Detailed Location:	MAPPED TO 1950 LOCALITY, "E FORK SAN GABRIEL RIVER, 2 MI E CAMP RINCON." CAMP RINCON GUARD STATION ON 1940 TOPO MAP IS AT SAME APPROXIMATE LOCATION OF RINCON STATION ON CURRENT TOPO MAPS.						
Ecological:							
General:	LACM SPECIMEN #19849 COLLECTED BY ZWEIFEL ON 17 MAR 1950.						
Owner/Manager:	USFS-ANGELES NF						



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<i>Thamnophis hammondi</i>		Element Code: ARADB36160	
two-striped gartersnake			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G4
	State: None		State: S3S4
	Other: BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive		
Habitat:	General:	COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.	
	Micro:	HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.	

Occurrence No.	138	Map Index:	80362	EO Index:	81349	Element Last Seen:	2001-08-22
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		2001-08-22	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2010-10-12	

Quad Summary:	Crystal Lake (3411737), Valyermo (3411747)						
County Summary:	Los Angeles						
Lat/Long:	34.38098 / -117.83103		Accuracy:	non-specific area			
UTM:	Zone-11 N3804713 E423598		Elevation (ft):	5020			
PLSS:	T03N, R09W, Sec. 04 (S)		Acres:	209.0			
Location:	SOUTH FORK BIG ROCK CREEK, JUST S OF SOUTH FORK CAMPGROUND ABOUT 1.5 MI W OF MT LEWIS, 3.5 MI NE OF CEDAR SPRING (TOWN).						
Detailed Location:	MAPPED TO SURVEY REACH LOCATION MAP #9, ATTACHED TO REPORT BAC02R0002.						
Ecological:	USGS MONITORING SITE.						
General:	UNKNOWN NUMBER OF INDIVIDUALS OBSERVED DURING USGS FIELD SURVEY FOR RANA MUSCOSA ON 22 AUG 2001.						
Owner/Manager:	USFS-ANGELES NF						

Occurrence No.	140	Map Index:	80365	EO Index:	81353	Element Last Seen:	2001-07-12
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		2001-07-12	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2010-10-12	

Quad Summary:	Crystal Lake (3411737), Waterman Mtn. (3411738)						
County Summary:	Los Angeles						
Lat/Long:	34.36034 / -117.87990		Accuracy:	non-specific area			
UTM:	Zone-11 N3802462 E419086		Elevation (ft):	6145			
PLSS:	T03N, R10W, Sec. 12 (S)		Acres:	52.0			
Location:	LITTLE ROCK CREEK, JUST N OF EAGLE ROOST CAMPGROUND, ABOUT 0.6 MI NE OF CEDER SPRING, 1.4 MI SW OF MT WILLIAMSON.						
Detailed Location:	MAPPED TO SURVEY REACH LOCATION SHOWN ON MAP #16, ATTACHED TO REPORT BAC02R0002.						
Ecological:	USGS MONITORING SITE.						
General:	UNKNOWN NUMBER OF INDIVIDUALS WAS OBSERVED DURING USGS FIELD SURVEY FOR RANA MUSCOSA ON 12 JUL 2001.						
Owner/Manager:	USFS-ANGELES NF						



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Southern California Arroyo Chub/Santa Ana Sucker Stream		Element Code: CARE2330CA	
Southern California Arroyo Chub/Santa Ana Sucker Stream			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: GNR
	State: None		State: SNR
	Other:		
Habitat:	General:		
	Micro:		

Occurrence No.	2	Map Index:	35340	EO Index:	29446	Element Last Seen:	1983-XX-XX
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:	1983-XX-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1996-09-23		
Quad Summary:	Mt. Baldy (3411726), Glendora (3411727), Mount San Antonio (3411736), Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.26140 / -117.74829		Accuracy:	specific area			
UTM:	Zone-11 N3791393 E431108		Elevation (ft):	2000			
PLSS:	T02N, R08W, Sec. 17 (S)		Acres:	1011.6			
Location:	EAST FORK OF THE SAN GABRIEL RIVER, TRIBUTARY TO SAN GABRIEL RESERVOIR, IN LOS ANGELES COUNTY.						
Detailed Location:	FROM OUTLET ON SAN GABRIEL RESERVOIR UPSTREAM ABOUT 15 MILES ON THE EAST FORK TO THE NARROWS; ALSO UP THROUGH CATTLE CANYON TO THE LOWER 1-2 MILES OF COW CANYON.						
Ecological:	CONTAINS ARROYO CHUB (IN LOWER REACHES), SANTA ANA SUCKER, SANTA ANA SPECKLED DACE AND RAINBOW TROUT.						
General:	ONE OF THE FEW DRAINAGES TO HAVE ARROYO CHUB, SANTA ANA SUCKER AND SPECKLED DACE OCCURRING TOGETHER IN A DRAINAGE LARGE ENOUGH THAT THEY PRESENTLY DO NOT APPEAR THREATENED.						
Owner/Manager:	USFS-ANGELES NF						

Occurrence No.	3	Map Index:	02611	EO Index:	29447	Element Last Seen:	1983-XX-XX
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:	1983-XX-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1999-11-29		
Quad Summary:	Glendora (3411727), Azusa (3411728), Crystal Lake (3411737), Waterman Mtn. (3411738)						
County Summary:	Los Angeles						
Lat/Long:	34.24055 / -117.88430		Accuracy:	specific area			
UTM:	Zone-11 N3789182 E418566		Elevation (ft):	1600			
PLSS:	T02N, R10W, Sec. 24 (S)		Acres:	1242.9			
Location:	N & W FORKS SAN GABRIEL RIVER, ALSO BIG MERMAIDS CANYON CREEK & BEAR CREEK, D/S OF COGSWELL RES, ~8 MILES N OF AZUSA.						
Detailed Location:	CONTAINS ARROYO CHUB (ABUNDANT BELOW COGSWELL RESERVOIR), SANTA ANA SUCKER (COMMON, HEALTHY POP. IN NORTH FORK), SANTA ANA SPECKLED DACE (ABUNDANT IN LOWER REACHES OF BOTH FORKS) AND RAINBOW TROUT THROUGHOUT THE DRAINAGE.						
Ecological:	RIPARIAN COVER: ALDER, WILLOW, & OAK, 1975. RIPARIAN WITH POPULUS SP, PLATANUS RACEMOSA & SALIX SP, 1999.						
General:	THREE NATIVE & RARE FISH SPECIES OCCUR TOGETHER IN DRAINAGE LARGE ENOUGH THAT THEY DO NOT APPEAR THREATENED AT THE PRESENT TIME. 8 MILES OF WEST FORK MANAGED AS "FLY FISHING ONLY" WILD TROUT STREAM.						
Owner/Manager:	USFS-ANGELES NF						

Canyon Live Oak Ravine Forest		Element Code: CTT61350CA	
Canyon Live Oak Ravine Forest			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G3
	State: None		State: S3.3
	Other:		



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Habitat:	General:			
	Micro:			

Occurrence No.	14	Map Index: 02623	EO Index: 15720	Element Last Seen: 1935-XX-XX
Occ. Rank:	None	Presence: Extirpated	Site Last Seen: 1978-09-19	
Occ. Type:	Natural/Native occurrence	Trend: Unknown	Record Last Updated: 1998-08-02	

Quad Summary: Glendora (3411727), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.24726 / -117.84144	Accuracy:	specific area
UTM:	Zone-11 N3789892 E422519	Elevation (ft):	1680
PLSS:	T02N, R09W, Sec. 20 (S)	Acres:	121.5

Location: BURRO CANYON, NORTH OF SAN GABRIEL.
Detailed Location: EXTIRPATED BY PLACEMENT OF FILL REMOVED FROM SAN GABRIEL RESERVOIR.
Ecological: MAPPED BY WIESLANDER SURVEY (1935) AS CLOSED CANOPY QUERCUS CHRYSOLEPIS.
General: SEE [HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES](https://wildlife.ca.gov/Data/VegCamp/Natural-Communities) TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	15	Map Index: 02738	EO Index: 15718	Element Last Seen: 1978-09-19
Occ. Rank:	Unknown	Presence: Presumed Extant	Site Last Seen: 1978-09-19	
Occ. Type:	Natural/Native occurrence	Trend: Unknown	Record Last Updated: 1998-08-02	

Quad Summary: Mt. Baldy (3411726), Glendora (3411727), Mount San Antonio (3411736), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.25100 / -117.75914	Accuracy:	specific area
UTM:	Zone-11 N3790247 E430101	Elevation (ft):	1720
PLSS:	T02N, R08W, Sec. 19, NW (S)	Acres:	851.5

Location: TRIBUTARIES TO SAN DIMAS CANYON ABOUT 1/2 MILE D/S FROM WOLFSKILL CANYON.
Detailed Location: EXTANT, 1978, PER INTERPRETATION OF AERIAL PHOTOS. MAPPED WITHIN THE SAN DIMAS EXPERIMENTAL FOREST.
Ecological: MAPPED BY WIESLANDER SURVEY (1935) AS CLOSED CANOPY QUERCUS CHRYSOLEPIS AND Q. AGRIFOLIA.
General: SEE [HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES](https://wildlife.ca.gov/Data/VegCamp/Natural-Communities) TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager: USFS-ANGELES NF



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Occurrence No.	23	Map Index:	02670	EO Index:	15711	Element Last Seen:	1978-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1978-XX-XX	Record Last Updated:	1998-08-02
Occ. Type:	Natural/Native occurrence		Trend:	Unknown			
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.25698 / -117.82037			Accuracy:	specific area		
UTM:	Zone-11 N3790954 E424468			Elevation (ft):	2480		
PLSS:	T02N, R09W, Sec. 15 (S)			Acres:	105.8		
Location:	SUSANA CANYON, ABOUT 1 MILE NNW OF DOE FLAT D/S FOR ABOUT 1 MILE.						
Detailed Location:	EXTANT, 1978, PER INTERPRETATION OF AERIAL PHOTOS.						
Ecological:	MAPPED BY WIESLANDER SURVEY (1935) AS CLOSED CANOPY QUERCUS CHRYSOLEPIS.						
General:	NEEDS FIELD VERIFICATION OF VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.						
Owner/Manager:	USFS-ANGELES NF						

Occurrence No.	24	Map Index:	02592	EO Index:	15709	Element Last Seen:	1978-09-19
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1978-09-19	Record Last Updated:	1998-08-02
Occ. Type:	Natural/Native occurrence		Trend:	Unknown			
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.27646 / -117.84975			Accuracy:	specific area		
UTM:	Zone-11 N3793136 E421781			Elevation (ft):	2680		
PLSS:	T02N, R09W, Sec. 08 (S)			Acres:	61.9		
Location:	LOST CANYON FROM CONFLUENCE W/ SAN GABRIEL RIVER U/S FOR ABOUT 1/2 MILE.						
Detailed Location:	1978 EXTENT SHOWN, MAPPED FROM INTERPRETATION OF AERIAL PHOTOS.						
Ecological:	MAPPED BY WIESLANDER SURVEY (1935) AS CLOSED CANOPY QUERCUS CHRYSOLEPIS.						
General:	SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.						
Owner/Manager:	USFS-ANGELES NF						

Southern Sycamore Alder Riparian Woodland				Element Code: CTT62400CA			
Southern Sycamore Alder Riparian Woodland							
Listing Status:	Federal:	None		CNDDB Element Ranks:	Global:	G4	
	State:	None			State:	S4	
	Other:						
Habitat:	General:						
	Micro:						



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Occurrence No.	46	Map Index: 02483	EO Index: 15507	Element Last Seen:	1988-03-29
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	1988-03-29
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	1998-07-22
Quad Summary:	Glendora (3411727), Azusa (3411728), Crystal Lake (3411737), Waterman Mtn. (3411738)				
County Summary:	Los Angeles				
Lat/Long:	34.28570 / -117.87805		Accuracy:	specific area	
UTM:	Zone-11 N3794183 E419185		Elevation (ft):	1800	
PLSS:	T02N, R10W, Sec. 01 (S)		Acres:	3048.1	
Location:	SAN GABRIEL RIVER ABOVE SAN GABRIEL RESERVOIR, NORTH AND WEST FORKS AND TRIBUTARIES DOWNSTREAM OF COGSWELL RESERVOIR.				
Detailed Location:	FOREST SPARSE UP NORTH FORK FROM CONFLUENCE WITH FORK PATCHY FROM CONFLUENCE TO BEAR CREEK; UPSTREAM, DENSE ALDER.				
Ecological:	PATCHY ALNUS RHOMBIFOLIA. SOME BURNED 1987 BUT GOOD RECOVERY. WILLOW THICKETS, ASH & SYCAMORE PRESENT. SOME ALDER TO 50 FT, SENESCENT, MOST YOUNGER.				
General:	SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	47	Map Index: 02597	EO Index: 15506	Element Last Seen:	1978-09-19
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1978-09-19
Occ. Type:	Natural/Native occurrence		Trend: Decreasing	Record Last Updated:	1998-07-22
Quad Summary:	Mt. Baldy (3411726), Glendora (3411727), Mount San Antonio (3411736), Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.23594 / -117.81295		Accuracy:	specific area	
UTM:	Zone-11 N3788615 E425133		Elevation (ft):	1320	
PLSS:	T02N, R09W, Sec. 27 (S)		Acres:	1534.3	
Location:	SAN GABRIEL CANYON FROM SAN GABRIEL DAM U/S SEVERAL MILES, INCL PARTS OF CATTLE, COW, COLDWATER CANYONS.				
Detailed Location:	NOW EXTIRPATED BELOW SAN GABRIEL RESERVOIR. SPARSE ABOVE EL DORADO CAMPGROUND ON MAIN FORK, VARIED DENSITY IN OTHER CANYONS. MAY EXTEND UP COLDWATER CANYON.				
Ecological:	QUERCUS AGRIFOLIA, Q. CHRYSOLEPIS, ALNUS RHOMBIFOLIA & PLATANUS RACEMOSA FORMING CLOSED CANOPY ACCORDING TO WIESLANDER SURVEY.				
General:	VEG COMPOSITION UNKNOWN; NEEDS FIELDWORK. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.				
Owner/Manager:	USFS-ANGELES NF				



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Occurrence No.	74	Map Index: 02734	EO Index: 15481	Element Last Seen: 1978-09-19
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 1978-09-19
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 1998-07-22

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.28128 / -117.77644	Accuracy:	specific area
UTM:	Zone-11 N3793617 E428533	Elevation (ft):	3440
PLSS:	T02N, R09W, Sec. 12 (S)	Acres:	239.9

Location: DEVIL GULCH & RATTLESNAKE CANYON NEAR CONFLUENCE W/ SAN GABRIEL RIVER.
Detailed Location: EXTANT, 1978, PER AERIAL PHOTO INTERPRETATION.
Ecological: CLOSED CANOPY ALNUS RHOMBIFOLIA ACCORDING TO WIESLANDER SURVEY.
General: RECENT GROUND TRUTH NEEDED. SEE [HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES](https://wildlife.ca.gov/Data/VegCamp/Natural-Communities) TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	75	Map Index: 02744	EO Index: 15479	Element Last Seen: 1978-09-19
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 1978-09-19
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 1998-07-22

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.31724 / -117.73160	Accuracy:	specific area
UTM:	Zone-11 N3797574 E432690	Elevation (ft):	3640
PLSS:	T03N, R08W, Sec. 29 (S)	Acres:	1123.2

Location: IRON, SOUTH, AND FISH FORKS SAN GABRIEL RIVER AND ALDER GULCH, WEST OF SAN ANTONIO RIDGE, SAN GABRIEL MOUNTAINS.
Detailed Location:
Ecological: APPEARS TO BE CLOSED CANOPY QUERCUS CHRYSOLEPIS & ALNUS RHOMBIFOLIA FROM INTERPRETATION OF 1978 AERIAL PHOTOS.
General: RECENT GROUND TRUTH NEEDED. SEE [HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES](https://wildlife.ca.gov/Data/VegCamp/Natural-Communities) TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager: USFS-ANGELES NF



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Occurrence No.	76	Map Index:	02622	EO Index:	15480	Element Last Seen:	1978-09-19
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1978-09-19	Record Last Updated:	1998-07-22
Occ. Type:	Natural/Native occurrence	Trend:	Unknown				
Quad Summary:	Crystal Lake (3411737), Valyermo (3411747)						
County Summary:	Los Angeles						
Lat/Long:	34.37193 / -117.83604			Accuracy:	specific area		
UTM:	Zone-11 N3803712 E423130			Elevation (ft):	5320		
PLSS:	T03N, R09W, Sec. 04, SE (S)			Acres:	428.9		
Location:	SOUTH FORK BIG ROCK CREEK, BETWEEN MT WILLIAMSON & MT LEWIS.						
Detailed Location:	EXTANT, 1978, PER AERIAL PHOTO INTERPRETATION.						
Ecological:	CLOSED CANOPY ALNUS RHOMBIFOLIA ACCORDING TO WIESLANDER SURVEY.						
General:	RECENT GROUND TRUTH NEEDED. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.						
Owner/Manager:	USFS-ANGELES NF						

<i>Bombus crotchii</i>	Element Code: IIHYM24480						
Crotch bumble bee							
Listing Status:	Federal:	None	CNDDDB Element Ranks:	Global:	G2	State:	S2
	State:	Candidate Endangered					
	Other:	IUCN_EN-Endangered					
Habitat:	General:	COASTAL CALIFORNIA EAST TO THE SIERRA-CASCADE CREST AND SOUTH INTO MEXICO.					
	Micro:	FOOD PLANT GENERA INCLUDE ANTIRRHINUM, PHACELIA, CLARKIA, DENDROMECON, ESCHSCHOLZIA, AND ERIOGONUM.					

