# Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project

ALAMEDA AND CONTRA COSTA COUNTY, CALIFORNIA
DISTRICT 4 – ALA/CC – 24 (PM R5.80/R6.24 and R0.00/R0.60)
EA 04-0J540 / EFIS 0414000011

# Initial Study with Mitigated Negative Declaration/Environmental Assessment and Final Individual Section 4(f) Evaluation with Finding of No Significant Impact

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

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

**June 2025**

# General Information about This Document

**What's in this document:**

The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study with Mitigated Negative Declaration/Environmental Assessment (IS/EA) and Final Individual Section 4(f) Evaluation for the project located in Alameda and Contra Costa Counties, California. The Department is the lead agency under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The document tells you why the project is being constructed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the avoidance, minimization, and/or mitigation measures. The Initial Study with Mitigated Negative Declaration/Environmental Assessment and Final Individual Section 4(f) with Finding of No Significant Impact was circulated to the public for 30 days between January 6, 2025, and February 6, 2025. Comments received during this period are included in Chapter 4. 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. Additional hard copies of this document and the related technical studies are available for review at the Caltrans District 4 office at 111 Grand Avenue, Oakland, CA 94612. This Initial Study with Mitigated Negative Declaration/Environmental Assessment and Final Individual Section 4(f) Evaluation with Finding of No Significant Impact document may be downloaded from the Caltrans website available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs.The project website is also available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

**Alternative Formats:**

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Brycelyn Hendrix, Environmental Planning, 111 Grand Avenue P.O. Box 23660, MS-8B, Oakland, CA 94623; (855) 367-3269 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

SCH# 2025010114
04-ALA/CC-24 - PM R5.80/R6.24 and R0.00/R0.60
EA: 04-0J540
Project No. 0414000011

This project will rehabilitate Bores 1, 2, and 3 of the Caldecott Tunnel at PM R5.80/R6.24 and R0.00/R0.60 on State Route 24 in Alameda and Contra Costa Counties. This project will preserve the structural integrity of the tunnel and extend its service life.

# Initial Study with Mitigated Negative Declaration/Environmental Assessment and Final Individual Section 4(f) Evaluation with Finding of No Significant Impact

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

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: California Transportation Commission

06/26/2025

Dina A. El-Tawansy
District 4 Director
California Department of Transportation
CEQA/NEPA Lead Agency

Date

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# Finding of No Significant Impact (FONSI)

FOR

Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project

The California Department of Transportation (Caltrans) has determined that Build Alternative Option 2 will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment (EA) which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, impacts of the project, and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached EA.

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

Dina A. El-Tawansy
District 4 Director
California Department of Transportation
CEQA/NEPA Lead Agency

06/26/2025
Date

# Mitigated Negative Declaration

SCH# 2025010114

Pursuant to: Division 13, Public Resources Code

***Project Description***

The California Department of Transportation (Caltrans) proposes to rehabilitate the Caldecott Tunnel Bores 1, 2 and 3. The project will preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life.

***Determination***

The Department has prepared an Initial Study with Mitigated Negative Declaration 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 growth, recreation, population and housing, land use planning, mineral resources, energy, air quality, agriculture and forest resources, geology and soils, or hydrology and water quality.
- In addition, the project would have less than significant effects to aesthetics, biological resources, community character or community resources, noise, utilities and service systems, public services, hazardous wastes and hazardous materials, greenhouse gases (GHGs), transportation, tribal cultural resources, wildfires, and mandatory findings of significance.

With the following mitigation measures incorporated, the project would have less than significant effects to cultural resources:

**Mitigation Measure Cultural 1:**

**Historic Resource Preservation:** Prior to construction, Caltrans will prepare a Built Environment Treatment Plan, and HAER (Historic American Engineering Record) documentation. In consultation with Section 106 stakeholders and the State Historic Preservation Officer (SHPO), Caltrans will develop a webinar and virtual tour and conduct a limited number of in-person tours of Bores 1 and 2. After construction, Caltrans and Section 106 stakeholders will develop and install interpretive panels that discuss the history of the tunnels. These strategies are captured in a Memorandum of Agreement (MOA) negotiated between Caltrans as the CEQA and NEPA lead agency, the stakeholders, and the SHPO.

06/26/2025

Dina A. El-Tawansy
District 4 Director
California Department of Transportation

Date

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# Chapter 1 Proposed Project

## 1.1 INTRODUCTION

The California Department of Transportation (Caltrans or the Department) is the lead agency under CEQA and NEPA, as assigned by the Federal Highway Administration (FHWA), for the Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Project (project).

Caltrans proposes to rehabilitate Bores 1, 2, and 3 of the Caldecott Tunnel at Postmile (PM) R5.80/R6.24 and R0.00/R0.60 on State Route (SR-) 24 in Alameda and Contra Costa Counties. Figures 1, 2, and 3 are project location and vicinity maps. The project scope includes, but is not limited to, installing a new fire suppression and ventilation system and performing maintenance and rehabilitation work for Caldecott Tunnel Bores 1, 2, and 3. The project will include repair and patching of the tunnel wall, liner, and the exhaust and supply plenums, applying Methacrylate treatment on the entire floor of the upper and lower plenum slabs, removing and replacing Portland Pozzolana Cement (PPC) slabs with rapid strength concrete (RSC), rehabilitating tunnel cross passages, and repairing and replacing all gutters, culverts, and drainage inlets. For more information, please refer to Section 1.3 and Section 1.4.

This Project is funded by the State Highway Operation and Protection Program (SHOPP), under the Bridge Rehabilitation and Replacement Program 20.XX.201.110.

### NEPA Assignment

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

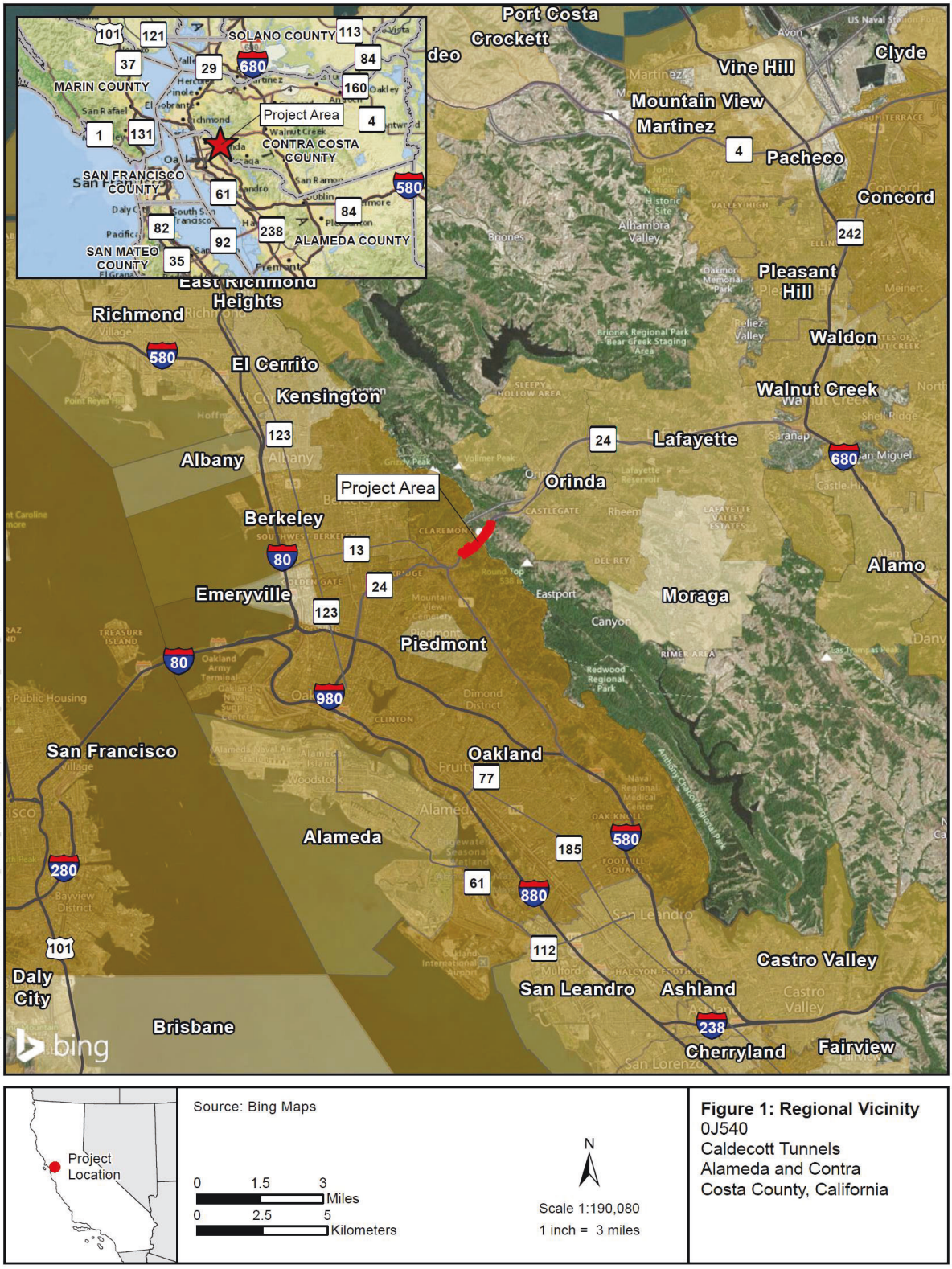



**Figure 1. Regional Vicinity**

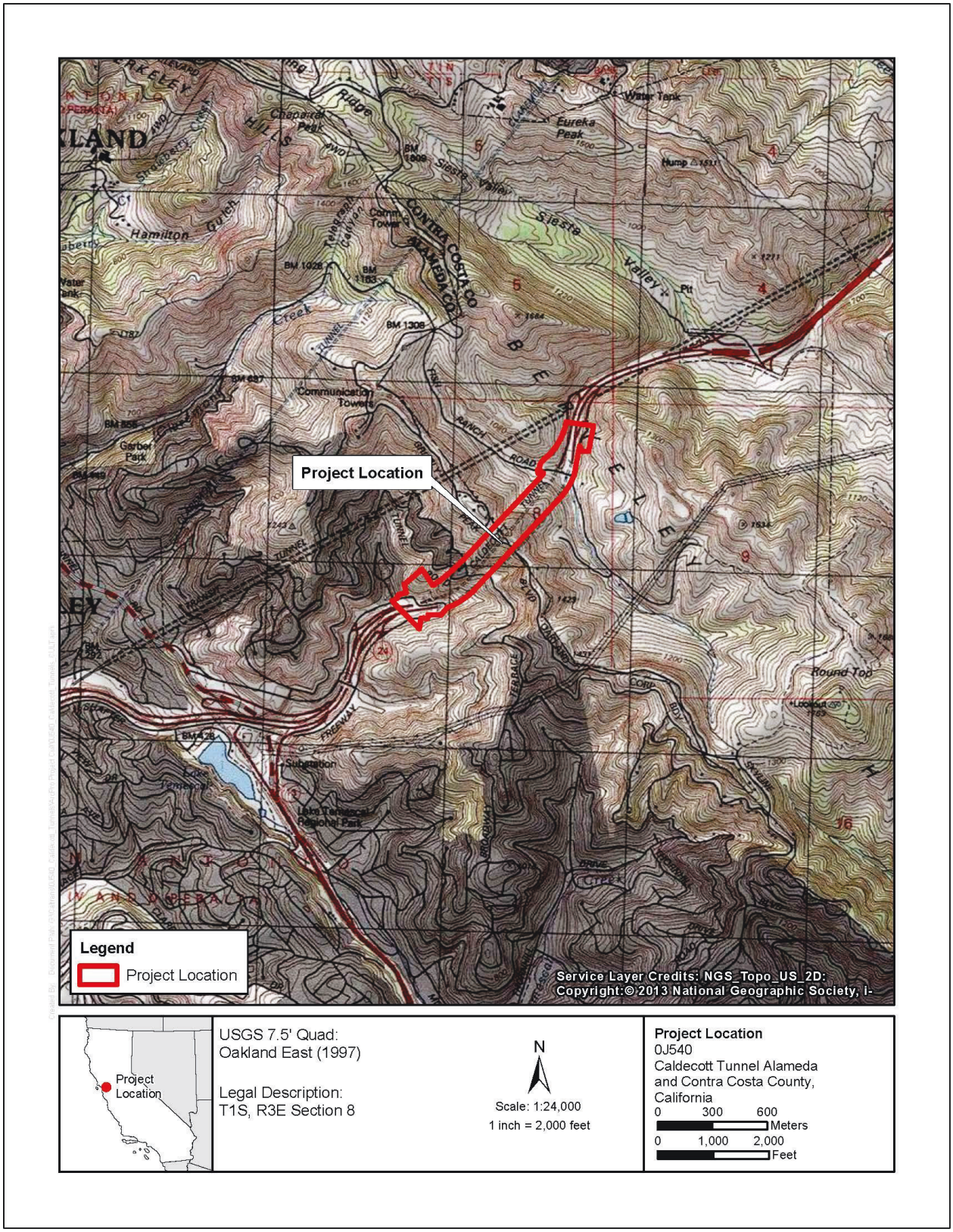



**Figure 2. Project Location**

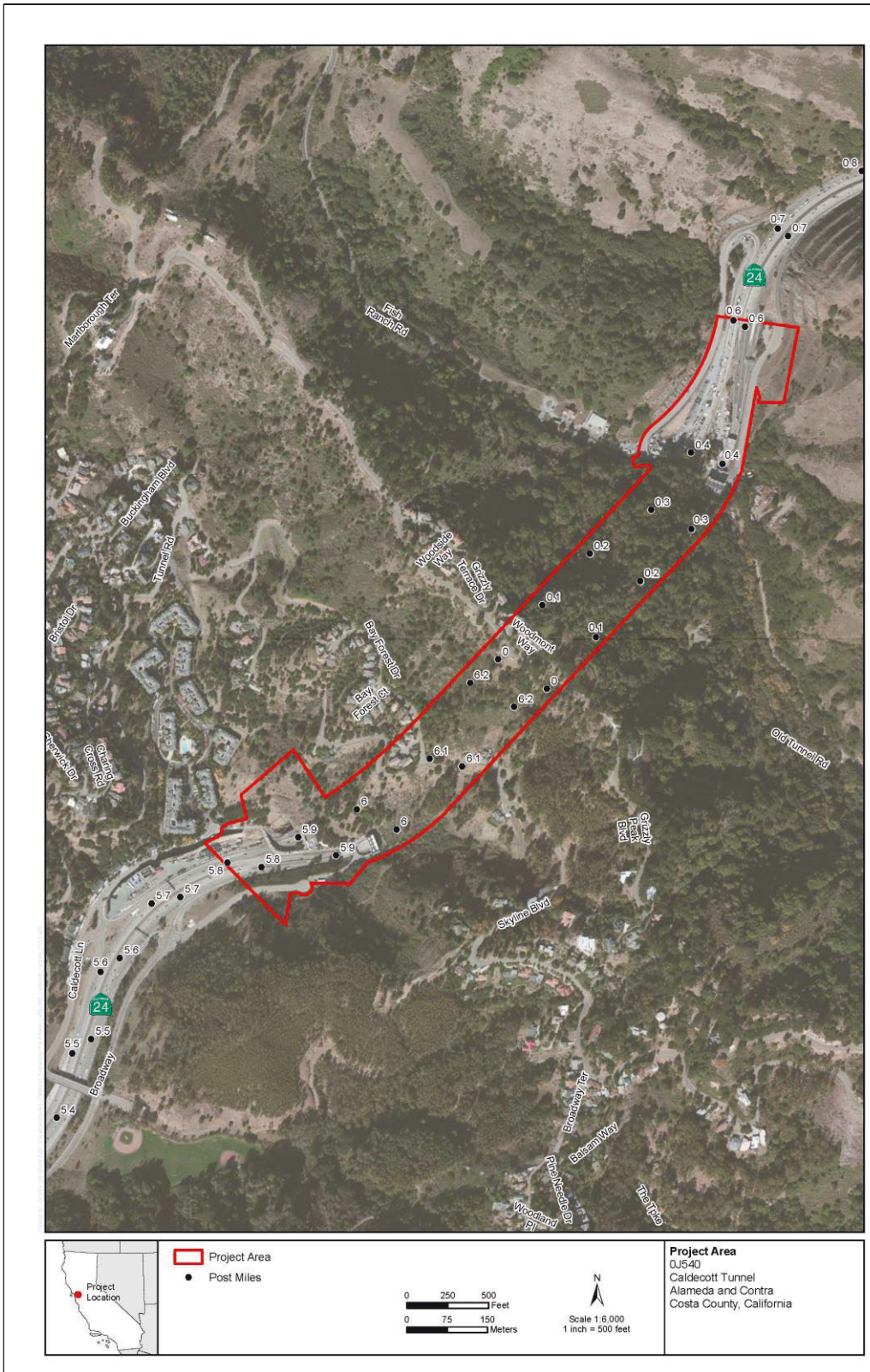



**Figure 3. Project Study Area**

# 1.2 PURPOSE AND NEED

## 1.2.1 Purpose

The purpose of the Project is to preserve the structural integrity, improve the performance of the tunnel, and extend its service life.

## 1.2.2 Need

The project is needed because Caltrans Division of Structure Maintenance and Investigation (SM&I) and District 4 identified deficiencies during inspection and concluded that the three bores required upgrades. If not addressed, the deficiencies would trigger more frequent maintenance and lead to more extensive repairs in the future. An independent consultant was tasked by the Division of Engineering Services (DES) and District 4 to perform a risk analysis exploring the ventilation capacities of the complex tunnel/tubes within the State of California to address smoke from potential vehicle fires. The risk analysis concluded that Caldecott Tunnel Bores 1, 2, and 3 were at the top risk priority in the State and recommended ventilation upgrades.

## 1.2.3 Independent Utility and Logical Termini

Federal Highway Administration (FHWA) regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that the action evaluated:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
2. Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made).
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The project includes logical starting and ending points, or termini, that are centered around the rehabilitation of the existing tunnel. The project would have independent utility, which means that the improvements can be implemented within the project limits, and completion of other projects would not be required to gain the operational benefits of the improvements. The project does not preclude consideration of alternatives for other reasonable, foreseeable transportation improvements in the area. In addition, the project is not a segment of a larger project or a commitment to a larger project with significant environmental effects. Therefore, the project has independent utility and logical termini and meets the regulations cited above.

# 1.3 PROJECT DESCRIPTION

### Project Background

Caltrans proposes to rehabilitate Bores 1, 2, and 3 of the Caldecott Tunnel at postmile R5.80/R6.24 and R0.00/R0.60 on SR-24 in Alameda and Contra Costa Counties (Figures 1, 2, and 3). SR-24 is an east-west route connecting Alameda and Contra Costa Counties. The Alameda County portion of the route is approximately 6.24 miles long and begins at Interstate (I) 580/I-980 in Oakland and runs eastward through the Caldecott Tunnel before ending at the Alameda-Contra Costa County line. The Contra Costa portion of SR-24 is approximately 9.14 miles long, beginning at the Alameda-Contra Costa County line and ending at I-680 in Walnut Creek.

The Caldecott Tunnel consists of four borings built into the Oakland-Berkeley Hills (Figures 4, 5, and 6). Bores 1 and 2 are two lanes each. Bore 1 measures 3,615 feet and Bore 2 measures 3,609 feet. Both bores are horseshoe-shaped arched reinforced concrete tunnels that frame a 22-foot roadway. A portal building sits atop each end of Bores 1 and 2 to accommodate ventilation equipment. Bore 3 is horseshoe-shaped arched reinforced concrete tunnel that also frames a 22-foot roadway. It is 3,371 feet long with a portal building on top of each end. The portal buildings for these bores are nearly identical. They are each two level, four chamber rectangular reinforced concrete structures with Art Deco facades. The interiors house large exhaust and fresh air fans as well as offices, storage rooms, and electrical equipment.

There is an additional Operations Maintenance and Control (OMC) building on the west end, or west portal, of the Caldecott Tunnel. This building also contains offices, storage rooms, and electrical equipment. This building is used to monitor safety within all bores of the Caldecott Tunnel. Figure 4 shows an aerial view of all four bores of the Caldecott Tunnel, the portal buildings, and the OMC building.

Caldecott Tunnel Bore 4 was constructed in 2012 and is not part of this project.

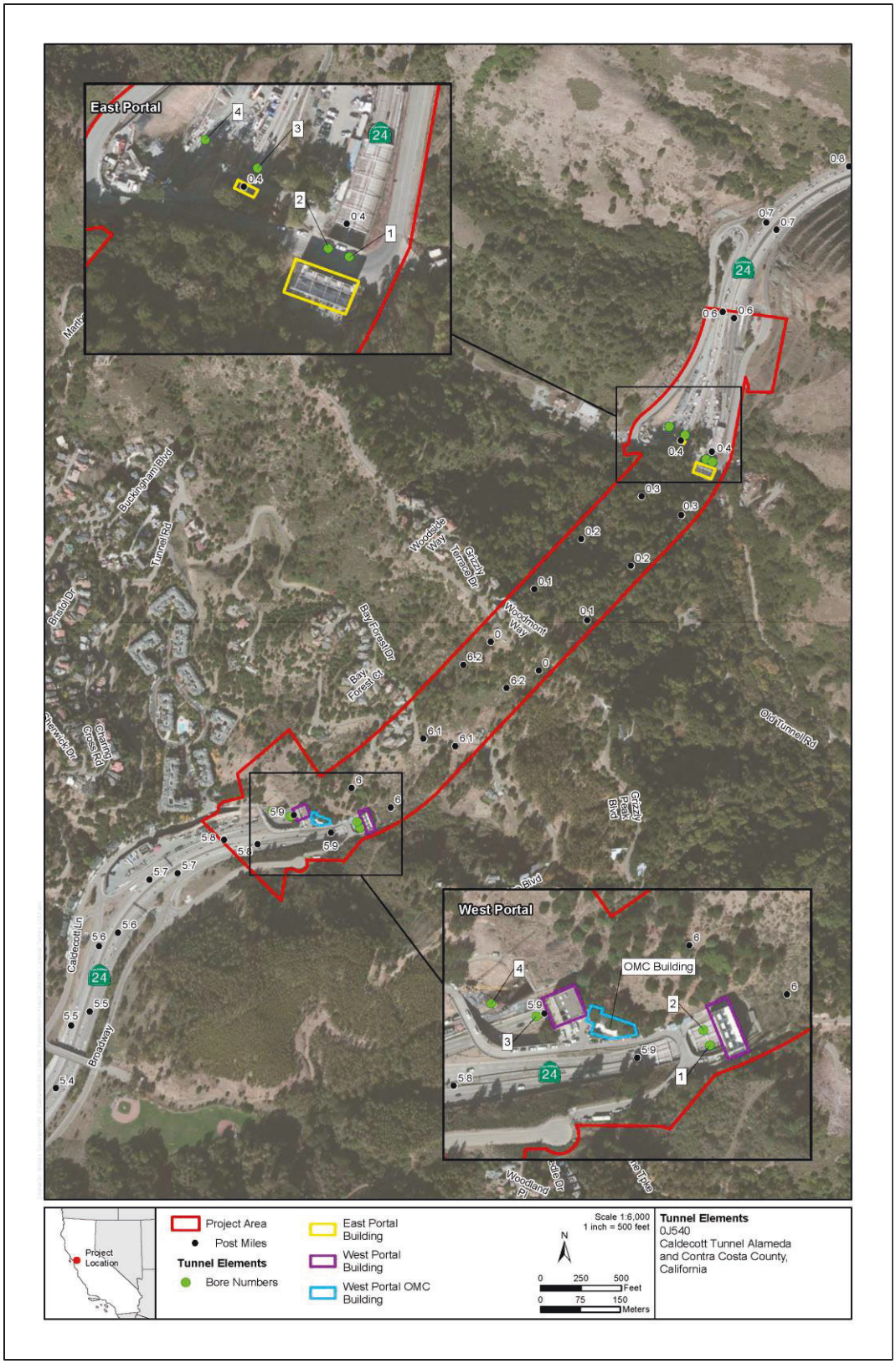
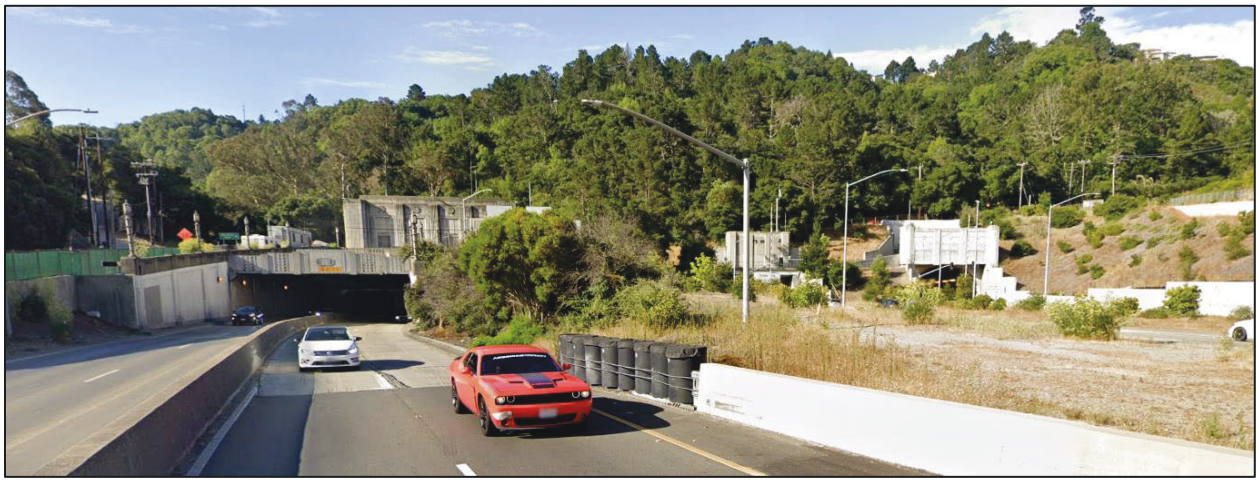



**Figure 4. Tunnel Elements**

Source: East Bay Times

**Figure 5. Existing View of Caldecott Tunnel, West Portal. From right to left, Bores 1, 2, 3, 4.**



Source: Google Maps

**Figure 6. Existing View of Caldecott Tunnel, East Portal. From right to left, Bores 1, 2, 3, 4.**

## Existing Conditions

Bores 1, 2, and 3 of the Caldecott Tunnel consist of two main components, or chambers. The lowest chamber is the driving lane, or roadway tunnel, which is the area of the tunnel used and seen by the public. The chambers positioned above the roadway tunnel are known as the plenum, or open air space. Within Bores 1 and 2, the plenum is divided in half horizontally (Figure 7), and in Bore 3, the plenum is divided in half vertically (Figure 8).

For Bores 1 and 2, the exhaust plenum is located immediately above the ceiling of the roadway tunnel. This plenum is used to blow out smoke or other airborne debris from the tunnel. The fresh air plenum is situated above the exhaust plenum. This chamber is used to bring in outside air to circulate through the tunnel (Figure 7).

For Bore 3, both the exhaust and fresh air supply plenums are located immediately above the roadway tunnel. The exhaust plenum is on the left side, and the fresh air supply plenum is on the right side (Figure 8).

The existing ventilation system in Bores 1 and 2 consists of eight total fans. There are two exhaust fans and two fresh air supply fans located in each of the east and west portal buildings. The fans circulate air through the plenums that run the length of the tunnel. Each of the eight fans is equipped with an automated damper, or flap, that can be used to separate the tunnel plenum from the portal building. There are air holes along the north wall of the fresh air supply plenum that connect the fresh air supply plenum to the roadway tunnel below.

In Bore 3, the existing ventilation system consists of four total fans. There are two exhaust fans and two fresh air supply fans within the west portal building. Each fan is equipped with a damper to separate the tunnel plenum from the portal building. There are air holes spaced every 15 feet along the length of the exhaust and fresh air supply plenum ceilings that allow the air to circulate throughout the roadway tunnel. Each of these air holes is also equipped with a damper that can open and close to regulate air flow. As illustrated below by the cross-sections of the existing conditions of Bores 1 and 2 (Figure 7), and Bore 3 (Figure 8), the fans are not visible to the traveling public, as they are located within the portal buildings.

In addition to the fire and smoke protection provided by the ventilation systems, there is also a fire protection system that includes fire water supplies located throughout each tunnel bore and within each portal building. This fire water supply consists of two main pumps located at the west end of Bore 3. There is also a sprinkler system in the OMC building.

Within the lowest section of each bore, the roadway tunnel, there are cross passages running horizontally between the bores, also called adits. These cross passages are used to allow emergency personnel or maintenance personnel to easily cross between and access each bore. There are three cross passages between Bores 1 and 2 and one cross passage between Bores 3 and 4. These cross passages are not shown in the diagram below, but they are accessible from the driving lanes and are visible via illuminated signs with exit arrows.

The walls of the tunnel, the plenums, and the adits are made of concrete slabs. To prevent water buildup within the tunnel, there are drainage inlets on the north and south sides of all three bores that feed into a reinforced concrete pipe. There are 12 manholes along the centerline of each bore.

There is one electrical power distribution system that supplies power to all four bores of the Caldecott Tunnel. This power distribution system has two 12 kilovolt substations, one on the west portal end of the tunnel and one on the east portal end.

For additional images of the existing conditions within Bores 1, 2, and 3, please refer to Figures 20 through 26 in Section 2.2.3.

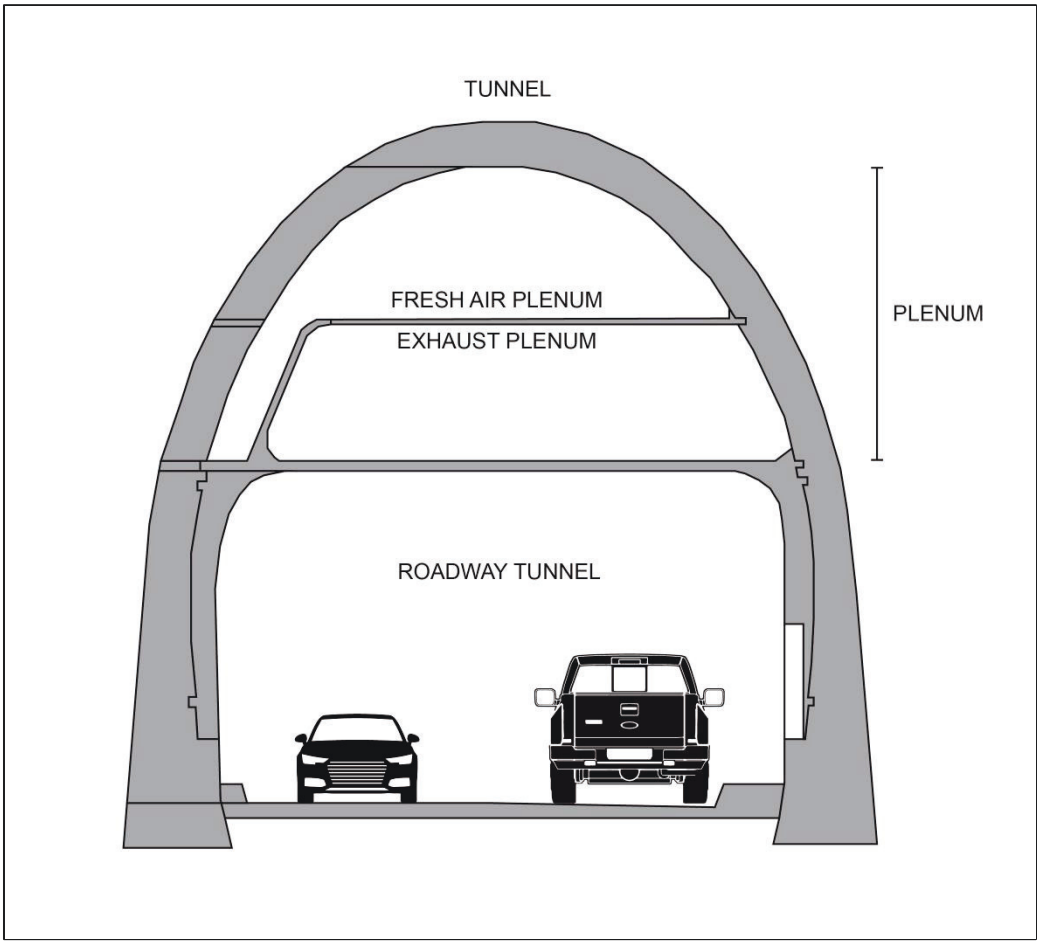



**Figure 7. Cross Section of Existing Conditions for Bores 1 and 2.**

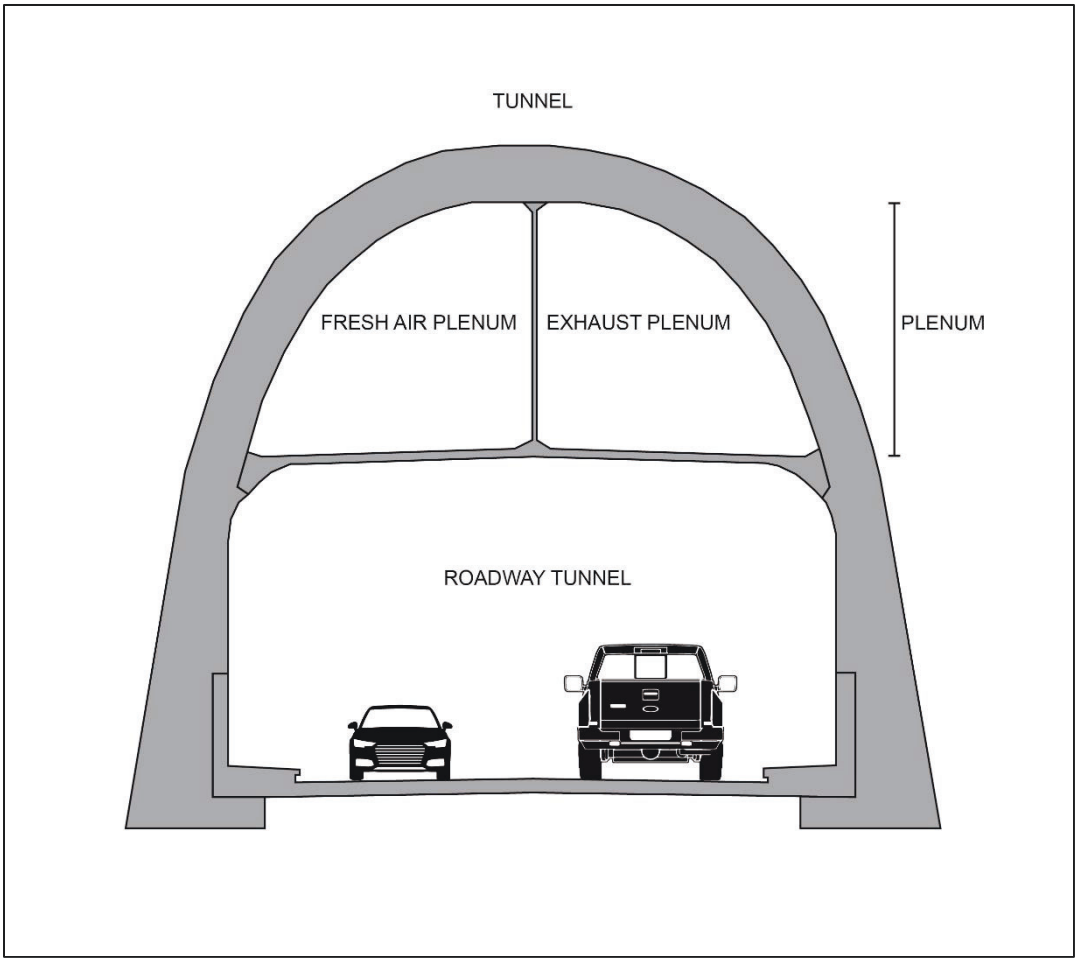



**Figure 8. Cross Section of Existing Conditions for Bore 3.**

## Project Improvements

This project was initiated in response to Division of Structures Maintenance and Investigations (SM&I) routine inspections, with the latest inspection dated May 2020. Later inspections were completed by District 4 Maintenance, Construction, and Operations Divisions. These two inspections identified a number of rehabilitation measures and improvements, which are described in detail below. Additional specifics for each of these measures will be finalized during the next phase of this project, the Design Phase.

*Ventilation System Upgrades*

The project would upgrade the existing ventilation system for Bores 1, 2, and 3 to improve smoke management for emergency exit by the public and firefighting in the event of a fire related emergency. The chosen design option for the ventilation improvements in Bores 1, 2, and 3 is to install jet fans in these Bores. The selection of this option is described in more detail in Section 1.4.

*Tunnel Repairs*

The project will repair and patch any cracking or fragmented concrete. Any unsound concrete will be removed. Weepholes, which are small openings used to allow water to escape the tunnel, will be cleaned out. Any other cracking, rust, or salt deposits will be cleaned and removed. Concrete curbs and metal guardrails will also be replaced. These repairs will cover an area of approximately 8,500 square feet for Bore 1, 8,800 square feet for Bore 2, and 5,500 square feet for Bore 3.

*Plenum Repairs*

The project will rehabilitate and repair all plenums in Bores 1, 2, and 3. Repairs will include rehabilitation of the floor slabs for each plenum and replacement of the slab with thicker, sturdier cement.

*Adit Repairs*

The project will conduct rehabilitation work on the adits, or tunnel cross passages. The existing adits do not have adequate lighting or ventilation systems. Caltrans will also repair the adit floors and walls as well as remove any lead contaminants found within.

*Safety Updates*

The project will incorporate a number of safety updates throughout Bores 1, 2, and 3. Updates will include installing a new sprinkler system; repairing or replacing all lane markers and safety markers to ensure visibility; upgrading the existing call boxes, fire extinguishers and fire extinguisher boxes, and carbon dioxide sensors; installing a public address (PA) system; upgrading the lighting system; and upgrading the changeable message signs (CMS) at the west portal. Tunnel lightning may be upgraded to meet current Caltrans standards.

*Electrical System Upgrades*

For the west portal (shown in Figure 9), the project will place a new transformer and motor control center (MCC) in the existing Bore 3 portal building. The two pads for the new electrical equipment will measure approximately 31 feet by 3 feet 10 inches and 31 feet by 6 feet 6 inches. A 4-inch conduit will be placed along the existing roadway or existing conduit pathway to connect the transformer and MCC to the West Bore 1 and Bore 2 ventilation room. Any trenching required will be a combination of horizontal directional drilling (HDD) and open trenching.

For the east portal (shown in Figure 9), the project will place a new transformer and motor control center (MCC) adjacent to the existing electrical equipment pad east of the portal entrance. This equipment will require two concrete pads, one measuring approximately 31 feet by 3 feet 10 inches and 31 feet by 6 feet 6 inches. A 4-inch conduit will be placed using open trenching along the existing roadway or existing conduit pathway to connect the transformer and MCC to the power substation near the east entrance of Bores 1 and 2. All trenching will be completed by hand or using a mini excavator. All trenches will be backfilled and placed to avoid existing trees and other vegetation.

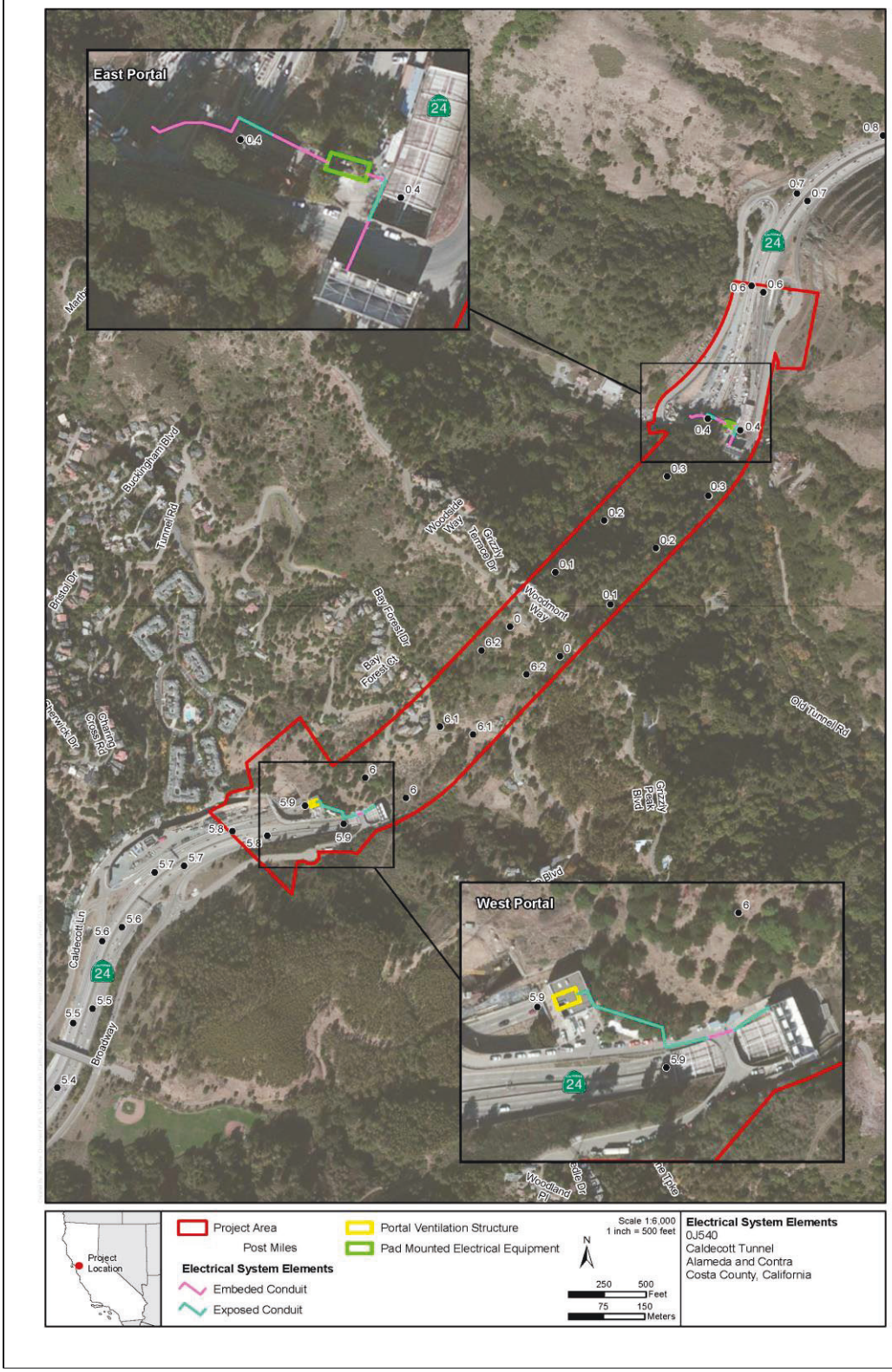



**Figure 9. Electrical System Elements.**

## 1.4 PREFERRED BUILD ALTERNATIVE

This section describes the preferred build alternative chosen to meet the purpose and need of the project while avoiding or minimizing environmental impacts. The Draft Environmental Document proposed two Build Alternatives Options and a No-Build Alternative. Build Alternatives Option 1 included incorporated the use of Saccardo Nozzles in Bores 1 and 2 and Build Alternatives Option 2 incorporated the use of Jet Fans in Bore 1 and 2. Both Build Alternatives options would have employed the use of Jet Fans in Bore 3.

Following fire emergency analysis and the circulation of the Draft Environmental Document, Build Alternative Option 2 for jet fans in Bores 1 and 2 was chosen as the preferred alternative for this project. See Section 1.6 for more information on why Design Option 2 (Jet Fans) was chosen as the preferred alternative and section 1.7 on why Desing Option 1 (Saccardo Nozzle) was not considered. All work for ventilation improvements and tunnel rehabilitation measures for this project will be the same across Bores 1, 2, and 3.

**Preferred Build Alternative Option 2, Jet Fans: Bores 1 and 2**

The preferred alternative, Build Alternative Option 2, will install a jet fan ventilation system to improve smoke management and to facilitate the safe exit by the traveling public from the tunnel during a fire, as well as help firefighting efforts by managing the smoke from a fire (Figure 10, Figure 11, and Figure 12). This option will include approximately four rows of fans placed throughout the tunnel. There will be two fans per row and eight fans total. Construction will be required only in the exhaust air plenum. The exact location of each fan will be determined in the next phase of this project, the Design Phase.

The jet fans are designed to provide air flow in a single direction of traffic flow but can provide reverse directional ventilation, depending on the design, to meet State Fire Marshall requirements. Reversing the direction of ventilation downhill away from the traffic flow would require additional rows of jet fans. The final number of fans will be determined during the Design Phase of the project.

Upgrading the ventilation system to this jet fan system will promote better air circulation throughout the tunnel. Spacing the fans along the length of the tunnel provides additional air flow that is not possible with the existing system.

The scope of work for this option includes the following modifications inside each tunnel and portal building:

1. Cut openings in the roadway tunnel ceiling to construct jet fan niches. The existing ceiling of the roadway will be removed to create an indentation, or niche, in which the jet fans will sit. Creating this higher ceiling in this area will allow for the jet fans to sit flush with the existing ceiling of the tunnel.
2. Seal all fresh air supply openings in the tunnel wall.
3. Seal all exhaust air openings in the tunnel ceiling.
4. Install new motorized dampers in the fresh air and exhaust air plenums floors to ventilate the plenums.

   If the existing supply and exhaust fans at the west and east portals are removed, new smaller fans will be added to ventilate the plenums.

