Interstate 680/Sunol Boulevard Interchange Improvements Project

Alameda County, California
District 04 ALA-680 (PM R14.8/R15.5)
EA 04-0Q9200, Project ID 0418000174

Initial Study with Mitigated Negative Declaration

Prepared by the
California Department of Transportation

Caltrans

June 2024

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General Information about This Document

The California Department of Transportation (Department) has prepared this Initial Study with Mitigated Negative Declaration for the proposed project located in Alameda County, California. The Department is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study with Proposed Mitigated Negative Declaration circulated to the public for 32 days between April 7, 2023, and May 8, 2023. Comments received during this period are included in Section 3.3. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs.

Alternative Formats:

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SCH# 2023040153
04-ALA-680 (PM R14.8/R15.5)
EA No 04-0Q9200
Project No. EFIS 0418000174

Interstate 680/Sunol Boulevard Interchange Improvements Project
on Interstate 680 in the City of Pleasanton at the Sunol Boulevard interchange (postmile R14.8 to postmile R15.5)

INITIAL STUDY WITH MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies:

California Department of Fish and Wildlife, California Transportation Commission, and Regional Water Quality Control Board

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06/04/2024

Date of Approval

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Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans), in coordination with the City of Pleasanton, proposes to modify the Interstate 680 (I-680)/Sunol Boulevard interchange and adjacent intersections in the City of Pleasanton and unincorporated Alameda County (project). The proposed project would modify intersection traffic controls and lane striping, increase ramp storage, and improve pedestrian and bicycle facilities in the interchange area. The project area is along I-680 from the Sunol Boulevard interchange (Post Mile [PM] R15.5) to 0.5 mile south of the interchange (PM R14.8), and along Sunol Boulevard from the Arlington Drive intersection to the Castlewood Drive/Pleasanton-Sunol Road intersection.

Determination

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

The project would have no effect on agriculture and forestry resources, mineral resources, population and housing, recreation, and tribal cultural resources.

In addition, the project would have less than significant effects to aesthetics, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation, utilities and service systems, and wildfire.

With implementation of mitigation measures MM-BIO-12 and MM-BIO-13, the project would have less-than-significant effects to biological resources, specifically sensitive natural communities and threatened and endangered species (California tiger salamander, California red-legged frog, and Alameda whipsnake).

Mougan Mostaghimi

06/05/2024

Christopher Caputo
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Environmental Planning and Engineering
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Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), in cooperation with the City of Pleasanton, proposes to modify the Interstate 680 (I-680)/Sunol Boulevard interchange and adjacent intersections in the City of Pleasanton and unincorporated Alameda County, California (project). The proposed project would modify intersection traffic controls and lane striping, increase ramp storage, and improve pedestrian and bicycle facilities in the interchange area.

The project is included in the Metropolitan Transportation Commission's (MTC's) Bay Area Regional Transportation Plan (RTP), Plan Bay Area 2050 (Association of Bay Area Governments [ABAG] and MTC 2021; RTP ID No. 21-T06-021). The project is in the 2023 Transportation Improvement Program (TIP), which was adopted by the MTC on September 28, 2022 (MTC 2022; TIP ID No. ALA190020). The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approved the 2023 TIP on December 16, 2022.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

1.2 Project Location

The project location is along I-680 from Post Mile (PM) R14.8 to PM R15.5, and along Sunol Boulevard from Arlington Drive to Castlewood Drive. The project area is shown in Figure 1-1.

I-680 extends from the I-280/United States Highway 101 (US 101) interchange in San Jose in the south to the I-80/State Route (SR) 12 interchange in Fairfield in the north. I-680 is a major north-south transportation corridor between Santa Clara and Alameda counties. The freeway serves as a major commute corridor for travelers who work in Contra Costa, Alameda and Santa Clara counties and live in the eastern and central parts of Alameda and Contra Costa counties. In the project area, I-680 has three general purpose lanes in each direction. The posted speed limit is 65 miles per hour (mph). Travel demand generally peaks in the southbound direction during the AM peak period (5 AM to 9 AM) and in the northbound direction during the PM peak period (3 PM to 7 PM). Traffic volumes on I-680 in the project area are generally higher during the PM peak period than the AM peak period.

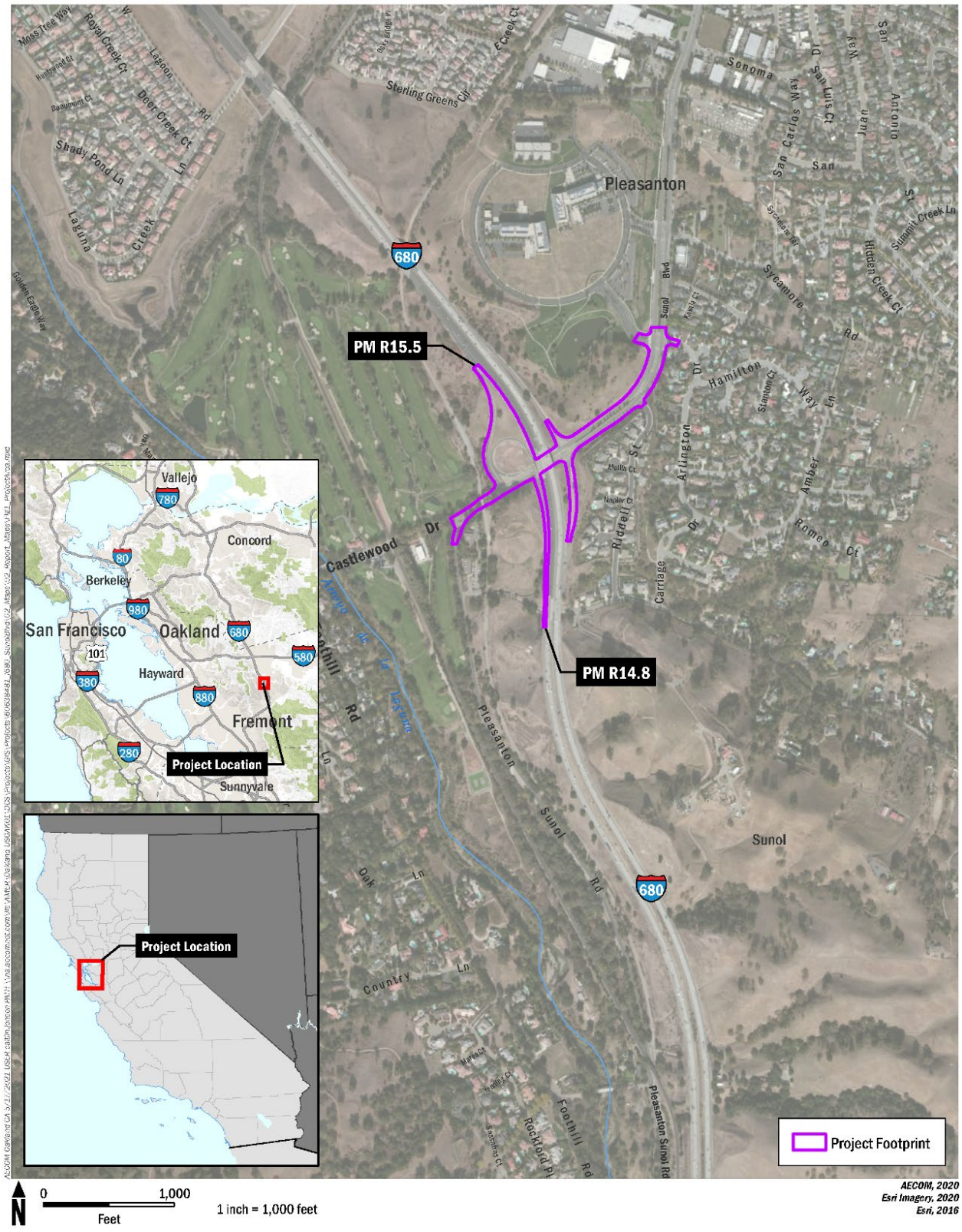

Figure 1-1. Project Location

At the I-680/Sunol Boulevard interchange, the northbound off-ramp has a single lane with a channelized right turn lane and a left/through lane at the terminus area, and the northbound on-ramp is a two lane metered ramp with one general purpose lane and one HOV lane. The southbound off-ramp has a single lane. The southbound loop on-ramp is a single lane with a ramp meter.

Located at the southwestern border of Pleasanton, the I-680/Sunol Boulevard interchange is the southernmost access point between I-680 and the city. Sunol Boulevard also serves as a major commute corridor for travelers living and working in the City of Pleasanton, City of Livermore, Alameda County, and Santa Clara County. Sunol Boulevard is a two-to-five-lane arterial roadway between Bernal Avenue in the east and Castlewood Drive/Pleasanton-Sunol Road in the west. West of I-680, Sunol Boulevard is called Pleasanton-Sunol Road, which bears south after splitting off to Castlewood Drive to the west. East of Bernal Avenue, Sunol Boulevard is called First Street, which connects to Stanley Boulevard, a major east-west arterial between Pleasanton and Livermore. The speed limit on Sunol Boulevard is 40 mph, and on-street parking is prohibited. Travel demand generally peaks in the westbound direction in the AM peak period and in the eastbound direction during the PM peak period. Traffic volumes on Sunol Boulevard in the project are generally higher during the AM peak period than the PM peak period, which reflects the effects of cut-through traffic volumes during the AM peak period.

A former Southern Pacific Railroad bridge crosses Pleasanton-Sunol Road just west of the southbound I-680 off-ramp. The bridge and rail corridor are part of right-of-way leased by Alameda County to the Pacific Locomotive Association (PLA). PLA has plans to lay new track on this corridor, through the project area, to Bernal Avenue as part of the Niles Canyon Railway.

1.3 Purpose

The purposes of the project are to:

- Reduce congestion on Sunol Boulevard;
- Accommodate future traffic volume growth; and
- Improve pedestrian and bicycle access through the interchange.

1.4 Need

The project is needed to address existing congestion on Sunol Boulevard, projected increases in travel demand from future job and housing growth, and gaps in the sidewalk and bicycle lane network through the interchange area, as described further below.

1.4.1 Existing Congestion

The portion of southbound I-680 between the Sunol Boulevard on-ramp and the Koopman Road off-ramp is a major regional bottleneck during the AM peak period (5 to 9 AM). Congestion associated with this bottleneck generally occurs throughout the weekday AM peak period and slows vehicle speeds to below 35 miles per hour (mph) northward to the westbound I-580 off-ramp.

Due to the recurring congestion on southbound I-680, a high volume of AM peak period traffic—including a substantial amount of cut-through traffic from points east of Pleasanton—enters the southbound I-680 mainline at the Sunol Boulevard on-ramp. Ramp metering is provided on the Sunol Boulevard southbound on-ramp, and vehicle queues from the ramp meter regularly spill back onto Sunol Boulevard. Field observations indicate that this ramp meter is a controlling bottleneck for Sunol Boulevard during the AM peak hour, with the westbound queue on Sunol Boulevard extending to the Arlington Drive intersection (Alameda CTC 2019a), a distance of approximately 0.4 mile.

Level of Service (LOS) is an indicator of operational conditions on a roadway or at an intersection and is defined in categories ranging from A to F. LOS A represents the best roadway conditions with minimal delay, and LOS F indicates substantial congestion with stop-and-go traffic. For intersections, LOS is based on the number of seconds of delay. The City of Pleasanton's General Plan sets a standard of LOS D for most local intersections,[1] and Caltrans typically sets a standard of LOS D for freeway on- and off-ramps. LOS is not used as a metric for analyzing transportation impacts under CEQA but helps to illustrate existing and future operations and delay. Section 2.19 addresses vehicle miles traveled (VMT) as part of the CEQA transportation analysis.

[1] The City of Pleasanton General Plan exempts gateway intersections, including the I-680/Sunol Boulevard interchange, from the City LOS standard.

Four of the five intersections in the project area do not meet the LOS D standard during the worst 30-minute AM peak period (6:30 AM to 7:00 AM). The intersections, levels of service, and delay times are as follows:

- I-680 southbound ramps/Sunol Boulevard – LOS E (37 seconds of delay)
- I-680 northbound ramps/Sunol Boulevard – LOS F (over 120 seconds of delay)
- Riddell Street/Sunol Boulevard – LOS F (69 seconds of delay)[2]
- Arlington Drive/Sunol Boulevard – LOS F (97 seconds of delay).

The Castlewood Drive/Pleasanton-Sunol Road intersection operates at LOS C or better during the AM peak period. All intersections in the project area operate at LOS C or better during the worst 30-minute PM peak (5:30 PM to 6:00 PM) (City of Pleasanton 2021a).

1.4.2 Future Traffic Growth

Vehicle demand volumes in the project area are anticipated to grow by a minimum of 1 percent per year based on Plan Bay Area forecasts of jobs and households in the I-680 corridor (City of Pleasanton 2021a). These projections indicate that demand will continue to increase during peak periods, adversely affecting travel speeds and increasing the level and duration of congestion.

In future analysis year 2045, the existing AM peak period bottleneck on southbound I-680 between Sunol Boulevard and Koopman Road would be improved by another project (the I-680 Express Lanes from State Route 84 to Alcosta Boulevard Project, EA 04-0Q300; southbound phase to be completed in 2024). However, increased demand volumes would result in continued AM peak hour congestion on southbound I-680 and the southbound on-ramp from Sunol Boulevard. At the intersections that currently function at LOS E or F, operations are projected to worsen compared to existing conditions, as shown below:

- I-680 southbound ramps/Sunol Boulevard – LOS F, AM peak (78 seconds of delay); LOS E, PM peak (5:30 PM to 6:00 PM; 35 seconds of delay)

[2] Delay times for the I-680 southbound ramps/Sunol Boulevard, I-680 northbound ramps/Sunol Boulevard, and Riddell Street/Sunol Boulevard intersections are for the worst approach delay.

- I-680 northbound ramps/Sunol Boulevard – LOS F, AM peak (over 120 seconds of delay)
- Riddell Street/Sunol Boulevard – LOS F, AM peak (66 seconds of delay)[3]
- Arlington Drive/Sunol Boulevard – LOS F, AM peak (over 120 seconds of delay).

The intersection of Castlewood Drive/Pleasanton-Sunol Road would be signalized before 2045 as part of another project and is anticipated to operate at LOS B during both the AM and PM peak periods. All other intersections would operate at LOS D or better during the AM and PM peak periods (City of Pleasanton 2021a).

1.4.3 Bicycle and Pedestrian Access

The City of Pleasanton Bicycle and Pedestrian Master Plan (City of Pleasanton 2018) identifies the Sunol Boulevard corridor as a High Stress Network, a designation for streets with high speeds, multiple travel lanes, limited or non-existent bikeways, and long intersection crossing distances.

The eastbound and westbound Class II (striped) bicycle lanes on Sunol Boulevard end near the I-680 southbound on-ramp intersection. Eastbound Sunol Boulevard has no sidewalk west of the I-680 northbound ramp intersection, and westbound Sunol Boulevard has no sidewalk. Both Pleasanton-Sunol Road and Castlewood Drive lack sidewalks and bicycle facilities.

The Bicycle and Pedestrian Master Plan proposes closing gaps in bicycle lanes, installing sidewalks/paths on both sides of Sunol Boulevard, and striping high-visibility crosswalks across all on-ramps. In addition, the Caltrans District 4 Bike Plan (2018a) identifies the need for Class II bike facilities at interchange ramp crossings, and the Caltrans District 4 Pedestrian Plan for the Bay Area (2021a) identifies the interchange as a Tier 3 priority level for pedestrian facilities. (Tier 1 represents the highest intensity of need.)

1.5 Project Description

The project would be constructed along I-680 from the Sunol Boulevard interchange (PM R15.5) to 0.5 mile south of the interchange (PM R14.8), and along Sunol Boulevard from the Arlington Drive intersection to the Castlewood Drive/Pleasanton-Sunol Road

[3] Delay times for the I-680 southbound ramps/Sunol Boulevard, I-680 northbound ramps/Sunol Boulevard, and Riddell Street/Sunol Boulevard intersections are for the worst approach delay.

intersection. The proposed scope of work includes modifying the I-680/Sunol Boulevard interchange and adjacent intersections, modifying intersection traffic controls and lane striping, increasing ramp storage, and improving pedestrian and bicycle facilities in the interchange area.

1.6 Project Alternatives

This section describes the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. The alternatives are the Build Alternative and the No Build Alternative. The alternatives, along with alternatives considered but eliminated from further discussion, are described further below.

1.6.1 Build Alternative

The Build Alternative would include the elements described below and shown in Figure 1-2. The improvements to the project area discussed in Section 1.6.2 for the No Build Alternative are also assumed for the Build Alternative.

SIGNALS AND LANE STRIPING

Southbound Ramp Intersection

At the I-680 southbound ramp intersection, the westbound Sunol Boulevard approach to the loop on-ramp would be modified to remove the existing channelized right-turn lane, and to include one through lane and two right turn-only lanes. An eastbound left turn pocket to the on-ramp would be added.

The Build Alternative would widen the southbound I-680 on-ramp to include two general purpose ramp meter storage lanes and one ramp meter bypass lane for high-occupancy vehicles with two or more occupants (HOV 2+). The Sunol Boulevard on-ramp overcrossing structure would also be widened to accommodate vehicles merging downstream of the ramp meter stop bar.

The southbound I-680 diagonal off-ramp approach to Sunol Boulevard would be restriped to include one left turn lane and one right turn lane. The existing stop sign at the end of the off-ramp would be removed, and traffic signals would be installed for the intersection of the southbound I-680 ramps with Sunol Boulevard.

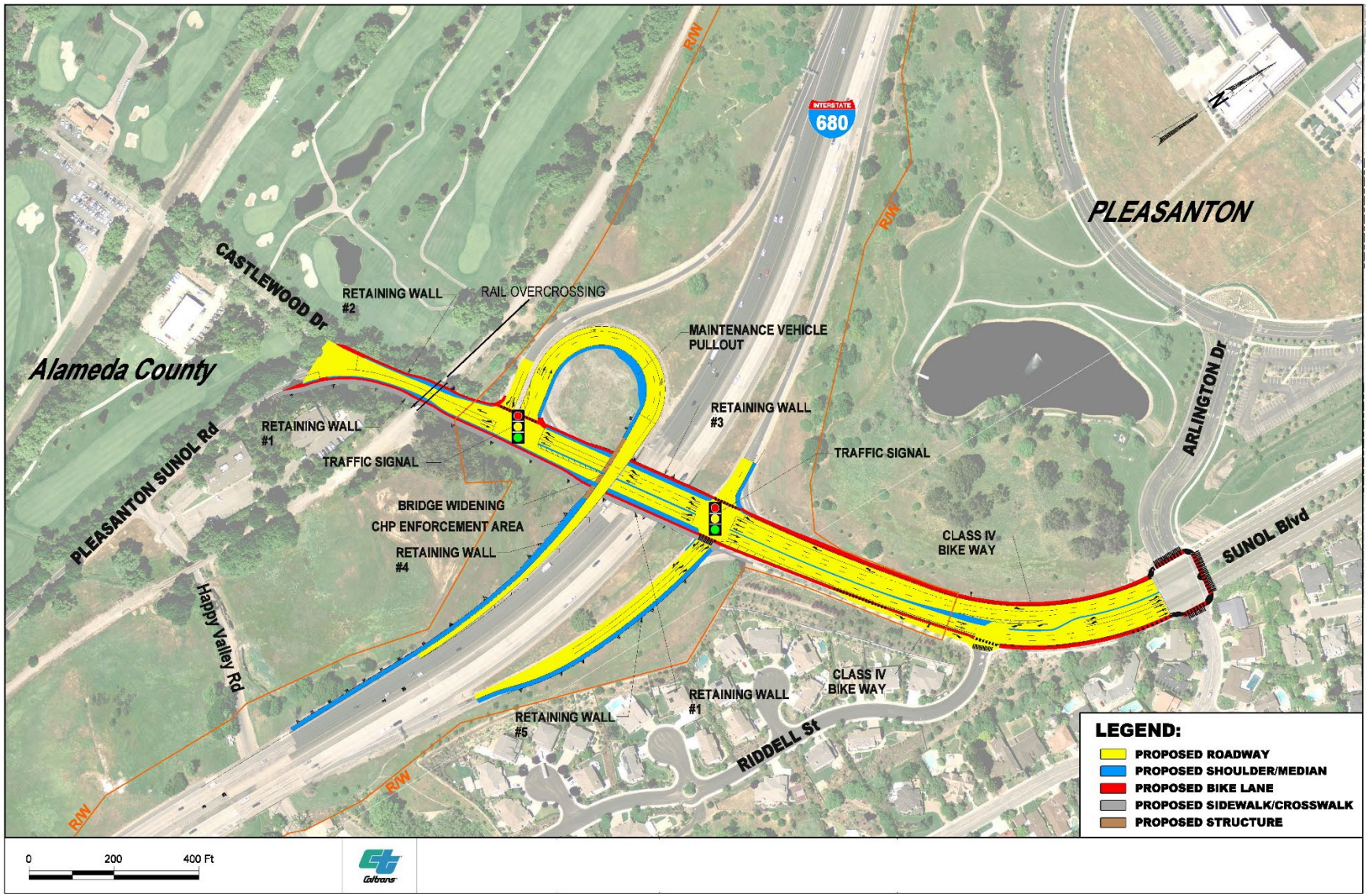

Figure 1-2. Project Layout

Northbound Ramp Intersection

At the I-680 northbound ramp intersection, the westbound approach to the diagonal on-ramp would be modified. The triangular median separating the two existing entry points – the channelized right turn-only lane and the shared approach from eastbound Sunol Boulevard and the I-680 northbound off-ramp – would be removed. The on-ramp approach would be reconfigured into a single, shared entry point with two lanes, just north of Sunol Boulevard. A third through lane would be added on westbound Sunol Boulevard approaching the intersection.

The northbound diagonal off-ramp approach to Sunol Boulevard would be modified to remove the existing channelized right turn lane, and to delineate one through-left turn shared lane and two right turn-only lanes. The triangular median separating the two existing exit points – the shared straight and left turn lane, and separate right turn lane – would be removed. The new lanes on the northbound off-ramp would start approximately 400 feet prior to the intersection stop bar, in order to increase ramp storage; this would require widening the off-ramp. The off-ramp approach would be reconfigured into a single exit point with one combined straight and left turn lane and two right turn lanes just south of Sunol Boulevard. The existing stop sign at the end of the off-ramp would be removed, and traffic signals would be installed for the intersection of the northbound I-680 ramps with Sunol Boulevard. The new off-ramp signals would be interconnected via fiber optic communication.

BICYCLE AND PEDESTRIAN FACILITIES

The proposed project would construct Class IV bikeways along the north and south sides of Sunol Boulevard, between the Arlington Drive/Sunol Boulevard and Castlewood Drive/Pleasanton-Sunol Road intersections. Class IV bikeways (also known as cycle tracks or separated bikeways) provide a designated facility exclusively for bicycle travel within a roadway and are protected from other vehicle traffic by physical barriers. The existing Class II bikeways located within the roadway between the I-680 southbound and northbound ramps would be relocated behind the existing columns of the I-680 overcrossing and rail overcrossing, and protected from motor vehicle traffic by a curb. Flexible posts would be used to separate the proposed Class IV bikeways from vehicle traffic on eastbound and westbound Sunol Boulevard from the I-680 northbound off-ramp terminus area to Arlington Drive.

At locations where the bikeways cross the I-680 ramps, as well as at the eastbound Sunol Boulevard/Riddell Street intersection, the project would install skip-striped 6-foot-wide bike lanes.

The sidewalk along the south side of Sunol Boulevard from east of Arlington Drive to just before the I-680 northbound off-ramp intersection would be continued westward to Pleasanton Sunol Road. The new sidewalk would be behind the existing columns of the I-680 overcrossing and rail overcrossing. New crosswalks for pedestrians and bicyclists would be provided along Sunol Boulevard at the northbound and southbound I-680 ramp intersections, Riddell Street, and Arlington Drive. Signing, striping, and pavement markings would be added to reduce the potential for conflicts between bicyclists and motorists at the entrance of the westbound Sunol Boulevard to southbound I-680 loop on-ramp.

1.6.2 No Build Alternative

The No Build Alternative would not modify intersection traffic controls and lane striping, increase ramp storage, or improve pedestrian and bicycle facilities along Sunol Boulevard in the I-680/Sunol Boulevard interchange area. However, the following background improvements are assumed in this scenario:

- Signalization of the Castlewood Drive/Pleasanton-Sunol Road intersection (funded through City of Pleasanton traffic impact fees and included in City of Pleasanton General Plan Circulation Element; assumed to be in place by 2045)

- I-680 Express Lanes from State Route 84 to Alcosta Boulevard (EA 04-0Q300; southbound lane to open in 2024, and northbound lane to open by 2027).

1.6.3 Identification of a Preferred Alternative

The Project Development Team identified the Build Alternative as the preferred alternative on May 15, 2023. Selection of the preferred alternative would meet the project's purpose and need to reduce congestion on Sunol Boulevard; accommodate future traffic volume growth; and improve pedestrian and bicycle access through the interchange. The following summarizes the reasons for choosing the Build Alternative over the No Build Alternative based on each stated purpose of the project:

- **Reduce congestion on Sunol Boulevard *and***
- **Accommodate future traffic volume growth**
  Four of the five intersections in the project area operate at LOS E or F during the AM peak period, with delays ranging from 37 to over 120 seconds at each intersection (Section 1.4.1). Future AM peak operations at these intersections are projected to worsen, with delays ranging from 66 to over 120 seconds of delay (Section 1.4.2). The Build Alternative would reduce congestion on Sunol Boulevard by generally improving opening year (2025) and design year (2045)

AM and PM peak intersection operations and reducing vehicle hours of delay compared with the No Build Alternative (Section 2.19). In addition to improving operations along Sunol Boulevard, the Build Alternative would not increase AM or PM peak period travel time on southbound or northbound I-680 in either 2025 or 2045 compared to the No Build Alternative (Section 2.19).

- **Improve pedestrian and bicycle access through the interchange.**
  The project area lacks continuous bike and pedestrian facilities, and both City of Pleasanton and Caltrans bicycle and pedestrian plans identify the need for improvements along Sunol Boulevard in the I-680 interchange area (Section 1.4.3). As stated in Sections 1.6.1 and 2.19, the Build Alternative would implement the following pedestrian and bicycle improvements in the project area:
    - Class IV bikeways along the north and south sides of Sunol Boulevard between the Arlington Drive/Sunol Boulevard and Castlewood Drive/Pleasanton-Sunol Road intersections
    - Class II bikeways at the I-680 ramps as well as at the eastbound Sunol Boulevard/Riddell Street intersection
    - Continuation of the sidewalk along the south side of Sunol Boulevard between Arlington Drive and Pleasanton-Sunol Road
    - New crosswalks for pedestrians and bicyclists along Sunol Boulevard at the northbound and southbound I-680 ramp intersections, Riddell Street, and Arlington Drive
    - Signing, striping, and pavement markings to reduce the potential for conflicts between bicyclists and motorists at the entrance of the westbound Sunol Boulevard to southbound I-680 loop on-ramp
    - New roadway lighting to improve visibility and safety for pedestrians and bicyclists

Additionally, the Build Alternative was found to be more effective at meeting the project purpose and need than the stop control and roundabout alternatives discussed in Section 1.6.4. Those alternatives were eliminated based on their potential to affect pedestrian and bicycle safety, as well as traffic operations.

In conclusion, the Build Alternative would satisfy the purpose and need for the project described in Sections 1.3 and 1.4. The No Build Alternative and eliminated alternatives described in Section 1.6.4 would not address the project's purpose and need.

1.6.4 Alternatives Considered but Eliminated from Further Discussion Prior to the "Draft" Initial Study with Proposed Mitigated Negative Declaration

The existing intersection of I-680/Sunol Boulevard is unsignalized, with stop controls at both the northbound and southbound off-ramps. The following alternatives were studied during the project initiation phase and early stages of the project approval and environmental document phase and ultimately rejected and withdrawn from further study for the reasons noted below (City of Pleasanton 2020).

STOP CONTROLS

Two options—All-Way Stop Controls and Two-Way Stop Controls—were considered for the I-680/Sunol Boulevard northbound and southbound ramps.

The All-Way Stop Controls option would not accommodate the projected increase in demand volumes at the I-680/Sunol Boulevard southbound on-ramp. The queues on the I-680/Sunol Boulevard southbound on-ramp with this option are projected to extend onto Sunol Boulevard, causing additional congestion and reducing travel speeds. Although this alternative would improve pedestrian and bicycle access along Sunol Boulevard compared to existing conditions, it would not meet the project purposes of reducing congestion on Sunol Boulevard and accommodating future traffic volume growth.

The Two-Way Stop Control option would impede traffic operations and present pedestrian and bicycle safety issues. A continuous influx of vehicles to and from the ramps would make it difficult for motorists, pedestrians, and bicyclists to find openings in traffic to cross the southbound on-ramp terminus on Sunol Boulevard during the AM peak hours and the northbound off-ramp terminus on Sunol Boulevard during the PM peak hours. This option would not meet the project purposes of reducing congestion on Sunol Boulevard and improving pedestrian and bicycle access through the interchange.

ROUNDABOUTS

A roundabout alternative (Alternative 2) was one of two viable build alternatives recommended for further study in the approved 2019 Project Study Report-Project Development Support (PSR-PDS) (Caltrans 2019). The other viable alternative identified in the PSR-PDS was Build Alternative 1, which has been refined and evaluated in this document as the proposed Build Alternative.

Two roundabout options were considered for Build Alternative 2, termed Option 1 and Option 2. Both options would install roundabouts at the northbound and southbound I-680/Sunol Boulevard intersections and convert the Arlington Drive/Sunol Boulevard intersection to a bicycle/pedestrian protected intersection. Both options would provide westbound free right turn bypass lanes so that motorists can enter the southbound and northbound on-ramps without using the roundabouts.

For the I-680 southbound ramp intersection, Option 1 would construct a single-lane roundabout, including an eastbound shared through-left turn lane, a southbound shared left turn-right turn lane, and a westbound through-right turn shared lane and free right turn bypass lane. Option 2 would construct a partial two-lane roundabout, including an eastbound flared two-lane approach with one shared through and left turn lane and one through lane, a southbound shared left turn-right turn lane, and a westbound through-right turn shared lane and free right turn bypass lane. Both options would add crosswalks across the southbound and eastbound approaches, and a protected intersection for bicyclists on the north side of the intersection for a proposed bike lane.

For the I-680 northbound ramp intersection, both options would install a two-lane roundabout, including an eastbound flared two-lane approach with one shared through and left turn lane and one through lane; a northbound shared left turn, through and right turn lane and a right turn only lane; a westbound through lane and shared left turn and through lane, and a free right turn bypass lane. Both options would add crosswalks across the northbound and southbound on-ramp approaches, and a protected intersection for bicyclists on both the north and south sides of the intersection for a proposed bike lane. As with Build Alternative 1, both options for Build Alternative 2 would widen the southbound I-680 on-ramp to include two general purpose ramp meter storage lanes and one HOV2+ meter bypass lane. The Sunol Boulevard southbound on-ramp overcrossing structure would also be widened to accommodate vehicles merging downstream of the ramp meter stop bar.

With the roundabout alternative, a single Class IV bicycle facility would be added along the south side of Sunol Boulevard between the Arlington Drive/Sunol Boulevard and Castlewood Drive/Pleasanton-Sunol Road intersections. Bicyclists would have the option to remain in the roadway through the interchange. A sidewalk would be added on the south side of Sunol Boulevard, and crossings/crosswalks added for pedestrians and bicyclists.

Neither option for the Roundabout Alternative would meet the purpose and need of the project. In 2045, the roundabouts are projected to cause queues that would spill beyond the ramp intersections along Sunol Boulevard by 2.1 miles to the east, upstream of Arlington Drive and into downtown Pleasanton. The roundabout design at the southbound on-ramp entrance would not be compatible with the ramp metering operations, and the queue from the ramp meter is projected to spill back to the roundabout and block all traffic operations in the roundabout. The westbound Sunol Boulevard vehicle queue is projected to extend beyond the northbound on-ramp, impeding the eastbound left turn movements onto the northbound on-ramp and extending 2.1 miles upstream of Arlington Drive. Moreover, with the roundabout alternative, the only official bicycle facility would be a Class IV bikeway along the south side of Sunol Boulevard. This design would expose bicyclists who choose to ride in traffic lanes to more vehicle conflicts than with the Build Alternative.

1.7 Project Construction

The following activities and components are anticipated as part of project construction.

1.7.1 Pavement Widening

The addition of bicycle facilities, sidewalks, and turning lanes along Sunol Boulevard would require pavement widening, which is expected to have a maximum depth of disturbance of 4 feet. One maintenance vehicle pullout (MVP) would be installed in the shoulder of the southbound I-680 loop on-ramp to allow access to the traffic operations systems (TOS) equipment described in Section 1.7.4. One California Highway Patrol (CHP) observation area would be constructed just south of the southbound I-680 loop on-ramp, to allow enforcement of the proposed HOV2+ lane. Both are shown in Figure 1-2. The MVP and the CHP observation area would have a depth of disturbance of 3 to 4 feet.

1.7.2 Structures

The Build Alternative would widen the southbound I-680 on-ramp overcrossing structure (Pleasanton Sunol Rd UC, Bridge No. 33-087K) to the west to accommodate vehicles merging downstream of the ramp meter stop bar. The maximum depth of disturbance for the bridge abutments would be 40 feet below ground surface, with the bents extending to 45 feet below ground surface. Additional details are provided in Table 1-1. Two 2-inch empty conduits would be installed across the structure for future utilities.