Occurrence No.	327	Map Index:	B6414	EO Index:	119472	Element Last Seen:	2019-07-13
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	2019-07-13	Record Last Updated:	2020-11-06
Occ. Type:	Natural/Native occurrence	Trend:	Unknown				
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.32921 / -117.83552			Accuracy:	2/5 mile		
UTM:	Zone-11 N3798976 E423140			Elevation (ft):	5878		
PLSS:	T03N, R09W, Sec. 21, SE (S)			Acres:	280.0		
Location:	ABOUT 1.0 MI NE OF CRYSTAL LAKE, BETWEEN DEER FLAT CAMPGROUND & WEST PINE FLAT, ANGELES NATIONAL FOREST.						
Detailed Location:	MAPPED TO PROVIDED COORDINATES; ACCURACY GIVEN AS 526M.						
Ecological:							
General:	1 OBSERVED AND PHOTOGRAPHED ON 13 JUL 2019.						
Owner/Manager:	USFS-ANGELES NF						



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<i>Euphydryas editha quino</i>		Element Code: IILEPK405L	
quino checkerspot butterfly			
Listing Status:	Federal: Endangered	CNDDDB Element Ranks:	Global: G4G5T1T2
	State: None		State: S1S2
Habitat:	General: SUNNY OPENINGS WITHIN CHAPARRAL AND COASTAL SAGE SHRUBLANDS IN PARTS OF RIVERSIDE AND SAN DIEGO COUNTIES.		
	Micro: HILLS AND MESAS NEAR THE COAST. NEED HIGH DENSITIES OF FOOD PLANTS PLANTAGO ERECTA, P. INSULARIS, AND ORTHOCARPUS PURPURESCENS.		

Occurrence No.	110	Map Index:	B0922	EO Index:	112804	Element Last Seen:	1968-04-24
Occ. Rank:	None	Presence:	Extirpated	Site Last Seen:			1968-04-24
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:			2018-10-02

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737), Mescal Creek (3411746), Valyermo (3411747), Juniper Hills (3411748)
County Summary: Los Angeles

Lat/Long:	34.40583 / -117.79425	Accuracy:	5 miles
UTM:	Zone-11 N3807441 E427003	Elevation (ft):	6155
PLSS:	T04N, R09W, Sec. 26 (S)	Acres:	49683.0

Location: PINYON RIDGE.
Detailed Location: EXACT LOCATION UNKNOWN; MAPPED GENERALLY TO THE CENTRAL AREA OF PINYON RIDGE.
Ecological:
General: 12 COLLECTED ON 13 APR 1963. 1 COLLECTED ON 24 APR 1968. THIS LOCALITY IS ALONG THE NORTHERN EXTENT OF THE SPECIES; A SPECIMEN REVIEW TO DOUBLE-CHECK THE ID MAY BE NEEDED. SPECIES CONSIDERED EXTIRPATED IN LOS ANGELES COUNTY BY THE USFWS.
Owner/Manager: USFS-ANGELES NF

<i>Oreonana vestita</i>		Element Code: PDAPI1G030	
woolly mountain-parsley			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G3
	State: None		State: S3
Habitat:	General: SUBALPINE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST, LOWER MONTANE CONIFEROUS FOREST.		
	Micro: HIGH RIDGES; ON SCREE, TALUS, OR GRAVEL. 800-3370 M.		



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Occurrence No.	13	Map Index: 35090	EO Index: 58398	Element Last Seen:	2011-08-13
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2011-08-13
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-24

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.35783 / -117.76486	Accuracy:	specific area
UTM:	Zone-11 N3802097 E429664	Elevation (ft):	9300
PLSS:	T03N, R08W, Sec. 7, SW (S)	Acres:	10.0

Location: MT BADEN-POWELL, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB ACCORDING TO 2005 BOGGS COORDINATES AND 2011 DAVIS COORDINATES, IN THE WEST 1/2 OF THE SW 1/4 OF SECTION 7. INCLUDES COLLECTIONS FROM "NORTH BALDY," A HISTORIC NAME FOR MT BADEN-POWELL.

Ecological: SUBALPINE ZONE, GRANITIC SOIL AND SCREE IN SOME AREAS. DOMINANT TREES ARE PINUS CONTORTA SSP. MURRAYANA, PINUS FLEXILIS. SHRUBS: CHRYSOLEPIS SEMPERVIRENS, HOLODISCUS MICROPHYLLUS, ARCTOSTAPHYLOS PATULA. HERBS: ERIOGONUM UMBELLATUM ETC.

General: N POLY: 50+ PLANTS SEEN IN 2005. S POLY: 40+ PLANTS SEEN IN 2011. 2011 SURVEY NOTES THAT PLANTS WERE FOUND ACROSS ALL AREAS OF SUMMIT EXCEPT EASTERN SLOPES. SEVERAL COLLECTIONS/PHOTOS FROM 1918 THROUGH 2008 ARE ALSO ATTRIBUTED TO THIS SITE.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	14	Map Index: 58364	EO Index: 58400	Element Last Seen:	2018-06-17
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2018-06-17
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-22

Quad Summary: Crystal Lake (3411737), Valyermo (3411747)

County Summary: Los Angeles

Lat/Long:	34.36797 / -117.80376	Accuracy:	non-specific area
UTM:	Zone-11 N3803250 E426095	Elevation (ft):	8000
PLSS:	T03N, R09W, Sec. 3, SE (S)	Acres:	111.0

Location: VICINITY OF DAWSON SADDLE AND MT LEWIS, SAN GABRIEL MOUNTAINS.

Detailed Location: 5 NON-SPECIFIC POLYS MAPPED BY CNDDDB. W POLY BASED ON A 1958 BACIGALUPI COLLECTION, E-MOST POLY BASED ON 2003 DENSLOW COORDS FOR A LINANTHUS CONCINNUS OBS, 2 S POLYS BASED ON 2004 MAP & 2018 COORDINATES, N POLY BASED ON 2015 HAWKE PHOTO.

Ecological: DRY OPEN STEEP TALUS, SCREE, AND ROCKY SLOPES IN JEFFREY PINE FOREST. ASSOCIATED WITH PINUS JEFFREYI, ARCTOSTAPHYLOS PATULA, CERCOCARPUS LEDIFOLIUS, ERIOGONUM SAXATILE, ETC. THE EASTERN POLYGON IS SITE OF LINANTHUS CONCINNUS EO #11.

General: PLANTS IN EASTERN POLYGON OBSERVED DURING 2003 SURVEY FOR LINANTHUS CONCINNUS (EO #11). 100+ PLANTS SEEN ALONG DAWSON SADDLE TRAIL IN 2002/2003. SEEN AT MT LEWIS IN 2015. SEEN IN S-MOST POLY IN 2018. INCLUDES OBS FROM 1958, 1969, & 2009.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	15	Map Index: 58365	EO Index: 58401	Element Last Seen:	2012-03-28
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2012-03-28
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-22

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34387 / -117.82917	Accuracy:	specific area
UTM:	Zone-11 N3800596 E423736	Elevation (ft):	8300
PLSS:	T03N, R09W, Sec. 16, W (S)	Acres:	10.0

Location: NEAR THE RIDGELINE ADJACENT TO PACIFIC CREST TRAIL AND LITTLE JIMMY SPRING, NEAR WINDY GAP, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB AS TWO POLYGONS ACCORDING TO COORDINATES IN A 2010 STRONG FIELD SURVEY AND A BOTHWELL 2011 FIELD SURVEY.

Ecological: DRY ROCKY RIDGES AND TALUS SLOPES, ALONG TRAIL WITH ALLIUM BURLEWII, PEDICULARIS SEMIBARBATA, CAULANTHUS AMPLEXICAULIS VAR. AMPLEXICAULIS, CALYPTRIDIIUM MONOSPERMUM, CEANOETHUS CORDULATUS, CHRYSOTHAMNUS NAUSEOSUS, HULSEA HETEROCHROMA, ETC.

General: 100S OF PLANTS SEEN IN 2010 AND 2011. 5 PLANTS SEEN DURING AN EARLY SEASON OBSERVATION IN 2012.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	16	Map Index: 58367	EO Index: 58403	Element Last Seen:	2016-08-15
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2016-08-15
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-04

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34491 / -117.83912	Accuracy:	non-specific area
UTM:	Zone-11 N3800719 E422822	Elevation (ft):	8100
PLSS:	T03N, R09W, Sec. 17, E (S)	Acres:	22.0

Location: NEAR SUMMIT OF MOUNT ISLIP, SAN GABRIEL MOUNTAINS.

Detailed Location: 2 POLYGONS MAPPED BY CNDDDB. WESTERN POLYGON IS NON-SPECIFIC, MAPPED NEAR SUMMIT OF MOUNT ISLIP BASED ON TWO COLLECTIONS FROM 8100 AND 8200 FEET ELEVATION. EASTERN POLYGON IS BASED ON 2016 MORSE COORDINATES.

Ecological: DRY GRANITIC GRAVEL OF RIDGE. NORTH SLOPES IN UNDERSTORY OF JEFFREY/SUGAR PINE/WHITE FIR FOREST. ASSOCIATED W/ ABIES CONCOLOR, ALLIUM BURLEWII, CALYPTRIDIIUM MONOSPERMUM, CEANOETHUS CORDULATUS, CHRYSOTHAMNUS NAUSEOSUS, ELYMUS ELYMOIDES, ETC.

General: WESTERN POLYGON IS BASED ON A 1930 EWAN COLLECTION AND 1931 FOSBERG COLLECTION. SEEN IN EASTERN POLYGON IN 2016. INCLUDES A 2008 FRAGA COLLECTION FROM "N SLOPE OF MT ISLIP FROM LITTLE JIMMY CAMPGROUND TO SUMMIT, SW 1/4 SEC 16."

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	17	Map Index: 58370	EO Index: 58406	Element Last Seen: 1983-07-18
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 1983-07-18
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 2004-12-07

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.35360 / -117.83539	Accuracy:	1/5 mile
UTM:	Zone-11 N3801679 E423172	Elevation (ft):	7000
PLSS:	T03N, R09W, Sec. 09, SW (S)	Acres:	0.0

Location: SAN GABRIEL MOUNTAINS, PINE HOLLOW.

Detailed Location: MAPPED IN VICINITY OF PINE HOLLOW PICNIC AREA ALONG HIGHWAY 2.

Ecological: RARE ON ROCKY SLOPE IN YELLOW PINE FOREST. ASSOCIATED WITH SENECIO SP., PEDICULARIS SP., CALOCHORTUS SP., LUPINUS SP., ETC.

General: ONLY SOURCE IS 1983 COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	18	Map Index: 28855	EO Index: 58408	Element Last Seen: 2008-07-02
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 2008-07-02
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 2019-01-07

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.36221 / -117.85576	Accuracy:	specific area
UTM:	Zone-11 N3802650 E421308	Elevation (ft):	7169
PLSS:	T03N, R09W, Sec. 7, NE (S)	Acres:	13.0

Location: SAN GABRIEL MOUNTAINS, 0.5 AND 0.7 MI NORTH OF ISLIP SADDLE ON TRAIL TO MT WILLIAMSON.

Detailed Location: 2 POLYGONS MAPPED ACCORDING TO 2003 GROSS COORDINATES AND 2008 FRAGA COORDINATES, IN THE SE 1/4 OF THE NE 1/4 OF SECTION 7.

Ecological: ON ESE TALUS SLOPE ABOVE THE TRAIL BELOW, IN PINE FOREST. ASSOCIATED WITH PINUS JEFFREYI, P. LAMBERTIANA, ABIES CONCOLOR, ARCTOSTAPHYLOS PATULA, YUCCA WHIPPLEI, AND RARE PLANTS LINANTHUS CONCINNUS AND HULSEA VESTITA SSP. GABRIELENIS.

General: MAIN SOURCES OF INFORMATION FOR THIS SITE ARE A 2003 GROSS COLLECTION AND A 2008 FRAGA COLLECTION.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	25	Map Index: 58934	EO Index: 58970	Element Last Seen: 1977-10-16
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 1977-10-16
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 2004-12-21

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long: 34.35052 / -117.79915 **Accuracy:** 1/5 mile

UTM: Zone-11 N3801311 E426503 **Elevation (ft):** 9100

PLSS: T03N, R09W, Sec. 14, NW (S) **Acres:** 0.0

Location: SAN GABRIEL MOUNTAINS, THROOP PEAK.

Detailed Location: MAPPED FROM COLLECTION INFORMATION: "THROOP PEAK TRAIL, 9100 FEET." TRAIL RUNS FROM DAWSON SADDLE TO JOIN THE PCT EAST OF THROOP PEAK, BUT 9100 FEET IS NEARLY AT SUMMIT OF THROOP PEAK, SO MAPPED AS BEST GUESS IN VICINITY OF THROOP PEAK.

Ecological:

General: ONLY SOURCE IS 1977 COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	34	Map Index: 85419	EO Index: 86434	Element Last Seen: 1993-06-03
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen: 1993-06-03
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 2012-03-20

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long: 34.37106 / -117.75584 **Accuracy:** 80 meters

UTM: Zone-11 N3803558 E430503 **Elevation (ft):** 7287

PLSS: T03N, R08W, Sec. 06, SW (S) **Acres:** 0.0

Location: MOUNT BADEN POWELL TRAIL, ABOUT 0.8 ROAD MILE SOUTH OF INTERSECTION WITH ANGELES CREST HWY, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB ACCORDING TO COORDINATES FROM A 2011 DAVIS FIELD SURVEY IN THE E 1/2 OF THE SW 1/4 OF SECTION 6.

Ecological: N-FACING SLOPE OF GANITIC SCREE. SUBALPINE ZONE. DOMINANT TREES ARE PINUS CONTORTA SSP. MURRAYANA, PINUS MONOPHYLLA. WITH CHRYSOLEPIS SEMPERVIRENS, DRABA CORRUGATA VAR. CORRUGATA, ERIOGONUM UMBELLATUM VAR. MINUS, AND PENSTEMON SP.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 2011 DAVIS FIELD SURVEY; 15 PLANTS SEEN.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	35	Map Index: 85421	EO Index: 86436	Element Last Seen:	1970-07-25
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1970-07-25
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-03-13

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.31635 / -117.80946	Accuracy:	1/10 mile
UTM:	Zone-11 N3797530 E425525	Elevation (ft):	7500
PLSS:	T03N, R09W, Sec. 27 (S)	Acres:	0.0

Location: HELIPORT 0.3 MILE NORTH OF SOUTH MT HAWKINS, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB AROUND THE HELIPORT JUST NORTH OF SOUTH MT HAWKINS ACCORDING TO A 1970 WHEELER COLLECTION.