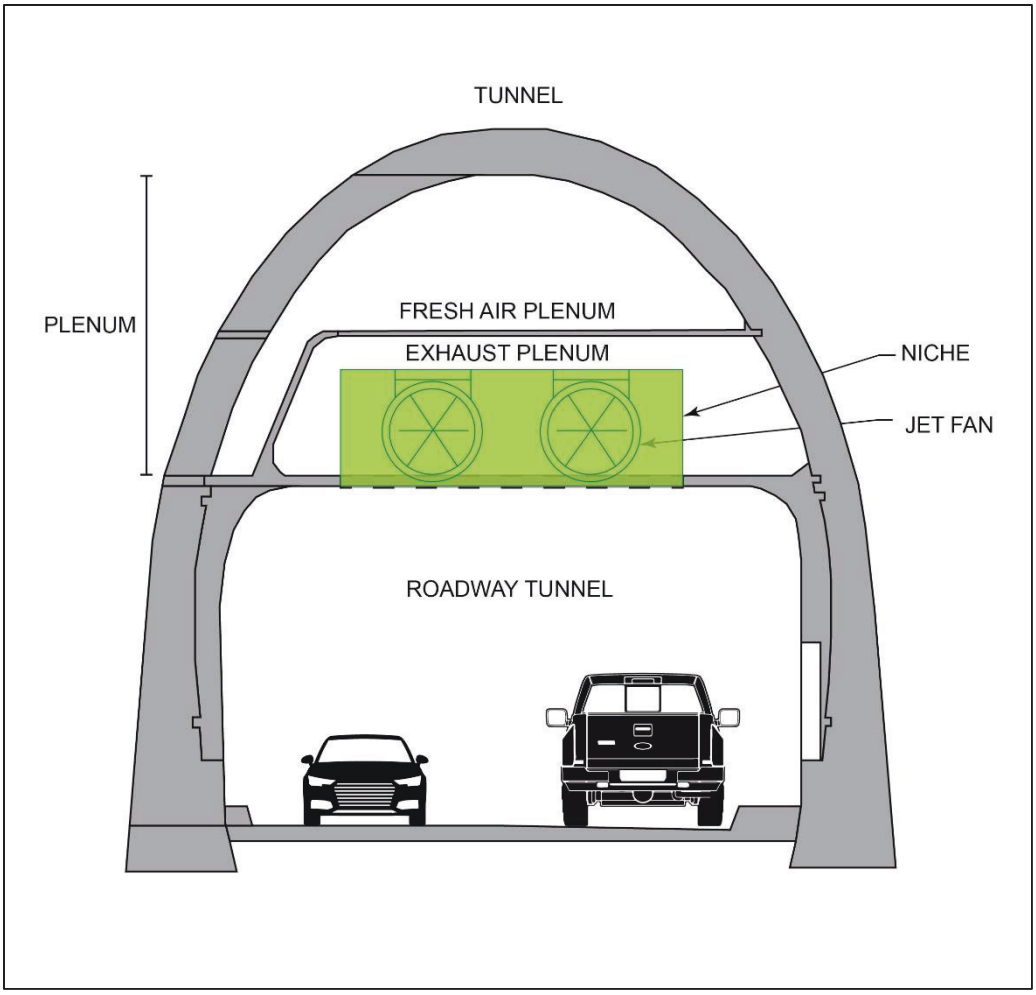



**Figure 10. Cross Section of Preferred Build Alternative Option 2.**

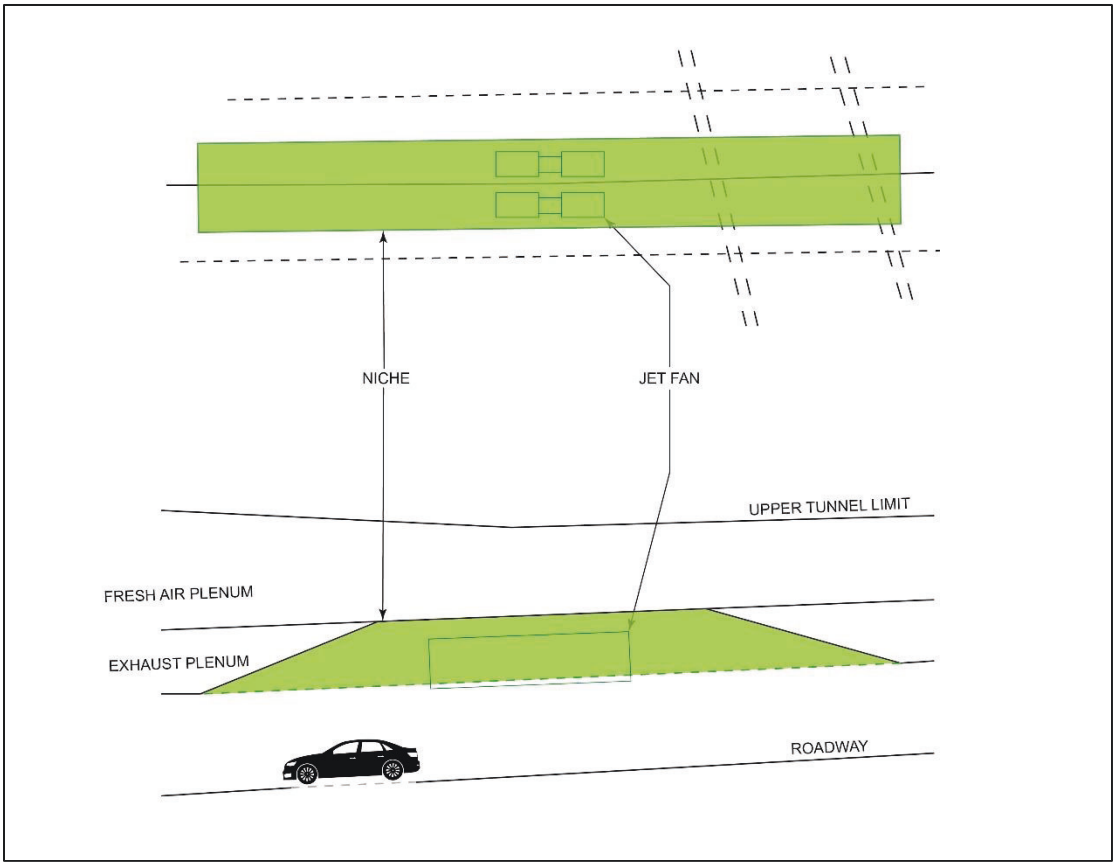



**Figure 11. Plan view (top) and side view (bottom) of Preferred Build Alternative Option 2.**

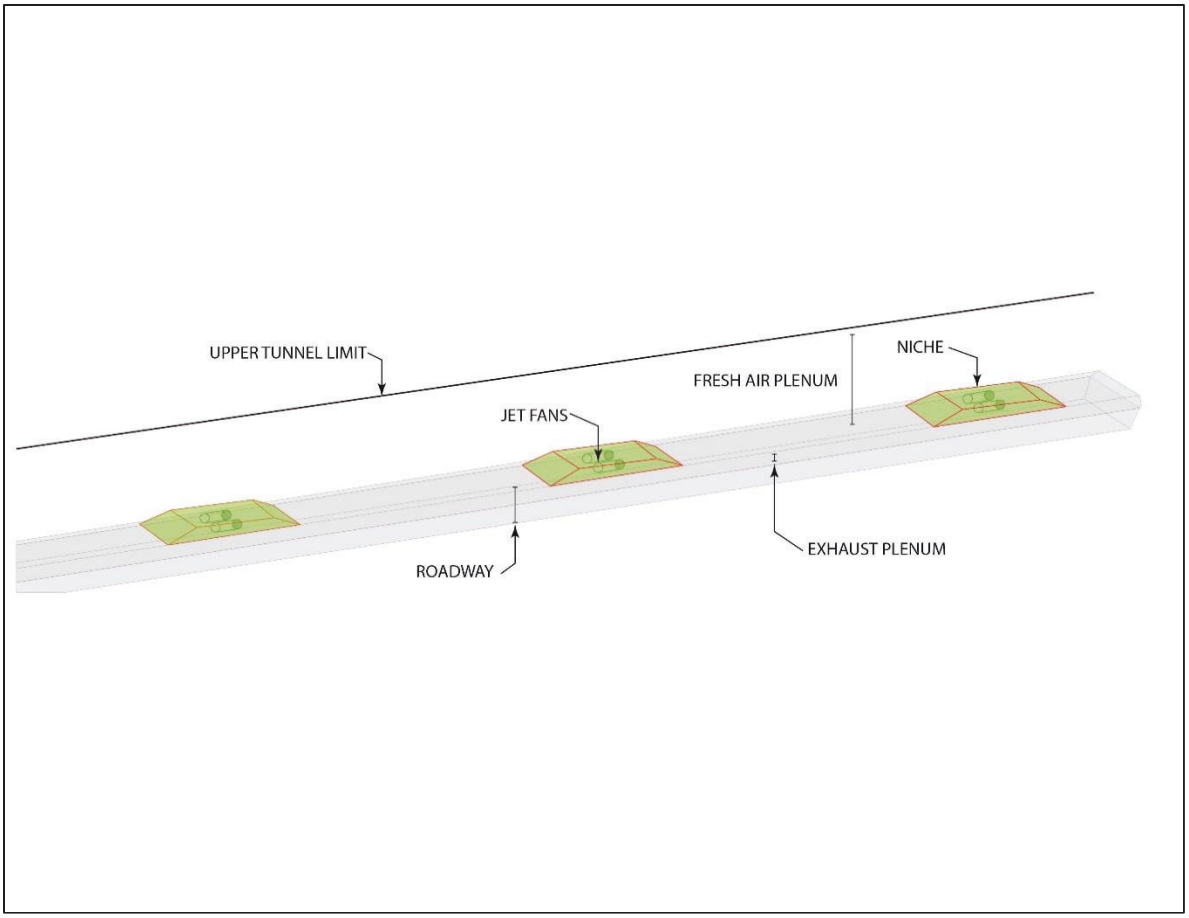



**Figure 12. Oblique view of Preferred Build Alternative Option 2.**

### Build Alternative Option 2, Jet Fans: Bore 3

For Bore 3, the project would install approximately 16 jet fans in eight rows of two throughout the length of the tunnel. This jet fan ventilation system would improve smoke management and facilitate the safe exit by the traveling public from the tunnel during a fire, as well as help firefighting efforts by managing the smoke from a fire. The exact location of each fan will be determined in the Design Phase of the project.

The jet fans are designed to provide air flow in a single direction of traffic flow but can provide reversible directional ventilation, depending on the design, to meet State Fire Marshall requirements. Reversing the direction of ventilation downhill would require additional rows of jet fans. Upgrading the ventilation system to this jet fan system will promote better air circulation throughout the tunnel. Spacing the fans along the length of the tunnel provides additional air flow that is not possible with the existing system.

This scope of work includes the following modifications inside Bore 3 and its portal building (Figure 13, Figure 14, and Figure 15):

1. Cut openings in the tunnel ceiling to construct jet fan niches. The existing ceiling of the roadway will be removed to create an indentation, or niche, in which the

jet fans will sit. Creating a higher ceiling in this area will allow for the jet fans to sit flush with the existing ceiling of the tunnel.

2. Remove the center wall between the fresh and exhaust air plenums at the jet fan niche locations.
3. Seal all of the supply and exhaust air openings in the tunnel ceiling.
4. Install new motorized dampers in the fresh air and exhaust air plenum floors to ventilate the plenums.
5. If the existing supply and exhaust fans at the west and east portals are removed, new smaller fans will be added to ventilate the plenums.

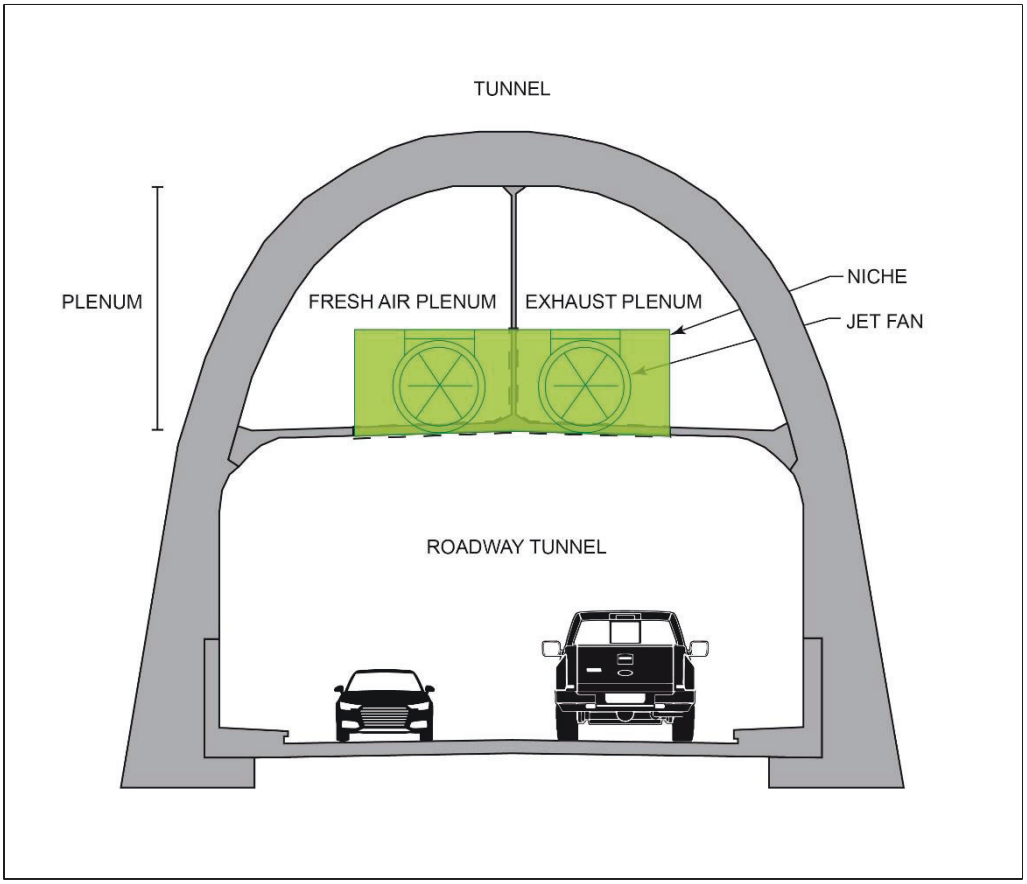



**Figure 13. Cross Section of Build Alternative ventilation work for Bore 3.**

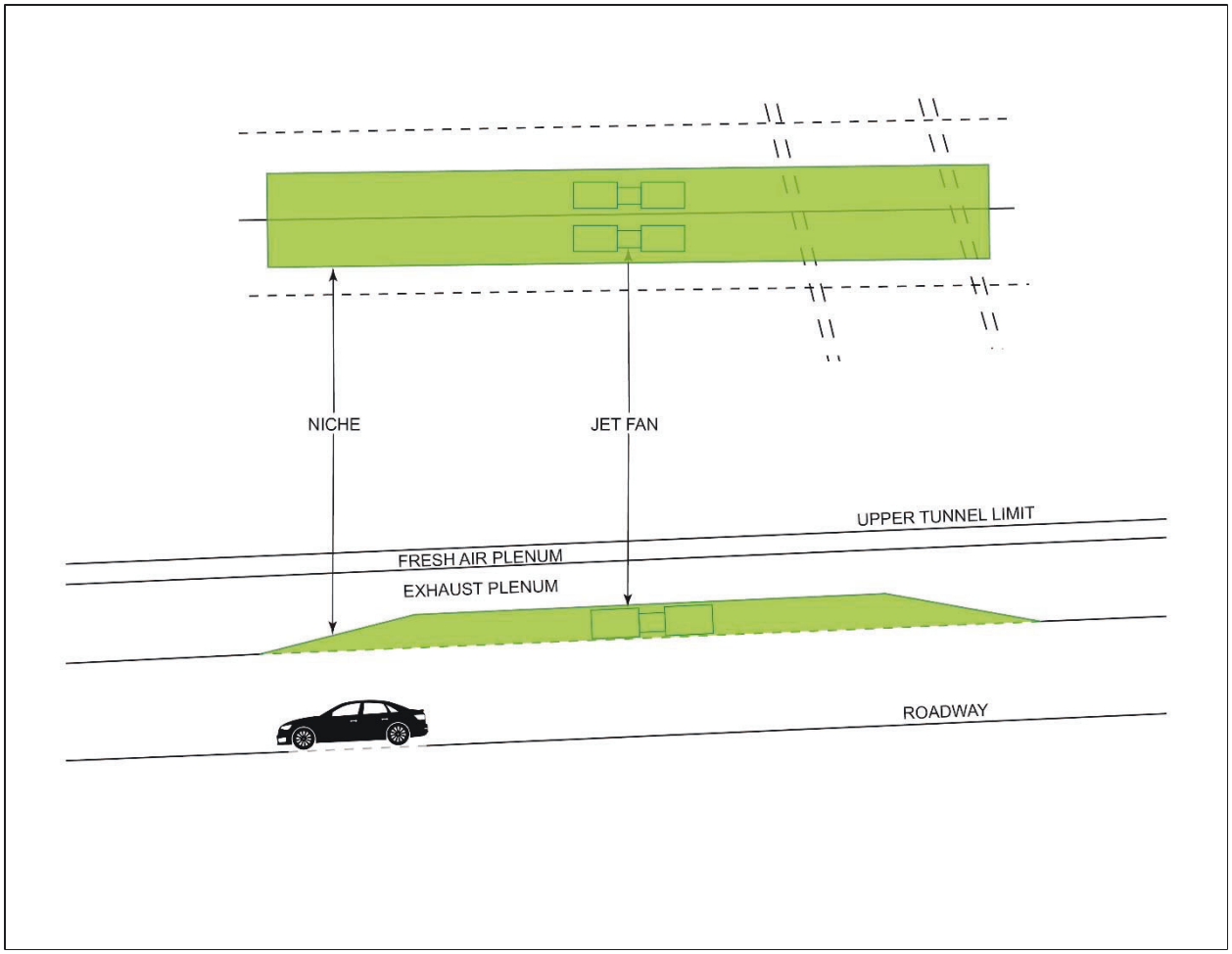



**Figure 14. Plan view (top) and side view (bottom) of Build Alternative ventilation work for Bore 3.**

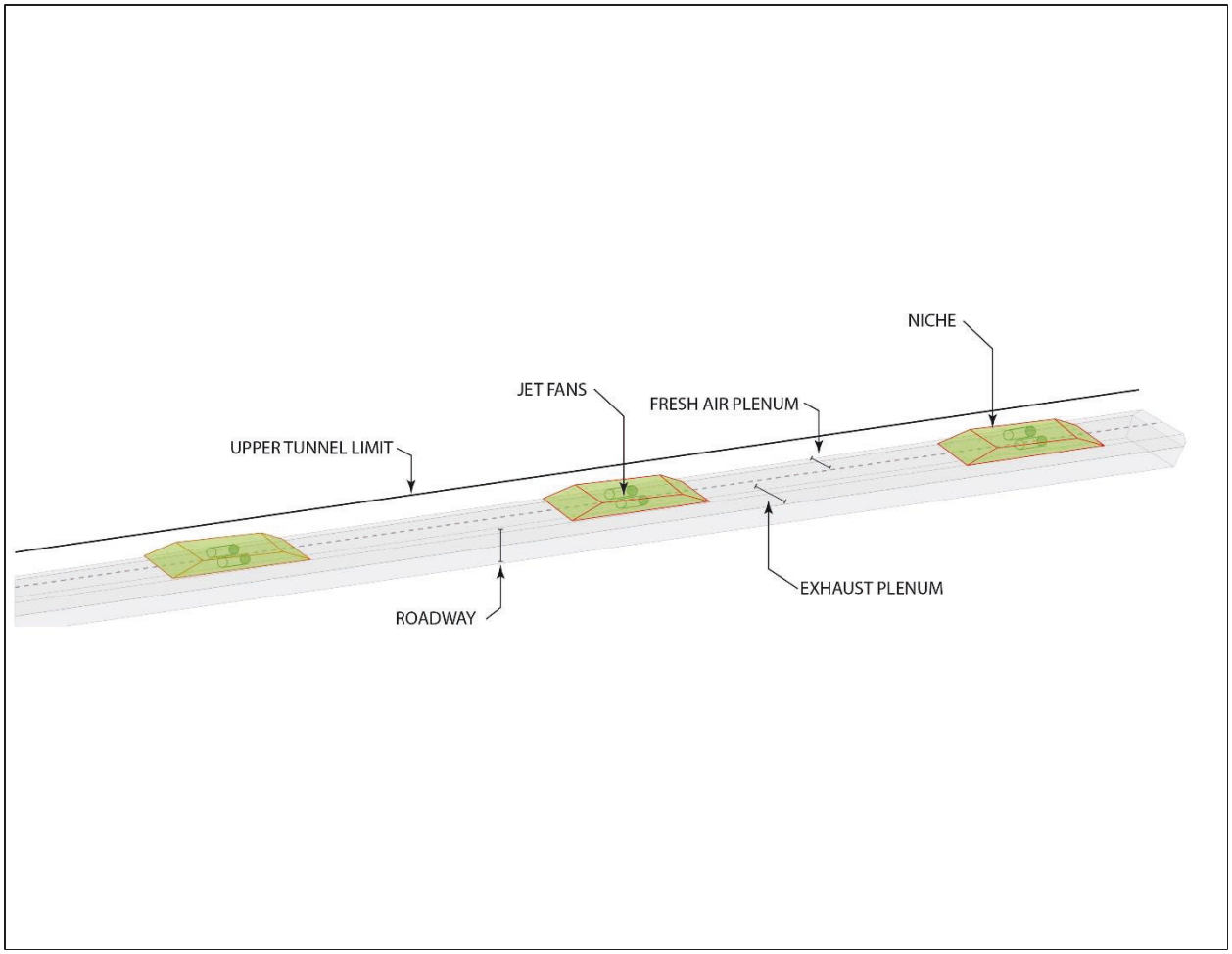



**Figure 15. Oblique view of Build Alternative ventilation work for Bore 3.**

### 1.4.1 Construction

The following section describes the estimated construction schedule for the project, right-of-way considerations, traffic considerations, and potential utility relocations.

#### Construction Schedule

Construction of the project is anticipated to begin in November 2026 and would last approximately three years to November 2029, with approximately 664 working days. The estimated number of working days for the preferred Build Alternative will be refined in the Design Phase of the project and could vary depending on contractor resources.

#### Right of Way and Staging

The project footprint is entirely within Caltrans right of way, and primarily includes the Caldecott Tunnel and 500 feet of adjacent roadway. Additional project work will be conducted around the east and west portals of the tunnel, including at the OMC building, portal buildings, and at the on and off ramps. The project footprint is within the Project Construction Area (PCA) and includes all areas directly temporarily or permanently impacted through construction activities. With the exception of the portal building and OMC building upgrades, the majority of the project work will be conducted within the SR-24 mainline, which is isolated by retaining walls and fences.

Additional right of way use is not anticipated. Railroad involvement is not anticipated. Construction staging will occur on paved areas and at the eastbound SR-24 Fish Ranch Road on and off ramp near the east end of the tunnel.

#### Traffic Management Analysis

During the Design Phase for the Build Alternative, a Final Traffic Management Plan (TMP) will be prepared in accordance with Caltrans requirements and guidelines to reduce construction-related delays and inconvenience for travelers in the project area. Additional information about Project Feature PF-TRA-1 (see Appendix B) to reduce construction related traffic delays is discussed in Section 2.2.2 below. The rehabilitation of the Caldecott Tunnel will require two main traffic management features to alleviate traffic congestion when construction is occurring withing Bores 1, 2, or 3: overnight closures and 55-hour weekend closures. All closures will maintain at least one bore (two lanes) open to traffic in each westbound and eastbound direction. These strategies aim to balance the need for efficient construction while reducing the impact on commuters.

The Final TMP will determine delay amounts and address potential traffic impacts as they relate to staged construction, ramp detours, and other traffic handling concerns associated with construction of the project. The TMP features will include the following:

- Caltrans will distribute press releases/media alerts, paid advertisements, and provide project updates via the project website. Signs specifying closure times of the ramps will be posted at least 72 hours in advance to notify the public of upcoming road closures, ramp detours, and alternative freeway routes.
- Caltrans will advise commuters to plan ahead and use alternate routes such as SR-4 or I-580 to avoid delays, and temporary disruption of traffic flow during

construction (see Figures 28 and 19).

- Traffic advisories will inform the public that construction disruptions may result in delays that are more than 15 minutes during commute hours. In addition, commuters will be encouraged to carpool and use public transit such as BART.
- Changeable Message Signs (CMS) will be implemented throughout the area to guide drivers to alternative freeway routes, inform them of potential delays, and ensure they are aware of any changes to traffic patterns.
- Caltrans will conduct coordination with California Highway Patrol (CHP), local agencies of jurisdiction, local law enforcement, online Navigation Providers, and emergency services.
- Caltrans will utilize Traffic Switches, CHP Construction Zone Enhanced Enforcement Program, and Freeway Service Patrol where possible to decrease delays.
- When required, Caltrans will conduct a closure of the eastbound SR-24 Tunnel Road/Broadway on-ramp on the Oakland side of the tunnel and the closure of eastbound SR-24 Fish Ranch Road off-ramp (Exit 7A) on the Orinda side of the tunnel. Both ramp closures will require detours to other ramps in the vicinity. No SR-24 traffic will be directed to Fish Ranch Road, Grizzly Peak Boulevard, or Claremont Avenue as an alternative route for passage through the Caldecott Tunnel.

Additional information regarding this preliminary traffic management analysis, such as closures, alternative freeway routes, and ramp detours to be incorporated in the TMP are included in Section 2.2.2 below.

**Utility Relocations**

Verification of utilities will be required and the need for potholing will be ascertained following the verification process. Based on the current project scope, potential protections, adjustments, or relocations include PG&E Electrical, AT&T Fiber Optic, and water facilities.

## 1.4.2 No Build Alternative

Under the No Build Alternative, there would be no rehabilitation of the existing tunnel. If the project is not constructed, continued and accelerated deterioration of the concrete pavement, drainage, and delineation in Bores 1, 2, and 3 will occur. If not addressed, the deficiencies of this aging tunnel would trigger more frequent maintenance and lead to more extensive repairs in the future. This alternative does not satisfy the purpose and need of the project. The No Build Alternative is considered the environmental baseline against which potential environmental effects of the build alternatives are evaluated. This alternative does not satisfy the purpose and need of the project and was not

chosen as the preferred alternative for the project.

## 1.5 COMPARISON OF ALTERNATIVES

This section compares the proposed and preferred Build Alternatives and the No Build Alternative that are analyzed in this environmental document. The criteria for evaluation is primarily the respective Alternatives' adherence to the project's purpose and need.

The Build Alternative meets the purpose and need of the project. Implementing the improvements described above would preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. Proposed Build Alternative Option 1 and preferred Build Alternative Option 2 would both improve ventilation performance. Option 1, the Saccardo Nozzles, allows for unidirectional air flow which when evaluated, did not meet State Fire Marshall requirements. Option 2, the jet fans, allows for multidirectional air flow, and meets State Fire Marshall requirements. Option 1 would require constructing a Saccardo Nozzle and niche in the exhaust air plenum/roadway tunnel ceiling, while Option 2 will require the construction of jet fans and niches in the exhaust air plenum/roadway tunnel ceiling. The number of working days would be similar for both of the proposed Build Alternative options.

Under the No Build Alternative, there would be no rehabilitation of the existing tunnel. If the project is not constructed, continued and accelerated deterioration of the concrete pavement, drainage and delineation in Bores 1, 2, and 3 will occur. If not addressed, the deficiencies would trigger more frequent maintenance and lead to more extensive repairs in the future. This alternative does not satisfy the purpose and need of the project and was not chosen as the preferred alternative for the project.

After the public circulation period, all comments were considered, the Department selected a preferred alternative, and the Department made a final determination of this project's effect on the environment. Under the California Environmental Quality Act (CEQA), no unmitigable significant adverse impacts were identified. The Department has prepared a Mitigated Negative Declaration (MND). Similarly, the Department, as assigned by the Federal Highway Administration (FHWA), determined the National Environmental Policy Act (NEPA) action does not significantly impact the environment. The Department has issued a Finding of No Significant Impact (FONSI).

Option 2, the jet fans, allows for multidirectional air flow and meets State Fire Marshall requirements. In compliance with State Fire Marshall requirements, Option 2 was selected as the preferred alternative to be constructed based on compliance with Fire Marshall regulations and design and budgetary criteria.

## 1.6 IDENTIFICATION OF A PREFERRED ALTERNATIVE

The public comment period was between January 6, 2025, and February 6, 2025. A Notice of Completion and Notice of Availability (Appendix I) for the Draft IS was published with the State Clearinghouse on January 6, 2025. A hybrid public meeting

was held during the comment period on January 22, 2025, at the Orinda Library Auditorium and virtually on Zoom. The meeting included a presentation, followed by a question-and-answer portion. Verbal responses to questions were provided by the Project Manager and Environmental staff, including various subject matter panelists.

During the comment period, a total of forty-one comments were received. Written responses to each comment are provided in Chapter 4 of this document. See Section 4.1.4 for a list of the comments received and Caltrans' responses to these comments.

**Preferred Build Alternative: Option 2 Design, Jets Fans in Bores 1, 2 and 3.**

The current fan capacity in Bores 1, 2, and 3 is inadequate to meet the ventilation requirements for a fire near the exit portal. Caltrans chose to move forward with one of the Build Design Options because the existing fan name plate pressure and flow, motor and electrical availability, and expected lifespan are unreliable. The preferred Build Alternative for this project is Option 2, Jet Fans Installation in Bores 1, 2, and 3.

Following fire emergency analysis, the jet fan design was the only one to meet the fire life safety design requirements outlined in the NFPA 502 Standard during a major fire (60 MW) caused by commercial vehicles inside the Tunnel. The 502 Standard is a standard by the National Fire Protection Association which provides fire protection and fire life safety requirements for limited access highways, road tunnels, bridges, elevated highways, depressed highways, and roadways that are located beneath air-right structures. The jet fan design option was chosen as it provides sufficient ventilation capacity for smoke ventilation in Bores 1, 2 and 3, while the installation of Saccardo Nozzles in Bores 1 and 2 would not.

Additionally, the Build Alternative Option 2 meets the purpose and need of the project. Implementing the improvements described above would preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. Caltrans chose to move forward with one of the Build Design Options because the existing fan name plate pressure and flow, motor and electrical availability, and expected lifespan are unreliable.

## 1.7 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DISCUSSION PRIOR TO THE "DRAFT" INITIAL STUDY/ENVIRONMENTAL ASSESSMENT (IS/EA)

**Build Alternative Considered but Eliminated: Option 1 Design**

Build Alternative Option 1, the Saccardo Nozzles, was evaluated for compliance with State Fire Marshall requirements, this option was determined to not meet the fire life safety design requirements outlined in the National Fire Protection Association (NFPA) 502 Standard during a major fire (60 MW) caused by commercial vehicles inside the Tunnel such as a Heavy Goods Vehicle (HGV). The NFPA's 502 Standard provides fire protection and fire life safety requirements for limited access highways, road tunnels, bridges, elevated highways, depressed highways, and roadways that are located beneath air-right structures. A Heavy Goods Vehicle is a large commercial vehicle

intended for the transportation of heavy loads.

Option 1 failed the fire emergency analysis in one of the most critical fire scenarios near the exit portal, and therefore, it is not viable for construction. There is also limited fan plant space to upgrade fans, motors, dampers, sound systems, and ducting and limited plenum space for installation of larger Saccardo Nozzle to meet requirements.

Build Alternative with Option 1, installing Saccardo Nozzles in Bores 1 and 2 would have installed a Saccardo Nozzle Ventilation System using supply fans to improve smoke management and to facilitate the safe exit by the traveling public from the tunnel during a fire, as well as to help firefighting efforts by managing the smoke from a fire. This system included one Saccardo Nozzle, with an opening approximately 22 feet long by 7.5 feet wide, to be placed at an angle in the fresh air plenum. This Nozzle placement would have also required an approximately 6.5-foot-high by 7-foot-wide duct to be placed in the fresh air plenum. Installation of the Saccardo Nozzles will not be continued during the next phase of this project, the Design Phase for the reasons listed above.

The scope of work for this option would have included the following modifications inside each tunnel and portal building:

1. Cut openings in the roadway tunnel ceiling to construct a Saccardo Nozzle opening. The existing ceiling of the roadway would be removed to create an indentation, or niche opening, in which the Saccardo Nozzle will sit. Cutting into the existing ceiling will allow for the Nozzle opening to sit flush with the existing ceiling of the tunnel.
2. Construct a dividing wall downstream from the air flow produced by the Saccardo Nozzle in the plenum. This wall would have an access door and motorized dampers for plenum ventilation.
3. Replace or refurbish the existing supply fans in the west portal fan room with new supply fans.
4. Install new motorized dampers in the fresh air and exhaust air plenum floors to ventilate the plenums.
5. Close all fresh air supply openings in the tunnel wall.
6. Close all exhaust air openings in the tunnel ceiling.

If the existing supply and exhaust fans at west and east portals are removed, new smaller fans will be added to ventilate the plenums

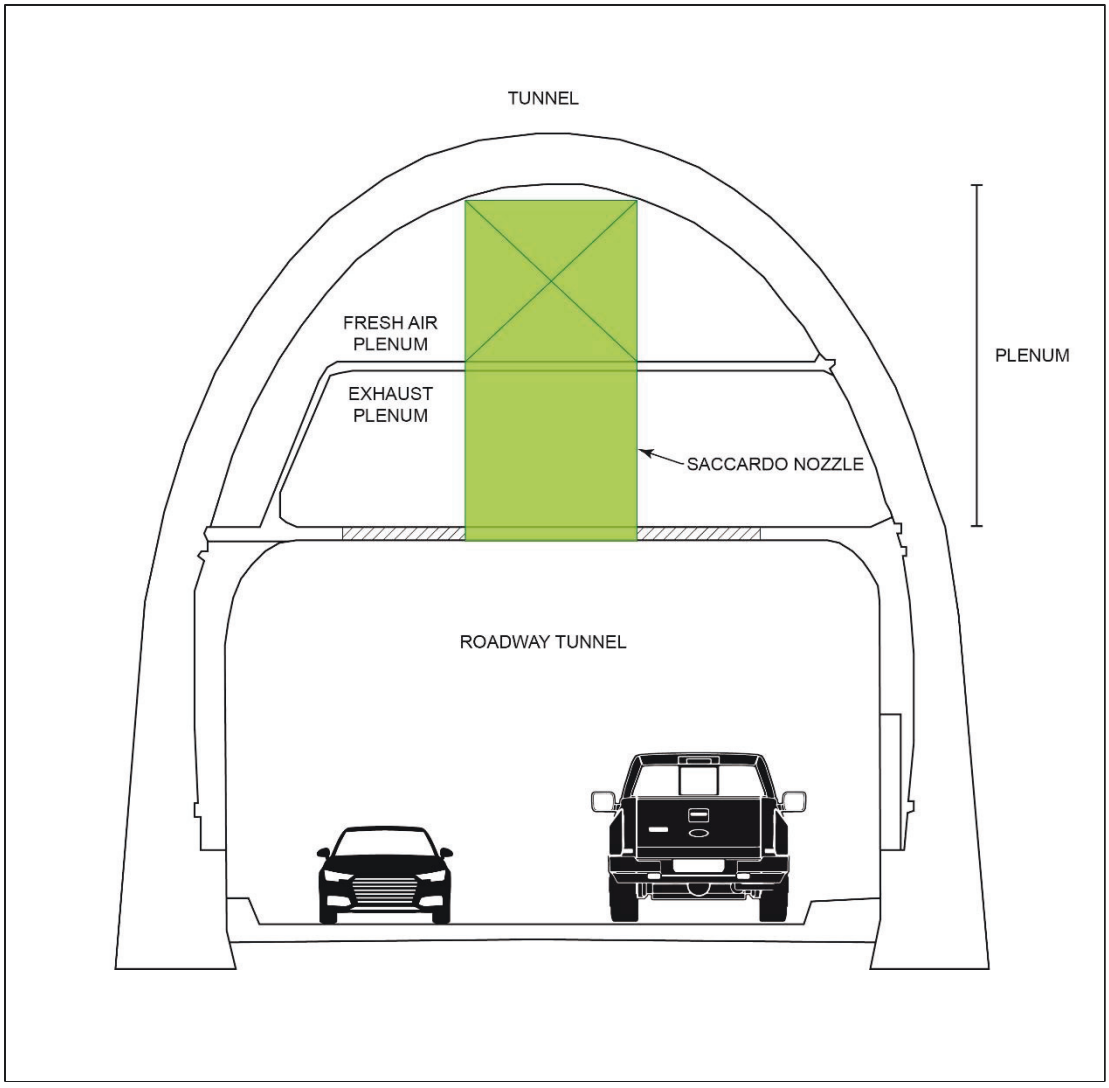



**Figure 16 Cross Section of Proposed Build Alternative Option 1**

### Rehabilitation and Ventilation Upgrades for Bore 3 Only

Under this alternative, rehabilitation and ventilation upgrades would be completed only for Bore 3, leaving Bores 1 and 2 in their current condition. Rehabilitation and ventilation measures would include all of the items described in Section 1.3, including the addition of jet fans. This alternative was developed because of the historic nature of Bores 1 and 2; rehabilitating only Bore 3 would avoid any impacts to the two historic bores. However, this alternative does not meet the purpose and need of this project. The purpose and need of this project state that the project should rehabilitate Caldecott Tunnel Bores 1, 2, and 3 as well as preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. This alternative would only rehabilitate one bore and would not preserve the structural integrity of the remainder of the tunnel, improve ventilation performance or fire-fighting operational response throughout all three bores, or extend the service life of all three bores.

### Rehabilitation of Bores 1, 2, and 3, without Ventilation Upgrades

This alternative would include all the rehabilitation measures described in Section 1.3, but would not include ventilation upgrades, either Saccardo Nozzles or jet fans, for any of the three bores. This alternative was also designed to avoid impacts to the historic Bores 1 and 2, as the ventilation upgrades could impact the historic integrity of the bores. However, this alternative does not meet the purpose and need of this project. The purpose and need of this project state that the project should rehabilitate Caldecott Tunnel Bores 1, 2, and 3 as well as preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. By not including any ventilation upgrades, this alternative would not improve the ventilation performance or fire-fighting operational response.

## 1.8 PROJECT FEATURES

This project contains standardized project features, which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the project. These measures are addressed in more detail in the Environmental Consequences sections found throughout Chapter 2 and are included in Appendix B.

## Table 1. Project Features

| Resource Area | Project Feature Number | Description |
|---|---|---|
| **Aesthetics and Visual Resources** | PF-AES-1 | **Vegetation Preservation**: Project construction activities will avoid and protect existing vegetation where feasible outside the bores from the contractor's operations, equipment, and materials storage. High visibility temporary fencing (THVF) will be placed around vegetation to be protected before roadway work begins. Truck watering for vegetation should be provided when automated irrigation is interrupted by construction. |
| **Aesthetics and Visual Resources** | PF-AES-2 | **Construction Staging**: Construction staging areas should be located in paved areas, if possible. |
| **Aesthetics and Visual Resources** | PF-AES-3 | **Erosion Control**: After construction, all areas cleared within the Project limits for uses such as contractor access, staging, and trenching operations would be treated with appropriate erosion control measures (such as mulch, hydroseed, and fiber rolls) where required. |
| **Aesthetics and Visual Resources** | PF-AES-4 | **Construction Lighting**: Construction lighting would be limited to within the area of work and avoid light trespass through the use of directional lighting and shielding as needed. |
| **Aesthetics and Visual Resources** | PF-AES-5 | **Construction Waste**: Unsightly materials, equipment storage and staging should be placed 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 sensitive receptors outside the project area. |
| **Cultural Resources** | PF-CUL-1 | **Discovery of Human Remains**: If remains are discovered during excavation, all work within 60 feet of the discovery would halt and Caltrans' Cultural Resource Studies Office would be called. Caltrans' Cultural Resources Studies Office Staff would assess the remains and, if determined human, would 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 would contact the Native American Heritage Commission who would then assign and notify a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on respectful treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable. |
| **Cultural Resources** | PF-CUL-2 | **Discovery of Cultural Materials:** If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a Caltrans qualified archaeologist is contacted to assess the nature and significant of the find. |
| **Greenhouse Gas Emissions (GHG)** | PF-GHG-1 | **For CEQA: Emissions Reductions for CEQA:** Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, and the use of |

| Resource Area | Project Feature Number | Description |
|---|---|---|
| | | construction best management practices, would result in reducing GHG emissions for CEQA from construction activities, including but not limited to:<br>1. Regular vehicle and equipment maintenance,<br>2. Limit idling of vehicles and equipment onsite,<br>3. If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material,<br>4. Use solar-powered signal boards, if feasible. |
| **Paleontology** | PF-PAL-1 | **Discovery of Paleontological Resources:** If unanticipated paleontological resources are discovered at the job site, do not disturb the resources and immediately: 1) stop all work within a 60-foot radius of the discovery, 2) secure the area, and 3) notify the engineer. Caltrans investigates the discovery and modifies the dimensions of the secured area if needed. Do not move paleontological resources or take them from the job site. Do not resume work within the radius of discovery until authorized. |
| **Tribal Cultural Resources** | PF-TCR-1 | **Tribal Cultural Resources:** In the event that archaeological resources (sites, features, or artifacts) or Tribal Cultural Resources (as defined by local consulting Tribes and CEQA) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find, in consultation with local Tribes to determine whether or not additional study is warranted. |
| **Transportation and Traffic** | PF-TRA-1 | **Traffic Management Plan:** A Final Traffic Management Plan (TMP) shall be developed by Caltrans during the Design Phase. The TMP shall include elements such as on- and off-ramp detours, suggested alternative routes, expected lane closures, haul routes, one-way traffic controls to minimize speeds and congestion, flag workers, and phasing to reduce delays and other impacts to local residents as feasible and maintain access for police, fire, and medical services in the area.<br>Prior to construction, Caltrans shall notify adjacent property owners, businesses, and agencies regarding construction activities, access changes, and lane closures and detours. In addition, Caltrans will coordinate with the local Fire Department and emergency response services prior to construction to minimize potential disruption to emergency services. |
| **Utilities and Service Systems** | PR-UTIL-1 | **Trash Management:** All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once daily from the project limits. |
| **Utilities and Service Systems** | PF-UTIL-2 | **Notify Utility Owners of Construction Schedule to Protect Utilities:** Caltrans would notify all affected utility companies, such as PG&E, of construction schedules for project work so that they can relocate the gas, telephone, cable, or overhead |

| Resource Area | Project Feature Number | Description |
|---|---|---|
| | | distribution lines prior to construction and minimize disruption of any utility service. |
| **Water Quality** | PF-WQ-1 | **Water Quality Best Management Practices:** The calculated disturbed soil area (DSA) is more than one acre, thus preparation of a stormwater pollution prevention plan (SWPPP) is required that includes Best Management Practices (BMPs) to reduce the pollutants in stormwater discharges during construction and permanently to the Maximum Extent Practicable (MEP). The construction activities need to comply with construction general permit (CGP) during construction. BMPs recommended for this project are as follows:<br>• If significant amount of water intrusion is encountered, non-storm water treatment system may be required, pending on the contamination of the water.<br>• The project will involve movement of dirt, demolished materials by construction equipment, adjacent to public roadways. Street sweeping should be utilized to remove tracked sediment.<br>• Sediment control/perimeter control measures such as temporary fiber rolls should be utilized where necessary as a sediment control measure to intercept sheet and concentrated flow runoff.<br>• Temporary drainage inlet protection should be utilized to prevent sediment from entering the current or proposed storm drains.<br>• Concrete wastes shall be managed using concrete washout facilities.<br>• Various waste management, materials handling, and other housekeeping items shall be used throughout the duration of the project. If stockpiles of various kinds are anticipated, it shall be maintained with the appropriate BMPs.<br>• The materials generated may require standard provisions for handling and testing to verify appropriate reuse or disposal options. |

## 1.9 PERMITS AND APPROVALS NEEDED

The project is not anticipated to require any permits from external agencies.

With the **Mitigation Measure Cultural 1** (**MM-CUL-1)** incorporated, the project would have less than significant effects to cultural resources. The measure's requirements include that Caltrans will prepare a Built Environment Treatment Plan, and Historic American Engineering Record (HAER) documentation. In consultation with Section 106 stakeholders and the State Historic Preservation Officer (SHPO) Caltrans will also develop a webinar, a virtual tour, conduct a limited number of in-person tours of Bores 1

and 2, and develop and install interpretive panels that discuss the history of the tunnels. These strategies are captured in a Memorandum of Agreement (MOA) negotiated between Caltrans as the CEQA and NEPA lead agency, the stakeholders, and the SHPO. The MOA was executed on May 12, 2025, and is included in Appendix J.

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

## 2.1 TOPICS CONSIDERED BUT DETERMINED NOT TO BE RELEVANT

This chapter discusses the potential environmental impacts of the tunnel rehabilitation project and the recommended avoidance, minimization and/or mitigation measures (AMMs), and mitigation measures (MMs). The AMMs and MMs are summarized in Appendix C. A list of abbreviations used in this document is available in Appendix D, the list of technical studies prepared for this project is available in Appendix E, and the list of references is available in Appendix F. In addition, Caltrans' Title VI Policy Statement is included in Appendix G and the biological species list for this project is in Appendix H. This chapter also addresses issues of concern pursuant to CEQA and NEPA.[1] Please see Chapter 3 for the CEQA Checklist and Appendix A for the Individual Section 4(f) evaluation.

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

**Land Use**

The project study area is a transportation corridor surrounded by land uses that include vacant hillside residential land, mixed housing type residential land, resource conservation area, and East Bay Regional Park District land. The resource conservation area and the land owned by the East Bay Regional Park District covers the top of the tunnel and will not be impacted by the project's rehabilitation work. Land use types within and adjacent to the project study area are shown below in Figure 17.

[1] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation. Climate change, environmental justice, and cumulative effects analysis are some topics impacted.

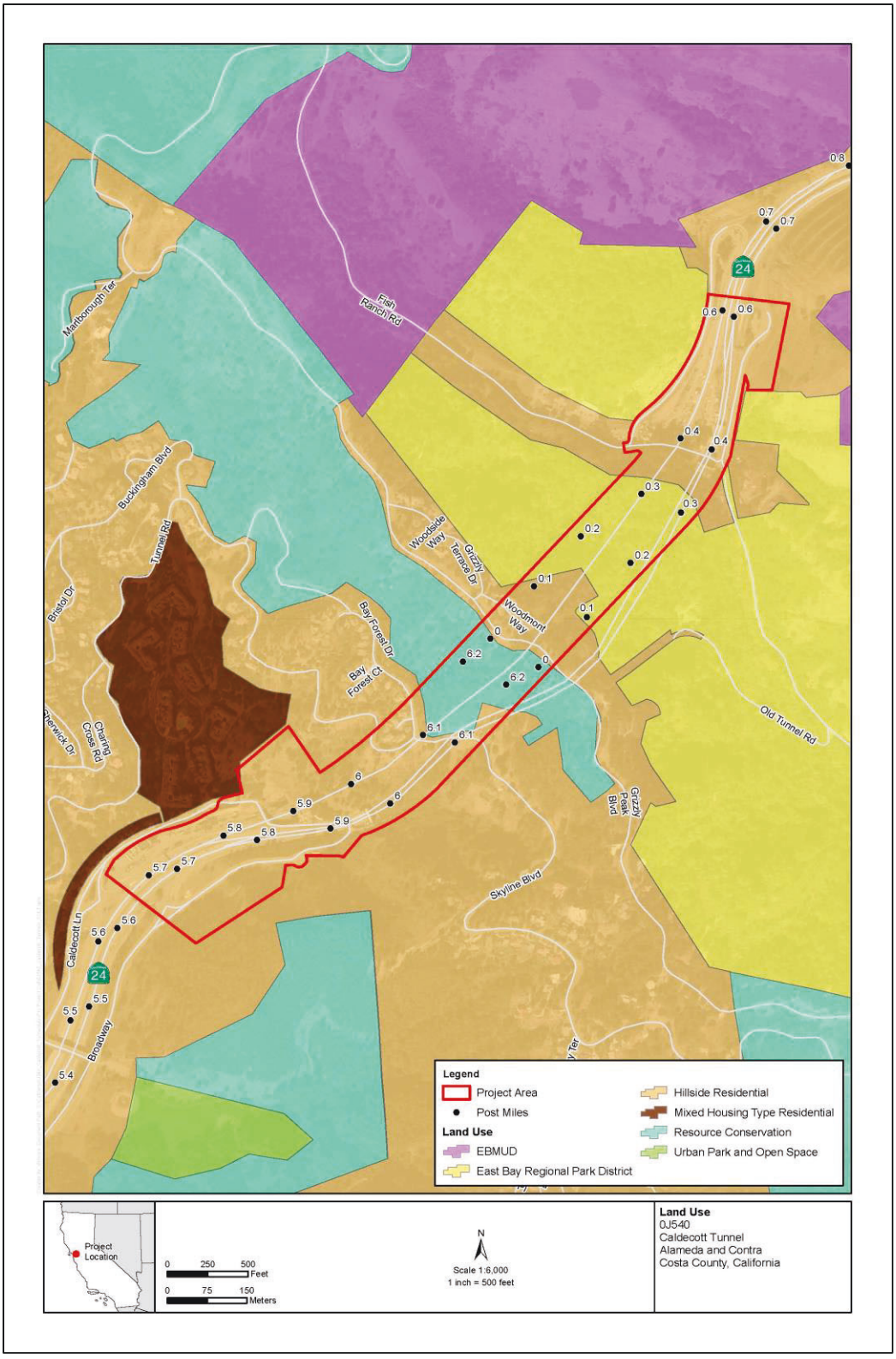



**Figure 17. Land Use Designations**

As part of this project, Caltrans conferred with Alameda County, Contra Costa County, the City of Oakland, and the City of Orinda to determine if there are any current or proposed developments near the project area. There are no current or proposed developments within half a mile of the project area.

The preferred Build Alternative will not require any permanent acquisition of properties outside of the Caltrans right of way (ROW). The preferred Build Alternative and the No Build Alternative would serve existing and planned land uses in the area. Relevant regional, local, and area plans and policies that are applicable to the project include: Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) Plan Bay Area 2050, Alameda County Transportation Commission (ACTC) Countywide Transportation Plan, Alameda County General Plan, City of Oakland General Plan, City of Oakland Department of Transportation (OakDOT) Strategic Plan, the Contra Costa County General Plan, and the City of Orinda General Plan.

### Coastal Zone

The project is not located within the California Coastal Zone. As such, no coastal resources would be affected by construction or operation of the project.

### Growth

The project would not alter the number of travel lanes along SR-24 or local roads. The project would neither provide new access to an undeveloped area nor influence development opportunities by expanding capacity. Temporary construction activities are not expected to increase the demand for housing. As a result, implementation of the project would not induce growth.

### Environmental Justice[2]

> *Please note: Executive Order (EO) 12898 has been rescinded pursuant to EO 14173, and EO 14096 has been rescinded pursuant to EO 14148. However, consideration of environmental justice was included in the analyses for the Draft Environmental Document, prior to the rescission of EOs 12898 and 14096, and therefore has been retained in the Final Environmental Document for informational purposes only.*

### Farmlands

The project study area is not located near any farmlands or lands zoned for agricultural uses. As such, the project would not irreversibly convert farmland to nonagricultural use.

### Floodplains

The project is not located within a 100-year base floodplain. As such, there will be no effects to the 100-year floodplain.

[2] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation. Environmental justice is one of the topics impacted. References in this Final Environmental Document to “environmental justice” are for CEQA purposes only.

### Parks and Recreational Facilities

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

The project area is located adjacent to land owned by the East Bay Regional Parks District. However, all rehabilitation work will be conducted within the Caltrans right of way and will not impact any park or recreational facilities.

### Wild and Scenic Rivers

The project study area does not traverse any rivers designated as part of the National Wild and Scenic Rivers System. As such, no wild or scenic rivers would be affected by construction or operation of the project.

### Timberlands

The project study area is not located near timberlands. Therefore, the project would not convert timberlands to a non-timberland use or otherwise affect timberlands.

### Community Character and Cohesion

NEPA[3], as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest. This requires considering adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

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

However, impacts from the preferred Build Alternative would be limited to temporary visual, traffic, and noise impacts. These temporary construction impacts will be addressed by **PF-AES-1 through PF-AES-5, AMM-AES-1 and AES-2, PF-TRA-1, and AMM's NOI-1 through NOI-8** (See Appendix B and Appendix C). This project will not affect the community cohesion of the area or availability of public facilities or services.

The existing footprint as described in Section 1.4.2 does not include transit facilities, pedestrian crossings, bicycle crossings, railroads, and waterways. Bicyclists and

[3] As of April 11, 2025, the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations contained in 40 Code of Federal Regulations (CFR) 1500 et seq have been repealed and are longer posted.

pedestrians are prohibited from using this freeway facility. Considering the tunnel geometry, it is infeasible to build out complete street features without modifying the tunnel structurally. Furthermore, such tunnel modification is outside of the scope of this project.

**Relocations and Real Property Acquisition**

This project will be conducted entirely within the Caltrans right of way and will not require any relocations or real property acquisition.

# 2.2 HUMAN ENVIRONMENT

## 2.2.1 Utilities/Emergency Services

### AFFECTED ENVIRONMENT

**Utilities**

Power, gas, telecommunications, and water facilities are located within the project area. Pacific Gas & Electric (PG&E) provides gas and electricity service, and American Telephone & Telegraph Company (AT&T) provides telecommunication service. East Bay Municipal Utility District (EBMUD) manages water utilities in the project area.