Table 1-1. Proposed Structure Widening

Bridge Name	No. of Spans	Width (feet)	Length (feet)
Pleasanton-Sunol Rd UC (Widen) Bridge No. 33-0387K	3	Varies	Approximately 171 feet, 9.75 inches

1.7.3 Retaining Walls

Retaining walls would be constructed along the northern side of Pleasanton-Sunol Road between the southbound I-680 off-ramp and Castlewood Drive (Wall No. 2), along the western side of the southbound I-680 loop on-ramp south of Sunol Boulevard (Wall No. 4), along the eastern side of the northbound I-680 off-ramp south of Sunol Boulevard (Wall No. 5), on the northern side of Sunol Boulevard under the I-680 overcrossing (Wall No. 3), and along the southern side of Pleasanton-Sunol Road and Sunol Boulevard between Castlewood Drive and the northbound I-680 off-ramp (Wall No 1). The retaining walls would accommodate the widening of the southbound loop on-ramp and northbound diagonal off-ramp, as well as the new Class IV bikeways (both sides) and sidewalk (southern side only) on Pleasanton-Sunol Road and Sunol Boulevard. Retaining walls would include aesthetic treatments such as texture and color to maintain visual consistency with other parts of Sunol Boulevard, adjacent streets and natural features, and I-680 in the project area. Retaining wall foundations are expected to extend to 3.5 feet below ground surface. Additional details are provided in Table 1-2.

Table 1-2. Proposed Retaining Walls

Wall No.	Wall Purpose	Wall Type	Maximum Design Height (from footing to top of wall; feet)[1]	Length (feet)[1]	Visible Height (from sidewalk or shoulder to top of wall; feet)[1,2]
1	For bikeway and sidewalk along the south side of Sunol Blvd	Ground Anchor Wall and Soil Nail Wall	17 - Ground Anchor Wall; 15 - Soil Nail Wall	1,061	Average 8; maximum 14 (under I-680 overcrossing)
2	For bikeway along the north side of Sunol Blvd	Ground Anchor Wall, Soil Nail Wall, and Type 5 Wall	9 - Ground Anchor Wall, 9 - Soil Nail Wall, 4 - Type 5 Wall	350	Average 1; maximum 3 (under railroad overcrossing)
3	For bikeway along north side of Sunol Blvd	Ground Anchor Wall and Soil Nail Wall	12 - Ground Anchor Wall, 12 - Soil Nail Wall	305	Average 6; maximum 8 (under I-680 overcrossing)
4	For widening of southbound I-680 on-ramp	Soil Nail Wall	16	229	Average 8; maximum 12 (just south of Sunol Boulevard)
5	For widening of northbound I-680 off-ramp	Soil Nail Wall	20	549	Average 11; maximum 14

1. Rounded to closest foot
2. Averaged over the length of the wall, to the nearest 100 feet. Shorter, tapered ends of walls not included in average; therefore, actual averages will be slightly lower.

No sound wall construction or reconstruction has been identified for the project.

1.7.4 Traffic Operations and Ramp Metering

Traffic operations system (TOS) equipment such as traffic monitoring stations, closed circuit television cameras, fiber optic communications and associated electrical equipment would be installed along the I-680 southbound loop on-ramp and northbound off-ramp. Trenching for conduits would be required along the ramps and Sunol Boulevard. The depth of trenching would be 30 inches. Horizontal directional drilling would be between 4 feet and 6 feet.

The project limits are within the Middle Mile Broadband Initiative (MMBI) network and covered by contract EA 04-1Y580.

The project would replace the existing ramp metering system on the I-680 southbound loop on-ramp. This would accommodate the ramp widening described in Section 1.6.1. The maximum depth of disturbance for ramp metering would be 5 feet.

1.7.5 Safety Lighting

Roadway lighting is present in the project area along Sunol Boulevard between Arlington Drive and just west of the I-680 southbound off-ramp. To improve roadway visibility, the project would install additional lighting at the signalized intersections of Sunol Boulevard with the I-680 southbound and northbound ramps, and from west of the I-680 southbound off-ramp to the Castlewood Drive/Pleasanton-Sunol Road intersection. The City of Pleasanton will operate and maintain roadway lighting.

The maximum height of the lighting would be 35 to 40 feet, and the number and location of lights would be determined during the detailed design phase. Signal and light pole foundations are expected to have a maximum depth of disturbance of 14 feet.

The lighting would be configured at the minimum necessary illumination level and optimal angle to restrict light to the paved roadway. Shields on the fixtures would be used where feasible to reduce light trespass into potential species habitat and surrounding properties.

1.7.6 Right-of-Way

The Build Alternative is anticipated to require small partial acquisitions from five parcels and permanent easements from seven parcels. Each acquisition is anticipated to be less than 0.01 acre. No full property acquisitions or relocations would be required. Temporary construction easements would be needed from six parcels for construction access and staging.

1.7.7 Utilities

Utilities in the project area include City of Pleasanton water and sewer lines, Pacific Gas and Electric Company (PG&E) overhead electrical and underground gas lines, and AT&T underground phone/communication lines. There is also a Kinder Morgan underground petroleum pipeline crossing Pleasanton-Sunol Road between the southbound I-680 off-ramp and the railroad overcrossing, in the western project area. The project is anticipated to require utility relocations, including five PG&E overhead 12-kilovolt electrical poles. The maximum depth of disturbance for utility poles is 10 feet below ground surface, and underground line work is expected to have a maximum depth of 8 feet below ground surface.

1.7.8 Drainage, Storm Water Treatment, and Erosion Control

The existing drainage systems within the project limits consist of cross culverts, longitudinal pipe systems, roadside ditches, asphalt concrete dikes, and concrete curbs with inlets to collect and convey stormwater. Improvements to the existing drainage system could include modified or new culverts, drainage ditches, and drainage inlets.

A project's disturbed soil area (DSA) includes the newly created, removed, and replaced impervious surfaces areas plus areas of planned grading and earthwork. The Build Alternative is anticipated to have approximately 2.93 acres of DSA, including 2.14 acres of new impervious surface.

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared before project construction, and SWPPP requirements will be inspected and maintained during construction. The SWPPP requires temporary best management practices (BMPs) to prevent runoff into storm water collection systems or waterways. Temporary BMPs proposed for the Build Alternative include soil stabilization, sediment control, wind erosion and tracking control, non-storm water management, and waste management and materials pollution control.

Temporary erosion control and slope stabilization BMPs will be installed before the start of soil disturbing activities. Erosion control measures may include silt fencing, straw wattles, straw bales, coir blankets, sediment traps, and other protective measures to minimize the potential for erosion of sediment beyond the work area or degradation of water quality in adjacent aquatic habitats.

The project would also include permanent BMPs to avoid the potential for project-related storm water discharges to alter drainage patterns, violate water quality standards, or degrade water quality. Potential permanent treatment BMPs for the Build Alternative include biofiltration strips and/or swales, infiltration and/or detention devices, and bioretention areas. The locations and design details of BMPs will be finalized during the design phase.

Permanent erosion control materials will be applied to all disturbed slopes and areas of construction disturbance. Slopes, where feasible, will be constructed at 4:1 (horizontal: vertical) or flatter, with a maximum allowable steepness of 2:1 (horizontal: vertical). Erosion control materials may include fiber rolls, rolled erosion control product (blankets), hydroseed, and hydromulch.

Drainage ditches affected by the project would be replaced in kind in the project footprint, with priority for providing unlined ditches wherever possible. These features will be separate from any treatment areas for roadway runoff and from features preliminarily identified as wetlands or other waters of the United States.

1.7.9 Construction Schedule and Staging

Project construction would take approximately 16 months. Temporary daytime and/or nighttime lane closures of Sunol Boulevard would be needed to set up and remove falsework and temporary shoring for the bridge widening on the southbound I-680 on-ramp. Full closure of the southbound on-ramp is not anticipated; however, temporary nighttime closures of one lane of I-680 and on-ramp and off-ramp lanes would be needed for pavement overlay, striping, and installation of temporary barriers along construction areas.

The I-680 southbound ramp median area would be used for temporary construction staging. Project construction would not require special haul roads.

1.7.10 Post-Construction Planting and Restoration

The project may require removal of up to 61 trees, as described further in Section 2.3. The majority of anticipated tree removals (46) are in Alameda County right-of-way (ROW) and are subject to the Alameda County Tree Ordinance. Two anticipated tree removals are in the City of Pleasanton ROW and are subject to the City's Tree Preservation Ordinance, which is intended to control the removal and preservation of heritage trees. Whether the two trees meet the definitions of a heritage tree, as defined by the City's Ordinance, will be confirmed during the detailed design phase. The remaining 13 trees are in the State ROW.

The City of Pleasanton will work with Alameda County to explore the feasibility of providing replacement tree plantings in the County ROW between Pleasanton-Sunol Road and Castlewood Golf Course, in accordance with the Alameda County Tree Ordinance and other applicable regulations and permits. Impacted planting outside of the Caltrans ROW will be addressed as part of property owner negotiations during the detailed design phase.

Thirteen trees in the Caltrans ROW are anticipated to be removed. Replacement planting in the Caltrans ROW will be provided in accordance with Measure PF-AES-01 (Section 1.9.1). In areas of temporary construction impacts in the Caltrans ROW, appropriate replacement native vegetation would be planted in areas where it would not affect roadway safety. Where appropriate, areas impacted by construction would be

hydroseeded and/or replanted with native vegetation in accordance with Measure PF-AES-02 (Section 1.9.1). The area that would be reseeded is approximately 1.22 acres. Specifications regarding vegetation and tree replacement would be provided during the design phase of the project (estimated to be completed in 2024).

1.8 Project Funding

The current preliminary total cost estimate, including the support cost for the project, is approximately $28.0 million. The current total project funding is $9 million, from City of Pleasanton traffic impact fees. The remaining $19 million of additional funding is anticipated from Senate Bill (SB) 1, regional measures, such as Measure B, Measure BB, Vehicle Registration Fee, State TIP funds, One Bay Area Grant Funds and other local funds, such as the Tri-Valley Transportation Development Fee.

1.9 Project Features

This project contains a number of standardized project measures that are employed on most, if not all, Caltrans projects in accordance with standard specifications, state and federal laws, and anticipated standard environmental permit conditions, and were not developed in response to any specific environmental impact resulting from the proposed project. Project features are separate from avoidance and/or minimization measures (AMMs) or mitigation measures (MMs), which directly relate to the impacts resulting from the proposed project. AMMs, MMs and other measures are discussed separately in each environmental section.

A list of these project features (PF) is included below in the order of environmental resource area.

1.9.1 Aesthetics

PF-AES-01. Highway Replacement and Mitigation Planting

Replacement highway planting and irrigation along with a minimum one-year plant establishment period will be provided in all areas of highway planting removal consistent with the corridor's Designated Scenic Highway Status and where safety and maintenance requirements can be met. Replacement planting with a minimum one-year plant establishment period shall be funded from the parent roadway contract, and must be included in the parent roadway contract that damaged or removed the existing planting. If the Project Development Team determines that a separate child project would be appropriate to fulfill the environmental commitment of the replacement planting, mitigation planting, plant establishment period and monitoring period required

by regulatory agencies, the planting project shall be implemented within two years of parent roadway contract acceptance. The City of Pleasanton shall obtain approval of the replacement planting work that will occur within State ROW from Caltrans District Landscape Architecture during the detailed design phase and prior to construction.

Required mitigation planting will be provided for impacts to valley oak woodland and riparian trees. The project is anticipated to have 0.03 acre of temporary impacts to valley oak woodland and require removal of approximately 19 trees in the riparian area along Pleasanton-Sunol Road (Section 2.6). On-site tree mitigation will be conducted in accordance with the project's permit requirements, which will be determined during detailed design. The final number of trees to be planted will be determined based on the actual number of tree removals, using replacement ratios set by regulatory agency permits, which are equal to or greater than Caltrans standards. If sufficient space is not available to accommodate all required mitigation planting, tree mitigation will also be satisfied through off-site tree planting or other compensatory mitigation under a separate contract funded by the City of Pleasanton. The off-site mitigation planting plan will be approved in advance per regulatory agency permit requirements.

PF-AES-02. Revegetation Planting

After construction, disturbed areas will be revegetated using hydroseed mixtures with a combination of native grasses, shrubs, and legumes. Temporarily disturbed areas will be restored to pre-construction conditions within one year of disturbance. Naturally occurring plants that are invasive will not be replanted.

PF-AES-03. Vegetation Preservation

Minimize the removal of groundcover, shrubs, and mature trees to the maximum extent feasible, utilizing open areas for contractor staging/storage areas.

Protect existing vegetation outside the clearing and grubbing limits from the contractor's operations, equipment and materials storage.

Place high-visibility temporary fencing around vegetation to be protected before roadway work begins.

1.9.2 Air Quality

PF-AIR-01. Construction Specifications

The project's construction contract will include the 2023 Caltrans Standard Specifications 7-1.02C and 14-9.02. Caltrans Standard Specification 7-1.02C requires contractors to certify that they are aware of and will comply with all California Air

Resources Board emissions reduction regulations. Caltrans Standard Specification 14-9.02 requires all work to be performed in accordance with air pollution control rules, regulations, ordinances, and statutes, including those provided in Government Code Section 11017 (California Public Contract Code Section 10231).

In addition, the following measures will be included in the construction contract to minimize construction impacts to nearby residences and businesses:

- Regular vehicle and equipment maintenance;
- BMPs to maintain engines and minimize idling of construction equipment to minimize tailpipe emissions; and
- Dust control measures, including use of water sprays or other non-toxic dust control methods on unpaved roadways, minimizing vehicle speed while traveling on unpaved surfaces, covering soil stockpiles when practical, and minimizing work during periods of high winds.

1.9.3 Biological Resources

PF-BIO-01. Restoration and Revegetation

Temporarily disturbed areas will be restored within one year of disturbance.

PF-BIO-02. Delineation of Environmentally Sensitive Areas

All proposed construction will be limited to the existing and proposed ROW. Environmentally Sensitive Areas (ESAs) will be identified on contract plans and discussed in the Special Provision. The ESAs will include areas designated in the environmental document and biological reports that support wetlands, waters, and/or habitats that potentially support listed species, and have been specifically identified to avoid during construction. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to sensitive resources. Contractor encroachment into ESAs will not be allowed. ESA provisions will be implemented as a first order of work and remain in place until all construction is completed.

PF-BIO-03. Construction Discharges

No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the United States or drainages. No discharges of excessively turbid water will be allowed, and all equipment

will be well maintained and free of leaks. The contractor will comply with the following standards/objectives (or BMPs) including but not limited to the following:

- Where work areas encroach on wetlands, San Francisco Bay Regional Water Quality Control Board (RWQCB) approved physical barriers adequate to prevent the flow or discharge of sediment into these systems will be constructed and maintained between working areas and streams, lakes, and wetlands.
- Discharge of sediment into culverts and storm drains will be held to a minimum during construction of the barriers.
- Discharge will be contained through the use of RWQCB approved measures that will keep sediment from entering jurisdictional waters beyond the project limits.
- All off road construction equipment should be cleaned of potential noxious weed sources (mud and vegetation) before entering the project footprint and after entering a potentially infested area before moving on to another area. The contractor will employ whatever cleaning methods (typically spraying with a high pressure water hose) are necessary to ensure that equipment is free of noxious weeds.
- Equipment should be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required. Equipment washing stations will be placed in areas that afford easy containment and monitoring (preferably outside of the project footprint) and that do not drain into sensitive (riparian, wetland, etc.) areas.

PF-BIO-04. Prevention of Wildlife Entrapment

To prevent inadvertent entrapment of federal and State listed species during construction excavated holes or trenches more than 1 foot deep with walls steeper than 30 degrees will be covered at the close of each working day by plywood or similar materials. Alternatively, an additional 4-foot-high vertical barrier, independent of exclusionary fences, will be used to further prevent the inadvertent entrapment of listed species. If it is not feasible to cover an excavation or provide an additional 4-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time a trapped listed animal is discovered, the on-site agency-approved biologist will

immediately place escape ramps or other appropriate structures to allow the animal to escape or the California Department of Fish and Wildlife (CDFW) will be contacted by telephone for guidance. The CDFW will be notified of the incident by telephone and electronic mail within 48 hours.

PF-BIO-05. Inspection of Pipes and Culverts

All construction pipes, culverts, or similar structures that are stored at the project site for one or more overnight periods shall be securely capped prior to storage or inspected by the agency-approved biologist before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special status species is discovered inside a pipe by the biologist or anyone else, the individual shall be allowed to leave its own accord, or, with the appropriate authorizations/permits, if it can be safely captured, it shall be relocated by the biologist to a suitable location outside of the project area.

PF-BIO-06. Agency-Approved Biologist

Prior to initiation of the proposed action, the qualifications of biological monitors would be submitted to CDFW and/or the United States Fish and Wildlife Service (USFWS) for approval. Such approved biologists are hereafter referred to as “agency-approved biologists.” The agency-approved biologist (knowledgeable about sensitive species and habitats in the action area) will conduct pre construction surveys to examine the BSA for occurrences of special status wildlife species. In the event that occupied nests or other habitats are found, the agency-approved biologist through the Resident Engineer or their designee, would be given the authority to communicate either verbally, by telephone, email or hard copy with all project personnel to ensure that take of State listed species is avoided, take of federally listed species is minimized, and permit requirements are fully implemented. Through the Resident Engineer or their designee, the agency-approved biologist would have the authority to stop project activities to avoid and/or minimize take of listed species or if he or she determines that any permit requirements are not fully implemented. If the agency-approved biologist exercises this authority, the agencies must be notified by telephone and email within 48 hours.

PF-BIO-07. On-site Worker Environmental Awareness Training

Before the onset of construction and within 3 days of any new worker arrival, a biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of California tiger salamander, California red-legged frog, Alameda whipsnake, western pond turtle, and other listed species and their habitats; the potential occurrence of these species within the project footprint; an explanation of the status of these species and protection under the California

Endangered Species Act (CESA), Federal Endangered Species Act (FESA), and all other federal, state, and local regulatory requirements; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur. A fact sheet conveying this information will be prepared and distributed to all construction crews and project personnel entering the project footprint. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all of the avoidance and minimization measures and implications of the CESA, FESA, and all other federal, state, and local regulatory requirements.

PF-BIO-08. Invasive Species

Executive Order (EO) on Invasive Species, EO 13112, is a standard practice that Caltrans adheres to for all projects. In compliance with EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will use species that are not listed as noxious weeds. The following methods will be used in accordance with standard construction practices:

- No disposal of soil and plant materials will be allowed from areas that support invasive species to areas dominated by native vegetation.
- Construction workers will be educated on weed identification and the importance of controlling and preventing the spread of identified invasive non-native species.
- Gravel and/or fill material to be placed in relatively weed-free areas will come from weed-free sources. Certified weed-free imported materials (or rice straw in upland areas) will be used.

1.9.4 Cultural Resources

PF-CUL-01. Protocol for Cultural Resource Discoveries

During project construction, if previously unidentified cultural resources are unearthed, all earth-moving activity within and around the immediate discovery area will be halted until a qualified archaeologist can assess the nature and significance of the find.

If remains are discovered during excavation, all work within 60 feet of the discovery will halt and Caltrans' Office of Cultural Resource Studies (OCRS) will be called. Caltrans OCRS staff will assess the remains and, if determined human, will contact the County Coroner as per Public Resources Code (PRC) Sections 5097.98, 5097.99, and 7050.5 of the California Health and Safety Code. If the Coroner determines the remains to be Native American, the Coroner will contact the Native American Heritage Commission

who will assign a Most Likely Descendant. Caltrans will consult with the Most Likely Descendant on treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

1.9.5 Geology and Soils

PF-GEO-01. Geotech Investigations

A geotechnical investigation will be performed during final design for any proposed new earthwork or new structure within the project limits, including retaining walls, overhead signs, embankments, bridges, and sound walls. The investigation will address geologic hazards, including liquefaction, cracking, differential compaction, ground shaking, and shrink-swell potential.

PF-GEO-02. Seismic Standards

Caltrans' design and construction guidelines incorporate engineering standards that address seismic risks. Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project vicinity and site conditions.

PF-GEO-03. Paleontological Resources

The project's construction contract will include the 2023 Caltrans Standard Specification 14-7.03, which provides for stopping work within a 60-foot radius, securing the area, notifying the resident engineer, and performing further investigation if paleontological resources are encountered during project construction.

1.9.6 Hazards and Hazardous Materials

PF-HAZ-01. Hazardous Materials

The long-term use of the existing roadway facility provides the opportunity for contaminated soils and groundwater to be encountered during project construction. During the final project design phase, a Preliminary Site Investigation will be performed in accordance with current Caltrans guidance to investigate hazardous materials concerns related to soil, groundwater, and building materials within the project limits and will include required measures for managing hazardous materials encountered during project construction. These measures will be incorporated in the final project design and would address the potential adverse effects to human health and the environment (if any) that could result from the disturbance of hazardous materials in order to protect human health and the environment.

Anticipated measures include the following as outlined in 2023 Caltrans Standard Specifications Section 13-4, Job Site Management and Section 14-11, Hazardous Waste and Contamination:

- Soils contaminated with aerially deposited lead (ADL) exceeding California hazardous waste thresholds will be managed in accordance with the Department of Toxic Substances Control's 2016 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils and Caltrans Standard Special Provision 14-11.08, Regulated Material Containing Aerially Deposited Lead.
- Lead compliance plans for ADL-contaminated soils and pavement markings containing lead will be prepared in accordance with the Caltrans Standard Special Provisions and implemented by the project construction contractor(s) to ensure compliance with the California Occupational Safety and Health Administration (Cal/OSHA) worker safety regulations.
- A bridge survey would be conducted during the project design phase to assess the presence of asbestos-containing materials on the bridge structure, which would be removed according to regulatory requirements, if present.
- Groundwater from dewatering of excavations will be stored in Baker tanks during construction activities and characterized to determine the appropriate treatment requirements for discharge and disposal. The extracted groundwater shall be collected and managed for disposal/treatment in compliance with local and state regulations.
- All loose and peeling lead-based paint and asbestos-containing material shall be removed by a certified contractor(s) in accordance with local, state, and federal requirements. All other hazardous materials will be removed from structures in accordance with Cal/OSHA regulations.
- Asphalt concrete and Portland cement concrete grindings shall be reused in accordance with RWQCB guidance to protect water quality or transported off-site for recycling or disposal.
- Job site perimeter air monitoring will be required when the project work disturbs regulated lead-contaminated soils. Air monitoring program requirements will be defined in Standard Special Provision 14-11.08 (Regulated Material Containing Aerially Deposited Lead), Section 14-11.08F (Air Monitoring).

- Before any excavation work begins, the contractor will be required to submit a plan for excavating, loading, and transporting contaminated soils, for review and acceptance by the state's resident engineer, as stated in Standard Special Provision 14-11.08, Regulated Material Containing Aerially Deposited Lead, subsection D(3).

1.9.7 Hydrology and Water Quality

PF-WQ-01. Water Quality Measures

The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 13 of the 2023 Caltrans Standard Specifications, including but not limited to the following:

- Temporary Soil Stabilization Control and Wind Erosion Control. Temporary Cover is a temporary soil stabilization and wind erosion control BMP which involves the placement of fabric cover or plastic sheeting to stabilize disturbed soil and/or stockpile areas to prevent erosion by wind and water.

- Temporary Sediment Control. Temporary silt fences, fiber rolls, and gravel bag berms are linear sediment barriers designed to intercept and slow the flow of sediment-laden sheet flow runoff. These measures usually are placed down-slope of exposed soil areas or along the perimeter of a project site to allow sediment to settle from runoff before water leaves the construction site.

- Temporary Drainage Inlet Protection is a temporary sediment control measure to minimize the amount of sediment entering storm drain systems. Temporary drainage inlet protection will be installed at storm drain inlets that are subject to runoff from construction activities to detain and/or to filter sediment-laden runoff to allow sediment to settle and/or to filter prior to discharge into storm drainage systems or watercourses.

- Tracking Control. Street Sweeping is a practice to remove tracked sediment to prevent the sediment from entering a storm drain or watercourse by hand or mechanical methods such as vacuuming. This practice is implemented anywhere sediment is tracked from the project site onto public or private paved roads. A temporary construction entrance and access road will be used for equipment and vehicle to enter and access to the work area for the control of dust and erosion created by vehicular tracking.

- Non-Storm Water Management and Waste Management & Materials Pollution Control. Job Site Management includes effective handling, storage, usage, and disposal practices to control material pollution and manage waste and non-stormwater at the job site before they come in contact with storm drain systems and receiving waters. Job site management includes spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities.

- Caltrans erosion control BMPs. Erosion control BMPs will be used to minimize any wind- or water-related erosion. The State Water Resources Control Board (SWRCB) has issued a National Pollution Discharge Elimination System (NPDES) Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities.

- Permanent Water Treatment BMPs. Caltrans will work with the RWQCB to determine potential areas for permanent treatment BMPs during the process for obtaining the Section 401 permit and in preparation of the Stormwater Pollution Prevention Plan. Off-site locations/mitigation will be considered if there is not enough room for the required square footage of treatment BMPs on-site.

- Water Quality Inspection. Water quality inspector(s) will inspect the site after a rain event to ensure that the stormwater BMPs are adequate.

- Concrete Waste and Stockpiles. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.

- Stormwater Pollution Prevention Plan. A SWPPP will be prepared by the contractor and approved by Caltrans. A SWPPP is required for all projects that have at least one acre of soil disturbance. The SWPPP complies with the Caltrans Storm Water Management Plan (SWMP) and addresses potential temporary impacts via implementation of appropriate BMPs to protect water quality. These BMPs include covering exposed soil, installing temporary creek diversions, street sweeping, and use of drainage inlet protection, fiber rolls, silt fence, and concrete washouts. Disturbed soil areas would be stabilized by paving, rock slope protection, or erosion control.

- Erosion Prevention. Revegetation and erosion control netting will be incorporated into the project design in order to prevent and minimize permanent erosion of exposed soils after the project is constructed.

- Permits. Caltrans will include a copy of all relevant permits, including the RWQCB 401 Certification, within the construction bid package of the proposed project. The Resident Engineer or their designee will be responsible for implementing the conditions of the permit.

1.9.8 Noise

PF-NOI-01. Construction Noise

The Caltrans 2023 Standard Specifications, Section 14-8.02, requires that the Maximum Sound Levels not exceed 86 A-weighted decibels at 50 feet from the job site, from 9:00 PM to 6:00 AM. Construction noise would not exceed thresholds or Caltrans' standards. Construction noise control measures would be required of the contractor. These include control measures for equipment and operating hours such as:

- All construction equipment shall conform to Section 14-8.02, Noise Control, of the latest Standard Specifications.

- Noise-generating construction activities shall be restricted to between 7:00 AM and 7:00 PM on weekdays, with no construction occurring on weekends or holidays. If work is necessary outside of these hours, Caltrans shall require the contractor to implement a construction noise monitoring program and provide additional noise controls where practical and feasible.

- All internal-combustion-engine-driven equipment shall be equipped with manufacturer-recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- Unnecessary idling of internal combustion engines within 100 feet of residences shall be strictly prohibited.

- Noise-generating equipment shall be kept as far as practical from sensitive receptors when sensitive receptors adjoin or are near the construction project area.

- "Quiet" air compressors and other "quiet" equipment shall be used where such technology exists.

1.9.9 Transportation

PF-TR-01. Transportation Management Plan

During the final design phase, a Transportation Management Plan (TMP) will be prepared in accordance with Caltrans requirements and guidelines to minimize the construction-related delays and inconvenience for travelers in the project area. The TMP will address the potential traffic impacts as they relate to staged construction, detours, and other traffic handling concerns associated with construction of the proposed project. The TMP will include:

- Distribution of press releases and other documents as necessary to notify local jurisdictions, agencies, and the public of upcoming road closures and detours;
- Coordination with CHP and local law enforcement on contingency plans;
- Use of portable Changeable Message Signs, CHP Construction Zone Enhanced Enforcement Program, and Freeway Service Patrol where possible to minimize delays.

Access will be maintained for emergency response vehicles.

1.9.10 Wildfire

PF-WF-01. Project Features for Minimizing Fire Risks

BMPs would be incorporated, such as clearing vegetation from the work area, prohibiting the use of highly flammable chemicals, following locally changing meteorological conditions, and maintaining awareness of the possibility of increased fire danger during the time work is in progress.

1.10 Permits and Approvals Needed

Table 1-3 lists the permits and approvals needed for the project.

Table 1-3. Permits and Approvals

Agency	Permit, Authorization, or Agreement	Permit Status
California Department of Fish and Wildlife (CDFW)	Section 1602 Lake and Streambed Alteration Agreement and Section 2081 Incidental Take Permit	● Section 1602 permit application and request for Incidental Take Permit for California tiger salamander and Alameda whipsnake will be submitted during the project design phase.
San Francisco Bay Regional Water Quality Control Board (RWQCB)	Waste discharge requirements (WDRs) under the Porter-Cologne Water Quality Control Act; National Pollutant Discharge Elimination System (NPDES) approval for work greater than one acre	● A joint “Application for 401 Water Quality Certification” and/or “Report of Waste Discharge" will be submitted during the project design phase. ● An NPDES permit application will be submitted during the project design phase. ● A Notice of Intent and SWPPP will be prepared/submitted before construction.
U.S. Army Corps of Engineers (USACE)	Concurrence on delineation of waters of the U.S., and Section 404 permit for placement of fill within waters of the U.S.	● Consultation will take place during the project design phase.
United States Fish and Wildlife Service (USFWS)	Biological Opinion for California tiger salamander, California red-legged frog, and Alameda whipsnake	● Consultation will take place during the project design phase.

Chapter 2 California Environmental Quality Act Evaluation

The proposed project by Caltrans is subject to CEQA and project documentation has been prepared in compliance with CEQA. Caltrans is the lead agency under CEQA. This chapter evaluates potential environmental impacts of the proposed project, as described in Chapter 1 as they relate to the CEQA checklist to comply with State CEQA Guidelines (Title 14 California Code of Regulations [CCR], Division 6, Chapter 3, Section 15091). Unless otherwise noted, the analysis and conclusions in this chapter apply to both alternatives under consideration.

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the project. Please see the full CEQA Environmental Checklist for additional information.

Table 2-1. Environmental Factors Potentially Affected

Potentially Affected	Environmental Factor
Yes	Aesthetics
No	Agriculture and Forestry
Yes	Air Quality
Yes	Biological Resources
Yes	Cultural Resources
Yes	Energy
Yes	Geology/Soils
Yes	Greenhouse Gas Emissions
Yes	Hazards and Hazardous Materials
Yes	Hydrology/Water Quality
Yes	Land Use/Planning
No	Mineral Resources
Yes	Noise
No	Population/Housing
Yes	Public Services
No	Recreation
Yes	Transportation/Traffic
No	Tribal Cultural Resources
Yes	Utilities/Service Systems
Yes	Wildfire
Yes	Mandatory Findings of Significance

2.2 Introduction to the CEQA Environmental Checklist

This checklist is presented at the beginning of each resource section below in the form of a table listing the pertinent questions applicable to the resource and four columns where the degree of impact is indicated. The checklist identifies physical, biological, social, and economic factors that might be affected by the project. In many cases, technical studies performed in connection with the project 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 checklist are related to CEQA impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Both project features and avoidance, minimization, and/or mitigation measures will be part of this project. Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as best management practices (BMPs) and measures included in Caltrans’ 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 Section 1.9 for a detailed discussion of these features. All proposed measures are provided in Appendix B.

Potentially affected environmental resources are indicated in Table 2-1. All environmental resources that could be potentially affected are marked with a yes. All of the environmental resources that would not be affected by the project are marked with a no.

2.3 Aesthetics

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	No	No	Yes	No
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No	No	Yes	No
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	No	No	Yes	No
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No	No	Yes	No

The following is summarized from the Visual Impact Assessment prepared for the project in June 2022 (City of Pleasanton 2022a).

The project corridor is defined as the area of land that is visible from, adjacent to, and outside the highway ROW, and is determined by topography, vegetation, and viewing distance. The landscape surrounding the project area is characterized by hilly terrain with California annual grass-land, landscaped vegetation, coast live oak and valley oak woodland, eucalyptus groves, and coyote brush scrub. In most places, I-680 is buffered from residential views by hills and embankments.

East of the northbound I-680 off-ramp to Sunol Boulevard, oak trees with their dark colors and rounded shapes are sparsely situated in a gully, along with single-family residences to the east. On Sunol Boulevard east of I-680 and up to the Arlington Drive intersection, there are views of grass-covered hills, patches of oaks, and landscape trees, with the Thermo Fisher Scientific campus to the north and residential

development to the south. The western end of the project area includes a limited view of the Castlewood Golf Course, as well as landscaped trees. To the west of the interchange area, the hillsides are heavily textured with dense groves of dark green-colored oak trees. Minimal grasslands are visible in small clearings between the groves of trees. Hidden within the trees are single-family residential structures with few features visible from the vantage points on I-680. Long-range views through the corridor to the north and south include distant mountains and ridges, and close-range views to the east and west include hills.

Within the project limits, I-680 is an Officially Designated State Scenic Highway. I-680 is also designated as a county scenic route (Alameda County 1994). According to the Scenic Highway Guidelines, this status is contingent upon the development and implementation of a Corridor Protection Program containing the following five legislatively required elements (Caltrans 2008):

- Regulation of land use and density of development (i.e., density classifications and types of allowable land uses)
- Detailed land and site planning (i.e., permit or design review authority and regulations for the review of proposed developments)
- Control of outdoor advertising (i.e., prohibition of off-premise advertising signs and control of on-premise advertising signs)
- Careful attention to and control of earthmoving and landscaping (i.e., grading ordinances, grading permit requirements, design review authority, landscaping, and vegetation requirements)
- Design and appearance of structures and equipment (i.e., design review authority and regulations for the placement of utility structures, microwave receptors, wireless communication towers, etc.)

The City of Pleasanton's General Plan Community Character Element includes goals, policies, and programs related to the maintenance and improvement of visual character within the city, and its Conservation and Open Space Element details goals and policies related to highways and corridors (City of Pleasanton 2009). Program 9.1 of the Community Character Element calls to "Complete and infill the street tree and median landscaping along streets, when feasible." Program 8.1 of the Conservation and Open Space Element calls to "implement the recommendations contained in the Scenic

Highway Plan for I-680." The city's 1985 Scenic Highway Plan calls for the preservation of the scenic quality along I-680, to include preserving existing large stands of vegetation; preserving and encouraging continued views to the surrounding hills; and preserving open space vistas along I-680. It further states that all new fixed elements along I-680 should be designed in a manner that is "attractive and in keeping with I-680's scenic highway designation." Additionally, it states that, on the western edge of the highway, major stands of existing vegetation should be retained, and replaced if removed. Wildflower/native vegetation planting programs may also be developed in interchange areas where protective erosion planting and landscaping are necessary (City of Pleasanton 1985).