Ecological: BULLDOZED ROAD BERM OF SHATTERED ROCK.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1970 WHEELER COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	36	Map Index: 85428	EO Index: 86440	Element Last Seen:	1990-06-25
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1990-06-25
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-03-13

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.33133 / -117.84883	Accuracy:	non-specific area
UTM:	Zone-11 N3799221 E421916	Elevation (ft):	7450
PLSS:	T03N, R09W, Sec. 20, W (S)	Acres:	71.0

Location: RIDGE TOP TO THE NNW OF CRYSTAL LAKE (RIDGE DESCENDING SSW FROM MT ISLIP), SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB ALONG RIDGE NNW OF CRYSTAL LAKE FROM ELEVATIONS OF 7320 FT (2230 M) TO 7600 FT (2310 M) ACCORDING TO A 1990 ROSS COLLECTION.

Ecological: ON SCREE SLOPE.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1990 ROSS COLLECTION; MENTIONED AS LOCALLY "UNCOMMON." NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	45	Map Index: B1860	EO Index: 113779	Element Last Seen:	2011-08-05
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2011-08-05
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-08

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34111 / -117.80555	Accuracy:	1/10 mile
UTM:	Zone-11 N3800273 E425907	Elevation (ft):	8800
PLSS:	T03N, R09W, Sec. 15, SE (S)	Acres:	18.0

Location: SUMMIT OF MOUNT HAWKINS, HIGH POINT OF COPTER RIDGE, 0.6 MILE SSE OF HIGHWAY 2, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED AROUND THE SUMMIT OF MT HAWKINS.

Ecological: ON OPEN GRAVEL SURFACES.

General: MAIN SOURCE FOR THIS SITE IS A 2011 SWINNEY COLLECTION. 100S OF PLANTS SEEN ALONG THIS RIDGELINE (POSSIBLY INCLUDING EOS 15 & 46) IN 2010. INCLUDES A 1947 ERNST COLLECTION FROM "MT HAWKINS, ON THE SUMMITS OF, TOP OF SAN GABRIEL CYN."

Owner/Manager: USFS-ANGELES NF

Occurrence No.	46	Map Index: B1861	EO Index: 113780	Element Last Seen:	2010-05-12
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2010-05-12
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-08

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34047 / -117.81719	Accuracy:	non-specific area
UTM:	Zone-11 N3800210 E424836	Elevation (ft):	8300
PLSS:	T03N, R09W, Sec. 15, SW (S)	Acres:	32.0

Location: RIDGE TRAIL, 0.7 MILE WEST OF MT HAWKINS, SAN GABRIEL MOUNTAINS.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB ALONG THE PACIFIC CREST TRAIL AROUND 0.7 MILE WEST OF THE SUMMIT OF MT HAWKINS, AROUND GIVEN ELEVATION OF 8300 FT.

Ecological: YELLOW PINE FOREST.

General: MAIN SOURCE FOR THIS SITE IS A 1981 SAWYER COLLECTION. 100S OF PLANTS SEEN ALONG THIS RIDGELINE (POSSIBLY INCLUDING EOS 15 & 45) IN 2010. INCLUDES A 1971 THORNE COLLECTION FROM "ALONG TRAIL FROM WINDY GAP TO MT HAWKINS, 8000 FT."

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	47	Map Index: B1862	EO Index: 113783	Element Last Seen:	2015-05-01
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2015-05-01
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-22
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.37151 / -117.84183		Accuracy:	80 meters	
UTM:	Zone-11 N3803671 E422598		Elevation (ft):	5950	
PLSS:	T03N, R09W, Sec. 5, SE (S)		Acres:	5.0	
Location:	ALONG TRAIL ON EAST SIDE OF MT WILLIAMSON, ABOUT 1.2 AIR MILES NNE OF ISLIP SADDLE.				
Detailed Location:	MAPPED ACCORDING TO 2015 HAWKE COORDINATES, IN THE NW 1/4 OF THE SE 1/4 OF SECTION 5.				
Ecological:					
General:	20+ PLANTS OBSERVED IN 2015.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	48	Map Index: B1864	EO Index: 113784	Element Last Seen:	2005-05-23
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2005-05-23
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-08
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.36392 / -117.86996		Accuracy:	80 meters	
UTM:	Zone-11 N3802851 E420004		Elevation (ft):	6900	
PLSS:	T03N, R09W, Sec. 7, NW (S)		Acres:	5.0	
Location:	KRATKA RIDGE, TRAIL TO MOUNT WILLIAMSON 0.25 KM NORTH OF HIGHWAY 2, SAN GABRIEL MOUNTAINS.				
Detailed Location:	MAPPED AS BEST GUESS BY CNDDDB BASED ON GIVEN DESCRIPTION AND ELEVATION.				
Ecological:	IN OPEN, GRAVELLY GRANITIC SOIL. JEFFREY PINE AND SUGAR PINE.				
General:	SITE IS BASED ON A 2005 WILSON COLLECTION.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	55	Map Index: B1878	EO Index: 113798	Element Last Seen:	2017-05-29
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2017-05-29
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-08
Quad Summary:	Crystal Lake (3411737), Valyermo (3411747)				
County Summary:	Los Angeles				
Lat/Long:	34.37539 / -117.86392		Accuracy:	80 meters	
UTM:	Zone-11 N3804118 E420570		Elevation (ft):	8230	
PLSS:	T03N, R09W, Sec. 6, NW (S)		Acres:	5.0	
Location:	WEST SUMMIT RIDGE OF MT WILLIAMSON, ABOUT 1.5 AIR MILES NORTHWEST OF ISLIP SADDLE.				
Detailed Location:	MAPPED ACCORDING TO 2017 THOMPSON COORDINATES, IN THE SE 1/4 OF THE NW 1/4 OF SECTION 6.				
Ecological:	FULL SUN, GRAVEL.				
General:	100+ PLANTS OBSERVED IN 2017. A 1974 GRANGER COLLECTION FROM "MT WILLIAMSON PEAK, 8124 FT ELEVATION" IS ALSO ATTRIBUTED TO THIS OCCURRENCE.				
Owner/Manager:	USFS-ANGELES NF				



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<i>Symphotrichum defoliatum</i>		Element Code: PDASTE80C0	
San Bernardino aster			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G2
	State: None		State: S2
Other:	Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank, USFS_S-Sensitive		
Habitat:	General:	MEADOWS AND SEEPS, CISMONTANE WOODLAND, COASTAL SCRUB, LOWER MONTANE CONIFEROUS FOREST, MARSHES AND SWAMPS, VALLEY AND FOOTHILL GRASSLAND.	
	Micro:	VERNALLY MESIC GRASSLAND OR NEAR DITCHES, STREAMS AND SPRINGS; DISTURBED AREAS. 3-2045 M.	

Occurrence No.	38	Map Index:	60557	EO Index:	60593	Element Last Seen:	1978-10-02
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1978-10-02	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2010-04-27	
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.30064 / -117.84047		Accuracy:	2/5 mile			
UTM:	Zone-11 N3795810 E422657		Elevation (ft):	4000			
PLSS:	T03N, R09W, Sec. 32, SE (S)		Acres:	0.0			
Location:	ON ROAD BANK OF HIGHWAY 39, FALLING SPRNGS.						
Detailed Location:	MAPPED BY CNDDDB AS BEST GUESS WHERE WATER CROSSES SR 39 WITHIN SECTION 32 (TRS ON COLLECTION LABEL).						
Ecological:	ROAD BANK WITH SPRING WATER.						
General:	A 1978 BRAYTON COLLECTION IS THE ONLY SOURCE OF INFORMATION FOR THIS SITE. NEEDS FIELDWORK.						
Owner/Manager:	USFS-ANGELES NF						

<i>Symphotrichum greatae</i>		Element Code: PDASTE80U0	
Greata's aster			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G2
	State: None		State: S2
Other:	Rare Plant Rank - 1B.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		
Habitat:	General:	CHAPARRAL, CISMONTANE WOODLAND, BROADLEAFED UPLAND FOREST, LOWER MONTANE CONIFEROUS FOREST, RIPARIAN WOODLAND.	
	Micro:	MESIC CANYONS. 335-2015 M.	



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Occurrence No.	7	Map Index: 98558	EO Index: 58454	Element Last Seen:	2010-09-13
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2010-09-13
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2015-12-18

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.30083 / -117.84389	Accuracy:	80 meters
UTM:	Zone-11 N3795835 E422343	Elevation (ft):	4080
PLSS:	T03N, R09W, Sec. 32, SE (S)	Acres:	5.0

Location: ABOUT 0,6 MILE WEST OF FALLING SPRINGS ALONG HWY 39/CRYSTAL LAKE RD, HEADWATERS OF EAST FORK COLDBROOK CREEK.

Detailed Location: AT HORSESHOE CURVE. AREA BURNED IN CURVE FIRE OF 2002. MAPPED IN THE NW 1/4 OF THE SE 1/4 OF SECTION 32 ACCORDING TO 2010 SWINNEY COORDINATES.

Ecological: S-FACING SLOPE WITH WELL DEVELOPED, FINE-GRAINED SOIL. RIPARIAN VEGETATION IRRIGATED BY RUNOFF FROM SPRING/PONDS TO IMMEDIATE NORTH (ADJ TO CABIN); SURROUNDED BY CHAPARRAL, DOMINANTS INCLUDE SOLIDAGO SPECTABILIS, EPIPACTIS GIGANTEA, ETC.

General: MAIN SOURCE OF INFORMATION IS A 2010 SWINNEY COLLECTION. 1967 THORNE COLLECTION FROM "YUCCA FLATS SUMMER HOME TRACT, UPPER END OF NORTH FORK SAN GABRIEL RIVER, 4100 FT" ATTRIBUTED HERE BASED ON GIVEN ELEVATION.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	8	Map Index: 28860	EO Index: 58465	Element Last Seen:	1974-09-01
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1974-09-01
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2004-12-09

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.33672 / -117.83085	Accuracy:	80 meters
UTM:	Zone-11 N3799804 E423576	Elevation (ft):	6600
PLSS:	T03N, R09W, Sec. 21, NW (S)	Acres:	0.0

Location: BIG CIENEGA SPRING, 1.5 AIR MILES NNE OF CRYSTAL LAKE, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED IN THE NE 1/4 OF NW 1/4 OF SEC 21.

Ecological: ON LOAMY SOIL IN SUNNY DRIER EDGE OF GRASSY MEADOW IN YELLOW PINE FOREST. SUSPECTED FOOD PLANT OF PHYCIODES CAMPESTRIS IN THIS AREA.

General: ONLY SOURCE IS 1974 COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	9	Map Index: 58438	EO Index: 58474	Element Last Seen:	1931-08-10
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1931-08-10
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2004-12-09

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long: 34.31825 / -117.83662 **Accuracy:** 2/5 mile

UTM: Zone-11 N3797761 E423027 **Elevation (ft):** 5300

PLSS: T03N, R09W, Sec. 28, W (S) **Acres:** 0.0

Location: PINE FLATS, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED IN THE VICINITY OF WEST PINE FLAT AT ELEVATION PROVIDED BASED ON COLLECTION AT "PINE FLATS, 5300 FEET."

Ecological: ALONG STREAM.

General: BASED ON A 1917 GRINNELL COLLECTION. 1931 FOSBERG COLLECTION FROM "LOWER PINE FLATS, FIRST CAMP, 1500 METERS ELEVATION" (FOSBERG #5630) ALSO ATTRIBUTED HERE. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	22	Map Index: 58653	EO Index: 58689	Element Last Seen:	1975-09-22
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1975-09-22
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2004-12-15

Quad Summary: Glendora (3411727), Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long: 34.25677 / -117.79772 **Accuracy:** non-specific area

UTM: Zone-11 N3790914 E426553 **Elevation (ft):**

PLSS: T02N, R09W, Sec. 14 (S) **Acres:** 241.6

Location: GRAVEYARD CANYON, SAN GABRIEL MOUNTAINS.

Detailed Location: NO ELEVATION PROVIDED, SO MAPPED BY CNDDDB ALONG ENTIRE LENGTH OF GRAVEYARD CANYON.

Ecological: SUNNY MOIST STREAM SIDE.

General: ONLY SOURCE IS 1975 COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF



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<i>Nemacladus secundiflorus var. robbinsii</i>		Element Code: PDCAM0F0B2
Robbins' nemacladus		
Listing Status:	Federal: None	CNDDB Element Ranks: Global: G3T2
	State: None	State: S2
	Other: Rare Plant Rank - 1B.2, USFS_S-Sensitive	
Habitat:	General: CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND.	
	Micro: DRY, SANDY OR GRAVELLY SLOPES. OPENINGS. 360-1710 M.	

Occurrence No.	1	Map Index: 79321	EO Index: 80303	Element Last Seen:	1929-05-19
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1929-05-19
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-07-07
Quad Summary:	Mount San Antonio (3411736), Crystal Lake (3411737), Waterman Mtn. (3411738), Mescal Creek (3411746), Valyermo (3411747), Juniper Hills (3411748)				
County Summary:	Los Angeles				
Lat/Long:	34.41965 / -117.81712		Accuracy:	5 miles	
UTM:	Zone-11 N3808990 E424912		Elevation (ft):		
PLSS:	T04N, R09W, Sec. 22 (S)		Acres:	0.0	
Location:	BIG ROCK CREEK, SAN GABRIEL MOUNTAINS.				
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED BY CNDDB TO ENCOMPASS THE ENTIRE CREEK WITHIN THE SAN GABRIEL MOUNTAINS.				
Ecological:	SANDY SLOPE.				
General:	OCCURRENCE KNOWN ONLY FROM A 1929 COLLECTION BY HOFFMANN. IDENTIFICATION OF SPECIMEN IS SOMEWHAT UNCERTAIN, COULD ALSO BE N. S. VAR. SECUNDIFLORUS OR MIXED WITH N. SIGMOIDEUS. NEEDS FIELDWORK.				
Owner/Manager:	UNKNOWN				

<i>Dudleya cymosa ssp. crebrifolia</i>		Element Code: PDCRA040A8
San Gabriel River dudleya		
Listing Status:	Federal: None	CNDDB Element Ranks: Global: G5T2
	State: None	State: S2
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	
Habitat:	General: CHAPARRAL.	
	Micro: ON GRANITE CLIFFS AND OUTCROPS, SURROUNDED BY SCRUB. 365-1250 M.	

Occurrence No.	6	Map Index: A5544	EO Index: 107279	Element Last Seen:	2011-04-20
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2011-04-20
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2017-07-26
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.25737 / -117.85854		Accuracy:	specific area	
UTM:	Zone-11 N3791026 E420954		Elevation (ft):	2000	
PLSS:	T02N, R09W, Sec. 18, SE (S)		Acres:	1.0	
Location:	WEST SIDE OF SAN GABRIEL CANYON ROAD, ABOUT 0.8 AIR MILE WSW OF BICHOTA MESA, WEST OF BURRO PEAK.				
Detailed Location:	MAPPED IN THE NE 1/4 OF THE SE 1/4 OF SECTION 18.				
Ecological:					
General:	5 PLANTS OBSERVED IN 2011.				
Owner/Manager:	USFS-ANGELES NF				



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Dudleya densiflora		Element Code: PDCRA040B0	
San Gabriel Mountains dudleya			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.1, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: CHAPARRAL, COASTAL SCRUB, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST, RIPARIAN FOREST.		
	Micro: IN CREVICES AND ON DECOMPOSED GRANITE ON CLIFFS AND CANYON WALLS. 270-1100 M.		