**Emergency Services**

Police and traffic enforcement services in the project area are provided by the City of Oakland, the City of Orinda, and the California Highway Patrol. Fire protection and emergency medical services are provided by the City of Oakland Fire Department and the Moraga-Orinda Fire District. The City of Oakland Fire Station No. 7 is located approximately five miles west of the project area, and the Moraga-Orinda Fire District Station 45 is located approximately five miles northeast of the project area.

### ENVIRONMENTAL CONSEQUENCES

**Preferred Build Alternative**

*Temporary Construction Impacts*

**Utilities**

Construction of the preferred Build Alternative may require protections, adjustments, or relocations of PG&E, AT&T, and water facilities. Final verifications of utility locations would be performed during the project's Design Phase, which may reveal additional utility relocations. For utilities that require relocation, it is anticipated that these utilities would be relocated prior to construction. Implementation of **Project Features UTIL-1**, trash management, and **PF-UTIL-2**, notifying utilities of construction schedule, would reduce any impacts to utilities during construction.

**Emergency Services**

During construction of the preferred Build Alternative, temporary lane closures on SR-24 would be required. These closures could result in short-term, temporary impacts to

emergency service providers. These impacts would be addressed in a Traffic Management Plan (TMP) as outlined in **Project Feature TRA-1** that will be developed during the Design Phase of the project and in consultation with emergency service providers. The TMP will address the potential traffic impacts as they relate to staged construction, ramp detours, alternative freeway routes, and other traffic handling concerns associated with construction of the project. Additionally, all closure plans, including detour information, will be notified to the public prior to construction via press releases/media alerts, paid advertisements, and the project website. Signs specifying closure times of ramps will be posted at least 72 hours in advance. All closures will be coordinated with the CHP, local law enforcement, local Fire Departments, and emergency services on contingency plans. Final ramp detour routes will also be coordinated with local agencies of jurisdiction.

*Permanent Impacts*

### Utilities and Emergency Services

The preferred Build Alternative would not increase the demand for additional utility services in the area and would not permanently impact emergency services. Therefore, there would be no permanent impacts to utilities or emergency services.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no rehabilitation and therefore no impacts to utilities or existing emergency services.

## AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No utility or emergency service-related avoidance, minimization, and/or mitigation measures would be required for the project. The following Project Features, also listed in Appendix B, would be implemented:

**PF-UTIL-1: Trash Management:** All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once daily from the project limits.

**PF-UTIL-2: Notify Utility Owners of Construction Schedule to Protect Utilities:** Caltrans would notify all affected utility companies, such as PG&E, of construction schedules for project work so that they can relocate the gas, telephone, cable, or overhead distribution lines prior to construction and minimize disruption of any utility service. As plans are further developed during the Design Phase, should any utility impacts be identified, additional Avoidance and Minimization measures may be applied.

## 2.2.2 Traffic and Transportation/Pedestrian and Bicycle Facilities

### REGULATORY SETTING[4]

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

### AFFECTED ENVIRONMENT

#### Access, Circulation, and Parking

This project is located along SR-24, an eight-lane divided freeway. The tunnels of Bore 1 and Bore 2 each contain two eastbound travel lanes. The tunnel of Bore 3 contains two westbound travel lanes. Bore 4, which is not part of the project, also contains two westbound travel lanes. The corridor serves local traffic from the Interstate (I) 580/I-980 interchange in Oakland to the I-680 junction in Walnut Creek. There is no parking along the section of SR-24 within the project area.

#### Traffic Management Analysis

A Final Traffic Management Plan (TMP) will be created during the Design Phase to guide the construction process for the rehabilitation and ventilation upgrade project for the Caldecott Tunnel Bores 1, 2, and 3 on SR-24. A Traffic Management Analysis was conducted due to the amount of expressed public concern for traffic management during construction of this project. Concepts considered by the preliminary traffic management analysis include bore closures, ramp closures, ramp detours and advanced warning signs, are subject to change during the Design Phase of the project when the Final TMP is developed and delay amounts are determined. The TMP will aim to ensure safety and functionality of the Tunnel system while reducing disruptions to regular traffic flow during construction. The following Project Feature, also listed in Appendix B, would be implemented:

> **PF-TRA-1 Traffic Management Plan:** A Final Traffic Management Plan (TMP) shall be developed by Caltrans during the Design Phase. The TMP shall include elements such as on- and off-ramp detours, suggested alternative routes, expected lane closures, haul routes, one-way traffic controls to minimize speeds and congestion, flag workers, and phasing to reduce delays and other impacts to local residents as feasible and maintain access for police, fire, and medical services in the area.

[4]Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation.

Prior to construction, Caltrans shall notify adjacent property owners, businesses, and agencies regarding construction activities, access changes, and lane closures and detours. In addition, Caltrans will coordinate with the local Fire Department and emergency response services prior to construction to minimize potential disruption to emergency services.

Different methods to ensure safety, productivity, and minimal disruption to construction while maintaining traffic flow for commuters will be used. The Final TMP will consider two main features to manage traffic congestion during construction operations within the tunnels: i) overnight closures of individual bores, with one bore of the Tunnel closed at a time (two of four lanes closed in each direction), from 9 p.m. to 5 a.m.; and ii) 55-hour weekend closures of individual bores with one bore of the Tunnel closed at a time (two of four lanes closed in each direction) over the weekend.

At least one bore (two lanes) in each westbound and eastbound direction will be open for travel at all times. Development of the Final TMP will aim to balance the need for efficient construction while reducing the impact on commuters. Caltrans will work to reduce the temporary disruption of traffic flow and inconvenience for commuters during construction. These disruptions may result in ramp detours and delays that are more than 15 minutes during commute hours. Methods such as maximizing project construction work hours, setting up safety buffer zones, and providing clear ramp detours and alternative freeway routes, are intended to complete the project efficiently while keeping both workers and drivers safe. Single bore closures give construction crews the opportunity to focus on tasks that cannot be safely or efficiently done during partial lane closures.

The closure of Bores 2 and 3 will not require closures of on- or off-ramps and associated ramp detours. The closure of Bore 1 will require closures of on and off-ramps, as described in the section below. There are no proposed detours for SR-24 traffic to be directed to local streets such as Fish Ranch Road, Grizzly Peak Boulevard, or Claremont Avenue as an alternative route for passage through the Caldecott Tunnel.

**Ramp Closures and Detours**

During construction, the closure of Bore 1 will require the closure of the eastbound SR-24 Tunnel Road/Broadway on-ramp on the Oakland side of the tunnel and the closure of the eastbound SR-24/Fish Ranch Road off-ramp (Exit 7A) on the Orinda side of the tunnel. Both ramp closures will require ramp detours. The only complete closures during the weekdays will be for these on- and off- ramps. This is the only time that traffic detours to other on- and off- ramps on SR-24 will occur.

Detour 1: Eastbound SR-24 Tunnel Road/Broadway on-ramp.

The closure of the eastbound SR-24 Tunnel Road/Broadway on-ramp will require a detour westward along Broadway to the nearest available eastbound SR-24 on-ramp located at Brookside Avenue and Broadway (1.5 miles).

Detour 2: Eastbound SR-24 Fish Ranch Road off-ramp (Exit 7A).

The closure of eastbound SR-24 Fish Ranch Road off-ramp (Exit 7A) will require

that traffic continue on eastbound SR-24 until the next available exit at Wilder Road (Exit 7B). Eastbound SR-24 traffic wishing to access Fish Ranch Road, Grizzly Peak Boulevard and Claremont Avenue on the Orinda side of the tunnel, will be detoured to westbound SR-24 Wilder Road on-ramp. Traffic will merge with westbound SR-24 and immediately take the westbound Fish Ranch Road off-ramp (Exit 7A). Traffic will continue along the frontage road (Old Tunnel Road) until it meets Fish Ranch Road. The closure of the eastbound SR-24 Fish Ranch Road off-ramp will add approximately 1.5 miles for those wishing to access Fish Ranch Road from eastbound SR-24.

These ramp detours are designed to maintain local commuter access and traffic flow on the mainline, but they may change during the project Design Phase based on traffic conditions, delay estimates, and project requirements.

### Public Transit

Public transportation within the study area includes the Alameda-Contra Costa Transit District (AC Transit) bus line 701, known as the Pittsburg/Bay Point Transbay Early Bird. This bus runs from the Pittsburg/Bay Point Bay Area Rapid Transit Station to the Salesforce Transit Center in San Francisco on weekday mornings. The Final TMP will require coordination with AC Transit as this bus may require an alternative route and/or alteration of service timing and/or frequency during tunnel closures.

### Bicycle/Pedestrian Access

The existing bicycle paths in the vicinity of the project area are not part of SR-24, the Caldecott Tunnel, or an associated Caltrans facility. The existing project footprint as described in Section 1.4.2 does not have bicycle or pedestrian access. Bicyclists and pedestrians are prohibited from using this freeway facility. The scope of the project for the rehabilitation of Bores 1, 2, and 3 does not include the construction or alteration of bicycle or pedestrian paths. It is infeasible to build out complete street features without modifying the tunnel structurally and such tunnel modification is outside of the scope of this project.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

*Temporary Construction Impacts*

During construction, partial road closures will be required of the Caldecott Tunnel Bores 1, 2 and 3 on SR-24. Lane closures, CMS, construction zone enhanced enforcement program (COZEEP), alternative freeway routes, and ramp detours will be included as part of the Final TMP to decrease traffic impacts. CMS will be implemented throughout the area to provide information to drivers. These signs will help guide commuters through alternative freeway routes, on-ramp and off-ramp detours, inform them of potential delays, and ensure they are aware of any changes to traffic patterns. In addition, commuters will be encouraged to carpool and use public transit such as BART and AC Transit. The Final TMP will be developed during the Design Phase of the project, and will assess delays, and minimize temporary traffic impacts due to construction during both off-peak and peak-hours.

As SR-24 is a heavily travelled corridor, only one bore (two lanes) will be closed in each direction at any given time during peak hours. The preferred Build Alternative will require both temporary overnight closures from 9 p.m. to 5 a.m. and extended duration weekend closures for up to 55 hours for Bores 1, 2 and 3. All closures will maintain at least one bore (two out of four lanes) open to the public in each westbound and eastbound direction. Bore 1 or Bore 2 may be closed at the same time as Bore 3. Additionally, alternative westbound and eastbound routes will be suggested via SR-4 or I-580 and advance warning will be provided to the public.

The closure of Bore 1 will require the closure of the eastbound SR-24 Tunnel Road/Broadway on-ramp on the Oakland side of the tunnel and the closure of the eastbound SR-24/Fish Ranch Road off-ramp (Exit 7A). Traffic will be detoured to the nearest available alternative on- and off-ramp. The closure of Bores 2 and 3 will not require closures of on- or off-ramps and associated detours. There are no proposed detours for SR-24 traffic to be directed to Fish Ranch Road, Grizzly Peak Boulevard and Claremont Avenue for passage through the Caldecott Tunnel. Caltrans will also work with navigation providers such as Google Maps, Apple Maps, Waze, etc. to ensure that drivers are not redirected or routed onto local streets during construction.

All closure plans will be distributed to the public prior to construction via press releases, media alerts, paid advertisements, and the project website. Signs specifying closure times of the ramps will be posted at least 72 hours in advance. All closures will be coordinated with the CHP, local agencies of jurisdiction, and emergency services.

Bores 1, 2, and 3 will be required to be closed overnight or for 55-hour weekend closures intermittently, but all bores will never be closed at the same time. The total timeline of construction of the ventilation, fire life safety systems and tunnel upgrades is estimated to take up to approximately 3 years. Additional time will be required for testing and approval by the state fire marshal.

55-Hour Weekend Closures

One of the TMP strategies that will be considered for the project is the use of 55-hour weekend closures. These closures would take place over weekends usually starting from Friday at 9 p.m. to Monday at 5 a.m., giving construction crews a longer, uninterrupted work period. This extended closure allows for more complex tasks to be completed without the challenges of managing weekday traffic. The use of 55-hour closures will ensure worker safety by allowing significant repairs and other important tasks to be completed without the interference of regular traffic. These closures are expected to be a key part of the traffic management plan, as they enable construction teams to make considerable progress on tunnel rehabilitation with minimal impact on weekday commuters.

However, while this approach may reduce disruptions during the workweek, it could still cause delays for weekend travelers. Traffic flow during construction will be closely monitored, and appropriate alternative route options will be provided to decrease delays and to direct drivers to use other State Routes and Highways.

Overnight Closures of Individual Bores

In addition to 55-hour weekend closures, overnight closures of individual bores of the

Caldecott Tunnel are also being considered. These closures would take place at specific times overnight. For example, closures could occur on weekdays or weekends from 9 p.m. to 5 a.m.

These individual bore closures give construction crews the opportunity to focus on tasks that need full access to the tunnel such as major structural repairs or equipment installations. While these closures can improve worker safety and productivity, they may cause inconvenience for commuters, especially if they happen during peak travel hours. The goal is to limit closures to times when traffic is lighter and provide alternative routing options that allow drivers to use other routes to navigate around the closures.

Proposed Alternative Freeway Routes to SR-24 During Closures of Individual Bores

During the 55-hour weekend closures and overnight closures of individual bores, alternative routes are also being considered for commuters to avoid traffic delays associated with the reduced capacity of the Caldecott Tunnel. For example, eastbound travelers on SR-24 can use the route: westbound I-580 to northbound I-80, then eastbound SR-4, or eastbound I-580 to northbound I-680. For westbound traffic on SR-24, options include northbound I-680 to westbound SR-4, southbound I-80 to eastbound I-580, or southbound I-680 to westbound I-580. See Figures 18 and 19 for visual reference.

**Figure 18: Suggested Eastbound Alternative Freeway Route**

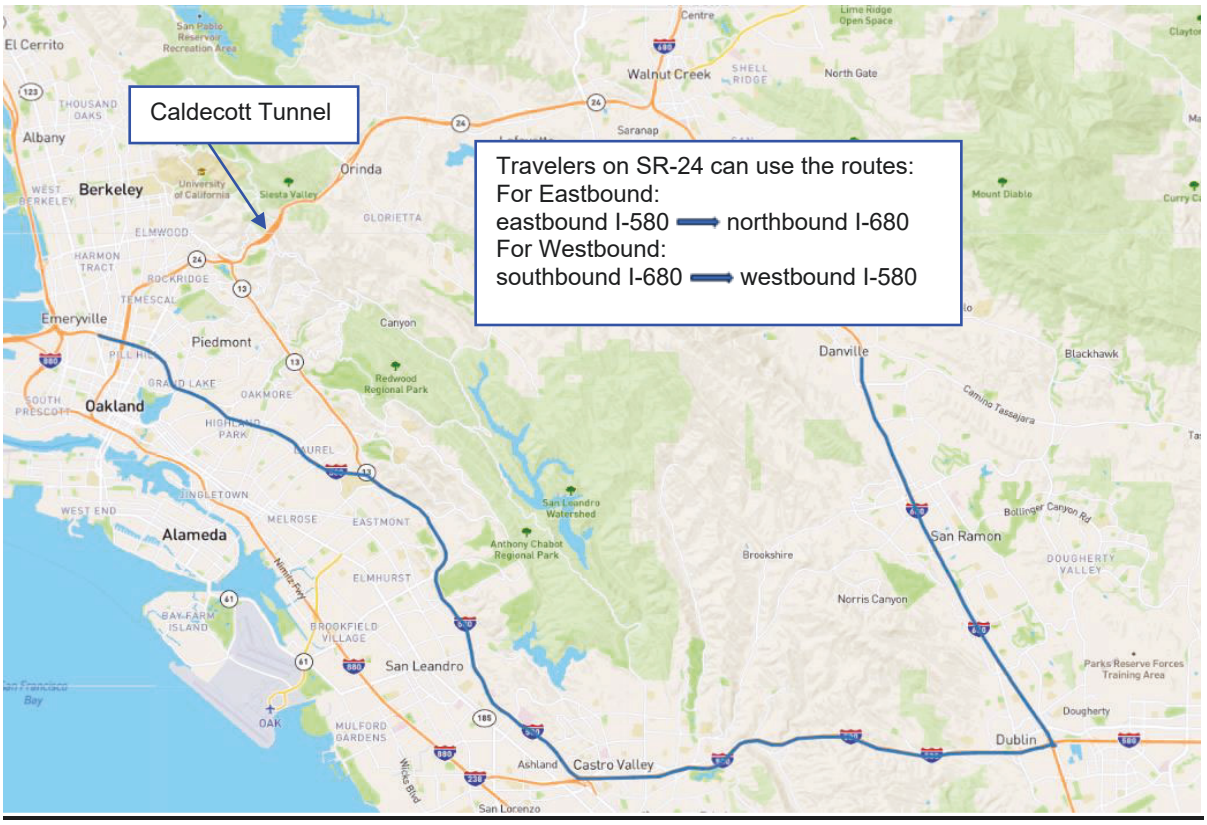



**Figure 19 Suggested Westbound Alternative Freeway Route**

Methodology for Traffic Management

The methods employed for traffic management will depend on monitoring of traffic patterns, the timing of construction, and balancing the completion of work while minimizing delays and maintaining traffic flow for commuters. The plan for work hours is still under review, and it is unclear which approach will be used. Caltrans' approach will be finalized in the Design Phase in a TMP. To keep workers and drivers safe, buffer lanes and safety zones will be considered during the construction. These zones will be used, when possible, to create a safe distance between the work and regular traffic.

Although Caltrans will work to reduce delays, some disruptions will happen during both the 55-hour weekend closures and overnight closures of individual bores. Commuters will be advised to plan ahead and use alternate routes to avoid delays during construction that might extend to more than 15 minutes.

District Lane Closure Review Committee

Lane closures may cause temporary disruption of traffic flow during construction, often resulting in long detours and delays that may be more than 15 minutes during commute hours. These closures, outlined in Caltrans Deputy Directive 60-R2 (DD-60-R2) on "Transportation Management Plans," will require approval from the District Lane Closure Review Committee (DLCRC). The DLCRC consists of Deputy District Directors from Construction, Design, Maintenance, Traffic Operations, as well as the District Public Information Officer (PIO). This committee is responsible for reviewing and approving road closures that could lead to substantial traffic delays.

Traffic Switches

Traffic switches may also be provided to maintain traffic flow during the peak periods during morning and afternoon commute times. This will involve temporarily converting Bores 2 and 3 to provide reversible traffic, as further described in this section below. When either an eastbound or westbound bore is closed for construction, others will remain open, so that only one bore will be closed at a time in each direction.

The project may require long-term traffic switches between Bores 2 and 3. Typically, traffic going westbound during the AM peak period is heavier, so switching traffic between Bores 2 and 3 may help mitigate congestion during this time. Similarly, in the PM, traffic heading eastbound is heavier, and implementing the switch during this period may help alleviate delays and maintain smoother flow.

For example, there may be periods of time where traffic direction either westbound or eastbound may be switched at Bore 3 to allow for essential repairs inside Bore 1 or Bore 2 when one of them is closed. And when Bore 3 is closed for repair, a traffic switch at Bore 2 may be provided. These switches could last for extended periods, potentially around 90 minutes per switch (twice a day).

*Permanent Impacts*

There will be no permanent impacts to traffic and transportation once the project is complete as the project will not change capacity or routes within the project area. There will be no permanent impacts to pedestrian and bicycle facilities once the project is complete as the project area does not have pedestrian and bicycle access.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no rehabilitation and therefore no impacts to traffic and transportation or pedestrian and bicycle facilities.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No traffic-related avoidance, minimization, and/or mitigation measures would be required for the project. The Project Feature **PF-TRA-1: Traffic Management Plan**, as discussed above in this Section and listed in Appendix B, would be implemented.

## 2.2.3 Visual/Aesthetics

### REGULATORY SETTING

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

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

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

### AFFECTED ENVIRONMENT

Information in this section is based on the Visual Impact Assessment (VIA) Memorandum (Caltrans 2024h). The purpose of the VIA is to document potential visual impacts caused by the project and to propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the amount of change that would occur as a result of the project, and predicting how the affected public would respond to or perceive those changes. This VIA follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* (FHWA 2015).

*Visual Resources and Scenic Resources*

The visual environment of SR-24 and the area adjacent to the project limits is suburban yet of considerable scenic quality. On the uphill side of the highway is the Parkwood community neighborhood, the view of which is partially screened from the project site by topography and vegetation. While vegetation is abundant, it is generally planted rather

than naturally occurring native species. Though areas near the project area are busy relatively near to residences, there are no visually unappealing views near the project site. From the project area, the greatest visual resource would be the view of San Francisco. Depending on the weather conditions, the San Francisco skyline is almost visible and appears to the viewer looking south. The SR-24 project corridor is a Designated State Scenic Highway from postmile (PM) R0.3/9.1 and was officially designated on October 22, 1982.

In Alameda County, a Landscape Freeway Classification exists between PM R1.85/R4.88 and R5.24/R5.89. Caldecott Tunnel's Bores 1 and 2 have been determined to be eligible for the National Register of Historic Places and are considered historic and a cultural resource.

*Visual Character and Visual Quality*

The visual character of the project will be compatible with the existing visual character of the corridor with the implementation of avoidance and minimization measures. Along the corridor, landscape planting includes trees, shrubs, and ground-cover plants. With appropriate aesthetic treatments applied to the rehab tunnel walls and ceiling using similar form, color and texture as the existing structure, visual impacts from the rehabilitation work would be rated as low with high compatibility of the visual character of the project.

The visual quality of the existing corridor is anticipated to not be altered by the project. If mature landscaping surrounding the scenic highway is not removed or killed by the project, contractor staging and/or storage areas, and proper aesthetic treatments are applied to the tunnel rehabilitation structures, then the current levels of vividness, intactness and unity are predicted to remain after project completion.

*Viewers*

*Neighbors* (people with views *to* the road) and *highway users* (people with views *from* the road) will be moderately affected by the project.

Both groups will have views of the project during construction. It may be possible for residents above the freeway to view construction operations. However, these impacts will be short term with respect to exposure.

Highway users will have proximity views of both the construction operations and project improvements. However, it is anticipated that the motorists' view of the improvement will be short in duration because they will focus their attention on their driving and traffic ahead. Sensitivity and exposure of highway users is predicted to be moderate to high, even though the duration of the impact will be relatively short per occurrence, as many motorists will have repeated exposures over time. It is anticipated that the average response of all viewer groups will be moderate to low.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

The installation of the Jet fan ventilation system casings would introduce a new man-made feature to each of the affected tunnel bores as shown in Figures 20 through 26. The aesthetic treatment applied onto the tunnel walls are subject to review in

accordance with Section 106 of the National Historic Preservation Act (NHPA) and Individual Section 4(f) Evaluation (Appendix A). Similarly, if the new roadway paving and striping resembles what motorists see along the freeway, then all elements are anticipated to result in moderate-low visual impacts. The project elements are not predicted to impact scenic vistas and scenic resources. There is a potential for temporary light and glare impacts during nighttime construction operation.

The continuous nightwork safety lighting will be perceptible in darkness, in views both from and to the roadway but visually compatible with the existing project corridor. Overall, visual change will be low in daylight and moderate to low in darkness. Highway travelers are anticipated to have a low sensitivity to this visual change, while adjacent residents are anticipated to have a moderate to low sensitivity, resulting in an overall moderate to low visual impact. Tunnel lightening may be upgraded to meet current Caltrans standards.

Replacement planting will occur where vegetation is removed. No mature trees are expected to be removed. Minor tree trimming will likely occur at the eastern entrance to the tunnel to facilitate the placement of new electrical generators and the installation of a security fence.

**Figure 20. Existing view of Caldecott Tunnel Bore 1, eastbound.**

**Figure 21. Photo simulation of proposed view of Saccardo Nozzle within Caldecott Tunnel Bore 1, eastbound.**

**Figure 22. Photo simulation of view of jet fans within Caldecott Tunnel Bore 1, eastbound.**

**Figure 23. Existing view of Caldecott Tunnel Bore 2, eastbound.**

**Figure 24. Photo simulation of view of jet fans within Caldecott Tunnel Bore 2, eastbound.**

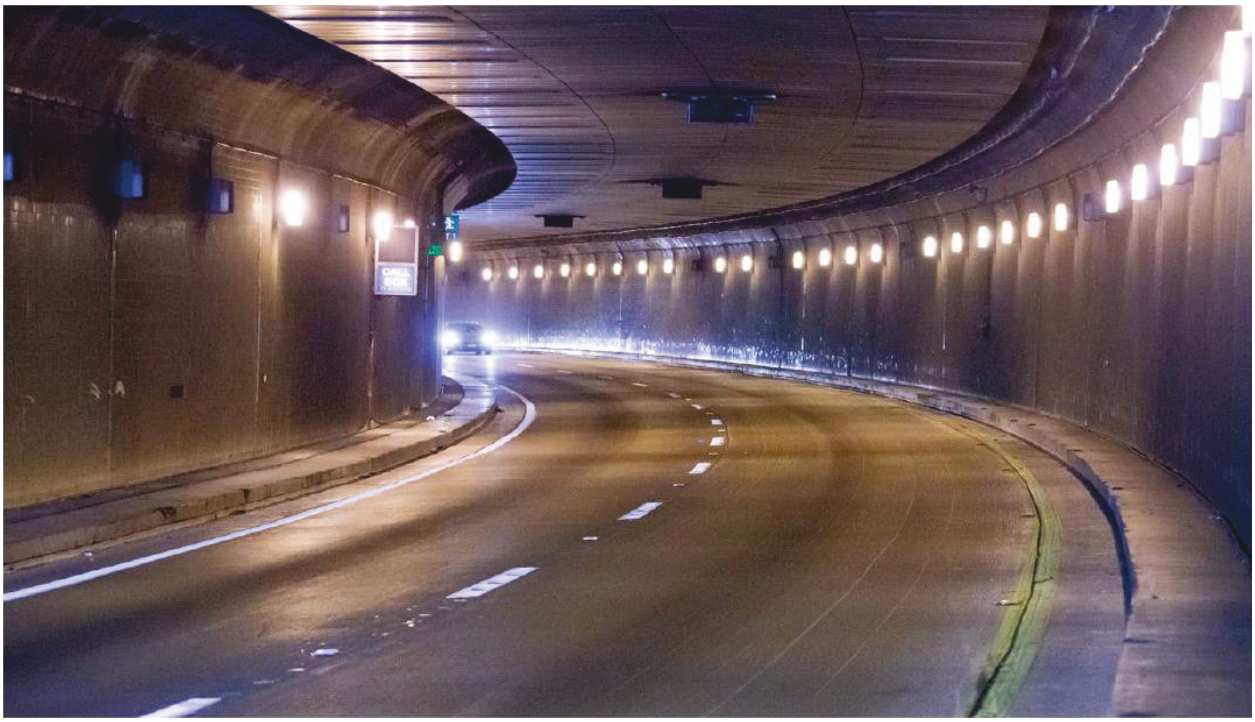


**Figure 25. Existing view of Caldecott Tunnel Bore 3, eastbound.**

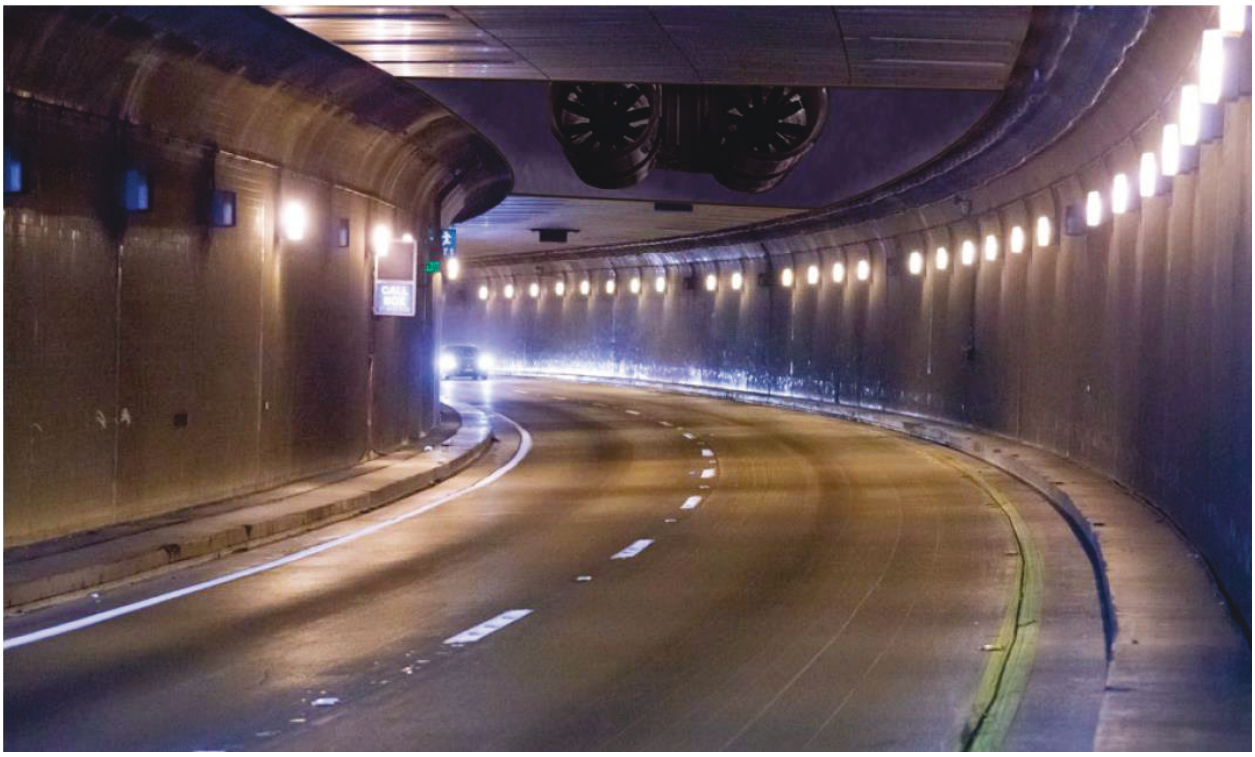


**Figure 26. Photo simulation of view of jet fans within Caldecott Tunnel Bore 3, eastbound.**

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no visual impacts.

## AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No mitigation measures are required. The following Project Features, also listed in Appendix B, would be implemented.

**PF-AES-1: Vegetation Preservation:** Project construction activities should avoid and protect existing vegetation where feasible outside the bores from the contractor's operations, equipment, and materials storage. High visibility temporary fencing (THVF) will be placed around vegetation to be protected before roadway work begins. Truck watering for vegetation should be provided when automated irrigation is interrupted by construction.

**PF-AES-2: Construction Staging:** Construction staging areas should be located in paved areas if possible.

**PF-AES-3: Erosion Control:** After construction, all areas cleared within the Project limits for uses such as contractor access, staging, and trenching operations would be treated with appropriate erosion control measures (such as mulch, hydroseed, and fiber rolls) where required.

**PF-AES-4: Construction Lighting:** Construction lighting would be limited to within the area of work and avoid light trespass through the use of directional lighting and shielding as needed.

**PF-AES-5: Construction Waste:** Unsightly materials, equipment storage and staging should be placed 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 sensitive receptors outside the project area.

The following Avoidance and Minimization Measures, also listed in Appendix C, would be implemented:

**AMM-AES-1: Tunnel Design:** The design, color and aesthetic treatment for the new rehab interior tunnel walls shall be similar in design to the existing adjacent Bore 4 inside tunnels and visually compatible and consistent with the existing structures along the corridor.

**AMM-AES-2: Replacement Planting:** Replacement highway planting should be installed where feasible in areas where existing trees and shrubs are impacted and if any are removed to maintain Classified Landscaped Freeways and Designated State Scenic Highway with three years Plant Establishment Period (PEP), to ensure a successful planting to support the aesthetics of the corridor.

**AMM-BIO-14: Replanting with Native Species:** All staging areas that are temporarily affected during construction would be revegetated with native plant species appropriate to the habitat that was disturbed in order to restore habitat values. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant

to Executive Order 13112 (Invasive Species).

## 2.2.4 Cultural Resources

### REGULATORY SETTING

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

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

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

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5

require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)[5] between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

## AFFECTED ENVIRONMENT

A Section 106 Summary Memo was prepared on September 26, 2024, by Caltrans Office of Cultural Resource Studies (OCRS) Professionally Qualified Staff (PQS) (Caltrans 2024f). The review was conducted in accordance with the January 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (PA) and the January 2015 *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Officer Regarding Compliance with Public Resources Code (PRC) Section 5024 and Governor's Executive Order W-26-92,* as addended 2019 (MOU).

The Area of Potential Effects (APE) represents the maximum extent of project-related activities for the project and contains all areas that could be permanently or temporarily affected by the work. The APE was established as the full width of the Caltrans Right-of-Way (ROW) between Postmiles (PM) ALA-24-R5.825 and CC-24-0.6, containing Tunnel Bores 1, 2, and 3, the associated West and East Portal buildings, and staging areas.

The Caldecott Tunnel Bores 1, 2, and 3 were listed as a City of Oakland Landmark in 1980, and Bores 1 and 2 were further determined eligible for the National Register of Historic Places (NRHP) in 1998. Bore 3 was determined to be ineligible for the NRHP. No archaeological resources have been identified within the APE.

Caltrans contacted the Native American Heritage Commission (NAHC) on January 19, 2024, requesting a search of their Sacred Lands File (SLF) to determine if there are historically significant or sacred sites within or near the project area. The NAHC responded that the project area was negative for cultural sites and provided a list of individuals from eleven indigenous groups for additional consultation. Letters initiating Section 106 of the National Historic Preservation Act (NHPA) and AB 52 were sent to each of the contacts on July 11, 2024. The Tribes contacted included: Amah Mutsun Tribal Band of Mission San Juan Bautista, Amah Mutsun Tribal Band, Confederated Villages of Lisjan Nation, Costanoan Rumsen Carmel Tribe, Guidiville Rancheria of California, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, North Valley Yokuts Tribe, The Ohlone Indian Tribe, Wilton

[5] The MOU is located on the SER at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf

Rancheria, and the Wuksachi Indian Tribe / Eshom Valley Band.

The Muwekma Ohlone Indian Tribe of the San Francisco Bay Area responded on July 15, 2024, with information about the tribe and the area. They concluded that formal tribal consultation is not necessary for this specific project and request to be notified in the future should any ancestral remains or signification subsurface features be uncovered. Caltrans will notify the Tribe of any changes or finds. Confederated Villages of Lisjan Nation responded on July 15, 2024 and would like to be notified of any changes to the project. Caltrans will notify the Tribe of any changes or finds. The Costanoan Rumsen Carmel Tribe responded on July 15 and requested consultation. A field meeting with the Tribe occurred on September 18, 2024 and requested to monitor construction. Consultation is ongoing and the Tribe has requested to be involved until the conclusion of the project.

On February 1, 2024, Caltrans Office of Cultural Resource Studies sent Section 106 consultation letters via email to Section 106 stakeholders with an invitation to attend a Section 106 stakeholder meeting scheduled for February 27, 2024.

Caltrans contacted Daniel Levy, President, Oakland Heritage Alliance (OHA); Elizabeth McElligott, Assistant Deputy Director, County of Alameda Parks, Recreation and Historical Commission; Tim Mollette-Parks, Acting Chair, City of Oakland Landmarks Preservation Advisory Board; Dominique Vogelpohl, Project Planner, Contra Costa County Historical Landmarks Advisory Committee; Donna Baarsch, Planning Technician, City of Orinda Historic Landmarks Committee; Ralph Anderson, President, Alameda County Historical Society; Cindy Heitzman, Executive Director, California Preservation Foundation (CPF); John Burgh, President, Contra Costa County Historical Society; Alison Burns, President, Orinda Historical Society; and Mary McCosker, President, Lafayette Historical Society. On February 12, 2024, Caltrans contacted Betty Marvin, Planner III, Historic Preservation, Oakland Cultural Heritage Survey. Follow-up emails and phone calls were made on February 14 and February 15 to organizations that had not replied.

Ms. McElligott replied on February 14 stating that the county reviewed the information Caltrans provided, and had no comments regarding the projects; Betty Marvin of the Oakland Cultural Heritage Survey replied on February 12 on behalf of the Advisory Board stating she did not expect to attend the meeting; Jon Haeber stated on February 15 that CPF might take part in the stakeholder meeting online, but ultimately did not attend; Contra Costa County Historical Society Executive Director Leigh Ann Davis expressed interest in the project but did not attend; Alison Burns stated on February 15 that the Orinda Historical Society board did not have any concerns about the project; Ms. McCosker replied on February 14 and said that she appreciated being invited to the meeting but did not feel the need to attend.

No replies were received from the Contra Costa County Historical Landmarks Advisory Committee or the Alameda County Historical Society.

The stakeholder meeting took place on February 27, 2024, and was attended by OHA President Daniel Levy and board member Naomi Schiff, and Donna Baarsch from the City of Orinda, as well as Caltrans representatives from OCRS. The meeting included discussion of two Caltrans Tunnels and Tubes projects, EA 0J540 (Caldecott Bores 1, 2

and 3) and EA 2Y780 (Posey Tube and Webster Tube Ventilation Upgrade Project) because of the similarity of the projects. The OHA's primary concern was maintaining the integrity of the portal buildings. They had no concerns regarding the ventilation upgrades. The City of Orinda's primary interest was traffic and road closures associated with construction. Both organizations requested updates as the project progresses.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

The installation of jet fans in Bores 1 and 2 will result in an adverse effect to the tunnel. As a result, OCRS completed a Historic Property Survey Report (HPSR) and Finding of Effect (FOE) Report for the project. Based on the engineering studies that have been completed for the project to date, the project will result in a Finding of Adverse Effect, pursuant to Stipulation X.C.1 of the PA.

The SHPO stated on January 14, 2025, that they had no objection to Caltrans's Finding of Adverse Effect for the project. OCRS will continue consultation with the Section 106 Stakeholders under Section 106 and solicit their input regarding ongoing mitigation strategies.

With the **Mitigation Measure Cultural 1** (**MM-CUL-1)** incorporated, the project would have less than significant effects to cultural resources. The measure's requirements include that Caltrans will develop a webinar, virtual tour, conduct a limited number of in-person tours of Bores 1 and 2, and develop and install interpretive panels that discuss the history of the tunnels. These strategies are captured in a Memorandum of Agreement (MOA) negotiated between Caltrans as the CEQA and NEPA lead agency, the stakeholders, and the SHPO. The MOA was executed on May 12, 2025, and is included in Appendix J.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to cultural resources.

## AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following Mitigation Measure, also listed in Appendix C, would be implemented:

**MM-CUL-1: Historic Resource Preservation:** Prior to construction, Caltrans will prepare a Built Environment Treatment Plan, and HAER (Historic American Engineering Record) documentation. In consultation with Section 106 stakeholders and the State Historic Preservation Officer (SHPO), Caltrans will develop a webinar and virtual tour and conduct a limited number of in-person tours of Bores 1 and 2. After construction, Caltrans and Section 106 stakeholders will develop and install interpretive panels with information on the history of the tunnels. These strategies are captured in a Memorandum of Agreement (MOA) negotiated between Caltrans as the CEQA and NEPA lead agency, the stakeholders, and the SHPO.

The following Avoidance and Minimization Measures and Project Features, also listed in Appendix C, would be implemented:

**AMM-TCR-1: Tribal Cultural Resources:** Prior to the initiation of construction for the project, the Project contractor, staff, and construction crews shall be made aware of the potential to encounter cultural resources and Tribal Cultural Resources (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants) through a presentation provided by an archaeologist and a representative from local consulting Tribes.

**AMM-TCR-2: Tribal Cultural Resources:** Native American monitoring will occur during construction, as determined through consultation among Caltrans and interested Native American Tribes.

No additional avoidance, minimization, or mitigation measures are required. The following Project Features, also listed in Appendix B, would be implemented:

**PF-TCR-1: Tribal Cultural Resources:** In the event that archaeological resources (sites, features, or artifacts) or Tribal Cultural Resources (as defined by local consulting Tribes and CEQA) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find, in consultation with local Tribes to determine whether or not additional study is warranted.

**PF-CUL-1: Discovery of Human Remains:** If remains are discovered during excavation, all work within 60 feet of the discovery would halt and Caltrans' Cultural Resource Studies office would be called. Caltrans' Cultural Resources Studies Office Staff would assess the remains and, if determined human, would 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 would contact the Native American Heritage Commission who would then assign and notify a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on respectful treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

**PF-CUL-2: Discovery of Cultural Materials:** If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a Caltrans qualified archaeologist is contacted to assess the nature and significant of the find.

# 2.3 PHYSICAL ENVIRONMENT

## 2.3.1 Water Quality and Stormwater Runoff

### REGULATORY SETTING[6]

#### Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[7] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

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

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

[6] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation.

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

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[8] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

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

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that

[8] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

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

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

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

  Municipal Separate Storm Sewer Systems (MS4)

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

  The Department’s MS4 Permit, Order No. 2022-0033-DWQ (adopted on June 22, 2022, and effective on January 1, 2023) has three basic requirements:

  The Department must comply with the requirements of the Construction General Permit (see below);

  1. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
  2. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and

participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit, Order No. 2022-0057-DWQ (adopted on September 8, 2022 and effective on September 1, 2023) regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

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

**Section 401 Permitting**

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

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

## AFFECTED ENVIRONMENT

The following section summarizes the results of the Water Quality Study prepared for the Project (Caltrans 2024i).

### Receiving Water Bodies

The project limits are within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (Region 2).

The project is within the Bay Bridges, Berkeley Hydrologic Area, and Undefined Hydrologic Sub-Area (HSA# 203.30) from the west side and the San Pablo Hydrologic Unit, Pinole Hydrologic Area, and Undefined Hydrologic Sub-Area (HSA # 206.60) from the east side.

Runoff from the west of the project site flows into the local drainage system and Temescal Creek, which eventually discharges into San Francisco Bay Central. Temescal Creek is not in 2020-2022 TMDLS & 303(d) Listed Waterbodies.

Runoff from the east of the project site flows into the local drainage system to San Pablo Reservoir, which eventually discharges into San Pablo Bay.

The work is not within U.S. and State Waterbodies. The project is in a high-risk receiving watershed.

### Ground Water Information

There is no major ground water reservoir in the vicinity of the project area. The project is expected to encounter groundwater in forms of seepage and leakage water (i.e., dry weather flows).

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

*Temporary Impacts*

The construction activities expected to be involved for the project include grinding, paving, sealing, concrete demolition, concrete pouring and curing, grouting, stormwater, and non-stormwater management controls. The project is expected to encounter groundwater in forms of seepage and leakage water (i.e., dry weather flows). The project may also encounter non-stormwater during pressure washing during construction.

Grinding and resurfacing roadways will result in temporary water quality impacts if water during construction enters into storm drainage facilities. Additional sources of sediment that could result in increases in turbidity include uncovered or improperly covered active and non-active stockpiles, unstabilized construction staging areas, and construction equipment not properly maintained or cleaned. Earth moving and other construction activities can cause minor erosion and runoff of topsoil into the drainage systems within the project during construction, which can temporarily affect water quality.

Fueling and maintenance of construction vehicles could occur within the project site during construction, which would increase the risk of accidental spills or releases of fuels, oils, or other potentially toxic materials. An accidental release of these materials

could pose a threat to water quality if contaminants enter the local receiving waters and storm drains. The magnitude of the impact from an accidental release depends on the amount and type of material spilled.

Temporary impacts to existing water quality would result from staging and active construction areas, which could result in the release of fluids, concrete material, sediment & litter beyond the perimeter of the site. Impacts may include a change in localized pH and turbidity and other pollutants entering in active construction site and beyond the perimeter of the project area.

*Permanent Impacts*

No additional new impervious surface is and, as a result, there is no potential for increases in flows. The general flow patterns will be similar to pre-project conditions. Permanent erosion control measures such as hydroseeding, erosion control blankets, rock slope protection and permanent fiber rolls would be applied to all Disturbed Soil Areas (DSA) to minimize post-construction erosion in unpaved and bare ground which may be used as construction staging areas.

Trash and heavy metals associated with vehicle tire and break wear, oil and grease, and exhaust emissions are the primary pollutants associated with transportation corridors. Generally, roadway stormwater runoff has the following pollutants: total suspended solids, nitrate nitrogen, total Kjeldahl nitrogen, phosphorus, ortho-phosphate, copper, lead, and zinc. Caltrans will adhere to its Stormwater NPDES Permit, which prohibits discharging trash for the San Francisco Bay region.

**No Build Alternative**

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to water quality resources.

**AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

No water quality-related avoidance, minimization, and/or mitigation measures would be required for the project. The following Project Features, also listed in Appendix B, would be implemented:

**PF-WQ-1: Water Quality Best Management Practices:** The calculated disturbed soil area (DSA) is more than one acre, thus preparation of a stormwater pollution prevention plan (SWPPP) is required that includes Best Management Practices (BMPs) to reduce the pollutants in stormwater discharges during construction and permanently to the Maximum Extent Practicable (MEP). The construction activities need to comply with the construction general permit (CGP) during construction. BMPs recommended for this project are as follows:

- If significant amount of water intrusion is encountered, non-storm water treatment system may be required, pending on the contamination of the water.
- The project will involve movement of dirt, demolished materials by construction equipment, adjacent to public roadways. Street sweeping should be utilized to remove tracked sediment.

- Sediment control/perimeter control measures such as temporary fiber rolls should be utilized where necessary as a sediment control measure to intercept sheet and concentrated flow runoff.
- Temporary drainage inlet protection should be utilized to prevent sediment from entering the current or proposed storm drains.
- Concrete wastes shall be managed using concrete washout facilities.
- Various waste management, materials handling, and other housekeeping items shall be used throughout the duration of the project. If stockpiles of various kinds are anticipated, it shall be maintained with the appropriate BMPs.
- The materials generated may require standard provisions for handling and testing to verify appropriate reuse or disposal options.

## 2.3.2 Geology/Soils/Seismic/Topography

### REGULATORY SETTING

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

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

### AFFECTED ENVIRONMENT

The following section summarizes the findings of the Preliminary Geotechnical Report prepared for the Caldecott Tunnel Bore 3 Pavement Restoration (Caltrans 2024g) and the Geologic and Paleontologic Analysis for Caldecott Tunnel Bores 1, 2, and 3 Rehab prepared for this project (Caltrans 2024d).

*Geologic Setting*

Geologic studies of Bores 1 through 3 both during construction and pre-construction

studies for Bore 4 indicate that the Orinda Formation is present throughout the easternmost 1,185 feet of Bore 3, as measured from the contact between the Claremont and Orinda Formations and the east portal. Poorly-consolidated mudstone and sandstone are predominate, with conglomerate occurring at intervals. The mudstone and sandstone are soft, with the mudstone rapidly deteriorating in water. The

conglomerate, which consists primarily of well-graded gravel within a poorly-cemented sandy matrix, is likely also soft. Bedding is typically thick to very thick, with some zones of massive bedding, and generally dips steeply to the southwest.

*Seismic Information*

Maintenance reports produced from 1966 to 2022 noted the addition of cracks and humps in the pavement and walls along Bore 3. However, Bore 3 is not located within an Alquist-Priolo Earthquake Fault Zone or 1,000 feet from any unzoned fault with an age of Holocene or younger. Therefore, the Caldecott Tunnel is not considered susceptible to surface fault rupture hazards, liquefaction, or seismically-induced slope stability hazards.

### ENVIRONMENTAL CONSEQUENCES

#### Preferred Build Alternative

The project will not grade native soil or rock as locations are either on structures or in shallow, previously disturbed material. The project will not impact sensitive paleontological or geologic rock units.

#### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to geology or soils.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No AMMs or MMs would be required to reduce effects related to geology, soils, seismicity, and topography.

## 2.3.3 Paleontology

### REGULATORY SETTING

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

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

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

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

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

### AFFECTED ENVIRONMENT

The following section summarizes the findings of the Geologic and Paleontologic Analysis prepared for this project (Caltrans 2024d).

The project will not grade native soil or rock as locations are either on structures or in shallow, previously disturbed material.

### ENVIRONMENTAL CONSEQUENCES

#### Preferred Build Alternative

The project will not impact sensitive paleontological or geologic rock units.

#### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to sensitive paleontological or geologic rock units.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No AMMs or MMs would be required to reduce effects related to paleontology.

## 2.3.4 Hazardous Waste/Materials

### REGULATORY SETTING

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

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

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

- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

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

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

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

## AFFECTED ENVIRONMENT

The following section summarizes the findings of the Hazardous Waste Memorandum prepared for this project (Caltrans 2024e).

In 2013 and 2014, the supply and exhaust ventilation shafts of Bores 1, 2, and 3 were cleaned of the lead-containing dust and particulates that accumulated from vehicle exhaust inside the tunnel bores. With lead not having been used as a fuel additive since the 1980s, the ventilation shafts have remained free of lead since that cleanup and no further impact is anticipated.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

Hazardous materials are not expected to have any effect on the project. Current weight and substance restrictions will continue to apply during construction of the project. Vehicles which are currently not permitted to travel through the Tunnel, or which have restrictions to travel only the late-night hours, will not be redirected to city streets during construction of the project. Vehicles carrying hazardous materials will be directed to alternative eastbound and westbound routes via SR 4 or I-580 and advance warning will be provided to the public. This will be delineated by a Traffic Management Plan (TMP) as outlined in **Project Feature TRA-1** that would be developed during the next phase of the project, the Design Phase, in consultation with emergency service providers.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts from hazardous materials.

**AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

No AMMs or MMs would be required to reduce effects related to hazardous materials or wastes.