The Visual Impact Assessment evaluates project changes in locations where project features would be most visible and would have a high potential for viewer exposure. Potential project-related effects would range from moderate-low at the northbound and southbound I-680 ramp intersections with Sunol Boulevard, to moderate-high along westbound Sunol Boulevard approaching the rail overcrossing and Castlewood Drive. With the project features and avoidance and minimization measures, the overall visual impacts would be moderate. Changes to aesthetic resources are discussed further below.

a) Less Than Significant Impact

Scenic vistas in the project area include Pleasanton Ridge and dense mature tree stands to the west, the tree-lined corridor along Pleasanton-Sunol Road, and undulating green and brown grass-covered hills that surround I-680. The proposed improvements to the I-680/Sunol Boulevard ramp intersections and adjacent intersections to the east and west would not substantially screen views of these scenic vistas. However, the project would require the removal of approximately 250 linear feet of trees and other vegetation along the north side of Pleasanton-Sunol Road, exposing views of the Castlewood Golf Course.

The segment of Pleasanton-Sunol Road where tree removal would be required currently has mature tree stands on both sides of the road. These are a notable visual feature for this particular segment, which contribute to a harmonious visual pattern. With the proposed tree removal, 250 linear feet of trees would be removed on the north side of Pleasanton-Sunol Road, and the Castlewood Golf Course and Pleasanton Ridge would become more visible to travelers. This would be similar to nearby views along Castlewood Drive, and typical for the area west of I-680. While this would represent a

change for this particular vista, it is not considered a substantial adverse effect. The features that would become more visible with this change have independent scenic quality, and would not detract from the existing visual quality of this vista. Additionally, measures PF-AES-01, PF-AES-02, and PF-AES-03 would address tree and vegetation removal throughout the project area. Impacts are anticipated to be less than significant. Measure AMM-AES-02 would further reduce the potential for impacts by providing for tree replacement along Pleasanton-Sunol Road.

b) Less Than Significant Impact

I-680 within the project limits is an official State Scenic Highway. I-680 is also identified as a scenic route in the Alameda County General Plan Scenic Route Element (Alameda County 1994) and addressed in the City of Pleasanton Scenic Highway Plan for Interstate 680 (City of Pleasanton 1985). Changes to the highway itself would be limited to the proposed retaining walls along the on- and off-ramps, ramp and ramp metering changes, and a new MVP and CHP observation area. The proposed changes would not affect the Scenic Highway Status of I-680. The Build Alternative would also include new retaining walls along Sunol Boulevard and would require tree and vegetation removal adjacent to I-680. The retaining walls along Sunol Boulevard and the majority of the tree removals would not be visible to the traveling public on I-680 because the freeway crosses over Sunol Boulevard on a bridge. These features would be more noticeable to travelers along Pleasanton-Sunol Road, which is outside of the State Scenic Highway..

New structures, including retaining walls, would be aesthetically treated per Measure AMM-AES-01 below. Additionally, trees and vegetation removed as part of the project would be replaced, as described in Measures PF-AES-01 and PF-AES-02 (Section 1.9.1). Therefore, impacts are anticipated to be less than significant.

c) Less Than Significant Impact

Noticeable alterations to the existing visual character within the project area would include the installation of traffic signals at the I-680 ramp/Sunol Boulevard intersections; the cutting back of steep embankments and construction of retaining walls throughout the Sunol Boulevard and Pleasanton-Sunol Road corridor, and I-680 ramps; tree removal; the addition of Class IV bicycle facilities, sidewalks, and crosswalks; and bridge widening at the southbound I-680 on-ramp.

Of the proposed project changes, the new retaining walls would be particularly noticeable to travelers along Pleasanton-Sunol Road, west of I-680; they would require

the cutting back of existing embankments as well as tree removals. For example, a retaining wall of approximately 549 feet in length and up to 14 feet in height would be cut into the steep slope along the east side of the northbound I-680 on-ramp (Retaining Wall no. 5, described in Section 1.7.3 and shown in Figure 1-2). This retaining wall is anticipated to have cable railing along the top.

While the proposed retaining walls and other changes will likely alter the visual character and quality of the project area, they are not anticipated to substantially degrade visual character or quality. The existing I-680 corridor is urbanized, and retaining walls are a typical feature within it. The semi-rural parts of the project area, such as Pleasanton-Sunol Road, also contain existing built features with varying degrees of intactness, such as the Castlewood Drive rail overcrossing, guardrails, fencing, signage, and overhead utility lines. With context-sensitive design, the proposed features would complement the landscape, rather than detract from it. For example, Measure AMM-AES-01 will increase the compatibility of proposed features with the surrounding environment..

With project features and avoidance and minimization measures, the proposed changes would be compatible with the existing visual character and quality of the area. Temporary construction-related impacts on the project area's visual character and nearby viewers would be reduced by Measure AMM-AES-03 below. Long-term impacts to visual character, such as the cutting back of embankments and installation of retaining walls, would be minimized by Measures AMM-AES-01 and AMM-AES-02 below. These long-term impacts include tree removals adjacent to I-680, which would be required for the Build Alternative.

The project may require removal of up to 61 trees, most of which are coast live oak (*Quercus agrifolia*), London plane (*Platanus* × *hispanica*), and valley oak (*Quercus lobata*) trees. Approximately 250 linear feet of trees (14 coast live oaks and 6 valley oaks) and other vegetation could be removed along Pleasanton-Sunol Road, where a mature stand of trees currently screens views of the Castlewood Golf Course. Removal of mature trees in this area has the potential to expose recreational users of the golf course to views of Pleasanton-Sunol Road, and vice versa. This potential tree removal area is shown in Figure 2.3-1 below. As stated above under criterion (a), the removal of trees along Pleasanton-Sunol Road would expose new views of the Castlewood Golf Course and Pleasanton Ridge to travelers at this particular vista. This would represent a change in visual character and quality until new trees are established along the

roadside here, as the dominant form of the trees in the existing view would yield to the rolling hills of the golf course.

The precise number and location of trees to be removed will be confirmed during the detailed design phase. Measure AMM-AES-02 below would minimize potential impacts to scenic resources by specifically addressing potential tree removals adjacent to the Castlewood Golf Course. Adequate space for replacement tree planting appears to be available on the north side of Pleasanton-Sunol Road, to the west of the railroad bridge.

Figure 2.3-1. Stand of Mature Trees Along Pleasanton-Sunol Road That Screen Views of Castlewood Golf Course

The majority of anticipated tree removals are within Alameda County ROW and are subject to the Alameda County Tree Ordinance (Alameda County 2016). According to the ordinance, trees removed on county property must be identified and permitted prior to removal. Two anticipated tree removals are within the City of Pleasanton ROW, and are subject to the City's Tree Preservation Ordinance (City of Pleasanton 1998). This ordinance is intended to control the removal and preservation of heritage trees within the City. Whether the two trees meet the definitions of a heritage tree, as defined by the

City's Ordinance, would be confirmed during the detailed design phase. Measures PF-AES-01 and PF-AES-02 (Section 1.9.1) would ensure that removed trees and other vegetation are replaced where feasible.

Additionally, the tree removals identified above along Pleasanton-Sunol Road are in a riparian area and would be identified in a CDFW Section 1602 Lake and Streambed Alteration Agreement Application. Final tree replanting and mitigation ratios with respect to biological resources will be determined in consultation with CDFW. This topic is discussed in further detail in Section 2.6.

In addition to the natural scenic quality provided by the mature trees west of the interchange, the Castlewood Drive rail overcrossing imparts distinct visual character. The overcrossing is identified as part of the Niles Canyon Transcontinental Railroad Historic District, but it is listed as a non-contributing element to the district. The Build Alternative would not affect the rail overcrossing. Views of this resource would become more accessible to the public as a result of the project's proposed pedestrian and bicycle features.

d) Less Than Significant Impact.

New traffic signals with overhead lighting would be installed at the I-680 ramp/Sunol Boulevard intersections. Additionally, new lighting would be installed from west of the I-680 southbound off-ramp to the Castlewood Drive/Pleasanton-Sunol Road intersection, to improve roadway visibility and safety for pedestrians and bicyclists. The proposed lighting would be configured at the minimum necessary illumination level and optimal angle to restrict light to the paved roadway, thus reducing glare. Shields on the fixtures would be used where feasible to reduce light trespass into potential species habitat and surrounding properties (Section 1.7.5). These features would be primarily visible to travelers at night, as overhead lighting would not be active during the day. The lighting is not anticipated to be visible to nearby residents, as views from the nearest houses are blocked by embankments and dense vegetation. Therefore, added lighting is not anticipated to adversely affect daytime or nighttime views of the area.

Avoidance, Minimization, and/or Mitigation Measures

AMM-AES-01: Aesthetic Treatment for New Structures

New structures such as retaining walls shall have architectural treatment to blend with the visual character of their surrounding environment and reduce the incidence of glare or graffiti, using context-sensitive designs. For example, retaining walls along the I-680

ramps could be designed with a cracked limestone texture to match the existing retaining wall along the northbound on-ramp. However, this design would not be appropriate for local roads such as Pleasanton-Sunol Road. In such areas, a brown color and more appropriate texture may be used. Final aesthetic treatments will be determined during the detailed design phase.

AMM-AES-02: Castlewood Golf Course Tree Removals

Caltrans and the City of Pleasanton will work with Alameda County to explore the feasibility of providing replacement tree plantings in County ROW between Pleasanton-Sunol Road and Castlewood Golf Course, in accordance with the Alameda County Tree Ordinance and other applicable regulations and permits.

AMM-AES-03. Construction Measures

Place unsightly materials, equipment storage and staging so that they are not visible within the foreground of the highway corridor to the maximum extent feasible. Where such siting is unavoidable, material and equipment shall be visually screened to minimize visibility from the roadway and nearby sensitive off-road receptors.

Limit all construction lighting to within the area of work and avoid light trespass through the use of directional lighting and shielding as needed.

2.4 Agriculture and Forest Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	No	Yes
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No	No	No	Yes
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No	No	No	Yes
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No	No	No	Yes
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	No	No	No	Yes

a – e) No Impact. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project footprint. The project footprint does not contain land zoned for agricultural uses, land under Williamson Act contracts, or land zoned as forest land, timber land, or timberland production. There would be no loss or conversion of forest land to non-forest land, or any other changes to the existing environment that would convert farmland to nonagricultural use or forest land to non-forest use. Therefore, the project would have no impact on agriculture and forest resources.

2.5 Air Quality

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	No	No	Yes	No
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	No	No	Yes	No
c) Expose sensitive receptors to substantial pollutant concentrations?	No	No	Yes	No
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No	No	Yes	No

a, b, c, and d) Less Than Significant Impact

The project is in the San Francisco Bay Area Air Basin (SFBAAB) and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and the California Air Resources Board (ARB). The proposed project would not interfere with any of the control measures described in the BAAQMD's Clean Air Plan (2017) to plan for and achieve compliance with federal and state ozone standards.

The project is also included in the current Regional Transportation Plan, Plan Bay Area 2050 (ABAG and MTC 2021; RTP ID No. 21-T06-021), and the 2022 TIP (MTC 2022; TIP ID No. ALA190020). The RTP and TIP conform to the State Implementation Plan, which is the state's plan to attain air quality standards set by the U.S. Environmental Protection Agency (EPA).

The project would not change the number of lanes on Sunol Boulevard at either end of the project area (Castlewood Drive to the west and Arlington Drive to the east) or accommodate additional through-traffic on Sunol Boulevard in the project area. The addition of turning lanes to increase storage for vehicles entering and exiting I-680 would not provide capacity for through-traffic. Therefore, the project would not add capacity and would therefore not result in operational degradation of air quality. Air

pollutants associated with project construction would be temporary and short term. Construction-related emissions would result from operation of trucks and construction equipment as well as wind-blown dust generated by excavation, grading, hauling and other activities. The effects from these activities would vary from day to day as construction progresses. Short-term air quality effects from project construction would be addressed by Caltrans Standard Specification 14-9.02 and the other provisions outlined in Measure PF-AIR-01 (Section 1.9.2). Additionally, the project is exempt from the regional requirement to determine air quality conformity, in accordance with 40 Code of Federal Regulations (CFR) 93.127 (Table 3: Interchange reconfiguration projects).

A quantitative hot-spot analysis is required for transportation projects that are in federal nonattainment or maintenance areas for particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$) and that are determined to be a Project of Air Quality Concern (POAQC) as defined in 40 CFR Part 93. The SFBAAB is currently designated as an unclassifiable/attainment area for the federal PM_{10} standard; therefore, a detailed PM_{10} hot-spot analysis is not required to demonstrate project-level conformity. The SFBAAB is currently designated as a federal nonattainment area for $PM_{2.5}$; therefore, a $PM_{2.5}$ hot-spot analysis is required if the project is determined to be a POAQC.

Rather than using specific $PM_{2.5}$ measurements, the $PM_{2.5}$ hot-spot demonstration process begins with an evaluation of whether a project fits into one or more of the POAQC categories listed in 40 CFR 93.123(b)(i)–(v). In the Bay Area, the process has been established by the MTC and requires interagency consultation with the Bay Area Air Quality Conformity Task Force (Task Force). The Task Force includes representatives from federal (EPA, FHWA, FTA), state (ARB, Caltrans), regional (MTC, BAAQMD, and ABAG), and subregional (Congestion Management Agencies, transit operators, local jurisdictions, etc.) agencies.

In March 2020, the City of Pleasanton, as the project sponsor, initiated consultation with the Task Force by submitting a Project Assessment Form for $PM_{2.5}$ Interagency Consultation. The Task Force considered projected future traffic conditions, with and without the project, and whether the project meets the specific regulatory definition of a POAQC set forth in 40 CFR Part 93. On March 26, 2020, the Task Force determined that the project is not a POAQC. A detailed $PM_{2.5}$ hot-spot analysis is not required.

With implementation of standard measures, the project would not conflict with or obstruct implementation of the applicable air quality plan, result in a cumulatively considerable net increase of any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or result in emissions or odors that would adversely affect a substantial number of people. Impacts would be less than significant.

2.6 Biological Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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 or U.S. Fish and Wildlife Service, or NOAA Fisheries?	No	Yes	No	No
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No	Yes	No	No
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No	No	Yes	No
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No	No	Yes	No
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	Yes	No

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No	No	No	Yes

The information in this section is summarized from the Natural Environment Study for the project (City of Pleasanton 2022b). The Natural Environment Study documented the potential effects of the proposed project on nearby biological resources.

A Biological Study Area (BSA) was established to evaluate the effects of the proposed project on natural communities and other biological resources. The BSA for the project includes the project footprint—the maximum extent of temporary and permanent impacts—and a 100-foot buffer to account for potential future changes to the project footprint and project disturbances such as noise and dust that can affect biological resources outside of the project footprint. The BSA for the project is approximately 49.22 acres, which comprise 25.35 acres of vegetated areas, 0.03 acre of wetlands, 0.03 acre of riverine features, and 23.82 acres of developed areas. Land cover types consist of grasslands (California annual grassland); forests and woodlands (coast live oak woodland, valley oak woodland, mixed oak woodland, eucalyptus groves, and Aleppo pine forest); scrubland (coyote brush scrub); wetlands (cattail marsh); riverine (intermittent and ephemeral channels); disturbed (landscaped and ruderal); and developed (defined as the paved surfaces of I-680, Sunol Boulevard, paved or gravel driveways, structures, and residential and commercial properties).

Wildlife habitat assessments, rare plant surveys, a wetland delineation, and tree surveys were conducted within the BSA in 2018, 2019, and 2020 to assess biological resources.

a) Less Than Significant with Mitigation Incorporated

Based on literature reviews, database searches, and familiarity with the region, a total of 41 special-status plant species and 51 wildlife species were initially considered to have potential to occur in the BSA. On further evaluation, the BSA was found to lack suitable habitat and/or is outside of the known range for some of the species, and therefore 39 plant species and 24 wildlife species are not expected to occur. The complete list of species and findings about their potential to occur is provided in Appendix E.

Special-Status Plants

Two plant species were determined to have low potential to occur within the BSA:

- Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*)
- Diablo helianthella (*Helianthella castanea*)

Potential habitat areas for Congdon's tarplant and Diablo helianthella were surveyed during their blooming periods, and no individuals were observed. Due to the disturbed nature of the potential habitat and lack of detections during multiple surveys, the two species are not anticipated to occur. Implementation of Measures PF-BIO-01 through PF-BIO-03 (Section 1.9.3) and AMM-BIO-01 (below) would avoid or minimize potential impacts to special-status plants, should they occur in the future. Impacts would be less than significant.

Special-Status Animals

Twenty-two wildlife species of special concern were considered to have some potential to occur in the BSA:

- Species of Special Concern
    - Western pond turtle (*Actinemys marmorata*) – California Species of Special Concern
    - Western burrowing owl (*Athene cunicularia*) – California Species of Special Concern
    - San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) – California Species of Special Concern
    - American badger (*Taxidea taxus*) – California Species of Special Concern
- Nesting Raptors
    - White-tailed kite (*Elanus leucurus*) – Fully Protected Species
    - American peregrine falcon (*Falco peregrinus anatum*) – Fully Protected Species
    - Cooper's hawk (*Accipiter cooperii*) – CDFW's Special Animals List

  - Sharp-shinned hawk (*Accipiter striatus*) – CDFW's Special Animals List
  - Golden eagle (*Aquila chrysaetos*) – Fully Protected Species
  - Ferruginous hawk (*Buteo regalis*) – CDFW's Special Animals List
  - Northern harrier (*Circus hudsonius*) – California Species of Special Concern
  - Prairie falcon (*Falco mexicanus*) – CDFW's Special Animals List
- Migratory Birds
  - Great blue heron (*Ardea herodias*) – CDFW's Special Animals List
  - Yellow rail (*Coturnicops noveboracensis*), a California Species of Special Concern and included on CDFW's Special Animals List
  - Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), a California Species of Special Concern and included on CDFW's Special Animals List
  - California yellow warbler (*Setophaga petechia*) – California Species of Special Concern
  - California horned lark (*Eremophila alpestris actia*) – CDFW's Special Animals List
- Bats
  - Pallid bat (*Antrozous pallidus*) – California Species of Special Concern and Western Bat Working Group (WBWG) high-priority species
  - Townsend's big-eared bat (*Corynorhinus townsendii*) – California Species of Special Concern and WBWG high-priority species
  - Western mastiff bat (*Eumops perotis californicus*) – California Species of Special Concern and WBWG high-priority species
  - Hoary bat (*Lasiurus cinereus*) – WBWG low-priority species
  - Yuma myotis (*Myotis yumanensis*) – WBWG low-priority species

Temporary impacts related to project construction activities, such as staging, clearing and grubbing, could temporarily impact potential habitat for western pond turtle, western burrowing owl, San Francisco dusky-footed woodrat, American badger, nesting raptors, migratory birds, and bats. The project features listed in Section 1.9.3 and Measures AMM-BIO-02 through AMM-BIO-08 below would reduce the potential for temporary construction impacts to these wildlife species. Impacts to western pond turtle, western burrowing owl, San Francisco dusky-footed woodrat, American badger, nesting raptors, migratory birds, and bats would be less than significant.

Threatened and Endangered Species

Three federal and/or state-listed wildlife species were considered to have some potential to occur in the BSA:

- California tiger salamander, Central California Distinct Population Segment (DPS) (*Ambystoma californiense*) – federally threatened, California threatened
- California red-legged frog (*Rana draytonii*) – federally threatened, California species of special concern
- Alameda whipsnake (*Masticophis lateralis euryxanthus*) – federally threatened, California threatened

In addition, tricolored blackbird (*Agelaius tricolor;* California threatened) or Swainson's hawk (*Buteo swainsoni;* California threatened) could occasionally migrate through or forage in the BSA; however, no suitable nesting habitat is present, and no impacts are expected.

Under the CESA and/or the FESA, compensation is required if a project impacts potentially suitable habitat for species that are listed as threatened or endangered. The proposed project would result in 0.89 acre of permanent and 1.15 acre of temporary impacts to suitable California tiger salamander, California red-legged frog, and Alameda whipsnake upland dispersal habitat. Table 2.6-1 below summarizes potential impacts to suitable habitat that could support these species.

Table 2.6-1 Impacts to Habitat for California Tiger Salamander, California Red-Legged Frog, and Alameda Whipsnake

Habitat Type	Permanent Impacts (Acres)	Temporary Impacts (Acres)	Total Impacts (Acres)
Grasslands	0.06	0.24	0.30
Forests and woodlands	0.22	0.27	0.49
Scrubland	0	0	0
Disturbed (ruderal and landscaped)	0.61	0.64	1.25
Wetlands/Riverine (Non-breeding aquatic habitat)	0	0	0
Total	**0.89**	**1.15**	**2.04**

Notes:
1. Vegetation communities mapped based on their dominant species.
2. Acreages rounded to the nearest hundredth, so values shown for each habitat type in table may not add up to total acreage shown.

The project features listed in Section 1.9.3 and Measures AMM-BIO-09 through AMM-BIO-11 below would avoid or minimize temporary construction impacts to California tiger salamander, California red-legged frog, and Alameda whipsnake. Compensatory mitigation for temporarily impacted areas is proposed through on-site restoration (described in Sections 1.7.10 and 1.9.1).

In order to mitigate for permanent direct effects to California tiger salamander, California red-legged frog, and Alameda whipsnake habitat, Caltrans proposes to purchase habitat credits at a 3:1 ratio from an approved mitigation bank such as Ohlone West Conservation Bank (Measure MM-BIO-12 below). The purchase of multi-species bank credits may be used to satisfy the conditions of multiple agencies and jurisdictions including FESA, CESA, and the CEQA process. The final mitigation may change during the consultation and permitting processes.

Artificial lighting has the potential to result in permanent, indirect impacts to potential California tiger salamander and California red-legged frog habitat. Roadway lighting is already present in the project area along Sunol Boulevard between Arlington Drive and just west of the I-680 southbound off-ramp. Additional roadway lighting would be installed at the signalized intersections of Sunol Boulevard with the I-680 southbound and northbound ramps, and from west of the I-680 southbound off-ramp to the Castlewood Drive/Pleasanton-Sunol Road intersection. The number and location of lights would be determined during the detailed design phase. The lighting would be configured at the minimum necessary illumination level and optimal angle to restrict light

to the paved roadway. Shields on the fixtures would be used where feasible to reduce light trespass into potential species habitat for California tiger salamander and California red-legged frog. Mitigation for indirect impacts to California tiger salamander and California red-legged frog from project lighting will be determined during the design phase (Measure MM-BIO-12 below).

With implementation of compensatory mitigation, impacts to California tiger salamander, California red-legged frog, and Alameda whipsnake would be less than significant.

An Incidental Take Permit for California tiger salamander and Alameda whipsnake will be requested from CDFW during the design phase.

b) Less Than Significant with Mitigation Incorporated

One vegetation community in the BSA is considered a sensitive vegetation community by the CDFW: valley oak woodland. In addition, the trees between an intermittent stream along Castlewood Golf Course and Pleasanton-Sunol Road are considered riparian trees due to their presence near a drainage. These trees consist of coast live oaks, valley oaks, and one red willow (*Salix laevigata*).

The BSA contains approximately 0.36 acre of valley oak woodland, of which 0.03 acre could be temporarily affected during project construction. No permanent impacts to valley oak woodland are anticipated. Approximately 19 trees in the riparian area along Pleasanton-Sunol Road are anticipated to be removed. Tree removals in the project area are discussed in Section 2.3. The tree removals in the riparian area would be identified in a CDFW Section 1602 Lake and Streambed Alteration Agreement Application, and tree replanting and mitigation ratios will be determined in consultation with CDFW. Measure PF-AES-01 (Section 1.9.1) and AMM-BIO-14 (below) would reduce the potential for impacts to sensitive natural communities and trees. With implementation of Measure MM-BIO-13 (below), impacts to sensitive natural communities and trees would be less than significant.

c) Less Than Significant Impact

The BSA contains a total of 0.03 acre of wetlands and 0.03 acre of other waters of the United States. No permanent or temporary impacts to wetlands are anticipated. Less than 0.001 acre of permanent impacts and less than 0.001 acre of temporary impacts are expected to an ephemeral drainage (a jurisdictional other water of the U.S.). The impacts would be to a concrete-lined portion of the ephemeral drainage that conveys

water from the I-680 shoulder to a nearby freshwater marsh. Measure PF-BIO-03 (Section 1.9.3) would reduce the potential for impacts during project construction. The small area of impact to a concrete-lined water of the U.S. would be less than significant.

Approximately 1,754 linear feet of potentially non-United States Army Corps of Engineers (USACE) jurisdictional stormwater features (human-made drainage ditches, roadside ditches, and concrete lined v-ditches) were identified in the BSA. Project activities have the potential to result in a total of 17 linear feet of permanent impacts and 21 linear feet of temporary impacts to these features. As noted in Section 1.7.8, drainage ditches affected by the project would be replaced in kind in the project footprint, with priority for providing unlined ditches wherever possible. These features will be separate from any treatment areas for roadway runoff and from features preliminarily identified as wetlands or other waters of the United States.

d) Less Than Significant Impact

Wildlife in the urban landscapes of the BSA is largely composed of species that are adapted to and/or tolerant of urban landscapes and disturbances. In the less developed areas of grassland or oak woodland within the BSA, more elusive species, those more sensitive to sound, or those with specific habitat requirements may be present. Wildlife may use the drainages, woodland, and riparian areas as migration corridors to other specific aquatic or terrestrial habitats.

Along the I-680 corridor, large culverts and undercrossings serve as important connectors for wildlife. In the BSA, three locations provide opportunities for wildlife to cross I-680: the Sunol Boulevard undercrossing, the Happy Valley Road undercrossing, and a double 8-foot-by-7-foot concrete box culvert for Happy Valley Creek. Potential impacts of the Build Alternative on the Sunol Boulevard undercrossing are described below. The Happy Valley Road undercrossing and box culvert are also described but will not be affected by the project.

The California Essential Habitat Connectivity Project, a joint effort between CDFW and Caltrans, has identified an Essential Connectivity Area (ECA) in the undeveloped areas to the west and south of the BSA. ECAs are defined as large, relatively natural habitat blocks that support native biodiversity and are essential for ecological connectivity and continued support of natural communities in the face of human development and climate change. The project area overlaps the easternmost edge of the ECA, which is considered the least permeable because it is located where natural lands meet developed suburban and urban areas.

Current barriers to potential wildlife movement in the BSA include motor vehicle traffic, paved roadways, fencing, road berms, steep road shoulders, metal guardrails, and the concrete median barrier of I-680. Wildlife may use the Sunol Boulevard undercrossing to cross I-680. The paved roadway of the undercrossing area is 66 feet wide, with 15.5 feet of clearance to the bottom of the I-680 bridge, a straight alignment, and unobstructed sight lines to both sides of I-680. The undercrossing's effectiveness as a wildlife crossing is tempered by the presence of human activity, vehicle traffic, associated light and noise, lack of vegetative cover, and steep embankments, particularly on the west side of I-680.

The project is not anticipated to substantially interfere with wildlife movement between the west and east sides of I-680 or the north and south sides of Sunol Boulevard. The following discussion addresses potential changes to wildlife connectivity by area and project component.

I-680 Mainline and Ramps

The project would not add lanes to I-680 or change the median barrier. The southbound I-680 off-ramp approach to Sunol Boulevard would be restriped to include one left turn lane and one right turn lane, but no widening is proposed.

The southbound on-ramp from Sunol Boulevard would be widened to accommodate additional vehicle storage lanes approaching the ramp meter, an outside shoulder, a new MVP, and a new CHP observation area. South of Sunol Boulevard, the slope along the west side of the on-ramp would be cut back, and a new retaining wall would be constructed. The retaining wall would be approximately 230 feet long and up to 12 feet high (Retaining Wall no. 4, described in Section 1.7.3 and shown in Figure 1-2). The retaining wall is anticipated to have cable railing along the top, as shown in the example in Figure 2.6-1 below.

Photo from Google Earth. Image date March 2021.

Figure 2.6-1. Retaining Wall Topped by Cable Barrier along Existing Northbound On-ramp to I-680 from Sunol Boulevard

The northbound off-ramp would be widened to accommodate additional vehicle storage lanes and an outside shoulder. The steep slope along the east side of ramp would be cut back and replaced with a retaining wall. The retaining wall would be approximately 549 feet long and up to 14 feet high (Retaining Wall no. 5, described in Section 1.7.3 and shown in Figure 1-2). The wall is also anticipated to have cable railing along the top.

These retaining walls could change how and where wildlife cross the I-680 ramps, if such crossings are attempted. The retaining walls topped by cable railing would replace part of the existing embankments, which would restrict wildlife access to the ramps. Terrestrial wildlife that encounter the walls and railing could divert their movements to the north or south, to avoid the vertical drops to the shoulder areas below. Sunol Boulevard to the north and Happy Valley Road and Happy Valley Creek to the south of the retaining walls (see under Local Roadways, below) all provide east-west connections under I-680 and access to natural habitat areas. Both Sunol Boulevard and Happy Valley Road have less automotive traffic than I-680, and traffic speeds are lower than on I-680 or the ramps, increasing the likelihood for animals to successfully cross or use the roads to reach other habitat. Therefore, although the retaining walls along the I-

680 southbound on-ramp and northbound off-ramp could change wildlife movement through the project area, they are not anticipated to substantially impact access to the east-west corridors under I-680.

The majority of the existing vegetation that would be removed for the ramp modifications is ruderal, has been disturbed by multiple previous roadway projects, and does not provide cover for wildlife. The Build Alternative would have permanent impacts on a total of 0.45 acre of ruderal vegetation in the BSA. A small decrease in ruderal vegetation directly adjacent to the ramps would not substantially reduce the cover that wildlife could use to cross or travel through the ramp areas.

Local Roadways

Sunol Boulevard would be widened to accommodate lane striping changes, Class IV bikeways on both sides, and a new sidewalk on the south side from the I-680 northbound off-ramp intersection to Pleasanton-Sunol Road. The existing columns of the I-680 bridge crossing and railroad crossing over Sunol Boulevard would remain in place, and the existing embankment slopes behind the columns would be replaced with three new retaining walls (1, 2, and 3; see Section 1.7.3 and Figure 1-2) to accommodate the new bikeways and sidewalk. The embankments have natural/vegetated surfaces except for the hardened slopes behind the I-680 bridge columns. The existing vegetated embankments behind the retaining walls will be revegetated if disturbed by project construction (Measure AMM-AES-03 in Section 2.3, and Measures PF-AES-01 and PF-AES-02 in Section 1.9.1) and will continue to allow access and cover for wildlife movement.

The Build Alternative would not increase capacity for automotive traffic compared with the No Build Alternative, and the roadway of Sunol Boulevard and the adjacent section of Pleasanton-Sunol Road would remain passable to wildlife after project construction. The new traffic signals at the southbound and northbound ramp intersections with Sunol Boulevard could help to slow through traffic and potentially reduce vehicle-wildlife collision risk. The Class IV bikeways and sidewalk would provide new options for east-west wildlife movement that have safe separation from vehicle traffic. The increased presence of bicyclists and pedestrians primarily during the day and additional safety lighting at night could cause some animals to avoid using Sunol Boulevard and the adjacent section of Pleasanton-Sunol Road. As wildlife in the project area are already exposed to high traffic volumes and existing roadway lighting in the project area, the project would not result in a substantial change.

Sunol Boulevard in the BSA is mostly bordered by ruderal vegetation, California annual grassland, eucalyptus grove (which has a barren shrub layer), and landscaped vegetation. These land cover types provide little cover for wildlife. The coast live oak woodland along Pleasanton-Sunol Road to the west of the southbound I-680 off-ramp provides denser vegetation and more cover than the areas to the east. Trees and other vegetation to the west of the southbound I-680 off-ramp are subject to mitigation and replacement as described in Items b (above) and e (below). A small decrease in vegetation directly adjacent to the roadway would not substantially reduce cover that wildlife could use to cross or travel through the Sunol Boulevard corridor.

In the southern part of the BSA, approximately 0.20 mile south of Sunol Boulevard, Happy Valley Road provides a two-lane crossing under the freeway, and Happy Valley Creek crosses I-680 through a double 8-foot-by-7-foot concrete box culvert (see Figures 2.6-2 and 2.6-3). Both the box culvert and Happy Valley Road would support east-west wildlife movement across I-680 in the project area. No changes to the box culvert or Happy Valley Road, including vegetation removal, are proposed as part of the project.

Photo from Google Earth. Image date December 2020.

Figure 2.6-2. Happy Valley Road East of I-680, Looking West Toward Undercrossing

Photo from Google Earth. Image date December 2020.

Figure 2.6-3. Happy Valley Road West of I-680, Looking East Toward Undercrossing; Concrete Box Culvert on Left

For the reasons described above, the project would not interfere substantially with wildlife movement. Impacts to wildlife movement corridors would be less than significant.

Measure AMM-AES-03 would minimize construction-related disturbance to vegetation (Section 2.3), and Measures PF-AES-01 and PF-AES-02 (Section 1.9.1) provide for the restoration of temporarily impacted vegetation. In addition, the measures listed in Section 1.9.3 would reduce the potential for temporary construction-related impacts to wildlife and their habitats. During construction, wildlife exclusion fencing will be installed along the project perimeter to prevent wildlife from entering construction zones and redirect their movements to other areas. Implementation of Measure AMM-BIO-16 below would further reduce the potential for long-term impacts to wildlife movement through the use of fencing and railing that allow for wildlife permeability.