Occurrence No.	14	Map Index:	A4066	EO Index:	105739	Element Last Seen:	XXXX-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		Record Last Updated:	2017-03-23
Occ. Type:	Natural/Native occurrence	Trend:	Unknown				

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.34504 / -117.83991	Accuracy:	1 mile
UTM:	Zone-11 N3800733 E422750	Elevation (ft):	
PLSS:	T03N, R09W, Sec. 17 (S)	Acres:	1987.0

Location: MT ISLIP.
Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB IN THE GENERAL VICINITY OF MT ISLIP.
Ecological:
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN UNDATED DAVIDSON COLLECTION. NEEDS FIELDWORK.
Owner/Manager: USFS-ANGELES NF



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<i>Arctostaphylos glandulosa ssp. gabrielensis</i>		Element Code: PDERI042P0	
San Gabriel manzanita			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G5T3
	State: None		State: S3
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: CHAPARRAL.		
	Micro: ROCKY OUTCROPS; CAN BE DOMINANT SHRUB WHERE IT OCCURS. 960-2015 M.		

Occurrence No.	9	Map Index: 84394	EO Index: 85421	Element Last Seen:	1992-10-15
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1992-10-15
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2011-12-01

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.35170 / -117.85675	Accuracy:	3/5 mile
UTM:	Zone-11 N3801486 E421207	Elevation (ft):	5643
PLSS:	T03N, R09W, Sec. 18 (S)	Acres:	0.0

Location: NW OF CRYSTAL LAKE; END OF HWY 39, SAN GABRIEL MOUNTAINS.
Detailed Location: EXACT LOCATION UNKNOWN. SOURCE GIVES "SAN GABRIEL MOUNTAINS REGION S-FACING SLOPES AT END HWY 39, NW OF CRYSTAL LAKE. 1720 M." MAPPED BY CNDDB AS BEST GUESS AROUND S- FACING SLOPES AT N END OF HWY 39 NEAR 5600 FT (1705 M) IN ELEVATION.
Ecological: SOUTH-FACING SLOPES.
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1992 KEELEY COLLECTION.
Owner/Manager: USFS-ANGELES NF

<i>Lupinus peirsonii</i>		Element Code: PDFAB2B330	
Peirson's lupine			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G3
	State: None		State: S3
	Other: Rare Plant Rank - 1B.3, IUCN_NT-Near Threatened, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: JOSHUA TREE WOODLAND, PINYON AND JUNIPER WOODLAND, LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST.		
	Micro: DECOMPOSED GRANITE SLIDE AND TALUS, ON SLOPES AND RIDGES. 1400-2380 M.		



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Occurrence No.	1	Map Index: 59035	EO Index: 59071	Element Last Seen:	1960-05-28
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1960-05-28
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-12-27

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.33933 / -117.83702	Accuracy:	2/5 mile
UTM:	Zone-11 N3800098 E423010	Elevation (ft):	7000
PLSS:	T03N, R09W, Sec. 16 (S)	Acres:	0.0

Location: BASE OF MOUNT ISLIP, SE SLOPE ABOVE CRYSTAL LAKE, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB AT THE ELEVATION PROVIDED ON THE SE SLOPE OF MT. ISLIP. COLLECTION STATES "GENERALLY COVERS THE BARREN BROWN EARTH SLIDE VISIBLE FROM THE CRYSTAL LAKE AREA" (QUIBELL #400); ELEVATION LISTED AS 7000 FT AND AS 7500 FT.

Ecological: DECOMPOSED GRANITE SLIDE AND TALUS. DRY SLOPES ABOVE THE LAKE.

General: ONLY SOURCES OF INFORMATION FOR THIS SITE ARE TWO COLLECTIONS FROM QUIBELL IN 1960. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	2	Map Index: 59037	EO Index: 59073	Element Last Seen:	2009-05-30
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2009-05-30
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-12-30

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.36449 / -117.80417	Accuracy:	non-specific area
UTM:	Zone-11 N3802864 E426053	Elevation (ft):	7800
PLSS:	T03N, R09W, Sec. 10, NE (S)	Acres:	50.0

Location: ALONG ANGELES CREST HIGHWAY AND DAWSON SADDLE TRAIL, DAWSON SADDLE, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED AS 3 POLYGONS. NE POLY BASED ON 2 SETS OF COORDINATES FROM GROSS ALONG ANGELES CREST HIGHWAY, CENTER POLYGON ALONG DAWSON SADDLE TRAIL ON RIDGE AT 8200 FT, AND SW POLYGON BASED ON THORNE COLLECTION 0.5 MILE S OF DAWSON SADDLE.

Ecological: IN YELLOW PINE FOREST IN GRAVELLY GRANITIC SOILS. ASSOCIATED WITH PINUS JEFFREYI, P. LAMBERTIANA, ARCTOSTAPHYLOS SP., CEANOTHUS SP., ERIOGONUM SAXATILE, ABIES CONCOLOR, CHRYSOTHAMNUS SP., ELYMUS ELYMOIDES, BROMUS TECTORUM, ETC.

General: "FAIRLY ABUNDANT AND SCATTERED" IN 1962. 500 PLANTS IN CENTER POLYGON IN 1996. 1962 GRIESEL COLLECTION FROM "DAWSON SADDLE, 8000 FT" AND 2009 MARQUIS PHOTO OBSERVATION "ANGELES CREST HWY NEAR DAWSON SADDLE" ATTRIB TO THIS SITE.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	3	Map Index: 59039	EO Index: 59075	Element Last Seen:	2011-08-13
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2011-08-13
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-01-30

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.37279 / -117.78208	Accuracy:	80 meters
UTM:	Zone-11 N3803769 E428092	Elevation (ft):	7300
PLSS:	T03N, R09W, Sec. 01, SW (S)	Acres:	0.0

Location: ALONG HIGHWAY 2 AROUND MILE MARKER 72.2, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB BASED ON STRONG 2011 OBSERVATION AND MAP.

Ecological: ALONG ROADSIDE, ON ROCKY SLOPES, ROAT CUTS AND BERMS. IN YELLOW PINE FOREST. OPEN SUN ON DRY SLOPE.

General: CONSIDERED "LOCALLY ABUNDANT" IN 1962. 100S OF PLANTS SEEN IN 2010 AND 2011. WHEELER 1968 COLLECTION "BIG ROCK CREEK AT ANGELES CREST HWY 7100 FT, SEC 1" AND LENZ 1968 COLLECTION "ALONG ANGELES CREST, W OF MT. BADEN-POWELL" ATTRIB TO SITE.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	6	Map Index: 59085	EO Index: 59121	Element Last Seen:	198X-XX-XX
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	198X-XX-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-12-28

Quad Summary: Crystal Lake (3411737), Valyermo (3411747)

County Summary: Los Angeles

Lat/Long:	34.37625 / -117.75609	Accuracy:	non-specific area
UTM:	Zone-11 N3804134 E430484	Elevation (ft):	
PLSS:	T03N, R08W, Sec. 06 (S)	Acres:	55.8

Location: ALONG UPPER ROAD INTO BIG ROCK CREEK NEAR JUNCTION WITH ANGELES CREST HIGHWAY, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED ALONG ROAD DESCENDING TO BIG ROCK CREEK IN VICINITY OF HIGHWAY 2 JUNCTION AT VINCENT GAP.

Ecological:

General: ONLY SOURCE IS UNDATED OBSERVATION BY LONG IN "THE 1970S-1980S." NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	7	Map Index: 44040	EO Index: 59139	Element Last Seen:	1937-05-07
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1937-05-07
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-12-28

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.32503 / -117.73974	Accuracy:	4/5 mile
UTM:	Zone-11 N3798443 E431947	Elevation (ft):	
PLSS:	T03N, R08W, Sec. 20 (S)	Acres:	0.0

Location: ALDER CANYON, SAN GABRIEL MOUNTAINS.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS IN ALDER GULCH, LOS ANGELES COUNTY.

Ecological:

General: ONLY SOURCE OF INFORMATION IS A 1937 ROWNTREE COLLECTION. NEEDS FIELDWORK TO CONFIRM PRESENCE IN ALDER GULCH.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	8	Map Index: 81205	EO Index: 82194	Element Last Seen:	1993-06-02
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1993-06-02
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-12-28
Quad Summary:	Mount San Antonio (3411736), Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.36409 / -117.74609		Accuracy:	2/5 mile	
UTM:	Zone-11 N3802778 E431394		Elevation (ft):	6920	
PLSS:	T03N, R08W, Sec. 07 (S)		Acres:	0.0	
Location:	MT. BADEN-POWELL, SAN GABRIEL MOUNTAINS.				
Detailed Location:	EAST-FACING SLOPE. MAPPED AS BEST GUESS BY CNDDDB ON TALUS-Y, E-FACING SLOPE OF MT. BADEN-POWELL.				
Ecological:	EXPOSED GRAVELLY TALUS IN FULL SUN. ASSOCIATED SPECIES INCLUDE ERYSIMUM CAPITATUM, ERIOGONUM NUDUM, FRANGULA CALIFORNICA, MONARDELLA SP., ELYMUS ELYMOIDES, ETC.				
General:	"LOCALLY SCATTERED" IN 1993. ONLY SOURCE OF INFORMATION IS A 1993 MISTRETТА COLLECTION.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	9	Map Index: 81207	EO Index: 82195	Element Last Seen:	2011-06-20
Occ. Rank:	Fair		Presence: Presumed Extant	Site Last Seen:	2011-06-20
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-01-30
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.34811 / -117.81053		Accuracy:	80 meters	
UTM:	Zone-11 N3801052 E425454		Elevation (ft):	7500	
PLSS:	T03N, R09W, Sec. 15, NE (S)		Acres:	0.0	
Location:	ALONG HIGHWAY 2 OPPOSITE THE DRAINAGE GULLY AT MILE MARKER 67.7, SAN GABRIEL MOUNTAINS.				
Detailed Location:	AT MILE MARKER 67.7 IN SECTION 15. NORTH SIDE OF HIGHWAY 2. 2010 AND 2011 COORDINATES ARE SLIGHTLY DIFFERENT; MAPPED USING THE 2011 COORDINATES WHICH BETTER MATCH HABITAT DESCRIPTION.				
Ecological:	MONTANE CONIFEROUS FOREST ALONG THE SIDE OF THE ROAD ON THE BERM IN FULL SUN. ASSOCIATED SPECIES INCLUDE LOTUS NEVADENSIS VAR. DAVIDSONII, MENTZELIA LAEVICAULIS, AND ERIOGONUM NUDUM.				
General:	4 PLANTS SEEN IN 2010 AND 2011.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	10	Map Index: 81208	EO Index: 82196	Element Last Seen:	1974-06-02
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1974-06-02
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2010-12-28
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.35041 / -117.85187		Accuracy:	non-specific area	
UTM:	Zone-11 N3801338 E421654		Elevation (ft):	6600	
PLSS:	T03N, R09W, Sec. 17, NW (S)		Acres:	65.0	
Location:	NEAR SUMMIT OF HIGHWAY 39, SAN GABRIEL MOUNTAINS.				
Detailed Location:	ROADSIDE BANK. MAPPED ALONG HIGHWAY 39 NEAR THE JUNCTION OF HIGHWAY 2 WHERE ELEVATION IS APPROXIMATELY 6600 FT.				
Ecological:					
General:	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1974 HELMKAMP COLLECTION. NEEDS FIELDWORK.				
Owner/Manager:	USFS-ANGELES NF				



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<i>Monardella australis ssp. gabrielensis</i>		Element Code: PDLAM18114	
San Gabriel Mountains monardella			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4T2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.2		
Habitat:	General: BROADLEAVED UPLAND FOREST, CHAPARRAL (MONTANE), LOWER MONTANE CONIFEROUS FOREST.		
	Micro: GRANITIC OPENINGS, OUTCROPS. 1600-2200 M.		
Occurrence No.	2	Map Index: B8253	EO Index: 121370
Occ. Rank:	Unknown	Presence: Presumed Extant	Element Last Seen: 1934-08-10
Occ. Type:	Natural/Native occurrence	Trend: Unknown	Site Last Seen: 1934-08-10
			Record Last Updated: 2022-09-01
Quad Summary:	Crystal Lake (3411737)		
County Summary:	Los Angeles		
Lat/Long:	34.36173 / -117.87007	Accuracy:	1/5 mile
UTM:	Zone-11 N3802607 E419992	Elevation (ft):	6700
PLSS:	T03N, R09W, Sec. 7, W (S)	Acres:	70.0
Location:	2 MILES N OF CEDAR SPRING, KRATKA RIDGE.		
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB JUST UNDER 2 ROAD MILES NE OF CEDAR SPRING ON HWY 2 BASED ON GIVEN ELEVATION (6700 FT).		
Ecological:			
General:	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1934 COLLECTION BY EWAN; FAIRLY COMMON IN 1934. NEEDS FIELDWORK.		
Owner/Manager:	USFS-ANGELES NF		



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<i>Aphyllon validum ssp. validum</i>		Element Code: PDORO040G2	
Rock Creek broomrape			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4T2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: CHAPARRAL, PINYON AND JUNIPER WOODLAND.		
	Micro: ON SLOPES OF LOOSE DECOMPOSED GRANITE; PARASITIC ON VARIOUS CHAPARRAL SHRUBS. 975-1985 M.		

Occurrence No.	12	Map Index:	85153	EO Index:	86172	Element Last Seen:	1928-06-02
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1928-06-02	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-02-23	

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.35974 / -117.85100	Accuracy:	non-specific area
UTM:	Zone-11 N3802372 E421743	Elevation (ft):	6500
PLSS:	T03N, R09W, Sec. 08, W (S)	Acres:	36.0

Location: TRAIL TOWARDS SUMMIT, SOUTH FORK OF ROCK CREEK, SAN GABRIEL MOUNTAINS.
Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS ALONG SOUTH FORK TRAIL AT ELEVATIONS AROUND 6500 FT (1980 M).
Ecological:
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1928 PEIRSON COLLECTION.
Owner/Manager: USFS-ANGELES NF

<i>Eriogonum kennedyi var. alpigenum</i>		Element Code: PDPGN083B1	
southern alpine buckwheat			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4T3
	State: None		State: S3
	Other: Rare Plant Rank - 1B.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: ALPINE BOULDER AND ROCK FIELDS, SUBALPINE CONIFEROUS FOREST.		
	Micro: DRY GRANITIC GRAVEL. 2500-3415 M.		