## 2.3.5 Air Quality[9]

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide ($NO_2$), ozone ($O_3$), particulate matter (PM) —which is broken down for regulatory purposes into particles of 10 micrometers or smaller ($PM_{10}$) and particles of 2.5 micrometers and smaller ($PM_{2.5}$), Lead (Pb), and sulfur dioxide ($SO_2$). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide ($H_2S$), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

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

*Conformity*

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

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

Regional conformity is concerned with how well the regional transportation system

[9] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation.

supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide ($NO_2$), ozone ($O_3$), particulate matter ($PM_{10}$ and $PM_{2.5}$), and in some areas (although not in California), sulfur dioxide ($SO_2$). California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except $SO_2$, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission (for CEQA Air Quality) analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission (for CEQA Air Quality) models to determine whether or not the implementation of those projects would conform to emission (for CEQA Air Quality) budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope[10] that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions (air quality) models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

## AFFECTED ENVIRONMENT

The project is exempt from the requirement to determine conformity regarding widening narrow pavements or reconstructing bridges (no additional travel lanes), therefore an air quality study is not required and there would be no impact to air quality.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

There is not expected to be any permanent impact to air quality from the project as the project does not involve the expansion of capacity to SR-24 and no new lanes are proposed. Temporary air quality impacts during construction will be addressed through the implementation of Caltrans Standard Specifications per **Project Feature GHG-1 (for CEQA)** listed below.

[10] "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions (for air quality) analysis, such as the number of lanes and the length of the project.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to air quality.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No AMMs or MMs would be required to reduce effects related to hazardous materials or wastes. The following Project Features, also listed in Appendix B, would be implemented:

**PF-GHG-1: Emissions Reductions for CEQA:** Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions for CEQA from construction activities, including but not limited to:

1. Regular vehicle and equipment maintenance.
2. Limit idling of vehicles and equipment onsite.
3. If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material.
4. Use solar-powered signal boards, if feasible.

## 2.3.6 Noise

### REGULATORY SETTING

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

#### *CALIFORNIA ENVIRONMENTAL QUALITY ACT*

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

#### *NATIONAL ENVIRONMENTAL POLICY ACT[11] AND 23 CFR 772*

For highway transportation projects with Federal Highway Administration (FHWA)

[11] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation.

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

**Table 2. Noise Abatement Criteria**

| Activity Category | NAC, Hourly A- Weighted Noise Level, Leq(h) | Description of activity category |
|---|---|---|
| A | 57 (Exterior) | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| B[1] | 67 (Exterior) | Residential. |
| C[1] | 67 (Exterior) | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. |
| D | 52 (Interior) | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios. |
| E | 72 (Exterior) | Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F. |
| F | No NAC— | Agriculture, airports, bus yards, emergency |

| Activity Category | NAC, Hourly A- Weighted Noise Level, Leq(h) | Description of activity category |
|---|---|---|
| | reporting only | services,<br>industrial, logging, maintenance facilities,<br>manufacturing, mining, rail yards, retail facilities,<br>shipyards, utilities (water resources, water treatment,<br>electrical, etc.), and warehousing. |
| G | No NAC—reporting only | Undeveloped lands that are not permitted. |
| [1] Includes undeveloped lands permitted for this activity category. | | |

Figure 27 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

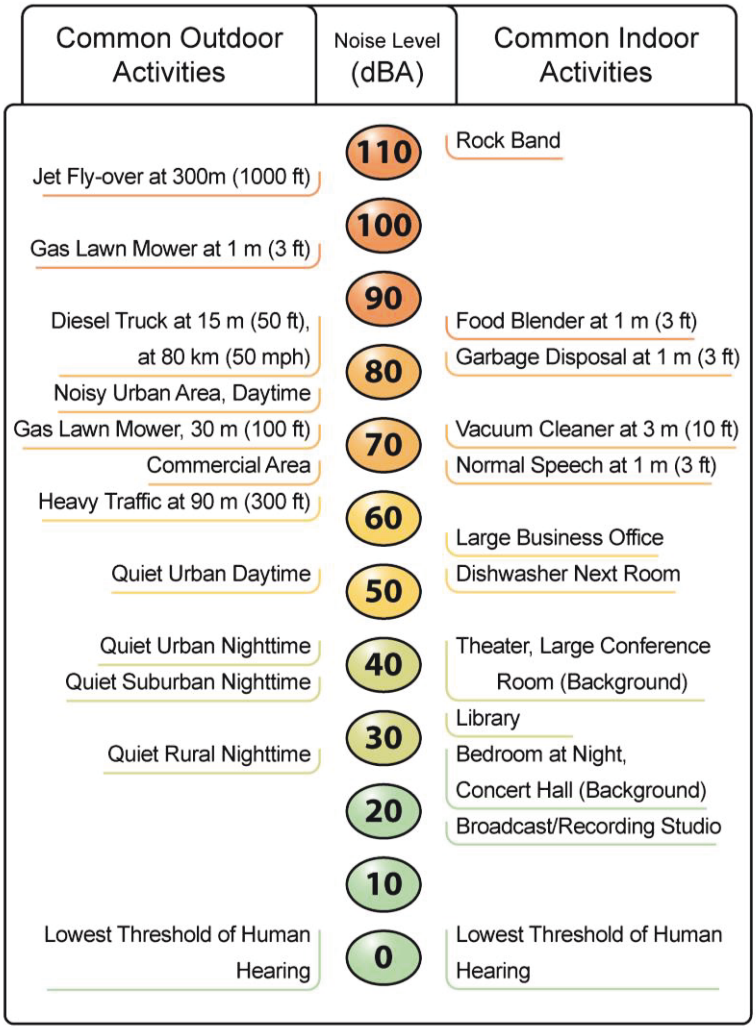



**Figure 27. Noise Levels of Common Activities**

According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC.

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

The Department's *Traffic Noise Analysis Protocol* sets forth the criteria for determining

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

## AFFECTED ENVIRONMENT

This section summarizes the results of the Construction Noise Analysis completed for this project (Caltrans 2024b).

Since the project is not a Type I per 23 CFR 772, noise abatement does not need to be considered, therefore a traffic noise study is not required. Type 1 projects include the construction of a new highway or involve the addition of traffic lanes, interchange lanes, ramps, the substantial physical alteration of a highway, restriping, or the addition a weigh station, rest stop, ride share lot, or toll plaza.

However, there are sensitive receptors located in proximity to areas where noisy construction activities may be taking place. The analysis method used to determine whether adverse construction noise impacts in the project area would arise is the FHWA Roadway Construction Noise Model (RCNM).

The Roadway Construction Noise Model (RCNM) was used to estimate the noise levels during construction. RCNM is the Federal Highway Administration’s (FHWA) national model for the prediction of construction noise. RCNM includes representative sound levels for the most common types of construction equipment and the estimated usage factor of each equipment. The usage factor represents the percentage of time that the equipment would be operating at full power. Vehicles and equipment likely to be used during each phase of construction were input into RCNM to estimate the maximum (Lmax) and the average hourly noise levels (Leq) at various distances.

Lmax is the highest instantaneous noise level during a specified time. Leq is the averaged level equivalent in energy to the time-varying noise levels during the same period. In some instances, maximum noise levels estimated can be slightly lower than the average noise levels. This occurs because maximum noise levels generated in short bursts by multiple pieces of construction equipment are not likely to occur at the same moment. Hourly average noise levels resulting from multiple pieces of construction equipment would be additive resulting in slightly higher calculated noise levels. While geometric spreading (increased distance) is considered in the model, noise reduction due to other factors such as ground absorption or shielding along the path are not figured in. For this reason, the model tends to overestimate the noise levels for locations at longer distance or where obstructions (i.e. buildings) are present. Therefore, the predicted sound level results are conservative.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

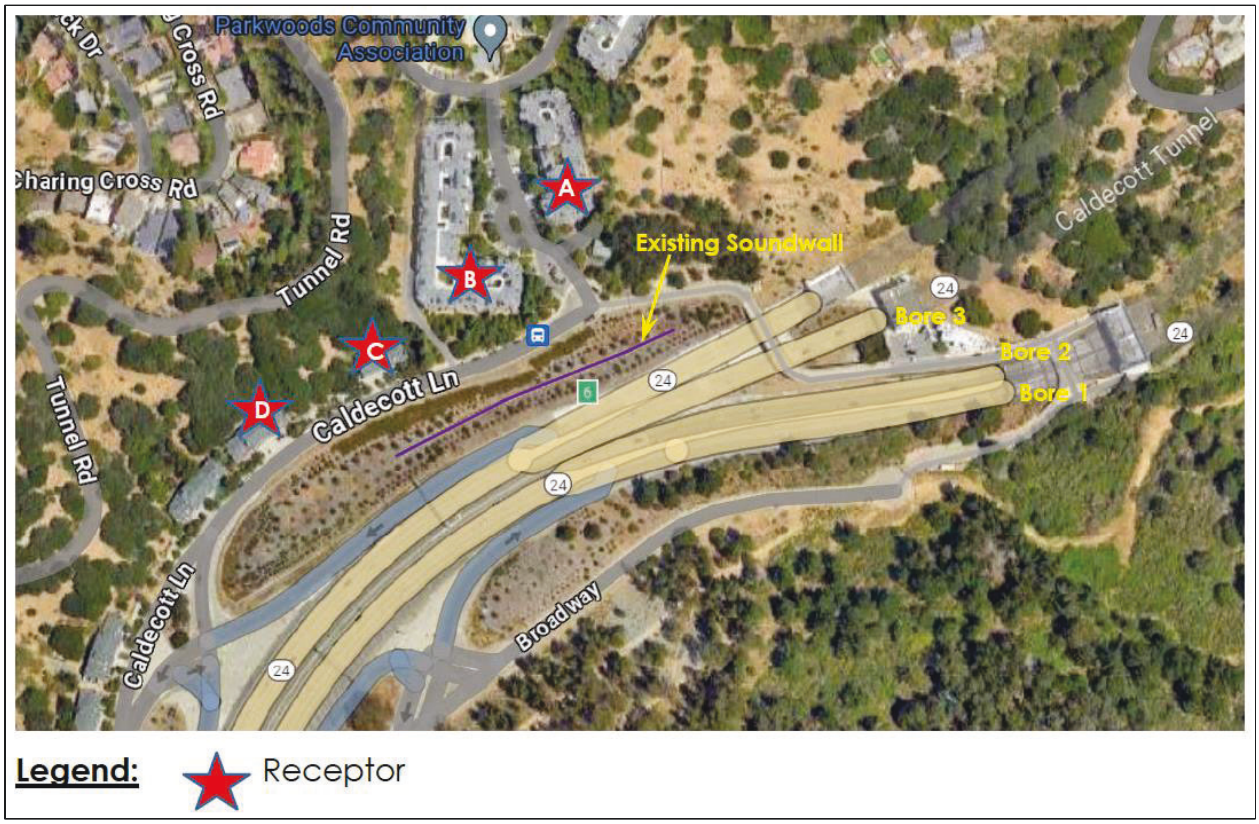



**Figure 28. Map of Noise Monitoring Sites.**

## Table 3. Summary of Construction Noise Results from RCNM for Bores 1, 2 & 3

| Bore # | Locations | Receptor Type | Receptor Distance (ft) | Remove Type 60 Concrete Barrier & Install Safety Shape Barrier | | Remove Curbed Island & Install Type 60 Concrete Barrier | | Roadway Work/ Remove Concrete Pavement | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Lmax (dBA) | Leq (dBA) | Lmax (dBA) | Leq (dBA) | Lmax (dBA) | Leq (dBA) |
| 1 | Receptor A 180 Caldecott Ln, Oakland, CA 94618 | Residential | 710 | 66.5 | 65.0 | - | - | - | - |
| 1 & 2 | | | 520 | - | - | 69.2 | 67.8 | - | -- |
| 3 | | | 355 | - | - | - | - | 72.6 | 71.2 |
| 1 | Receptor B 320 Caldecott Ln, Oakland, CA 94618 | Residential | 770 | 65.8 | 64.3 | | | | |
| 1 & 2 | | | 540 | - | - | 69.9 | 67.4 | - | - |
| 3 | | | 245 | - | - | - | - | 75.8 | 74.5 |
| 1 | Receptor C 158 Caldecott Ln, Oakland, CA 94618 | Residential | 950 | 64.0 | 62.5 | - | - | - | - |
| 1 & 2 | | | 705 | - | - | 66.6 | 65.1 | - | - |
| 3 | | | 255 | - | - | - | - | 75.4 | 74.1 |
| 1 | Receptor D 152 Caldecott Ln, Oakland, CA 94618 | Residential | 1150 | 62.3 | 60.9 | - | - | - | - |
| 1 & 2 | | | 905 | - | - | 64.4 | 62.9 | - | - |
| 3 | | | 290 | - | - | - | - | 74.3 | 73.0 |
| 1 | 50 ft from the construction zone | - | 50 | **89.6** | **88.1** | - | - | - | - |
| 1 & 2 | | | | - | - | **89.6** | **88.1** | - | - |
| 3 | | | | - | - | - | - | **89.6** | **88.3** |
| 1 | 100 ft from the construction zone | - | 100 | 83.6 | 82.1 | - | - | - | - |
| 1 & 2 | | | | - | - | 83.6 | 82.1 | - | - |
| 3 | | | | - | - | - | - | 83.6 | 82.3 |
| 1 | 200 ft from the construction zone | - | 200 | 77.5 | 76.1 | - | - | - | - |
| 1 & 2 | | | | - | - | 77.5 | 76.1 | - | - |

Figure 28 shows a map of noise monitoring locations A, B, C, and D at the west end of the Caldecott Tunnel. Table 3 shows the summary results of the RCNM analysis. Construction noise due to activities occurring inside the Tunnel were assumed to have no impacts on the nearby sensitive receptors. Therefore, noise impacts due to activities occurring near the exits/outside of the Tunnel only were analyzed. A separate run was done for each major phase (activities): 1) remove Type 60 concrete barrier and install safety shaped barrier at west end of Bore 1 2) remove curbed island between Bore 1 & 2 on the west end and install Type 60 concrete barrier 3) remove expansive soil below the roadway section on the west end of Bore 3. Construction equipment for each phase was input into the RCNM to estimate the maximum (Lmax) and the average hourly (Leq) noise levels at receptor locations and at hypothetical non-specific locations. The steps in performing an RCNM analysis are as follows:

- Enter construction equipment anticipated to be used during construction
- Input receptors and distances
- Export results to Excel for processing

The Caltrans 2023 Standard Specifications 14-8.02 requires Lmax not to exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. Based on the results of Table 3, the noisiest operations will be to remove Type 60 concrete barrier, remove curbed island and remove expansive soil below the roadway section at 50 ft from the activities.

There are no sensitive receptors present at the east end of the Tunnel, however, there are sensitive receptors at the west end. Using the Google Maps measuring tool, it was determined that the closest residential receptor, Receptor B (as shown in Figure 28) is within 245 to 770 feet from all job site activities. There is an existing soundwall to the north of Route 24 that shields receptors A, B & C. As shown in Table 3, the modeled construction noise levels at all the Receptors A, B, C & D due to any type of construction activity is considerably below 86 dBA, therefore the residential receptors will not be impacted. In addition, the existing soundwall will further attenuate the noise levels by up to 8 dBA.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to noise.

## AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

The following Avoidance and Minimization Measures, also listed in Appendix C, would be implemented:

**AMM-NOI-1: Daytime Construction:** Any operation exceeding 86 dBA shall not be allowed at nighttime from 9:00 p.m. to 6:00 a.m.

**AMM-NOI-2: Public Outreach:** Public outreach shall be required throughout the project duration of construction to update nearby residents, businesses, and other project stakeholders on upcoming construction activities and any changes to the project construction timeline.

**AMM-NOI-3: Scheduling:** Schedule noisy operations within the same time frame. The

total noise level will not be significantly greater than the level produced if operations are performed separately.

**AMM-NOI-4: Prevent Idling:** Prevent idling of equipment within 100 feet of sensitive receptors.

**AMM-NOI-5: Staging and Storage Areas:** Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.

**AMM-NOI-6: Alternative Methods or Equipment:** Use quieter alternative methods or equipment, if feasible. (e.g. “quiet” air compressors and other “quiet” equipment where such technology exists). Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

**AMM-NOI-7: Equipment Delivery:** No construction equipment will be delivered and dropped off before 6:00 a.m.

**AMM-NOI-8: Internal Combustion Engine Maintenance:** Maintain all internal combustion engine properly to minimize noise generation.

## 2.3.7 Energy

### REGULATORY SETTING[12]

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

The California Environmental Quality Act (CEQA) Guidelines section 15126.2(b) and Appendix F, Energy Conservation, require an analysis of a project’s energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

### AFFECTED ENVIRONMENT

The following section summarizes the Construction-Related Energy Analysis prepared for the project (Caltrans 2024c). Additional information is pulled from the Project Report for the project as well as Section 2.2.2, Traffic and Transportation/Pedestrian and Bicycle Facilities.

The project is located along SR-24, an eight-lane divided freeway. The corridor serves local traffic from the Interstate (I) 580/I-980 interchange in Oakland to the I-680 junction in Walnut Creek. As of 2021, the Caldecott Tunnel has an Annual Average Daily Traffic count of 160,000 vehicles.

CEQA guidelines require that an EIR should include an analysis of a project’s potential

[12] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation.

for significant environmental effects resulting from wasteful, inefficient, or unnecessary use of energy. A quantitative analysis is required for projects that increase capacity or provide congestion relief, both of which could affect the ability of a transportation facility to accommodate existing and future traffic demand. The project was not classified as a capacity increasing project and is not expected to change the existing vehicle mix. Examples of capacity increasing projects include new highways, added travel or auxiliary lanes, and new or reconfigured interchanges.

Energy will be consumed during construction, operation, and maintenance of the tunnel. Activities that consume energy also generate by-products. To assess gasoline, diesel and electricity consumed by construction equipment and vehicles, (for CEQA) the Construction Emissions Tool 2021 (CAL-CET 2021), version 1.0, developed by the California Department of Transportation was used to quantify the fuel volumes and electricity. Energy usage in terms of fuel consumption and electricity are shown in Table 4.

**Table 4. Construction Equipment/Vehicles Fuel and Electricity Consumption**

| BUILD ALTERNATIVE | TOTAL FUEL CONSUMPTION | | |
|---|---|---|---|
| | DIESEL (gallons) | GASOLINE (gallons)[a] | ELECTRICITY (kWh) |
| TOTAL | 120,001 | 43,816 | 16,920 |

Pollutants include carbon dioxide (CO2), methane (CH4), nitrous oxide (N20), hydrofluorocarbon (HFCs) and black carbon (BC). Based on project information available for environmental studies, the construction-related pollutants for CEQA were calculated using the Construction Emissions Tool 2021 (CAL-CET 2021), version 1.0, developed by the California Department of Transportation. It was estimated that for construction of this project, the total amount of CO2 produced due to construction would be 1,779 tons.

The following table summarizes the construction related emissions for CEQA, including the total CO2e:

**Table 5. Summary of Construction-Related Pollutants for CEQA**

| Project Location: Contra Costa County on Route 24, PM R0.1 | PARAMETERS | | | PROJECT TOTAL |
|---|---|---|---|---|
| | CO2 (tons) | CH4 (tons) | N2O (tons) | CO2e (metric tons) |
| TOTAL EMISSIONS FOR CEQA | 1,779 | 0.039 | 0.097 | 1,740 |

There will be different phases in construction and energy use will be dependent on construction equipment being used per activity of each phase.

Because construction activities are short-term, the increase of consumption within the project area will also be short-term. The use of construction best management practices will minimize energy consumption from construction activities, including but not limited to:

1. Regular vehicle and equipment maintenance
2. If feasible, recycle non-hazardous waste and excess materials to reduce disposal offside

In addition, with innovations such as longer pavement lives, improvement in traffic management and changes in materials, energy consumption can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

Because construction activities are short-term, the pollutants discussed for CEQA resulting from construction activities would not result in long-term adverse effects. Implementation of Caltrans Standard Specifications, such as complying with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions for CEQA from construction activities.

In addition, with innovations such as longer pavement lives, improvement in traffic management and changes in materials, construction-related pollutants for CEQA produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The tunnel rehabilitation may result in smoother pavement surfaces, which would improve vehicle operations, reduce emissions for CEQA, and reduce energy consumption. The preferred Build Alternative will not conflict with the regional/statewide goals on climate change, air quality and petroleum reduction.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to the above discussed pollutants for CEQA.

## AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No energy-related avoidance, minimization, and/or mitigation measures would be required for the project. The following Project Features, also listed in Appendix B, would be implemented:

**PF-GHG-1: Emissions Reductions for CEQA:** Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions for CEQA from construction activities, including but not limited to:

1. Regular vehicle and equipment maintenance.
2. Limit idling of vehicles and equipment onsite.
3. If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material.
4. Use solar-powered signal boards, if feasible.

## 2.4 BIOLOGICAL ENVIRONMENT

Caltrans prepared a Natural Environment Study (NES) to provide technical information to determine the extent that the project would affect plants, wildlife, and natural communities, including special-status species, potentially jurisdictional wetlands and waters/creeks, and protected natural plant communities. The biological resources and determinations within the NES are detailed in the following subsections.

As summarized below and in Appendix C, Avoidance and Minimization Measures (AMMs) BIO-1 through BIO-14 are incorporated into the project. Appendix H includes updated U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Natural Diversity Database (CNDDB), and California Native Plant Society (CNPS) Species Lists. Caltrans conducted a field visit on August 2nd, 2024, to review the existing biological site conditions and assess impacts associated with the project activities. The Caltrans biologist concluded that with the implementation of AMMs BIO-1 through BIO-14 the project would not result in affects to natural communities, including special-status species, potentially jurisdictional wetlands and waters, and protected natural plant communities. No federal or state endangered species act consultations or agency permits would be required for the project.

**AMM-BIO-1: Preconstruction Wildlife Surveys:** In areas adjacent to oak woodland and immediately prior to any initial or ongoing ground disturbance, including staging of equipment or materials, preconstruction surveys would be conducted by a qualified biologist. These surveys would consist of walking surveys of the accessible portions of the BSA and PCA to determine presence of wildlife species, nesting birds and any special-status species. In the highly unlikely event that a special-status species is observed within the PCA, all construction activities within the appropriate buffer would cease and the agencies would be notified. Construction activities would not resume without approval from a qualified biologist. Under no circumstances would the capture, handling or relocation of special-status species occur unless expressly authorized by the agencies.

**AMM-BIO-2: Preconstruction Surveys for Nesting Birds:** Clearing and grubbing of vegetation should occur outside of the nesting bird season (February 1 to September 30), to the degree possible. If tree and vegetation removal or clearing and grubbing must occur prior to or during nesting bird season, preconstruction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction.

**AMM-BIO-3: Non-Disturbance Buffer:** If work is to occur near active raptor nests or active passerine nests, an appropriately determined non-disturbance buffer would be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. Buffer size would be determined in cooperation with a qualified biologist. Non-disturbance buffers may also need to be established for other special-status species and would be determined in cooperation with a qualified biologist.

**AMM-BIO-4: Covering of Trenches and Excavated Holes:** To prevent inadvertent entrapment of wildlife during construction excavated holes or electrical trenches more

than one-foot-deep with walls steeper than 30 degrees would be covered by plywood or similar materials at the close of each working day. Alternatively, an additional four-foot-high vertical barrier, independent of exclusionary fences, would be used to further prevent the inadvertent entrapment of wildlife. If it is not feasible to cover an excavation or provide an additional four-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped special-status species is discovered, the department biologist would immediately place escape ramps or other appropriate structures to allow the animal to escape or the agencies would be contacted by telephone for guidance.

**AMM-BIO-5: Work on Previously Disturbed Areas and Vehicle Use:** To the extent practicable, work will remain on paved surfaces or on previously disturbed areas. Project employees would be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards. Vehicles would remain on paved roads to the maximum extent practicable, and speeds would be limited to 10 miles per hour when off the pavement.

**AMM-BIO-6: Preconstruction Surveys for Bats:** Prior to construction at work sites where structures would be removed or otherwise disturbed prior to the initiation of construction, preconstruction surveys for bats will be conducted by a qualified biologist no more than 72 hours prior to the start of construction. If bats or suitable bat roosting habitat is detected, CDFW shall be notified immediately for consultation and possible on-site monitoring if bats are day roosting in trees or buildings within the BSA, construction activity cannot begin until 30 minutes after sunset as established by U.S. Naval Observatory Astronomical Applications Department.

**AMM-BIO-7: Protected Species in Work Zone:** The resident engineer would immediately contact the qualified Project biologist(s) in the event that a special-status species gains access to the PCA. If a special-status species is discovered within the work area, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the species or nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. The resident engineer would suspend construction activities within the non-disturbance buffer of the animal that could reasonably result in a take of the special-status species until the animal leaves the site voluntarily.

**AMM-BIO-8: Trash:** All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed weekly from the work area.

**AMM-BIO-9: Firearms:** No firearms would be allowed in the BSA except for those carried by authorized security personnel, or local, state, or federal law enforcement officials.

**AMM-BIO-10: Pets:** To prevent harassment, injury, or mortality of sensitive species, no pets would be permitted in the BSA.

**AMM-BIO-11: Caltrans Standard Best Management Practices (BMPs):** The potential

for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. Caltrans erosion control BMPs will be used to minimize any wind or water-related erosion. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Storm Water Pollution Prevention Program (SWPPP) or Water Pollution Control Program (WPCP) will be developed for the Project, as required. The SWPPP or WPCP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for Project design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.

The SWPPP or WPCP will reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found at the following website:

http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm

Protective measures will be included in the contract, including, at a minimum:

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

A Revegetation Plan would be prepared for restoration of temporary staging areas.

**AMM-BIO-12: Monofilament Netting:** To prevent wildlife from being entangled, trapped or injured, erosion control materials with plastic mono-filament netting would not be used within the BSA.

**AMM-BIO-13: Asphalt Waste:** All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet

from any aquatic habitat, culvert, or drainage feature.

**AMM-BIO-14: Replanting with Native Species:** All staging areas that are temporarily affected during construction would be revegetated with native plant species appropriate to the habitat that was disturbed in order to restore habitat values. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant to Executive Order 13112 (Invasive Species).

## 2.4.1 Natural Communities

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

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species Section 2.4.5. Wetlands and other waters are also discussed below in Section 2.4.2.

### AFFECTED ENVIRONMENT

The biological study area (BSA) was established to evaluate the effects of the project on natural communities and other biological and regulated resources. The BSA contains the project footprint as well as a buffer to include areas that project construction activities may directly or indirectly impact. Direct impacts may occur from the construction of project elements or the use of areas for staging and access. Indirect impacts are a result of construction activities associated with the construction of the project and typically includes vibration, noise, visual disturbance and nighttime illumination (Figure 29). For the project, the BSA consists of approximately 71.56 acres and includes the section of SR 24 from PM 5.65 in Alameda County to PM 0.65 in Contra Costa Country. Vegetation and landcover classification and mapping for the BSA was completed using aerial imagery. Preliminary technical studies and focused site visits were conducted to evaluate the potential for wetlands and jurisdictional waters/creeks, confirm land classifications based on aerial imagery and review the BSA for potential habitat for natural communities and special-status species.

Six landcover type classifications were identified within the BSA, four of which are considered as not naturally occurring (barren, road, underground and urban/landscaped) and do not support natural communities. The remaining two landcover types are natural vegetation communities (oak woodland and naturalized grassland) and occur around and above the tunnel portals.

### Vegetation Communities

Sensitive vegetation communities are defined as those that are considered vulnerable, imperiled, or critically imperiled, in California. These categories contain native plant communities that are regarded by CDFW as having special significance under CEQA.

The following describes the vegetation communities in the BSA, along with each community's suitability as wildlife habitat.

*Oak Woodland*

Oak woodland totals 5.54 acres of the BSA. Oak woodland overstory consists of deciduous and evergreen hardwoods. Stands vary from upland savannas and woodlands to bottomland, riparian forests with closed tree canopies. The understory is variable; sometimes composed of shrubs from adjacent chaparral or coastal shrub which forms a dense, almost impenetrable understory. The dense understory and thick layer of leaf litter common to this woodland type provide habitat for many common species of amphibian, reptile, and small mammal. Special-status species that may occur in oak woodland habitats include California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), and pallid bat (Antrozous pallidus).

The oak woodland within the BSA is predominately coast live oak (*Quercus agrifolia*) with an understory of French broom (G*enista monspessulana*), snowberry (*Symphoricarpos albus*), mint (*Mentha sp.),* and non-native forbs. Coast live oak woodland borders barren and urban/landscaped landcover types at the Oakland portal on the western end of the Caldecott Tunnel. Portions of the oak woodland identified in the BSA occur within USFWS designated critical habitat for Alameda whipsnake and do contain the physical and biological features necessary to support a population of that species. As the oak woodland identified in the BSA at the western portal contains the habitat requirements for Alameda whipsnake, there is a moderate potential for Alameda whipsnake to occur or disperse within this specific area of BSA. Oak woodland occurring above the Caldecott Tunnel but was not included in the BSA. No oak woodland habitat occurs within the PCA.

*Naturalized Grassland*

Naturalized grassland totals 1.63 acres of the BSA, and only occurs on the Orinda side of the tunnel adjacent to the eastbound Fish Ranch Road looped off-ramp. Many wildlife species use grasslands for foraging, such as the Alameda whipsnake, but some require special habitat features such as cliffs, caves, ponds, or chaparral for breeding, resting, and refugia. Characteristic reptiles that breed in annual grassland habitats include the western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis),* and western rattlesnake (*Crotalus oregonus*). Mammals typically found in this habitat include the black-tailed jackrabbit (*Lepus californicus),* California ground squirrel (*Otospermophilus beechyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans).* Birds commonly known to breed in annual grasslands include the western meadowlark (*Sturnella neglecta*). This habitat also provides important foraging habitat for turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), and prairie falcon (*Falco mexicanus*).

The naturalized grassland in the BSA is low quality due to the steepness of the cut slope and its immediate proximity to the Fish Ranch off-ramp/frontage road. This area of naturalized grassland occurs within USFWS designated critical habitat for Alameda whipsnake but does not contain the essential physical and biological features necessary

to support a resident population or other special-status species. As this area occurs in the outside shoulder of the Caltrans ROW, there is the low potential that this area could be used by special-status species for dispersal.

*Urban/Landscaped*

The urban/landscaped areas (13.46 acres) of the BSA are dominated by mowed and wood mulched groundcover with the sporadic planting of landscaped trees and shrubs. These tree and shrub plantings are associated with residential, commercial and transportation uses (e.g., horticultural plantings, golf courses, and irrigated lawns) and are often subject to ongoing maintenance. A handful of mature oak and pine landscape trees and shrubs are interspersed within these areas. Due to the disturbed nature of this habitat, it is not generally considered to have the physical and biological conditions suitable for special-status species. In addition to the lack of suitable habitat, the urban/landscaped areas identified in the BSA are surrounded by on- and off-ramps, local city streets, frontage roads and SR 24. These roads greatly reduce the potential for species-status species to access these areas for foraging or dispersal. Although not suitable for special-status species, urban/landscape areas can provide habitat for wildlife species and select species of nesting birds that have adapted to this man-made environment.

*Barren/Road/Underground*

The BSA is mostly comprised of paved roadways, including the roadway within the tunnel. Road surfaces comprise 13.53 acres within the BSA and Underground comprises 21.14 acres. Barren landcover comprises 0.33 acre within the BSA and occurs within the unpaved shoulder adjacent to the roadway on both the east and west end of the BSA. Due to the disturbed nature of these habitats, they are not considered to have the physical and biological conditions suitable for special-status species.

*Fish Passage*

No barriers to fish were identified in the BSA.

*Migratory Corridors*

The natural vegetation communities and urban/landscaped areas of the BSA may provide habitat for mammals, birds, small reptiles, amphibians and invertebrates. These species include coyote, gray fox (*Urocyon cinereoargenteus*), common garter snake (*Thamnophis sirtalis*), great blue heron (*Ardea herodias*), Pacific tree frog (*Pseudacris regilla*), California vole, pocket gopher (*Thomomys bottae*), and raptors. Wildlife may use the natural vegetation communities and urban landscape area as migration corridors to other terrestrial habitats.

Current barriers in the BSA at the tunnel portals include buildings, fencing, road berms, steep road shoulders, and metal guardrails that can impede migration. The area above the Caldecott tunnel between the portals allows for north south movement of special-status and other wildlife species such as mountain lion to cross SR 24. East Bay Regional Parks has identified the Caldecott as integral to the Bay Area “critical linkages” habitat connectivity program and connects “islands” of open space on either side of Highway 24 such as Claremont Canyon Regional Preserve and Tilden Regional Park to

the north, and Sibley and Huckleberry Regional Preserves to the south.

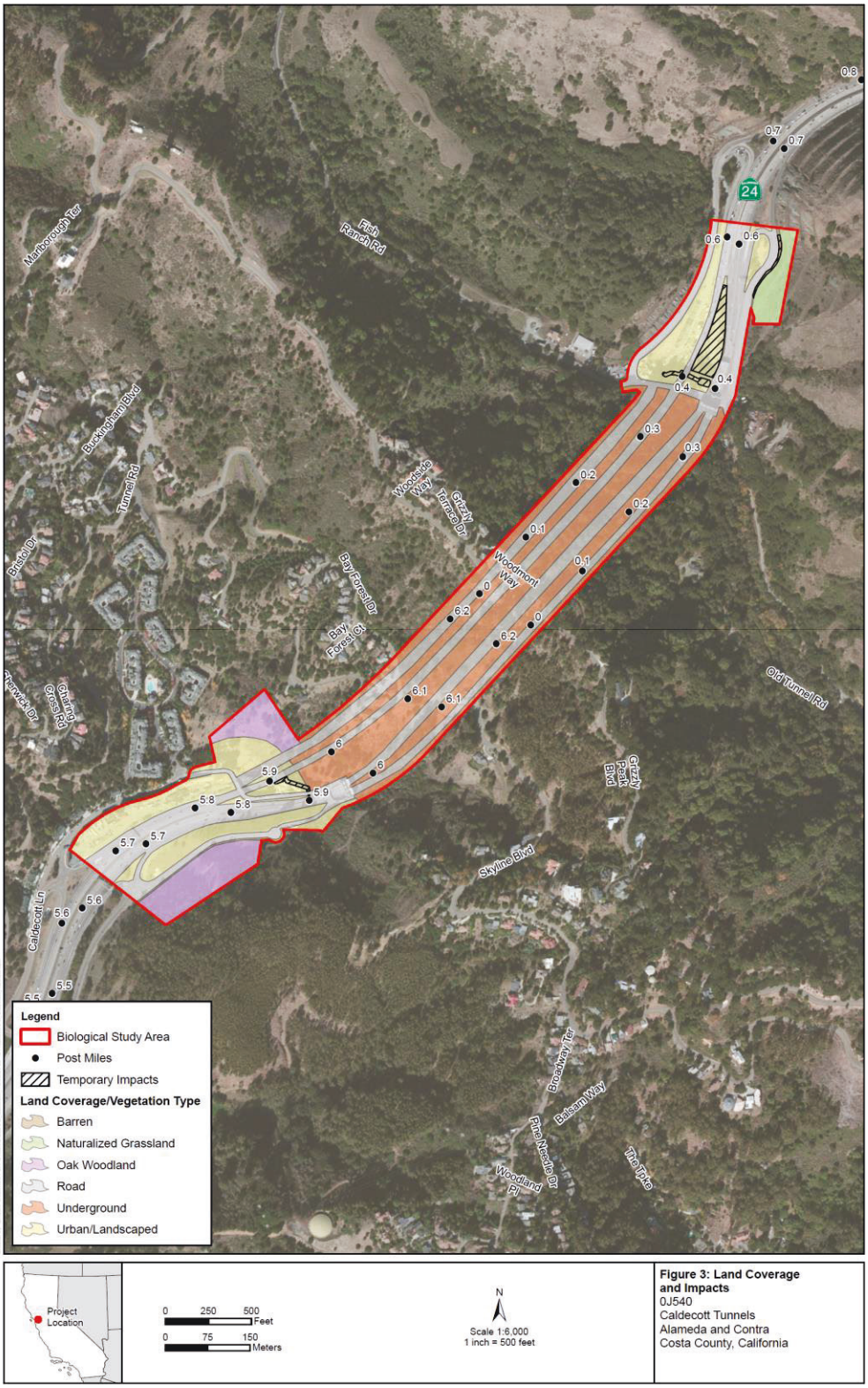



**Figure 29. Biological Study Area and Land**

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

The project, access and staging will all occur within the Project Construction Area (PCA). The PCA includes all areas of direct temporary and permanent impacts. The PCA occurs entirely within the BSA which is buffered to capture any indirect impacts to plants, wildlife, and natural communities, including special-status species, potentially jurisdictional wetlands and waters, and protected natural plant communities.

Work within the PCA that may impact biological resources would include trenching or horizontal directional drilling for new electrical service at both portals, excavation and concrete pouring for new electrical cabinets at the eastern portal, and minor tree trimming of one oak tree at the eastern portal to facilitate the installation of a security fence. Vegetation clearing may also be necessary at the proposed staging area. All direct temporary impacts associated with the project will only occur in areas designated as urban/landscape, road and barren.

*Vegetation Communities*

As the PCA does not overlap within oak woodland or naturalized grassland, no natural vegetation communities will be directly impacted by the project. Potential project impacts to special-status species associated with vegetation removal and tree trimming within urban/landscaped areas are further discussed in Section 2.4.2, 2.4.3 and 2.4.4.

Urban/landscaped areas within the BSA and PCA do not have suitable habitat for special-status species, however there are a number of other wildlife animals and birds such as dusky footed woodrat that may inhabit landscaped areas within the PCA. To minimize the impacts of any vegetation clearing and grubbing on animal species, Caltrans would implement **AMM-BIO-1 through AMM-BIO-6** and **AMM-BIO-14.** Once construction of either build alternative is complete, the width of existing roadways would remain the same as existing conditions, there would be no impacts to wildlife corridors, and there would be no habitat fragmentation. The preferred Build Alternative would not result in permanent impacts to natural communities.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to natural communities.

## AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No natural communities-related mitigation measures would be required for the project. The following avoidance and minimization measures listed below would be required.

As discussed, due to lack of habitat, special-status species are not expected to occur in the PCA. However, to avoid impacts to migratory birds, nesting birds, other wildlife species within landscaped areas and avoid indirect impacts to special-status species which have the potential to occupy areas of oak woodland within the BSA, preconstruction surveys and a series of biological avoidance measures will be implemented. Avoidance and minimization measures **AMM-BIO-1 through AMM-BIO-6, and AMM-BIO-14**, listed above in Section 2.4 and in Appendix C, were recommended by the NES.

## 2.4.2 Wetlands and Other Waters

### REGULATORY SETTING[13]

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

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

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

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

[13] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation.

significant adverse environmental consequences.

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

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

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see Water Quality, Section 2.3.1, for more details.

## AFFECTED ENVIRONMENT

Two potential culverted jurisdictional drainages (unnamed) occur at the eastern tunnel portal. Both culverts are underground with no daylighted portion occurring in the BSA. Conclusions presented in this section are based on the NES (Caltrans 2024c).

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

The project will occur on existing pavement or previously disturbed areas within the BSA. A staging area is proposed in a gore adjacent to one of the culverted drainages. This area has been developed and is highly disturbed. No work is proposed within this culverted drainage. Therefore, no impacts to jurisdictional waters, wetlands or creeks are anticipated. Caltrans's standard Best Management Practices (BMPs), and **AMM-BIO-11**, will be implemented to protect water quality during construction. The build alternative would not result in any temporary or permanent impacts to wetlands, waterways, or creeks.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to wetlands or waterways.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No wetlands-related mitigation measures would be required for the project. No impacts to wetlands, creeks, any bodies of water or waters of the State are anticipated. Avoidance and minimization measure **AMM-BIO-11**, listed above in Section 2.4 and in Appendix B, related to waters of the US would be implemented**.**

## 2.4.3 Plant Species

### REGULATORY SETTING

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section 2.4.5 in this document for detailed information about these species.

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

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

### AFFECTED ENVIRONMENT

Of the special-status plant species considered for the NES, only four occurrences (two California Native Plant Society (CNPS) plants listed as rare, threatened, or endangered in California) were identified in the California Natural Diversity Database (CNDDB) search that overlaps the BSA and PCA. Suitable habitat for western leatherwood (*Dirca occidentalis*) may occur within the oak woodland portion of the BSA, but as western leatherwood does not occur in disturbed landscaped areas, the potential for the species to occur in the PCA is low. Most beautiful jewelflower (*steptanthus albidus ssp. Peroenus*) only occurs in chaparral woodland on serpentine outcrops. As the BSA is lacking areas of chaparral, this species is not expected to occur within the BSA.

Habitat conditions within the PCA, which consists of roadway, barren and maintained landscaped areas, are not suitable for special-status plant species identified during the database searches and literature review. This was further confirmed by site visits by biologists and attributed to existing paved surfaces and human disturbance via maintenance and traffic. No special-status plant species or rare plants are expected to occur within the PCA.

### ENVIRONMENTAL CONSEQUENCES

#### Preferred Build Alternative

Given the lack of suitable habitat within the PCA and the low probability of occurrences, the preferred Build Alternative is not expected to result in direct or indirect impacts on special-status plant species during construction. Construction will occur within the Tunnel, urban/landscaped areas at the tunnel portals and staging will occur within previously disturbed areas identified an urban/landscaped. However, in the very unlikely event that special-status plant species are discovered during construction in the PCA, construction will halt in the immediate vicinity of the plant and consultation with the appropriate agencies would be initiated. To promote native plants and shrubs species, **AMM-BIO-14** will be employed to any areas temporarily affected by construction activities to restore habitat values.

#### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to plant species.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No special-status plant species related mitigation measures would be required for the project. Avoidance and minimization measure **AMM-BIO-14**, listed above in Section 2.4 and in Appendix B, for native species would be implemented in staging areas**.**

## 2.4.4 Animal Species

### REGULATORY SETTING

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or for listing under the federal or state Endangered Species Act. Species listed or for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section 2.4.5 below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act

- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

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

**AFFECTED ENVIRONMENT**

Several common animal species are expected to use habitat in the BSA. California vole, California ground squirrel, and Gilbert's skink were some of the species observed during field surveys. Oak woodland provides nesting habitat for birds such as oak titmouse and black phoebe, breeding habitat for northern pacific rattlesnakes, and foraging and nesting habitat for some raptor species such as red-tailed hawk. The urban buildings and landscaped trees in the BSA could also provide suitable habitat for roosting bats that have a high tolerance to human activity.

Caltrans Biologists concluded that seven special-status species have low to moderate potential to occur in the BSA but are not expected to occur within the PCA. These species with low to moderate potential to occur were determined through literature and database searches, historical occurrences, familiarity with the region, and site visits to assess potential habitat. Areas of oak woodland and naturalized grassland within the BSA had a low to moderate potential for the occurrence of special-status species. Areas with a classification of urban/landscape had a low potential for special-status species to occur.

*Migratory Birds*

Habitat within the BSA is of marginal nesting quality due to continual human disturbance from SR 24. All land cover types within the BSA except for paved roads may be used by one or more bird species for nesting. Raptors and smaller bird species may nest in the trees within the BSA, and many other birds may nest among grassland land cover types. Urban areas may also provide suitable nesting habitat in landscape trees and landscape plantings. In addition to common bird species, the NES reports that two special-status bird species have low potential to travel, forage and/or nest within the BSA with CNDDB records occurrences of within two miles of the BSA:

- Golden eagle (*Aquila chyrsaetos*)
- American peregrine falcon (*Falco peregrinus anatum*)

The Golden eagle is protected under the Bald and Golden Eagle Protection Act, is a Fully Protected Species under California Fish and Game Code. The American peregrine falcon was formerly Federally listed as Threatened or Endangered, however is a Fully Protected Species under California Fish and Game Code

*Roosting Bats*

Bats are widespread within California and may be found in any habitat. Different bat

species have different roosting requirements, and roosts can be found in a variety of habitats and locations. The NES reports that three special-status bat species have a low potential to occur within the BSA based on recorded CNDDB occurrences in the region:

- Hoary bat (*Lasiurus cinereus*)
- Pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)

The Hoary bat is included on the California Department of Fish and Wildlife's (CDFW) Special Animal List. The Pallid bat and Townsend's big-eared bat are both CDFW Species of Special Concern (SSC).

*Alameda Whipsnake*

There are seven CNDDB occurrences of Alameda whipsnake (*Masticophis lateralis euryxanthus)* within 2 miles of the BSA. The closest and only CNDDB occurrence that overlaps the BSA is at the northeast end of the project. The area surrounding the BSA at the northeast end consists of oak woodlands, grassland and rocky outcrops, and chaparral. Alameda whipsnake is considered to have a moderate potential to occur within the oak woodland portion of the BSA but is not expected to occur in urban/landscaped areas due to lack of suitable habitat locations and CNDDB occurrences, and the presence of dispersal barriers. Although, the area within the BSA contains a small portion of naturalized grassland at the east end of the BSA which could support Alameda whipsnake, this area is of poor quality due to the proximity to the roadway and existing disturbances, and does not contain the physical and biological elements needed for the species to inhabit or to maintain a population of Alameda whipsnake.

*Monarch Butterfly*

The BSA contains low potential for roosting, foraging and migration habitat for Monarch Butterflies (*Danaus plexippus*). The BSA does not contain large stands of eucalyptus or host plants. Larval host plants include at least 13 species of milkweed (*Asclepias* spp.) in the western U.S. There are no known roosting sites within the BSA, however individuals may travel through the BSA.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

As discussed in the NES, construction activity would occur on pavement, barren and existing landscaped areas. The project would avoid tree removal and impacts to trees and shrubs particularly by alternating between open trenching and HDD trenching. One oak tree within an urban/landscaped area is to be trimmed to accommodate the installation of a security fence. Clearing and grubbing of landscaped vegetation may be necessary in potential staging areas or where trenching may occur within the 1.49 acres of the PCA.

*Migratory Birds*

Project-related activities have the potential to temporarily impact nesting or foraging migratory birds and their habitat. Construction activities such as tree trimming, vegetation

clearing and other project-related ground disturbances or equipment operation associated with the project could affect raptors nesting in vegetation in or adjacent to work areas. Tree trimming could result in direct loss of active nest sites if nest sites are present within the PCA. Project construction activities, particularly noise and vibration, could cause individuals to avoid using adjacent areas or cause nests to be abandoned, resulting in temporary disturbances to active nests or individuals foraging in areas near the BSA. However, implementing **AMM-BIO-1 through AMM-BIO-3** would minimize impacts to nesting birds or raptors.

*Roosting Bats*

The project could result in the disturbance of suitable roosting sites for the pallid bat, hoary bat, and Townsend's big-eared bat. Disruption of suitable roosting and nesting sites could have a temporary negative effect on bats; however, the project would not permanently remove bat habitat, and with implementation of **AMM-BIO-6**, there would be no long-term negative effect on bats. If daytime or maternity roosts are identified, additional buffers, and a work window will be implemented to avoid and minimize impacts on roosts.

*Alameda Whipsnake*

Portions of the oak woodland identified in the BSA occur within USFWS designated critical habitat for Alameda whipsnake and do contain the physical and biological features necessary to support a population of that species. As the oak woodland identified in the BSA at the western portal contains the habitat requirements for Alameda whipsnake, there is a moderate potential for Alameda whipsnake to occur or disperse within this specific area of the BSA. Alameda whipsnake are not expected to occur within the PCA due to a lack of suitable habitat. In the highly unlikely event that an Alameda whipsnake is observed during the implementation of **AMM-BIO-1 through AMM-BIO-3** within the PCA, all construction activities within the appropriate buffer would cease and the agencies would be notified.

*Monarch Butterfly*

There are no CNDDB occurrences of monarch butterflies within the BSA. Monarch butterflies are a Candidate for listing under the Federal Endangered Species Act. The NES discusses that monarch butterflies are considered to have low potential to occur within the BSA. There are no known roosting sites within the BSA, however they may travel through the BSA. Preconstruction surveys (**AMM-BIO-1)** will be implemented to avoid potential impacts to any monarch butterflies that may travel through the BSA during migration and could potentially overwinter in the trees above the Tunnel.

In order to avoid and minimize effects to potential special-status species and their habitats within the BSA , **AMM-BIO-1 through AMM-BIO-3 and AMM-BIO-6 through AMM-BIO-7** would require work windows and preconstruction surveys for nesting birds and bats, and **AMM-BIO-4, AMM-BIO-5, and AMM-BIO-12** would also aid in helping to avoid entrapment, entanglement, or injury of wildlife. As described in **AMM-BIO-11 and AMM-BIO-14**, in the event that clearing and grubbing are necessary during construction, those areas would be revegetated with appropriate species after the project is constructed.

**No Build Alternative**

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to animal species.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No animal species-related mitigation measures would be required for the project. Avoidance and minimization measures **AMM-BIO-1 through AMM-BIO-14**, listed above in Section 2.4 and in Appendix C, would be implemented.

## 2.4.5 Threatened and Endangered Species

### REGULATORY SETTING

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United

States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### AFFECTED ENVIRONMENT

The NES determined that federally designated critical habitat for Alameda whipsnake (Unit C04A) occurs within the BSA at the eastern tunnel portal but that no work would occur within the unit. Additionally, the report does not anticipate injury or mortal take of federally or state-listed species, and that there will be no temporary or permanent impacts to protected species habitat associated with the project. Due to the small amount of marginal habitat on-site and implementation of AMMs, no take of listed species is anticipated.

### ENVIRONMENTAL CONSEQUENCES

#### Preferred Build Alternative

As no construction activities are proposed for areas designated as critical habitat and the PCA does not overlap with any areas within the BSA that has suitable habitat for federally protected species, Caltrans has determined that this project would have “no effect” on federally listed species, their habitats, or federally protected communities. The AMM’s described above will further reduce potential for effects. Adverse impacts to any federally designated critical habitat would not occur as a result of project activities given that impacts are taking place within the existing roadway. The “no effect” determination has been made for all federally listed species identified in the official USFWS species list and the official NMFS species list requested for this project.