Construction activities have the potential to increase the nighttime light and glare sources compared to current levels. In particular, areas most sensitive to increased lighting and glare over natural conditions would be the riparian corridor and the drainages, which provide for a natural pathway for wildlife. Nighttime illumination is known to adversely affect some species of wildlife in natural areas. It can disturb breeding and foraging behavior and potentially alter breeding cycles of birds, mammals,

and nocturnal invertebrates. In addition, light could deter some animal species, especially the larger mammals, from using rivers, creeks, and washes as a movement corridor. If uncontrolled, lighting near movement corridors could adversely impact the composition and behavior of the wildlife that occur in these areas. In addition, noise and vibrations from the operation of heavy equipment in active construction areas has the potential to temporarily affect the movement of wildlife species. Measure AMM-BIO-15 below would reduce the potential for temporary impacts to wildlife movement during construction, by minimizing the effects of light, glare, noise and human activity.

e) Less Than Significant Impact

As described in Section 2.3, the project may require removal of up to 61 trees, most of which are coast live oak (*Quercus agrifolia*), London plane (*Platanus* × *hispanica*), and valley oak (*Quercus lobata*) trees. The precise number and location of trees to be removed will be confirmed during the detailed design phase.

The majority of anticipated tree removals are within Alameda County ROW and are subject to the Alameda County Tree Ordinance (Alameda County 2016). According to the Alameda County Tree Ordinance, trees removed on county property must be identified and permitted prior to removal. Two anticipated tree removals are within the City of Pleasanton ROW, and are subject to the City's Tree Preservation Ordinance (City of Pleasanton 1998). This ordinance is intended to control the removal and preservation of heritage trees within the City. Whether those two trees meet the definitions of a heritage tree, as defined by the City's Ordinance, would be confirmed during the detailed design phase.

Measure PF-AES-01 (Section 1.9.1) provides for replacement of removed trees. Additionally, Measure AMM-AES-02 (Section 2.3) would minimize impacts to the mature tree stand adjacent to Castlewood Golf Course.

f) No Impact

No habitat conservation plans or natural community conservation plans are currently in effect for the project area.

Avoidance, Minimization, and/or Mitigation Measures

AMM-BIO-01. Special-Status Plants

Prior to the commencement of construction activities, a biologist shall conduct appropriately timed surveys for the listed plant species to correspond with these

species' blooming period. The surveys shall include botanical inventories between May and October (the blooming period of Congdon's tarplant), and between March and June (the blooming period of Diablo helianthella).

If listed plant species are discovered within the construction area, protective measures will be established. These protective measures will include setting a temporary protective buffer around the plants; ensuring all such plants are numbered, mapped, and identified in the field with pin flags; and conducting appropriate agency coordination. Special status plant occurrences shall be avoided to the maximum extent possible.

AMM-BIO-02. Western Pond Turtle

An agency-approved biologist shall survey the work site no more than 48 hours before the onset of activities for signs of western pond turtles and/or western pond turtle nesting activity (i.e. recently excavated nests, nest plugs) or nest depredation (partially to fully excavated nest chambers, nest plugs, scattered egg shell remains, egg shell fragments). Preconstruction surveys to detect western pond turtles should focus on suitable aquatic habitat as well as the shoreline and shallow waters where pond turtles may be present below the water surface beneath algal mats. Preconstruction surveys to detect western pond turtle nesting activity should be concentrated within 402 meters (1,319 feet) of suitable aquatic habitat and should focus on areas along south or west facing slopes with bare hard packed clay, silt soils, or a sparse vegetation of short grasses or forbs. If western pond turtles or their nesting sites are found, the agency-approved biologist shall contact CDFW to determine whether relocation and/or exclusion buffers and nest enclosures are appropriate. If CDFW approves of moving the animal, the agency-approved biologist shall be allowed sufficient time to move the western pond turtle(s) from the work site before work activities begin.

AMM-BIO-03. Western Burrowing Owl

Migratory Bird Special Contract Provisions will be adhered to in order to avoid potential effects to special status bird species. Appropriate avoidance, minimization, or protection measures shall be determined in consultation with the CDFW in the that event an active burrow is located in an area subject to disturbance, or within the typical setback (i.e., occupied burrows or nests within 150 feet of an area subject to disturbance during the non-breeding season, or within 250 feet of an area subject to disturbance during the breeding season).

AMM-BIO-04. San Francisco Dusky-Footed Woodrat

Before the start of construction, an agency-approved biologist will conduct a survey of the BSA and a 30-foot buffer beyond the BSA boundaries to determine the location of active and inactive woodrat dens. Any dens detected during the surveys will be recorded and mapped in relation to the construction disturbance footprint. In addition, the biologist will evaluate any signs of current woodrat activity, including the presence of fresh scat, freshly chewed vegetation, and the presence of cobwebs covering nest entrances. A 30-foot equipment exclusion buffer will be established around active and inactive dens that can be avoided; within such buffers, all vegetation will be retained and nests will remain undisturbed.

A woodrat trapping and relocation plan will be developed and implemented prior to project construction for any nest site that will be directly affected by the proposed project. Specific methods for trapping woodrats and relocation of individuals and their nest sites, as well as identification of suitable sites for relocation, include:

1. Trapping at all woodrat middens mapped within the project's temporary and permanent impact areas,

2. Installing relocation midden structures,

3. Relocating trapped woodrats to the relocation midden structures, and

4. Dismantling existing woodrat middens in the project area to be cleared, to discourage woodrat reoccupation.

If suitable habitat is not available for relocation of the woodrats in the project vicinity, offsite locations will be identified. Trapping of the woodrats will be conducted by an agency-approved biologist with a current CDFW collection permit to trap and relocate the species. Ideally, the trapping will occur outside of the breeding period, between September and December.

AMM-BIO-05. American Badger

Preconstruction surveys will be conducted within the BSA in areas of suitable habitat to identify dens or signs of American badger. These surveys will be conducted no more than 30 days before the start of ground disturbing activities and will be phased with project build out.

If an American badger is detected on site at any time during these surveys, CDFW will be contacted to discuss ways to proceed with the project and to avoid take to the maximum extent practicable.

AMM-BIO-06. Nesting Raptors

The measures below will be implemented for construction work during the nesting season (February 1 through September 30).

Preconstruction surveys for raptors will be conducted within 300 feet of the construction area, no more than three days prior to ground disturbing activities.

If raptor nests are found within or adjacent to the construction area, work will be stopped until a 300-foot buffer is established, which is typically done using bright orange polypropylene ESA fencing. Larger raptors such as eagles will receive an avoidance buffer larger than 300 feet commensurate with the species and the level of disturbance. An agency-approved biologist will conduct weekly monitoring during construction, to evaluate the identified nest for potential disturbances associated with construction activities. Construction within the buffer is prohibited until the agency-approved biologist determines the nest is no longer active.

If an active nest is found after construction begins, construction activities in the vicinity of the nest will stop until an agency-approved biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, USFWS and CDFW will be contacted for further avoidance and minimization guidelines.

AMM-BIO-07. Migratory Birds

The measures below will be implemented for construction work during the nesting season (February 1 through September 30).

An agency-approved biologist will conduct preconstruction surveys for nesting migratory birds in the BSA no more than three days prior to the start of ground disturbing activities in the BSA. If preconstruction surveys indicate the presence of any migratory bird nests where activities will directly result in bird injury or death, a buffer zone of 50 feet will be placed around the nest.

Buffers will be established around active migratory bird nests where project activities will directly result in bird injury or death. The size of the buffer may vary for different species and will be determined in coordination with CDFW. An agency-approved biologist will

delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape. The buffer zone will be maintained around all active nest sites until the young have fledged and are foraging independently. In the event that an active nest is found after the completion of preconstruction surveys and after construction begins, all construction activities within a 50-foot radius will be stopped until an agency-approved biologist has evaluated the nest and erected the appropriate buffer around it. Vegetation clearing or general construction near the nest will resume only when the hatchlings have fledged. If establishment of the buffer is not feasible, CDFW will be contacted for further avoidance and minimization guidelines.

AMM-BIO-08. Bats

No more than two weeks prior to tree removal, an agency-approved biologist will conduct a preconstruction survey for crevice and cavity roosting habitat for all areas that provide suitable bat roosting habitat, including human made structures, snags, rotten stumps, mature trees with broken limbs, exfoliating bark, and dense foliage. Sensitive habitat areas and roost sites will be avoided to the maximum extent practicable. To avoid mortality and reproductive loss, Caltrans may limit tree removal to between September 1 and April 14, outside the breeding season, so as not to disturb maternal colonies or roosts. If potential roost sites (e.g., trees, snags) are to be removed or trimmed, limbs smaller than 3 inches in diameter will be cut and the tree will be left overnight to allow any bats using the tree/snag for roosting time to leave and find another roost. A biological monitor will be present during the trimming or removal of trees/snags. If occupied sites are observed in the BSA, Caltrans will contact CDFW to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied roost and construction activities. In addition, nighttime construction will be limited. Measures relating to nighttime work include:

- Artificial lighting of the BSA during nighttime hours will be minimized to the maximum extent practicable. Light shields will be installed to prevent illuminating habitat.

- If deemed necessary, specific day and night bat roost avoidance and minimization measure will be developed through technical assistance with CDFW and bat specialists.

AMM-BIO-09. California Tiger Salamander

Work within suitable upland habitat for California tiger salamander will occur during the dry season (April 15 and October 15). All work within suitable non-breeding aquatic

habitat for California tiger salamander (drainages, etc.) will occur between June 15 and October 15.

Within 24 hours prior to initial ground-disturbing activities, portions of the BSA that are suitable refuge habitats for the California tiger salamander will be surveyed when it is feasible and safe to do so. This includes thorough investigation of burrows, rocks, soil cracks, vegetation, logs, and any other debris identified as potential refuge habitat. The agency-approved biologist will ensure the site is clear of salamanders moving above-ground, or taking refuge in burrow openings or under materials that could provide cover such as boards, scrap metal, woody debris, or other materials. Potentially occupied refugia burrows within the BSA will be excluded with fencing and avoided for the duration of the activity at that location.

An agency-approved biologist will be present during initial ground disturbing activities in suitable refugia habitats for the California tiger salamander to monitor the removal of the top 12 inches of topsoil at all project locations. If California tiger salamanders are discovered during the initial ground disturbing activities, work will be stopped immediately and the biologist will contact CDFW and USFWS within one working day. The biologist in consultation with CDFW and USFWS will use adaptive management to modify as necessary project activities to avoid or minimize effects to listed species.

If individual animals are observed, work at that location will be temporarily halted while the agency-approved biologist excavates the occupied burrow by hand, and the individual salamander is moved to a natural burrow within 0.25 mile of the construction site. CDFW will be notified if California tiger salamanders are found and relocated. Any listed amphibian will be released at the mouth of a suitable burrow and then observed until it has safely entered the burrow.

An Incidental Take Permit for California tiger salamander will be requested from CDFW during the design phase.

AMM-BIO-10. California Red-Legged Frog

Measure AMM-BIO-09 for California tiger salamander will also be applied for California red-legged frog. Within 24 hours prior to initial ground-disturbing activities, portions of the BSA that are suitable refuge habitats for the California red-legged frog will be surveyed when it is feasible and safe to do so. This includes thorough investigation of burrows, rocks, soil cracks, vegetation, logs, and any other debris identified as potential refuge habitat. To the extent feasible, potentially occupied refugia within the BSA will be excluded with fencing and avoided for the duration of the activity at that location.

AMM-BIO-11. Alameda Whipsnake

Measures AMM-BIO-09 for California tiger salamander and AMM-BIO-10 for California red-legged frog will also be applied for Alameda whipsnake.

An Incidental Take Permit for Alameda whipsnake will be requested from CDFW during the design phase.

MM-BIO-12. Compensatory Mitigation

In order to mitigate for permanent direct effects to California tiger salamander, California red-legged frog, and Alameda whipsnake, Caltrans proposes to purchase habitat credits at a 3:1 ratio from an approved mitigation bank such as Ohlone West Conservation Bank. Mitigation for indirect impacts to California tiger salamander and California red-legged frog from project lighting will be determined during the design phase.

MM-BIO-13. Natural Communities

Compensatory mitigation for temporary impacts to vegetation communities or Natural Communities of Concern, including valley oak woodland, will be provided through the restoration of habitat by planting native species that are typical to that habitat. The restored vegetation communities will be monitored for success. If enough space is not available for on-site mitigation, off site like habitat providing these species habitat requirements will be preserved through the purchase of mitigation bank credits.

AMM-BIO-14. Trees

Whenever possible, trees will be trimmed rather than removed. To avoid potential damage to retained trees, trees will be safeguarded during construction through implementation of the following measures as applicable:

- No construction equipment, vehicles, or materials shall be stored, parked, or staged within the critical root zone (CRZ) of trees outside of the BSA. Only the CRZ of trees shown in the plan sheets as temporarily or permanently impacted can be used for storage, parking, or staging; and

- Work will not be performed within the CRZ of any tree to be retained without consultation with an ISA-certified arborist. If trees are damaged during construction and become unhealthy or die, the damaged tree(s) will be removed and replaced.

AMM-BIO-15. Light, Glare, and Noise Control

Use lighting in areas only where necessary for safety and signage. Eliminate all lighting in other areas. All lighting should be downcast and/or utilize shielding to direct lighting

toward construction and staging areas and away from ESAs. This will help to minimize artificial lighting of natural areas, particularly in riparian areas and adjacent to drainages.

Limit operation of vibration-causing equipment such as pile drivers, dozers, large excavators to daylight hours when working in areas adjacent to open space.

A biological monitor shall be present to observe activities of wildlife during nighttime construction within species habitat areas. If activities are noted to affect wildlife, the biological monitor shall stop construction activities as necessary.

AMM-BIO-16. Fencing and Railings

During the detailed design phase, consider fencing and railing types that support wildlife permeability while minimizing potential animal-vehicle conflicts. Select height, material, and placement of fencing and cable railing that allow for wildlife movement through the project area where feasible, given highway safety standards and other engineering and environmental considerations.

2.7 Cultural Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No	No	No	Yes
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No	No	No	Yes
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No	No	Yes	No

The following discussion is from the Historical Resources Compliance Report for the proposed project (City of Pleasanton 2022c).

a) and b) No Impact

There are no historical resources in the Project Area Limits (PAL). Therefore, the project would have no impact on historical resources as defined in 14 CCR 15064.5.

No archaeological resources were identified within the project area. The majority of the project construction footprint is mapped as bedrock, which is not archaeologically sensitive. Construction of proposed retaining walls on Pleasanton-Sunol Road east of Castlewood Drive would be in an area mapped as latest Holocene stream terrace deposits, which could have the potential to contain buried archaeological resources. However, this area has been disturbed multiple times for the construction of two water mains, guardrails, and the roadway, which diminishes the potential to encounter buried archaeological resources. In addition, the project includes Measure PF-CUL-01 (Section 1.9.4), which provides a protocol for cultural resource discoveries if encountered during construction. The project would have a less than significant impact on archaeological resources.

c) Less Than Significant Impact

The project includes Measure PF-CUL-01 (Section 1.9.4), which provides a protocol for cultural resource discoveries if encountered during construction. With this measure, the project would have a less than significant impact on the potential disturbance of human remains and other cultural materials from construction.

2.8 Energy

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No	No	No	Yes

a) Less Than Significant Impact

The project is not anticipated to result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. Direct energy usage for construction is a one-time, necessary commitment for infrastructure projects such as

this. The project is not likely to lead to a measurable and substantial increase in vehicle travel, including as measured in VMT, the primary metric for analyzing direct energy use from roadway transportation projects. As the project would not appreciably increase motor vehicle capacity, direct and indirect operational energy usage is not anticipated to substantially increase. The project would have a less-than-significant potential to result in a wasteful, inefficient, or unnecessary consumption of energy.

b) No Impact

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. It would support state and local goals to increase active transportation by improving bicycle and pedestrian connections across I-680, without appreciably increasing motor vehicle capacity. The project would have a less-than-significant potential to result in wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources in the project area or region.

2.9 Geology and Soils

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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.	No	No	No	Yes
ii) Strong seismic ground shaking?	No	No	No	Yes
iii) Seismic-related ground failure, including liquefaction?	No	No	No	Yes
iv) Landslides?	No	No	No	Yes
b) Result in substantial soil erosion or the loss of topsoil?	No	No	No	Yes

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No	No	No	Yes
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No	No	No	Yes
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No	No	No	Yes
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	No	Yes	No

a) – e) No Impact

As described in Measure PF-GEO-01 (Section 1.9.5), Caltrans' design and construction guidelines incorporate engineering standards that address seismic risks. Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project vicinity and site conditions. Caltrans also requires additional geotechnical subsurface and design investigations to be performed during the final project design and engineering phase (Measure PF-GEO-02; Section 1.9.5). These standards and requirements would avoid the potential for adverse impacts.

f) Less than Significant Impact

Proposed project activities would encounter geologic units that are known to have high paleontological sensitivity. The majority of the project area was evaluated in February 2019 for the I-680 Express Lanes from State Route 84 to Alcosta Boulevard Project and documented in a Paleontological Evaluation Report/Paleontological Mitigation Plan (PER/PMP; Alameda CTC 2019b). The following information is from the Paleontological

Evaluation Memo (City of Pleasanton 2021b) for this project, which incorporates the PER/PMP.

The following geological units are present in the project area and are shown in order of geologic age from youngest to oldest.

- Historic sediments in the area including artificial fill are man-made deposits of various materials and ages that were placed or modified in the last several hundred years. These deposits are considered too young to contain fossils.
- Holocene deposits are sediments that were deposited in the last 11,000 years before present and include Alluvial Fan deposits. These deposits also are considered too young to contain fossils.
- Pleistocene deposits are sediments that were deposited during the Ice Age that occurred between 11,000 years before present (bp) to 2.6 million years bp. The Pleistocene deposits in the area include Alluvial Fan deposits. Pleistocene deposits in the area have produced vertebrate and invertebrate fossils.
- Pliocene/Pleistocene deposits in the area include the Livermore Gravels. The Livermore Gravels primarily occur in the hills flanking the San Ramon, Livermore-Amador, and Sunol Valleys. The Livermore Gravels contain well-documented fossil vertebrate, invertebrate, plant, and microfossil finds.
- Miocene deposits in the area include the Briones Formation. Certain horizons of the Briones Formation are very fossiliferous and contain well-document finds of vertebrate, invertebrate, plant, and microfossils.

Surficial geology in the project area is primarily composed of Pliocene/Pleistocene Livermore Gravels, with Pleistocene Alluvial Fan deposits to the south and west. Project activities are most likely to encounter Pleistocene Alluvial Fan deposits between west of the rail overcrossing and the Pleasanton-Sunol Road/Castlewood Drive intersection. There are Holocene Alluvial Fan Deposits to the northwest of the I-680/Sunol Boulevard interchange, but no ground-disturbing activities are planned that could encounter Holocene Alluvial Fan Deposits. Miocene Briones Formation and artificial fill are also mapped in the project area but are not anticipated to be disturbed by project construction.

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important.

The Pleistocene Alluvial Fan deposits, Pliocene/Pleistocene Livermore Gravels, and Miocene Briones Formation are all considered to have a high potential to contain significant paleontological resources. Historic sediments and Holocene deposits are considered too young to be paleontologically significant and have no paleontological resource sensitivity rating.

Proposed project activities would encounter geologic units that are known to contain paleontological resources. Locations where ground-disturbing activities are proposed in paleontologically sensitive geologic units are summarized below. The specific depths and locations of all excavations are preliminary and will be reevaluated as the project design progresses.

- Widening of the I-680 southbound on-ramp overcrossing structure (45 feet).
- Installation of traffic signals, roadway lighting, and permanent and temporary wooden overhead utility poles (10 to 14 feet).
- Underground utility relocations (8 feet).
- Construction of retaining walls (7 feet).
- Pavement work (4 feet).
- Trenching for conduits, TOS, and ramp metering equipment (3 to 5 feet).

Measure PF-GEO-03 (Section 1.9.5) will be implemented to provide for stopping work, securing the area, and performing further investigation if paleontological resources are encountered during project construction. Measure AMM-GEO-01 below would reduce potential impacts to paleontological resources by allowing for the recovery of fossil remains and associated specimen data and corresponding geologic and geographic site data that otherwise might be lost. No permits are anticipated to be needed for

monitoring or fossil recovery. Impacts to paleontological resources would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

AMM-GEO-01. Paleontological Resources

Update and finalize the monitoring recommendations from the Paleontological Evaluation Memo (City of Pleasanton 2021b) and the PER/PMP (Alameda CTC 2019b) once project design is nearly complete. The final plan will be implemented during construction.

Include a specification in the construction contract stating that paleontological monitoring will occur in accordance with the Paleontological Mitigation Plan.

2.10 Greenhouse Gas Emissions

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No	No	Yes	No
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No	No	Yes	No

a) and b) Less than Significant Impact

The project would not increase the capacity of the existing roadway and would therefore not lead to an increase in operational greenhouse gas (GHG) emissions (i.e., increased emissions from vehicles in the project area). However, short-term GHG emissions resulting from construction activities are anticipated.

Construction-generated GHG stems from material processing by onsite construction equipment, workers commuting to and from the project site, and potential traffic delays due to construction. These emissions would be produced at different rates throughout

the construction phase, depending on the activities involved at various phases of project construction.

A construction-related GHG emission analysis was conducted for the project, focusing on vehicle-emitted GHG. Carbon dioxide (CO2) is the single most important GHG pollutant due to its abundance when compared with other vehicle-emitted GHGs, including methane (CH4), nitrous oxide (N2O), hydrofluorocarbon (HFCs), and black carbon (BC).

Construction-related GHG emissions were calculated using the Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model (RCEM), version 9.0.0, along with adjustment factors to account for the effects of the U.S. National Highway Traffic Safety Administration and Environmental Protection Agency (EPA) Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule.[4] The analysis estimated that, for a construction period of 16 months, construction would produce a total of 1,246.73 tons (1,131.33 metric tons) of CO2. The analysis also quantified total GHG emissions, which include CO2, CH4, and N2O, as carbon dioxide equivalent (CO2e). CO2e is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given time, relative to the emissions of 1 ton of CO2. This figure was obtained by multiplying each GHG by its global warming potential. The total GHG emissions for construction would be 1,259.47 tons (1,142.89 metric tons) of CO2e.

While the project would result in GHG emissions during construction, no increase in vehicle miles traveled (VMT) would occur because the project would not increase the number of travel lanes. Therefore, the project is not anticipated to result in an increase in operational GHG emissions. With implementation of construction emissions reduction measures, PF-AIR-01, and PF-TR-01, construction-related impacts would be less than significant. At the state level, the ARB implements measures to achieve emission reductions of GHG in response to Assembly Bill (AB) 32 and Senate Bill (SB) 32. AB 32, the California Global Warming Solutions Act of 2006, initially set a goal of reducing GHG emissions to 1990 levels by 2020. This goal was extended by SB 32 in 2016, to reduce emissions by 40 percent below 1990 levels by 2030. At the local level, plans and programs include the San Mateo County General Plan Energy and Climate Change

[4] Part One of the SAFE Vehicles Rule revoking California's authority to set its own GHG standards became effective on November 26, 2019, and was rescinded effective January 28, 2022. SAFE Vehicles Rule Part Two amended Corporate Average Fuel Economy (CAFE) and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026. Part Two of the SAFE Vehicles Rule remains in effect.
CARB developed adjustment factors to be utilized in light of the SAFE Rule, and EPA approved the adjustment factors on March 12, 2020. The CARB adjustment factors were used in this analysis.

Element, Energy Efficiency Climate Action Plan, and Government Operations Climate Action Plan. Project construction would not conflict with any goals or policies at the state or local level, because Caltrans' Standard Specifications support the reduction of emissions to the maximum feasible extent.

2.11 Hazards and Hazardous Materials

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	No	No	Yes	No
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No	No	No	Yes
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No	No	No	Yes
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?	No	No	No	Yes

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	Yes	No
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No	No	Yes	No

The information in this section is based on the Initial Site Assessment (ISA) for the I-680 Express Lanes from SR 84 to Alcosta Boulevard Project (Alameda CTC 2018), and the ISA update memorandum for the proposed project (City of Pleasanton 2021c). The ISA evaluated the level of risk associated with hazardous materials, hazardous waste, and/or contamination within the express lanes project area, which included the I-680/Sunol Boulevard interchange and vicinity. The ISA update memorandum included a review of the California State Water Resources Control Board GeoTracker and United States Environmental Protection Agency Enforcement and Compliance History Online (ECHO) databases to confirm the findings of the ISA, and to account for any new or updated hazardous material sites. Through that review, four closed release sites, one of which is subject to land use restrictions, were identified within one mile of the project area. Additionally, the Castlewood Drive rail overcrossing and a Kinder-Morgan underground petroleum pipeline were identified as potential environmental concerns, as upset of those elements could result in the release of hazardous materials. The four sites, rail overcrossing, and pipeline were also documented in the ISA.

a) Less Than Significant Impact

Project construction and maintenance activities are expected to involve the routine transport, use, and disposal of hazardous materials (e.g., fuels, paints, and lubricants) that could pose a significant threat to human health or the environment if not properly managed. Adherence to federal and state regulations during project construction and maintenance reduces the risk of exposure to hazardous materials and accidental hazardous materials releases. Compliance with existing regulations is mandatory; therefore, construction of the Build Alternative is not expected to create a hazard to construction workers, the public, or the environment through the routine transport, use, disposal, or accidental release of hazardous materials.

b) Less Than Significant Impact

Construction and maintenance of the Build Alternative could result in the potential disturbance of hazardous materials in soil, groundwater, the Kinder-Morgan pipeline, and building materials in the project corridor. Measure PF-HAZ-01 (Section 1.9.6) provides for investigating potential hazardous materials in soil, groundwater, and building materials before construction. Further, compliance with existing regulations is expected to limit the risk of a reasonably foreseeable upset or accident and minimize the impact to the public and environment should an accident occur.

c) No Impact

There are no existing or proposed schools within 0.25-mile of the project area.

d) Less Than Significant Impact

As stated above, there are four hazardous materials sites identified within one mile of the project area. Three of these sites are designated as closed because investigation and/or remedial actions (if necessary) have been completed. The remaining site is a closed release site with a land use restriction, which is an ongoing Voluntary Cleanup operation at the Thermo-Fisher Scientific property (formerly Applied Biosystems). These sites are not expected to affect environmental conditions within the project area because a pathway for contaminant migration does not exist (e.g., the site is downgradient from the project area).

If site investigations conducted during the project design phase show evidence of hazardous materials (Measure PF-HAZ-01, Section 1.9.6), Caltrans would require the contractor to follow the appropriate standard specifications for any contaminants. The project would not create a significant hazard to the public or the environment.

e) No Impact

There are no airports within 2 miles of the project, and the project area is not included in an airport land use plan.

f) Less Than Significant Impact

The Build Alternative would not impair implementation of or physically interfere with an emergency response or emergency evacuation plan. The project would modify intersection traffic controls and lane striping, increase ramp storage, and improve

pedestrian and bicycle facilities in the interchange area. By reducing congestion on Sunol Boulevard as described in Section 2.19, the project would support emergency response and evacuations. A Transportation Management Plan (TMP) will be developed to minimize construction-related delays and include coordination with CHP and local law enforcement agencies (Measure PF-TR-01, Section 1.9.9). Access will be maintained for emergency response vehicles throughout project construction.

g) Less Than Significant Impact

The Build Alternative would not change the alignment of I-680, local arterials, or any adjacent land uses. Section 2.22 provides a description of fire hazard conditions in and adjacent to the project area, potential risk factors, and the wildfire risk minimization measures that would be included as part of the Build Alternative. The project area is in and near a state responsibility area (SRA) and a local responsibility area (LRA), which range from fire severity risk from high to very high (CAL FIRE 2007). Measure PF-WF-01 (Section 1.9.10) would reduce the project's potential to expose people or structures to wildland fires.

2.12 Hydrology and Water Quality

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	No	No	Yes	No
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;	No	No	Yes	No
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No	No	Yes	No
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	No	No	Yes	No
(iv) impede or redirect flood flows?	No	No	Yes	No
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No	No	No	Yes
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No	No	Yes	No

This section summarizes the Stormwater Data Report, Location Hydraulic Study, Preliminary Drainage and Hydromodification Impact Study, and Water Quality Assessment Report prepared for this project (City of Pleasanton 2021d,e,f,g). The project area is under jurisdiction of the San Francisco Bay RWQCB, Region 2. The

project's receiving water bodies are Arroyo de la Laguna and Happy Valley Creek. Its ultimate receiving water body is the San Francisco Bay. The City of Pleasanton is subject to hydromodification requirements, and the Alameda Countywide Clean Water Program designates the entire project area as susceptible to hydromodification.

A SWPPP will be implemented during construction (Section 1.7.8). The project is also anticipated to require a Section 401 Water Quality Certification from the RWQCB.

a) Less Than Significant Impact

The Build Alternative would have an estimated disturbed soil area (DSA) of 2.93 acres. The DSA includes newly created, removed, and replaced impervious surfaces plus areas of planned grading and earthwork.

Temporary impacts to water quality may result from soil disturbance and the operation of construction equipment. The SWPPP will include construction site BMPs for erosion and sediment control and material management to avoid or reduce impacts (Section 1.7.8). These measures are consistent with the practices required under the Construction General Permit and the Caltrans MS4 permit and are intended to achieve compliance with the requirements of those permits.

The project would also include permanent stormwater treatment BMPs, such as biofiltration strips and/or swales, infiltration and/or detention devices, and bioretention areas, to minimize the potential impact of polluted runoff (Section 1.7.8). Therefore, potential long-term impacts to water quality resulting from the would be minimal.

Implementation of the standard short-term and long-term BMPs listed under Measure PF-WQ-01 and the project's Section 401 permit conditions (Section 1.9.7) would substantially reduce impacts to surface and ground water quality. Effects to surface and ground water quality would be less than significant.

b) Less Than Significant Impact

The project is located within the San Francisco Bay Hydrologic Region and the Livermore Valley Groundwater Basin, which covers an area of 65,000 acres. The project would add approximately 2.14 acres of new impervious surface. While new impervious surface could reduce the available unpaved area where runoff can infiltrate into native soils and recharge aquifers, the additional impervious surface is minimal in comparison with the total area of the groundwater basin. Therefore, impacts to groundwater supply and recharge would be less than significant.

c) (i), (ii), (iii), and (iv) Less Than Significant Impact

The project would not alter the course of a stream or river but would increase impervious surfaces (1.56 acres of net new impervious area and 0.58 acres of replaced impervious surface, for a total of 2.14 acres of new and reconstructed impervious area).

The goal of the project drainage design would be to maintain existing drainage patterns. The project would be designed and implemented to reduce the potential for negative long-term impacts from polluted storm water runoff on receiving water bodies and to retain, detain, or infiltrate runoff and match post-project flows and durations to pre-project patterns. Hydromodification management measures would be included in the design of all storm water discharges to Waters of the State, as required of all projects with the potential to result in hydromodification that require a Section 401 Water Quality Certification. In addition, the project would be designed to meet trash capture requirements where feasible. Implementation of the standard short-term and long-term BMPs listed under Measure PF-WQ-01 and the project's Section 401 and 404 permit conditions (Section 1.9.7) would reduce the potential for temporary or permanent impacts to drainage patterns.

d) No Impact

No waterways are in the immediate interchange area, although Happy Valley Creek crosses I-680 south of the interchange, and Arroyo de la Laguna roughly parallels I-680 west of the interchange. Federal Emergency Management Agency (FEMA) mapping shows that the project is outside of Special Flood Hazard Areas and mapped floodways (FEMA 2009). Two FEMA floodplain areas are west, and outside, of the project area: Arroyo de la Laguna and Line B-2-1, which are both designated as Zone AE floodways (see Figure 2.12-1). Zone AE floodplains are areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. However, the project footprint is not located within either of these waterways' Zone AE or shaded Zone X floodplains. Happy Valley Creek was not analyzed by FEMA and is located within an unshaded Zone X floodplain, which is an area outside the 0.2-percent-annual-chance flood event. No project components are planned that would encroach on these floodways. Therefore, no impact is anticipated.

Figure 2.12-1. FEMA Floodplains in the Project Area

e) Less Than Significant Impact

The project is required to adhere to the Clean Water Act, the Porter-Cologne Water Quality Control Act, and the Construction General Permit. The project's Section 401 permit would require implementation of project measures in accordance with applicable water quality control plans (Section 1.9.7). The project is not expected to impact groundwater supplies. As a result, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

2.13 Land Use and Planning

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
a) Physically divide an established community?	No	No	No	Yes
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No	No	Yes	No

a) No Impact

The project would be primarily constructed within the existing state ROW. I-680, Sunol Boulevard, and other adjacent arterials would remain open during project construction and would not be permanently altered in a way that would create barriers to community access. Temporary lane closures and detours may be implemented during construction. However, a transportation management plan (TMP) would be implemented to minimize temporary effects to travel time (Measure PF-TR-01, Section 1.9.9). Therefore, the project would not physically divide an established community, and no impact would occur.

b) Less Than Significant Impact

Existing land uses within and adjacent to the project area include transportation, single-family residential, institutional (i.e., Happy Valley Church) and commercial. The project would not result in any changes in land use in or adjacent to the project area. As

stated above, the project would be primarily constructed within the existing state ROW. The project would modify intersection traffic controls and lane striping, increase ramp storage, and improve pedestrian and bicycle facilities in the interchange area.

The project area is included in several plans and programs governing land use, such as transportation and general plans. The project's consistency with those plans is discussed in Table 2.13-1 below. The project's would generally align with the goals, policies, and programs detailed therein. Construction of the Build Alternative would require the removal of trees and vegetation and could result in effects on special-status species; thus, avoidance, minimization, and/or measures are included to reduce those impacts, as described in Sections 2.3 and 2.6. Therefore, impacts due to conflicts with applicable land use plans are anticipated to be less than significant.