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Occurrence No.	4	Map Index: 84542	EO Index: 20739	Element Last Seen:	2011-08-13
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2011-08-13
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2013-03-21
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.35733 / -117.76475		Accuracy:	specific area	
UTM:	Zone-11 N3802043 E429672		Elevation (ft):	9300	
PLSS:	T03N, R08W, Sec. 07, SW (S)		Acres:	10.0	
Location:	SUMMIT AND SOUTH RIDGE OF MT BADEN-POWELL, SAN GABRIEL MOUNTAINS.				
Detailed Location:	TWO POLYGONS MAPPED ACCORDING TO COORDINATES FROM 2005 AND 2011, THOUGH 2011 SURVEY FORM STATES THAT PLANTS WERE FOUND ACROSS ALL AREAS OF SUMMIT WITH THE EXCEPTION OF THE EASTERLY SLOPES.				
Ecological:	SUBALPINE ZONE, GRANITIC SOIL AND SCREE IN SOME AREAS. ASSOCIATED WITH PINUS CONTORTA SSP. MURRAYANA, P. FLEXILIS, ERIGERON SP., CHRYSOLEPIS SEMPERVIRENS, HOLODISCUS MICROPHYLLUS, ARCTOSTAPHYLOS PATULA, THE RARE OREONANA VESTITA, ETC.				
General:	MORE THAN 100 PLANTS OBSERVED IN 2005 AND 2011. 1936 EWAN COLLECTION FROM "NORTH BALDY" (VARIANT NAME FOR MT BADEN-POWELL) ATTRIBUTED HERE. COLLECTIONS FROM 1967, 1971, 1974, AND 1998 ALSO ATTRIBUTED HERE. INCLUDES FORMER OCCURRENCE #3.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	5	Map Index: 35089	EO Index: 133	Element Last Seen:	1971-08-25
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1971-08-25
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2011-12-20
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.34355 / -117.80498		Accuracy:	1/10 mile	
UTM:	Zone-11 N3800543 E425961		Elevation (ft):	8750	
PLSS:	T03N, R09W, Sec. 15, SE (S)		Acres:	0.0	
Location:	JUST NORTH OF SUMMIT OF MT HAWKINS ON SADDLE BETWEEN HAWKINS AND THROOP PEAK, SAN GABRIEL MOUNTAINS.				
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDDB JUST NORTH OF MT HAWKINS IN VICINITY OF GIVEN ELEVATION OF 8750 FEET.				
Ecological:					
General:	MAIN SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1971 COLLECTION BY THORNE. CNPS OBSERVATION FROM "TRAIL SW ABOUT 0.3 MI FROM THROOP PEAK" IS ALSO ATTRIBUTED TO THIS OCCURRENCE, UNKNOWN WHEN PLANTS SEEN.				
Owner/Manager:	USFS-ANGELES NF				



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Occurrence No.	7	Map Index: 48160	EO Index: 48160	Element Last Seen:	1934-08-09
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1934-08-09
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2011-12-20

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.37113 / -117.85826	Accuracy:	1/5 mile
UTM:	Zone-11 N3803641 E421086	Elevation (ft):	8200
PLSS:	T03N, R09W, Sec. 06, SE (S)	Acres:	0.0

Location: MT WILLIAMSON SUMMIT, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED BY CNDDDB IN THE GENERAL VICINITY OF MT WILLIAMSON SUMMIT.

Ecological: GRAVELLY SUMMIT RIDGE. OPEN, NO SUBSHRUBS PRESENT.

General: PLANTS NOTED AS "ABUNDANT" IN A 1934 EWAN COLLECTION. CNPS OBSERVATION RECORD ALSO ATTRIBUTED TO THIS SITE, UNKNOWN WHEN PLANTS SEEN. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	8	Map Index: 57699	EO Index: 48161	Element Last Seen:	2003-09-17
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2003-09-17
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2013-03-21

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.36387 / -117.80469	Accuracy:	80 meters
UTM:	Zone-11 N3802796 E426005	Elevation (ft):	8300
PLSS:	T03N, R09W, Sec. 10, NE (S)	Acres:	0.0

Location: ALONG DAWSON SADDLE TRAIL, 0.37 MILE SOUTH OF THE TRAILHEAD AT HIGHWAY 2, SOUTH OF MOUNT LEWIS, SAN GABRIEL MOUNTAINS.

Detailed Location: FIRST PLANTS ALONG TRAIL REPORTED FROM 0.37 MILE FROM TRAILHEAD, ON E SIDE OF TRAIL. MAIN SOURCE OF INFO IS A TRAIL PLANT LIST BY CHESTER & STRONG, UNCLEAR WHETHER ALL THE PLANTS WERE NEAR THIS LOCATION OR SPREAD OUT FURTHER UP THE TRAIL.

Ecological: GROWING IN OPEN ROCKY AND SANDY LOCATIONS IN YELLOW PINE FOREST COMMUNITY.

General: OVER 100 PLANTS OBSERVED IN 2003 FROM 5 CLUSTERS ALONG THE TRAIL. HISTORIC COLLECTION AND REPORT FROM DAWSON SADDLE ARE ALSO ATTRIBUTED HERE.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	11	Map Index: 84549	EO Index: 85567	Element Last Seen:	2011-07-21
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2011-07-21
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-01-10

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.35043 / -117.79819	Accuracy:	non-specific area
UTM:	Zone-11 N3801300 E426591	Elevation (ft):	9000
PLSS:	T03N, R09W, Sec. 14, NW (S)	Acres:	75.0

Location: THROOP PEAK, SAN GABRIEL MOUNTAINS.

Detailed Location: 2 POLYGONS. SW POLYGON IS SPECIFIC, MAPPED ACCORDING TO 2011 COORDINATES PROVIDED BY CHESTER. NE POLYGON IS NONSPECIFIC, MAPPED TO ENCOMPASS COLLECTION LOCALITIES FROM "SUMMIT OF THROOP PEAK, 9130 FT" AND "EAST SLOPE THROOP PEAK, 8750 FT."

Ecological: MONTANE CONIFEROUS FOREST AND GRAVEL RIDGE.

General: PLANTS OBSERVED IN NE POLYGON IN 1934, 1971 AND 1977. 100S OF PLANTS OBSERVED IN SW POLYGON IN 2011.

Owner/Manager: USFS-ANGELES NF

Linanthus concinnus **Element Code:** PDPLM090D0

San Gabriel linanthus

Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST, CHAPARRAL.		
	Micro: DRY ROCKY SLOPES, OFTEN IN JEFFREY PINE/CANYON OAK FOREST. 1310-2560 M.		

Occurrence No.	6	Map Index: 35446	EO Index: 25583	Element Last Seen:	1923-05-26
Occ. Rank:	None		Presence: Possibly Extirpated	Site Last Seen:	2004-05-27
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2009-12-01

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737), Mescal Creek (3411746), Valyermo (3411747)

County Summary: Los Angeles

Lat/Long:	34.37215 / -117.74980	Accuracy:	2/5 mile
UTM:	Zone-11 N3803675 E431060	Elevation (ft):	6700
PLSS:	T03N, R08W (S)	Acres:	0.0

Location: VINCENT GULCH, SAN GABRIEL MOUNTAINS.

Detailed Location: COLLECTED AT 6700' ELEVATION.

Ecological: OCCASIONAL ON WARM, DRY SLOPES.

General: LAST SEEN IN 1923. NO PLANTS SEEN IN 2003 OR 2004 SURVEYS BY SOZA.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	9	Map Index: 77443	EO Index: 30447	Element Last Seen:	2015-05-01
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2015-05-01
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-01-07
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.36371 / -117.8502		Accuracy:	specific area	
UTM:	Zone-11 N3802812 E421821		Elevation (ft):	6600	
PLSS:	T03N, R09W, Sec. 8 (S)		Acres:	51.0	
Location:	ALONG TRAIL NORTH OF ISLIP SADDLE, FROM 0.6 MI SSW TO 0.4 MI NE OF REED SPRING, SE OF MT WILLIAMSON, SAN GABRIEL MTNS.				
Detailed Location:	ABOVE AND BELOW TRAIL. MAPPED AS 7 POLYGONS BASED ON TWO 1994 HAWKE FIELD SURVEY MAPS, 2003 GROSS COORDINATES, 2003 DENSLOW COORDINATES, 2014 TIRRELL COORDINATES, AND 2015 HAWKE COORDINATES.				
Ecological:	ON E-FACING SLOPE IN GRANITIC SOIL. IN CLUMPS IN DRY, ROCKY OPENINGS IN JEFFREY PINE FOREST W/QUERCUS CHRYSOLEPIS, PINUS LAMBERTIANA, ABIES CONCOLOR, ARCTOSTAPHYLOS PATULA, CEANOTHUS CORDULATUS, CHRYSOTHAMNUS NAUSEOSUS, ERIOGONUM WRIGHTII.				
General:	POPULATION NUMBERS FOR PORTIONS OF OCCURRENCE: 80 PLANTS SEEN IN 1994, 903 PLANTS SEEN IN 2003, ~100 PLANTS IN 2014, 700+ PLANTS IN 2015. 1921 & 1928 PEIRSON COLLECTIONS ARE ALSO ATTRIBUTED HERE. INCLUDES FORMER EO #10.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	11	Map Index: 28865	EO Index: 30443	Element Last Seen:	2012-05-30
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2012-05-30
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-03-14
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.36682 / -117.80155		Accuracy:	80 meters	
UTM:	Zone-11 N3803120 E426297		Elevation (ft):	8000	
PLSS:	T03N, R09W, Sec. 10, NE (S)		Acres:	0.0	
Location:	0.45 MI SE OF MT LEWIS, JUST E OF DAWSON SADDLE, ALONG INSIDE (S SIDE) OF BEND IN ANGELES CREST HWY, SAN GABRIEL MTNS.				
Detailed Location:	MAPPED BY CNDDDB BASED ON COORDINATES FROM A 2003 DENSLOW FIELD SURVEY FORM, IN THE NE 1/4 OF THE NE 1/4 OF SECTION 10.				
Ecological:	DRY, ROCKY OPENING W/ THICK PINE DUFF IN JEFFREY PINE FOREST W/ CERCOCARPUS LEDIFOLIUS, ARCTOSTAPHYLOS PATULA, CHRYSOTHAMNUS SP., PENSTEMON GRINNELLII, ERIOGONUM SAXATILE, E. UMBELLATUM MINUS, ELYMUS ELYMOIDES, POA SECUNDA, ETC.				
General:	~700 PLANTS SEEN IN 120' X 60' AREA IN 1994. 2566 PLANTS SEEN IN 2003. A 2012 PORTER COLLECTION IS ALSO ATTRIBUTED TO THIS SITE.				
Owner/Manager:	USFS-ANGELES NF				



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Occurrence No.	36	Map Index: A8585	EO Index: 110373	Element Last Seen:	2015-05-01
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2015-05-01
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-03-06
Quad Summary:	Crystal Lake (3411737), Valyermo (3411747)				
County Summary:	Los Angeles				
Lat/Long:	34.37485 / -117.83975		Accuracy:	80 meters	
UTM:	Zone-11 N3804039 E422792		Elevation (ft):	5850	
PLSS:	T03N, R09W, Sec. 5, NE (S)		Acres:	5.0	
Location:	ALONG TRAIL NORTH OF ISLIP SADDLE, ABOUT 0.7 AIR MILE NORTHEAST OF REED SPRING, SAN GABRIEL MOUNTAINS.				
Detailed Location:	MAPPED IN THE SE 1/4 OF THE NE 1/4 OF SECTION 5.				
Ecological:					
General:	150+ PLANTS OBSERVED IN 2015.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	37	Map Index: A8586	EO Index: 110375	Element Last Seen:	2015-05-06
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2015-05-06
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-03-06
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.36145 / -117.87114		Accuracy:	specific area	
UTM:	Zone-11 N3802578 E419893		Elevation (ft):	6750	
PLSS:	T03N, R09W, Sec. 7, NW (S)		Acres:	1.0	
Location:	ALONG THE PACIFIC CREST TRAIL AS IT GOES UP KRATKA RIDGE, JUST SOUTH OF HIGHWAY 2 CROSSING, SOUTHWEST OF MT WILLIAMSON.				
Detailed Location:	MAPPED IN THE SW 1/4 OF THE NW 1/4 OF SECTION 7.				
Ecological:	OPEN SANDY, GRAVELLY SLOPE, GRANITIC ROCK. ASPECT 125 DEG, SLOPE ~25 DEG. ASSOCIATED WITH ERIOGONUM SAXATILE, QUERCUS CHRYSOLEPIS, PINUS JEFFREYI, PINUS LAMBERTIANA, AND CERCOCARPUS LEDIFOLIUS.				
General:	80-100 PLANTS OBSERVED IN 2015.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	38	Map Index: A8588	EO Index: 110376	Element Last Seen:	2012-05-29
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2012-05-29
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-03-06
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.346 / -117.82535		Accuracy:	80 meters	
UTM:	Zone-11 N3800829 E424090		Elevation (ft):	7360	
PLSS:	T03N, R09W, Sec. 16, NE (S)		Acres:	5.0	
Location:	NORTH SIDE OF HIGHWAY 2 JUST EAST OF LITTLE JIMMY CAMPGROUND, SAN GABRIEL MOUNTAINS.				
Detailed Location:	ON TOP OF A HIGHWAY CUT NEAR MILE MARKER 66.43. MAPPED IN THE SW 1/4 OF THE NE 1/4 OF SECTION 16.				
Ecological:	YELLOW PINE FOREST, WEST-FACING GRAVELLY SLOPE.				
General:	50-150 PLANTS ESTIMATED IN 2012.				
Owner/Manager:	USFS-ANGELES NF				



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Occurrence No.	39	Map Index: A8589	EO Index: 110377	Element Last Seen:	2015-05-21
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2015-05-21
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-03-06

Quad Summary: Crystal Lake (3411737), Waterman Mtn. (3411738)

County Summary: Los Angeles

Lat/Long:	34.3589 / -117.87601	Accuracy:	specific area
UTM:	Zone-11 N3802299 E419443	Elevation (ft):	6843
PLSS:	T03N, R10W, Sec. 12, SE (S)	Acres:	1.0

Location: KRATKA RIDGE, ALONG PACIFIC CREST TRAIL ABOUT 0.3 MILE NORTH OF EAGLES ROOST, SAN GABRIEL MOUNTAINS.

Detailed Location: MAPPED IN THE NORTH 1/2 OF THE SE 1/4 OF SECTION 12.

Ecological: OPEN, GRAVELLY, GRANITIC SLOPE. ASPECT 295 DEG, SLOPE ~30 DEG. ASSOCIATED WITH QUERCUS CHRYSOLEPIS, ERIOGONUM SAXATILE, ALLIUM BURLEWII, ARCTOSTAPHYLOS PATULA, PINUS JEFFREYI, AND CERCOCARPUS LEDIFOLIUS.

General: ~500 PLANTS OBSERVED IN 2015.

Owner/Manager: USFS-ANGELES NF

<i>Claytonia peirsonii ssp. peirsonii</i>			Element Code: PDPOR03121
Peirson's spring beauty			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G2G3T2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: UPPER MONTANE CONIFEROUS FOREST, SUBALPINE CONIFEROUS FOREST.		
	Micro: GRANITIC SCREE SLOPES, OFTEN WITH A SANDY OR FINE SOIL COMPONENT AND GRANITIC COBBLES. 1510-2745 M.		

Occurrence No.	9	Map Index: B4461	EO Index: 117390	Element Last Seen:	2015-03-14
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2015-03-14
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2019-12-04

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34646 / -117.82897	Accuracy:	specific area
UTM:	Zone-11 N3800883 E423758	Elevation (ft):	7400
PLSS:	T03N, R09W, Sec. 16 (S)	Acres:	3.0

Location: JUST EAST OF LITTLE JIMMY CAMPGROUND NEAR WINDY GAP, EAST OF MT. ISLIP.

Detailed Location: MAPPED AS 3 POLYGONS ACCORDING TO 2012 COORDINATES.

Ecological: SHADED, NE-FACING SLOPE WITH HEAVY PINE DUFF. HILLSIDE DOMINATED BY PINUS LAMBERTIANA AND P. JEFFREYI. IN LOOSE SOILS WITH A LOT PINE DUFF.

General: 100+ INDIVIDUALS OBSERVED IN 2012. UNKNOWN NUMBER SEEN IN 2015.

Owner/Manager: USFS-ANGELES NF

<i>Drymocallis cuneifolia var. ewanii</i>			Element Code: PDROS1B0S3
Ewan's woodbeauty			
Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G2T2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture, USFS_S-Sensitive		
Habitat:	General: LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.		



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Micro: EDGES OF SEEPS AND SPRINGS, SMALL WATERWAYS, 2270-2450 M.