The project will have no effects to federally listed anadromous fish, critical habitat, or their Essential Fish Habitat regulated by FESA (16 USC § 1531) and Magnuson-Stevens Fishery Conservation and Management Act [Public Law 94 – 265]). No effects to any other federally listed or candidate species are anticipated.

#### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to threatened and endangered species.

### AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

As discussed in Section 2.4.4 above, no threatened or endangered species-related mitigation measures would be required for the project. Avoidance and minimization measures **AMM-BIO-1 through AMM-BIO-14**, listed above in Section 2.4 and in Appendix C, would be implemented.

## 2.4.6 Invasive Species

### REGULATORY SETTING

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112

requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

## AFFECTED ENVIRONMENT

Vegetation along some portions of the roadway is the result of landscaping with both native and non-native species, while other disturbed portions have been colonized by pioneer species, both native and non-native. Some of these have the potential to be invasive. The introduction and spread of invasive plants adversely affect natural plant communities by displacing native plant species that provide shelter and forage for wildlife species. The infestation of the BSA by these species primarily occurs along the roadway and within the channel banks. Through site visits and database searches, no invasive plant species have been identified in the BSA.

## ENVIRONMENTAL CONSEQUENCES

### Preferred Build Alternative

The preferred Build Alternative is anticipated to have minimal effects on the spread of invasive species within the project’s BSA. There have not been any invasive species identified within the BSA and the improvements are not expected to result in the colonization of additional species. Caltrans would implement **Avoidance and Minimization Measure BIO-14**, ensuring that all areas temporarily affected during construction would be revegetated with native species and that invasive species would be controlled to the maximum extent practicable.

### No Build Alternative

Under the No Build Alternative, the tunnel would remain in its current condition. There would be no impacts to the spread of invasive species.

## AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No invasive species-related mitigation measures would be required for the project. Avoidance and minimization measure **AMM-BIO-14**, listed above in Section 2.4 and in Appendix B, would be implemented.

## 2.5 CUMULATIVE IMPACTS (CEQA)

Cumulative impacts[14] are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

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

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines.

> *Please note: Council on Environmental Quality (CEQ) NEPA Implementing Regulations that were contained in 40 Code of Federal Regulations 1500 et seq have been removed.*
>
> *Included in the removal was Section 1508 that defined cumulative impacts. However, consideration of cumulative impacts was included in the analyses for the Draft Environmental Document, prior to the removal of the CEQ regulations, and therefore has been retained in the Final Environmental Document for informational purposes only.*

As described above, the project would have no effect on growth, recreation, population and housing, land use planning, mineral resources, energy, air quality, agriculture and forest resources, geology and soils, or hydrology and water quality.

In addition, the project would have less than significant effects to aesthetics, biological resources, community character or community resources, noise, utilities and service systems, public services, hazardous wastes and hazardous materials, transportation, tribal cultural resources, wildfires, and mandatory findings of significance.

The project would have less than significant effects to cultural resources with **Mitigation Measure CUL-1** incorporated.

The following projects have been or are proposed to be implemented by Caltrans along SR-24 near the Caldecott Tunnel. There are no housing or other development projects

[14] As of April 11, 2025, the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations contained in 40 Code of Federal Regulations (CFR) 1500 et seq have been repealed and are longer posted. One of the key results is that cumulative, direct, and indirect effects are no longer in regulation.

planned by the City of Oakland, City of Orinda, Alameda County, or Contra Costa Counties near the project area.

**Table 6. Implemented or Planned Projects in Project Area**

| Project EA Number | Postmiles | Project Name and Description | Year Implemented/To Be Implemented |
|---|---|---|---|
| 04-1Q840 | 0.010/0.010 | Director's Orders for maintenance at Caldecott Tunnel | 2020 |
| 04-1Y090 | 0.010/0.010 | Highway maintenance at Caldecott Tunnel | 2023 |
| 04-1X260 | 0.100/0.100 | Director's Orders for maintenance at Caldecott Tunnel | 2024 |

As all of the above projects are maintenance projects with no significant impacts, and because this project is not anticipated to have any significant impacts on resources, there are no anticipated cumulative impacts.

# Chapter 3 California Environmental Quality Act (CEQA) Evaluation

## 3.1 DETERMINING SIGNIFICANCE UNDER CEQA

The project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA)[15]. FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans. The Department is the lead agency under CEQA and NEPA.

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

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

## 3.2 CEQA ENVIRONMENTAL CHECKLIST

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. In many cases, background studies performed in connection

[15] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation. Climate change is one of the topics impacted.

with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

## 3.2.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

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

**CEQA Significance Determinations for Aesthetics**

a) **No Impact –** Under the preferred Build Alternative, it is not anticipated that there will be any permanent impacts to scenic vistas (views of the Oakland/Berkeley hills) or scenic resources (if mature trees and shrubs are protected from damage). Temporary visual impacts will be addressed by **Project Feature-AES-1 through PF-AES-5.**

b) **Less than Significant Impact -** The installation of the Jet fan ventilation system casings would introduce a new man-made feature to each of the affected tunnel

bores as shown in Figures 20 through 26 of Section 2.2.3 above. However, with an aesthetic treatment applied onto the tunnel walls that mimics the existing aesthetics in color and pattern, **AMM-AES-1**, the rehabilitation of the bores would visually blend in with the existing structure of Bore 4. Similarly, if the new roadway paving and striping resembles what motorists see along the freeway, then all elements are anticipated to result in moderate-low visual impacts. There is a potential for temporary light and glare impacts during nighttime construction operation.

Additionally, as SR-24 is a scenic highway **AMM-AES-2** replacement highway planting will be installed where feasible in areas where existing trees and shrubs are impacted and if any are removed to maintain Classified Landscaped Freeways and Designated State Scenic Highway with three years Plant Establishment Period (PEP), to ensure a successful planting to support the aesthetics of the corridor.

c) **No Impact –** The project is located in an urbanized area. Under the preferred Build Alternative, the project would not conflict with applicable zoning and other regulations governing scenic quality.

d) **Less than Significant Impact –** Under the preferred Build Alternative, the project would not create a permanent, new source of light or glare. During construction, lighting would likely be used during nightwork, introducing a new source of light in the project area. However, construction lighting during nightwork would be limited to the immediate vicinity of active work and utilize shielding to avoid light trespass, as outlined in **Project Feature AES-4**. Implementation of this Project Feature would further reduce potential temporary impacts from light and glare. Therefore, impacts from light and glare would be less than significant.

**PFs, AMMs and/or MMs:**

The project would implement **Project Features AES-1 through PF-AES-5** and **Avoidance and Minimization Measure AES-1** and **AMM-AES-2** to avoid or minimize the Project's visual effects (see Appendix B and Appendix C).

## 3.2.2 Agriculture and Forestry Resources

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

| Question | CEQA Determination |
|---|---|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | No Impact |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | No Impact |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | No Impact |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | No Impact |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | No Impact |

**CEQA Significance Determinations for Agriculture and Forestry Resources**

Would the project:

a) **No Impact –** There are no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) within the project area.

b) **No Impact –** There are no parcels under Williamson Act contract within the project limits.

c) **No Impact –** There are no forest or timberlands within the project limits.

d) **No Impact -** There are no forest or timberlands within the project limits.

e) **No Impact –** There are no other changes anticipated to farmland or forest lands.

**PFs, AMMs and/or MMs:**

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

## 3.2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

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

**CEQA Significance Determinations for Air Quality**

**a) No Impact** – The project is exempt from the requirement to determine conformity per 40 CFR[16] 93.126 (Table 2 of CRF 93.126– Widening narrow pavements or reconstructing bridges (no additional travel lanes), therefore an air quality study is not required and there would be no impact to air quality. The project would not conflict with or obstruct any applicable air quality plans, would not result in a cumulatively considerable net increase of criteria pollutants, or result in other emission for CEQA that would adversely affect a substantial number of people.

**b) No Impact** – See a) above.

**c) No Impact** – See a) above.

**d) No Impact** – See a) above.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature GHG-1** to further reduce air quality impacts from construction activities (see Appendix B).

## 3.2.4 Biological Resources

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and | Less Than Significant Impact |

[16] As of April 11, 2025, the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations contained in 40 Code of Federal Regulations (CFR) 1500 et seq have been repealed and are longer posted.

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

**CEQA Significance Determinations for Biological Resources**

a) **Less Than Significant Impact -** Literature reviews and database searches were conducted to determine the presence of special-status plant and wildlife species with potential to occur with the project's BSA. 30 wildlife species and 23 plant species were considered to have potential to be present within the BSA. However, due to the lack of suitable habitat present within the highly disturbed and urban BSA, only seven of these species have a low potential to occur, and none are expected to be impacted by this project. Migratory birds, bats, and Alameda whipsnake may be present within the BSA. **AMM-BIO-1 through AMM-BIO-3 and AMM-BIO-6 through AMM-BIO-7** would require work windows and preconstruction surveys for nesting birds and bats, and **AMM-BIO-4, AMM-BIO-5, and AMM-BIO-12** would also aid in helping to avoid entrapment, entanglement, or injury of wildlife. As described in **AMM-BIO-11 and AMM-BIO-14**, the areas where clearing and grubbing are necessary would be revegetated with appropriate species after the project is constructed.

b) **No Impact** – The project's BSA contains little vegetation or suitable habitat, and the vegetation that is present lacks connectivity to natural area. While construction activities may result in minor vegetation removal, this would not impact any riparian vegetation or wildlife corridors. To minimize the impacts from vegetation clearing and grubbing and tree removal, Caltrans would implement

**AMM-BIO-11, AMM-BIO-14**, **and AMM-AES-2** which would require revegetation of areas disturbed by construction activities with native species to the maximum extent practicable. There are also no wetlands present within the project's BSA. Caltrans would also implement **AMM- BIO-13**, which would require storage of all asphalt waste a minimum of 150 feet away from any aquatic habitat, culvert, or drainage feature. **AMM-BIO-11 and Project Feature PF-WQ-1** would include the use of temporary BMPs during construction activities. Therefore, there would be no impact to sensitive habitats, wildlife corridors, wetlands, or waterways and the project would not conflict with local policies or conservation plans.

c) **No Impact** – See b) above.

d) **No Impact** – See b) above.

e) **No Impact** – See b) above.

f) **No Impact** – See b) above.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature WQ-1** and **Avoidance and Minimization Measures BIO-1 through AMM-BIO-14 and AMM-AES-2** to avoid or minimize the project's impacts on biological (see Appendix B and Appendix C).

## 3.2.5 Cultural Resources

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5? | Less Than Significant with Mitigation Incorporated |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | No Impact |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | No Impact |

**CEQA Significance Determinations for Cultural Resources**

a) **Less than Significant Impact with Mitigation Incorporated –** As described in the Cultural Resources Section of Chapter 2 (Section 2.2.4), the Caldecott Tunnel Bores 1, 2, and 3 were listed as a City of Oakland Landmark in 1980, and Bores 1 and 2 were further determined eligible for the National Register of Historic Places (NRHP) in 1998. Bores 1 and 2 are a significant resource under CEQA. Bore 3 was determined to be ineligible for the NRHP. No archaeological resources have been identified within the Area of Potential Effects (APE).

A stakeholder meeting took place on February 27, 2024, and was attended by OHA President Daniel Levy and board member Naomi Schiff, and Donna Baarsch from the City of Orinda, as well as Caltrans representatives from OCRS.

The meeting included discussion of two Caltrans Tunnels and Tubes projects, EA 0J540 (Caldecott Bores 1, 2 and 3) and EA 2Y780 (Posey Tube and Webster Tube Ventilation Upgrade Project) because of the similarity of the projects. The OHA's primary concern was maintaining the integrity of the portal buildings. They had no concerns regarding the ventilation upgrades. The City of Orinda's primary interest was traffic and road closures associated with construction. Both organizations requested updates as the project progresses.

The addition of the jet fans under the preferred Build Alternative, including the removal of sections of the plenum, would have a significant impact on Bores 1 and 2. Under **Mitigation Measure CUL-1**, Caltrans produced a Historic Property Survey Report (HPSR) and Finding of Adverse Effect (FOE) report, pursuant to Stipulation X.C.1 of the PA. The SHPO stated on January 14, 2025, that they had no objection to Caltrans's Finding of Adverse Effect for the project. OCRS will continue consultation with the Section 106 Stakeholders to advise them of the project's finding under Section 106 and solicit their input regarding ongoing mitigation strategies. The strategies have been captured in a Memorandum of Agreement (MOA) negotiated between Caltrans, the stakeholders, and the State Historic Preservation Officer (SHPO). The MOA was executed on May 12, 2025.

With implementation of the above measures, the impacts to the historical resource will be less than significant with mitigation incorporated.

b) **No Impact -** No archaeological resources have been recorded in the area that will be affected by the project.

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

**PFs, AMMs, and/or MMs:**

The project would implement **Project Features CUL-1 through CUL-2** and **Mitigation Measure CUL-1** to further reduce cultural impacts from construction activities (see Appendix B and Appendix C).

## 3.2.6 Energy

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | No Impact |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | No Impact |

### CEQA Significance Determinations for Energy

a) **No Impact** – The preferred Build Alternative would not result in temporary or permanent wasteful, inefficient, or unnecessary consumption of energy resources. Construction activities would result in short-term energy consumption from the use of petroleum fuels by off-road construction equipment, and from on-road vehicles used by construction workers to travel to and from the site during construction and to deliver construction materials (Caltrans 2024c). With the implementation of **PF-GHG-1 (For CEQA)**, Caltrans would implement construction best management practices including ensuring regular vehicle and equipment maintenance, limiting vehicle idling, recycling nonhazardous wastes, and using solar-powered signal boards, if feasible. The project is not a capacity-increasing transportation project and would not increase use of energy resources. The project would not conflict with state and local plans for renewable energy and energy efficiency. There would be no impact.

b) **No Impact** – See a) above.

**PFs, AMMs, and/or MMs:**

The project would implement **Project Feature GHG-1** to further reduce energy impacts from construction activities (see Appendix B).

## 3.2.7 Geology and Soils

Would the project.

| Question | CEQA Determination |
|---|---|
| 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 Impact |
| ii) Strong seismic ground shaking? | No Impact |
| iii) Seismic-related ground failure, including liquefaction? | No Impact |
| iv) Landslides? | No Impact |
| b) Result in substantial soil erosion or the loss of topsoil? | 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 Impact |

| Question | CEQA Determination |
|---|---|
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | No Impact |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | No Impact |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | No Impact |

**CEQA Significance Determinations for Geology and Soils**

a) **No Impact –** The preferred Build Alternative would be designed and constructed in accordance with Caltrans' Geotechnical Design Standards, current Seismic Design Criteria, and Standard Specifications. The project would not expose the public to additional hazards due to strong ground shaking, fault rupture, liquefaction, slope instability, soft soils, or expansive soils. The project would implement erosion control measures and Best Management Practices (BMPs) under Project Feature WQ-1 to further minimize any soil erosion of loss of topsoil.

b) **No Impact –** See a) above.

c) **No Impact –** See a) above.

d) **No Impact –** See a) above.

e) **No Impact –** See a) above.

f) **No Impact –** See a) above.

**PFs, AMMs, and/or MMs:**

The project would implement **Project Feature WQ-1** to further reduce geologic impacts from construction activities (see Appendix B).

## 3.2.8 Greenhouse Gas Emissions

Would the project:

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

**CEQA Significance Determinations for Greenhouse Gas Emissions**

a) **Less than Significant Impact -** Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions for CEQA that may occur related to this project. The analysis included in the climate change section of this document for CEQA (Section 3.3) provides the public and decision-makers as much information about the project as possible. The project would implement **PF-GHG-1 (For CEQA)** to reduce GHG emissions for CEQA for all construction activities.

b) **Less than Significant Impact -** It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions for CEQA limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change for CEQA. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section for CEQA that follows in Section 3.3.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature GHG-1 (For CEQA)** and **Avoidance and Minimization Measure BIO-11** to further reduce construction-related emissions for CEQA and impacts from construction activities (see Section 1.8 and Appendix B).

## 3.2.9 Hazards and Hazardous Materials

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | No Impact |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | No Impact |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | No Impact |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | No Impact |

| Question | CEQA Determination |
|---|---|
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two nautical 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 Impact |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Less Than Significant Impact |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | No Impact |

**CEQA Significance Determinations for Hazards and Hazardous Materials**

Would the project:

**a) No Impact** - In 2013 and 2014, the supply and exhaust ventilation shafts of Bores 1, 2, and 3 were cleaned of the lead-containing dust and particulates that accumulated from vehicle exhaust inside the tunnel bores. With lead not having been used as a fuel additive since the 1980s, the ventilation shafts have remained free of lead since that cleanup. The project area does not contain any sites known to contain hazardous materials. The project is also not located within an airport land use plan or within 2 miles of a public airport. The project would not create a hazard to the public or the environment.

**b) No Impact** – See a) above.

**c) No Impact** – See a) above.

**d) No Impact** – See a) above.

**e) No Impact** – See a) above.

**f) Less than Significant Impact** – Construction and operation of either of the project build alternatives would not interfere with any emergency evacuation or response plan. During construction of alternative, there would be necessary lane closures that may pose temporary traffic impacts to emergency services. However, Caltrans would implement **Project Feature TRA-1** to create a TMP in coordination with emergency service providers to provide notice to the public and maintain emergency access during construction. Therefore, the impact would be less than significant.

**g) No Impact** – The project is located in an area classified as being a very high fire severity zone. However, the project would not require any installation of infrastructures that may exacerbate fire risks or pose ongoing impacts to the environment. The project would not expose people or structures to effects of wildland fires. There would be no impact.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature TRA-1** to ensure continuity of emergency evacuation and response plans. No additional project features or avoidance and minimization or mitigation measures are required to reduce hazardous waste impacts from construction activities (see Appendix B).

## 3.2.10 Hydrology and Water Quality

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | No Impact |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | No Impact |
| 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:<br><br>i) result in substantial erosion or siltation on- or off-site; | No Impact |
| ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | No Impact |
| iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | No Impact |
| iv) impede or redirect flood flows? | No Impact |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | No Impact |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | No Impact |

**CEQA Significance Determinations for Hydrology and Water Quality**

**a) No Impact** –The project, under the preferred Build Alternative, would result in disturbed soil area (DSA) that is more than 1 acre. As a result, construction activities are subjected to the Construction General Permit (CGP). Stormwater pollution prevention plan (SWPPP) would be prepared to control all potential

temporary construction impacts. As part of the SWPPP, various temporary construction site best management practices (BMPs) would be included to reduce pollutants both during and after construction to the maximum extent practicable (MEP). BMPs include job site management, concrete waste management, sediment and erosion control measures, storm drain inlet protection, etc. With implementation of these BMPs as outlined in **Project Feature WQ-1**, the impacts on surface and groundwater would be less than significant.

**b) No Impact** - The amount of DSA as a result of the project is estimated to be more than 1 acre under either alternative. Once constructed, the amount of new impervious surface is estimated to be minimal at less than 1 acre. As a result, post-construction storm water treatment measures are not required. In addition, there are no proposed dewatering activities needed during construction.

**c) No Impact** – See b) above.

**d) No Impact** – See b) above.

**e) No Impact** – See b) above.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature WQ-1** to further reduce water quality impacts from construction activities (see Appendix B).

## 3.2.11 Land Use and Planning

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Physically divide an established community? | No Impact |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | No Impact |

**CEQA Significance Determinations for Land Use and Planning**

**a) No Impact** – The project would not physically divide an established community. The project would not conflict with Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) Plan Bay Area 2050, Alameda County Transportation Commission (ACTC) Countywide Transportation Plan, Alameda County General Plan, City of Oakland General Plan, City of Oakland Department of Transportation (OakDOT) Strategic Plan, the Contra Costa County General Plan, and the City of Orinda General Plan. There would be no impact to any land use plans or policies.

**b) No Impact** – See a) above.

**PFs, AMMs and/or MMs:**

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

## 3.2.12 Mineral Resources

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state? | No Impact |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | No Impact |

**CEQA Significance Determinations for Mineral Resources**

**a) No Impact** – Loss of availability of any locally-important mineral resources is not anticipated in the project.

**b) No Impact** – See a) above.

**PFs, AMMs and/or MMs:**

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

## 3.2.13 Noise

Would the project result in:

| Question | CEQA Determination |
|---|---|
| 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? | Less Than Significant Impact |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | Less Than Significant Impact |
| 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 nautical miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | No Impact |

**CEQA Significance Determinations for Noise**

**a) Less than Significant Impact** – The modeled construction noise levels at Receptors A, B, C & D as described in the Noise section of Chapter 2 (Section

2.3.6) is considerably below 86 dBA. In addition, the existing soundwall will further decrease the noise levels by up to 8 dBA. However, to further minimize the public noise disturbance resulting from the construction activities, **AMM's NOI-1 through NOI-8** will be implemented.

The project is not a capacity-increasing project and would not add additional travel lanes to local streets or to SR-24, so traffic noise levels would remain the same as existing once construction is completed. The noise impacts from this project are due only to temporary construction activities. With implementation of the described Project Features, the project would not expose people residing or working in the project area to excessive noise levels during construction. The impact would be less than significant.

**b) Less than Significant Impact –** See a) above.

**c) No Impact** – The project is not located within the vicinity of an airport land use plan or within 2 miles of a public or private airport or airstrip. There would be no impact.

**PFs, AMMs and/or MMs:**

The project would implement **Avoidance and Minimization Measures AMM-NOI-1 through AMM-NOI-8** to further reduce noise impacts from construction activities (see Appendix C).

## 3.2.14 Population and Housing

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | No Impact |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | No Impact |

**CEQA Significance Determinations for Population and Housing**

Would the project:

**a) No Impact -** The project is a non-capacity increasing project and does not introduce new utilities to the area and so would not induce unplanned population growth. The project would also not result in any property acquisitions or displacement of residents or businesses. There would be no impact.

**b) No Impact –** See a) above.

**PFs, AMMs and/or MMs:**

No impact is anticipated, and no additional measures are proposed.

## 3.2.15 Public Services

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 following public services:

| Question | CEQA Determination |
|---|---|
| a) Fire protection? | Less Than Significant Impact |
| b) Police protection? | Less Than Significant Impact |
| c) Schools? | No Impact |
| d) Parks? | Less Than Significant Impact |
| e) Other public facilities? | No Impact |

**CEQA Significance Determinations for Public Services**

a) **Less than Significant Impact -** The project would not result in a use that would directly or indirectly induce population and employment growth in the City of Oakland, Alameda County, the City of Orinda, or Contra Costa County or permanently alter any of these public services. However, during construction of the preferred Build Alternative there would be necessary lane closures and ramp detours that may temporarily impact fire protection and police services. However, these temporary traffic impacts including ramp detours would be reduced through implementation of a TMP, under **Project Feature TRA-1**. The TMP will include elements to inform both the local community and wider region of alternate freeway routes and ramp detours to maintain access for emergency services. All closure plans will be notified to the public prior to construction via press releases/media alerts, paid advertisements, and the project website. Signs specifying closure times of the ramps will be posted at least 72 hours in advance. All closures will be coordinated with the CHP, local agencies of jurisdiction, and emergency services.

b) **Less than Significant Impact –** See a) above.

c) **No Impact** – The project would not result in a use that would directly or indirectly induce population and employment growth in the City of Oakland, Alameda County, the City of Orinda, or Contra Costa County or permanently alter any of these public services. There are no schools or other public facilities in the immediate vicinity of the project area. There would be no impacts.

d) **Less than Significant Impact -** During construction of the preferred Build Alternative there would be necessary lane closures and ramp detours. These lane closures and ramp detours may temporarily impact access to the East Bay Regional Parks District properties located near the project area. However, these

temporary traffic impacts would be reduced through implementation of a TMP, under Project Feature TRA-1, to maintain access for emergency services and provide adequate noticing and ramp detours for the community.

e) **No Impact** – The project would not result in a use that would directly or indirectly induce population and employment growth in the City of Oakland, Alameda County, the City of Orinda, or Contra Costa County or permanently alter any of these public services. There are no schools or other public facilities in the immediate vicinity of the project area. There would be no impacts.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature TRA-1** to further reduce emergency service availability impacts from construction activities (see Appendix B).

## 3.2.16 Recreation

| Question | CEQA Determination |
|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | No Impact |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | No Impact |

**CEQA Significance Determinations for Recreation**

a) **No Impact -** The project would not increase current highway or roadway capacity or induce population and employment growth in the City of Oakland, Alameda County, the City of Orinda, or Contra Costa County.

b) **No Impact -** The project does not propose any expansion of recreational facilities and does not result in any use of public recreation areas. There would be no impact to recreational facilities.

**PFs, AMMs and/or MMs:**

No impacts are anticipated and no additional measures are proposed.

## 3.2.17 Transportation

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | No Impact |

| Question | CEQA Determination |
|---|---|
| b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | No Impact |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | No Impact |
| d) Result in inadequate emergency access? | Less Than Significant Impact |

**CEQA Significance Determinations for Transportation**

a) **No Impact –** As described in the Human Environment of Chapter 2, the project would not conflict with any local or regional program, plan, ordinance, or policy addressing transit or bicycle and pedestrian facilities.

b) **No Impact -** The project would not include the addition of through traffic lanes on existing highways or roadways, so the Project would not conflict with CEQA Guidelines section 15064.3, subdivision (b).

c) **No Impact -** The project would also not substantially increase any hazards due to geometric design features.

d) **Less than Significant Impact -** The project would not result in inadequate emergency access. There are necessary lane closures that would be needed during construction of the preferred Build Alternative. However, these impacts would be temporary, and Caltrans would implement a TMP under **Project Feature TRA-1** to minimize temporary impacts to emergency access vehicles and services. The impact would be less than significant.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature TRA-1** to further reduce impacts to emergency access from construction activities (see Appendix B).

## 3.2.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

| Question | CEQA Determination |
|---|---|
| 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 | Less Than Significant Impact |

| Question | CEQA Determination |
|---|---|
| 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. | Less Than Significant Impact |

**CEQA Significance Determinations for Tribal Cultural Resources**

a) **Less Than Significant** - The summary memo prepared by Caltrans Professionally Qualified Staff for this project identified a tribal sensitivity area within the project area or APE (Caltrans 2024f). Caltrans is currently participating in coordination efforts with Costanoan Rumsen Carmel Tribe and will continue to coordinate with the Tribal representatives throughout the project. If the project changes, the Office of Cultural Resource Studies (OCRS) would notify Tribal representatives. Caltrans would implement **Project Features CUL-1 and CUL-2** that would halt all construction activities if previously unidentified human remains or cultural resources are unearthed during construction until a qualified archaeologist can assess the discovery.

Caltrans contacted the Native American Heritage Commission (NAHC) on January 19, 2024, requesting a search of their Sacred Lands File (SLF) to determine if there are historically significant or sacred sites within or near the Project area. The NAHC responded that the project area was negative for cultural sites and provided a list of individuals from eleven indigenous groups for additional consultation. Letters initiating Section 106 of the National Historic Preservation Act (NHPA) and AB 52 were sent to each of the contacts on July 11, 2024. The Tribes contacted included: Amah Mutsun Tribal Band of Mission San Juan Bautista, Amah Mutsun Tribal Band, Confederated Villages of Lisjan Nation, Costanoan Rumsen Carmel Tribe, Guidiville Rancheria of California, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, North Valley Yokuts Tribe, The Ohlone Indian Tribe, Wilton Rancheria, and the Wuksachi Indian Tribe / Eshom Valley Band.

Muwekma Ohlone Indian Tribe of the SF Bay Area responded on July 15, 2024 with information about the tribe and the area. They concluded that formal tribal consultation is not necessary relative to this specific project and request to be notified in the future should any ancestral remains or signification subsurface features be uncovered. Caltrans will notify the Tribe of any changes or finds. Confederated Villages of Lisjan Nation responded on July 15, 2024 and would like to be notified of any changes to the project. Caltrans will notify the Tribe of any changes or finds. The Costanoan Rumsen Carmel Tribe responded on July 15 and requested consultation. A field meeting with the Tribe occurred on September 18, 2024 and the Tribe has requested to monitor construction. Consultation is ongoing and the Tribe has requested to be involved until the

conclusion of the project.

**b) Less than Significant Impact –** See a) above.

**PFs, AMMs and/or MMs:**

Caltrans will implement **Avoidance and Minimization Measure TCR-1 and TCR-2** to minimize impacts to Tribal cultural resources from construction activities. In addition, the project would implement **Project Features TCR-1, CUL-1, and CUL-2** to further reduce impacts to Tribal cultural resources from construction activities (see Appendix B and Appendix C).

## 3.2.19 Utilities and Service Systems

Would the project:

| Question | CEQA Determination |
|---|---|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | Less Than Significant Impact |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | 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 Impact |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | No Impact |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | No Impact |

**CEQA Significance Determinations for Utilities and Service Systems**

**a) Less than Significant Impact -** Construction of the preferred Build Alternative may require protections, adjustments, or relocations of PG&E, AT&T, and water facilities. Final verifications of utilities would be performed during the project's Design Phase, which may reveal additional utility relocations needed. For utilities that require relocation, it is anticipated that these utilities would be relocated prior to construction. Implementation of **Project Features UTIL-1**, trash management, **and UTIL-2**, notifying utilities of construction schedule, would further reduce any

impacts to utilities during construction. As plans are further developed during the Design Phase, should any utility impacts be identified, additional Avoidance and Minimization measures may be applied.

b) **No Impact -** The preferred Build Alternative would not directly increase the number of residents in the area because residential land uses are not proposed.

c) **No Impact -** The project would not increase the demand for additional water or wastewater treatment.

d) **No Impact -** The project also would not generate excess solid waste or interfere with solid waste-related regulations.

e) **No Impact -** The project will comply with federal, state, and local management and reduction statutes and regulation related to solid waste.

**PFs, AMMs and/or MMs:**

The project would implement **Project Features UTIL-1 and UTIL-2** to further reduce impacts to utility services from construction activities (see Section 1.8 and Appendix B).

## 3.2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

| Question | CEQA Determination |
|---|---|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | Less Than Significant Impact |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | No Impact |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | No Impact |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | No Impact |

**CEQA Significance Determinations for Wildfire**

a) **Less than Significant Impact -** The project would not result in impairment of an adopted emergency response plan or emergency evacuation plan. However, construction of the preferred Build Alternative would require lane closures that may pose traffic impacts to emergency services in the area. These impacts

would be temporary, and Caltrans would implement a TMP under **Project Feature TRA-1** to minimize temporary impacts to emergency access vehicles and services. The impact would be less than significant.

**b) No Impact -** The project is located in an area classified as being a very high fire severity zone. However, the project would not exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

**c) No Impact –** The project is located in an area classified as being a very high fire severity zone. However, the project would not require any installation of infrastructure that may exacerbate fire risks or pose ongoing impacts to the environment.

**d) No Impact -** The project would not expose people or structures to other risks such as flooding or landslides.

**PFs, AMMs and/or MMs:**

The project would implement **Project Feature TRA-1** to further reduce impacts to wildfire risk from construction activities (see Appendix B).

## 3.2.21 Mandatory Findings of Significance

| Question | CEQA Determination |
|---|---|
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | Less Than Significant with Mitigation Incorporated |
| 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)? | Less Than Significant Impact |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | Less Than Significant Impact |

**CEQA Significance Determinations for Mandatory Findings of Significance**

**a) Less than Significant Impact with Mitigation Incorporated -** As described in Section 2.4, Biological Resources, due to the lack of suitable habitat present within

the highly disturbed and urban BSA, only seven of these special-status animal species have a low potential to occur, and none are expected to be impacted by this project. Migratory birds, bats, monarch butterfly, and Alameda whipsnake have potential to occur within the BSA, but the project would implement **Avoidance and Minimization Measures BIO-1 through BIO-4** that would require pre-construction surveys, non-disturbance buffers around any active nests found, and that vegetation removal be avoided during the nesting season. **Avoidance and Minimization Measures BIO-5 through BIO-14** would further reduce impacts to natural communities, plant and animal species, and other biological resources during construction.

Section 2.2.4, Cultural Resources, describes the historic resource, Bores 1 and 2 of the Caldecott Tunnel, within the APE prepared for the project. There are no archaeological resources identified within the project area. The project includes **Project Features CUL-1 and CUL-2** to halt all construction activities in the event that human remains or other cultural resources are found until an archaeologist can assess the discovery. With implementation of these project Features found in Appendix B, impacts would be reduced to a less than significant level. The project also includes **Mitigation Measure CUL-1** for the historic bores.

**b) Less than Significant Impact -** The project proposes improvements to existing transportation infrastructure within the project area. With incorporation of project Features and avoidance and minimization measures, construction, and operation of the project under either alternative would not result in a substantial contribution to a cumulatively considerable impact.

**c) Less than Significant Impact -** The project would not result in significant environmental impacts with implementation of Project Features and several avoidance and minimization measures (AMMs). The Project Features and AMMs identified in Chapter 1, Chapter 2, and Appendix B would address the potential impacts of the project that could affect human beings. **AMM's NOI-1 through NOI-8** would collectively address the potential noise impacts during construction. While this project is exempt from determining air quality conformity per 40 CFR[17] 93.123 and so would not result in impacts to air quality, the project would still incorporate **Project Feature GHG-1 (For CEQA)** to reduce emissions for CEQA. With implementation of these Project Features and AMMs included in Appendix B and C, respectively, the project would not have a substantial direct or indirect impact on the human environment, and impacts would be less than significant.

[17] As of April 11, 2025, the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations contained in 40 Code of Federal Regulations (CFR) 1500 et seq have been repealed and are longer posted.

# 3.3 CLIMATE CHANGE

This information is provided for CEQA purposes only.

Climate change[18] refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions (for CEQA) 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 Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions (for CEQA) 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; while it is a naturally occurring and necessary component of 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 (for CEQA), mostly $CO_2$.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions (for CEQA). Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, "mitigation" involves actions to reduce GHG emissions (for CEQA) to lessen adverse impacts that are likely to occur. "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.

> *Please note: The NEPA Phase II regulations that required climate change to be analyzed have been rescinded pursuant to the Removal of NEPA Implementing Regulations CEQ Interim Rule (effective April 11, 2025). However, climate change was included in the NEPA section for the Draft Environmental Document prior to the rescission of the NEPA Phase II regulations. Therefore, it has been retained in the Final Environmental Document NEPA section for informational purposes only.*

## 3.3.1 Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change for CEQA

[18] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation. Climate change analysis is one of the topics impacted.

(GHGs and adaptation), please refer to Caltrans' Standard Environmental Reference (SER), Chapter 16, Climate Change.

## Federal

To date, no nationwide numeric mobile-source GHG reduction targets have been established.

The Federal Highway Administration (FHWA)[19] recognizes the threats that extreme weather, sea level rise, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. 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 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 corporate average fuel economy (CAFÉ) standards for on-road motor vehicles sold in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, and saves consumers money at the pump (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

## State

California has been innovative and proactive in addressing (for CEQA) 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 (for CEQA) 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 (for CEQA) 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 reductions of greenhouse gases." Ongoing GHG emissions (for CEQA) 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 (for CEQA) by 85 percent below 1990 levels, achieve net zero GHG emissions (for CEQA) by 2045, and achieve and maintain negative emissions (for CEQA) thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change 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.

## 3.3.2 Environmental Setting

The project is in an urban/suburban area of Alameda and Contra Costa County with a well-developed road and street network. The project area is mainly vacant residential land, single family residential homes, and East Bay Regional Park District land. The land owned by the East Bay Regional Park District covers the top of the tunnel and will not be impacted by the project's rehabilitation work. The tunnel in the project area is heavily used during peak hours. The Metropolitan Transportation Commission's Regional Transportation Plan (RTP)/ Sustainable Communities Strategy (SCS), also known as Plan Bay Area 2050, guides transportation and housing development in Alameda County, Contra Costa County, and the larger San Francisco Bay Area. The City of Oakland's Equitable Climate Action Plan and the Municipal Climate Action Plan address GHGs and air pollution in the project area.

### GHG Inventories

A GHG emissions (for CEQA) inventory estimates the amount of GHGs (for CEQA) discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions (for CEQA) allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The ARB documents GHG emissions for the state of California, 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 (for CEQA).

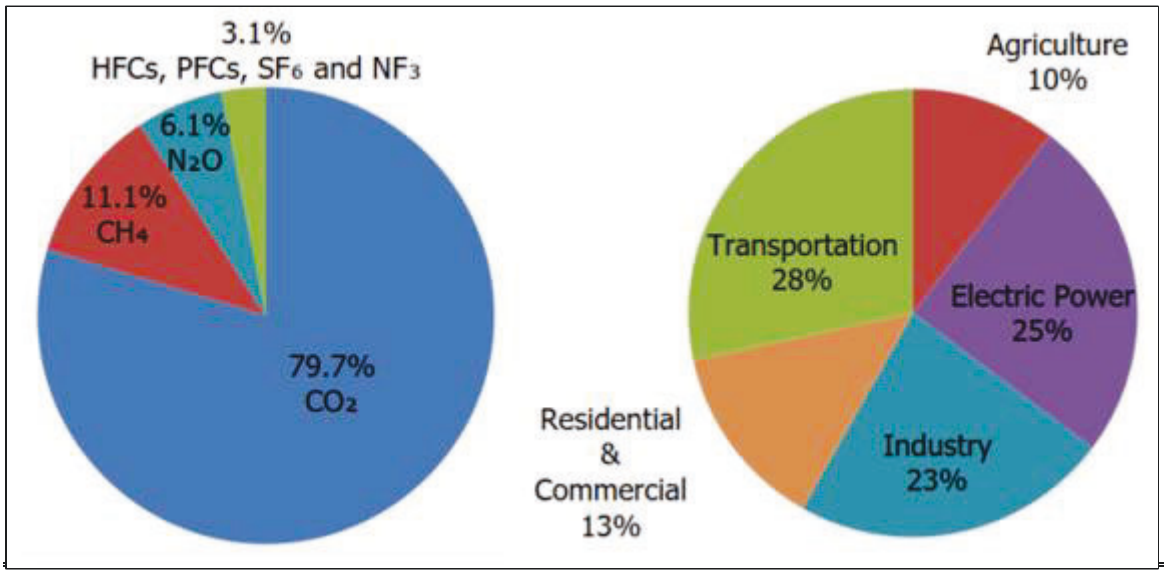
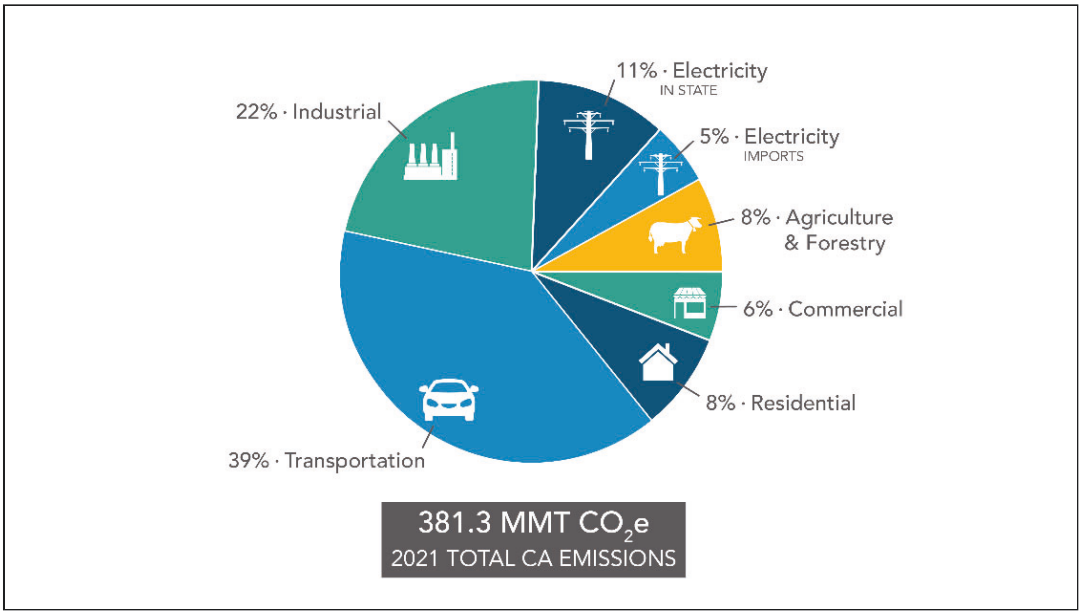



**Figure 30. U.S. 2022 GHG Emissions**

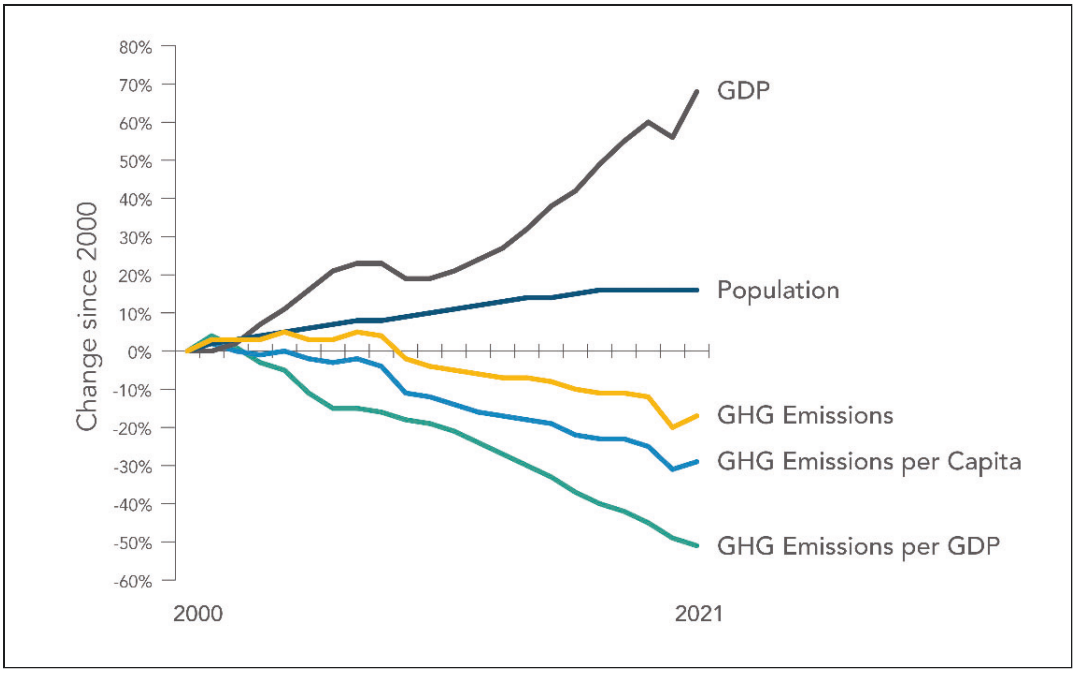
#### *State GHG Inventory*

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 2021 despite growth in population and state economic output (Figure 30). Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 31) (ARB 2023).




(Source: ARB 2023)

**Figure 31. California 2021 Greenhouse Gas Emissions by Economic Sector**




(Source: ARB 2023)

**Figure 32. Change in California GDP, Population, and GHG Emissions since 2000**

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 2022a).

## Regional Plans

ARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The project is included in the RTP/SCS for the Metropolitan Transportation Commission (MTC). The regional reduction target for MTC is 19 percent by 2035 (ARB 2021b).

**Table 7. Regional and Local Greenhouse Gas Reduction Plans**

| Title | GHG Reduction Policies or Strategies |
|---|---|
| Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) - Plan Bay Area 2050 (adopted October 2021) | • Expand commute trip reduction programs at major employers.<br>• Expand clean vehicle initiatives.<br>• Expand transportation demand management initiatives.<br>• Build a Complete Streets network.<br>• Advance regional Vision Zero policy through street design and reduced speeds.<br>• Enhance local transit frequency, capacity, and reliability.<br>• Expand and modernize the regional rail network.<br>• Build an integrated regional express lanes and express bus network. |
| City of Oakland - 2030 Equitable Climate Action Plan [ECAP] (adopted in Jul 2020) | • Shift to 100% carbon-free energy.<br>• Eliminate fossil fuels from building heating systems.<br>• Improve building insulation and windows.<br>• Significantly shift people away from private auto trips.<br>• Accelerate the electrification of vehicles. |
| Contra Costa County Municipal Climate Action Plan/Envision Contra Costa 2040 (adopted in 2015, currently undergoing revision) | • Achieve GHG emissions reduction target of 15% below baseline levels by 2020.<br>• Support employee carpool and vanpool programs.<br>• Direct digital control for heating, ventilation, and air conditioning systems in County buildings.<br>• Support flexible employee work schedules. |

### 3.3.3 Project Analysis

GHG emissions (for CEQA) from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational 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 greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, for CEQA "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 for CEQA climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

#### Operational Emissions

The purpose of the project is to rehabilitate the Caldecott Tunnel, and it will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR-24, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

#### Construction Emissions

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

longer intervals between maintenance and rehabilitation activities.

Caltrans prepared a Construction Greenhouse Gas (GHG) Analysis for CEQA (Caltrans 2024a) for the project. The results of the GHG emissions analysis are shown below in Table 8. The construction-related GHG emissions for CEQA were calculated using the Construction Emissions Tool 2021 (CAL-CET 2021), version 1.0, developed by the California Department of Transportation. It was estimated that for construction of this project, the total amount of CO2 produced due to construction would be 1,779 tons.

**Table 8. Summary of Construction-Related GHG Emissions for CEQA**

| Project Location: Contra Costa County on Route 24, PM R0.1 | PARAMETERS | | | PROJECT TOTAL |
|---|---|---|---|---|
| | CO2 (tons) | CH4 (tons) | N2O (tons) | CO2e (metric tons) |
| TOTAL EMISSIONS FOR CEQA | 1,779 | 0.039 | 0.097 | 1,740 |

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction for CEQA, 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 for CEQA 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 for CEQA also help reduce GHG emissions for CEQA.

### CEQA Conclusion

While the project would result in GHG emissions (for CEQA) during construction, it is anticipated that the project would not result in any increase in operational GHG emissions (for CEQA). The 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 (for CEQA), the impact would be less than significant. Caltrans is firmly committed to implementing measures to help reduce GHG emissions for CEQA. These measures are outlined in the following section.

## 3.3.4 Greenhouse Gas Reduction Strategies

### Statewide Efforts

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs (for CEQA) that cause climate change. Climate change programs in California are effectively reducing GHG emissions (for CEQA) 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, cleaner, low-carbon future,

while maintaining a robust economy (ARB 2022b).

Major sectors of the California economy, including transportation, will need to reduce emissions (for CEQA) to meet 2030 and 2050 GHG emissions (for CEQA) targets. The Governor's Office of Planning and Research 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 (for CEQA) 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 (for CEQA) 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 (for CEQA) reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions (for CEQA) 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 carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order 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 (for CEQA purposes) low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022).

## 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 (for CEQA) 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 (for CEQA) in transportation, which account for more than 40 percent of all polluting emissions (for CEQA), 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 (for CEQA purposes) 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 (for CEQA). 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 for CEQA, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions (for CEQA) reduction targets and increase resilience to climate change for CEQA. It demonstrates how GHG emissions (for CEQA) from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

### *Caltrans Strategic Plan*

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, (for CEQA) climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

### *Caltrans Policy Directives and Other Initiatives*

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director's policies promote energy efficiency, conservation, and climate change for CEQA, and commit Caltrans to sustainability practices in all planning, maintenance, and operations. For CEQA *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions (for CEQA) and current Caltrans procedures and activities that track and reduce GHG emissions (for CEQA). It identifies additional opportunities for further reducing GHG emissions (for CEQA) from Department-controlled emission (for CEQA) sources, in support of Caltrans and State goals.

## Project-Level GHG Reduction Strategies

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

Construction contractors would comply with Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, (for CEQA) Emissions Reduction, and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Some construction best management practices

(BMPs) that would be implemented, as part of **Project Feature GHG-1**, include providing regular vehicle and equipment maintenance, limiting idling of vehicles and equipment at the job site, recycling nonhazardous waste and excess material, and using solar-powered signal boards if feasible.

**Project Features AES-1 and Avoidance and Minimization Measure AES-2** requires Caltrans to minimize vegetation removal and engage in replacement tree and vegetation planting. Likewise, **Avoidance and Minimization Measure BIO-14** also requires vegetation replanting with native species. Project Features are included in Appendix B.

## 3.3.5 Adaptation

Reducing GHG emissions (for CEQA) is only one part of an approach to addressing climate change (for CEQA). 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 (for CEQA) 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.

### Federal Efforts

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.[20]

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and "analyzes the effects of global change on the 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."

The National Oceanic and Atmospheric Administration provides sea level rise

[20] Recently issued presidential Executive Orders and policy memoranda at the federal level have resulted in changes to the environmental process that affect National Environmental Policy Act (NEPA) documentation. Climate change analysis is one of the topics impacted. However, inclusion of federal efforts of adaptions was included in the NEPA section for the Draft Environmental Document prior to the rescission of the NEPA Phase II regulations. Therefore, it has been retained in the Final Environmental Document NEPA section for CEQA informational purposes only.

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).

## 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) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions (for CEQA) by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (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 of 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 addressed 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* include acting in

partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

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).

## 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 of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports 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 (for CEQA) 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 (for CEQA) (Caltrans 2023).

## Project Adaptation Analysis

### *Sea Level Rise*

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

### *Precipitation and Flooding*

The project is not located within base floodplains, and direct impacts to transportation

facilities due to flooding are not expected.