Table 2-13.1. Consistency with State, Regional, and Local Plans and Programs

Plan/Program	Goals/Policies Relevant to the Project	Project Consistency
State Scenic Highway Program	The goal of the California Scenic Highway Program is to preserve and enhance the natural beauty of California through the special designation of select highway segments. Scenic highways are protected by local measures in the form of ordinances, zoning, and/or planning policies that apply to the area of land within the scenic corridor (Caltrans 2008).	**Consistent.** I-680 within the project limits is an official State Scenic Highway. Project changes to the highway itself would be minimal, and views of the highway from Sunol Boulevard would not be affected. The Build Alternative would include new retaining walls along the on- and off-ramps and would require tree and vegetation removal adjacent to I-680. The majority of tree removals would not be apparent to the traveling public on I-680 and would therefore not affect the highway's scenic status.
Plan Bay Area 2050	• Maintain and optimize the existing transportation system. This strategy includes addressing near-term highway bottlenecks, such as those identified at the I-680/Sunol Boulevard interchange and supporting local priorities. • Create safe and healthy streets. This strategy includes making roads safer for all users, such as drivers bicyclists, rollers (e.g., people who use a wheelchair or scooter), and pedestrians, and building a Complete Streets network. The project would align with this goal by improving non-motorized transportation safety and accessibility in and adjacent to the interchange area.	**Consistent.** The project is included in Plan Bay Area 2050 (ABAG and MTC 2021; RTP ID No. 21-T06-021). The project would maintain and optimize the existing transportation system at the I-680/Sunol Boulevard interchange and improve conditions for non-motorized modes of transportation.
Alameda Countywide Transportation Plan	This plan identifies transportation needs across Alameda County, including safety improvements for all users, more reliable travel times, complete streets and the following: • Safe, Healthy, and Sustainable: Create safe multimodal facilities to walk, bike, and access public transportation to promote healthy outcomes and support strategies that reduce reliance on single-occupant vehicles and minimize impacts of pollutants and greenhouse gas emissions.	**Consistent.** The project is also included in the Alameda Countywide Transportation Plan (Alameda CTC 2020). The project is identified as a 10-year priority project within the plan, a category of projects that increase multimodal access throughout the county, with an emphasis on adding more walking, biking, and transit improvements along key corridors.
East County Area Plan	• Policy 110: The County shall require that developments are sited to avoid or, if avoidance is infeasible, to minimize disturbance of large stands of mature, healthy trees and individual healthy trees of notable size and age. Where healthy trees will be removed, the County shall require a tree replacement program which includes a range of tree sizes, including specimen-sized trees, to achieve immediate visual effect while optimizing the long-term success of the replanting effort. • Policy 114: The County shall require the use of landscaping in both rural and urban areas to enhance the scenic quality of the area and to screen undesirable views. Choice of plants should be based on compatibility with	**Generally Consistent.** The project includes several features and AMMs that would help to preserve trees, provide replacement planting, preserve areas known to support special-status species, and minimize impacts to riparian woodland (Section 2.6). The project would improve transportation facilities and contribute to the County bicycle system (Section 1.6) while also minimizing traffic congestion (Section 2.19).

Plan/Program	Goals/Policies Relevant to the Project	Project Consistency
	surrounding vegetation, drought-tolerance, and suitability to site conditions; and in rural areas, habitat value and fire retardance. • Policy 125: The County shall encourage preservation of areas known to support special-status species. • Policy 129: The County shall protect existing riparian woodland habitat present along the Arroyo Mocho, Arroyo Del Valle, Arroyo Las Positas, Arroyo de la Laguna; and Alamo, Tassajara, and Alameda Creeks. … • Policy 176: The County shall allow development and expansion of transportation facilities (e.g., streets and highways, public transit, bicycle and pedestrian paths, airports, etc.) in appropriate locations inside and outside the Urban Growth Boundary consistent with the policies and Land Use Diagram of the East County Area Plan. • Policy 183: The County shall seek to minimize traffic congestion levels throughout the East County street and highway system. • Policy 211: The County shall create and maintain a safe, convenient, and effective bicycle system that maximizes bicycle use.	
City of Pleasanton General Plan	• Circulation Element, Goal 1: Develop a safe, convenient and uncongested circulation system. • Circulation Element, Goal 2: Develop and manage a local and regional street and highway system which accommodates future growth while maintaining acceptable levels of service. – Policy 2: Phase development and roadway improvements so that levels of service at adjacent major intersections do not exceed LOS D at major intersections outside Downtown and gateway intersections… – Policy 3: Facilitate the free flow of vehicular traffic on major arterials. – Policy 5: At gateway intersections, facilitate the flow of traffic and access into and out of the City, consistent with maintaining visual character, landscaping, and pedestrian convenience. – Policy 8: Maximize traffic safety for automobile, transit, bicycle users, and pedestrians. • Circulation Element, Goal 4: Provide a multi-modal transportation system which creates alternatives to the single-occupancy automobile. – Policy 22: Create and maintain a safe, convenient, and effective bicycle system which encourages increased bicycle use. • Conservation and Open Space Element, Goal 1: Practice sustainability to preserve and protect natural resources and open space. • Conservation and Open Space Element, Goal 2: Preserve and enhance the natural resources of the Planning Area, including plant and wildlife habitats, heritage trees, scenic resources, and watercourses.	**Generally Consistent.** The project would reduce congestion in the City's circulation system and improve the flow of traffic at a gateway intersection (see Section 2.19). The proposed bicycle and pedestrian facilities (Section 1.6.1) are anticipated to improve safety by providing additional separation from motor vehicle traffic and would support multi-modal travel. The project includes several features and AMMs that would help to protect natural resources (see Section 2.6).

2.14 Mineral Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	No	Yes
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No	No	No	Yes

a) – b) No Impact

The project area is not located in or adjacent to any areas classified as mineral resource zones.

2.15 Noise

Would the Project Result In:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Generation of excessive groundborne vibration or groundborne noise levels?	No	No	Yes	No
c) For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	No	No	No	Yes

a) – b) Less Than Significant Impact

The project will not add capacity to I-680 or adjacent arterials in the City of Pleasanton. The reconfiguration and improvements at the I-680 ramp and Sunol Boulevard intersections, and adjacent intersections, would not generate excessive permanent noise, groundborne vibration, or groundborne noise. Temporary increases in noise may occur during construction but would be primarily limited to the hours of 7:00 AM – 7:00 PM by Measure PF-NOI-01 (Section 1.9.8). The other provisions of Measure PF-NOI-01 will help to reduce temporary construction noise.

c) No Impact

The project is not located within the vicinity of a private airstrip or airport land use plan, nor is it within two miles of a public airport or public use airport.

2.16 Population and Housing

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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)?	No	No	No	Yes
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No	No	No	Yes

a) – b) No Impact

The project would not induce unplanned population growth directly or indirectly. The proposed improvements would serve to alleviate congestion without adding capacity. The project would not involve the construction of new residential buildings or businesses, or expand transportation services and facilities that could induce population growth. The project would not remove or displace existing people or housing and would not necessitate construction of replacement housing elsewhere.

2.17 Public Services

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
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: a) Fire protection?	No	No	Yes	No
b) Police protection?	No	No	Yes	No
c) Schools?	No	No	No	Yes
d) Parks?	No	No	No	Yes
e) Other public facilities?	No	No	No	Yes

a) – b) Less Than Significant Impact

Temporary lane closures would be needed to construct the project, which could affect emergency response times. However, a Transportation Management Plan (TMP) would be developed during the design phase to minimize potential impacts (Measure PF-TR-01, Section 1.9.9). The TMP will include notification to emergency service providers and the public of lane closures and detours; coordination with CHP and local law enforcement on contingency plans; and using portable Changeable Message Signs, CHP's Construction Zone Enhanced Enforcement Program, and Freeway Service Patrol where possible to minimize delays. Therefore, no emergency services would be temporarily affected by construction of the project. Law enforcement, fire, and/or emergency services would be maintained during project construction and operation of the lanes. Therefore, the project is not expected to result in decreased response times.

c) – e) No Impact

The project is not located in or adjacent to any schools, parks, or other public facilities. The project would not result in physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities.

2.18 Recreation

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	No	Yes
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No	No	No	Yes

a) No Impact

The only recreational facilities that are adjacent to the project limits are the Club at Castlewood (a private golf course and country club) to the west of I-680, and a paved walking path along a pond on the Thermo-Fisher Scientific campus to the east of I-680. The project would not increase the use of the private club, walking path, or any other existing neighborhood or regional parks or other recreational facilities such that their physical deterioration would occur or be accelerated.

b) No Impact

The Build Alternative includes new bicycle and pedestrian facilities along Sunol Boulevard and Pleasanton-Sunol Road. These facilities would support bicycle and pedestrian connections to local trails and parks outside of the project area. However,

the project would not require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

2.19 Transportation

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No	No	Yes	No
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No	No	No	Yes
d) Result in inadequate emergency access?	No	No	Yes	No

This section is based on the Traffic Operations Analysis Report completed for the project in September 2021 (City of Pleasanton 2021a). The geographic area considered in the traffic analysis extended beyond the project limits to capture the effects of the proposed project on the surrounding area. The study corridor for the traffic analysis encompasses Sunol Boulevard between Arlington Drive and Castlewood Drive, and I-680 between Andrade Road and I-580.

Field observations of traffic congestion were collected in spring 2018 for the mainline and ramp facilities in the study area for the I-680 Express Lanes Project (Alameda CTC 2019a). Field observations of congestion along the Sunol Boulevard corridor were also taken in 2018 as part of the Traffic Engineering Performance Assessment for the proposed project (City of Pleasanton 2019). The traffic study analyzed the following scenarios:

- Existing conditions, which represent 2018, the year when the traffic study began and the CEQA baseline year;
- 2025, which represents the project's opening year, for the No Build and Build scenarios; and

- 2045, which represents the design year (20 years after the opening year), for the No Build and Build scenarios.

The study hours for the traffic operations analysis were 6:00 AM to 10:00 AM for the AM peak period and 3:00 PM to 7:00 PM for the PM peak period.

a) Less Than Significant Impact.

Programs, plans, ordinances, or policies that apply to the circulation system in the project area are summarized in Table 2.13-1 (Section 2.13). The traffic operations analysis results were reviewed to determine whether the project would be consistent with plan provisions that relate to congestion relief and acceptable levels of service, including the following from the City of Pleasanton General Plan Circulation Element:

- Circulation Element, Goal 1: Develop a safe, convenient and uncongested circulation system.

- Circulation Element, Goal 2: Develop and manage a local and regional street and highway system which accommodates future growth while maintaining acceptable levels of service.

Changes in traffic operations were evaluated for measures including intersection level of service (LOS), vehicle-hours of delay (VHD), freeway average travel time, and maximum individual delay.

Intersection Level of Service

Intersection operations, measured by Levels of Service (LOS), measures how well intersections along the Sunol Boulevard study corridor will operate before and after construction of the proposed project. LOS is a measure of the quality of traffic operating conditions varying from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions when traffic flows exceed capacity, resulting in long queues and delays). LOS represents the perspective of drivers and is an indication of the comfort and convenience associated with driving. The City of Pleasanton's General Plan sets a standard of LOS D for most local intersections, although gateway intersections, including the I-680/Sunol Boulevard interchange, are exempt from the LOS standard. Caltrans typically sets a standard of LOS D for freeway on- and off-ramp intersections.

Table 2.19-1 lists existing delay times and LOS for the project area intersections for the worst 30 minutes during the AM and PM peak periods.

Table 2.19-1. Existing (2018) Intersection Operations

Intersection	Control	Peak Period[1]	Delay (seconds)[2]	LOS[3]
Castlewood Drive/ Pleasanton-Sunol Road	Side-Street Stop-Control	AM	3 (7)	A (A)
Castlewood Drive/ Pleasanton-Sunol Road	Side-Street Stop-Control	PM	11 (21)	B (C)
I-680 southbound Ramps/Sunol Boulevard	Side-Street Stop-Control	AM	21 **(37)**	C **(E)**
I-680 southbound Ramps/Sunol Boulevard	Side-Street Stop-Control	PM	2 (12)	A (B)
I-680 northbound Ramps/Sunol Boulevard	Side-Street Stop-Control	AM	**104 (>120)**	**F (F)**
I-680 northbound Ramps/Sunol Boulevard	Side-Street Stop-Control	PM	1 (11)	A (B)
Riddell Street/Sunol Boulevard	Side-Street Stop-Control	AM	**59 (69)**	**F (F)**
Riddell Street/Sunol Boulevard	Side-Street Stop-Control	PM	1 (7)	A (A)
Arlington Drive/Sunol Boulevard	Signal	AM	**97**	**F**
Arlington Drive/Sunol Boulevard	Signal	PM	3	A

Notes:

1. Morning (AM) 30-minute peak period is from 6:30 AM to 7:00 AM. Evening (PM) 30-minute peak period is from 5:30 PM to 6:00 PM.
2. Weighted average control delay presented for signalized intersections. Delay for side-street stop-controlled intersections presented as 'Intersection Average Delay (Worst Approach Delay)'.
3. **Bold** text indicates level-of-service (LOS) E or F.

Tables 2.19-2 and 2.19-3 show how the Build Alternative and No Build Alternative would affect intersection LOS in future analysis years 2025 and 2045, for the worst 30 minutes during the AM and PM peak periods.

Table 2.19-2. Opening Year (2025) Intersection Operations

Intersection	Peak Period[1]	No Build Control	No Build Delay (Seconds)[2]	No Build LOS[3]	Build Control	Build Delay (Seconds)[2]	Build LOS[3]
Castlewood Drive/Pleasanton-Sunol Road	AM	Signal	13	B	Signal	11	B
Castlewood Drive/Pleasanton-Sunol Road	PM	Signal	8	A	Signal	9	A
I-680 southbound Ramps/Sunol Boulevard	AM	Side-Street	17 (29)	C (D)	Signal	35	D
I-680 southbound Ramps/Sunol Boulevard	PM	Stop-Control	5 (18)	A (C)	Signal	9	A
I-680 northbound Ramps/Sunol Boulevard	AM	Side-Street	**75 (98)**	**F (F)**	Signal	13	B
I-680 northbound Ramps/Sunol Boulevard	PM	Stop-Control	2 (11)	A (B)	Signal	14	B
Riddell Street/Sunol Boulevard	AM	Side-Street	**41 (50)**	**E (F)**	Side-Street	1 (6)	A (A)
Riddell Street/Sunol Boulevard	PM	Stop-Control	1 (7)	A (A)	Stop-Control	1 (7)	A (A)
Arlington Drive/Sunol Boulevard	AM	Signal	42	D	Signal	3	A
Arlington Drive/Sunol Boulevard	PM	Signal	6	A	Signal	6	A

Notes:

1. Morning (AM) 30-minute peak period is from 6:30 AM to 7:00 AM. Evening (PM) 30-minute peak period is from 5:30 PM to 6:00 PM.

2. Weighted average control delay presented for signalized intersections. Delay for side-street stop-controlled intersections presented as 'Intersection Average Delay (Worst Approach Delay)'.

3. **Bold** text indicates level-of-service (LOS) E or F.

Table 2.19-3. Design Year (2045) Intersection Operations

Intersection	Peak Period[1]	No Build Control	No Build Delay (Seconds)[2]	No Build LOS[3]	Build Control	Build Delay (Seconds)[2]	Build LOS[3]
Castlewood Drive/Pleasanton-Sunol Road	AM	Signal	15	B	Signal	17	B
Castlewood Drive/Pleasanton-Sunol Road	PM	Signal	11	B	Signal	17	B
I-680 southbound Ramps/Sunol Boulevard	AM	Side-Street	**25 (78)**	**C (F)**	Signal	**56**	**E**
I-680 southbound Ramps/Sunol Boulevard	PM	Stop-Control	9 (35)	A (E)	Signal	17	B
I-680 northbound Ramps/Sunol Boulevard	AM	Side-Street	**76 (>120)**	**F (F)**	Signal	**105**	**F**
I-680 northbound Ramps/Sunol Boulevard	PM	Stop-Control	4 (25)	A (D)	Signal	27	C
Riddell Street/Sunol Boulevard	AM	Side-Street	**44 (46)**	**E (F)**	Side-Street	**33 (47)**	**D (E)**
Riddell Street/Sunol Boulevard	PM	Stop-Control	1 (16)	A (C)	Stop-Control	1 (12)	A (B)
Arlington Drive/Sunol Boulevard	AM	Signal	**> 120**	**F**	Signal	71	E
Arlington Drive/Sunol Boulevard	PM	Signal	7	A	Signal	7	A

Notes:

1. Morning (AM) 30-minute peak period is from 6:30 AM to 7:00 AM. Evening (PM) 30-minute peak period is from 5:30 PM to 6:00 PM.
2. Weighted average control delay presented for signalized intersections. Delay for side-street stop-controlled intersections presented as 'Intersection Average Delay (Worst Approach Delay)'.
3. **Bold** text indicates level-of-service (LOS) E or F.

As described in Section 1.4.1 and shown in Table 2.19-1, four of the five study intersections operate at LOS E or F during the AM peak. All five intersections operate at LOS C or better during the PM peak.

During the AM peak period in the 2025 scenario, the Build Alternative would improve LOS from F to B or better at the I-680 northbound ramps/Sunol Boulevard and Riddell Street/Sunol Boulevard intersections, as shown in Table 2.19-2. This improvement is due to the queue spillback from the southbound I-680 on-ramp meter being wholly contained on the on-ramp with the Build Alternative. During the PM peak period in the 2025 scenario, all intersections would operate at LOS B or better. Therefore, the Build Alternative would improve intersection operations during the 2025 AM peak period and would not deteriorate operations during the 2025 PM peak period.

During the AM peak period in the 2045 scenario, the Build Alternative would improve LOS from F to E or better at the Riddell Street/Sunol Boulevard and Arlington

Drive/Sunol Boulevard intersections, as shown in Table 2.19-3. This improvement is due to the additional queueing storage capacity at the southbound I-680 on-ramp from the Build Alternative. During the PM peak period in the 2045 scenario, all intersections would operate at LOS C or better. Therefore, the Build Alternative would improve intersection operations during the 2045 AM peak period and would not deteriorate operations during the 2045 PM peak period.

Vehicle-Hours of Delay

Vehicle-Hours of Delay (VHD) measures the total delay (in hours) incurred by all vehicles using the study area during the study periods due to congestion. Delay is calculated relative to the posted speed limits on study area roadways.

Table 2.19-4 shows how the project would affect VHD throughout the study area.

Table 2.19-4. Change in Systemwide Vehicle-Hours of Delay (for all Drivers in Study Area)

Study Period	No Build VHD	Build VHD	Change in VHD (Build vs No Build)
2018 AM	4,100	NA	NA
2018 PM	7,500	NA	NA
2025 AM	3,700	3,160	-14.6%
2025 PM	2,800	2,800	-0.0%
2045 AM	21,500	19,600	-8.8%
2045 PM	25,200	25,100	-0.4%

Notes: Vehicle-Hours of Delay (VHD) is measured in hours and represents the combined delay of all origin-destination pairs, i.e., mainlines, entry and exit points, all on- and off-ramps, and intersections in the study network.

NA = Not applicable

As shown in Table 2.19-4, VHD is anticipated to decrease in 2025 and increase in 2045 compared to the existing (2018) condition with both the No Build and Build alternatives. However, the compared to the No Build Alternative, the Build Alternative would result in a reduction in VHD for both the AM and PM peak study periods in 2025 and 2045. The Build Alternative would result in improved operations along Sunol Boulevard without substantially degrading operations along the I-680 corridor.

Freeway Average Travel Time and Maximum Individual Delay

Table 2.19-5 and 2.19-6 present the I-680 mainline average travel time and maximum individual delay, which show how the project would affect I-680 mainline operations.

Table 2.19-5. Peak Period Average Travel Time by Route for Drivers Traveling Through Each Study Corridor

Route	Study Period	Existing (2018) Travel Time	Future No Build Travel Time (Minutes)	Future Build Travel Time (Minutes)	Does I-680 mainline driver travel time increase? (Yes/No)
Southbound I-680	2018 AM	16.7	NA	NA	NA
Southbound I-680	2018 PM	8.5	NA	NA	NA
Northbound I-680	2018 AM	8.5	NA	NA	NA
Northbound I-680	2018 PM	9.8	NA	NA	NA
Southbound I-680	2025 AM	NA	8.9	8.8	No Increase
Southbound I-680	2025 PM	NA	8.6	8.6	No Increase
Northbound I-680	2025 AM	NA	8.6	8.6	No Increase
Northbound I-680	2025 PM	NA	8.8	8.8	No Increase
Southbound I-680	2045 AM	NA	13	13	No Increase
Southbound I-680	2045 PM	NA	9	9	No Increase
Northbound I-680	2045 AM	NA	15.3	14.4	No Increase
Northbound I-680	2045 PM	NA	12.5	12.5	No Increase

Notes:

Travel through the corridor includes only vehicles that travel between the two discrete points:

- Southbound travel through the corridor extends from the I-580 on-ramp (in Pleasanton) to Andrade Road interchange off-ramp (in unincorporated Alameda County).
- Northbound travel through the corridor extends from the Andrade Road interchange on-ramp (in unincorporated Alameda County) to lane reduction downstream of westbound I-580 off-ramp (in Pleasanton).

NA = Not applicable

Table 2.19-6. Change in Maximum Individual Delay for Drivers Using Study Corridors

Route	Study Period	Existing (2018) Travel Time	Future No Build Travel Time (Minutes)	Future Build Travel Time (Minutes)	Does I-680 mainline driver travel time increase? (Yes/No)
Southbound I-680	2018 AM	12.3	NA	NA	NA
Southbound I-680	2018 PM	1	NA	NA	NA
Northbound I-680	2018 AM	0	NA	NA	NA
Northbound I-680	2018 PM	2.7	NA	NA	NA
Southbound I-680	2025 AM	NA	1.1	0.9	No Increase
Southbound I-680	2025 PM	NA	0.8	0.8	No Increase
Northbound I-680	2025 AM	NA	0	0	No Increase
Northbound I-680	2025 PM	NA	0.3	0.1	No Increase
Southbound I-680	2045 AM	NA	10.2	10.2	No Increase
Southbound I-680	2045 PM	NA	2.2	2.1	No Increase
Northbound I-680	2045 AM	NA	17.7	17.3	No Increase
Northbound I-680	2045 PM	NA	8.5	8.3	No Increase

Notes:

Travel through the corridor includes only vehicles that travel between the two discrete points:

- Southbound travel through the corridor extends from the I-580 on-ramp (in Pleasanton) to Andrade Road interchange off-ramp (in unincorporated Alameda County).
- Northbound travel through the corridor extends from the Andrade Road interchange on-ramp (in unincorporated Alameda County) to lane reduction downstream of westbound I-580 off-ramp (in Pleasanton).

NA = Not applicable

As shown in Tables 2.19-5 and 2.19-6, travel times and delays for southbound I-680 during the AM peak would be lower in future analysis years 2025 and 2045 than in the existing (2018) condition, with both the No Build and Build alternatives. The reduction in travel times and delays is anticipated due to the completion of the southbound express lane in 2024 (Section 1.4.2), which would improve the existing AM peak period bottleneck on southbound I-680 between Sunol Boulevard and Koopman Road. For the other travel directions and peak periods in 2025 and 2045, the Build Alternative would not increase travel times or delays compared with the No Build Alternative.

Transit

Three transit routes currently operate on I-680 in the traffic study area: Livermore-Amador Valley Transit Authority (Wheels) Routes 53 and 54 and Central

Contra Costa Transit Authority (County Connection) Route 92X (City of Pleasanton 2021a). As these routes do not use Sunol Boulevard, service delays are not anticipated. In addition, the TMP that will be developed during the design phase (Measure PF-TR-01, Section 1.9.9) will include input from local transit providers and further reduce the potential for service delays.

Bicycle and Pedestrian Facilities

The City of Pleasanton Bicycle and Pedestrian Master Plan (City of Pleasanton 2018) proposes closing gaps in bicycle lanes, installing sidewalks/paths on both sides of Sunol Boulevard, and striping high-visibility crosswalks across all on-ramps.

The project would construct Class IV bikeways along the north and south sides of Sunol Boulevard between the Arlington Drive/Sunol Boulevard and Castlewood Drive/Pleasanton-Sunol Road intersections and Class II bikeways at the I-680 ramps as well as at the eastbound Sunol Boulevard/Riddell Street intersection. The sidewalk along the south side of Sunol Boulevard between Arlington Drive and Pleasanton Sunol Road would be continued, and new crosswalks for pedestrians and bicyclists would be provided along Sunol Boulevard at the northbound and southbound I-680 ramp intersections, Riddell Street, and Arlington Drive. Signing, striping, and pavement markings would be added to reduce the potential for conflicts between bicyclists and motorists at the entrance of the westbound Sunol Boulevard to southbound I-680 loop on-ramp. New roadway lighting would be installed to improve visibility and safety for pedestrians and bicyclists.

Conclusion

Based on the analysis above, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system.

b) Less Than Significant Impact

The project is consistent with CEQA Guidelines Section 15064.3, subdivision (b), which relates to induced demand and vehicle miles traveled.

The project would have no impact on VMT because it is not a capacity-increasing project. Concurrence with this finding was provided on October 21, 2020, by staff from Caltrans Headquarters Division of Environmental Analysis; Caltrans District 4 Environmental Analysis and Traffic Forecasting; the City of Pleasanton; and the City's environmental, engineering, and traffic consultants (AECOM 2020; included in Appendix

F). Under Section 15064.3, subdivision (b), transportation projects that have no impact on VMT should be presumed to cause less than significant transportation impacts.

c) No impact

The project would include improvements along the same alignment as the existing facility and would not increase hazards due to a geometric design feature.

d) Less Than Significant Impact

Temporary lane closures would be needed to construct the project. A TMP would be developed during the design phase to minimize potential impacts to emergency response times (Measure PF-TR-01, Section 1.9.9). The TMP will include notification to emergency service providers and the public of lane closures and detours; coordination with CHP and local law enforcement on contingency plans; and using portable Changeable Message Signs, CHP's Construction Zone Enhanced Enforcement Program, and Freeway Service Patrol where possible to minimize delays. Access will be maintained for emergency response vehicles. Therefore, the project would not result in inadequate emergency access.

2.20 Tribal Cultural Resources

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	No	No	No	Yes

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No	No	No	Yes

a) – b) No Impact

No California Native American Tribe has identified a Tribal Cultural Resource (TCR) in the project area.

2.21 Utilities and Service Systems

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No	No	No	Yes

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No	No	No	Yes
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No	No	No	Yes
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No	No	No	Yes

a) Less Than Significant Impact

The project is anticipated to require relocation of some overhead and underground utilities (Section 1.7.7). Any interruption of service associated with these relocations would be temporary and short-term.

The project would add or modify culverts, drainage ditches, and drainage inlets (Section 1.7.8). As described under Hydrology and Water Quality, implementation of Measure PF-WQ-01 and the project's Section 401 permit conditions (Section 1.9.7) would reduce potential impacts from new or modified drainage features.

The proposed traffic operations systems (TOS), ramp metering equipment, and roadway lighting would require electrical power. The amount of electricity used to operate these project components would not result in the need for new or expanded electrical power facilities.

b) -e) No Impact

The Build Alternative would not require new or expanded water entitlements or affect public utilities for wastewater treatment. The Build Alternative would not generate or require solid waste disposal in excess of state or local standards, or in excess of the capacity of local infrastructure. Construction waste would be disposed at a certified facility based on the waste type and would not affect landfill capacity. The Build

Alternative would comply with statutes and regulations related to solid waste management and reduction.

2.22 Wildfire

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	Yes	No
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No	No	No	Yes
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No	No	No	Yes
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No	No	No	Yes

The project area contains both a state responsibility area (SRA) and a local responsibility area (LRA) (CAL FIRE 2007). The SRA, which is in unincorporated Alameda County west of Pleasanton-Sunol Road and south of Castlewood Drive and Happy Valley Road, is classified as a high fire hazard severity zone. The portion of the project area within the City of Pleasanton is an LRA. Two very high fire hazard severity zones in the LRA are to the west, near but outside of the project area: one generally west of Foothill Road, and one south of Country Lane.

a) Less Than Significant Impact

The Alameda County Emergency Operations Plan would apply to the project area (Alameda County 2012). This plan identifies emergency response policies, protocols, and roles and responsibilities of County authorities in the event of an emergency.

Temporary lane closures would be needed to construct the project, which could affect emergency response times. However, a TMP would be developed during the design phase to minimize potential impacts (Measure PF-TR-01, Section 1.9.9). The TMP will include notification to emergency service providers and the public of lane closures and detours; coordination with CHP and local law enforcement on contingency plans; and using portable Changeable Message Signs, CHP's Construction Zone Enhanced Enforcement Program, and Freeway Service Patrol where possible to minimize delays. Access will be maintained for emergency response vehicles. Therefore, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

b) No Impact

The alignment of I-680 and local arterials would be generally unaltered by the project, as the primary project activities would be the reconfiguration and signalization of the I-680 ramps/Sunol Boulevard intersection. The addition of retaining walls along Sunol Boulevard and Pleasanton-Sunol Road and widening of the I-680 southbound loop on-ramp would not alter slope, prevailing winds, or other factors and thereby exacerbate wildfire risks.

c, d) No Impact

The project would not require new access or haul roads for construction – the I-680 southbound ramp areas would be used for temporary staging during construction. The project would require the relocation of PG&E underground electrical and gas lines. Electrical lines may need to be temporarily relocated overhead during construction. These activities are not anticipated to exacerbate fire risk, as measures for minimizing fire risks would be incorporated during construction in compliance with state and federal fire regulations. Fire risk BMPs are documented in Measure PF-WF-01 (Section 1.9.10).

The Build Alternative would install retaining walls along Sunol Boulevard and Pleasanton-Sunol Road, create approximately 2.14 acres of new impervious surface, and modify project area drainage. As detailed in PF-AES-01 and PF-AES-02 (Section

1.9.1), the Build Alternative would include replacement planting for removed trees and vegetation. Measure PF-WQ-01 (Section 1.9.7) would include temporary and permanent BMPs to prevent erosion and the alteration of existing drainage patterns. These BMPs would avoid or minimize the project's potential to result in downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes.

2.23 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation	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?	No	No	Yes	No
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	No	No	Yes	No
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No	No	Yes	No

a) Less Than Significant Impact

The potential environmental impacts associated with project construction and operation, and the measures proposed to avoid or minimize those impacts, are disclosed in this IS and summarized in the checklist discussions above. Measures have been included to

reduce impacts to resources such as special-status wildlife species and their habitats. With implementation of the proposed measures, the project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b) Less Than Significant Impact

The project would be constructed in the vicinity of several other past and planned projects, as detailed in Table 2.23-1. For this analysis, these actions are considered in connection to the proposed project for any impacts that could be cumulatively considerable.

Table 2.23-1. Past and Planned Projects in the Project Vicinity

Project Proponent/Name	Project Description	Project Status	Location (Approximate Distance from Project Area)
Transportation Projects			
Caltrans/I-680 Southbound Express Lane Project from SR 84 to Alcosta Boulevard	The project will add a new express lane in both the southbound and northbound directions of I-680 from SR 84 to Alcosta Boulevard. Phase 1 will construct the southbound express lane and all project-related improvements in the median (both northbound and southbound) and also incorporates pavement rehabilitation (EA 0J624). Phase 2 will construct the northbound express lane.	Phase 1 anticipated to begin construction in Fall 2022. Phase 2 is a future project; construction date unknown.	I-680 (includes project area)
Caltrans/Northbound I-680 Pavement Rehabilitation Project	The project will rehabilitate the northbound mainline roadway and ramps pavement on I-680 from the Koopman Road Undercrossing to the Alcosta Boulevard Overcrossing. The project also proposes to repair drainage systems, replace or upgrade guardrails, replace and upgrade the concrete median barrier within Segments 4-6, replace all signs, and implement ADA curb ramp requirements.	Construction began in 2022.	I-680 (includes project area)

Project Proponent/Name	Project Description	Project Status	Location (Approximate Distance from Project Area)
Caltrans/SR 84 Expressway Widening and SR 84/I-680 Interchange Improvements Project	The project will widen and conform SR 84 to expressway standards between south of Ruby Hill Drive and I-680, improve SR 84/I-680 interchange ramps, and extend the existing southbound I-680 HOV/express lane northward by approximately 2 miles, to approximately 0.8 mile north of Koopman Road.	Currently under construction; anticipated to be completed in late 2023.	I-680 (0.2 mile south of project area)
Caltrans/I-680 HOV Lane + Sunol Express Lanes - Southbound	This project included construction of an HOV lane (later converted to an express lane) from SR 84 to SR 237 with auxiliary lanes and ramp metering facilities.	Past project; completed in 2010.	I-680 (3.5 miles south of project area)
Caltrans/I-680 Sunol Express Lanes – Northbound	The project will construct an HOV/Express lane on northbound I-680 from south of SR 237 in Santa Clara County to north of SR 84 in Alameda County.	Completed in March 2022.	I-680 (3.5 miles south of project area)
Caltrans/Arroyo de la Laguna Bridge Project	The project proposes to replace the bridge with a wider structure that has two through lanes, bicycle lanes, and a sidewalk.	Future project; construction anticipated in 2024.	SR 84, in the town of Sunol (3.25 miles south of project area)
Other Infrastructure Projects			
Alameda County Public Works Agency/Castlewood Tanks Replacement Project	The project proposes to replace two existing deteriorating 100,000-gallon redwood water tanks that provide water for domestic consumption and emergency fire control. The tanks are part of a gravity-based water system situated at an elevation of 895 feet within the Castlewood County Service Area zone 2. The two existing tanks are approximately 6 feet apart and set back 9-10 feet from the downhill top of slope with approximately 5-foot-high retaining walls. The new tanks will be located on the same footprint of the existing tanks after demolition. The tank replacement would meet American Water Works Association Sections 13-2 seismic standards.	Future project; IS/MND approved November 2017.	Castlewood Drive (1 mile southwest of project area)

Project Proponent/Name	Project Description	Project Status	Location (Approximate Distance from Project Area)
Development Projects			
Ponderosa Homes II, Inc./P16-1386, PUD-113, and TRACT 8259	The project demolished the existing religious building and related improvements and constructed 36 single-family homes, a private clubhouse with a parking lot, and related site improvements.	In construction.	6900 Valley Trails Drive, Pleasanton (2.6 miles northwest of project area)

Resource areas that would have no adverse effects from the proposed project would not have incremental effects that would be cumulatively considerable (Caltrans 2005). The project is anticipated to have no impacts or less than significant impacts on the majority of resource areas identified in Sections 2.3 through 2.22. The project would have impacts to the following resources that require mitigation:

- Threatened and endangered species (California tiger salamander, California red-legged frog, and Alameda whipsnake)
- Sensitive natural communities

Cumulative impacts to these resources were considered in the Natural Environment Study (City of Pleasanton 2022b). All past, present, and future projects have gone through or are required to undergo an environmental review to identify, account for, and mitigate for potential significant impacts to these species and sensitive natural communities such as oak woodland. In addition, the projects listed in Table 2.23-1 are required to undergo a regulatory agency permit process that includes compensatory mitigation for impacts. The requirement for these projects to provide compensatory mitigation reduces the potential for cumulatively considerable impacts to threatened and endangered species and sensitive natural communities.