Occurrence No.	1	Map Index: 35086	EO Index: 138	Element Last Seen:	2005-09-18
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2005-09-18
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2011-12-14

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.34805 / -117.83589	Accuracy:	1/10 mile
UTM:	Zone-11 N3801065 E423122	Elevation (ft):	7450
PLSS:	T03N, R09W, Sec. 16, NW (S)	Acres:	0.0

Location: WINDY SPRING ON THE NORTH SLOPE OF MT ISLIP, SAN GABRIEL MOUNTAINS, ANGELES NATIONAL FOREST.
Detailed Location: MAPPED BY CNDDDB IN GENERAL VICINITY OF WINDY SPRING TO ENCOMPASS GIVEN ELEVATIONS OF 7400 AND 7500 FEET.
Ecological: DRIER MARGINS OF SPRING WITHIN A YELLOW PINE FOREST.
General: OCCURRENCE IS BASED ON A 1934 EWAN COLLECTION, A 1971 THORNE COLLECTION, AND 2005 CHARTERS PHOTOS IN CALPHOTOS.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	2	Map Index: 35087	EO Index: 136	Element Last Seen:	2011-07-01
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2011-07-01
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2011-12-14

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.34559 / -117.82945	Accuracy:	80 meters
UTM:	Zone-11 N3800787 E423712	Elevation (ft):	7460
PLSS:	T03N, R09W, Sec. 16 (S)	Acres:	0.0

Location: LITTLE JIMMY SPRING, NORTH SLOPE OF MT ISLIP, SAN GABRIEL MOUNTAINS, ANGELES NATIONAL FOREST.
Detailed Location: MAPPED NEAR THE CENTER OF SECTION 16 ACCORDING TO 2011 COORDINATES PROVIDED BY STRONG.
Ecological: SPRING SEEPAGE AND WET AREAS IN MONTANE CONIFEROUS FOREST.
General: TYPE LOCALITY. 100S OF PLANTS OBSERVED IN 2010 AND 2011. COLLECTIONS FROM 1921, 1930, AND 1931 FROM LITTLE JIMMY SPRING AND WINDY CAMP (LITTLE JIMMY CAMP) ARE ALSO ATTRIBUTED TO THIS SITE.
Owner/Manager: USFS-ANGELES NF



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Occurrence No.	3	Map Index: 35088	EO Index: 134	Element Last Seen:	2011-06-23
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2011-06-23
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2011-12-21

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.35051 / -117.80795	Accuracy:	80 meters
UTM:	Zone-11 N3801316 E425694	Elevation (ft):	7600
PLSS:	T03N, R09W, Sec. 15, NE (S)	Acres:	0.0

Location: HWY 2 BETWEEN DAWSON SADDLE AND HWY 39, ABOUT 1.6 ROAD MILES SSW OF DAWSON SADDLE, SAN GABRIEL MOUNTAINS.

Detailed Location: DRAINAGE GULLY ABOVE HIGHWAY 2 IMMEDIATELY EAST OF MILE MARKER 67.86. PLANTS FOUND IN THE MIDDLE OF THE DRAINAGE GULLY. MAPPED IN THE NW 1/4 OF THE NE 1/4 OF SECTION 15 ACCORDING TO 2011 COORDINATES PROVIDED BY STRONG.

Ecological: EDGE OF MONTANE CHAPARRAL THICKET NEAR SEEP.

General: 100S OF PLANTS SEEN IN 2010. 1000S OF PLANTS SEEN IN 2011. 1919 PEIRSON COLLECTION, 1969 THORNE COLLECTION FROM "ABOVE HWY & BELOW LILY SPRING AT HEADWATER OF S FORK ROCK CRK, 7600 FT", AND 1981 SAWYER COLLECTION ALSO ATTRIBUTED HERE.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	4	Map Index: 35092	EO Index: 132	Element Last Seen:	1989-05-22
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1989-05-22
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2006-04-06

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.35837 / -117.79586	Accuracy:	non-specific area
UTM:	Zone-11 N3802179 E426813	Elevation (ft):	7800
PLSS:	T03N, R09W, Sec. 11, SW (S)	Acres:	52.0

Location: ALONG HIGHWAY 2 BETWEEN LODGEPOLE PICNIC AREA AND HEAD OF DORR CANYON, SAN GABRIEL MOUNTAINS, ANGELES NF.

Detailed Location: COLLECTIONS FROM "HEAD OF DORR CANYON", "0.5 MILE SOUTH OF DAWSON SADDLE", "1.5 MILES SOUTHEAST OF DAWSON SADDLE", AND "LODGEPOLE PICNIC GROUNDS" ARE INCLUDED AT THIS SITE.

Ecological: GROWING ALONG SMALL WATERCOURSES, STREAMS, DAMP PLACES, AND SPRINGS WITHIN FOREST OF PINUS LAMBERTIANA, P. PONDEROSA, AND ABIES. ASSOCIATED WITH AQUILEGIA FORMOSA, MIMULUS MOSCHATUS, AND PEDICULARIS SEMIBARBATA.

General: MANY COLLECTIONS FROM THIS VICINITY INCLUDING ERTTER AND THOMPSON (#8479) IN 1989, BACIGALUPI AND ALAVA (#6437 UC) IN 1958, WALLACE (#1445 RSA) IN 1975, AND THORNE (#38365 CAS, RSA) IN 1969.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	6	Map Index:	84499	EO Index:	85519	Element Last Seen:	2011-07-01
Occ. Rank:	Excellent	Presence:	Presumed Extant	Site Last Seen:		2011-07-01	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2011-12-14	
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.34509 / -117.81005	Accuracy:	80 meters				
UTM:	Zone-11 N3800717 E425495	Elevation (ft):	8040				
PLSS:	T03N, R09W, Sec. 15 (S)	Acres:	0.0				
Location:	LILY SPRING, NORTHWEST SLOPE OF MT HAWKINS, SAN GABRIEL MOUNTAINS.						
Detailed Location:	PLANTS FOUND IN THE LILY SPRING AREA AND THE SLOPES ABOVE. MAPPED NEAR THE CENTER OF SECTION 15 ACCORDING TO 2011 COORDINATES PROVIDED BY STRONG.						
Ecological:	SEEPY AREA ABOVE SPRINGS. DRY, BUT VERNALLY MOIST SLOPE IN SUGAR PINE/WHITE FIR/LODGEPOLE PINE FOREST WITH PINUS LAMBERTIANA, P. CONTORTA MURRAYANA, P. JEFFREYI, ABIES CONCOLOR, CALOCEDRUS DECURRENS, GAYOPHYTUM DIFFUSUM PARVIFLORUM, ETC.						
General:	100S OF PLANTS OBSERVED IN 2010. 1000S OF PLANTS OBSERVED IN 2011. 1974 THORNE COLLECTION AND 1980 KRAMER COLLECTION FROM LILY SPRINGS ARE ALSO ATTRIBUTED TO THIS OCCURRENCE.						
Owner/Manager:	USFS-ANGELES NF						

<i>Parnassia cirrata var. cirrata</i>		Element Code: PDSAX0P030					
San Bernardino grass-of-Parnassus							
Listing Status:	Federal:	None	CNDDDB Element Ranks:	Global:	G5T2		
	State:	None		State:	S2		
	Other:	Rare Plant Rank - 1B.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive					
Habitat:	General:	LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.					
	Micro:	MESIC SITES, STREAMSIDES, SOMETIMES CALCAREOUS. 1245-2440 M.					

Occurrence No.	4	Map Index:	85653	EO Index:	44040	Element Last Seen:	1970-09-10
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1970-09-10	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-04-06	
Quad Summary:	Mount San Antonio (3411736), Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.32563 / -117.74672	Accuracy:	2/5 mile				
UTM:	Zone-11 N3798515 E431305	Elevation (ft):	5500				
PLSS:	T03N, R08W, Sec. 19 (S)	Acres:	0.0				
Location:	SOUTH FORK ALDER GULCH, SAN GABRIEL MOUNTAINS.						
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS AROUND THE PORTION OF ALDER GULCH, AND CANYONS THAT HEAD IN A SOUTHERLY DIRECTION OFF OF ALDER GULCH, AT ABOUT 5500 FEET IN ELEVATION. NEAR THE COMMON CORNER OF SECTIONS 19, 20, 29 & 30.						
Ecological:	CALCAREOUS SEEP, NORTH-SLOPE, SEMI-SUNNY.						
General:	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1970 WHEELER COLLECTION. NEEDS FIELDWORK.						
Owner/Manager:	USFS-ANGELES NF						



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Occurrence No.	5	Map Index: 44041	EO Index: 44041	Element Last Seen: 1968-07-03
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 1968-07-03
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 2000-12-28

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.29261 / -117.80703	Accuracy:	non-specific area
UTM:	Zone-11 N3794895 E425728	Elevation (ft):	5200
PLSS:	T02N, R09W, Sec. 03, NE (S)	Acres:	185.9

Location: PIGEON RIDGE, WEST OF HELIPORT.
Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB ACCORDING TO T-R-S PROVIDED BY WHEELER (NE1/4 SECTION 3).
Ecological: STEEP WET SOUTHEAST-FACING CALCAREOUS MEADOW.
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1968 WHEELER COLLECTION. NEEDS FIELDWORK.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	6	Map Index: 44042	EO Index: 44042	Element Last Seen: 1967-10-10
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen: 1967-10-10
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated: 2017-05-23

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.30310 / -117.83754	Accuracy:	2/5 mile
UTM:	Zone-11 N3796081 E422929	Elevation (ft):	4100
PLSS:	T03N, R09W, Sec. 32 (S)	Acres:	0.0

Location: NORTH FORK SAN GABRIEL RIVER, NEAR FALLING SPRINGS, BETWEEN COLDBROOK & CRYSTAL LAKE.
Detailed Location: EXACT LOCATION UNKNOWN. FOUR COLLECTIONS MAPPED AS BEST GUESS TO INCLUDE AREA AROUND FALLING SPRINGS AT 4100 FEET BY CNDDDB.
Ecological: SUNNY SOUTH-SLOPING CALCAREOUS STREAMLET.
General: COLLECTIONS FROM "NORTH FORK SAN GABRIEL RIVER," "SOUTH FORK SAN GABRIEL RIVER," "ABOVE COLDBROOK," AND "YUCCA FLATS SUMMER HOUSING TRACT" FROM 1915 THROUGH 1967 ARE ATTRIBUTED TO THIS SITE. NEEDS FIELDWORK.
Owner/Manager: USFS-ANGELES NF

<i>Viola pinetorum ssp. grisea</i>		Element Code: PDVIO04431
grey-leaved violet		
Listing Status:	Federal: None	CNDDDB Element Ranks: Global: G4G5T3
	State: None	State: S3
	Other: Rare Plant Rank - 1B.2, BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	
Habitat:	General: SUBALPINE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.	
	Micro: DRY MOUNTAIN PEAKS AND SLOPES. 1580-3700 M.	



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Occurrence No.	36	Map Index:	82465	EO Index:	83479	Element Last Seen:	2011-06-02
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:		2011-06-02	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2015-04-20	
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.34111 / -117.80900			Accuracy:	specific area		
UTM:	Zone-11 N3800275 E425589			Elevation (ft):	8600		
PLSS:	T03N, R09W, Sec. 15, S (S)			Acres:	14.0		
Location:	ON N-FACING BANK OF THE RIDGE JUST E OF LILY SPRING TURN OFF FROM PACIFIC CREST TRAIL, ANGELES NATIONAL FOREST.						
Detailed Location:	MAPPED BY CNDDDB ACCORDING TO COORDINATES IN A 2011 TIRRELL EMAIL AND FROM A 2011 LILLY SPRING AREA SURVEY.						
Ecological:	NORTH-FACING SLOPES OF OPEN GRAVELLY AREAS IN MONTANE CONIFEROUS FOREST; MONTANE CONIFEROUS FOREST.						
General:	100S OF INDIVIDUALS SEEN IN 2010. ID WAS VERIFIED BY R. JOHN LITTLE (1993 JEPSON MANUAL AUTHOR FOR VIOLACEAE). SITE REVISITED IN 2011; 100S OF PLANTS SEEN. INCLUDES FORMER OCCURRENCE #45.						
Owner/Manager:	USFS-ANGELES NF						

Occurrence No.	37	Map Index:	82467	EO Index:	83483	Element Last Seen:	2011-07-18
Occ. Rank:	Poor	Presence:	Presumed Extant	Site Last Seen:		2011-07-18	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-02-27	
Quad Summary:	Crystal Lake (3411737)						
County Summary:	Los Angeles						
Lat/Long:	34.34521 / -117.81962			Accuracy:	specific area		
UTM:	Zone-11 N3800738 E424616			Elevation (ft):	7580		
PLSS:	T03N, R09W, Sec. 15, E (S)			Acres:	10.0		
Location:	THE MORE WESTERN OF THE TWO GULLIES AT MILE MARKER 66.82 OF HWY 2, WEST OF LILY SPRING, ANGELES NATIONAL FOREST.						
Detailed Location:	ROAD TURNOUT. MAPPED BY CNDDDB AS TWO POINTS; WESTERN POINT MAPPED AS BEST GUESS AROUND MILE MARKER 66.82 AND EASTERN POINT MAPPED ACCORDING TO COORDINATES IN A 2011 LILLY SPRING SURVEY.						
Ecological:	NORTH-FACING SLOPES OF OPEN GRAVELLY AREAS IN MONTANE CONIFEROUS FOREST. ASSOCIATED WITH ACANTHOSCYPHUS PARISHII, CHENOPODIUM FREMONTII, ERIOGONUM NUDUM, AND CAULANTHUS AMPLEXICAULIS.						
General:	3 PLANTS WERE SEEN ON 06/22/2010 AND NO PLANTS WERE SEEN ON SITE REVISIT ON 09/01/2010; POPULATION WAS NOTED AS DESTROYED BY CALTRANS LEVELING THE BERM. FEWER THAN 10 PLANTS SEEN ON 07/18/2011 AT MORE EASTERN POINT.						
Owner/Manager:	USFS-ANGELES NF						



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Occurrence No.	58	Map Index:	95922	EO Index:	97065	Element Last Seen:	2013-06-02
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		2013-06-02	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2015-04-20	

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.35094 / -117.83974	Accuracy:	non-specific area
UTM:	Zone-11 N3801388 E422770	Elevation (ft):	7000
PLSS:	T03N, R09W, Sec. 17 (S)	Acres:	130.0

Location: ALONG THE PACIFIC CREST TRAIL BETWEEN WINDY GAP AND ISLIP SADDLE, ANGELES NF.
Detailed Location: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS ALONG TRAIL BETWEEN WINDY GAP AND ISLIP SADDLE BASED ON 2013 CHESTER CHECKLIST FOR THIS SECTION OF THE PCT; UNCERTAIN WHERE ALONG TRAIL THE PLANT WAS SEEN.

Ecological:

General: 1 PLANT SEEN IN 2013. ACCORDING TO CHESTER, 2013 WAS A DRY YEAR AND FEW PLANTS WERE IN BLOOM.

Owner/Manager: USFS-ANGELES NF

Carex occidentalis **Element Code:** PMCYP039M0
 western sedge

Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G4
	State: None		State: S3
	Other: Rare Plant Rank - 2B.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		
Habitat:	General: LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.		
	Micro: 1645-2320 M.		

Occurrence No.	7	Map Index:	28860	EO Index:	72838	Element Last Seen:	2000-06-14
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		2000-06-14	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2008-08-14	

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.33672 / -117.83085	Accuracy:	80 meters
UTM:	Zone-11 N3799804 E423576	Elevation (ft):	6500
PLSS:	T03N, R09W, Sec. 21, NW (S)	Acres:	0.0

Location: SPRING AT BIG CIENEGA, CA. 0.6 MI NE OF DEER FLAT CAMPGROUND ALONG SOUTH HAWKINS ROAD, SAN GABRIEL MTNS.

Detailed Location:

Ecological: WET GROUND OF SPRING ON GENTLE SSW-FACING SLOPE ABOVE FIRE ROAD, IN PARTIAL SUN AND MOSTLY SHADE, BENEATH JEFFREY PINE, INCENSE CEDAR, AND BIGCONE SPRUCE. ASSOCIATED WITH CAREX HASSEI, ELEOCHARIS MONTEVIDENSIS, EQUISETUM HYEMALE AFFINE.

General: MENTIONED AS "LOCALLY ABUNDANT" IN 2000.

Owner/Manager: USFS-ANGELES NF



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<i>Fimbristylis thermalis</i>		Element Code: PMCYP0B0N0	
hot springs fimbristylis			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4
	State: None		State: S1S2
	Other: Rare Plant Rank - 2B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		
Habitat:	General: MEADOWS AND SEEPS (ALKALINE).		
	Micro: NEAR HOT SPRINGS. 115-1585 M.		