### *Wildfire*

The project is located in an area classified as being a very high fire severity zone. However, the project would not exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

### *Temperature*

The Caltrans District 4 Climate Change Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices.

# Chapter 4 Comments and Coordination

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

## 4.1.1 NATIVE AMERICAN TRIBAL CONSULTATION

Caltrans contacted the Native American Heritage Commission (NAHC) on January 19, 2024, requesting a review of their Sacred Lands File (SLF) to determine if there were known cultural resources within or near the APE. The results of the SLF, were negative and a list of Native American contacts affiliated with fifteen tribes with potential interest or information was provided. The individuals from eleven tribes were sent Section 106 of the National Historic Preservation Act (NHPA) and AB 58 consultation letters regarding the project. The Tribes contacted included: Amah Mutsun Tribal Band of Mission San Juan Bautista, Amah Mutsun Tribal Band, Indian Canyon Mutsun Band of Costanoan, Chicken Ranch Rancheria of Me-Wuk Indians, Costanoan Rumsen Carmel Tribe, Guidiville Rancheria of California, Confederated Villages of Lisjan Nation, Muwekma Ohlone Indian Tribe of the SF Bay Area, Nashville Enterprise Miwok-Maidu-Nishinam Tribe, North Valley Yokuts Tribe, The Ohlone Indian Tribe, Tamien Nation, Tule River Indian Tribe, Wilton Rancheria, and the Wuksachi Indian Tribe / Eshom Valley Band. Consultation is ongoing.

## 4.1.2 STAKEHOLDER CONSULTATION

On February 1, 2024, Caltrans Office of Cultural Resource Studies sent Section 106 consultation letters via email to Section 106 stakeholders with an invitation to attend a Section 106 stakeholder meeting scheduled for February 27, 2024.

Caltrans contacted Daniel Levy, President, Oakland Heritage Alliance (OHA); Elizabeth McElligott, Assistant Deputy Director, County of Alameda Parks, Recreation and Historical Commission; Tim Mollette-Parks, Acting Chair, City of Oakland Landmarks Preservation Advisory Board; Dominique Vogelpohl, Project Planner, Contra Costa County Historical Landmarks Advisory Committee; Donna Baarsch, Planning Technician, City of Orinda Historic Landmarks Committee; Ralph Anderson, President, Alameda County Historical Society; Cindy Heitzman, Executive Director, California Preservation Foundation (CPF); John Burgh, President, Contra Costa County Historical

Society; Alison Burns, President, Orinda Historical Society; and Mary McCosker, President, Lafayette Historical Society. On February 12, 2024, Caltrans contacted Betty Marvin, Planner III, Historic Preservation, Oakland Cultural Heritage Survey. Follow-up emails and phone calls were made on February 14 and February 15 to organizations that had not replied.

Ms. McElligott replied on February 14 stating that the county reviewed the information Caltrans provided, and had no comments regarding the projects; Betty Marvin of the Oakland Cultural Heritage Survey replied on February 12 on behalf of the Advisory Board stating she did not expect to attend the meeting; Jon Haeber stated on February 15 that CPF might take part in the stakeholder meeting online, but ultimately did not attend; Contra Costa County Historical Society Executive Director Leigh Ann Davis expressed interest in the project but did not attend; Alison Burns stated on February 15 that the Orinda Historical Society board did not have any concerns about the project; Ms. McCosker replied on February 14 and said that she appreciated being invited to the meeting but did not feel the need to attend.

No replies were received from the Contra Costa County Historical Landmarks Advisory Committee or the Alameda County Historical Society.

The stakeholder meeting took place on February 27, 2024, and was attended by OHA President Daniel Levy and board member Naomi Schiff, and Donna Baarssh from the City of Orinda. Caltrans was represented by Lindsay Busse, Helen Blackmore, and Charles Palmer from the OCRS. The meeting included discussion of two Caltrans Tunnels and Tubes projects, EA 0J540 (Caldecott Bores 1, 2 and 3) and EA 2Y780 (Posey Tube and Webster Tube Ventilation Upgrade Project) because of the similarity of the projects. The OHA's primary concern was maintaining the integrity of the portal buildings. They had no concerns regarding the ventilation upgrades. The City of Orinda's primary interest was traffic and road closures associated with construction. Both organizations requested updates as the project progresses.

### 4.1.3 PUBLIC INVOLVEMENT PROCESS FOR FED

Prior to initiating the public review period, Caltrans published a notice of the Draft Environmental Document's (DED's) availability on the Caltrans website available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs.

A Notice of Completion was submitted to the State Clearinghouse at the beginning of the public comment period on January 6, 2025. The project was then assigned a State Clearinghouse number (SCH # 2025010114). The State Clearinghouse subsequently distributed copies of the DED to agencies for comments.

Two separate notices were also published in the Contra Costa Times and Alameda Times-Star. In addition, the notice was distributed through mailers to the local community and businesses within the immediate project area in early November 2024. Members of the public were able to provide comment via email, postal mail, voicemail on a Toll Free number, and using a virtual comment card on the Project website. The project website is available via the following link: https://dot.ca.gov/caltrans-near-

me/district-4/d4-projects/d4-caldecott-tunnel-upgrade.

The public comment period began on January 6, 2025, and lasted for 30 days, ending on February 6, 2025. The Caldecott Tunnel Environmental Meeting was held during the public comment period on January 22, 2025 at the Orinda Library Auditorium.

The public meeting was a hybrid meeting that was also held as a Zoom webinar online, which allowed members of the public to submit questions. A short informational video from the project website was played. The Project Manager and lead Environmental staff conducted a presentation and provided an overview of the project. Following the presentation, the Project Manager and Environmental staff directed questions received during the meeting to various subject matter panelists for responses.

As shown below in Section 4.1.4. Public in-person attendance by non-Caltrans or non-project affiliated people was one person. Public attendance via Zoom webinar is estimated to be approximately twenty-two people. This number is approximate as it is not certain how many of those who logged on who did not use their DOT email accounts or were not recognized as Project-affiliates. Approximately twenty-five people affiliated with Caltrans or the project also logged in via Zoom.

Ten of the twelve comments and questions were questions by the public submitted via Zoom; two questions were submitted by known Caltrans staff (see Section 4.1.4). Some of the items discussed were repeated by more than one commenter.

Questions asked via Zoom involved topics such as: the previous Fourth bore agreement, construction noise, FM radio reception in the tunnel, Cultural Resource mitigations, project construction timeline/schedule, budget/funding, freeway and on- and off-ramp access and ramp detours during construction, the sprinkler system, the two ventilations options presented in the DED, lighting, interior improvements, cross tunnel passages, and seismic safety/reinforcement.

A member of the Fourth Bore Coalition, Howard Matis, was the sole individual who attended the meeting in person. The Fourth Bore Coalitions is a resident group which formed during the time of the construction of the tunnel's Fourth Bore. Mr. Matis submitted a comment card (see Section 4.1.4) with a question regarding previous right of way and sidewalk work which was conducted in conjunction with the construction of the fourth bore. The panelists clarified that this Project is separate from the previous Fourth Bore Project and Mr. Matis clarified his question and discussed his knowledge of the history of the Fourth Bore project and previous agreements made which involved Caltrans and the City of Oakland. Following the meeting Mr. Matis also spoke to members of Caltrans staff, including the Public Information Officer (PIO) Hector Chinchilla, who was in attendance at the meeting.

Comments were also received following the public Environmental Meeting. After the public comment period, all comments were considered, Caltrans selected a preferred alternative, and made the final determination of the effect to the environment. Under the California Environmental Quality Act (CEQA), as no unmitigable significant adverse impacts are identified, Caltrans has prepared a Mitigated Negative Declaration (MND). Similarly, Caltrans, as assigned by the Federal Highway Administration (FHWA), has determined the National Environmental Policy Act (NEPA) action does not significantly

impact the environment. Caltrans has issued a Finding of No Significant Impact (FONSI).

## 4.1.4 PUBLIC COMMENTS RECEIVED

Caltrans filed a Notice of Completion for the Draft IS with the State Clearinghouse on January 6, 2025. The filing of the Notice of Completion began a public review and comment period that ran from January 6, 2025, through February 6, 2025. Local agencies, organizations, and members of the public submitted comments. Each comment card, email, or letter that was received was reviewed, and substantive comments were identified. This section presents the comments that were received and the response to those comments. Forty-one comments were received prior to the close of the public comment period on February 6, 2025.

### Index to Comments

Comments are organized by type (during hybrid public meeting, email, phone call etc.,) and then chronologically (by first received). Each individual comment within a comment letter is identified in the margins by a numeric code, which also corresponds to the responses prepared to address each comment. For example, Letter 1, comment 1-1 is addressed in response 1-1. All agencies, community organizations, and individuals who commented on the Draft IS are listed in Table 9. Several individuals submitted comments through multiple platforms; these submissions are included separately based on the date on which they were submitted.

**Table 9 Index to Comments**

| Comment ID | Date of Comment | Commenter |
|---|---|---|
| During Hybrid Public Meeting: | | |
| 1 | 1/22/2025 | Howard Matis- Fourth Bore Coalition |
| 2 | 1/22/2025 | Anonymous |
| 3 | 1/22/2025 | Daniel Levy |
| 4 | 1/22/2025 | Anonymous attendee |
| 5 | 1/22/2025 | Daniel Levy |
| 6 | 1/22/2025 | Vince’s iPhone |
| 7 | 1/22/2025 | Anonymous attendee |
| 8 | 1/22/2025 | Olalekan |
| 9 | 1/22/2025 | Olalekan |
| 10 | 1/22/2025 | Anonymous attendee |
| 11 | 1/22/2025 | Anonymous attendee |

| Comment ID | Date of Comment | Commenter |
|---|---|---|
| 12 | 1/22/2025 | Aileen Frankel |
| Emails Received: | | |
| 13 | 1/14/2025 | Haydee Valentine |
| 14 | 1/14/2025 | Mike Handlin |
| | | |
| 16 | 1/20/2025 | Clinton Myers |
| 17 | 1/21/2025 | Jeanne Robinson |
| 18 | 1/23/2025 | Clinton Myers |
| 19 | 1/23/2025 | Henry Gardner |
| 20 | 1/23/2025 | Mareth Ellis |
| 21 | 1/28/2025 | Pam Meeds Williams |
| 22 | 1/29/2025 | Howard Matis |
| 23 | 2/3/2025 | David J. Rehnstrom, Manager of Water Distribution Planning |
| 24 | 2/6/2025 | Daniel Levy, President Oakland Heritage Alliance 446 |
| 25 | 2/6/2025 | Athan Magganas |
| 26 | 2/6/2025 | Ann Smulka, Co-Founder and Former President Caldecott Fourth Bore Coalition, Inc. |
| Received Via Online Comment Form: | | |
| 27 | 1/13/2025 | Marylee Martinez |
| 28 | 1/22/2025 | Andrea Bustabade |
| 29 | 1/23/2025 | Jackson Hurst |
| 30 | 1/23/2025 | Nadia |
| 31 | 1/24/2025 | Andrea H |
| 32 | 1/25/2025 | Nathaniel Kane |
| 33 | 1/28/2025 | Pamela Meeds |
| 34 | 2/2/2025 | Howard Matis |
| 35 | 2/2/2025 | Howard Matis |

| Comment ID | Date of Comment | Commenter |
|---|---|---|
| 36 | 2/3/2025 | Kuan Butts |
| 37 | 2/4/2025 | Claire Caldwell |
| 38 | 2/5/2025 | Bernard Smits |
| 39 | 2/6/2025 | Christos Magganas |
| 40 | 2/6/2025 | Jake Lewis |
| Voicemail Received: | | |
| 41 | 1/24/2025 | Carol Lyons |

**DURING HYBRID PUBLIC MEETING:**

**Comment #1:** From: Howard Matis - Fourth Bore Coalition via in person comment card, 1/22/2025

*1) The Fourth Bore Coalition agreed with Caltrans to build pedestrian and bike facilities. A sidewalk was designed and not built because of money. Can you include money so that sidewalk can be build.*

*2) What noise from traffic will Oakland community hear during construction? Will there be backup beepers? If so will they be prohibited so not wake up resident.*

**Response to Comment #1:** Thank you for attending the meeting in person and for your comments. Regarding your first comment: 1) During the Caldecott Tunnel Fourth Bore Construction Project, Caltrans provided funding to the City of Oakland Public Works Department with the understanding that the City would carry out the construction of a bicycle and pedestrian project. Segments of the existing bicycle paths in the vicinity of the Tunnel were constructed by the City of Oakland with funding provided by Caltrans following construction of Bore 4 for bicycle and pedestrian facilities. Caltrans recommends that interested parties follow up with the City of Oakland Public Works Department for more information on the status of the project.

In regard to your second comment: 2) During construction, the Contractor is required to adhere to our standard specifications requiring construction noise to not exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. Additionally, to minimize significant noise impacts, the project requires the Contractor to adhere to noise Avoidance, Minimization and Mitigation measures to ensure noise levels adhere to Caltrans standards, including vehicle backup safety beepers and restrictions of noise levels between 9 p.m. and 6 a.m. .

Section 2.3.6 above discusses existing noise levels in the vicinity of the project area and Figure 28 shows a map of noise monitoring locations at the west end of the Caldecott Tunnel. It was determined that the closest residential receptor is within 245 to 770 feet from all job site activities. There is an existing soundwall to the north of Route 24 that

shields the neighboring area, the modeled construction noise levels due to any type of construction activity for this project is considerably below 86 dBA, therefore the residential receptors will not be impacted. In addition, the existing soundwall will further attenuate the noise levels by up to 8 dBA.

Measures AMM's NOI-1 through NOI-8 will be implemented during construction to ensure noise levels adhere to Caltrans standards. Please see Appendix B and Appendix C for all Project Features and Avoidance, Minimization, and Mitigation Measures required for this project.

**Comment #2** From: Anonymous via Zoom, 1/22/2025

*Why is fm radio reception disabled in bore 4?*

**Response to Comment #2:** Thank you for attending the meeting virtually and your comment. Radio waves cannot penetrate the thick walls of the Tunnel bores. There is currently no requirement to provide AM/FM radio signals in the Tunnel's bores. However, Caltrans is working diligently to ensure that first responders will have radio reception in the bores in the near future.

**Comment #3** From: Daniel Levy via Zoom 1/22/2025

*Thank you for hosting this talk! If not already discussed, can you provide an overview of the impacts to cultural resources and the proposed mitigations in the DEIR? For the recessed fans, is there any language in the DEIR that discusses artistic treatments that could reduce the impact of the fans? Thanks!*

**Response to Comment #3:** Thank you for attending the meeting virtually and submitting your question. This project's impact to cultural resources has been determined to be an "Adverse Effect" on Caldecott Tunnel Bores 1 and 2. Mitigation Measures' Cul-1 Cul-2 are listed in Appendix C. Caltrans and the State Historic Preservation Officer (SHPO) have entered into a Memorandum of Agreement (MOA) to document the projects cultural mitigation measures. These measures include competition of HAER (Historic American Engineering Record) documentation, a webinar with virtual tour, in-person tours of the ventilation buildings at the western portal, and the installation of two interpretive panels. The Oakland Heritage Alliance and other stakeholders have reviewed the MOA and built environment treatment. The MOA was signed and executed by the State Historic Preservation Officer (SHPO) on May 12, 2025.

**Comment #4** From: Anonymous attendee via Zoom 1/22/2025

*How long is the project scheduled for? How do you plan to manage already congested traffic?*

**Response to Comment #4:** Thank you for your question. This project is scheduled to be completed by Winter 2029, with construction on Bores 1, 3 and 3 to be conducted intermittently over 3 years..

As discussed in Section 2.2.2 above, TMP features may involve traffic switches where Bores 2 and 3 may be converted temporarily to provide reversible traffic, to maintain traffic flow during morning and afternoon commute times, changeable message signs to provide traffic information to drivers, strategic closures, ramp detours, and alternative freeway routes. 55-hour weekend closures and overnight closures of individual bores during off peak travel hours allow for more complex tasks to be completed without the challenges of managing weekday traffic and enable construction teams to make considerable progress on tunnel rehabilitation with minimal impact on weekday commuters. Traffic flow will be closely monitored, and appropriate ramp detours and alternative freeway routes will be provided to decrease delays. See Section 2.2.2 for more information regarding detours. The bore closures will be planned so that at least one bore (two of four lanes) will be open for both directions of traffic at all times.

**Comment #5** From Daniel Levy via Zoom 1/22/2025

*Can you discuss the pros and cons of each ventilation option in bores 1 and 2: the nozzle, the fans, or the sprinkler system? Thanks!*

**Response to Comment #5:** Thank you for your additional question. Some cons of the Saccardo Nozzles system include higher capital costs for the ventilation shaft and Nozzle construction. There is also a risk of a hot layer of smoke moving against the ventilation system in the Tunnel if the fans are not maintained properly.

The pros of the Saccardo Nozzles system are that it can push smoke towards the exit portal, providing effective smoke management. The Saccardo Nozzle system provides fresh air intake and additional tunnel height is not required for their installation. Additionally, the Nozzles themselves require less maintenance, hence reduced lane closures for maintenance in the future. However, as a final con, please note that the Fire Marshall did not approve the Saccardo Nozzle system.

The cons of the jet fan system include a higher cost for niche construction in the existing Tunnel's bores due to the number of jet fans required to adequately ventilate the tunnel in the case of a fire. Additionally, bore height must be increased for the jet fan system. Lane closure is required during maintenance of the jet fans and there is a potential for noise if not properly maintained.

The pros are that the jet fans will push smoke towards the exit portal, providing effective smoke management, are less complex in comparison to the Saccardo Nozzle system, and the Fire Marshall has approved the system. Please see Section 1.6 for more information regarding the selection of the preferred design option, Option 2, the jet fan systems.

**Comment #6** From vince's iPhone via Zoom 1/22/2025

*Will the project address the cross tunnel passages between Bores 1 and 2?*

**Response to Comment #6:** Thank you for your question. No, there are no proposed tunnel cross passages or proposed improvements to existing passages between Bore 1 & 2 planned for this project. Existing passages are for emergency use

and evacuation use only and are not for public use.

**Comment #7** From: Anonymous attendee via Zoom 1/22/2025

*How can you close a freeway access to/from Fish Ranch road? What about all of the residents that live off of Grizzly Peak that use these on-ramps daily.*

**Response to Comment #7:** Thank you for your question. Please note, the closure of Bores 2 and 3 will not require closures of on- or off-ramps and associated detours. However, the closure of Bore 1 will require closures of on- and off-ramps. If the eastbound SR-24 Fish Ranch Road off-ramp (Exit 7A) is closed during 55-hour weekend closures, drivers will be directed to the Wilder Road off-ramp (Exit 7B), where they can loop back westbound and exit via the frontage road. These ramp detours are designed to maintain local commuter access and traffic flow on the mainline, but they may change based on traffic conditions and project requirements. Additional re-routing options are also being considered for commuters. These ramp detours will be implemented to help keep traffic flowing around the affected areas. Please see Section 2.2.2 above for more information about the Traffic Management Plan (TMP) concepts discussed for this project. The project team will prepare the Final TMP during the project Design Phase. The alternative freeway routes, ramp closures and ramp detour plans around the project vicinity will be discussed in more detail in the Final TMP report.

**Comment #8** From: Olalekan via Zoom 1/22/2025

*How will construction and operation affect the quality of life for nearby residents, particularly in terms of noise, pollution, and traffic?*

**Response to Comment #8:** Thank you for your question. Please note that this project is not adding capacity, and no new tunnels, bores, or exterior work to the Tunnel structure is proposed. A noise analysis was conducted (see Section 2.6.3) which indicates the levels of noise resulting from the project on surrounding neighbors will be minimal.

Section 2.3.6 above discusses existing noise levels in the vicinity of the project area and Figure 28 shows a map of noise monitoring locations at the west end of the Caldecott Tunnel, it was determined that the closest residential receptor is within 245 to 770 feet from all job site activities There is an existing soundwall to the north of Route 24 that shields the neighboring area shown, the modeled construction noise levels due to any type of construction activity is considerably below 86 dBA, therefore the residential receptors will not be impacted. In addition, the existing soundwall will further attenuate the noise levels by up to 8 dBA.

Additionally, construction vehicles and equipment will be required to abide by Bay Area Air Quality Management District regulations for all construction projects. Caltrans is committed to minimizing impacts on surrounding communities and works with local partner agencies to ensure this. A Traffic Management Plan (TMP) and ramp detour plans will be developed in the Design Phase. Additionally, closures around the project vicinity will be developed in the Final TMP report during the Design Phase of the project.

Please see Section 2.2.2 above for more information on the TMP concepts discussed for this project.

**Comment #9** From: Olalekan via Zoom 1/22/2025

*What is the anticipated noise level of the jet fans during operation, as well as the construction noise level and how will noise impacts be mitigated for nearby communities?*

**Response to Comment #9:** Thank you for your additional question. Please note that this project is not adding capacity, no new tunnels, bores, or exterior work to the Tunnel structure are proposed. A noise analysis was conducted (see Section 2.3.6) which indicates the levels of noise resulting from the project on surrounding neighbors, and that of the jet fans will be minimal. Expected noise levels in the closest community to the Tunnel entrance will be approximately 76 dbA at the loudest. 76 dbA is approximately the same level of noise as existing traffic.

Figure 28 in Section 2.3.6 above shows a map of noise monitoring locations at the west end of the Caldecott Tunnel, it was determined that the closest residential receptor is within 245 to 770 feet from all job site activities There is an existing soundwall to the north of SR-24 that shields the neighboring area shown. The modeled construction noise levels due to any type of construction activity is considerably below 86 dBA, therefore the residential receptors will not be impacted. In addition, the existing soundwall will further attenuate the noise levels by up to 8 dBA.

Avoidance, Minimization and Mitigation Measures regarding noise AMM's NOI-1 through NOI-8 will be implemented. Please see Appendix B and Appendix C for all Project Features and Avoidance, Minimization, and Mitigation Measures required for this project.

**Comment #10** From: Anonymous attendee via Zoom 1/22/2025

*I do apologize if this was discussed, but is there an anticipated budget for his project? Thank you.*

**Response to Comment #10:** Thank you for your question. The Construction Capital Cost is programmed for $163 million using State Highway Operation and Protection Programs (SHOPP) and Infrastructure Investment and Job Act (IIJA) Funding. The budget is currently estimated at $200 million.

**Comment #11** From: Anonymous attendee via Zoom 1/22/2025

*If you're worried about fire around the tunnel why isn't CalTrans taking care of the overgrowth around and above the tunnel?*

**Response to Comment #11:** Thank you for your question, Caltrans has a Maintenance Agreement with the Contra Costa County Maintenance team. This includes vegetation trimming, which is deferred to the county in areas above and around

the Caldecott Tunnel. Caltrans Maintenance team is responsible for the travel way and the drainage facilities inside the Tunnel.

**Comment #12** From: Aileen Frankel via Zoom 1/22/2025

*Glad to see the intent to increase lighting of Bore 1 & 2 and improve drainage to stop leaks on the road surface that are hazardous in the historic tunnels. Looking forward to safer, better fire & life safety measures. Is any seismic reinforcing of the cement also included around any of the bores?*

*PS. I echo request for Caltrans to look for supplemental funding to complete sidewalks already designed on Caldecott Lane (that were a high priority mitigation measure of the Fourth Bore Construction) that were not adequately funded. This is NOT a request for a pedestrian path on the inside of any of the three tunnel bores.*

**Response to Comment #12**: Thank you for your comments and question. Regarding your question, seismic reinforcing of the cement around the bores is not within the project scope. The project scope includes improvements to the existing lighting inside the Tunnel bores. The project scope will address the deficiencies in the existing Tunnel liners.

Regarding your second comment in your postscript, as noted above in response to Comment #1, Caltrans recommended the Fourth Bore Coalition members follow up with the City of Oakland Public Works Department for more information on the status of the sidewalk project. Caltrans has contributed funding to a list of projects to be delivered by the City of Oakland with the understanding that a sidewalk was among the projects City would construct. Any items related to the construction of Bore 4 are outside the scope of this rehabilitation project.

**EMAILS RECEIVED:**

**Comment #13** From: HAYDEE VALENTIN via email 1/14/2025

*I wanted to reach out to you and introduce myself as your local point of contact for my hotel, SONESTA SELECT PLEASANT HILL. I would like to find out if the project above will need of any hotel accommodations from the General Contractors. I would love to partner with them to host your crew at the Hotel. How will we know which general contractor will win the bid. Is the project out for bids already?*

**Response to Comment #13:** Thank you for your email. The project is still in the project approval and Design Phase. The project is anticipated to go out for bids in the Fall of 2026. Project information and updates will be provided by Caltrans' Public Information Officer, who can be reached via email at caltrans.d4@dot.ca.gov (please include the project name and location in the subject line) and via phone at (510) 286-4444. Please continue to check the project website for latest updates available via the following link https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

**Comment #14** From: Mike Handlin via email 1/14/2025

*“Why is there no radio reception in bore #2? My radio works fine in the other three bores but not this one.”*

**Response to Comment #14**: Thank you for your email and question. As discussed in the response to Comment #2 above, radio waves cannot penetrate the thick walls of the Tunnel and bores. There is currently no requirement to provide AM/FM radio signals in the Tunnel and bores. However, Caltrans is working diligently to ensure that first responders will have radio reception in the bores in the near future.

**Comment #15** From: M. NOVOSEL Via Email 1/16/2025

*The California Highway Patrol (CHP) Oakland Area received the "Notice of Completion & Environmental Document Transmittal" of the proposed "Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade" project. After review, we have concerns with the potential impacts and/or impact to local operations and/or public safety. State Route-24 (SR-24 )/Caldecott Tunnel Bores 1, 2, and 3 are narrow roadways that consists of two traffic lanes in each Bore with no center median or right shoulders. SR-24 serves as the major arterial route that connects the greater Bay Area, which already exceeds its capacity during commute hours. While this project would aim to conduct repairs and update to the ventilation system, it could have a negative impact on our operations due to the increased traffic congestion, which could necessitate the need for additional traffic control measures to mitigate the potential increase in traffic crashes within our jurisdiction, as well as the surrounding surface streets, businesses, and residences. If you have any questions, please contact the CHP Oakland Area at (510) 457-2875.*

**Response to Comment #15:** Thank you for the comment letter. Caltrans understands the concerns that California Highway Patrol (CHP) raised about the potential project impact to local operations and/or public safety. All applicable traffic control measures will be implemented during construction in accordance with Highway Operations’ Final Traffic Management Plan (TMP) and ramp detour plans. Caltrans will incorporate all emergency response elements from CHP’s “Caldecott Tunnel Bore 1 and Bore 2 Emergency Response Plan (2023)” and “Caldecott Tunnel Bore 3 and Bore 4 Emergency Response Plan (2021)” plans into the Final TMP. Both plans include detailed response procedures for the tunnel system during times of traffic congestion. The Final TMP will also determine delay amounts and address potential traffic impacts as they relate to staged construction, ramp detours, and other traffic handling concerns associated with construction of the project.

Caltrans will coordinate with both CHP Oakland and Contra Costa, and as discussed in Section 1.4.1 above, local agencies of jurisdiction, local law enforcement, online Navigation Providers, and emergency services. Caltrans will provide a Construction Zone Enhanced Enforcement Program (COZEEP) and Freeway Service Patrol where possible to decrease delays; as needed and required during any lane closures for Bores 1, 2, and 3.

Caltrans will distribute press releases/media alerts, paid advertisements, and provide project updates via the project website. Signs specifying closure times of the ramps will be posted at least 72 hours in advance to notify the public of upcoming road closures, ramp detours, and alternative freeway routes. Caltrans will also advise commuters to plan ahead and use alternate routes such as SR-4 or I-580 to avoid delays during construction, and the temporary disruption of traffic flow during construction. These disruptions may often result in ramp detours, alternative freeway routes. and delays that are more than 15 minutes during commute hours. In addition, commuters are also encouraged to carpool and use public transit such as BART. Changeable Message Signs (CMS) will be implemented throughout the area to guide drivers to alternative freeway routes, inform them of potential delays, and ensure they are aware of any changes to traffic patterns;

More information about TMP strategies are discussed in Section 2.2.2 of this document.

**Comment #16:** From Clinton Myers Via Email 1/20/2025

*could you please send me the info/link for public meeting on January 22nd?*

**Response to Comment #16:** Thank you for your email request. A response was sent on January 20, 2025 with information on the public meeting and where to find the link to the public meeting. For future reference the project website available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

**Comment #17** From: Jeanne Robinson Via Email 1/16/2025

*Please do it, especially the lighting. It is so dark on the right bore going east it is dangerous and the other east bound bore, but not quite as bad.*

**Response to Comment #17:** Thank you for your comment. The project scope includes improvements to the interior lighting in the eastbound bores and will address the deficiencies in each of the existing Tunnel bores in terms of visibility and safety concerns as part of the rehabilitation of the Tunnel. Upgrades to existing lighting is proposed in order to improve and enhance visibility, including addressing the changes in brightness when entering and exiting the bores.

**Comment #18** From: Clinton Myers Via Email 1/23/25

*one of my co-workers attended the meeting last night virtually and asked what the construction cost of the project is budgeted for, but he did not hear his question answered. Do you have that information?*

**Response to Comment #18**: Thank you for your question. The Construction Capital Cost is programmed for $163 million using State Highway Operation and Protection Programs (SHOPP) and Infrastructure Investment and Job Act (IIJA) Funding. The budget is currently estimated at $200 million.

**Comment #19** From: Henry Gardner Via Email 1/23/2025

*It is imperative that the safety improvements proceed at once. It would only take a casual observation to see that the proposed improvements, most especially the lighting, are desperately needed. Cars zipping through the tunnel, virtually in the dark, with no room for error, is a disaster waiting to happen.*

**Response to Comment #19:** Thank you for your comment. The project scope includes improvements to the interior lighting in Bores 1, 2 and 3 as part of the rehabilitation of the Tunnel. Upgrades to existing lighting are proposed in order to improve and enhance visibility, including addressing the changes in brightness when entering and exiting the bores.

**Comment #20** From: Mareth Ellis Via Email 1/23/2025

*I have tried to use your phone line, and it does not work. It just keeps repeating your message and does not permit any time for response. I live in the Hiller Highlands area, and use the tunnel almost daily…just tunnel 1. It is disgusting and scary. It needs a lot of help.*

**Response to Comment #20:** Thank you for your email. A response was provided via email the same day this email was received. The phone line was checked and functionality was restored on the same day that this email was received and ensured that it remained functional during the entirety public comment period. Additionally, the commenter was informed that comments could be provide by email or voicemail. The project scope includes improvements to the interior lighting in Bores 1, 2 and 3 as part of the rehabilitation of the Tunnel. Upgrades to existing lighting are proposed in order to improve and enhance visibility, including addressing the changes in brightness when entering and exiting the bores For future reference the project website available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

**Comment #21:** From: Pam Meeds Williams Via Email 1/28/2025

*Caldecott Tunnel Rehabilitation and Ventilation Upgrades Home*
*https://sites.google.com/view/caldecotttunnelrehab?usp=sharing*

**Response to Comment #21**: This comment appears to be pasted in error.

**Comment #22** From: Howard Matis Via Email 1/29/2024

*At the recent Orinda meeting, I met the Caltrans contact to discuss the area around the Caldecott Tunnel. Can you please provide me with his email? Thank you.*

**Response to Comment #22:** Thank you for your follow up email following the in-person hybrid meeting. A response was provided via email on January 29th, 2025. The project's Public Information Officer is Hector Chinchilla and his contact information was

provided via email. For future reference, his email is: Hector.Chincilla@dot.ca.gov. Members of the public may contact the Caltrans District 4 via email at caltrans.d4@dot.ca.gov (please include the project name and location in the subject line) and via phone at (510) 286-4444.

**Comment #23** From: David J. Rehnstrom, Manager of Water Distribution Planning Via Email 2/3/2025

*Dear Ms. Hendrix:*

*East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Mitigated Negative Declaration (MND) for the Caldecott Tunnel Bores I, 2, and 3 Rehabilitation and Ventilation Upgrade Project located in Alameda and Contra Costa County. EBMUD has the following comments.*

*WATER SERVICE*

*EBMUD's Amito Pressure Zone, with a service elevation between 700 and 900 feet, will serve the proposed project. The property currently has water service. If additional water or tire service is needed, Caltrans should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions for providing additional water service to the existing parcel. Engineering and installation of water services require substantial lead time, which should be provided for in Caltrans's development schedule.*

*WATER DISTRIBUTION PIPELINES*

*EBMUD owns and operates water distribution and transmission pipelines within the project boundary. These pipelines provide continuous service to EBMUD's customers in the area. Any proposed construction activity in close proximity to EBMUD's pipelines would need to be coordinated with EBMUD so that the integrity of these water mains is maintained at all times.*

*It is imperative to coordinate with EBMUD during the development of the project, so reasonable time can be provided for planning, design, and construction if conflicts exist to avoid schedule impacts. Caltrans and EBMUD will need to continue to work together in finalizing the scope of work, if water mains are affected, for EBMUD infrastructure adjustments and relocations. EBMUD requires reasonable time to allocate resources and modify internal construction schedules. EBMUD recommends at least 18 months advance notification to allow for a reasonable amount of time to perform water pipeline relocations. The following table provides a typical project schedule for EBMUD to design and relocate approximately 1,500 feet of 8-inch water pipeline. The required time may increase or decrease depending on the size, length and complexity of the water pipeline project; and if constructed by EBMUD crews or by Contractor.*

| *Required Time* | *Schedule Taska* |
|---|---|
| *1 month* | *Receive Street Improvement and Understand Impacts* |
| *1 month* | *Review Project and Planning Assessment* |
| *2 months* | *Collect Survey Data or Use Existing Survey from Requesting* |

| | |
|---|---|
| | *Agency* |
| *2 months* | *Draft Base Drawing for Water Main Relocation* |
| *3 months* | *Design Water Main Relocation* |
| *2 months* | *Develop Construction Bid Documents* |
| *3 months* | *Advertise and Award Water Main Relocation Project* |
| *4 months* | *Install New Water Main and Provide Temporary Paving* |
| *18 months* | *Reasonable Notification Time (Typical Project: 1,500 feet of 8-inch pipe)* |

*EBMUD will not design piping or services until soil and groundwater quality data and remediation plans have been received and reviewed and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by Caltrans is insufficient, EBMUD may require Caltrans to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation, or EBMUD may perform such sampling and analysis at the Caltrans's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.*

*EBMUD's water distribution pipelines and valves must always be accessible to EBMUD staff in order to maintain high-quality domestic water and fire flow services and mitigate for planned and unplanned pipeline outages. Caltrans is responsible for protecting in-place pipeline valves and ensuring that pipeline valves are accessible (i.e., not paved over) during and after Project construction. EBMUD recommends that the Caltrans review EBMUD's as-built drawings and identify potential utility conflicts between Project improvements and existing EBMUD's pipelines. Attached are EBMUD guidelines for requesting pipeline as-builts that include pipeline vertical data (see Attachment - EBMUD Map & Utility Information Request Form and Guidelines). EBMUD's process for requesting as-built drawings is a two steps process: l) request EBMUD water distribution maps, and 2) submit to EBMUD marked-up EBMUD water distribution maps identifying which water pipeline as-builts are needed to evaluate water pipelines within the project boundary. In some cases, EBMUD as-builts are not available and in those situations EBMUD recommends for local agencies to pothole and field locate utilities.*

*EBMUD'S DESIGN STANDARDS AND SPECIFICATIONS*

*When evaluating the need and method for relocating and adjusting EBMUD infrastructure (e.g., pipelines, meters, valves, and fire hydrants), please review EBMUD's Design Standards and Specifications for Mains 20-inches and Smaller, which are located on the following webpage under "Apply for Standard Water Service". https://www.ebmud.com/customers/new-meter-installation*

*PIPELINE VALVE COVER ADJUSTMENTS*

*For utility conflicts between the Project and existing EBMUD's pipeline valve covers, Caltrans must share with EBMUD conflict locations, and existing and final pavement*

*grade elevations. EBMUD will support paving street improvement projects as follows:*

*Grade change less than 0.5-inches - For street improvement projects with a grade change elevation less than 0.5-inches, EBMUD is not obligated to adjust pipeline valve covers to facilitate the construction of street improvements, pursuant to Streets & Highways Code Section 680, which states that EBMUD may not be required to relocate its facilities for a temporary purpose. However, EBMUD will provide valve cover rings, at no cost, to be used to make valve cover adjustments as needed. Caltrans is responsible for protecting in-place EBMUD pipeline valve covers which will be inspected by EBMUD staff post project completion. Pipeline valves must remain accessible during and after project construction for water distribution operations (i.e., not paved over).*

*Grade change greater than 0.5-inches - For street improvement projects with a grade change elevation greater than 0.5-inches, EBMUD will support the Project by adjusting pipelines valve covers (one time) to the final street grade. However, EBMUD is not obligated to adjust valves during construction to facilitate means and methods for completing street improvements, pursuant to Streets & Highways Code Section 680, which states that EBMUD may not be required to relocate its facilities for a temporary purpose. Caltrans is responsible for protecting in-place EBMUD pipeline valve covers which will be inspected by EBMUD staff post project completion. Pipelines valves must remain accessible during and after project construction for water distribution operations (i.e., not paved over).*

*Pipeline Valve Cover Upgrades - If Caltrans determines a need to upgrade old pipeline valve covers to the new Christy G-05 Valve Box and Rise Installation, EBMUD will provide the valve boxes and covers, and will reimburse Caltrans for the valve box upgrade at a reasonable cost. To upgrade pipeline valve covers and boxes, Caltrans must enter into a Valve Box Agreement with EBMUD prior to start of pipeline valve cover upgrades. An EBMUD Union notification will be required to complete the work by the County's contractor.*

*WATER METER RELOCATIONS AND ADJUSTMENTS*

*When an agency like Caltrans completes street improvements (e.g., replace sidewalks, street pavement, and storm drain pipelines) to improve both street safety and street aesthetics, EBMUD supports the agency by relocating water meters to meet Project objectives, current design standards (e.g., meters need to be placed at I-foot off the face of curb), and mitigate utility conflicts. EBMUD relocates water meters to their new location once the area is staked and is ready for final meter placement (e.g., forms for new sidewalk and other features are in place). Caltrans is then responsible for relocating the customer's private water service line to the new meter location. EBMUD is not financially liable for work beyond the water meter (i.e., private water line).*

*HYDRANT RELOCATIONS OR ADJUSTMENTS (SET-BACKS/SET- FORWARDS)*

*When Caltrans completes street improvements (e.g., replace sidewalks and curbs) to improve both street safety and street aesthetics, Caltrans must ensure that there are no conflicts between existing EBMUD fire hydrants and new curb ramps and sidewalks. Fire hydrants must be located 5-feet from the edge of curb ramps and 20 to 24- inches from the face of street curbs. Hydrant relocations are horizontal offsets that require the*

*installation of new hydrant service laterals; hydrant relocations require the County to submit Hydrant Relocation Application with EBMUD's New Business Office (510-287- IO I0) or via EBMUD's online water service application at https://wsa.ebmud.com.*

*PRE-CONSTRUCTION MEETING*

*If pipeline relocation is needed, Caltrans shall invite EBMUD's Central Area Service Center Superintendent, Mario Soares (510-287-1104 or mario.soares@ebmud.com) and Assistant Superintendent, Juan Serrano (510-453-7458 or juan.serrano@ebmud.com) to all pre-construction meetings.*

*If you have any questions concerning this response, please contact Sandra Mulhauser, Senior Civil Engineer, Major Facilities Planning Section at (510) 287-7032. Sincerely, David J. Rehnstrom*

*Manager of Water Distribution Planning*

**Response to Comment #23:** Thank you for the comment letter, Caltrans appreciates the provided guidance. During the initial design process Caltrans' consultant team AECOM contacted EBMUD to inquire about pressure and flow availability for Bore 3 water supply. AECOM also contacted the New Business Office regarding the procedure for the addition of a new designated water supply line. Due to the time required and cost for new water line, the replacement sprinkler system will be designed utilizing the existing water supply, subject to the Fire Marshal's approval. Sprinkler systems in Bores 1, 2 and 3 will be upgraded and it is anticipated that the replacement sprinkler system will not require additional water service and/or pressure. Additionally, during the construction of Bore 4 (completed in 2013) the EBMUD waterline serving the Caldecott Tunnel was upgraded. Caltrans will consult with EBMUD should any of these proposed designs change or additional water service requirements are mandated by the Fire Marshal.

**Comment #24** From: Daniel Levy, President Oakland Heritage Alliance 446 Via Email 2/6/2025

*Thank you for the opportunity to comment on the Draft Environmental Document for the Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project. The Caldecott Tunnel is Oakland Landmark #32, and we appreciate the work to keep our tunnels up to top safety standards while also preserving its historic integrity.*

*We are grateful to have discussed ideas for mitigations with the project team. It is our understanding that the Draft Environmental Document is not complete and further mitigations will be added. As is, the sole proposed mitigation of Historic American Engineering Record (HAER) Documentation as stated on pages iv and 58 is insufficient. Here are our suggested additional mitigation measures.*

*Proposed MM-CUL-2: National and California Register Nominations. Post construction, Bores 1 and 2 shall be reevaluated for National Register eligibility. Assuming they are still eligible, an application shall be submitted for listing Bores 1 and 2 on the National Register of Historic Places and the California Register of Historic Resources.*

*Proposed MM-CUL-3: Tours. Prior to construction, up to three tours per year shall be*

*allowed of the tunnels to showcase their design and various ventilation systems. Weekend tour times shall be encouraged. Due to the site's limited parking and accessibility, providing van transportation shall also be encouraged.*

*Proposed MM-CUL-4: Webinar. Collaborate to create a webinar and virtual tour of the facility. California Preservation Foundation and Lafayette Historical Society are suggested collaborators in implementing this mitigation.*

*Proposed MM-CUL-5: Tunnel Merch. Merchandise such as stickers, hats, and shirts shall be developed and distributed to raise awareness and appreciation of the historic resource. The digital art shall be made available to the public for future use.*

*Proposed MM-C\H -6· Interpretation: Interpretive panels shall be created on both sides of the tunnel covering their history, design, engineering, and ventilation systems at a location viewable by the public.*

*Proposed MM-C\H -7· Kennedy Tunnel Site Restoration Key to the Caldecott Tunnel's history is the prior Kennedy Tunnel. This site has fallen into disrepair. This site shall be restored and interpretive panels covering the tunnel's history added.*

*Proposed MM-CUL-8 Landmarks Preservation Advisory Board Presentation The project shall be presented to the Oakland Landmarks Preservation Advisory Board for their input and so that the public can be made aware of the project.*

*Proposed MM-CUL-9· Restoration of wall on East Side It is our understanding that some of the original exit walls on the east side of Bore's 1 and 2 have been removed. See cover photo of Mary Solon and Mary McCosker's Building The Caldecott Tunnel and compare with the current exit walls at the east portal. These walls shall be reconstructed to restore these lost aspects of the historic resource.*

*Thank you for reading. We realize these are quite a list of mitigations, but we hope they offer a good range of options to choose from to mitigate the significant impacts of these new fan systems to the integrity of these historic tunnels.*

*Sincerely,*

*Daniel Levy*

*President Oakland Heritage Alliance*

**Response to Comment #24**: Thank you for the attendance at the in-person hybrid meeting, coordination with staff as a stakeholder, and your email comment letter. The Caltrans District 4 Office of Cultural Resource Studies will continue consultation on mitigation measures with the Oakland Heritage Alliance, which is a concurring party to the Memorandum of Agreement. Many of the ideas presented in your comment letter were incorporated into the MOAs mitigation measures, see Appendix J for the MOA that was executed on May 12, 2025. The Final Environmental document is available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs and the project website is available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade .

**Comment #25**: From: Athan Magganavais Via Email 2/6/25

*During the mitigation measures related to the construction of the 4th Bore: we the residents at Caldecott Lane received no RELIEF whatsoever while we have been the most impacted. We ASK that because we live RIGHT NEXT TO THE TUNNELS we are accorded the attention needed to limit the impacts of all these construction, activities and other environmental degradation. We live next door to the tunnels and never received any notices EITHER. I just became aware of this matter just now and scurring to respond.*

**Response to Comment #25:** Thank you for your comments. Similar to the responses above to questions regarding the previous construction of Bore #4 and the Fourth Bore Coalition commitments, Caltrans recommends the Fourth Bore Coalition members follow up with the City of Oakland Public Works Department. Caltrans has provided the funding for the sidewalk to the City of Oakland with the understanding that the city will carry out the construction of the project.

When the Final TMP is developed in the Design Phase of this project, it will include strategies Caltrans will use to communicate with the public regarding construction and traffic advisories. As discussed in Section 1.4.1 above, Caltrans will distribute press releases/media alerts, paid advertisements, and provide project updates via the project website.

Caltrans also has guidelines for our Public Information Office (PIO) to post public advisories. on social media sites, which currently include Facebook, Instagram, and X. Caltrans' PIOs also often work with local cities' and often include Homeowner Associations (HOAs), community leaders, and elected officials in our traffic advisory emails. Additionally, local newspapers such as Berkeleyside, Oaklandside, The Patch, and others are included on Caltrans' email lists with traffic advisories.

Once the project has been awarded to a contractor and construction is scheduled to begin, the assigned Caltrans PIO contact information will be included in the traffic advisories and on the project website, which is available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade. The website will also have contact information for the public to use if there are project concerns during construction. In the meantime, members of the public may contact the Caltrans District 4 via email at caltrans.d4@dot.ca.gov (please include the project name and location in the subject line) and via phone at (510) 286-4444.

**Comment #26** From: Ann Smulka, Co-Founder and Former President, Caldecott Fourth Bore Coalition, Inc. Via Email 2/6/2025

*Thank you for the opportunity to submit comments to the draft environmental assessment of Caltrans' project to rehabilitate and upgrade Caldecott Tunnel Bores 1, 2, and 3. I support the project and agree that rehabilitation of the bores is important for public safety and for the region's transportation network, however, I have several comments in response to the proposed build alternatives and temporary construction impacts. I ask that the Traffic Management Plan include the following: Motorist Information Strategies• Portable changeable message signs should be placed at decision points so that motorists may choose an alternate route well in advance of*

*reaching the approach to the construction area. For example, at points along northbound SR-13 between I-580 and SR-24; near SR-238 and westbound I-580.*

*• Please include estimated times to travel from point A to point B, as you do on the intelligent highway system. This information helps mitigate road rage.*

*• Please include a construction off-site parking program that keeps construction-related vehicles, including workers' company or personal vehicles off city streets.*

*• The document states that when Bore 1 is closed, traffic will be redirected along Tunnel Road, Broadway, Old Tunnel Road, and Wilder Road. Furthermore, the eastbound on-ramp onto SR-24 at Broadway will be closed and traffic will be directed to Broadway/Brookside.*
*o Please do not direct any detours down The Uplands in Berkeley. Currently, GPS systems often direct eastbound traffic traveling on Tunnel Rd. from Berkeley to points east of the tunnels to access SR-24 via The Uplands >> Roanoke Rd. >> Chabot Rd. >> Golden Gate Ave. >> Broadway >> Brookside. This route passes by two schools, is a bike route to get from the northside to the southside of SR-24, and is in a residential area with narrow streets. It cannot handle any more traffic.*
*o Currently, when traffic is slow or at a standstill on eastbound SR-24 as far back as Children's Hospital, motorists bypass the stalled traffic by exiting at Claremont Ave. and driving to southbound Tunnel Rd. >> Kay Overcrossing >> eastbound on-ramp to SR-24. Signage should be installed at appropriate points to tell motorists that such a route will not get them through the tunnel.*
*o During PM peak hours, there is tremendous traffic congestion from UC Berkeley employees and students who drive along the Warring | Derby | Belrose | Claremont | Ashby |Tunnel | Kay Overcrossing route to access the eastbound ramp and Tunnel #1. Please work with UC Berkeley's parking & Transportation Department and the City of Berkeley's Transportation Department to encourage drivers, via signage and other communications, to take an arterial such as Telegraph Ave. to SR-24 East instead of driving from Ashby/Tunnel Rd. to the Kay Overcrossing >> Broadway >> Brookside route.*
*o The detour via Brookside Drive will direct traffic past the North Oakland Sports Center at 6900 Broadway and the northside access to Lake Temescal. Please ensure there are traffic calming measures in place to ensure the safety of families using these recreational facilities while construction places a higher volume of traffic along this corridor.*
*o As noted on p. 149, the proposed project is in an area classified as being a very high fire severity zone. Please include a plan for High Fire Risk days. Under what circumstances will construction be paused, to be prepared for the possibility of emergency evacuations? What activities will continue on high fir risk days?*
*Public Awareness Strategies*

*• The document states that prior to construction, Caltrans would notify adjacent property owners, businesses, and agencies regarding construction activities, access changes, and lane closures and detours. In addition, Caltrans would coordinate with the local Fire Department and emergency response services prior to construction to minimize potential disruption to emergency services. Please include the following in your notifications, especially when the Broadway on-ramp is closed for construction in Tunnel*

*#1, because such closures are likely to impact traffic on Ashby and Tunnel Roads (aka Hwy 13 in Berkeley) as well as the streets that feed into that arterial.*
*o UC Berkeley's Parking & Transportation Department*
*o Alta Bates Hospital on Ashby Ave.*
*o Berkeley's Fire Station #3 at 2710 Russell St., near Ashby and College Aves.*
*o City of Berkeley Transportation Department*

*• When Caltrans communicates the closure plans to the public, please include social media sites such as NextDoor and Reddit, and micro local news sites such as Berkeleyside, Oaklandside, Patch, Oakland North, and The Berkeley Scanner, in addition to the regional broadcast, print, and web-based news media. GPS mapping services such as Google Maps, Apple Maps, and Waze should also be given adequate notice (and not direct motorists down The Uplands).*

*• Please include a dispute/problem resolution process with adequate enforcement powers and remedies. For example, if traffic detour routes produce unanticipated local congestion, there should be procedures in place to modify the Traffic Management Plan. There also should be procedures in place if the construction noise level exceeds the anticipated 76dB for an extended period of time. Designate senior-level representatives to work with the Project Information Officer and Resident Engineer or Project Manager as issues arise. Provide the public with a phone number or email to which they can direct complaints and provide the period of time within which they can expect a response.*
*Complete Streets for Pedestrians During the public presentation on January 22, 2025, Kenneth Puth spoke of Caltrans' vision and values, which include a connected California, improving lives and community through transportation, and putting people first. In response to this, I would like to note that in the area adjacent to the western side of the Caldecott Tunnel, Caltrans continually fails to improve the lives of pedestrians by always putting cars first. Caltrans needs to "complete the street."*
*There is no safe route for pedestrians to walk from Parkwoods Condominiums to Hiller Drive to access schools and commercial areas, or to evacuate the area on foot in the event of a catastrophic fire. The area needs a sidewalk so that pedestrians no longer have to walk in the road. To remedy this, Oakland and Caltrans engineers designed "Project 2. Pedestrian facilities on Caldecott Lane and Tunnel Road between Parkwoods Condominiums and Berkeley City Limits" using funds from Caltrans' Caldecott Tunnel Settlement Agreement with the City of Oakland. It was one of the top enhancement projects identified to be built with those funds. The engineers and planners took about 10 years (!) and spent about $618,000 to design the project before funds to construct it were depleted. Pedestrians who reside immediately adjacent to the fourth bore's western portal, the very people who lived through the years of construction noise, vibrations, landscape destruction, and truck traffic while the fourth bore was built, were shortchanged. The project has been shovel-ready since 2018.*
*Caltrans - Please budget funds to complete this project so that residents of all ages, abilities and incomes can safely, conveniently, and comfortably walk for their transportation needs.*
*I refer you to the following documents, available online via the embedded link until 12/31/2025. I, along with Howard Matis and Aileen Frankel, will be happy to discuss*

*them with the relevant parties: Caldecott Improvement Project Presentation to Caltrans Detailed Project Plans (Original concept and 100% design) I appreciate your consideration and look forward to your comments.*

**Response to Comment #26:** Thank you for providing your comments via email. Regarding the first part of your comment letter, the project team will prepare a Final Traffic Management Plan (TMP) during the project Design Phase. However, as discussed in Section 2.2.2 above, the project team has developed a TMP concepts to reduce traffic impacts on the traveling public due to public concerns regarding traffic during the construction of this project. During construction, traffic delay along SR-24 will be monitored at the Traffic Management Center via Closed Circuit Television (CCTV) and in the field with field crews. Expected delay information along SR-24 will be disseminated to the public via changeable message signs (CMS) located on Bay Area freeways. Parking of construction workers' vehicles will be restricted per the Final TMP. Caltrans provides specifications regarding designated areas for worker parking that all contractors are required to abide by. Staging areas have been identified for construction equipment parking as part of the project plans. Additionally, the work during construction will primarily occur within the Tunnel bores and identified staging areas which will keep construction workers' vehicles off local streets.