The proposed project would result in 0.89 acre of permanent and 1.15 acres of temporary impacts to suitable California tiger salamander, California red-legged frog, and Alameda whipsnake habitat. Implementation of the project features listed in Section 1.9.3, Measures AMM-BIO-09 through AMM-BIO-11, and MM-BIO-12 in Section 2.6 would reduce the potential for adverse impacts to California tiger salamander, California red-legged frog, and Alameda whipsnake. As a result, the project would not result in cumulative impacts or contribute to cumulatively considerable impacts on these species.

The project would have 0.03 acre of temporary impacts to valley oak woodland and require removal of approximately 19 trees in a separate riparian area. The tree removals in the riparian area would be identified in a CDFW Section 1602 Lake and Streambed Alteration Agreement Application, and tree replanting and mitigation ratios will be determined in consultation with CDFW. Implementation of Measure PF-AES-01 (Section 1.9.1) along with Measures MM-BIO-13 and AMM-BIO-14 in Section 2.6 would reduce the potential for adverse impacts to sensitive natural communities. As a result, the project would not result in cumulative impacts or contribute to cumulatively considerable impacts on sensitive natural communities.

c) Less Than Significant Impact

While human beings could be affected by a variety of the impacts described above, the project would not have substantial adverse effects on human beings, either directly or indirectly. With implementation of the proposed measures, the project would not have substantially adverse direct or indirect impacts on human beings.

2.24 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 (IPCC), 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. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the IPCC and other scientists over 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 (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons [HFCs]).CO_2 is the most abundant GHG; although it is a naturally occurring and a necessary component of the Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

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 patters. 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 CEQA and 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.

2.24.1 Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), please refer to Caltrans' Standard Environmental Reference (SER), Chapter 16, Climate Change.

2.24.1.1 FEDERAL

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

The National Environmental Policy Act (NEPA) (42 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. In January 2023, the White House Council on Environmental Quality (CEQ) issued updated and expanded interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (88 Fed. Reg. 1196) (CEQ NEPA GHG Guidance), in accordance with EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 86 FR 70935 (Dec. 13, 2021) and EO 14008, *Tackling the Climate Crisis at Home and Abroad*. The CEQ guidance does not establish numeric thresholds of significance, but emphasizes quantifying reasonably foreseeable lifetime direct and indirect emissions whenever possible. This guidance also emphasizes resilience and environmental justice in project-level climate change and GHG analyses.

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.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards for on-road motor vehicles sold in the United States. The U.S. EPA calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles 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 (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

2.24.1.2 STATE

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs).

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later Eos and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (ARB) was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective reduction of greenhouse gases." Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate stressors, and passed legislation requiring state agencies to

consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

2.24.2 Environmental Setting

The project area is rural and semi-rural south of Sunol Boulevard and suburban north of Sunol Boulevard. I-680 serves as a major commute corridor for Contra Costa, Alameda and Santa Clara counties. Plan Bay Area 2050, the region's RTP/SCS, guides transportation and housing development in the project area, and the City of Pleasanton and Alameda County have climate action plans that address GHGs in the project area.

2.24.2.1 GHG INVENTORIES

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, 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. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so 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 or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the U.S. Total GHG emissions from all sectors in 2021 were 5,586.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 12% of total U.S. emissions in 2021 [U.S. EPA 2023a].) While total GHG emissions in 2021 were 17% below 2005 levels, they increased by 6% over 2020 levels. Of these, 79.4% were CO_2, 11.5% were CH_4, and 6.2% were N_2O; the balance consisted of fluorinated gases. From 1990 to 2021, CO_2 emissions decreased by only 2% (U.S. EPA 2023a).The transportation sector's share of total GHG emissions increased to 28% in 2021 and remains the largest contributing sector (Figure 2.24-1). Transportation fossil fuel combustion accounted for 92% of all CO_2 emissions in 2021. This is an increase of 7% over 2020, largely due to the rebound in economic activity following the COVID-19 pandemic (U.S. EPA 2023a, 2023b).

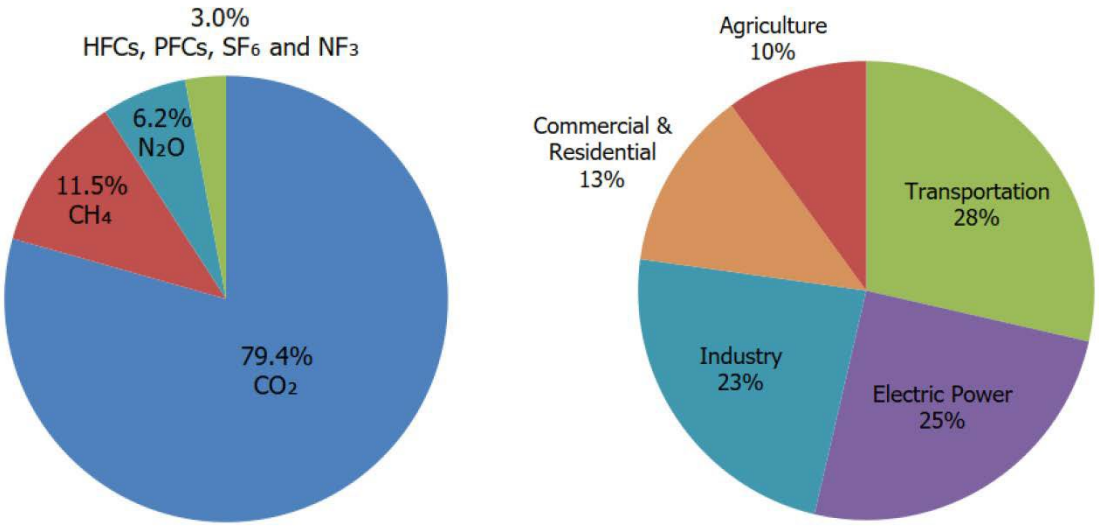

Figure 2.24-1. U.S.
2021 Greenhouse Gas Emissions (Source: U.S. EPA 2023b)

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year . It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2020 despite growth in population and state economic output (Figure 2.24-2) (ARB 2022a).

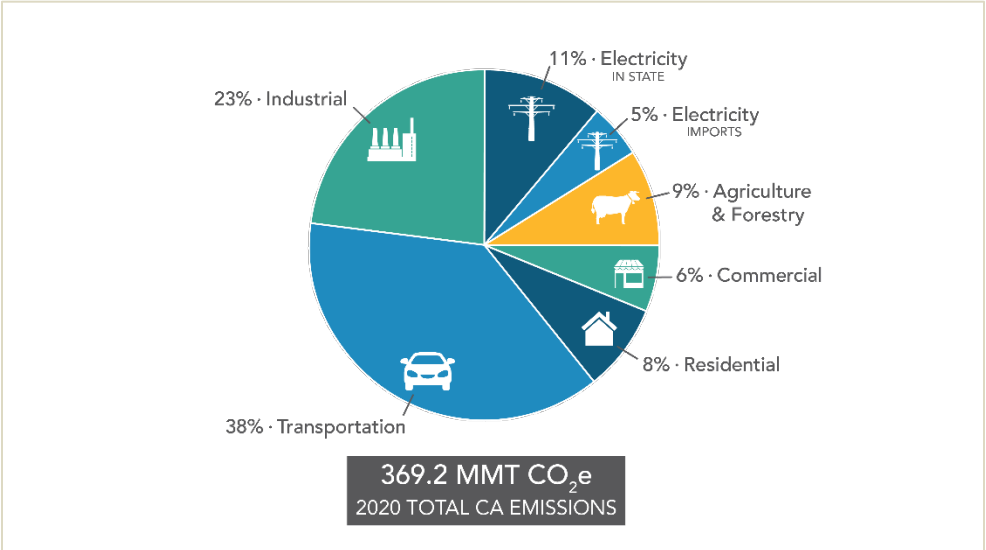

Figure 2.24-2. California 2020 Greenhouse Gas Emissions by Economic Sector (Source: ARB 2022a)

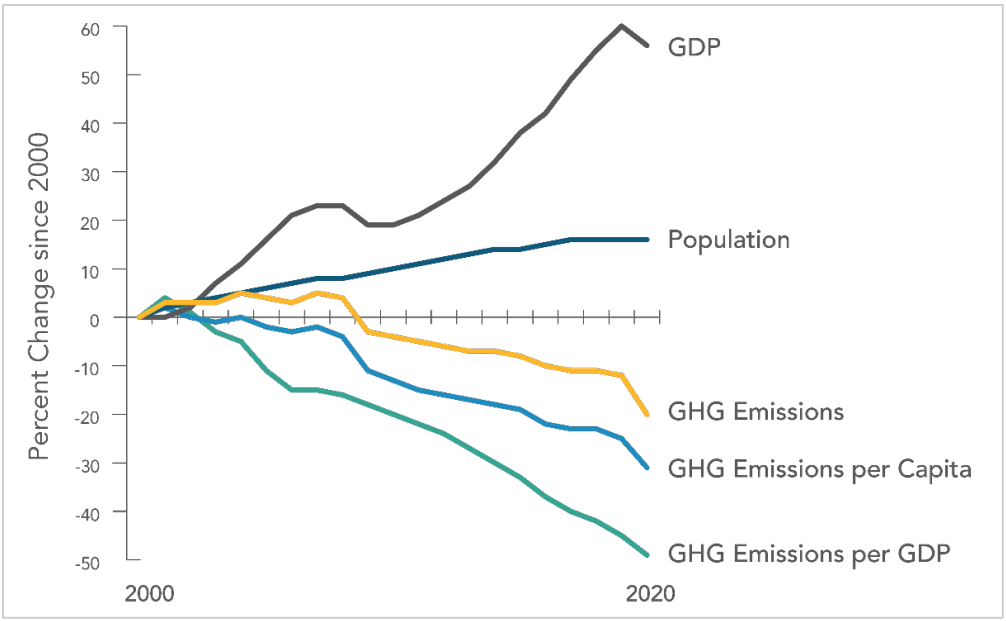

Figure 2.24-3. Change in California GDP, Population, and GHG Emissions since 2000 (Source: ARB 2022a)

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first scoping plan in 2008. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality*, adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022b).

2.24.2.2 REGIONAL PLANS

As required by *The Sustainable Communities and Climate Protection Act of 2008*, ARB sets regional GHG 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 MTC is the MPO and regional transportation planning agency for the project region, for which ARB has established GHG reduction targets of 10 percent by 2020 and 19 percent by 2035.

Plan Bay Area goals align with those of the California Transportation Plan 2040, which include CO_2 emissions reduction to tackle future climate change and fixing an aging transportation system (ABAG and MTC 2021).

The proposed project is within the jurisdiction of Plan Bay Area 2050. Table 2.24-1 provides a summary of GHG reduction policies or strategies from the RTP/SCS and other climate action plans for the project area.

Table 2.24-1. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Plan Bay Area 2050	Environmental Strategies for Reducing Climate Emissions: • EN7. Expand commute trip reduction programs at major employers. Set a sustainable commute target for major employers as part of an expanded Bay Area Commuter Benefits Program, with employers responsible for funding incentives and disincentives to shift auto commuters to any combination of telecommuting, transit, walking and/or bicycling. • EN8. Expand clean vehicle initiatives. Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers. • EN9. Expand transportation demand management initiatives. Expand investments in programs like vanpools, bikeshare, carshare and parking fees to discourage solo driving. Implementation Actions for Reducing Climate Emissions: • 11a. Evaluate and, if determined necessary and feasible, seek legislative authority to modify or expand the existing Bay Area Commuter Benefits Program in partnership with the Air District. • 11b. Seek new revenues and/or increased funding to support climate, electrification and travel demand management needs. • 11c. Convene local governments, transportation demand management (TDM) partners, transit agencies and employers to expand and foster relationships, target outreach, support education, develop metrics, share data and identify shared goals. • 11d. Identify the resources and capacities necessary to implement an expanded Bay Area Commuter Benefits Program at both the Air District and MTC, including an effort to improve program data and enhance database functionality, while using existing resources to develop program messaging. • 11e. Restructure MTC's Climate Initiatives Program to ensure it can effectively scale over the next five years, while advancing existing initiatives including electric vehicle incentives, electric vehicle charger programs, local parking policies, curb management, Targeted Transportation Alternatives, Mobility Hubs, vanpooling, car sharing, MTC SHIFT as well as bikeshare and e-bike incentive programs. • 11f. Coordinate an agency-wide, cross-sectional approach for operational TDM programs to increase equity, efficiency and effectiveness and support a shared regional vision for TDM • 11g. Conduct research such as focus groups, workshops, surveys, polls and studies to support the development of strategies and approaches that will maximize the viability of sustainable commute targets for major employers to implement.
City of Pleasanton Climate Action Plan (adopted February 2012)	• Improve and increase transit ridership with incentives, partnerships, and related investments • Promote alternatives to work and school commutes • Improve traffic flow to relieve congestion
Alameda County (Unincorporated Areas) Community Climate Action Plan (adopted February 2014)	• Conduct a public transit study and implement ridership enhancement programs • Enhance rideshare infrastructure and services to increase community participation in this important travel mode

Sources: ABAG and MTC 2021, City of Pleasanton 2012, Alameda County 2014.

The BAAQMD's 2017 clean air plan, Spare the Air, Cool the Climate, defines strategies for climate protection in the Bay Area that support goals laid out in Plan Bay Area. Goals include transforming the transportation sector to reduce motor vehicle travel, promote zero-emissions vehicles and renewable fuels, adopt fixed- and flexible-route

transit services, and support infrastructure and planning that enable a large share of trips by bicycling, walking, and transit.

2.24.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operations emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent", or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.) The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code 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.

2.24.3.1 Operational Emissions

The purpose of the project is to reduce congestion on Sunol Boulevard, accommodate future traffic volume, and improve pedestrian and bicycle access through the interchange. The project would not increase the capacity of Sunol Boulevard, I-680, or other roadways in the project area. Because the project would not increase the number of through-travel lanes, no increase in VMT would occur as result of project implementation. Although some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

2.24.3.2 CONSTRUCTION EMISSIONS

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered "temporary" in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials, can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

As discussed in Section 2.10, GHGs would be generated during project construction. It was estimated that for a construction duration of 16 months, the total amount of CO_2 produced for the construction of the project would be 1,246.73 tons (1,131.33 metric tons). Total CO_2e emissions (CO_2, CH_4, and N_2O) would be 1,259.47 tons (1,142.89 metric tons).

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7-1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

2.24.3.3 CEQA CONCLUSION

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

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

2.24.4 Greenhouse Gas Reduction Strategies

2.24.4.1 STATEWIDE EFFORTS

In response to AB 32, the Global Warming Solutions Act, 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 (ARB 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 up to 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).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of VMT. Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove CO_2 from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

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.*

2.24.4.2 CALTRANS ACTIVITIES

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3 05 and S-01 07 and help achieve the targets set forth in AB 32. EO B-30 15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

Climate Action Plan for Transportation Infrastructure

The *California Action Plan for Transportation Infrastructure* (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which accounts for more 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 (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 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 2021b).

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 2021c).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP 30) Climate Change (June 22, 2012) established a Department 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 Department-controlled emission sources, in support of Departmental and State goals.

2.24.4.3 PROJECT-LEVEL GHG REDUCTION STRATEGIES

The following measures will be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

1. Measure PF-AIR-01 (Section 1.9.2): Caltrans Standard Specifications require contractors to comply with all laws applicable to the project and to certify they are aware of and would comply with all ARB emission reduction regulations. Measure PF-AIR-01 also includes BMPs for air quality to be incorporated during construction activities, such as limiting the idling of vehicles and equipment onsite and maintaining vehicles and equipment

2. Measure PF-TR-01 (Section 1.9.9): A TMP will be prepared during the design phase of the project to minimize traffic disruptions from project construction. Minimizing traffic delays during construction will help reduce GHG emissions from idling vehicles.

2.24.5 Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that

landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

2.24.5.1 FEDERAL EFFORTS

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance. Caltrans practices generally align with the 2023 CEQ interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, which offers recommendations for additional ways of evaluating project effects related to GHG emissions and climate change. These recommendations are not regulatory requirements.

The Fifth National Climate Assessment, published in 2023, presents the most recent science and "analyzes the effects oof global change on natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years… to support informed decision-making across the United States". Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The United States Department of Transportation (U.S. DOT) recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of the department's top priorities (U.S. DOT 2023). FHWA's policy is 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 fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).The National Oceanic and Atmospheric Administration provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

2.24.5.2 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 resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State'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 a 2.7 to 8.8 degrees Fahrenheit increase 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% increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67% 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; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 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 to climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 California Climate Adaptation Strategy, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports address the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates 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 2023 California Climate Adaptation Strategy including acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing 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 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published Planning and Investing for a Resilient California: A Guidebook for State Agencies, to encourage a uniform and systematic approach to building resilience. SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to "anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone". As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

2.24.5.3 CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise.

The 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

analysis of at-risk assets and development of Adaptation Priority Plans and as a method to make capital programming decisions to address identified risks.

Caltrans Sustainability Programs

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The *Sustainability Roadmap* is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023).

2.24.5.4 PROJECT ADAPTATION ANALYSIS

Sea-Level Rise Analysis

The proposed project is outside of the coastal zone and not in an area subject to sea-level rise. Accordingly, the project is not anticipated to result in direct impacts on transportation facilities due to sea-level rise.

Precipitation and Flooding

The project would result in 1.56 acres of net new impervious area, which is less than 0.2 percent of the area of the Happy Valley Creek watershed. The project includes permanent BMPs to avoid the potential for project-related storm water discharges to alter drainage patterns, violate water quality standards, or degrade water quality, as described in Sections 1.7.8 and 1.9.7. New impervious area from the project is not anticipated to affect flood magnitude and frequency related to changes in precipitation patterns or to disrupt emergency or transportation access.

The project area is outside of mapped floodplains, as described in Section 2.12. No project components are planned that would encroach on these floodways, and no change to the 100-year water surface elevation is anticipated from the project.

The project is not anticipated to exacerbate the effects of climate change in terms of precipitation depth, including in floodplains.

Wildfire

The project area contains a high fire hazard severity zone in a state responsibility area and two very high fire severity zones in a local responsibility area. The project will apply Caltrans Standard Specifications 7.1.02M(2) for fire prevention during construction.

Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners to determine the necessary scope of environmental documentation and the level of analysis required; and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Consultation and public participation for this project will be accomplished through a variety of formal and informal methods. This chapter summarizes the results of Caltrans' preliminary efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

3.1 Consultation and Coordination with Public Agencies

3.1.1 Federal Agencies

UNITED STATES ARMY CORPS OF ENGINEERS

The proposed project will affect waters of the U.S. as defined in Section 404 of the CWA, as described in Section 2.6. A preliminary jurisdictional wetland delineation and an application for a Section 404 permit will be submitted to the USACE during the project design phase.

UNITED STATES FISH AND WILDLIFE SERVICE

A USFWS species list was created on October 9, 2020, mostly recently updated on August 16, 2023, and used to identify target species for reconnaissance-level surveys for terrestrial plants and animals. The proposed project will result in temporary and permanent impacts to habitat for California tiger salamander, California red-legged frog, and Alameda whipsnake. The City of Pleasanton will complete formal consultation with the USFWS for these species during the project design phase.

3.1.2 Tribal Entities

The Native American Heritage Commission (NAHC) was contacted on September 18, 2020, to request a search of the Sacred Lands File for cultural resources of significance to Native Americans within or near the cultural resources Area of Potential Effects (APE; same as the PAL). The NAHC replied on September 21, 2020, providing a list of tribes with traditional lands or cultural places located within Alameda County.

On October 8, 2020, the City of Pleasanton sent letters via email with a project description and map of the APE to the Native American individuals specified by the NAHC, requesting any information or concerns regarding the APE. Chairperson Sayers'

letter was returned; a second attempt was also unsuccessful. On October 11, 2020, Chairperson Perez, North Valley Yokuts Tribe, replied to the City of Pleasanton that they would like to initiate consultation under California Assembly Bill 52; Ms. Perez's letter was forwarded to Caltrans Native American Coordinator, Kathryn Rose and PQS, Britt Schlosshardt as Caltrans will be conducting the consultation. On October 14, 2020, Ms. Rose extended an invitation to Ms. Perez to participate in the archaeological survey of the APE, however Ms. Perez declined, preferring to receive an update about the survey findings once it was completed. On October 26, 2020, Ms. Schlosshardt sent an email to Ms. Perez that detailed the survey findings. On November 4, 2020, Corrina Gould, Chairperson, The Confederated Villages of Lisjan, replied to the City of Pleasanton that they would like to initiate consultation under AB 52. Ms. Gould's email was forwarded to Caltrans District Native American Coordinator, Kathryn Rose, who responded via email on November 5, 2020, to set up further consultation. Ms. Gould responded on November 16, 2020, with dates and times to consult, to which Caltrans responded on November 20, 2020, with optional times. Ms. Rose and Ms. Schlosshardt had a virtual meeting with Ms. Gould on December 30, 2020. Ms. Schlosshardt provided Ms. Gould with requested information via email on January 11, 2021. Ms. Gould confirmed via email on January 13, 2021, that the Tribe had no further information regarding the project area, and asked that the Tribe be contacted if there are any finds. No other responses have been received to date.

3.1.3 State Agencies

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE CONSULTATION SUMMARY

The project has the potential to affect state-listed species, as described in Section 2.6. An Incidental Take Permit application for California tiger salamander and Alameda whipsnake will be submitted to the CDFW under Section 2081(b) of the CESA during the detailed design phase.

A Section 1600 Lake or Streambed Alteration Agreement with CDFW is necessary when a project would alter the flow, bed, channel, or bank of a stream or lake. A 1602 permit application will be submitted to the CDFW during the detailed design phase.

3.1.4 Regional Agencies

SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD

Project construction could affect waters of the United States. Pursuant to Section 401 of the Clean Water Act, a Notice of Intent will be submitted to the RWQCB. The project would implement any general WDRs issued by the RWQCB.

3.2 Draft Initial Study with Proposed Mitigated Negative Declaration Circulation Period

Public outreach took place during the circulation period of the Draft Initial Study with Proposed Mitigated Declaration. Caltrans filed a Notice of Completion for the draft environmental document with the State Clearinghouse on April 7, 2023. This filing began a public review and comment period that extended from April 7, 2023, to May 8, 2023. The public had more than 30 days to review and comment on the document. Additionally, a virtual public open house meeting was held on April 19, 2023, as described below.

Notice of the draft environmental document circulation and virtual public meeting was provided in the following ways:

- A newspaper advertisement was placed in the Pleasanton Weekly on April 7, 2023.
- Notices were mailed to approximately 3,000 addresses in and adjacent to the project area.
- Social media posts were made by Caltrans and the City of Pleasanton.
- Caltrans contacted elected and non-elected officials.

The review period and instructions for submitting comments were also included on the first page of the Draft Initial Study with Proposed Mitigated Declaration.

A virtual open house public meeting was held on Zoom Webinars on Wednesday, April 19, 2023, from 6:00 PM to 7:30 PM. The public meeting began with a presentation providing an overview of the project and the environmental process, followed by a question-and-answer session. Attendees were invited to submit questions via an online question-and-answer function. Approximately 10 members of the public attended. A phone number was provided for technical help, translation, or assistive materials, before and during the meeting. No requests for these services were received.

The purpose of the meeting was to encourage public involvement and comments, as well as to give the public an opportunity to view project information and ask questions of project team members. Attendees were encouraged to submit comments in writing via email or postal mail. Comments were requested to be submitted by May 8, 2023.

A total of five comments were submitted during the public review and comment period. Comments included recommended changes to the proposed pedestrian and bicycle facilities; recommended revisions to the description of the rail overcrossing bridge on Pleasanton-Sunol Road; and a request for noise barriers. All formal comments are addressed, and responses are included in Section 3.3.

3.3 Comments and Responses

The text of each public comment is presented below. Responses follow each comment. Text changes resulting from the comments are summarized in the responses and have been incorporated into the Initial Study with Mitigated Negative Declaration (IS/MND). Revisions made after the public review period are indicated by a vertical line in the margin of the IS/MND text, similar to the one shown to the left of this paragraph.

3.3.1 Pacific Locomotive Association Inc. (Michael Strider, P.E., Chief Engineer)

COMMENT

The Pacific Locomotive Association (PLA), operators of the Niles Canyon Railway, have a few concerns related to the proposed aforementioned project as it affects our existing railroad structure and right-of-way (ROW).

The Niles Canyon Railway operates on land leased to PLA by Alameda County, known as the Alameda County Transportation Corridor. The lease agreement covers the former Southern Pacific Tracy Line from Niles (Fremont) to Bernal Avenue in Pleasanton, approximately 11.5 miles. Part of this ROW includes the existing railroad bridge over Pleasanton-Sunol Road where your proposed improvements are located. PLA currently has active track built from Niles (MP 29) to the bridge over Happy Valley Road (MP 39). New replacement track is actively being installed from the Happy Valley Road Bridge toward Pleasanton and within a year or two, our track will be placed on the railroad bridge over Pleasanton-Sunol Road (MP 39.20).

In reading the Caltrans Draft Initial Study for the I-680 project, in particular part 1.2, last paragraph, it states that a former Union Pacific Railroad bridge crosses Pleasanton-Sunol Road just west of the southbound I-680 off-ramp. This bridge is in fact a former Southern Pacific Railroad bridge, never owned by Union Pacific, and it is part of the ROW and structure leased by Alameda County to PLA. PLA plans to rebuild track all the way to Bernal Avenue. As a side note, Caltrans District 4 has been working with PLA and County staff to repair drainage damage under I-680 (MP 39.58) and the repair is scheduled for this year. The Transportation Corridor that PLA encompasses is also registered as a federal historic site for which it was part of the extension of the original Transcontinental Railroad.

PLA needs to make sure that the project will not negatively affect this structure and that Caltrans will show PLA and the County how the project will NOT affect the ROW or structure. We understand there will be minor excavation under the bridge on both sides of the road. How will Caltrans address the improvements so as to not affect the integrity of the structure? The railroad loading is generally outlined using AREMA E-80 requirements.

PLA is in favor of this project and we look forward to working with Caltrans throughout the period of the project.

Your attention to this is appreciated.

RESPONSE TO COMMENT

Thank you for clarifying the past and present ownership of the railroad bridge. The description of the railroad corridor has been revised in Section 1.2. This section of the corridor is identified as part of the Niles Canyon Transcontinental Railroad Historic District in Section 2.3, item c.

The project design would avoid impacts to the railroad bridge. The existing Pleasanton-Sunol Road is planned to be widened on the north side under the railroad crossing. The widening would be accomplished by constructing a ground anchor wall (also called a tie-back wall) in front of the existing bridge abutments in order to avoid impacts to the existing structure. This type of retaining wall is routinely used on the State Highway System in similar situations. A top-down construction method and prestressed ground anchors would be used to avoid impacts to the bridge structure. Below is a typical example of the proposed ground anchor wall.

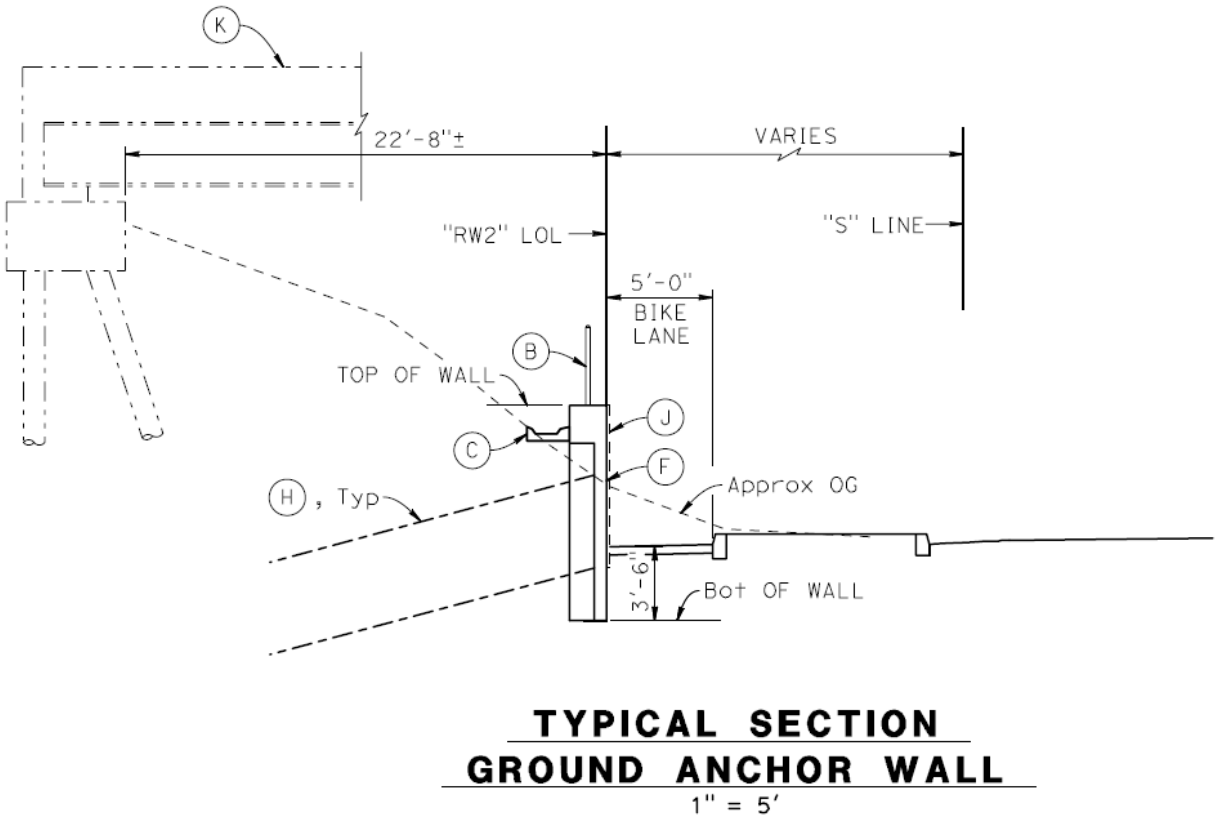

Figure 3.3-1 Typical Section of a Ground Anchor Wall

3.3.2 Dr. Sekhar Reddy

COMMENT

Glad to connect with you with regards to the I-680/Sunol Boulevard Interchange Improvements project. I live in the neighborhood of Arlington Drive and want to bring forward an important aspect which could be kindly considered. As such our area is surrounded by nature parks along with many low income and high income custom built houses which are resided by hard working and tax paying people. However, one aspect which needs your kind attention is the noise factor. All through the day we suffer from very high road/vehicle noise coming from the highway that is disrupting the peaceful environment. The peak noise is so high sometimes that I cannot even hear what the other person is saying. Appreciate if you can consider putting sound barriers on either side of the freeway so that we could have a better living conditions.

RESPONSE TO COMMENT

Thank you for your comment regarding noise in the project area. Caltrans and the Federal Highway Administration (FHWA) have established standards for analyzing noise from highway projects, in accordance with Title 23, Part 772 of the Code of

Federal Regulations. Those regulations define which kinds of projects require analysis of operational noise (meaning long-term traffic noise after construction is completed).

The project would not add capacity to I-680, Sunol Boulevard, or adjacent arterials, or result in a substantial change in lane alignment or elevation. As a result, the project does not meet Caltrans and FHWA standards for requiring evaluation of sound barriers and other kinds of highway noise abatement.

Caltrans and the City of Pleasanton will implement Project Feature-NOI-1 (Construction Noise) to restrict noise-generating construction activities, which would reduce the potential for temporary noise impacts during construction. This project feature includes a number of measures that limit the timing and manner of construction activities, including those such as restricting noise-generating activities to between 9 PM and 6 AM. Section 1.9.8 of this document contains the full text of Project Feature-NOI-1.

3.3.3 Todd Nelson

COMMENT 1 OF 2

As a cyclist, the current configuration of bike lanes on southbound Sunol Boulevard is dangerous. The lanes have vehicular traffic on both sides and abrupt changes. The proposed configuration is better. It will be challenging for cyclists to stop at the first traffic signal because of the slope of the hill coming down from the Arlington intersection. A long yellow is important (bikes don't have good brakes, downhill speeds without pedaling can be 25mph+).

However, regardless of the signal light, cars will turn right on red from southbound Sunol Boulevard to the northbound I-680 on-ramp. Can we have a cyclist-activated "no turn on red" sign? There are blank-out signs that are normally off and are only illuminated by button. I don't support a permanent "no turn on red" situation. Enforcement will be difficult. Cyclists will not be present most of the time. Vehicles will just turn right on red anyway.

Personally, I question the value of a trail/sidewalk for pedestrians in this area. Is there any pedestrian demand? No one will walk to/from the golf course. But if it is justified, then why are there not equal trails/sidewalks in both directions?

COMMENT 2 OF 2

It occurred to me after I sent this [above comment], that it might be confusing. If a cyclist is stopped at the red light on southbound Sunol (at the northbound 680 on-ramp), then a car turning right on red isn't really a problem. The problem occurs when the light turns green. The cyclist will proceed across the ramp at the same time that a car will turn onto the ramp. If anything, the driver will look *away* from the cyclist in case there is oncoming traffic also turning onto the on-ramp. During times when traffic is congested, there won't be any time when it is safe for a cyclist to proceed. Therefore, what I would like to see is a "Leading Pedestrian Interval" in combination with a "no turn on red" signal. Allow the cyclist to be the only one to proceed for seven seconds or so. Block vehicles from every other direction with a red light until the cyclist can cross.

By the way, the situation is much easier on the south side (northbound Sunol Blvd) because there is only one ramp to cross instead of three.