Occurrence No.	13	Map Index:	64002	EO Index:	64097	Element Last Seen:	1915-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1915-XX-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2006-02-21	

Quad Summary: Glendora (3411727), Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.26251 / -117.84408	Accuracy:	non-specific area
UTM:	Zone-11 N3791585 E422290	Elevation (ft):	
PLSS:	T02N, R09W, Sec. 17 (S)	Acres:	287.4

Location: SAN GABRIEL MOUNTAINS, NORTH FORK SAN GABRIEL RIVER.
Detailed Location: BASED ON 1915 COLLECTION FROM "SAN GABRIEL MOUNTAINS REGION, NORTH FORK, SAN GABRIEL RIVER" (MOHR #3009), MAPPED AS BEST GUESS ALONG NORTH FORK SAN GABRIEL RIVER, FROM CONFLUENCE WITH WEST FORK, NORTH TO MOUTH OF COLDBROOK CREEK.
Ecological:
General: THIS SITE IS DISJUNCT FROM REST OF RANGE IN CALIFORNIA, IN DESERT SPRINGS IN INYO, MONO, AND SAN BERNARDINO COUNTIES. IDENTIFICATION CONFIRMED BY VANDERPLANK AND BOYD (RSA) IN 2006. SITE NEEDS FIELDWORK TO PINPOINT ACTUAL OCCURRENCE.
Owner/Manager: USFS-ANGELES NF



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Calochortus clavatus var. gracilis

Element Code: PMLIL0D096

slender mariposa-lily

Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4T2T3
	State: None		State: S2S3
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive		
Habitat:	General: CHAPARRAL, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND.		
	Micro: SHADED FOOTHILL CANYONS; OFTEN ON GRASSY SLOPES WITHIN OTHER HABITAT. 210-1815 M.		

Occurrence No.	3	Map Index:	26508	EO Index:	1573	Element Last Seen:	1930-06-28
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1930-06-28	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2010-04-07	

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.26656 / -117.82802	Accuracy:	non-specific area
UTM:	Zone-11 N3792022 E423773	Elevation (ft):	2500
PLSS:	T02N, R09W (S)	Acres:	177.5

Location: BICHOTA CANYON, NORTH FORK OF SAN GABRIEL CANYON.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB ALONG THE CANYON FROM THE MOUTH UPSTREAM ABOUT TWO MILES BASED ON COLLECTION BY CROW. COLLECTIONS BY GRANT AND EASTWOOD WERE FROM SAN GABRIEL CANYON; THESE ARE INCLUDED IN THIS OCCURRENCE.

Ecological: ON DRY SLOPE.

General: TYPE LOCALITY. THREE COLLECTIONS ATTRIBUTED TO THIS SITE: CROW SN (P TYPE) IN 1930, EASTWOOD #9002 (CA) IN 1919, GRANT SN (D) IN 1904. COLLECTIONS CITED BY OWNBNEY IN "MONOGRAPH OF CALOCHORTUS" IN ANNALS OF THE MISSOURI BOTANICAL GARDEN.

Owner/Manager: USFS-ANGELES NF



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<i>Calochortus plummerae</i>		Element Code: PMLIL0D150	
Plummer's mariposa-lily			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4
	State: None		State: S4
	Other: Rare Plant Rank - 4.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		
Habitat:	General: COASTAL SCRUB, CHAPARRAL, VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND, LOWER MONTANE CONIFEROUS FOREST.		
	Micro: OCCURS ON ROCKY AND SANDY SITES, USUALLY OF GRANITIC OR ALLUVIAL MATERIAL. CAN BE VERY COMMON AFTER FIRE. 60-2500 M.		

Occurrence No.	36	Map Index: 27702	EO Index: 22639	Element Last Seen:	1933-07-11
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1933-07-11
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2009-10-14
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.30519 / -117.84132		Accuracy:	1 mile	
UTM:	Zone-11 N3796316 E422584		Elevation (ft):	4500	
PLSS:	T03N, R09W (S)		Acres:	0.0	
Location:	TRAIL BETWEEN CAMP COLDBROOK AND PINE FLATS, SAN GABRIEL MOUNTAINS.				
Detailed Location:	UNCERTAIN WHICH TRAIL WAS USED TO PASS BETWEEN THESE TWO LOCALITIES. MAPPED BY CNDDDB BETWEEN COLDBROOK GUARD STATION AND WEST PINE FLAT NEAR HIGHWAY 39.				
Ecological:					
General:	MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1930 COLLECTION BY WEST ET AL. 1933 DUNKLE COLLECTION FROM COLD BROOK CAMP ALSO ATTRIBUTED HERE.				
Owner/Manager:	USFS-ANGELES NF				

Occurrence No.	37	Map Index: 27703	EO Index: 17713	Element Last Seen:	1995-06-XX
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1995-06-XX
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2009-10-14
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.26037 / -117.84839		Accuracy:	1/10 mile	
UTM:	Zone-11 N3791352 E421891		Elevation (ft):	2100	
PLSS:	T02N, R09W, Sec. 17, NW (S)		Acres:	0.0	
Location:	NORTH FORK SAN GABRIEL RIVER, CIRCA 1/4 MILE WEST OF CONFLUENCE WITH BICHOTA CREEK.				
Detailed Location:					
Ecological:	COASTAL SAGE/CHAPARRAL ECOTONE. BOULDERY BENCH, SOUTH SIDE OF CANYON. COARSE GRANITIC LOAM. ASSOCIATED WITH ERIOGONUM FASCICULATUM, ADENOSTOMA FASCICULATUM, PRUNUS ILICIFOLIA, CERCOCARPUS BETULOIDES, ERIGERON FOLIOSUS, MULLA MARITIMA, ETC.				
General:	APPROXIMATELY 50 PLANTS OBSERVED IN 1995. 1921 COLLECTION BY PEIRSON FROM NORTH FORK SAN GABRIEL RIVER, 2500 FEET, ALSO ATTRIBUTED HERE.				
Owner/Manager:	USFS-ANGELES NF				

<i>Lilium parryi</i>		Element Code: PMLIL1A0J0	
lemon lily			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G3
	State: None		State: S3
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank, USFS_S-Sensitive		



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Habitat:	General:	LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS, RIPARIAN FOREST, UPPER MONTANE CONIFEROUS FOREST.		
	Micro:	WET, MOUNTAINOUS TERRAIN; GENERALLY IN FORESTED AREAS; ON SHADY EDGES OF STREAMS, IN OPEN BOGGY MEADOWS AND SEEPS. 625-2930 M.		

Occurrence No.	43	Map Index:	28857	EO Index:	30449	Element Last Seen:	1990-08-02
Occ. Rank:	Poor	Presence:	Presumed Extant	Site Last Seen:		1990-08-02	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-03-28	

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.35577 / -117.84391	Accuracy:	80 meters
UTM:	Zone-11 N3801927 E422391	Elevation (ft):	6800
PLSS:	T03N, R09W, Sec. 08, SE (S)	Acres:	0.0

Location: CORTELYOU SPRINGS; ALONG ANGELES CREST HWY, NORTH OF CRYSTAL LAKE RECREATION AREA, SAN GABRIEL MOUNTAINS.
Detailed Location: MAPPED IN THE SW 1/4 OF THE SE 1/4 OF SECTION 8 ACCORDING TO A 1991 MISTRETTA REPORT MAP.
Ecological: SITE IS WITHIN SOUTHERN CALIFORNIA WHITE FIR FOREST. SMALL SEEP WHICH HAS BEEN WALLED OFF ON THREE SIDES. LILIES ARE GROWING NEAR THE WETTEST AREAS WITHIN SALIX.
General: 1 PLANT OBSERVED IN 1983. 2 FLOWERING PLANTS OBSERVED IN 1990.
Owner/Manager: USFS-ANGELES NF

Occurrence No.	44	Map Index:	28858	EO Index:	1531	Element Last Seen:	1993-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1993-XX-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-02-28	

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.34706 / -117.83750	Accuracy:	80 meters
UTM:	Zone-11 N3800956 E422973	Elevation (ft):	7600
PLSS:	T03N, R09W, Sec. 16, NE (S)	Acres:	0.0

Location: WINDY SPRINGS; NORTH OF CRYSTAL LAKE RECREATION AREA, SAN GABRIEL MOUNTAINS.
Detailed Location: GROWING ABOUT 100 YARDS ABOVE AND TO THE WEST OF THE SPRINGS. MAPPED IN THE SE 1/4 OF THE NE 1/4 OF SECTION 17 AND THE SW 1/4 OF THE NW 1/4 OF SECTION 16 ACCORDING TO A 1991 MISTRETTA REPORT MAP.
Ecological: WESTERN PONDEROSA PINE FOREST. GROWING BENEATH INCENSE CEDAR AND JEFFREY PINE AND ADJACENT TO A LARGE, DENSE STAND OF HELENIUM BIGELOVII. OTHER ASSOCIATES INCLUDE CEANOTHUS CORDULATUS, RIBES NEVADENSE, CAREX, AND POTENTILLA.
General: 7 FLOWERING PLANTS OBSERVED IN 1991. 197 PLANTS SEEN IN 1993.
Owner/Manager: USFS-ANGELES NF



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Occurrence No.	45	Map Index: 35087	EO Index: 30446	Element Last Seen:	2011-07-15
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2011-07-15
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-03-29

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34559 / -117.82945	Accuracy:	80 meters
UTM:	Zone-11 N3800787 E423712	Elevation (ft):	7450
PLSS:	T03N, R09W, Sec. 16 (S)	Acres:	0.0

Location: LITTLE JIMMY SPRING; NORTH OF CRYSTAL LAKE RECREATION AREA, SAN GABRIEL MOUNTAINS.

Detailed Location: IN 1990 PLANTS WERE GROWING IN RIBES THICKET ON WEST SLOPE AND BELOW SPRING. MAPPED NEAR THE CENTER OF SECTION 16 ACCORDING TO COORDINATES GIVEN IN A 2010 STRONG FIELD SURVEY FORM AND A 2011 TIRRELL OBSERVATION.

Ecological: WET AREAS WITH SPRINGS; MONTANE CONIFEROUS FOREST; POTENTILLA GLANDULOSA SSP. REFLEXA, DRYMOCALLIS CUNEIFOLIA VAR. EWANII, MIMULUS FLORIBUNDUS AND PILOSUS, DODECATHEON REDOLENS, AQUILEGIA FORMOSA.

General: 8 PLANTS (3 FLOWERING) OBSERVED IN 1990, 29 FLOWERING PLANTS OBSERVED IN 1993. UNKNOWN NUMBER OF PLANTS OBSERVED AT LITTLE JIMMY SPRING IN 2005. 50-70 PLANTS SEEN IN 2010 AND 2011.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	46	Map Index: 28863	EO Index: 30445	Element Last Seen:	2011-07-15
Occ. Rank:	Good		Presence: Presumed Extant	Site Last Seen:	2011-07-15
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-03-29

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.34833 / -117.81001	Accuracy:	specific area
UTM:	Zone-11 N3801077 E425502	Elevation (ft):	7800
PLSS:	T03N, R09W, Sec. 15, E (S)	Acres:	10.0

Location: LILY SPRING AREA; AT SPRING AND APPROXIMATELY 0.2 AIR MILE NORTH AT ANGELES CREST HIGHWAY, SAN GABRIEL MOUNTAINS.

Detailed Location: IN DRAINAGE GULLY ABOVE HWY 2 ON THE S SIDE NEAR MILE MARKER 67.70. MAPPED AS TWO POLYGONS IN THE NW 1/4 OF SE 1/4 AND SW 1/4 OF NE 1/4 OF SECTION 15 ACCORDING TO 2010 STRONG AND 2011 TIRRELL COORDINATES AND A 1991 MISTRETTA REPORT MAP.

Ecological: WET AREAS WITH SPRINGS, MONTANE CONIFEROUS FOREST, NORTH-FACING. DRYMOCALLIS CUNEIFOLIA VAR. EWANII, MIMULUS FLORIBUNDUS AND PILOSUS, DODECATHEON REDOLENS, AQUILEGIA FORMOSA, HELENIUM BIGELOVII.

General: SOUTH POLYGON: 7 PLANTS OBSERVED IN 1983, 16 PLANTS (10 FLOWERING) OBSERVED IN 1990. NORTH POLYGON: 75-100 PLANTS SEEN IN 2010, 2 PLANTS SEEN IN 2011 (TIRRELL NOTES "ENTIRE UPSLOPE POPULATION (UP TO 100) WAS ABSENT THIS YEAR").

Owner/Manager: USFS-ANGELES NF



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California Department of Fish and Wildlife
California Natural Diversity Database



Occurrence No.	47	Map Index: 72112	EO Index: 30450	Element Last Seen:	2009-07-13
Occ. Rank:	Excellent		Presence: Presumed Extant	Site Last Seen:	2009-07-13
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-08-23
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.33684 / -117.83114		Accuracy:	specific area	
UTM:	Zone-11 N3799818 E423550		Elevation (ft):	6563	
PLSS:	T03N, R09W, Sec. 21, NW (S)		Acres:	2.0	
Location:	BIG CIENEGA SPRING; NORTH OF CRYSTAL LAKE RECREATION AREA, SAN GABRIEL MOUNTAINS.				
Detailed Location:	MAPPED IN THE NE 1/4 OF THE NW 1/4 OF SECTION 21 ACCORDING TO 2014 USFS DIGITAL DATA.				
Ecological:	MONTANE MEADOW WITHIN WESTSIDE PONDEROSA FOREST. GROWING IN WET GROUND IN PARTIAL SHADE OF OPEN WOODLAND WITH CALOCEDRUS, PINUS JEFFREYI, ABIES CONCOLOR, SEQUIOADENDRON, QUERCUS CHRYSOLEPIS, MENTHA, CAREX, JUNCUS, HELENIVM BIGELOVII, ETC.				
General:	345 PLANTS OBSERVED IN 1990; POPULATION NOTED AS THE LARGEST KNOWN IN THE SAN GABRIEL MOUNTAINS. UNKNOWN NUMBER OF PLANTS OBSERVED IN 2009.				
Owner/Manager:	USFS-ANGELES NF				
Occurrence No.	48	Map Index: 28861	EO Index: 30451	Element Last Seen:	1990-08-09
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1990-08-09
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-02-29
Quad Summary:	Crystal Lake (3411737)				
County Summary:	Los Angeles				
Lat/Long:	34.33039 / -117.82584		Accuracy:	80 meters	
UTM:	Zone-11 N3799098 E424030		Elevation (ft):	6250	
PLSS:	T03N, R09W, Sec. 21, SE (S)		Acres:	0.0	
Location:	ALEXANDER SPRING; SOUTH SIDE OF SNOWSLIDE CANYON, NORTHEASTERN CRYSTAL LAKE RECREATION AREA, SAN GABRIEL MOUNTAINS.				
Detailed Location:	ALONG SMALL SEEP IN DEEP SHADE OF HEAVILY WOODED AREA. IN THE NW 1/4 OF THE SE 1/4 OF SECTION 21.				
Ecological:	WESTSIDE PONDEROSA PINE FOREST WITH OVERSTORY OF CALOCEDRUS DECURRENS, ALNUS RHOMBIFOLIA, PINUS JEFFREYI. GENTLE SLOPE WITH HEAVY LITTER ACCUMULATION, FEW UNDERSTORY ELEMENTS, MOSTLY CAREX SP. HABITAT EXTENT VERY SMALL, <0.1 ACRE.				
General:	46 PLANTS OBSERVED (1 FLOWERING) IN 1990.				
Owner/Manager:	USFS-ANGELES NF				



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California Department of Fish and Wildlife
California Natural Diversity Database



Occurrence No.	49	Map Index: 28862	EO Index: 30452	Element Last Seen:	2009-07-12
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2009-07-12
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-07-10

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.31257 / -117.83325	Accuracy:	specific area
UTM:	Zone-11 N3797129 E423333	Elevation (ft):	4965
PLSS:	T03N, R09W, Sec. 28, SW (S)	Acres:	1.0

Location: SOUTH END OF LOWER PINE FLAT; SPRINGS AT SOLDIER CREEK, CRYSTAL LAKE RECREATION AREA, SAN GABRIEL MOUNTAINS.