The rehabilitation of the Caldecott Tunnel will require two main TMP features to manage traffic congestion: 55-hour weekend closures and overnight closures of individual Bores 1, 2, or 3. These features aim to balance the need for efficient construction while reducing the impact on commuters. Although delays could be more than 15 minutes, Caltrans will work to reduce the inconvenience for commuters. Methods such as maximizing work hours, setting up safety buffer zones, and providing clear alternative freeway routes and ramp detour routes, are intended to complete the project efficiently while keeping both workers and drivers safe.

When a Bore is closed, traffic will not be directed to local streets and at least one other Bore in the same direction will remain open. The only complete closures will be for on- and off- ramps during the closure of Bore 1. This is the only time that traffic detours will occur, and in the case of an off-ramp closure, drivers will be directed to another access point to and off SR-24. There are no proposed detours for SR-24 traffic to be directed to Fish Ranch Road, Grizzly Peak Boulevard and Claremont Avenue as an alternative route for passage through the Caldecott Tunnel.

Regarding your comments about coordination with other agencies, Caltrans works with the Fire Marshall, local fire departments, local and State Park services, Cal Fire, local cities, and the California Highway Patrol. These public agencies provide guidance regarding areas to avoid and which areas must be closed during a fire advisory. Additionally, Cal OSHA requires a shutdown of work if there is imminent danger. Please note that construction will be confined inside the Tunnel and bores and will not occur near shrubs or trees, so there will not be a risk of them catching fire. During fire season (September - November), the project will coordinate with local safety agencies such as the Oakland Firesafe Council (https://oaklandfiresafecouncil.org/) to address potential fire risks during construction.

The SR-24 freeway will never be completely shut down during construction of this

project. Project construction will not block or temporarily obstruct any public transportation access or bike and pedestrian access point. Accessibility will be ensured for first responders at all times. Tunnel emergency response will be preserved and all authorities having jurisdiction will maintain access to the Tunnel and surrounding vicinities during construction or in the event of an emergency.

Regarding your comments about Caltrans communications, Caltrans headquarters has rules on which social media sites our Public Information Office (PIO) is allowed to post on, which currently include only Facebook, Instagram, and X. Caltrans' Public Information Officers (PIOs) often work with local cities' PIOs, as they have different guidelines regarding use of social media for public advisories. For some projects, we include Homeowner Associations (HOAs), community leaders, and elected officials in our traffic advisory emails so that they may contact their constituents with this information. It is at their discretion to post on platforms such as Nextdoor. Regarding local newspapers such as Berkeleyside, Oaklandside, The Patch, and other local newspapers, they are included on Caltrans' email lists with traffic advisories.

Once the project has been awarded to a contractor and construction is scheduled to begin, the assigned Caltrans PIO contact information will be included in the traffic advisories and on the project website, which is available via the following link: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade. The website will also have contact information for the public to use if there are project concerns during construction. In the meantime, members of the public may contact the Caltrans District 4 via email at caltrans.d4@dot.ca.gov (please include the project name and location in the subject line) and via phone at (510) 286-4444.

Regarding your comments about pedestrian access. Similar to responses above, during the Caldecott Tunnel Fourth Bore Construction Project, Caltrans provided funding to the City of Oakland Public Works Department with the understanding that the City would carry out the construction of a bicycle and pedestrian project. Segments of the existing bicycle paths in the vicinity of the Tunnel were constructed by the City of Oakland with funding provided by Caltrans following construction of Bore 4 for bicycle and pedestrian facilities. Caltrans recommends that interested parties follow up with the City of Oakland Public Works Department for more information on the status of the project.

**RECEIVED VIA ONLINE COMMENT FORM:**

**Comment #27** From: Marylee Martinez Via Online Comment form 1/13/2025

*During the rehab of the Caldecott Tunnels, pls wash down the tiles in all 4 bores - in their entirety and not just sections of the tunnels. It's so hard to see sometimes - even with headlights - I feel so unsafe in those sections."*

**Response to Comment #27:** Thank you for providing your comment via the online comment form. Please note that this project scope only involves Bores 1, 2, and 3 and not Bore 4. The project scope will address the deficiencies in the existing Tunnel liners. Caltrans maintenance crews clean the Tunnel walls per an existing quarterly

maintenance schedule. Regarding visibility and safety concerns, upgrades to the existing lighting is proposed as part of the project scope to improve and enhance visibility.

**Comment #28** From: Andrea Bustabade Via Online Comment form 1/22/2025

*How many tunnels will be closed at a time? There are an enormous amount of people that use the Fish Ranch Road to 24 East Onramp during commute hours. These people live in the Berkeley, Oakland and Claremont Hills and are also commuters who try to bypass the gridlock at the tunnels by taking Claremont to Fish Ranch road. Closing that on-ramp is ill advised and will divert this traffic onto 24 West and then back into the remaining Eastbound bores. Have you conducted any studies on the volume of cars that rely on the Fish Ranch road to 24 East Onramp? Please provide details about the proposed detour that cars will need to take if they want to get on Eastbound 24 from Fish Ranch Road. Why is this project going to take so long to complete?*

**Response to Comment #28:** Thank you for providing your questions via the online comment form. As part of the work plan, there will always be at least one bore open in each direction, both westbound and eastbound. In addition, during the peak commute time, there will be two bores open for the peak commute direction (westbound in morning and eastbound in the afternoon). The project team will prepare the Final Traffic Management Plan (TMP) during the project Design Phase. The alternative freeway routes, ramp closures and ramp detour plans around the project vicinity will be discussed in the Final TMP report. However, Caltrans has prepared TMP concepts due to public concern regarding traffic impacts caused by the construction of this project. Please see Section 2.2.2 above for discussion of the TMP concepts Caltrans has developed so far.

**Comment #29** From: Jackson Hurst Via Online Comment form 1/23/2025

*I have reviewed the Draft Environmental Document for Caltrans Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project and I approve and support the findings and the build alternative because the build alternative will improve safety by adding a sprinkler system to the Caldecott Tunnel which will help in suppressing vehicle fires.*

**Response to Comment #29:** Thank you for providing your comment via the online comment form, and for your review of the Draft Environmental Document.

**Comment #30** From: Nadia Via Online Comment form 1/23/2025

*Hello I own a property off of Fish Ranch Rd and have an issue about the closure of the Fish Ranch exit for up to 3 years. This would be an inconvenience and also in case of fire in the area we need access to the freeways. I would request that the project be considered in a way that would not close the freeway access in either direction. Thanks*

**Response to Comment #30:** Thank you for your comments via the online comment

form. The ramp closure at Fish Ranch exit is anticipated to be intermittent and only one direction at a time. Residents will have access to the freeway during normal and/or emergency travel. The project team will prepare the Final Traffic Management Plan (TMP) during the project Design Phase. However, Caltrans has prepared TMP concepts due to public concern regarding traffic impacts caused by the construction of this project. Please see Section 2.2.2 above for discussion of the TMP concepts Caltrans has developed so far. The Final TMP will develop features such as alternative freeway routes, ramp closures and ramp detour plans around the project vicinity.

Caltrans works with the Fire Marshall, local fire departments, local and State Park services, Cal Fire, local cities, and the California Highway Patrol. These public agencies provide guidance regarding areas to avoid and which areas must be closed during a fire advisory. Additionally, Cal OSHA requires a shutdown of work if there is imminent danger. Please note that construction will be confined inside the Tunnel and bores and will not occur near shrubs or trees, so there will not be a risk of them catching fire. During fire season (Sept-November), the project will coordinate with Local safety agencies such as the Oakland Firesafe Council (https://oaklandfiresafecouncil.org/) to address potential fire risks during Construction.

**Comment #31** From Andrea H Via Online Comment form 1/24/2025

*Is there anyway a closer detour can be made for the East Bound Fish Ranch Road offramp/exit? We need to make sure we have easy and available access for the residents that live off of Grizzly Peak. Both for fire and health emergencies. We have very limited road access in and out of our area. Can a temporary opening and detour be made from the freeway barrier as you exit the tunnel?*

**Response to Comment #31:** Thank you for your comments. The ramp detour for the Eastbound Fish Ranch offramp exit will be at the next exit at Wilder Road, and drivers will be directed to return back to Westbound SR-24 via the Fish Ranch Offramp exit.

Caltrans works with the Fire Marshall, local fire departments, local and State Park services, Cal Fire, local cities, and the California Highway Patrol. These public agencies provide guidance regarding areas to avoid and which areas must be closed during a fire advisory. Additionally, Cal OSHA requires a shutdown of work if there is imminent danger. Please note that construction will be confined inside the Tunnel and bores and will not occur near shrubs or trees, so there will not be a risk of them catching fire. During fire season (Sept-November), the project will coordinate with Local safety agencies such as the Oakland Firesafe Council (https://oaklandfiresafecouncil.org/) to address potential fire risks during Construction.

**Comment #32** From: Nathaniel Kane Via Online Comment form 1/25/2025

*I agree that tunnel maintenance is important and this project should proceed. The main concern I have is fire preparedness particularly Sept-November when the easterly winds are strong. I anticipate that Fish Ranch Rd will receive heavier traffic during this*

*construction and therefore there will be added risk of a car fire/accident on Fish Ranch Rd. Seeing as we live directly above this Rd., if there is a car fire here and no immediate fire response, it will be near impossible to protect the homes immediately uphill from Fish Ranch Rd. I don't know if it would be able to have a fire truck stationed at the base of Fish Ranch Rd. during high fire risk days, but that would alleviate some sense of worry on my part.*

**Response to Comment #32:** Thank you for your comment. Caltrans works with the Fire Marshall, local fire departments, local and State Park services, Cal Fire, local cities, and the California Highway Patrol. These public agencies provide guidance regarding areas to avoid, and which areas must be closed during a fire advisory. Additionally, Cal OSHA requires a shutdown of work if there is imminent danger. Please note that construction will be confined inside the Tunnel and bores, and will not occur near shrubs or trees, so there will not be a risk of them catching fire. During fire season (Sept-November), the project will coordinate with Local safety agencies such as the Oakland Firesafe Council (https://oaklandfiresafecouncil.org/) to address potential fire risks during Construction.

**Comment #33** From: Pamela Meeds Via Online Comment form 1/28/2025

*Is the work going to be done at night? I live in Hiller Highlands and lived here after the 1984 fire in the tunnel. The repair work was done at night and made lots of noise, and for months we could not sleep. This is very dangerous to peoples health, mental and physical, to not sleep. Not to mention the air pollution that will be generated by the work drilling into the cement. I find it irresponsible that CalTrans did not have a public meeting on our side of the tunnel. The people in Orinda are not going to be directly impacted by the work on the Tunnel. Please make an effort to keep the residents on the West side of the tunnel updated on this project. Thank you.*

**Response to Comment #33**: Thank you for your question. Please note that this project is not adding capacity, no new tunnels, bores, or exterior work to the Tunnel structure are proposed. A noise analysis was conducted (see Section 2.3.6) which indicates the levels of noise resulting from the project on surrounding neighbors, and that of the jet fans will be minimal. Expected noise levels during the day in the closest community to the Tunnel entrance will be approximately 76 dbA at the loudest. 76 dbA is approximately the same as the level of noise as existing traffic. Avoidance and minimization measures regarding noise, AMM's NOI-1 through NOI-8, will be implemented. Please see Appendix B and Appendix C for all Project Features and Avoidance, Minimization, and Mitigation Measures required for this project.

**Comment #34** From: Howard Matis Via Online Comment form 2/2/2025

*The proposed Caldecott Tunnel Rehabilitation Project will involve construction vehicles and personnel, significantly impacting the neighborhood. For instance, neighborhood streets will be clogged when a bore is closed. I request that Caltrans fund the sidewalk from Hiller Light to the Parkwood Condominiums. This project was designed entirely and put out to bid as mitigation for the construction of the Fourth Bore. This sidewalk*

*was the number 2 priority. Unfortunately, this high-priority item was not funded due to its cost. Please provide the mitigation funds to build this sidewalk, as people in that area cannot walk to Berkeley or Oakland. They must walk on the roads leading to Highway 24 and 13. It is time to complete the sidewalks in that area dominated by Caltrans.*

**Response to Comment #34:** Thank you for your additional comments. During the previous project at the Caldecott Tunnel which involved the construction of the Fourth Bore, Caltrans provided the funding for the sidewalk to the City of Oakland Public Works Department. This funding was provided with the understanding that the City would carry out the construction of the project. Caltrans recommends that members of the Fourth Bore Coalition and other interested parties follow up with the City of Oakland Public Works Department for more information on the status of the project.

**Comment #35** From: Howard Matis Via Online Comment form 2/2/2025

*Below are some points that need to be addressed.*
*1. Page #43 says, "The section of SR-24 within the proposed project area does not have bicycle or pedestrian access." That statement is incorrect. There is bike access on SR-24 from Fish Ranch Road to Orinda. There are signs on Highway 24 that say that bike traffic is permitted. That access must be included in the report. In addition, cyclists must be able to access that area from Fish Ranch Road.*
*2. The construction staging area must be built on the east side of the Tunnel so it does not impact the residents on the west side.*
*3. No construction vehicle shall be allowed to drive on the west entrance before 8 AM. Construction vehicles use backup beepers. Backup beepers near the west entrance can be heard in my neighborhood. These beepers wake us up.*
*4. When vehicles are caught in a traffic jam, they block the path we travel on city streets in our neighborhood. When a tunnel is blocked, eastbound traffic is hindered, and we have significant delays in our homes. The Tunnels must be closed to minimize impact on our area.*
*5. Given the sophistication of Google Maps, what is the impact on local areas when the application indicates that the fastest route traverses our neighborhoods? For example, I reside on Sherwick Drive. Utilizing that road represents the most expedient means to reach the opposite side, particularly in the context of substantial traffic congestion.*
*6. Will the staging areas be active on High-Fire Days? What activities will be conducted on High-Fire days?*
*7. Will a bore be closed on a High-Fire Day? Closing a bore could block people fleeing a fire traveling on Fish Ranch Road or from the west side because of traffic blockage.*
*I would be happy to discuss more neighborhood impacts with Caltrans.*
*To mitigate these impacts, a pedestrian sidewalk must be built between the Hiller Light on SR-13 and the Parkwood Condominiums, near the entrance and exit to SR-24.*

**Response to Comment #35:** Thank you for your additional comments. Regarding the bike access surrounding the Tunnel, #1) The existing footprint of the Project (as described in Section 1.4.2) does not have bicycle or pedestrian access and bicyclists and pedestrians are prohibited from using this freeway facility. The Project does not include the construction or alteration of bicycle or pedestrian paths.

During the Caldecott Tunnel Fourth Bore Construction Project, Caltrans provided funding to the City of Oakland Public Works Department with the understanding that the City would carry out the construction of a bicycle and pedestrian project. Segments of the existing bicycle paths in the vicinity of the Tunnel were constructed by the City of Oakland with funding provided by Caltrans following construction of Bore 4 for bicycle and pedestrian facilities. Caltrans recommends that interested parties follow up with the City of Oakland Public Works Department for more information on the status of the project.

Regarding item #2) Construction staging will occur on both sides of the tunnel, east and west. Staging will occur in areas approved by Caltrans biological, environmental, and design staff and will not impact residents. All construction staging will be confined within the State Right of Way and areas identified within this environmental document, please see Section 2.2.2 for more information.

Regarding item #3) Regarding noise and other impacts, the majority of work will occur inside the Tunnel, within Bores 1, 2 and 3, structures and will not be outside. Please see Section 2.3.6 which indicates the levels of noise resulting from the project on surrounding neighbors, and that of the jet fans will be minimal. Expected noise levels during the day in the closest community to the tunnel entrance will be approximately 76 dbA at the loudest. 76 dbA is approximately the same level of the noise as existing traffic. During construction, the Contractor is required to adhere to Caltrans' standard specifications requiring construction noise to not exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. The project's AMM's NOI-1 through NOI-8 (Appendix C) will ensure noise levels adhere to Caltrans standards including vehicle backup safety beepers.

Regarding item #4) As discussed in Section 2.2.2 above, the project team will prepare the Final Traffic Management Plan (TMP) during the project Design Phase, however, TMP concepts were prepared for this environmental document, please see Section 2.2.2. The alternative freeway routes, ramp closures, and ramp detour plans around the project vicinity will be discussed in the Final TMP report.. During construction, traffic delay along SR-24 will be monitored at the Traffic Management Center via Closed Circuit Television (CCTV) and in the field with field crews. Expected delay information along SR-24 will be disseminated to motorist public via changeable message sign (CMS) located within the Bay Area freeways.

When Bore 1 is closed; traffic will not be directed to local streets and Bore 2 will remain open. The only complete closures will be for on- and off- ramps. The ramp closure at Fish Ranch exit is anticipated to be intermittent and only one direction at a time. Residents will have access to the freeway during normal and/or emergency travel. Accessibility will be ensured for first responders at all times, including communications, and all authorities having jurisdiction will maintain access to the tunnel and surrounding vicinities during construction or in the event of an emergency.

Regarding item #5) Caltrans Public Information Officers and other staff have processes in place to allow for communication with map providers such as Google Maps when a project occurs to ensure traffic is not re-routed onto local streets. Caltrans does not plan to detour traffic to local streets, and the SR-24 freeway will not be shut down during

construction.

Regarding items #6 & #7) Caltrans works with the Fire Marshall, local fire departments, local and State Park services, Cal Fire, local cities, and the California Highway Patrol. These public agencies provide guidance regarding areas to avoid, and which areas must be closed during a fire advisory. Additionally, Cal OSHA requires a shutdown of work if there is imminent danger. Please note that construction will be confined inside the Tunnel and bores and will not occur near shrubs or trees, so there will not be a risk of them catching fire. During fire season (Sept-November), the project will coordinate with Local safety agencies such as the Oakland Firesafe Council (https://oaklandfiresafecouncil.org/) to address potential fire risks during Construction.

**Comment #36** From: Kuan butts Via Online Comment form 2/3/2025

*Heard the vent system was prior planned to be a bike and led path - please install that so we have better bike/ped access through the hills*

**Response to Comment #36:** Thank you for your comment. The project scope does not and has never included construction of bicycle or pedestrian paths. This project is a rehabilitation project for Bores 1, 2, and 3 of the Caldecott Tunnel. As stated in a few of the previous responses, during the Caldecott Tunnel Fourth Bore Construction Project, Caltrans provided funding to the City of Oakland Public Works Department with the understanding that the City would carry out the construction of a bicycle and pedestrian project. Segments of the existing bicycle paths in the vicinity of the Tunnel were constructed by the City of Oakland with funding provided by Caltrans following construction of Bore 4 for bicycle and pedestrian facilities. Caltrans recommends that interested parties follow up with the City of Oakland Public Works Department for more information on the status of the project.

**Comment #37** From: Claire Caldwell Via Online Comment form 2/4/2025

*I like the newer bores of the tunnel. They are brightly lit at all times, the lanes are wide, and the ventilation seems to work fine.*
*I have lived in close vicinity of the Caldecott Tunnel all my life and driven through it numerous times over the last 60 years; however, I can no longer drive through the older bores of the tunnel. I don't like the narrow lanes (which is scary), but that isn't the main reason.*
*As an older adult, my eyes don't adjust going from lightness to darkness as quickly as they used to and I find myself momentarily blinded when I reach about halfway through the oldest bore. It is better when the lights in the tunnel are on, but I can't count on them being on.*
*As a result, I don't drive through that direction of the tunnel anymore. Instead I drive up and over the hill from Oakland (Fish Ranch Road) and enter Highway 24 after the tunnel.*
*Even if CalTrans doesn't decide to replace the older bores so they match the newest bores, PLEASE increase the lighting in the older bores AND keep the lights on at all times.*

*I appreciate the opportunity to provide comments on your proposed project. Thank you for your consideration.*

**Response to Comment #37:** Thank you for your comment. Please note that this project scope only involves Bores 1, 2, and 3. The project scope does not involve the newer Bore 4 and does not include any widening of the tunnel or any of the bores. The project scope will address the deficiencies in the existing tunnel bores regarding visibility and safety concerns as part of the rehabilitation of the tunnel. Upgrades to the existing lighting are proposed to improve and enhance visibility, including addressing the changes in brightness when entering and exiting the bores.

**Comment #38** From: Bernard Smits Via Online Comment form 2/5/2025

*Regarding the ventilation upgrades. As a professional engineer and fire life safety professional with over 25 years experience in tunnels, the plan to use Saccardo nozzles or jet fans is a waste of money and will not increase safety in these tunnels. While single direction auto tunnels develop their own airflow, by vehicle movement, the job of the emergency ventilation system is to maintain that airflow pattern. A push-pull longitudinal ventilation system is the simplest and safest (and cheapest) approach for protecting drivers in these tunnels. A push-pull longitudinal (or a semi-transverse) ventilation system provides easy of operation and "system redundancy". System Redundancy provides both supply and exhaust operations so that if either half of the system were to fail, in an emergency the other half of the system would maintain the required level of safety to protect people needing to evacuate the tunnel. The Bay Area Rapid Transit system has used these two tunnel ventilation approaches safely, in the significantly more difficult mass transit environment, for over 50 years. Please reconsider the suggested ventilation approaches to utilize either a push-pull longitudinal approach or a semi-transverse approach. Hope this is helpful. Thanks*

**Response to Comment #38** Thank you for your comments. A study was conducted with a configuration of the existing fully transverse system to a push-pull system for Bores 1 and 2 utilizing existing fans at both portals. It was determined that the existing system capacity is not adequate due to the fire heat release rate of heavy goods vehicles. Caltrans considered both a Saccardo Nozzle System and a longitudinal ventilation system using jet fans to provide system capacity to ventilate a vehicle fire involving a heavy goods vehicle in the Draft Environmental Document. The Jet Fan system was subsequently chosen. This system would push smoke towards the exit portal and provide safe evacuation path in case of a fire incident.

**Comment #39** From: Christos Magganas Via Online Comment form 2/6/2025

*"Dear CalTrans Project Team,*
*I am writing regarding immediate concerns about the proposed rehabilitation of Tunnel Bores 1, 2, and 3. The previous construction significantly impacted our community, and we request the following considerations:*
** The 4th bore construction eliminated our street shoulder, leading to severe congestion from emergency vehicles, tow trucks, and abandoned vehicles. Debris from accidents*

*and construction regularly spills onto our properties. We request restoration of the shoulder area and implementation of proper drainage and debris barriers.*
** Current lighting is insufficient for resident safety and traffic visibility. We request additional street lighting to prevent theft and improve traffic safety, particularly for emergency vehicle access.*
** The increased tunnel traffic has created unacceptable noise levels. We request the installation of rubberized pavement as previously promised during 4th bore construction to reduce road noise.*
** Protection from freeway impacts is critical. We request construction of sound walls and berms to shield our homes from debris, noise, and traffic impacts.*
*As you proceed with rehabilitation, we ask that you address these safety and quality-of-life concerns that have persisted since previous construction projects.*
*Sincerely,*
*Christos Magganas*
*158 Caldecott Lane, Oakland, CA"*

**Response to Comment #39:** Thank you for your comments. The first comment regarding the previous construction of Bore 4 is beyond the scope of the project and outside the project limits. The comments are appreciated and will be passed on to management and for consideration and implementation of future projects.

Regarding your comment about the current lighting in the bores, the project scope will address the deficiencies of visibility and safety concerns as part of the rehabilitation of the tunnel. Upgrades to the existing lighting are proposed to improve and enhance visibility, including addressing the changes in brightness when entering and exiting the bores.

Regarding noise and other impacts, most work will occur inside the tunnel bores and will not be outside. Please see Section 2.3.6 which indicates the levels of noise from the project on surrounding neighbors, and that of the jet fans will be minimal. Expected noise levels during the day in the closest community to the tunnel entrance will be approximately 76 dbA at the loudest. 76 dbA is approximately the same level of noise as existing traffic.

During construction, the Contractor is required to adhere to Caltrans' standard specifications requiring construction noise to not exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. The project's AMM's NOI-1 through NOI-8 (Appendix C) will ensure noise levels adhere to Caltrans standards.

Figure 28 in Section 2.3.6 above shows a map of noise monitoring locations at the west end of the Caldecott Tunnel, it was determined that the closest residential receptor is within 245 to 770 feet from all job site activities There is an existing soundwall to the north of SR-24 that shields the neighboring area shown, the modeled construction noise levels due to any type of construction activity is considerably below 86 dBA, therefore the residential receptors will not be impacted. In addition, the existing soundwall will further attenuate the noise levels by up to 8 dBA.

As discussed in Section 2.2.2 above, one of the concepts that will be considered during development of the TMP during the project's Design Phase includes 55-hour weekend closures, and overnight closures of individual bores restricted from 9 p.m. to 5 a.m. on

weekdays or weekends. During this time, Avoidance, Minimization and Mitigation Measures regarding noise AMM's NOI-1 through NOI-8 (listed in Appendix C), would be implemented. Please see Appendix B and Appendix C for all Project Features and Avoidance, Minimization, and Mitigation Measures required for this project.

Regarding your fourth comment please note that this project is not a Type I project (a project that includes the construction of a new highway, involves the addition of traffic lanes, or substantially alter the roadway alignment) per 23 Code of Federal Regulations Part 772. Therefore, additional traffic noise abatement or sound walls are not considered for the project.

**Comment #40** From: Jake Lewis Via Online Comment form 2/6/2025

*"To whom it may concern,*
*Regarding the proposed rehab of Bores 1-3.*
*The previous construction significantly impacted our community, and we request the following considerations:*
** The 4th bore construction eliminated our street shoulder, leading to severe congestion from emergency vehicles, tow trucks, and abandoned vehicles. Debris from accidents and construction regularly spills onto our properties. We request restoration of the shoulder area and implementation of proper drainage and debris barriers.*
** Current lighting is insufficient for resident safety and traffic visibility. We request additional street lighting to prevent theft and improve traffic safety, particularly for emergency vehicle access.*
** The increased tunnel traffic has created unacceptable noise levels. We request the installation of rubberized pavement as previously promised during 4th bore construction to reduce road noise.*
** Protection from freeway impacts is critical. We request construction of sound walls and berms to shield our homes from debris, noise, and traffic impacts.*
** Construction and increased tunnel traffic causes significant dirt and debris to accumulate on Caldecott Lane. We request regular street sweeping on both sides to make our street safe and to prevent inevitable damage to our vehicles from accumulations.*
*As you proceed with rehabilitation, we ask that you address these safety and quality-of-life concerns that have persisted since previous construction projects.*
*Sincerely,*
*Jake Lucas*
*Parkwood "*

**Response to Comment #40**: Thank you for your comments. The first comment regarding the previous construction of Bore 4 is beyond the scope of the project and outside the project limits. The comments are appreciated and will be passed on to management and for consideration and implementation of future projects.

Regarding your comment about the current lighting in the bores the project scope will address the deficiencies of visibility and safety concerns as part of the rehabilitation of the tunnel. Upgrades to the existing lighting are proposed to improve and enhance visibility, including addressing the changes in brightness when entering and exiting the

bores.

Regarding noise and other impacts, most construction work will occur inside the tunnel bores and will not be outside. Please see Section 2.3.6 which indicates the levels of noise from the project on surrounding neighbors, and that of the jet fans will be minimal. Expected noise levels during the day in the closest community to the tunnel entrance will be approximately 76 dbA at the loudest. 76 dbA is approximately the same level of noise as existing traffic.

During construction, the Contractor is required to adhere to Caltrans' standard specifications requiring construction noise to not exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. The project's AMM's NOI-1 through NOI-8 (Appendix C) will ensure noise levels adhere to Caltrans standards

Figure 28 in Section 2.3.6 above shows a map of noise monitoring locations at the west end of the Caldecott Tunnel, it was determined that the closest residential receptor is within 245 to 770 feet from all job site activities. There is an existing soundwall to the north of Route 24 that shields the neighboring area shown, the modeled construction noise levels due to any type of construction activity is considerably below 86 dBA, therefore the residential receptors will not be impacted. In addition, the existing soundwall will further attenuate the noise levels by up to 8 dBA.

As discussed in Section 2.2.2 above, one of the concepts that will be considered during development of the TMP during the project's Design Phase includes 55-hour weekend closures and overnight closures of individual bores restricted from 9 p.m. to 5 a.m. on weekdays or weekends. During this time, Avoidance, Minimization and Mitigation Measures regarding noise AMM's NOI-1 through NOI-8 (listed in Appendix C), would be implemented. Please see Appendix B and Appendix C for all Project Features and Avoidance, Minimization, and Mitigation Measures required for this project.

Regarding your fourth comment please note that this project is not a Type I project (a project that includes the construction of a new highway, involves the addition of traffic lanes, or substantially alter the roadway alignment) per 23 Code of Federal Regulations Part 772. Therefore, additional traffic noise abatement or sound walls are not considered for the project.

**VOICEMAIL RECEIVED:**

**Comment #41** From: Carol Lyons Via voicemail 1/24/25

*"My name is Carol Lyons. I live at 10 Marlin Cove in Oakland in Hiller Highlands and I go through the Caldecott Bore I many, many, many times a week. I have called and talked to the ladies in Oakland and registered my concerns, especially about the darkness and the water that seeps and drips from the ceiling onto the pavement. It's extremely daunting to drive through that bore, especially with those two distractions. I would have loved to attend the public meeting on Wednesday, January 22nd, but I didn't get the flyer until that day when I came home at 630.I hope there will be another public meeting and that the notices will go out in time for people to actually attend. If the tunnel*

*is improved, as you say it will be, it will help, I hope. It's a disaster waiting to happen, and everybody knows that, who drives through the tunnel from west to east. In the other direction, the new bore is a delight. There's never traffic coming from east to west, and I really appreciate that. But whatever you do with 4-1, it will be an important part of the process." (transcribed by voicemail system)*

**Response to Comment #41:** Thank you for your comment. The project scope includes rehabilitating the Caldecott Tunnel bores. As part of the rehabilitation of the tunnel, the lighting system will be upgraded inside Bores 1, 2, and 3. The project will also address water that drips from the ceiling.

# Chapter 5 List of Preparers

The following Caltrans staff and consultants contributed to the preparation and review of this IS-MND and EA are included below in Table 10.

**Table 10. List of Preparers**

| Agency/Company | Name | Role |
|---|---|---|
| **Environmental Analysis** | | |
| Caltrans | Larry Bonner | Office Chief, Office of Environmental Analysis |
| Caltrans | Wahida Rashid | Branch Chief, Senior Environmental Scientist (Supervisor) District 4 |
| Caltrans | Brycelyn Hendrix | Environmental Scientist |
| **Aesthetics** | | |
| Caltrans | Lydia Mac | Branch Chief, Office of Landscape Architecture |
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# Appendix A Section 4(f)

**Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project**

Final Individual Section 4(f) Evaluation

Alameda County & Contra Costa County, California District 4, State Route 24, PM RO.01
EFIS: 0414000011, EA: 04-0J540

Prepared by:
State of California, Department of

Transportation May 2025

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

# Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project

Final Individual Section 4(f) Evaluation

**0J540**

Christopher Caputo
Deputy District Director Division of Environmental Planning and Engineering
Caltrans District 4

06/18/2025

Date

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**Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project**
**Final Individual Section 4(f) Evaluation**

## 1.0 Introduction

Section 4(f) of the U.S. Department of Transportation Act of 1966, codified in federal law as 49 United States Code (USC) 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site), only if:

(1) There is no prudent and feasible alternative to using that land, and
(2) the project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires coordination among the Department of the Interior in developing transportation projects and programs that use land protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans, including determinations and approval of Section 4(f) evaluations as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by the project action.

## 2.0 Project Description

Caltrans proposes to rehabilitate Bores 1, 2, and 3 of the Caldecott Tunnel at postmile R5.80/R6.24 and R0.00/R0.60 on SR-24 in Alameda and Contra Costa. The project will preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. Additional project information can be found in Section 2.2 below.

### *2.1 Purpose and Need*

The purpose of this project is to rehabilitate Caldecott Tunnel Bores 1, 2, and 3. The project will preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life.

The project is needed because Headquarters Structure Maintenance and Investigation (SM&I) and District 4 identified deficiencies during inspection and concluded that the three bores required upgrades. If not addressed, the deficiencies would trigger more frequent maintenance and lead to more extensive repairs in the future. An independent consultant, WSP, was tasked by the Division of Engineering Services (DES) and District 04 to perform a risk analysis exploring the ventilation capacities of the Complex Tunnel/Tubes within the State of California to address smoke from vehicle fires of current commercial vehicles. The risk analysis concluded that Caldecott Tunnel Bores 1, 2, and 3 are of the top risk priority in the State and recommended ventilation upgrades.

### *2.2 Project Background and Existing Conditions*

The Caldecott Tunnel Bores 1 and 2 were built in the 1930s to connect the Bay Area with rural Contra Costa County. The tunnel opened in 1937. Bores 1 and 2 consist of single barrel cast-in-place reinforced concrete horseshoe shaped tunnels on reinforced concrete slab-on-grade with lighting, ventilation, and fire and life safety functional systems. Bore 1 is 3616’ long with a vertical clearance of 14.2’. The roadway width is 20.8’ for two lanes of traffic. Bore 2 is 3610’ long and features the same construction and configuration as Bore 1, except for a clearance of 14.8’. Bore 3 was constructed in 1965 and is 3371’ long with a vertical clearance of 14.9’. Bore 3 is also a single barrel cast-in-place reinforced concrete horseshoe shaped tunnel. It has reinforced concrete cross passages and slab- on-grade with lighting, ventilation, and fire and life safety functional systems. The roadway width is 28’ for two lanes of traffic. The average annual daily traffic (AADT) count for the Caldecott Tunnel was 178,286 vehicles in 2021.

There is an additional Operations Maintenance and Control (OMC) building on the west end, or west portal, of the Caldecott Tunnel. This building also contains offices, storage rooms, and electrical equipment. This building is used to monitor safety within all bores of the Caldecott Tunnel.

Caldecott Tunnel Bore 4 was constructed in 2012 and is not part of this project.

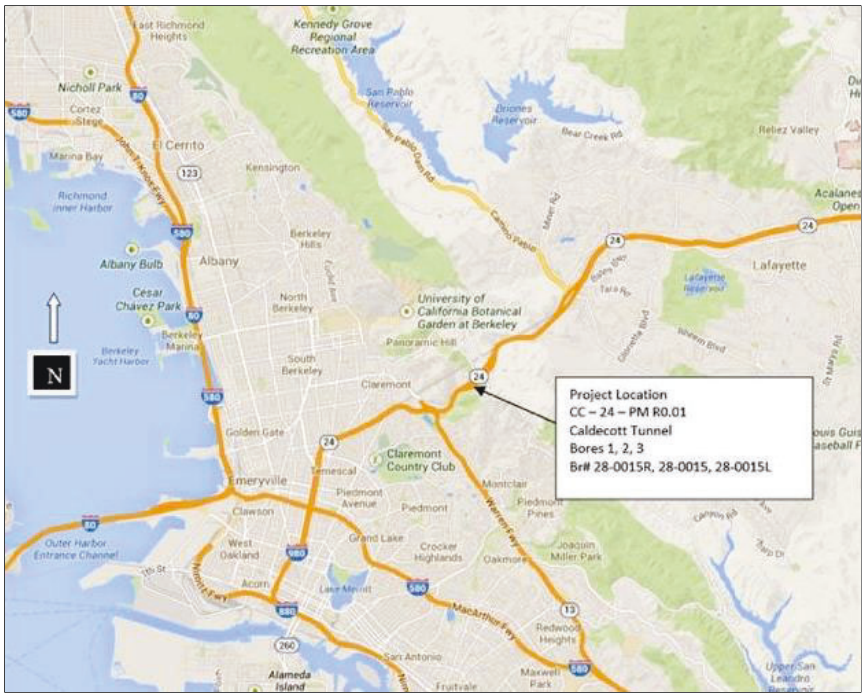


**Figure 1. Project Location**

This project was initiated in response to Structure Maintenance and Investigations (SM&I) in-depth inspection of the Caldecott Tunnel Bores 1, 2, and 3 in May 2020. The inspection identified that Bores 1, 2, and 3 required maintenance, repair, and rehabilitation, particularly of the concrete tunnels and slabs, which exhibited cracking, delamination, spalling, and efflorescence. The inspection also showed that the current ventilation systems require upgrades and included fans that are past their maintenance service life.

On December 27, 2021, WSP, an environmental consulting firm, finalized a Statewide Risk Assessment Report for Caltrans Road Tunnels. This report identifies Caldecott Tunnel Bores 1, 2, and 3 at a higher risk level for overall fire-life safety in terms of prioritizing improvement options based on the before improvement fire risk score (FRS) of 10.3 for Bore 3 and the FRS score of 10.0 for Bores 1 and 2, which are the second highest risk score in relative to a common benchmark tunnel (NFPA 502 compliant tunnel, half a mile long, 2400 vehicles per hour, traffic mix the same as Posey-Weber Tube).

## Existing Conditions

Bores 1, 2, and 3 of the Caldecott Tunnel consist of two main components, or chambers. The lowest chamber is the driving lane, or roadway tunnel, which is the area of the tunnel used and seen by the public. The chambers positioned above the roadway tunnels are known as the plenum, or open-air space. Within Bores 1 and 2, the plenum is divided in half horizontally (Figure 2), and in Bore 3, the plenum is divided in half vertically (Figure 3).

For Bores 1 and 2, the exhaust plenum is located immediately above the ceiling of the roadway tunnel. This plenum is used to blow out smoke or other airborne debris from the

tunnel. The fresh air plenum is situated above the exhaust plenum. This chamber is used to bring in outside air to circulate through the tunnel (Figure 2).

For Bore 3, both the exhaust and fresh air supply plenums are located immediately above the roadway tunnel. The exhaust plenum is on the left side, and the fresh air supply plenum is on the right side (Figure 3).

The existing ventilation system in Bores 1 and 2 consists of eight total fans. There are two exhaust fans and two fresh air supply fans located in each of the east and west portal buildings. The fans circulate air through the plenums that run the length of the tunnel. Each of the eight fans is equipped with an automated damper, or flap, that can be used to separate the tunnel plenum from the portal building. There are air holes along the north wall of the fresh air supply plenum that connect the fresh air supply plenum to the roadway tunnel below.

In Bore 3, the existing ventilation system consists of four total fans. There are two exhaust fans and two fresh air supply fans within the west portal building. Each fan is equipped with a damper to separate the tunnel plenum from the portal building. There are air holes spaced every 15 feet along the length of the exhaust and fresh air supply plenum ceilings that allow the air to circulate throughout the roadway tunnel. Each of these air holes is also equipped with a damper that can open and close to regulate air flow. As Figure 2 and Figure 3 below are examples of what is found within the length of the tunnel, these fans are not shown. As described above, the existing fans for all three bores are located only within the portal buildings.

In addition to the fire and smoke protection provided by the ventilation systems, there is also a fire protection system that includes fire water supplies located throughout each tunnel bore and within each portal building. This fire water supply consists of two main pumps located at the west end of Bore 3. There is also a sprinkler system in the OMC building.

Within the lowest section of each bore, the roadway tunnel, there are cross passages running horizontally between the bores, also called adits. These cross passages are used to allow emergency personnel or maintenance personnel to easily cross between and access each bore. There are three cross passages between Bores 1 and 2 and one cross passage between Bores 3 and 4. These cross passages are not shown in the diagram below, but they are accessible from the driving lanes and are visible via illuminated signs with exit arrows.

The walls of the tunnel, the plenums, and the adits are made of concrete slabs. To prevent water buildup within the tunnel, there are drainage inlets on the north and south sides of all three bores that feed into a reinforced concrete pipe. There are 12 manholes along the centerline of each bore.

above the ceiling of the roadway tunnel. This plenum is used to blow out smoke or other airborne debris from the tunnel. The fresh air plenum is situated above the exhaust plenum. This chamber is used to bring in outside air to circulate through the tunnel (Figure 2). There is one electrical power distribution system that supplies power to all four bores of the Caldecott Tunnel. This power distribution system has two 12 kilovolt substations, one on the west portal end of the tunnel and one on the east portal end.

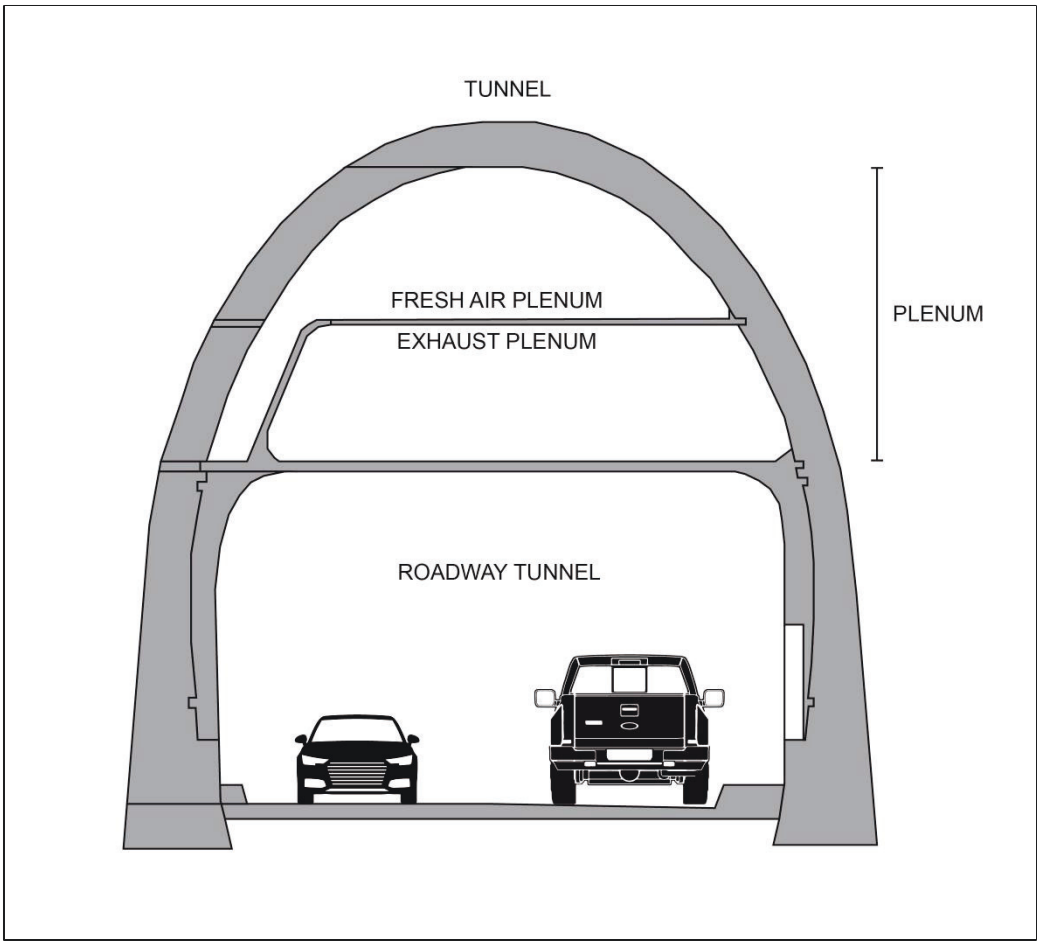


**Figure 2. Cross Section of Existing Conditions for Bores 1 and 2**

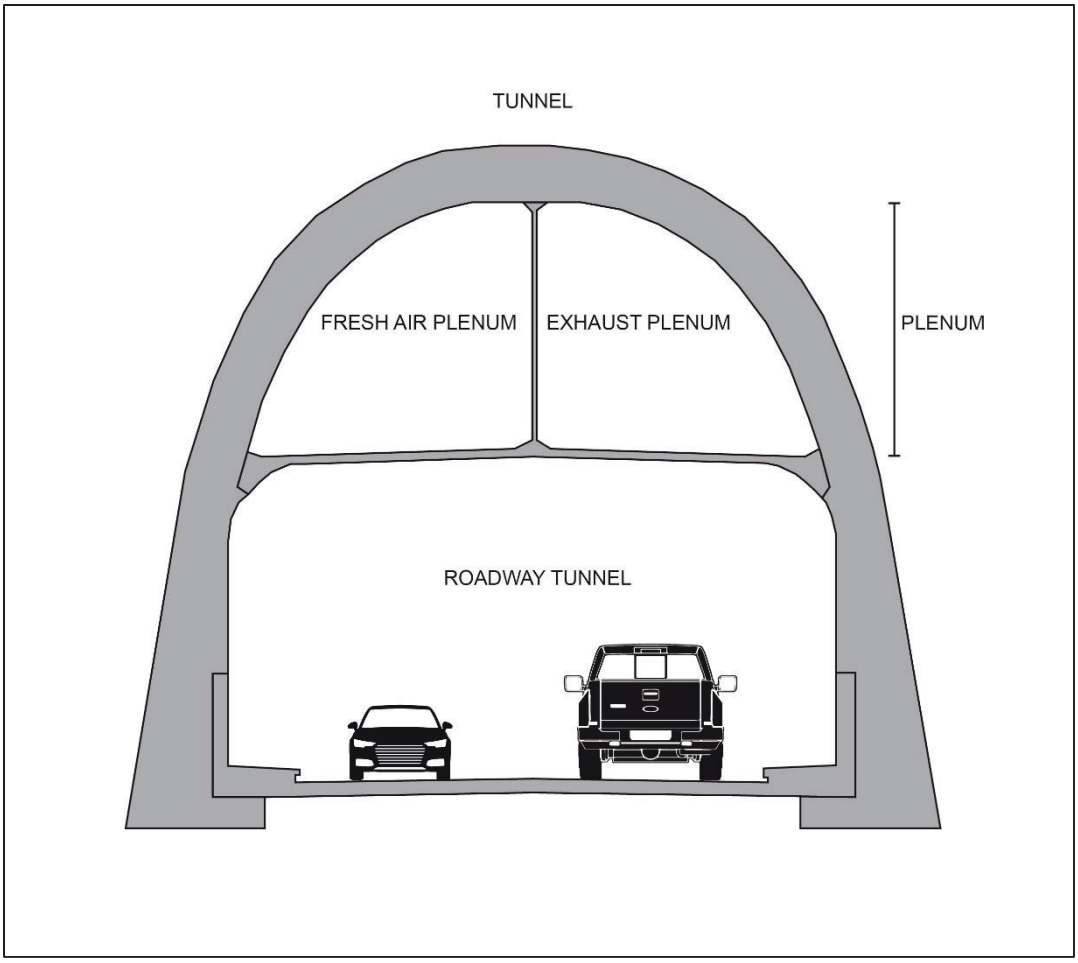


**Figure 3. Cross Section of Existing Conditions for Bore 3**

*2.3 Project Alternatives*

*2.3.1 No Build Alternative*

The No Build Alterative would take no action. If the project is not constructed, continued and accelerated deterioration of the concrete pavement, drainage, and delineation markers in Bores 1, 2, and 3 will occur. If not addressed, this aging tunnel could trigger more frequent maintenance, and lead to more extensive repairs in the future. This alternative does not meet the purpose and need of the project.