RESPONSE TO COMMENTS

Thank you for your comment regarding the proposed bicycle and pedestrian facilities. The option to include a Leading Pedestrian Interval in combination with a No Turn On Red will be analyzed in the detailed design phase. Regarding the need for a continuous sidewalk in the project area, Caltrans Complete Street Director's Policy 37 requires all transportation projects funded or overseen by Caltrans to 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. Caltrans and the City of Pleasanton will review the need for the proposed sidewalk during the next phase of the project.

3.3.4 Sharon Piekarski

COMMENT

Please note the following comments on the Interstate 680/Sunol Boulevard Interchange Improvements Project as presented during the April 19, 2023 online public meeting which presented the Initial Study with Proposed Mitigated Negative Declaration.

The design includes much needed pedestrian and bicycle improvements. However, the design for the pedestrian and bicycle improvements on the south side of Sunol Boulevard show a 5' wide Class IV separated Bikeway and a 10' pedestrian path.

Very few, if any, pedestrians are likely to use this pedestrian path due to the fact that residences are a long distance from potential destinations and this area is not conducive to recreational use. The nearest residence on Foothill Rd. is 1.3 mile from the nearest potential destination of Oak Hill Shopping Center. Most nearby residences are further away at Castlewood and to access this path pedestrians would have to descend a steep and curvy access road with no sidewalks and blind curves in the road. In addition, the Pleasanton Sunol Road is often used by bicyclists for both recreation and commuting. For these reasons bicycle facilities should be given priority.

Seven feet is the preferred width for a Class IV bikeway in the City of Pleasanton Bicycle & Pedestrian Master Plan as well as the California Department of Transportation's Design Information Bulletin 89-01. Both documents state that five feet is the minimum. During the online public meeting it was stated that the pedestrian path was ten foot wide to give less confident riders an option. However, a sufficiently wide Class IV bikeway is by definition intended to be an all ages and abilities facility.

For these reasons, please reduce the width of the pedestrian walkway and widen the Class IV bikeway to a minimum seven-foot bicycle lane with a three to four foot striped buffer with vertical barriers to safely accommodate bicycle traffic and reduce the pedestrian path to a six foot wide sidewalk which is the standard sidewalk dimension in Pleasanton for Arterials per the Bicycle Pedestrian Master Plan.

Also, on page 1-3 of the study document, there is mention of the former Union Pacific Railroad. It states "The former rail corridor is shown as a proposed future multi-use path in the Alameda County Bicycle and Pedestrian Master Plan . . ." While true, per Alameda County staff, the County has leased this rail corridor to Niles Canyon Railroad from Bernal Ave in Pleasanton to the town of Sunol and, should the railway be abandoned in future, the right of way would be returned to adjacent landowners. This corridor has historical significance since it was part of the Transcontinental Railroad and as such has priority over other uses. A modification of the wording of the document may be in order.

RESPONSE TO COMMENT

Thank you for your comment regarding the proposed bicycle and pedestrian facilities, as well as the railroad bridge and corridor in the project area. The proposed bicycle and pedestrian facilities have been designed in accordance with Caltrans Complete Street Director's Policy 37, as described in the response to the comment in Section 3.3.3. Your suggestions regarding the reduction of width of the sidewalk and subsequent widening of the Class IV bikeway have been taken into consideration, and will be reviewed during the next phase of the project.

The descriptions of the railroad bridge and corridor have been revised in Section 1.2. This section of the rail corridor is identified as part of the Niles Canyon Transcontinental Railroad Historic District in Section 2.3, item c.

Chapter 4 List of Preparers

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Chapter 5 Distribution List

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Federal Agencies

Environmental Protection Agency, Region 9 (Pacific Southwest)
Public Affairs Office
75 Hawthorne Street
San Francisco, CA 94105

U.S. Army Corps of Engineers
San Francisco District
450 Golden Gate Ave, 4th Floor
San Francisco, CA 94102

U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

State Agencies

California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

California Department of Conservation
801 K Street, MS 24-01
Sacramento, CA 95814

California Department of Fish & Wildlife, Region 3
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

California Department of Parks and Recreation
Natural Resources Division
P.O. Box 942896
Sacramento, CA 94296

California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

California Highway Patrol
Attn: Special Projects Section
4999 Gleason Drive
Dublin, CA 94568

California Office of Emergency Services
Public Safety Communications Office
601 & 630 Sequoia Pacific Boulevard Sacramento, CA 95811

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

California Transportation Commission
1120 N Street, Room 2221, MS-52
Sacramento, CA 95814

Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812

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

State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

State Historic Preservation Officer
California Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Regional Agencies

Association of Bay Area Governments
375 Beale Street
Suite 800
San Francisco, CA 94105

Bay Area Air Quality Management District
375 Beale Street
Suite 600
San Francisco, CA 94105

East Bay Regional Park District
2950 Peralta Oaks Court
P.O. Box 5381
Oakland, CA 94605

Metropolitan Transportation Commission
375 Beale Street, Suite 700
San Francisco, CA 94105

Pacific Locomotive Association
P.O. Box 515
Sunol, CA 94586

San Francisco Public Utilities Commission
525 Golden Gate Avenue
San Francisco, CA 94102

San Francisco Regional Water Quality Control Board, Region 2
1515 Clay St, Suite 1400
Oakland, CA 94612

Local Agencies and Organizations

Alameda County Planning Commission
224 W. Winton Avenue,
Room 111
Hayward CA 94542

Alameda County
Department of Public Works
951 Turner Court
Hayward, CA 94545

Alameda County Transportation Commission
1111 Broadway Avenue, Suite 800
Oakland, CA 94607

Alameda Creek Alliance
P.O. Box 2626
Niles, CA 94536

Niles Canyon Railway
P.O. Box 515
Sunol, CA 94586

Sunol Citizens' Advisory Council
County of Alameda Administration Building
1221 Oak Street, #536
Oakland, CA 94612

Bike East Bay
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Oakland, CA 94604

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United States Senate
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San Francisco, CA 94104

U.S. Senator Alex Padilla
United States Senate
333 Bush Street, Suite 3225
San Francisco, CA 94104

The Honorable Eric Swalwell
United States House of Representatives (CA-15)

3615 Castro Valley Boulevard
Castro Valley, CA 94546

State Elected Officials

The Honorable Steven M. Glazer
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Appendix A Title VI/Non-Discrimination Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

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September 2022

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 non-discriminatory 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) 639-6392 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 PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"

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Appendix B Summary of Project Features and Avoidance, Minimization, and/or Mitigation Measures

Aesthetics

PF-AES-01. Highway Replacement and Mitigation Planting

Replacement highway planting and irrigation along with a minimum one-year plant establishment period will be provided in all areas of highway planting removal consistent with the corridor's Designated Scenic Highway Status and where safety and maintenance requirements can be met. Replacement planting with a minimum one-year plant establishment period shall be funded from the parent roadway contract, and must be included in the parent roadway contract that damaged or removed the existing planting. If the Project Development Team determines that a separate child project would be appropriate to fulfill the environmental commitment of the replacement planting, mitigation planting, plant establishment period and monitoring period required by regulatory agencies, the planting project shall be implemented within two years of parent roadway contract acceptance. The City of Pleasanton shall obtain approval of the replacement planting work that will occur within State ROW from Caltrans District Landscape Architecture during the detailed design phase and prior to construction.

Required mitigation planting will be provided for impacts to valley oak woodland and riparian trees. The project is anticipated to have 0.03 acre of temporary impacts to valley oak woodland and require removal of approximately 19 trees in the riparian area along Pleasanton-Sunol Road (Section 2.6). On-site tree mitigation will be conducted in accordance with the project's permit requirements, which will be determined during detailed design. The final number of trees to be planted will be determined based on the actual number of tree removals, using replacement ratios set by regulatory agency permits, which are equal to or greater than Caltrans standards. If sufficient space is not available to accommodate all required mitigation planting, tree mitigation will also be satisfied through off-site tree planting or other compensatory mitigation under a separate contract funded by the City of Pleasanton. The off-site mitigation planting plan will be approved in advance per regulatory agency permit requirements.

PF-AES-02. Revegetation Planting

After construction, disturbed areas will be revegetated using hydroseed mixtures with a combination of native grasses, shrubs, and legumes. Temporarily disturbed areas will be restored to pre-construction conditions within one year of disturbance. Naturally occurring plants that are invasive will not be replanted.

PF-AES-03. Vegetation Preservation

Minimize the removal of groundcover, shrubs, and mature trees to the maximum extent feasible, utilizing open areas for contractor staging/storage areas.

Protect existing vegetation outside the clearing and grubbing limits from the contractor's operations, equipment and materials storage.

Place high-visibility temporary fencing around vegetation to be protected before roadway work begins.

AMM-AES-01: Aesthetic Treatment for New Structures

New structures such as retaining walls shall have architectural treatment to blend with the visual character of their surrounding environment and reduce the incidence of glare or graffiti, using context-sensitive designs. For example, retaining walls along the I-680 ramps could be designed with a cracked limestone texture to match the existing retaining wall along the northbound on-ramp. However, this design would not be appropriate for local roads such as Pleasanton-Sunol Road. In such areas, a brown color and more appropriate texture may be used. Final aesthetic treatments will be determined during the detailed design phase.

AMM-AES-02: Castlewood Golf Course Tree Removals

Caltrans and the City of Pleasanton will work with Alameda County to explore the feasibility of providing replacement tree plantings in County ROW between Pleasanton-Sunol Road and Castlewood Golf Course, in accordance with the Alameda County Tree Ordinance and other applicable regulations and permits.

AMM-AES-03. Construction Measures

Place unsightly materials, equipment storage and staging so that they are not visible within the foreground of the highway corridor to the maximum extent feasible. Where such siting is unavoidable, material and equipment shall be visually screened to minimize visibility from the roadway and nearby sensitive off-road receptors.

Limit all construction lighting to within the area of work and avoid light trespass through the use of directional lighting and shielding as needed.

Air Quality

PF-AIR-01. Construction Specifications

The project's construction contract will include the 2023 Caltrans Standard Specifications 7-1.02C and 14-9.02. Caltrans Standard Specification 7-1.02C requires contractors to certify that they are aware of and will comply with all California Air Resources Board emissions reduction regulations. Caltrans Standard Specification 14-9.02 requires all work to be performed in accordance with air pollution control rules, regulations, ordinances, and statutes, including those provided in Government Code Section 11017 (California Public Contract Code Section 10231).

In addition, the following measures will be included in the construction contract to minimize construction impacts to nearby residences and businesses:

- Regular vehicle and equipment maintenance;
- BMPs to maintain engines and minimize idling of construction equipment to minimize tailpipe emissions; and
- Dust control measures, including use of water sprays or other non-toxic dust control methods on unpaved roadways, minimizing vehicle speed while traveling on unpaved surfaces, covering soil stockpiles when practical, and minimizing work during periods of high winds.

Biological Resources

PF-BIO-01. Restoration and Revegetation

Temporarily disturbed areas will be restored within one year of disturbance.

PF-BIO-02. Delineation of Environmentally Sensitive Areas

All proposed construction will be limited to the existing and proposed ROW. Environmentally Sensitive Areas (ESAs) will be identified on contract plans and discussed in the Special Provision. The ESAs will include areas designated in the environmental document and biological reports that support wetlands, waters, and/or habitats that potentially support listed species, and have been specifically identified to avoid during construction. ESA provisions may include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to

sensitive resources. Contractor encroachment into ESAs will not be allowed. ESA provisions will be implemented as a first order of work and remain in place until all construction is completed.

PF-BIO-03. Construction Discharges

No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the United States or drainages. No discharges of excessively turbid water will be allowed, and all equipment will be well maintained and free of leaks. The contractor will comply with the following standards/objectives (or BMPs) including but not limited to the following:

- Where work areas encroach on wetlands, San Francisco Bay Regional Water Quality Control Board (RWQCB) approved physical barriers adequate to prevent the flow or discharge of sediment into these systems will be constructed and maintained between working areas and streams, lakes, and wetlands.

- Discharge of sediment into culverts and storm drains will be held to a minimum during construction of the barriers.

- Discharge will be contained through the use of RWQCB approved measures that will keep sediment from entering jurisdictional waters beyond the project limits.

- All off-road construction equipment should be cleaned of potential noxious weed sources (mud and vegetation) before entering the project footprint and after entering a potentially infested area before moving on to another area. The contractor will employ whatever cleaning methods (typically spraying with a high pressure water hose) are necessary to ensure that equipment is free of noxious weeds.

- Equipment should be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required. Equipment washing stations will be placed in areas that afford easy containment and monitoring (preferably outside of the project footprint) and that do not drain into sensitive (riparian, wetland, etc.) areas.

PF-BIO-04. Prevention of Wildlife Entrapment

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

PF-BIO-05. Inspection of Pipes and Culverts

All construction pipes, culverts, or similar structures that are stored at the project site for one or more overnight periods shall be securely capped prior to storage or inspected by the agency-approved biologist before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special status species is discovered inside a pipe by the biologist or anyone else, the individual shall be allowed to leave its own accord, or, with the appropriate authorizations/permits, if it can be safely captured, it shall be relocated by the biologist to a suitable location outside of the project area.

PF-BIO-06. Agency-Approved Biologist

Prior to initiation of the proposed action, the qualifications of biological monitors would be submitted to CDFW and/or USFWS for approval. Such approved biologists are hereafter referred to as “agency-approved biologists.” The agency-approved biologist (knowledgeable about sensitive species and habitats in the action area) will conduct pre construction surveys to examine the BSA for occurrences of special status wildlife species. In the event that occupied nests or other habitats are found, the agency-approved biologist through the Resident Engineer or their designee, would be given the authority to communicate either verbally, by telephone, email or hard copy with all project personnel to ensure that take of State listed species is avoided, take of federally listed species is minimized, and permit requirements are fully implemented. Through the Resident Engineer or their designee, the agency-approved biologist would have the authority to stop project activities to avoid and/or minimize take of listed species or if he or she determines that any permit requirements are not fully implemented. If the

agency-approved biologist exercises this authority, the agencies must be notified by telephone and email within 48 hours.

PF-BIO-07. On-site Worker Environmental Awareness Training

Before the onset of construction and within 3 days of any new worker arrival, a biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of California tiger salamander, California red-legged frog, Alameda whipsnake, western pond turtle, and other listed species and their habitats; the potential occurrence of these species within the project footprint; an explanation of the status of these species and protection under the California Endangered Species Act (CESA), Federal Endangered Species Act (FESA), and all other federal, state, and local regulatory requirements; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; and boundaries within which construction may occur. A fact sheet conveying this information will be prepared and distributed to all construction crews and project personnel entering the project footprint. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all of the avoidance and minimization measures and implications of the CESA, FESA, and all other federal, state, and local regulatory requirements.

PF-BIO-08. Invasive Species

Executive Order (EO) on Invasive Species, EO 13112, is a standard practice that Caltrans adheres to for all projects. In compliance with EO 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will use species that are not listed as noxious weeds. The following methods will be used in accordance with standard construction practices:

- No disposal of soil and plant materials will be allowed from areas that support invasive species to areas dominated by native vegetation.
- Construction workers will be educated on weed identification and the importance of controlling and preventing the spread of identified invasive non-native species.
- Gravel and/or fill material to be placed in relatively weed-free areas will come from weed-free sources. Certified weed-free imported materials (or rice straw in upland areas) will be used.

AMM-BIO-01. Special-Status Plants

Prior to the commencement of construction activities, a biologist shall conduct appropriately timed surveys for the listed plant species to correspond with these species' blooming period. The surveys shall include botanical inventories between May and October (the blooming period of Congdon's tarplant), and between March and June (the blooming period of Diablo helianthella).

If listed plant species are discovered within the construction area, protective measures will be established. These protective measures will include setting a temporary protective buffer around the plants; ensuring all such plants are numbered, mapped, and identified in the field with pin flags; and conducting appropriate agency coordination. Special status plant occurrences shall be avoided to the maximum extent possible.

AMM-BIO-02. Western Pond Turtle

An agency-approved biologist shall survey the work site no more than 48 hours before the onset of activities for signs of western pond turtles and/or western pond turtle nesting activity (i.e. recently excavated nests, nest plugs) or nest depredation (partially to fully excavated nest chambers, nest plugs, scattered egg shell remains, egg shell fragments). Preconstruction surveys to detect western pond turtles should focus on suitable aquatic habitat as well as the shoreline and shallow waters where pond turtles may be present below the water surface beneath algal mats. Preconstruction surveys to detect western pond turtle nesting activity should be concentrated within 402 meters (1,319 feet) of suitable aquatic habitat and should focus on areas along south or west facing slopes with bare hard packed clay, silt soils, or a sparse vegetation of short grasses or forbs. If western pond turtles or their nesting sites are found, the agency-approved biologist shall contact CDFW to determine whether relocation and/or exclusion buffers and nest enclosures are appropriate. If CDFW approves of moving the animal, the agency-approved biologist shall be allowed sufficient time to move the western pond turtle(s) from the work site before work activities begin.

AMM-BIO-03. Western Burrowing Owl

Migratory Bird Special Contract Provisions will be adhered to in order to avoid potential effects to special status bird species. Appropriate avoidance, minimization, or protection measures shall be determined in consultation with the CDFW in the that event an active burrow is located in an area subject to disturbance, or within the typical setback (i.e., occupied burrows or nests within 150 feet of an area subject to disturbance during the

non-breeding season, or within 250 feet of an area subject to disturbance during the breeding season).

AMM-BIO-04. San Francisco Dusky-Footed Woodrat

Before the start of construction, an agency-approved biologist will conduct a survey of the BSA and a 30-foot buffer beyond the BSA boundaries to determine the location of active and inactive woodrat dens. Any dens detected during the surveys will be recorded and mapped in relation to the construction disturbance footprint. In addition, the biologist will evaluate any signs of current woodrat activity, including the presence of fresh scat, freshly chewed vegetation, and the presence of cobwebs covering nest entrances. A 30-foot equipment exclusion buffer will be established around active and inactive dens that can be avoided; within such buffers, all vegetation will be retained and nests will remain undisturbed.

A woodrat trapping and relocation plan will be developed and implemented prior to project construction for any nest site that will be directly affected by the proposed project. Specific methods for trapping woodrats and relocation of individuals and their nest sites, as well as identification of suitable sites for relocation, include:

1. Trapping at all woodrat middens mapped within the project's temporary and permanent impact areas,

2. Installing relocation midden structures,

3. Relocating trapped woodrats to the relocation midden structures, and

4. Dismantling existing woodrat middens in the project area to be cleared, to discourage woodrat reoccupation.

If suitable habitat is not available for relocation of the woodrats in the project vicinity, offsite locations will be identified. Trapping of the woodrats will be conducted by an agency-approved biologist with a current CDFW collection permit to trap and relocate the species. Ideally, the trapping will occur outside of the breeding period, between September and December.

AMM-BIO-05. American Badger

Preconstruction surveys will be conducted within the BSA in areas of suitable habitat to identify dens or signs of American badger. These surveys will be conducted no more than 30 days before the start of ground disturbing activities and will be phased with project build out.

If an American badger is detected on site at any time during these surveys, CDFW will be contacted to discuss ways to proceed with the project and to avoid take to the maximum extent practicable.

AMM-BIO-06. Nesting Raptors

The measures below will be implemented for construction work during the nesting season (February 1 through September 30).

Preconstruction surveys for raptors will be conducted within 300 feet of the construction area, no more than three days prior to ground disturbing activities.

If raptor nests are found within or adjacent to the construction area, work will be stopped until a 300-foot buffer is established, which is typically done using bright orange polypropylene ESA fencing. Larger raptors such as eagles will receive an avoidance buffer larger than 300 feet commensurate with the species and the level of disturbance. An agency-approved biologist will conduct weekly monitoring during construction, to evaluate the identified nest for potential disturbances associated with construction activities. Construction within the buffer is prohibited until the agency-approved biologist determines the nest is no longer active.

If an active nest is found after construction begins, construction activities in the vicinity of the nest will stop until an agency-approved biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, USFWS and CDFW will be contacted for further avoidance and minimization guidelines.

AMM-BIO-07. Migratory Birds

The measures below will be implemented for construction work during the nesting season (February 1 through September 30).

An agency-approved biologist will conduct preconstruction surveys for nesting migratory birds in the BSA no more than three days prior to the start of ground disturbing activities in the BSA. If preconstruction surveys indicate the presence of any migratory bird nests where activities will directly result in bird injury or death, a buffer zone of 50 feet will be placed around the nest.

Buffers will be established around active migratory bird nests where project activities will directly result in bird injury or death. The size of the buffer may vary for different species and will be determined in coordination with CDFW. An agency-approved biologist will

delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape. The buffer zone will be maintained around all active nest sites until the young have fledged and are foraging independently. In the event that an active nest is found after the completion of preconstruction surveys and after construction begins, all construction activities within a 50-foot radius will be stopped until an agency-approved biologist has evaluated the nest and erected the appropriate buffer around it. Vegetation clearing or general construction near the nest will resume only when the hatchlings have fledged. If establishment of the buffer is not feasible, CDFW will be contacted for further avoidance and minimization guidelines.

AMM-BIO-08. Bats

No more than two weeks prior to tree removal, an agency-approved biologist will conduct a preconstruction survey for crevice and cavity roosting habitat for all areas that provide suitable bat roosting habitat, including human made structures, snags, rotten stumps, mature trees with broken limbs, exfoliating bark, and dense foliage. Sensitive habitat areas and roost sites will be avoided to the maximum extent practicable. To avoid mortality and reproductive loss, Caltrans may limit tree removal to between September 1 and April 14, outside the breeding season, so as not to disturb maternal colonies or roosts. If potential roost sites (e.g., trees, snags) are to be removed or trimmed, limbs smaller than 3 inches in diameter will be cut and the tree will be left overnight to allow any bats using the tree/snag for roosting time to leave and find another roost. A biological monitor will be present during the trimming or removal of trees/snags. If occupied sites are observed in the BSA, Caltrans will contact CDFW to report occurrences for the agency's database. Caltrans will provide an appropriate buffer between any occupied roost and construction activities. In addition, nighttime construction will be limited. Measures relating to nighttime work include:

- Artificial lighting of the BSA during nighttime hours will be minimized to the maximum extent practicable. Light shields will be installed to prevent illuminating habitat.

- If deemed necessary, specific day and night bat roost avoidance and minimization measure will be developed through technical assistance with CDFW and bat specialists.

AMM-BIO-09. California Tiger Salamander

Work within suitable upland habitat for California tiger salamander will occur during the dry season (April 15 and October 15). All work within suitable non-breeding aquatic

habitat for California tiger salamander (drainages, etc.) will occur between June 15 and October 15.

Within 24 hours prior to initial ground-disturbing activities, portions of the BSA that are suitable refuge habitats for the California tiger salamander will be surveyed when it is feasible and safe to do so. This includes thorough investigation of burrows, rocks, soil cracks, vegetation, logs, and any other debris identified as potential refuge habitat. The agency-approved biologist will ensure the site is clear of salamanders moving above-ground, or taking refuge in burrow openings or under materials that could provide cover such as boards, scrap metal, woody debris, or other materials. Potentially occupied refugia burrows within the BSA will be excluded with fencing and avoided for the duration of the activity at that location.

An agency-approved biologist will be present during initial ground disturbing activities in suitable refugia habitats for the California tiger salamander to monitor the removal of the top 12 inches of topsoil at all project locations. If California tiger salamanders are discovered during the initial ground disturbing activities, work will be stopped immediately and the biologist will contact CDFW and USFWS within one working day. The biologist in consultation with CDFW and USFWS will use adaptive management to modify as necessary project activities to avoid or minimize effects to listed species.

If individual animals are observed, work at that location will be temporarily halted while the agency-approved biologist excavates the occupied burrow by hand, and the individual salamander is moved to a natural burrow within 0.25 mile of the construction site. CDFW will be notified if California tiger salamanders are found and relocated. Any listed amphibian will be released at the mouth of a suitable burrow and then observed until it has safely entered the burrow.

AMM-BIO-10. California Red-Legged Frog

Measure AMM-BIO-09 for California tiger salamander will also be applied for California red-legged frog. Within 24 hours prior to initial ground-disturbing activities, portions of the BSA that are suitable refuge habitats for the California red-legged frog will be surveyed when it is feasible and safe to do so. This includes thorough investigation of burrows, rocks, soil cracks, vegetation, logs, and any other debris identified as potential refuge habitat. To the extent feasible, potentially occupied refugia within the BSA will be excluded with fencing and avoided for the duration of the activity at that location.

AMM-BIO-11. Alameda Whipsnake

Measures AMM-BIO-09 for California tiger salamander and AMM-BIO-10 for California red-legged frog will also be applied for Alameda whipsnake.

MM-BIO-12. Compensatory Mitigation

In order to mitigate for permanent direct effects to California tiger salamander, California red-legged frog, and Alameda whipsnake, Caltrans proposes to purchase habitat credits at a 3:1 ratio from an approved mitigation bank such as Ohlone West Conservation Bank. Mitigation for indirect impacts to California tiger salamander and California red-legged frog from project lighting will be determined during the design phase.

MM-BIO-13. Natural Communities

Compensatory mitigation for temporary impacts to vegetation communities or Natural Communities of Concern, including valley oak woodland, will be provided through the restoration of habitat by planting native species that are typical to that habitat. The restored vegetation communities will be monitored for success. If enough space is not available for on-site mitigation, off site like habitat providing these species habitat requirements will be preserved through the purchase of mitigation bank credits.

AMM-BIO-14. Trees

Whenever possible, trees will be trimmed rather than removed. To avoid potential damage to retained trees, trees will be safeguarded during construction through implementation of the following measures as applicable:

- No construction equipment, vehicles, or materials shall be stored, parked, or staged within the critical root zone (CRZ) of trees outside of the BSA. Only the CRZ of trees shown in the plan sheets as temporarily or permanently impacted can be used for storage, parking, or staging; and

- Work will not be performed within the CRZ of any tree to be retained without consultation with an ISA-certified arborist. If trees are damaged during construction and become unhealthy or die, the damaged tree(s) will be removed and replaced.

AMM-BIO-15. Light, Glare, and Noise Control

Use lighting in areas only where necessary for safety and signage. Eliminate all lighting in other areas. All lighting should be downcast and/or utilize shielding to direct lighting toward construction and staging areas and away from ESAs. This will help to minimize artificial lighting of natural areas, particularly in riparian areas and adjacent to drainages.

Limit operation of vibration-causing equipment such as pile drivers, dozers, large excavators to daylight hours when working in areas adjacent to open space.

A biological monitor shall be present to observe activities of wildlife during nighttime construction within species habitat areas. If activities are noted to affect wildlife, the biological monitor shall stop construction activities as necessary.

AMM-BIO-16. Fencing and Railings

During the detailed design phase, consider fencing and railing types that support wildlife permeability while minimizing potential animal-vehicle conflicts. Select height, material, and placement of fencing and cable railing that allow for wildlife movement through the project area where feasible, given highway safety standards and other engineering and environmental considerations.

Cultural Resources

PF-CUL-01. Protocol for Cultural Resource Discoveries

During project construction, if previously unidentified cultural resources are unearthed, all earth-moving activity within and around the immediate discovery area will be halted until a qualified archaeologist can assess the nature and significance of the find.

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

Geology and Soils

PF-GEO-01. Geotech Investigations

A geotechnical investigation will be performed during final design for any proposed new earthwork or new structure within the project limits, including retaining walls, overhead signs, embankments, bridges, and sound walls. The investigation will address geologic hazards, including liquefaction, cracking, differential compaction, ground shaking, and shrink-swell potential.

PF-GEO-02. Seismic Standards

Caltrans' design and construction guidelines incorporate engineering standards that address seismic risks. Project elements will be designed and constructed to meet seismic design requirements for ground shaking and ground motions, as determined for the project vicinity and site conditions.

PF-GEO-03. Paleontological Resources

The project's construction contract will include the 2023 Caltrans Standard Specification 14-7.03, which provides for stopping work within a 60-foot radius, securing the area, notifying the resident engineer, and performing further investigation if paleontological resources are encountered during project construction.

AMM-GEO-01. Paleontological Resources

Update and finalize the monitoring recommendations from the Paleontological Evaluation Memo (City of Pleasanton 2021b) and the PER/PMP (Alameda CTC 2019b) once project design is nearly complete. The final plan will be implemented during construction.

Include a specification in the construction contract stating that paleontological monitoring will occur in accordance with the Paleontological Mitigation Plan.

Hazards and Hazardous Materials

PF-HAZ-01. Hazardous Materials

The long-term use of the existing roadway facility provides the opportunity for contaminated soils and groundwater to be encountered during project construction. During the final project design phase, a Preliminary Site Investigation will be performed in accordance with current Caltrans guidance to investigate hazardous materials concerns related to soil, groundwater, and building materials within the project limits and will include required measures for managing hazardous materials encountered during project construction. These measures will be incorporated in the final project design and would address the potential adverse effects to human health and the environment (if any) that could result from the disturbance of hazardous materials in order to protect human health and the environment.

Anticipated measures include the following as outlined in 2023 Caltrans Standard Specifications Section 13-4, Job Site Management and Section 14-11, Hazardous Waste and Contamination:

- Soils contaminated with aerially deposited lead (ADL) exceeding California hazardous waste thresholds will be managed in accordance with the Department of Toxic Substances Control's 2016 Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils and Caltrans Standard Special Provision 14-11.08, Regulated Material Containing Aerially Deposited Lead.

- Lead compliance plans for ADL-contaminated soils and pavement markings containing lead will be prepared in accordance with the Caltrans Standard Special Provisions and implemented by the project construction contractor(s) to ensure compliance with the California Occupational Safety and Health Administration (Cal/OSHA) worker safety regulations.

- A bridge survey would be conducted during the project design phase to assess the presence of asbestos-containing materials on the bridge structure, which would be removed according to regulatory requirements, if present.

- Groundwater from dewatering of excavations will be stored in Baker tanks during construction activities and characterized to determine the appropriate treatment requirements for discharge and disposal. The extracted groundwater shall be collected and managed for disposal/treatment in compliance with local and state regulations.

- All loose and peeling lead-based paint and asbestos-containing material shall be removed by a certified contractor(s) in accordance with local, state, and federal requirements. All other hazardous materials will be removed from structures in accordance with Cal/OSHA regulations.

- Asphalt concrete and Portland cement concrete grindings shall be reused in accordance with RWQCB guidance to protect water quality or transported off-site for recycling or disposal.

- Job site perimeter air monitoring will be required when the project work disturbs regulated lead-contaminated soils. Air monitoring program requirements will be defined in Standard Special Provision 14-11.08 (Regulated Material Containing Aerially Deposited Lead), Section 14-11.08F (Air Monitoring).

- Before any excavation work begins, the contractor will be required to submit a plan for excavating, loading, and transporting contaminated soils, for review and acceptance by the state's resident engineer, as stated in Standard Special

Provision 14-11.08, Regulated Material Containing Aerially Deposited Lead, subsection D(3).

Hydrology and Water Quality

PF-WQ-01. Water Quality Measures

The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 13 of the 2023 Caltrans Standard Specifications, including but not limited to the following:

- Temporary Soil Stabilization Control and Wind Erosion Control. Temporary Cover is a temporary soil stabilization and wind erosion control BMP which involves the placement of fabric cover or plastic sheeting to stabilize disturbed soil and/or stockpile areas to prevent erosion by wind and water.

- Temporary Sediment Control. Temporary silt fences, fiber rolls, and gravel bag berms are linear sediment barriers designed to intercept and slow the flow of sediment-laden sheet flow runoff. These measures usually are placed down-slope of exposed soil areas or along the perimeter of a project site to allow sediment to settle from runoff before water leaves the construction site.

- Temporary Drainage Inlet Protection is a temporary sediment control measure to minimize the amount of sediment entering storm drain systems. Temporary drainage inlet protection will be installed at storm drain inlets that are subject to runoff from construction activities to detain and/or to filter sediment-laden runoff to allow sediment to settle and/or to filter prior to discharge into storm drainage systems or watercourses.

- Tracking Control. Street Sweeping is a practice to remove tracked sediment to prevent the sediment from entering a storm drain or watercourse by hand or mechanical methods such as vacuuming. This practice is implemented anywhere sediment is tracked from the project site onto public or private paved roads. A temporary construction entrance and access road will be used for equipment and vehicle to enter and access to the work area for the control of dust and erosion created by vehicular tracking.

- Non-Storm Water Management and Waste Management & Materials Pollution Control. Job Site Management includes effective handling, storage, usage, and disposal practices to control material pollution and manage waste and

non-stormwater at the job site before they come in contact with storm drain systems and receiving waters. Job site management includes spill prevention and control, material management, waste management, non-stormwater management, and dewatering activities.

- Caltrans erosion control BMPs. Erosion control BMPs will be used to minimize any wind- or water-related erosion. The State Water Resources Control Board (SWRCB) has issued a National Pollution Discharge Elimination System (NPDES) Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities.

- Permanent Water Treatment BMPs. Caltrans will work with the RWQCB to determine potential areas for permanent treatment BMPs during the process for obtaining the Section 401 permit and in preparation of the Stormwater Pollution Prevention Plan. Off-site locations/mitigation will be considered if there is not enough room for the required square footage of treatment BMPs on-site.

- Water Quality Inspection. Water quality inspector(s) will inspect the site after a rain event to ensure that the stormwater BMPs are adequate.

- Concrete Waste and Stockpiles. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.

- Stormwater Pollution Prevention Plan. A SWPPP will be prepared by the contractor and approved by Caltrans. A SWPPP is required for all projects that have at least one acre of soil disturbance. The SWPPP complies with the Caltrans SWMP and addresses potential temporary impacts via implementation of appropriate BMPs to protect water quality. These BMPs include covering exposed soil, installing temporary creek diversions, street sweeping, and use of drainage inlet protection, fiber rolls, silt fence, and concrete washouts. Disturbed soil areas would be stabilized by paving, rock slope protection, or erosion control.

- Erosion Prevention. Revegetation and erosion control netting will be incorporated into the project design in order to prevent and minimize permanent erosion of exposed soils after the project is constructed.

- Permits. Caltrans will include a copy of all relevant permits, including the RWQCB 401 Certification, within the construction bid package of the proposed project. The

Resident Engineer or their designee will be responsible for implementing the conditions of the permit.