Detailed Location: SOUTHERN END OF FLAT IN DAMP MEADOWS AND ALONG DRAINAGE IN PARTIAL TO HEAVY SHADE. MAPPED ACCORDING TO 2014 USFS DIGITAL DATA, IN THE SW 1/4 OF THE SW 1/4 OF SECTION 28.

Ecological: MONTANE MEADOW AND WHITE ALDER RIPARIAN FOREST. ASSOCIATED WITH CALOEDRUS, ALNUS RHOMBIFOLIA, PINUS JEFFREYI, QUERCUS CHRYSOLEPIS, UMBELLULARIA, BOYKINIA ROTUNDIFOLIA, MIMULUS CARDINALIS, CAREX, AQUILEGIA, ARTEMISIA DRACUNCULUS, ETC.

General: 185 PLANTS OBSERVED (110 FLOWERING) IN 1990. UNKNOWN NUMBER OF PLANTS OBSERVED IN 2009. A 1931 FOSBERG COLLECTION FROM "LOWER PINE FLATS, FIRST CAMP, N FORK SAN GABRIEL CANYON, 1500 M" IS ALSO ATTRIBUTED TO THIS SITE.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	50	Map Index: 28866	EO Index: 30442	Element Last Seen:	2002-08-14
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2002-08-14
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-02-29

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.36761 / -117.75736	Accuracy:	80 meters
UTM:	Zone-11 N3803177 E430361	Elevation (ft):	7800
PLSS:	T03N, R08W, Sec. 07, NW (S)	Acres:	0.0

Location: LAMEL SPRING; NE OF MOUNT BADEN-POWELL, SAN GABRIEL MOUNTAINS.

Detailed Location: ON TRAIL 8W01 NEAR PACIFIC CREST TRAIL. ON THE SECTION LINE BETWEEN THE SW 1/4 OF SECTION 6 AND THE NW 1/4 OF SECTION 7.

Ecological: SIERRAN MIXED CONIFER FOREST WITH PINUS LAMBERTIANA, ABIES CONCOLOR, MIMULUS CARDINALIS, DODECATHEON REDOLENS, HELENIUM BIGELOVII, EPILOBIUM, SISYRINCHIUM BELLUM, RIBES NEVADENSE, AND ARCTOSTAPHYLOS.

General: 20 PLANTS OBSERVED BY SKINNER IN 1983. 19 PLANTS (12 FLOWERING) OBSERVED IN 1990. UNKNOWN NUMBER OF PLANTS OBSERVED IN 2002.

Owner/Manager: USFS-ANGELES NF



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Occurrence No.	131	Map Index: 85653	EO Index: 86479	Element Last Seen:	1970-09-10
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1970-09-10
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2012-04-04

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.32563 / -117.74672	Accuracy:	2/5 mile
UTM:	Zone-11 N3798515 E431305	Elevation (ft):	5500
PLSS:	T03N, R08W, Sec. 19 (S)	Acres:	0.0

Location: SOUTH FORK ALDER GULCH, SAN GABRIEL MOUNTAINS.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS AROUND THE PORTION OF ALDER GULCH, AND CANYONS THAT HEAD IN A SOUTHERLY DIRECTION OFF OF ALDER GULCH, AT ABOUT 5500 FEET IN ELEVATION. NEAR THE COMMON CORNER OF SECTIONS 19, 20, 29 & 30.

Ecological: CALCAREOUS SEEP, NORTH-SLOPE, SEMI-SUNNY.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1970 WHEELER COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-ANGELES NF

Occurrence No.	167	Map Index: B0101	EO Index: 111960	Element Last Seen:	2009-06-22
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	2009-06-22
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2018-07-23

Quad Summary: Crystal Lake (3411737)

County Summary: Los Angeles

Lat/Long:	34.32014 / -117.83739	Accuracy:	specific area
UTM:	Zone-11 N3797971 E422959	Elevation (ft):	5365
PLSS:	T03N, R09W, Sec. 28, NW (S)	Acres:	1.0

Location: CEDAR CREEK, SOUTH OF CRYSTAL LAKE GUARD STATION, APPROXIMATELY 0.5 AIR MILE EAST OF CRYSTAL LAKE.

Detailed Location: MAPPED ACCORDING TO 2014 USFS DIGITAL DATA, ON THE WESTERN BORDER OF THE NW 1/4 OF SECTION 28.

Ecological:

General: UNKNOWN NUMBER OF PLANTS SEEN IN 2009.

Owner/Manager: USFS-ANGELES NF



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California Department of Fish and Wildlife
California Natural Diversity Database



Muhlenbergia californica		Element Code: PMPOA480A0	
California muhly			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4
	State: None		State: S4
	Other: Rare Plant Rank - 4.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		
Habitat:	General: COASTAL SCRUB, CHAPARRAL, LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.		
	Micro: USUALLY FOUND NEAR STREAMS OR SEEPS. 100-2000 M.		

Occurrence No.	3	Map Index: 35091	EO Index: 131	Element Last Seen:	1951-07-30
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1951-07-30
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	1996-03-07

Quad Summary: Mount San Antonio (3411736), Crystal Lake (3411737), Mescal Creek (3411746), Valyermo (3411747)
County Summary: Los Angeles

Lat/Long:	34.37434 / -117.76556	Accuracy:	1 mile
UTM:	Zone-11 N3803928 E429613	Elevation (ft):	6500
PLSS:	T03N, R09W, Sec. 01, E (S)	Acres:	0.0

Location: BIG ROCK CREEK, NORTH OF MT. BADEN-POWELL, SAN GABRIEL MOUNTAINS.
Detailed Location: MAPPED ABOUT 1 MILE NORTH OF MT. BADEN-POWELL.
Ecological: INFREQUENT ON EXPOSED SOUTH SLOPE WITH ARTEMISIA TRIDENTATA AND FREMONTODENDRON CALIFORNICUM.
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1951 COLLECTION BY ROOS.
Owner/Manager: UNKNOWN

Occurrence No.	4	Map Index: 02622	EO Index: 137	Element Last Seen:	1933-08-11
Occ. Rank:	Unknown		Presence: Presumed Extant	Site Last Seen:	1933-08-11
Occ. Type:	Natural/Native occurrence		Trend: Unknown	Record Last Updated:	2007-10-19

Quad Summary: Crystal Lake (3411737), Valyermo (3411747)
County Summary: Los Angeles

Lat/Long:	34.37193 / -117.83604	Accuracy:	specific area
UTM:	Zone-11 N3803712 E423130	Elevation (ft):	5250
PLSS:	T03N, R09W, Sec. 04 (S)	Acres:	428.9

Location: SOUTH FORK BIG ROCK CREEK, SAN GABRIEL MOUNTAINS.
Detailed Location: MAPPED ALL ALONG SOUTH FORK BIG ROCK CREEK; LOCATION VAGUE.
Ecological:
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1933 COLLECTION BY DURAN.
Owner/Manager: USFS-ANGELES NF



Multiple Occurrences per Page
California Department of Fish and Wildlife
California Natural Diversity Database



<i>Botrychium crenulatum</i>		Element Code: PPOPH010L0	
scalloped moonwort			
Listing Status:	Federal: None	CNDDDB Element Ranks:	Global: G4
	State: None		State: S3
	Other: Rare Plant Rank - 2B.2, USFS_S-Sensitive		
Habitat:	General: BOGS AND FENS, MEADOWS AND SEEPS, UPPER MONTANE CONIFEROUS FOREST, LOWER MONTANE CONIFEROUS FOREST, MARSHES AND SWAMPS.		
	Micro: MOIST MEADOWS, FRESHWATER MARSH, AND NEAR CREEKS. 1185-3110 M.		

Occurrence No.	8	Map Index:	31460	EO Index:	2700	Element Last Seen:	XXXX-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		Record Last Updated:	1996-02-19
Occ. Type:	Natural/Native occurrence	Trend:	Unknown				

Quad Summary: Crystal Lake (3411737)
County Summary: Los Angeles

Lat/Long:	34.36823 / -117.75737	Accuracy:	1/5 mile
UTM:	Zone-11 N3803245 E430361	Elevation (ft):	7745
PLSS:	T03N, R08W, Sec. 06, SW (S)	Acres:	0.0

Location: LAMEL SPRING, MT. BADEN POWELL TRAIL, SAN GABRIEL MOUNTAINS.
Detailed Location: LOCATION ON LABEL SAYS "MT. BADEN-POWELL TRAIL, HAMELL SPRINGS...". NOT ABLE TO LOCATE HAMELL SPRINGS, PROBABLY A TYPO.
Ecological:
General: TYPE LOCALITY. ONLY SOURCE OF INFORMATION FOR THIS SITE IS COLLECTION BY KIEFER #1488 (MICH, UCLA), DATE UNKNOWN.
Owner/Manager: USFS-ANGELES NF

Appendix J SHPO Concurrence Letter

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



October 16, 2008

Reply To: FHWA080922C

Gary Iverson
District Environmental Branch Chief
Division of Environmental Planning
California Department of Transportation, District 7
100 Main Street, Suite 100
Los Angeles, CA 90012-3606

Re: Determination of Eligibility for the Proposed Reopening of State Route 39, San Gabriel Canyon Road, Los Angeles County, CA

Dear Mr. Iverson:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

The California Department of Transportation (Caltrans) is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, that the French Wall (07-LA-39 PM 43.4) is eligible for the National Register of Historic Places (NRHP) under Criterion C for its distinctive characteristics of a type and method of construction. The wall is a prototypical example of modern mechanically reinforced earth in the United States, a unique method of construction when it was first erected. As a demonstration project the French Wall was extensively monitored, researched, and published. The French Wall is also unique in the application of elliptical galvanized steel skin, which was imported from France. It does not appear on other Reinforced Earth walls built in the United States as the steel wall was later replaced by a concrete panel system. The French Wall also meets Criteria Consideration G because it introduced reinforced earth technology to the United States and was subsequently improved upon with additional methods. Several new patents were awarded as a direct result of the research that was performed on the Route 39 wall.

Based on my review of the submitted documentation, I concur that the French Wall is eligible for the NRHP under Criterion C for the reasons stated above. Please note that this also constitutes our comments pursuant to PRC 5024(f).

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 654-0631 or e-mail at nlindquist@parks.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Susan K Stratton for".

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

STATE OF CALIFORNIA - THE RESOURCES AGENCY

GRAY DAVIS, Governor

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**P.O. BOX 942886
SACRAMENTO, CA 94290-0001
(916) 853-6824 Fax: (916) 853-9824
calshpo@ohp.parks.ca.gov

November 3, 1999

Reply To: USFS991004A

Michael J. Rogers
Forest Supervisor
Angeles National Forest
701 N Santa Anita Ave
Arcadia, CA 91006-2725

Re: Determinations of Eligibility and Effect for the Proposed Reopening of Highway 39, Angeles National Forest

Dear Mr. Rogers:

Thank you for your letter of September 28, 1999 requesting my review and comments in regard to the United States Forest Service's (USFS) efforts to determine whether the project described above may affect historic properties. You have done this, and are consulting with me, in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

The USFS has determined that the rubble masonry walls along Highway 39 are not eligible for the National Register of Historic Places (NRHP). On page 8 of the *Historic Resource Evaluation Report for the Proposed Improvements of Route 39 Including Drainage Rehabilitation, Repairing an Existing Retaining Wall, the Construction of Two New Retaining Walls, and Roadway Widening (HRER)*, the author refers to attached photographs. I did not receive these photographs. I will reserve comment on the eligibility of the rubble masonry walls until I receive these photographs.

The USFS has also determined that the "French" earthen wall is not eligible for the NRHP. The USFS stated that the earthen wall is not yet 50 years old, and does not possess extraordinary characteristics or significance that would merit its inclusion in the NRHP. However in the conclusion of the HRER the author specifically states, "The 'French' earthen retaining wall is not yet 50 years old, and is therefore automatically excluded from the National Register of Historic Places, but may be found eligible at a later date if re-evaluated." The "French" earthen wall was never evaluated for the NRHP due to its age, however in the historic context of the HRER there was evidence that this resource may have exception significance and should have been evaluated using Criterion Consideration G: Properties That Have Achieved Significance Within the Last Fifty Years. Before I comment further on this property I request your evaluation of the wall using Criterion Consideration G, as well as photographs of the resource.

Finally in your letter you mention that the HRER documents culverts, but the USFS did not make an eligibility determination on these culverts. Does the USFS intend to make a determination for the culverts?

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 654-0631 or e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

Daniel Abeyta, Acting
State Historic Preservation Officer

Appendix IV: DPR 523 Forms

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
 HRI #
 Trinomial
 NRHP Status Code

Other Listings
 Review Code

Reviewer

Date

Page 1 of 14

*Resource Name or #: French Wall

P1. Other Identifier: FHWA Demonstration Project 18

*P2. Location: Not for Publication Unrestricted

*a. County: Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: Crystal Lake

Date:

T

;

R

;

¼ of

¼ of Sec

; M.D.

B.M.

c. Address:

City:

Zip:

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
 The French Wall is the first application of Reinforced Earth® (more commonly known today as Mechanically Stabilized Earth or MSE) built in the United States. MSE is a composite material formed by combining horizontal layers of earth with reinforcing (here employing metal straps). It was first used in the United States in 1972 in the San Gabriel Mountains in the form of a wall supporting a failed section of State Route 39. The wall system is made up of several elements, the most obvious being the galvanized steel plate skin that comprises the wall face. (see Continuation Sheet, page 3)

*P3b. Resource Attributes: (List attributes and codes) HP11. Engineering structure

*P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
 Looking southeast at the central section of the wall

*P6. Date Constructed/Age and Sources: Historic
 Prehistoric Both
 ca. 1972

*P7. Owner and Address:
 State of California
 Angeles National Forest
 California Dept. of Transportation
 100 South Main Street
 Los Angeles, CA 90012

*P8. Recorded by: (Name, affiliation, and address)
 Noah M. Stewart
 Caltrans, District 7
 100 South Main Street, Suite 100
 Los Angeles, CA 90012

*P9. Date Recorded: August 2008
 *P10. Survey Type: (Describe)
 Intensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none") Noah M. Stewart, Historic Resources Evaluation Report: Storm Damage Repair on State Route 39 (SR-39), San Gabriel Canyon Road, 07-LA-39 PM 40.0/PM 44.4, EA: 19920U (Los Angeles: California Department of Transportation, 2008).

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

Appendix K List of Technical Studies

Appendix K List of Technical Studies

List of Technical Studies

- Air Quality Report by Caltrans on January 10, 2024
- Archeological Survey Report (ASR) by ECORP Consulting, Inc. on December 19, 2023
- Community Impact Assessment (CIA) by ECORP Consulting, Inc. on September 22, 2023
- Finding of No Historic Properties Affected by Caltrans on December 20, 2023
- Hazardous Waste Initial Site Assessment (ISA) on September 22, 2023
- Historic Property Survey Report (HPSR) by ECORP Consulting, Inc. on December 19, 2023
- Preliminary Location Hydraulic Study Report by Caltrans on June 30, 2023
- Natural Environmental Study (NES) by Caltrans on January 19, 2023
- District Preliminary Geotechnical Report by Caltrans on August 31, 2023
- De Minimis Section 4(f) Evaluation by Parsons Transportation Group Inc. on January 11, 2024
- Storm Water Data Report by Caltrans on September 28, 2023
- Shuttle Service Feasibility Study by Parsons Transportation Group Inc. on August 16, 2023
- Visual Impact Assessment by Caltrans on December 7, 2023
- Qualitative VMT Analysis Memo by Caltrans on November 1, 2023
- Wildlife Impact Noise Study Report by Caltrans on June 30, 2023