Noise

PF-NOI-01. Construction Noise

The Caltrans 2023 Standard Specifications, Section 14-8.02, requires that the Maximum Sound Levels not exceed 86 A-weighted decibels at 50 feet from the job site, from 9:00 PM to 6:00 AM. Construction noise would not exceed thresholds or Caltrans' standards. Construction noise control measures would be required of the contractor. These include control measures for equipment and operating hours such as:

- All construction equipment shall conform to Section 14-8.02, Noise Control, of the latest Standard Specifications.
- Noise-generating construction activities shall be restricted to between 7:00 AM and 7:00 PM on weekdays, with no construction occurring on weekends or holidays. If work is necessary outside of these hours, Caltrans shall require the contractor to implement a construction noise monitoring program and provide additional noise controls where practical and feasible.
- All internal-combustion-engine-driven equipment shall be equipped with manufacturer-recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines within 100 feet of residences shall be strictly prohibited.
- Noise-generating equipment shall be kept as far as practical from sensitive receptors when sensitive receptors adjoin or are near the construction project area.
- "Quiet" air compressors and other "quiet" equipment shall be used where such technology exists.

Transportation

PF-TR-01. Transportation Management Plan

During the final design phase, a Transportation Management Plan (TMP) will be prepared in accordance with Caltrans requirements and guidelines to minimize the construction-related delays and inconvenience for travelers in the project area. The

TMP will address the potential traffic impacts as they relate to staged construction, detours, and other traffic handling concerns associated with construction of the proposed project. The TMP will include:

- Distribution of press releases and other documents as necessary to notify local jurisdictions, agencies, and the public of upcoming road closures and detours;
- Coordination with CHP and local law enforcement on contingency plans;
- Use of portable Changeable Message Signs, CHP Construction Zone Enhanced Enforcement Program, and Freeway Service Patrol where possible to minimize delays.

Access will be maintained for emergency response vehicles.

Wildfire

PF-WF-01. Project Features for Minimizing Fire Risks

BMPs would be incorporated, such as clearing vegetation from the work area, prohibiting the use of highly flammable chemicals, following locally changing meteorological conditions, and maintaining awareness of the possibility of increased fire danger during the time work is in progress.

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Appendix C List of Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
AMM	Avoidance and/or Minimization Measure
APE	Area of Potential Effect
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BC	black carbon
BMP	Best Management Practice
bp	before present
BSA	Biological Study Area
CAFE	Corporate Average Fuel Economy
Caltrans	California Department of Transportation
CAPTI	California Action Plan for Transportation Infrastructure
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act

CFR	Code of Federal Regulations
CH_4	methane
CHP	California Highway Patrol
CIDH	cast in drilled hole
CNDDB	California Natural Diversity Database
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CTP	California Transportation Plan
DP 30	Director's Policy 30
DTSC	California Department of Toxic Substances Control
ECA	Essential Connectivity Area
EPA	(United States) Environmental Protection Agency
EOP	Emergency Operations Plan
EOs	executive orders
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GDP	gross domestic product
GHG	greenhouse gas
GWP	global warming potential
HFCs	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change

IS	Initial Study
MM	Mitigation measure
MMT	million metric tons
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSATs	mobile source air toxics
MVP	maintenance vehicle pullout
N_2O	nitrous oxide
NHPA	National Historic Preservation Act
NHTSA	(U.S. Department of Transportation's) National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OCRS	Office of Cultural Resource Studies
OPR	Governor's Office of Planning and Research
PLA	Pacific Locomotive Association
PER/PMP	Paleontological Evaluation Report/Paleontological Mitigation Plan
PM	post mile
$PM_{2.5}$	particulate matter equal to or less than 2.5 microns in diameter
PRC	Public Resources Code

ROW	right-of-way
RTP	Regional Transportation Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SHS	State Highway System
SR	State Route
SSC	California species of special concern
ST	state listed as threatened
TCE	Temporary Construction Easement
TMP	Transportation Management Plan
TOS	traffic operation systems
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled

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Appendix E Special-Status Plant and Wildlife Species

Table E-1: Species of Special Concern with Potential to Occur within the Biological Study Area

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
INVERTEBRATES				
Branchinecta lynchi	vernal pool fairy shrimp	FT/SA	Endemic to the grasslands of the Central Valley, central coast mountain, and south coast mountains, in astatic rain-filled pools.	Not expected. No vernal pool habitat in the BSA. No effect.
Bombus caliginosus	obscure bumble bee	SA	Inhabits stream courses, meadows, recently burned or logged areas, grasslands or roadside flowers. Ground nester (e.g., abandoned burrows, holes in building foundations or stacks of firewood/ vegetation/ debris).	Not expected. Formerly found in much of California, restricted to coastal environments.
Bombus occidentalis	western bumble bee	SA/SC	Inhabits stream courses, meadows, recently burned or logged areas, grasslands or roadside flowers. Ground nester (e.g., abandoned burrows, holes in building foundations or stacks of firewood/ vegetation/ debris).	Not expected. Formerly found in much of California, restricted to high meadows or coastal environments.
Callophrys mossii bayensis	San Bruno elfin butterfly	FE/SA	Inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco Peninsula, endemic to this habitat in California.	Not expected. The BSA is outside of the known or potential range of this species. No effect.
Danaus plexippus	Monarch butterfly	FC	Breeding habitat can be agricultural fields, pastureland, prairie, and urban and suburban garden areas where there is host plant milkweed (*Asclepias* spp.).	Not expected. No known populations are in the BSA, and no suitable habitat exists in the BSA.
Efferia antiochi	Antioch efferian robberfly	SA	Sand dunes in Contra Costa County (Antioch Dunes)	Not expected. No sand dune habitat in the BSA.
Gonidea angulata	western ridged mussel	SA	Found in the rivers and streams of California	Not expected. No suitable habitat in the BSA. Nearest occurrence of this species is within 4.5 miles of the BSA.
Helminthoglypta nickliniana bridgesi	Bridges' coast range shoulderband	SA	Found in tall grasses and weeds on open grassy hillsides. Hides under downed branches, logs, and other woody debris.	Not expected. Site topography not suitable, and no known occurrences of this species within five miles of the BSA.
Lepidurus packardi	vernal pool tadpole shrimp	FE/SA	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water.	Not expected. The BSA is outside of the known or potential range of this species. No effect.
Linderiella occidentalis	California linderiella fairy shrimp	SA	Seasonal pools in intact grasslands where alluvial soils are underlaid by hardpan or in sandstone depressions.	Not expected. The BSA is outside of the known or potential range of this species.
Microcina lumi	Lum's micro-blind harvestman	SA	Inhabits serpentine grassland and shrublands. Microhabitat underside of rocks, logs, or debris. Presence below cover dependent upon moisture.	Not expected. Marginal suitable habitat in the BSA.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
FISH				
Hypomesus transpacificus	Delta smelt	FT/SE	Sacramento-San Joaquin Delta. Seasonally in Suisun bay, Carquinez Strait, and San Pablo Bay.	Not expected. Outside species' range, and no suitable habitat in the BSA. No effect.
Oncorhynchus mykiss pop. 8	steelhead - Central California Coast DPS	FT/SA	Anadromous. Spawn and rear in mid and high elevation coastal streams. Juveniles typically migrate to the ocean to mature during their third year, and return to spawn as adults in their fourth year. Adult steelhead may spawn more than once. From Russian River, south to Soquel to, but not including, Pajaro River. Also San Francisco & San Pablo Bay basins.	Not expected. No large creeks pass through the BSA. No in-water work proposed. No effect.
Spirinchus thaleichthys	longfin smelt	FC/ST	Found in San Francisco Bay-Delta estuaries, rivers, and lakes	Not expected. Outside species' range, and no suitable habitat in the BSA. No effect.
AMPHIBIANS				
Ambystoma californiense	California tiger salamander	FT/ST	Vernal pools and/or seasonal water sources; requires underground refuges in adjacent upland areas, especially ground squirrel burrows.	Moderate. Suitable upland habitat within and adjacent to the BSA. Suitable breeding habitat within dispersal range. May affect, likely to adversely effect.
Rana draytonii	California red-legged frog	FT/SSC	Lowlands & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Adjacent upland habitats are often used for temporary refuges or dispersal movements.	Moderate. Suitable upland habitat within and adjacent to the BSA. Suitable breeding habitat within dispersal range. May affect, likely to adversely effect.
Rana boylii	foothill yellow-legged frog	FC/SE/SSC	Partly shaded, shallow streams & riffles with a rocky substrate in a variety of habitats.	Not expected. No suitable habitat within the BSA.
REPTILES				
Actinemys marmorata	western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches with aquatic vegetation.	Moderate. Potential to occur in the BSA during upland dispersal from nearby ponds and deep water stream habitats.
Masticophis lateralis euryxanthus	Alameda whipsnake	FT/ST	Restricted to valley-foothill hardwood habitat of the coast ranges between Monterey and San Francisco bay. Open areas in canyons, rocky hillsides, chaparral scrublands, open woodlands, pond edges, and stream courses.	Moderate. Marginal suitable scrub habitat is present, and may disperse through the BSA based on habitat within and adjacent to BSA and proximity to critical habitat units. Numerous occurrences within 5 miles of the BSA. May affect, likely to adversely affect.
	CRITICAL HABITAT Alameda whipsnake	Designated Critical Habitat-Unit 3	Critical habitat for the species was designated in October 2006 for approximately 154,834 acres in 4 counties in California, including areas of Alameda County.	None. The BSA is approximately 0.4 mile from (but not directly within) a designated critical habitat unit. No effect.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
BIRDS				
Accipiter cooperii	Cooper's hawk	SA	Woodland, chiefly of open, interrupted or marginal type.	Moderate. Suitable foraging habitat throughout BSA, and suitable nesting habitat in the vicinity.
Accipiter striatus	sharp-shinned hawk	SA	Found in ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers riparian areas. Nest sites with plucking perches on north-facing slopes are critical requirements. Nests usually within 275 feet of water.	Moderate. May forage or occur during migration. May nest in trees in forests.
Agelaius tricolor	tricolored blackbird	ST/SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Moderate. Potential for species to disperse through BSA, and foraging habitat is present. However, no marsh habitat of suitable size for nesting colonies observed in the BSA, therefore suitable breeding habitat is absent.
Aquila chrysaetos	golden eagle	FP	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Moderate. Potential for species to occur as a migrant. No breeding habitat in the BSA; may occur as occasional forager.
Ardea herodias	great blue heron	SA	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Moderate. No suitable habitat for rookeries in the BSA. May occur as a migrant or forage.
Athene cunicularia	burrowing owl	SSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Moderate. Marginal grassland habitat for nesting in the BSA. Suitable foraging habitat present.
Buteo regalis	ferruginous hawk	SA	Forages over open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitats. Does not nest in California.	Moderate. Does not nest in California, but may occur within the BSA while foraging or during migration.
Buteo swainsoni	Swainson's hawk	ST	Nests in oaks or cottonwoods in or near riparian habitat. Forages in grasslands and agricultural fields.	Low. May forage or occur during migration. Not expected to nest within the BSA.
Charadrius alexandrinus nivosus	western snowy plover	FT/SSC	Nests on sandy coasts and brackish inland lakes and is uncommon near fresh water. Nests in a ground scrape.	Not expected. Unlikely to forage or occur during migration. Not expected to nest within the BSA. No effect.
Circus hudsonius	northern harrier	SSC	Wet and dry open country such as marshes and grasslands with good ground cover. Nests on the ground among tall vegetation.	Moderate. Not likely to nest within the BSA, marginally suitable nesting habitat in adjacent grassland, may forage occasionally within BSA.
Coturnicops noveboracensis	Yellow rail	SA/SSC	Found in moderately wet marshes and meadows, with dense grasses.	Low. Unlikely to forage or occur during migration. Not expected to nest within the BSA.
Setophaga petechia	California yellow warbler	SSC	Nest and forage in riparian woodlands, often associated with willows (*Salix* spp.) and cottonwoods (*Populus* spp.), though specific vegetation varies by locality.	Moderate. May forage or occur as a migrant within the BSA. Not expected to nest within the BSA. No suitable nesting habitat in the BSA.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
Elanus leucurus	white-tailed kite	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	Moderate. Marginal suitable nesting habitat in trees within and adjacent to BSA. May occur as a breeder and forager.
Eremophila alpestris actia	California horned lark	SA	Grasslands and other open habitats that lack trees or brushy areas. Nests on the ground, usually near grass clumps or earth clods.	Moderate. Marginal suitable nesting habitat in grassland habitats within the BSA.
Falco mexicanus	prairie falcon	SA	Found in dry, open terrain, either level or hilly. Breeding sites are located on cliffs. Forages far afield, even to marshlands and ocean shores.	Moderate. No suitable nesting habitat is present, but individuals may occasionally forage or occur as a migrant within the BSA.
Falco peregrinus anatum	American peregrine falcon	FD/SD/FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Moderate. Marginal suitable nesting habitat present, and individuals may occasionally forage or occur as a migrant within the BSA.
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	SA/SSC	Winters in tidal salt and brackish marshes, nests within freshwater to brackish marshes and riparian woodland	Low. No suitable nesting habitat, but individuals may occasionally forage or occur as a migrant within the BSA.
Gymnogyps californianus	California condor	FE	Large trees or snags, or on rocky outcrops and cliffs. Current range includes mountains of southern California north of the Los Angeles basin, the Big Sur vicinity of the central California coast, near the Grand Canyon in Arizona, and in the mountains of Baja California.	Not expected. The BSA is outside of this species' range and does not provide suitable habitat. No impact.
Laterallus jamaicensis coturniculus	California black rail	ST/FP	Salt marshes along large bays, also freshwater marshes.	Not expected. No suitable habitat in the BSA.
Melospiza melodia pusillula	Alameda song sparrow	SA/SSC	Tidal salt marshes on the fringes of south San Francisco Bay	Not expected. No suitable habitat in the BSA.
Rallus obsoletus	California Ridgway's rail	FE/SE/FP	Salt-water and brackish marshes with tidal sloughs.	Not expected. No suitable habitat in the BSA. No effect.
Riparia riparia	Bank swallow	ST	Nests in open lowland areas near bodies of water.	Not expected. No suitable habitat in the BSA.
Sternula antillarum browni	California least tern	FE/SE/FP	Lives and nests coastally from San Francisco Bay south to northern Baja, California. Nests within a sand/ shell fragment scrape on open beaches kept free of vegetation by the tide.	Not expected. No sandy or shell fragment beach habitat in the BSA. No effect.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
MAMMALS				
Antrozous pallidus	pallid bat	SSC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.	Moderate. Known to occur in the region and occupy bridges. Not likely to use urbanized areas but may roost and forage in woodland areas.
Corynorhinus townsendii	Townsend's big-eared bat	SSC	Throughout California in a wide variety of habitats, but almost always near caves or abandoned mines, and other roosting areas (sometimes in abandoned buildings or large tree cavities). They can be found in pine forests and arid desert scrub habitats. Most common in mesic sites.	Moderate. Known to occur in the region, but species extremely sensitive to disturbance. May occur as occasional forager.
Dipodomys heermanni berkeleyensis	Berkeley kangaroo rat	SA	Open grassy hilltops & open spaces in chaparral & blue oak/digger pine woodlands.	Not expected. Suitable habitat is not present within the BSA.
Eumops perotis californicus	Western mastiff bat	SSC	Found in open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and/or tunnels.	Moderate. May roost and forage in woodland habitat within the BSA.
Lasiurus cinereus	hoary bat	SA	Prefers open habitats or habitat mosaics, with access to trees for cover & open areas or habitat edges for feeding.	Moderate. Known to occur in the region and does not roost in bridges. Suitable woodland roosting habitat within the BSA.
Myotis yumanensis	Yuma myotis	SA	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Moderate. Known to occur in the region. Suitable woodland habitat within the BSA and may roost in bridge interiors.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	SSC	Forest habitats of moderate canopy and moderate to dense understory. May prefer woodland, chaparral, and redwood habitats.	High. Suitable woodland habitat present in the BSA. Middens observed in field surveys.
Reithrodontomys raviventris	salt marsh harvest mouse	FE/SE/FP	Only in the saline emergent wetlands of San Francisco Bay and its tributaries.	Not expected. No suitable habitat in the BSA. No effect.
Sorex vagrans halicoetes	salt marsh wandering shrew	SA	Salicornia marsh with daily tidal water inundation, dense cover, and invertebrates for food, suitable nesting and resting sites, and continuous ground moisture.	Not expected. No suitable habitat in the BSA.
Taxidea taxus	American badger	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Moderate. Marginal habitat occurs in open space adjacent to the BSA. Individuals may forage or disperse through the BSA.
Vulpes macrotis mutica	San Joaquin kit fox	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation.	Not expected. Rare and sparsely distributed in the region. Not expected within the BSA. No effect.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
PLANTS				
Amsinckia grandiflora	large-flowered fiddleneck	CRPR 1B.1	Cismontane woodland, valley and foothill grassland, Blooms April-May; 909-1804 feet.	Not expected. Limited grassland suitable habitat in the BSA. Known from fewer than 5 natural occurrences. Only 2 current natural populations in Alameda County (Lawrence Livermore Labs and Corral Hollow), which are more than 10 miles from the project area.
Amsinckia lunaris	bent-flowered fiddleneck	CRPR 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Blooms March-June; 10-1,500 feet.	Not expected. Limited suitable grassland habitat in the BSA. Only current Alameda County occurrences more than 20 miles north of the project area in the Berkeley Hills.
Arctostaphylos auriculata	Mt. Diablo manzanita	CRPR 1B.3	Chaparral (sandstone), cismontane woodland, valley and foothill grassland. Blooms January-March; 440-2135 feet.	Not expected. No suitable habitat in the BSA. Outside of known range.CNDDB occurrences are at Mt. Diablo, Contra Costa County.
Arctostaphylos manzanita ssp. *Laevigata*	Contra Costa manzanita	CRPR 1B.2	Chaparral (rocky). Blooms January-March (April); 1410-3610 feet.	Not expected. No suitable habitat in the BSA. Outside of known range. CNDDB occurrences are at Mt. Diablo, Contra Costa County.
Astragalus tener var. *tener*	alkali milk-vetch	CRPR 1B.2	Playas, Valley and foothill Grassland (adobe clay), Vernal pools, alkaline. Blooms March-June; 0-195 feet.	Not expected. No suitable alkaline habitat in the BSA.
Atriplex depressa	Brittlescale	CRPR 1B.2	Chenopod scrub, meadows and seeps, Playas, Valley and foothill grassland Vernal pools, alkaline, clay. Blooms April-October; 0-1050 feet.	Not expected. Grassland habitat in the BSA is not suitable for the species. Outside of known range.
Atriplex minuscula	lesser saltscale	CRPR 1B.1	Chenopod scrub, playas, valley and foothill grassland, alkaline, sandy. Blooms May-October; 45-655 feet.	Not expected. Grassland habitat in the BSA is not suitable for the species. Outside of known range.
Balsamorhiza macrolepis	big-scale balsamroot	CRPR 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentinite on slopes. Blooms March-July; +/- 4,500 feet.	Not expected. No suitable habitat in the BSA. Outside of known range.
Calochortus pulchellus	Mt. Diablo fairy-lantern	CRPR 1B.2	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland. Blooms April-June; 95-2755 feet.	Not expected. No suitable habitat in the BSA.
Campanula exigua	chaparral harebell	CRPR 1B.2	Chaparral; rocky, usually serpentinite. Blooms May-June; 270-4,100 feet.	Not expected. No suitable serpentine habitat in the BSA.
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	CRPR 1B.1	Valley and foothill grassland. Particularly in alkaline soils. Blooms May-Oct; 1-750 feet.	Low. No suitable alkaline habitat in the BSA. Limited suitable grassland habitat in the BSA. Grows in disturbed areas along roads, but not major roads. Two CNDDB occurrences within 5 miles of the BSA.
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	CRPR 1B.2	Marshes and swamps (coastal salt). Blooms June-October; 0-33 feet.	Not expected. No suitable habitat in the BSA. One occurrence within 10 miles of the BSA.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
Chloropyron palmatum	palmate-bracted bird's-beak	FE/SE/CRPR 1B.1	Chenopod scrub, Valley and foothill grassland, alkaline. Blooms May-October; 15-510 feet.	Not expected. No suitable habitat in the BSA. One occurrence within 12 miles of the BSA. No effect
Delphinium californicum ssp. *interius*	Hospital Canyon larkspur	CRPR 1B.2	Chaparral (openings), cismontane woodland (mesic), and coastal scrub. Blooms April-June; 700-3,600 feet.	Not expected. No suitable habitat in the BSA.
Eriogonum truncatum	Mt. Diablo buckwheat	CRPR 1B.1	Sandy soils, chaparral, costal scrub, valley and foothill grassland. Blooms April-December, 9-160 feet.	Not expected. No suitable habitat in the BSA.
Eryngium aristulatum var. *hooveri*	Hoover's button-celery	CRPR 1B.1	Vernal pools, seasonal wetlands, occasionally alkaline; 10-150 feet. Blooms June-August; 12-130 feet.	Not expected. No suitable habitat in the BSA.
Eryngium jepsonii	Jepson's coyote-thistle	CRPR 1B.2	Valley and foothill grassland, Vernal pools, clay. Blooms April-August; 5-985 feet.	Not expected. No suitable habitat in the BSA.
Extriplex joaquiniana	San Joaquin spearscale	CRPR 1B.2	Chenopod scrub, alkali meadow, valley and foothill grassland. Blooms April-Sept; 1-2,740 feet.	Not expected. No suitable alkaline habitat in the BSA.
Fritillaria liliacea	fragrant fritillary	CRPR 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie. Blooms Feb-April; 10-1,250 feet.	Not expected. No suitable habitat in the BSA.
Helianthella castanea	Diablo helianthella	CRPR 1B.2	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Blooms March-June; 200-4,250 feet.	Low. Limited suitable habitat in BSA. Closest CalFlora occurrence approximately 3.3 miles and closest CNDDB occurrence is within less than 8 miles from the BSA.
Hesperolinon breweri	Brewer's western flax	CRPR 1B.2	Chaparral, Cismontane woodland, valley and foothill grassland, usually serpentinite. Blooms May-July; 95-3100 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. Ten CNDDB occurrences between Mt Diablo and Morgan Territory Rd.
Hoita strobilina	Loma Prieta hoita	CRPR 1B.1	Serpentinite, mesic. Chaparral, cismontane woodland, and riparian woodland. Blooms May-July (August-October); 98-2821 feet	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrence within 16 miles from the BSA
Holocarpha macradenia	Santa Cruz tarplant	FT/SE/CRPR 1B.1	Coastal prairie, Coastal scrub, valley and foothill grassland, often clay, sandy. Blooms June-October; 30-720 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrence within 12 miles from the BSA
Lasthenia conjugens	Contra Costa goldfields	FE/CRPR 1B.1	Valley and foothill grassland, vernal pools, cismontane woodland. The vernal pool types from which this species has been reported are Northern Basalt Flow, Northern Claypan, and Northern Volcanic Ashflow (Sawyer et al. 2009). Extirpated from most of its range; Endangered. Blooms March-June; 0-1,550 feet.	Not expected. No suitable habitat in the BSA. Wetlands in BSA are not suitable habitat for this species. No effect.
Malacothamnus hallii	Hall's bush-mallow	CRPR 1B.2	Chaparral, Coastal scrub. Blooms (April) May-September (October); 30-2495 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrence within 15.5 miles from the BSA in Contra Costa County.

Scientific Name	Common Name	Status (FESA/CESA/ Other)	Habitat Description*	Potential to Occur at the Project Site / Determination for Federally Listed Species
Monolopia gracilens	woodland woollythreads	CRPR 1B.2	Broadleafed upland forest (openings), chaparral (openings), cismontane woodland, North Coast coniferous forest (openings), valley and foothill grassland, serpentine. Blooms (February) March-July; 325-3935 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrences within 15.5 miles of the BSA.
Navarretia prostrata	prostrate vernal pool navarretia	CRPR 1B.2	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools, Mesic. Blooms April-July; 5-3970 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrence within 5 miles of the BSA.
Phacelia phacelioides	Mt. Diablo phacelia	CRPR 1B.2	Chaparral, cismontane woodland, rocky. Blooms April-May; 1640-4495 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrences within 15 miles of the BSA.
Plagiobothrys glaber	hairless popcornflower	CRPR 1A	Meadows and seeps (alkaline), Marshes and swamps (coastal salt). March-May; 45-590 feet.	Not expected. No suitable habitat in the BSA.
Polemonium carneum	Oregon polemonium	CRPR 2B.2	Moist to dry, open areas. Blooms April-June; <2700 feet.	Not expected. No suitable habitat in the BSA.
Puccinellia simplex	California alkali grass	CRPR 1B.2	Saline flats, mineral spring. Blooms March-May; <2952 feet.	Not expected. There only one occurrence within 5 miles, a historic occurrence just east of the BSA along SR 84. However, the location has since been paved.
Senecio aphanactis	chaparral ragwort	CRPR 2B.2	Chaparral, Cismontane woodland, Coastal scrub, sometimes alkaline. Blooms January-April (May); 45-2625 feet.	Not expected. Grasslands in BSA do not provide suitable habitat. CNDDB occurrence within 13 miles of the BSA.
Spergularia macrotheca var. longistyla	long-styled sand-spurrey	CRPR 1B.2	Meadows and seeps, Marshes and swamps, Alkaline. Blooms February-May (June); 0-835 feet.	Not expected. No suitable habitat in the BSA.
Streptanthus albidus ssp. *peramoenus*	most beautiful jewel-flower	CRPR 1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Usually serpentine soils. Blooms April-July; 350-3,300 feet.	Not expected. No suitable serpentine habitat in the BSA.
Streptanthus hispidus	Mt. Diablo jewelflower	CRPR 1B.3	Chaparral, valley and foothill grassland, rocky. Blooms March-June; 1195-3935 feet.	Not expected. No suitable habitat in the BSA.
Stuckenia filiformis ssp. Alpine	slender-leaved pondweed	CRPR 2B.2	Marshes and swamps (assorted shallow freshwater). Blooms May-July; 980-7055 feet.	Not expected. No suitable habitat in the BSA.
Suaeda californica	California seablite	FE/CRPR 1B.1	Marshes and swamps (coastal salt). Blooms July-October; 0-49 feet	Not expected. No suitable habitat in the BSA. No effect
Trifolium hydrophilum	saline clover	CRPR 1B.2	Marshes and swamps, alkaline valley and mesic alkaline foothill grassland, vernal pools. Blooms April-June; 0-1,000 feet.	Not expected. No suitable habitat in the BSA.
Triquetrella californica	coastal triquetrella	CRPR 1B.2	Coastal bluff scrub, coastal scrub, soil. 30-330 feet.	Not expected. No suitable habitat in the BSA.
Tropidocarpum capparideum	caper-fruited tropidocarpum	CRPR 1B.1	Valley and foothill grassland (alkaline soils). Blooms March-April; 1-1,500 feet.	Not expected. No suitable habitat in the BSA.
Viburnum ellipticum	oval-leaved viburnum	CRPR 2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Blooms May-June; 705-4595 feet.	Not expected. No suitable habitat in the BSA.

Federal Status Designations:

FD	Federal Delisted
FE	Federal Endangered
FT	Federal Threatened
FC	Federal Candidate

State of California Status Designations:

SE	State Endangered
FP	Fully protected Species under California Fish and Game Code
ST	State Threatened
SSC	State Species of Special Concern
SC	State Candidate
SA	Included on the California Department of Fish and Wildlife's Special Animals List

California Native Plant Society (CNPS)

1A	Plant presumed Extinct in California
1B.1	Plants rare, threatened, or endangered in California or elsewhere. Seriously endangered in California
1B.2	Plants rare, threatened, or endangered in California or elsewhere. Fairly endangered in California
3	Plant species about which more information is needed.
4	Plants of limited distribution – a watch list.

*For plant species habitat descriptions include blooming period, elevation range and habitat description.

Appendix F CEQA Traffic Approach

AECOM Imagine it. Delivered.

AECOM
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Project name:
I-680/Sunol Boulevard Interchange Improvements Project

Project ref: EA 0Q9200/ EFIS 0418000174 (4-ALA-680-PM 14.8/15.5)

From:
Lynn McIntyre, Environmental Manager, and Broden Farazmand, Environmental Planner

Date:
October 29, 2020

Memo

Subject: CEQA Traffic Approach

California Senate Bill 743 (SB 743) amended the California Environmental Quality Act (CEQA), to include that vehicle miles traveled (VMT) and induced travel must be analyzed for transportation projects that increase capacity. As of July 1, 2020, the California Department of Transportation (Caltrans) implemented statewide guidance for methods to be used to achieve compliance with the new CEQA Guidelines. One of the guidance documents, the Caltrans Transportation Analysis under CEQA (TAC), includes a screening process to help project teams determine a project's potential to increase capacity and the proper analysis approach. The TAC includes several examples of projects that are "Not Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel."

The City of Pleasanton, in cooperation with Caltrans, proposes to modify the Interstate 680 (I-680)/Sunol Boulevard interchange and adjacent intersections in the City of Pleasanton and unincorporated Alameda County (Figure 1). The project would modify intersection traffic controls and lane striping, increase ramp storage, and improve pedestrian and bicycle facilities in the interchange area (Figure 2). This memorandum documents why the proposed project is not likely to lead to a measurable and substantial increase in vehicle travel.

Project Overview

The project would signalize the northbound and southbound I-680/Sunol Boulevard intersections, and convert the Arlington Drive/Sunol Boulevard intersection to a bicycle/pedestrian protected intersection. Sunol Boulevard is signed as Pleasanton-Sunol Road west of the southbound I-680 off-ramp.

For the I-680 southbound ramp intersection, the westbound Sunol Boulevard approach to the loop on-ramp would be modified to remove the existing channelized right turn lane, and to include one through lane and two right turn-only lanes. The eastbound left turn pocket to the loop on-ramp would be lengthened to maximize vehicle storage. The southbound diagonal off-ramp approach would be

modified to include one left turn lane and one right turn lane. A crosswalk will be added along the westbound approach, as well as a protected intersection for bicyclists on the north side of the intersection, accommodating a proposed Class II bike lane.

For the I-680 northbound ramp intersection, the westbound approach to the diagonal on-ramp would be modified to remove the existing channelized right turn lane, and to include three westbound through lanes and one right turn-only lane. The northbound diagonal off-ramp approach would be modified to remove the existing channelized right turn lane, and to include one through-left turn shared lane and two right-turn only lanes. Crosswalks would be added across the northbound approaches, as well as a protected intersection for bicyclists on both the north and south side of the intersection, accommodating proposed Class II bike lanes.

The project would widen the southbound I-680 on-ramp to include two general purpose ramp meter storage lanes and one High-Occupancy Vehicle with two or more occupants (HOV2+) ramp meter bypass lane. The Sunol Boulevard on-ramp overcrossing structure would also be widened to accommodate vehicles merging downstream of the ramp meter stop bar. The ramp would continue to provide a single-lane connection to southbound I-680.

Two Class IV bicycle facilities would be added in the vicinity of the interchange. One facility would be located on the north side of Sunol Boulevard, between the Arlington Drive/Sunol Boulevard and I-680 southbound ramps/Sunol Boulevard intersections, and the other along the south side of Sunol Boulevard, between the Arlington Drive/Sunol Boulevard and Castlewood Drive/Pleasanton-Sunol Road intersections. The sidewalk along the south side of Sunol Boulevard between Arlington Drive and Pleasanton-Sunol Road would be continued, and new crosswalks for pedestrians and bicyclists would be provided along Sunol Boulevard at the northbound and southbound I-680 ramp intersections, Riddell Street, and Arlington Drive. Signing, striping, and pavement markings would be added to reduce the potential for conflicts between bicyclists and motorists at the entrance of the westbound Sunol Boulevard to southbound I-680 loop on-ramp.

CEQA Induced Travel Analysis

According to CEQA Guidelines Section 15064.3(b) and the Caltrans TAC, transportation projects must be evaluated based on their potential to induce travel and increase VMT. Section 5.1.1(ii) of the TAC describes representative project types not likely to lead to a measurable and substantial increase in vehicle travel, which may lead to the project being screened out from further analysis. The following summarizes the traffic-related project components and their potential to induce travel and increase VMT, based on the guidance in the TAC. Project components such as utility relocations and retaining walls do not add motor vehicle capacity and therefore are not included in this discussion.

- Installation of traffic control devices (signals) at the intersections of the southbound and northbound ramps with Sunol Boulevard or elsewhere in the project area would not affect capacity or induce travel.
- Construction of bicycle and pedestrian improvements would not induce motor vehicle travel and could support a mode shift from motor vehicle use to active transportation.
- Addition of turning lanes to increase storage for vehicles entering and exiting I-680 would not induce travel because the lanes do not provide capacity for through-traffic. In one location, the project includes a short (700-foot, 0.13-mile) section of a westbound through-lane that feeds directly into a right-turn lane to the southbound I-680 on-ramp. It is striped as a through-lane rather than a right-turn lane to keep drivers from accidently turning right onto the northbound I-680 on-ramp before they reach the southbound ramp. In addition, the project would not change the number of lanes on Sunol Boulevard at either end of the project area (Castlewood Drive to

the west and Arlington Drive to the east). The project would not accommodate additional through-traffic on Sunol Boulevard in the project area.

- Addition of a general purpose lane and an HOV ramp meter bypass lane to the southbound on-ramp would increase vehicle storage approaching the ramp meter. The storage would reduce recurring peak period queue spillback onto Sunol Boulevard. The vehicles in these lanes must merge into a single lane after (south of) the ramp meter stop bar. The ramp will remain a metered, single-lane entrance to the freeway, and the ramp metering rate will not change. Therefore, the ramp modifications would not induce travel or increase VMT.

The project is not expected to lead to a measurable and substantial increase in vehicle travel. As such, the project is considered non-capacity-increasing for purposes of the CEQA traffic analysis, and exempt from the requirement for an analysis of induced travel.

Concurrence with this finding was provided on October 21, 2020, by staff from Caltrans Headquarters Division of Environmental Analysis; Caltrans District 4 Environmental Analysis and Traffic Forecasting; the City of Pleasanton; and the City's environmental, engineering, and traffic consultants.