*2.3.2 Build Alternative*

All work for this project will be the same across Bores 1, 2, and 3, except for the two design options for ventilation improvements. Build Alternative Option 1 will install Saccardo Nozzles in Bores 1 and 2. Build Alternative Option 2 will install jet fans in Bores 1 and 2. Both options will install jet fans in Bore 3.

The Build Alternative would rehabilitate Caldecott Tunnel Bores 1, 2, and 3 and provide additional fire system, ventilation, and electrical upgrades.

## Common Design Features

*Ventilation System Upgrades*

The proposed project would upgrade the existing ventilation system for Bores 1, 2, and 3 to improve smoke management for egress and firefighting in the event of a fire related emergency. There are different two design options for ventilation improvements in Bores 1 and 2. Option 1 would install Saccardo Nozzles in Bores 1 and 2. Option 2 would install jet fans in Bores 1 and 2. Both options will involve the installation of jet fans in Bore 3.

*Tunnel Repairs*

The proposed project would repair and patch any cracking or fragmented concrete. Any unsound concrete will be removed. Weepholes, which are small openings used to allow water to escape the tunnel, will be cleaned out. Any other cracking, rust, or salt deposits will be cleaned and removed. Concrete curbs and metal guardrails will also be replaced. These repairs will cover an area of approximately 8,500 square feet for Bore 1, 8,800 square feet for Bore 2, and 5,500 square feet for Bore 3.

*Plenum Repairs*

The proposed project will rehabilitate and repair all plenums in Bores 1, 2, and 3. Repairs will include rehabilitation of the floor slabs for each plenum and replacement of the slab with thicker, sturdier cement.

*Adit Repairs*

The proposed project will conduct rehabilitation work on the adits, or tunnel cross passages. The existing adits do not have adequate lighting or ventilation systems. Caltrans will also repair the adit floors and walls as well as remove any lead contaminants found within.

*Safety Updates*

The proposed project will incorporate a number of safety updates throughout Bores 1, 2, and 3. Updates will include installing a new sprinkler system; repairing or replacing all lane markers and safety markers to ensure visibility; upgrading the existing call boxes, fire extinguishers and fire extinguisher boxes, and carbon dioxide sensors; installing a public address (PA) system; upgrading the lighting system; and upgrading the changeable message signs (CMS) at the west portal.

*Electrical System Upgrades*

For the west portal, the proposed project will place a new transformer and motor control center (MCC) in the existing Bore 3 portal building. The two pads for the new electrical equipment will measure approximately 31’ by 3.10’ and 31’ by 6.6’. A 4” conduit will be placed along the existing roadway or existing conduit pathway to connect the transformer

and MCC to the West Bore 1 and Bore 2 ventilation room. Any trenching required will be a combination of horizontal directional drilling (HDD) and open trenching.

For the east portal, the proposed project will place a new transformer and motor control center (MCC) adjacent to the existing electrical equipment pad east of the portal entrance. This equipment will require two concrete pads, one measuring approximately 31' by 3.10' and 31' by 6.6'. A 4" conduit will be placed using open trenching along the existing roadway or existing conduit pathway to connect the transformer and MCC to the power substation near the east entrance of Bores 1 and 2. All trenching will be completed by hand or using a mini excavator. All trenches will be backfilled and placed to avoid existing trees and other vegetation.

**Build Alternative Option 1, Saccardo Nozzle Ventilation System: Bores 1 and 2**

This option would install a Saccardo Nozzle Ventilation System using supply fans to improve smoke management and to facilitate the safe exit by the traveling public from the tunnel during a fire, as well as to help firefighting efforts by managing the smoke from a fire (Figure 4, Figure 5, and Figure 6). This system includes one Saccardo Nozzle, with an opening approximately 22' long by 7.5' wide, to be placed at an angle in the fresh air plenum. This Nozzle placement would also require an approximately 6.5' high by 7' wide duct to be placed in the fresh air plenum. Placement of the Saccardo Nozzle would be finalized during the next phase of this project, the Design Phase.

The Saccardo Nozzle would require the use of an existing fan or the construction of new fans. The Saccardo Nozzle would provide air flow in a single direction. Upgrading the existing system to include the Saccardo Nozzle would allow for additional ventilation along the length of the tunnel that is not possible with the existing fan layout.

The scope of work for this option includes the following modifications inside each tunnel and portal building:

1. Cut openings in the roadway tunnel ceiling to construct a Saccardo Nozzle opening. The existing ceiling of the roadway would be removed to create an indentation, or niche opening, in which the Saccardo Nozzle would sit. Cutting into the existing ceiling would allow for the Nozzle opening to sit flush with the existing ceiling of the tunnel.
2. Construct a dividing wall downstream from the air flow produced by the Saccardo Nozzle in the plenum. This wall would have an access door and motorized dampers for plenum ventilation.
3. Replace or refurbish the existing supply fans in the west portal fan room with new supply fans.
4. Install new motorized dampers in the fresh air and exhaust air plenum floors to ventilate the plenums.
5. Close all fresh air supply openings in the tunnel wall.
6. Close all exhaust air openings in the tunnel ceiling.

7. If the existing supply and exhaust fans at west and east portals are removed, new smaller fans would be added to ventilate the plenums.

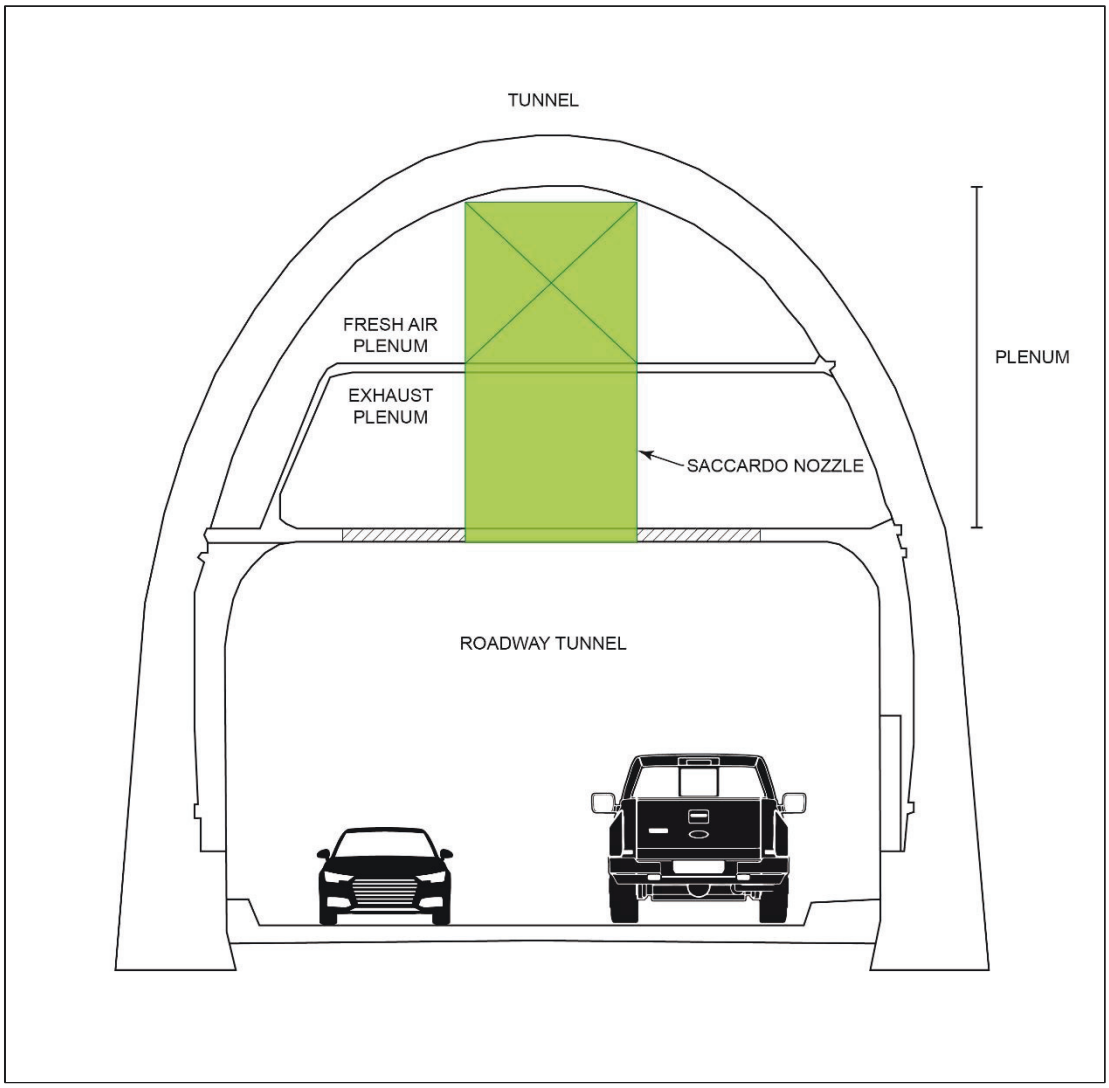


**Figure 4. Cross Section of Proposed Build Alternative Option 1**

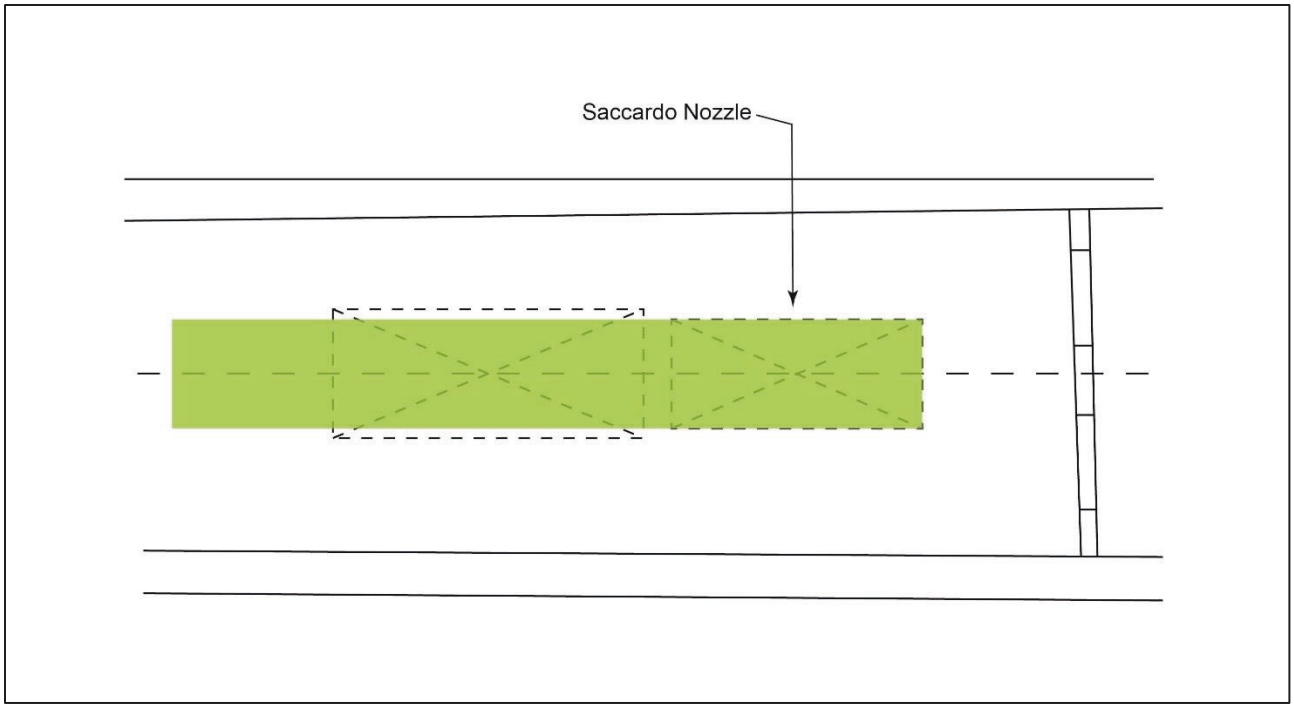


**Figure 5. Plan View of Proposed Build Alternative Option 1**

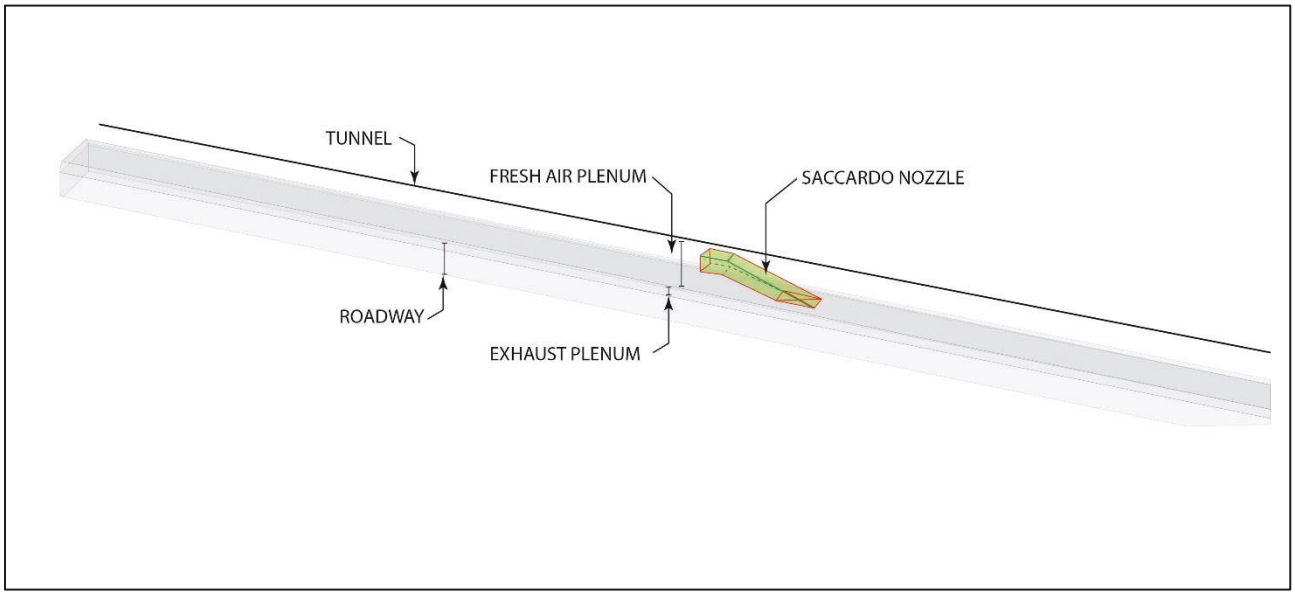


**Figure 6. Oblique View of Proposed Build Alternative Option 1**

**Build Alternative Option 2, Jet Fans: Bores 1 and 2**

This option would install a jet fan ventilation system to improve smoke management and to facilitate the safe exit by the traveling public from the tunnel during a fire, as well as help firefighting efforts by managing the smoke from a fire (Figure 7, Figure 8, and Figure 9). This option would include approximately four rows of fans placed throughout the tunnel. There would be two fans per row, with eight fans total. Construction would be required only in the exhaust air plenum. The exact location of each fan would be determined in the next phase of this project, the Design Phase.

The jet fans are designed to provide air flow in a single direction of traffic flow but can provide reversible directional ventilation, depending on the design, to meet State Fire Marshall requirements. Reversing the direction of ventilation downhill away from the traffic flow would require additional rows of jet fans. The final number of fans would be determined during the next phase of the project, the Design Phase.

Upgrading the ventilation system to this proposed jet fan system would promote better air circulation throughout the tunnel. Spacing the fans along the length of the tunnel provides additional air flow that is not possible with the existing system.

The scope of work for this option includes the following modifications inside each tunnel and portal building:

1. Cut openings in the roadway tunnel ceiling to construct jet fan niches. The existing ceiling of the roadway would be removed to create an indentation, or niche, in which the jet fans would sit. Creating this higher ceiling in this area would allow for the jet fans to sit flush with the existing ceiling of the tunnel.
2. Seal all fresh air supply openings in the tunnel wall.
3. Seal all exhaust air openings in the tunnel ceiling.
4. Install new motorized dampers in the fresh air and exhaust air plenums floors to ventilate the plenums.
5. If the existing supply and exhaust fans at the west and east portals are removed, new smaller fans would be added to ventilate the plenums.

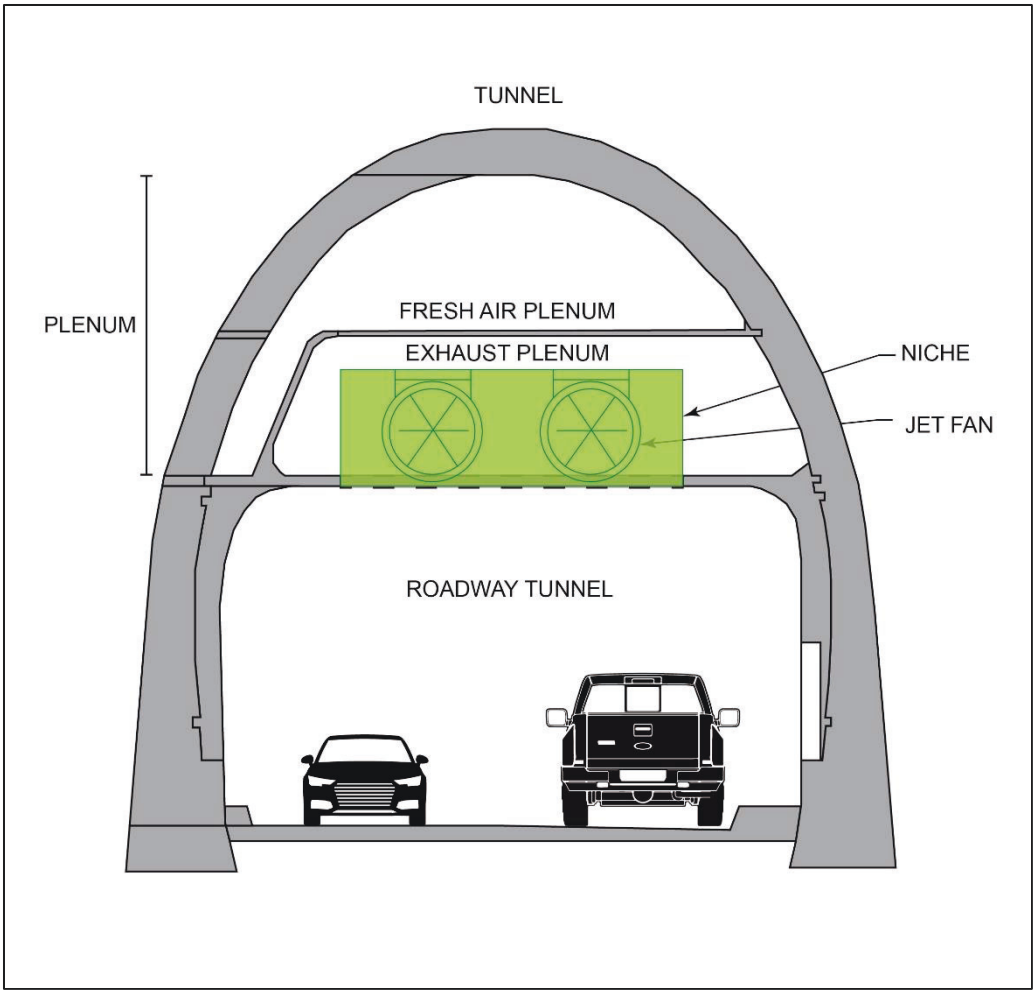


**Figure 7. Cross Section of Proposed Build Alternative Option 2**

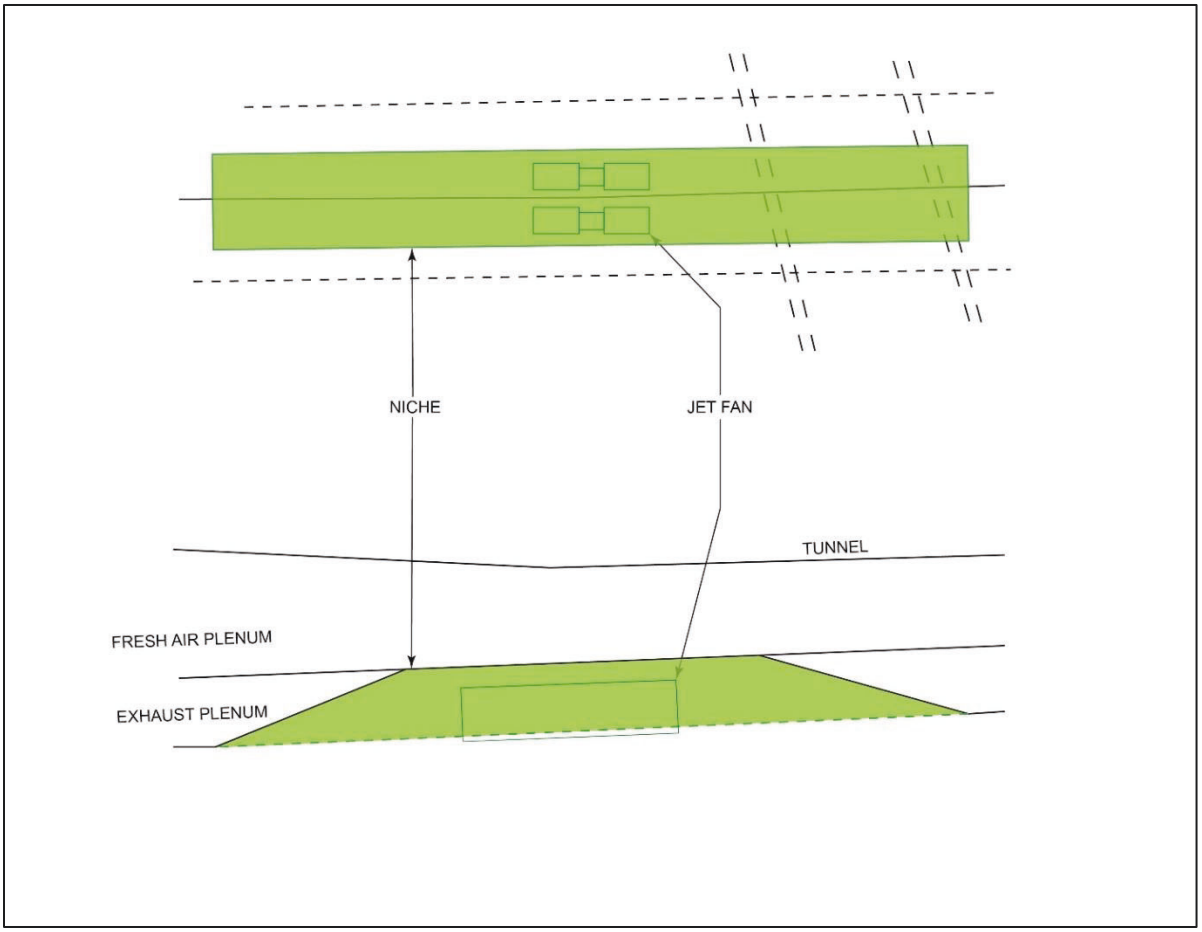


**Figure 8. Plan view (top) and side view (bottom) of Proposed Build Alternative Option 2**

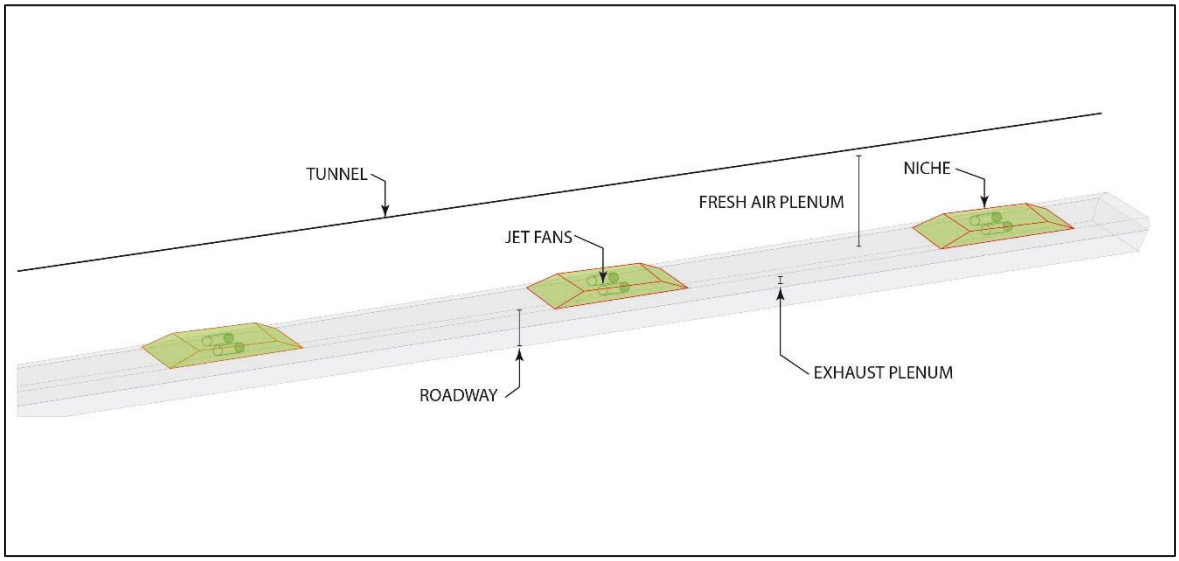


**Figure 9. Oblique view of Proposed Build Alternative Option 2**

**Both Build Alternative Options, Jet Fans: Bore 3**

For Bore 3, the proposed project would install approximately 16 jet fans in eight rows of two throughout the length of the tunnel. This jet fan ventilation system would improve smoke management and facilitate the safe exit by the traveling public from the tunnel during a fire, as well as help firefighting efforts by managing the smoke from a fire. The exact location of each fan would be determined in the next phase of this project, the Design Phase.

The jet fans are designed to provide air flow in a single direction of traffic flow but can provide reversible directional ventilation, depending on the design, to meet State Fire Marshall requirements. Reversing the direction of ventilation downhill would require additional rows of jet fans. Upgrading the ventilation system to this proposed jet fan system would promote better air circulation throughout the tunnel. Spacing the fans along the length of the tunnel provides additional air flow that is not possible with the existing system.

This scope of work includes the following modifications inside Bore 3 and its portal building (Figure 10, Figure 11, and Figure 12):

1. Cut openings in the tunnel ceiling to construct jet fan niches. The existing ceiling of the roadway would be removed to create an indentation, or niche, in which the jet fans will sit. Creating a higher ceiling in this area would allow for the jet fans to sit flush with the existing ceiling of the tunnel.
2. Remove the center wall between the fresh and exhaust air plenums at the jet fan niche locations.
3. Seal all of the supply and exhaust air openings in the tunnel ceiling.
4. Install new motorized dampers in the fresh air and exhaust air plenum floors to ventilate the plenums.
5. If the existing supply and exhaust fans at the west and east portals are removed, new smaller fans would be added to ventilate the plenums.

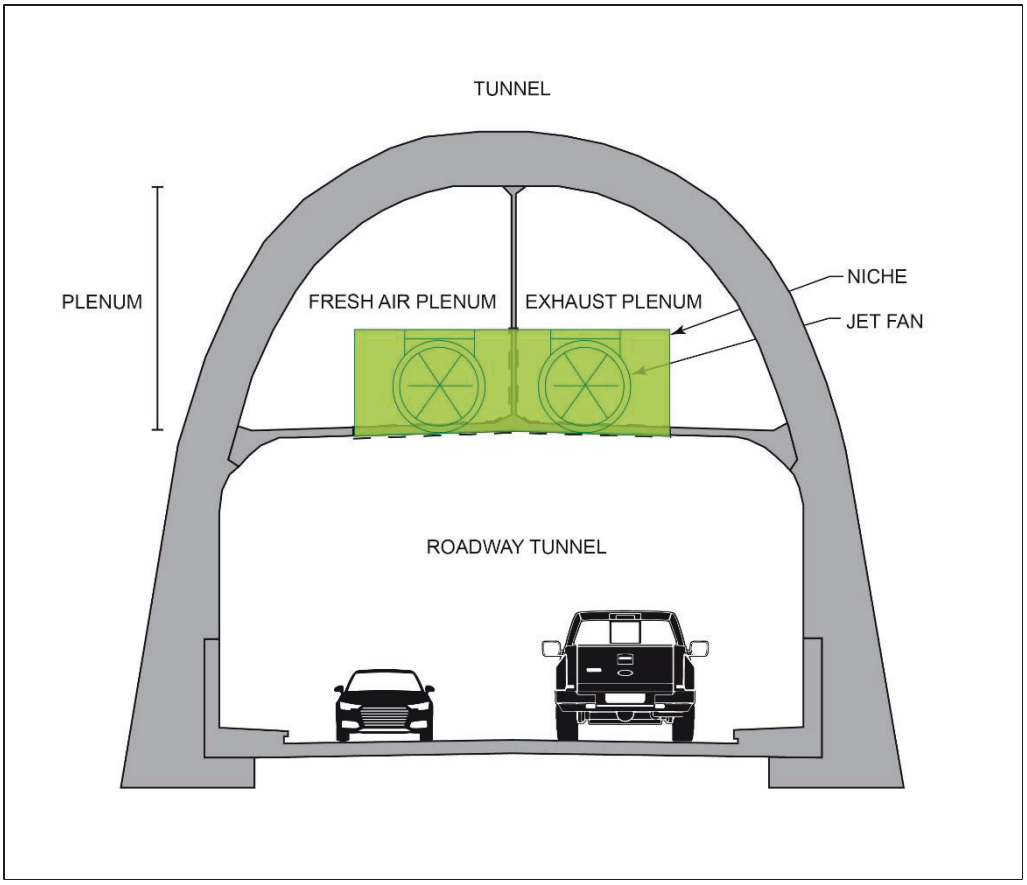


**Figure 10. Cross Section of Proposed Build Alternative Ventilation Work for Bore 3**

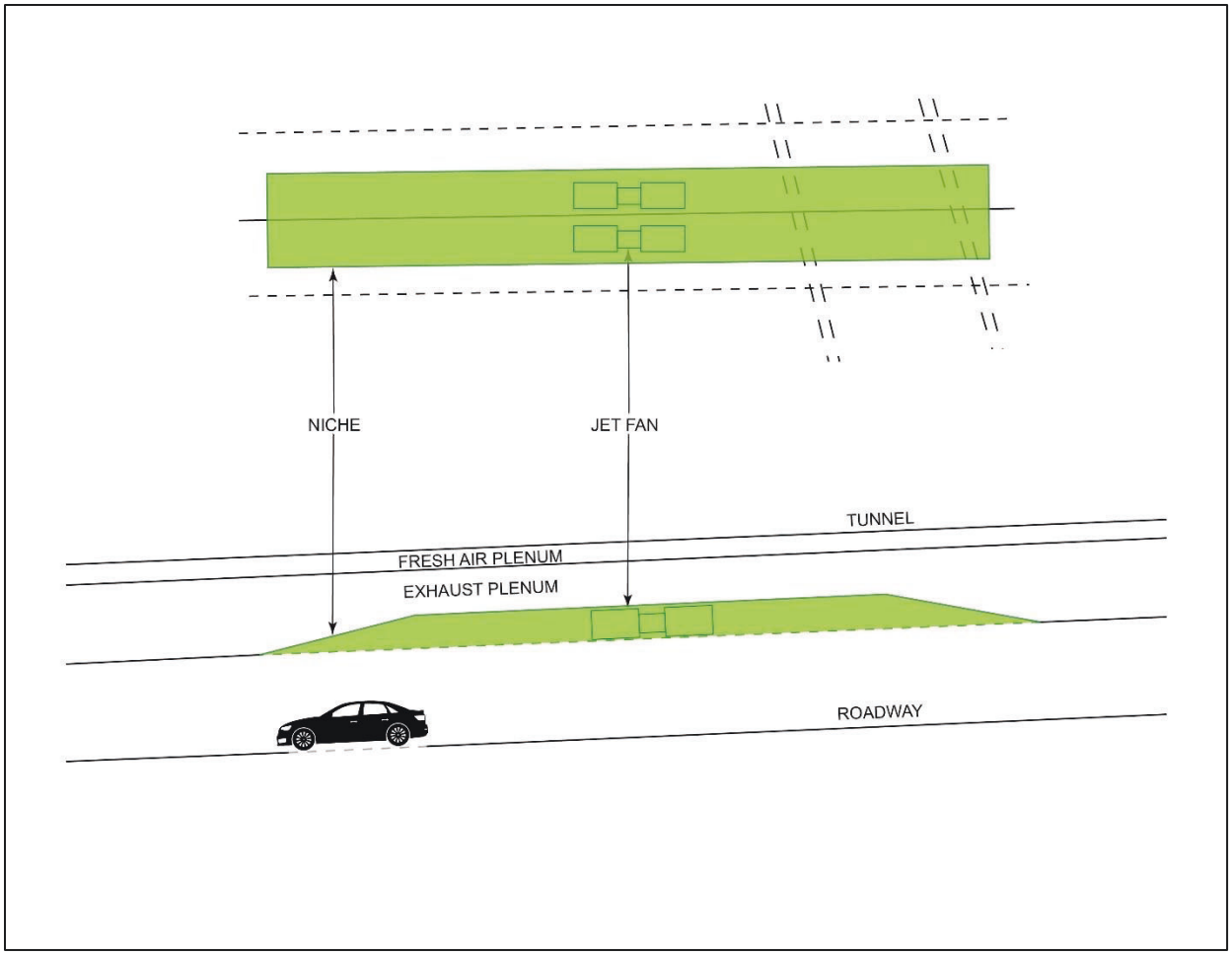


**Figure 11. Plan view (top) and side view (bottom) of Proposed Build Alternative Ventilation Work for Bore 3**

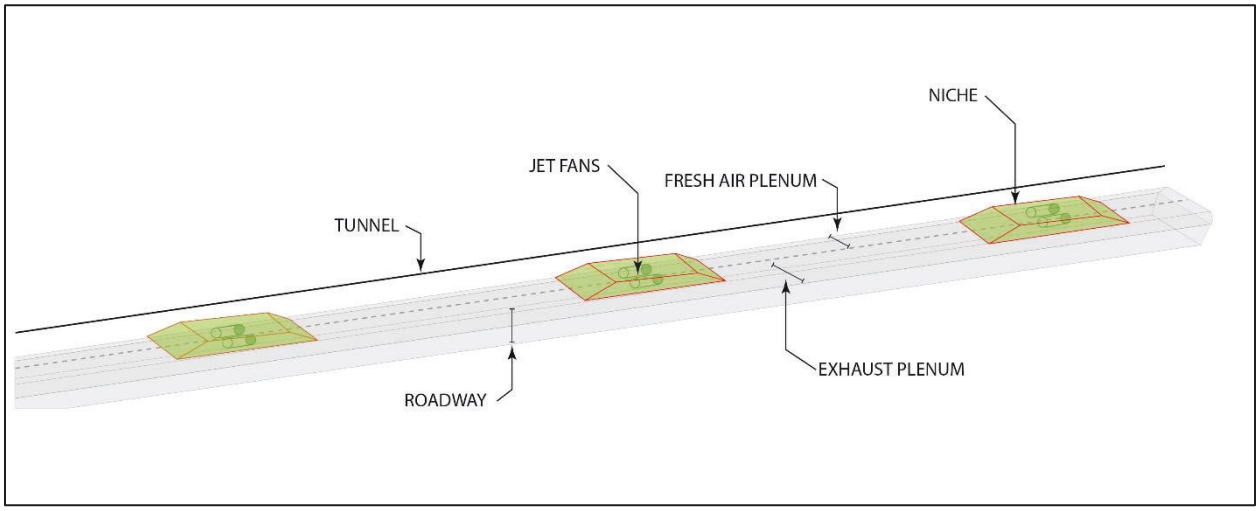


**Figure 12. Oblique view of Proposed Build Alternative Ventilation Work for Bore 3**

## Construction Schedule

Construction of the proposed project is anticipated to begin in November 2026 and would last approximately three years to November 2029, with approximately 664 working days. The estimated number of working days for the Proposed Build Alternative will be refined in the project's next phase, the Design Phase, and could vary depending on contractor resources.

## Right of Way and Staging

The proposed project footprint is entirely within Caltrans right of way and primarily includes the Caldecott Tunnel and 500 feet of adjacent roadway. Additional project work will be conducted around the east and west portals of the tunnel, including at the OMC building, portal buildings, and at the on and off ramps. With the exception of the portal building and OMC building upgrades, the majority of the proposed project work will be conducted within the SR-24 mainline, which is isolated by retaining walls and fences. The existing footprint does not include transit facilities, pedestrian crossings, bicycle crossings, railroads, and waterways. Bicyclists and pedestrians are prohibited from using this freeway facility. Considering the tunnel geometry, it is infeasible to build out complete street features without modifying the tunnel structurally. Furthermore, such tunnel modification is outside of the scope of this project.

Additional right of way use is not anticipated. Railroad involvement is not anticipated. Construction staging will occur on paved areas and at the eastbound SR-24 Fish Ranch Road on and off ramp near the east end of the tunnel.

## Transportation Management Plan (TMP)

Lane closures, changeable message signs (CMS), construction zone enhanced enforcement program (COZEEP), alternative freeway routes, and ramp detours will be part of the TMP. Because SR-24 is a heavily travelled corridor, it is recommended to close one bore at a time during peak hours to ensure safety of both drivers and construction personnel. There are two proposed ramp detour plans for tunnel closures. The first will close the eastbound SR-24 on-ramp from Tunnel Road and redirect traffic along Broadway. The second will close the westbound SR-24 on-ramp from Fish Ranch Road and redirect traffic along Wilder Road. All closure plans will be available to the public prior to construction. Signs specifying closure times of the ramps will be posted at least 72 hours in advance. All closures will be coordinated with the local agencies of jurisdiction. Lane closures will primarily occur between 10 pm and 4 am.

The total timeline of construction of the ventilation and fire life safety systems is estimated to take up to approximately 3 years total. Traffic closures of Bore 1, 2, and 3 will be closed intermittent for multiple months each, all bores will not be continuous closed during the whole three years.

## Utility Relocations

Verification of utilities will be required and the need for potholing will be ascertained following the verification process. Based on the current project scope, potential protections, adjustments, or relocations include PG&E Electrical, AT&T Fiber Optic, and water facilities.

2.3.3 Alternatives Considered but Eliminated

**Rehabilitation and Ventilation Upgrades for Bore 3 Only**

Under this alternative, rehabilitation and ventilation upgrades would be completed only for Bore 3, leaving Bores 1 and 2 in their current condition. Rehabilitation and ventilation measures would include all of the items described in Section 2.2, including the addition of jet fans. This alternative was developed as an avoidance alternative as rehabilitating only Bore 3 would avoid any impacts to Bores 1 and 2. However, this alternative does not meet the purpose and need of this project. The purpose and need of this project state that the project should rehabilitate Caldecott Tunnel Bores 1, 2, and 3 as well as preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. This alternative would only rehabilitate Bore 3 and would not preserve the structural integrity of the remainder of the tunnel, nor improve ventilation performance or fire-fighting operational response or extend the service life of Bores 1 and 2.

**Rehabilitation of Bores 1, 2, and 3, without Ventilation Upgrades**

This alternative would include all of the rehabilitation measures described in Section 2.2 but would not include ventilation upgrades for any of the three bores. This alternative was developed as an avoidance alternative because rehabilitating all three Bores without ventilation upgrades would avoid impacts to Bores 1 and 2. However, this alternative does not meet the purpose and need of this project. The purpose and need of this project state that the project should rehabilitate Caldecott Tunnel Bores 1, 2, and 3 as well as preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. By not including any ventilation upgrades, this alternative would not improve the ventilation performance or fire-fighting operational response for any of the Bores.

3.0 Section 4(f) Properties

*3.1 Historic Property*

*3.1.1 Caldecott Tunnel, Bores 1 and 2*

Caldecott Tunnel consists of four borings built into the Oakland-Berkeley Hills. Constructed in the 1930s utilizing New Deal funding, Caldecott Tunnel Bores 1 and 2 are two lanes each and were originally known as the Broadway Low Level Tunnel. Bore 1 measures 3,615' and Bore 2 measures 3,609'. Both bores are horseshoe shaped arched reinforced concrete tunnels that frame a 22-foot roadway with a 3.5-foot sidewalk. A portal building sits atop each end of Bores 1 and 2 to accommodate ventilation equipment. Bore 3 was constructed in 1965 and is 3,371' long with a portal building on top. The Caldecott Tunnel also includes Bore 4, which opened in 2013. Bores 1 and 2 and appurtenances, including portal buildings and approaches, retain many Art Deco-style features and elements. The portal buildings are nearly identical. They are each two level, four-bay, rectangular reinforced concrete structures with Art Deco façades. The interiors house large exhaust and fresh air fans as well as offices, storage rooms, and electrical equipment. The east portal building sits on the Fish Ranch Road Overpass and the sidewalk associated with that road sits just below the windows. The overpass and approaches feature stylized railings and light fixtures. The tunnel is a significant civil engineering feat as the state's longest highway tunnel and its construction was a major boost to efficiently transport agricultural products by vehicle and a catalyst for development in Contra Costa County. Bores 1 and 2 are eligible for listing in the National Register of Historic Places, while Bores 3 and 4 are not eligible. Bores 1 and 2 are eligible on the state level under Criterion A for Transportation and Criterion C for Engineering as the state's longest highway tunnel and for their role in improving transportation in the area, benefiting the agricultural industry and leading to increased development.

**Figure 13. Caldecott Tunnel West Portal Building**

## 4.0 Use of the Section 4(f) Property

This section discusses the concept of "use." The Federal Highway Administration regulations at 23 CFR 774.17 generally addresses three forms of use:

1. Land is permanently incorporated into a transportation facility;
2. There is a temporary occupancy of land that is adverse in terms of the Section 4(f) statute's preservation purposes; and
3. There is a constructive use of the Section 4(f) property.

Here, the Section 4(f) property is already part of a transportation facility. Thus, the question of use is dependent on whether the Section 4(f) property will be adversely impacted by the undertaking/project. If the Section 4(f) property will be adversely impacted, as determined through compliance with Section 106 of the National Historic Preservation Act, there is use of the Section 4(f) property.

Utilizing the definitions and description of use set forth above, Table 1 below shows which alternative uses the Section 4(f) property.

**Table 11: Use of Section 4(f) Resource by Alternative**

| | No Build | Build Alternative Option 1 | Build Alternative Option 2 | Rehabilitate Bore 3 Only | Rehabilitate Bore 1, 2, 3 without Ventilation Upgrades |
|---|---|---|---|---|---|
| **Caldecott Tunnel** | No Use | Use | Use | No Use | No Use |

The No Build alternative would not take any action and would not constitute use of the Section 4(f) property. The alternatives Rehabilitate and Ventilation Upgrade for Bore 3 Only and Rehabilitate Bore 1, 2, and 3 without Ventilation Upgrades would not adversely impact the Section 4(f) property and would not constitute use of the Section 4(f) property.

The Build Alternative Option 1 would result in a Section 4(f) permanent use of Caldecott Tunnel Bores 1 and 2. In order to install the Saccardo Nozzle Ventilation System, the scope of work would require adding one opening in the ceiling in both Bores 1 and 2 that is 22' long and 7.5' wide to access the fresh air plenum. The Nozzle placement would require placing an approximately 6.5' high by 7' wide duct within the fresh air plenum. This action would result in the removal of 119 square feet of ceiling in each bore. This action would significantly alter the tunnel ceiling, thus, diminishing the historical integrity and character of Bores 1 and 2.

Build Alternative Option 2 would result in a Section 4(f) permanent use of Caldecott Tunnel Bores 1 and 2. In order to install the jet fans, the scope of work would require removing approximately 150' of the existing tunnel ceiling at each of the 4 jet fan row locations and installing a new sloped ceiling. This action would result in the removal of approximately 4,800 square feet of ceiling in each bore. This action would significantly

alter the tunnel ceiling, thus diminishing the historical integrity and character of Bores 1 and 2.

Caltrans undertook Section 106 consultation with SHPO for the Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation project, which included coordination regarding the application of adverse effects criteria to Build Alternatives Option 1 and Option 2. On January 14, 2025, SHPO concurred that Build Alternatives Option 1 and Option 2 would result in adverse effects to the Caldecott Tunnel Bores 1 and 2 pursuant to Section 106. This finding constitutes a use to the Section 4(f) property. The project does not involve any additional National Register-eligible properties.

## 5.0 Avoidance Alternatives Analysis

Section 4(f) requires avoidance of Section 4(f) properties unless there are no prudent and feasible avoidance alternatives. Section 4(f) regulations found under 23 CFR 774.17 define that an alternative is not feasible if it cannot be built as a matter of sound engineering judgment. The prudence evaluation involves applying each of the following six factors to each avoidance alternative. An alternative is not prudent if:

i. It compromises the project to a degree that is unreasonable to proceed with the project in light of its stated purpose and need.
ii. It results in unacceptable safety or operational problems.
iii. After reasonable mitigation, it still causes:
    a. Severe social, economic, or environmental impacts;
    b. Severe disruptions to established communities;
    c. Severe disproportionate impacts to minority or low-income populations; or
    d. Severe impacts to environmental resources protected by other Federal Statutes
iv. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude.
v. It causes other unique problems or unusual factors.
vi. It involves multiple factors listed above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

The following alternatives avoid the use of Section 4(f) properties and are analyzed below based on the standards for prudency and feasibility.

### *5.1 No Build*

The No Build alternative would take no action to address or preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, nor extend the service life of the Caldecott Tunnel. The feasibility factor, therefore, is not relevant to the No Build Alternative.

The paragraphs below discuss the six factors that inform prudency.

i. The No Build alternative would compromise the project to a degree that it is unreasonable to proceed with the project in light of the purpose and need because it would not address the tunnel's structural deficiencies or high-risk rating for fire-life safety. If not addressed, the current structural deficiencies, particularly concrete cracking, delamination, spalling, and efflorescence in the tunnel walls and liners, would trigger more frequent maintenance and lead to more extensive repairs in the future. Tunnel Bores 1, 2, and 3 are also approaching the end of their service life and the No Build option would not address the ability to extend this service life. The current ventilation fans are past their maintenance service life and pose a significant firefighting and life-safety hazard if not replaced.
ii. The No Build alternative would not correct the high-risk rating for fire-life safety of the Caldecott Tunnel, which would result in unacceptable safety and operational problems. The Caldecott Tunnel Bores 1, 2, and 3 have been

identified with high FRS (10.3 and 10.0) for overall fire-life safety relative to a common benchmark tunnel for ventilation capacity to address vehicle fires of current commercial vehicles. This risk analysis concluded that the Caldecott Tunnel Bores 1, 2, and 3 are of the top risk priority for the State because the current ventilation system requires upgrades, including to ventilation fans that are past their maintenance service life. Thus, not addressing these significant firefighting and life-safety hazards is an unacceptable safety and operational problem.

iii. The No Build alternative would not cause severe social, economic, or environmental impacts; severe disruptions to established communities; severe environmental justice impacts; or severe impacts to federally protected resources.

iv. The No Build alternative would not result in additional construction, maintenance, or operational costs of an extraordinary magnitude.

v. It does not cause other unique problems or unusual factors.

vi. The No Build alternative would not cumulatively result in impacts of extraordinary magnitude.

Weighing all of the circumstances, the No Build alternative would not be considered prudent in light of the factors set forth in 23 CFR 774.17 (i) and (ii), as analyzed above.

*5.2 Rehabilitate and Ventilation Upgrade for Bore 3 Only*

The Rehabilitation and Ventilation Upgrade for Bore 3 Only avoidance alternative would address the structural deficiencies and fire-life safety hazards of one bore of the Caldecott Tunnel. This alternative is feasible, as it can be built as a matter of sound engineering judgment. However, this alternative would take no action to address structural deficiencies or fire-life safety hazards of Bores 1 and 2 of the Caldecott Tunnel.

The paragraphs below discuss the six factors that inform prudency.

i. The Rehabilitate and Ventilation Upgrade for Bore 3 Only alternative would compromise the project to a degree that it is unreasonable to proceed with the project in light of the purpose and need because it would not address Bore 1 and 2's structural deficiencies or high FRS rating. If not addressed, the current structural deficiencies, particularly concrete cracking, delamination, spalling, and efflorescence in the tunnel walls and liners, would trigger more frequent maintenance and lead to more extensive repairs in the future. Tunnel Bores 1 and 2 are also approaching the end of their service life and this alternative would not address the ability to extend this service life. In addition, the current ventilation fans are past their maintenance service life and pose a significant firefighting and life-safety hazard if not replaced.

ii. The Rehabilitate and Ventilation Upgrade for Bore 3 Only alternative would not correct the FRS rating for fire-life safety of the entirety of the Caldecott Tunnel, which would result in unacceptable safety and operational problems. The Caldecott Tunnel Bores 1 and 2 have been identified with the second highest FRS (10.0) for overall fire-life safety relative to a common benchmark tunnel for ventilation capacity to address vehicle fires of current commercial vehicles.

This risk analysis concluded that the Caldecott Tunnel Bores 1 and 2 are of the top risk priority for the State because the current ventilation system requires upgrades, including ventilation fans that are past their maintenance service life. Thus, not addressing these significant firefighting and life-safety hazards is an unacceptable safety and operational problem.

iii. The Rehabilitate and Ventilation Upgrade for Bore 3 Only alternative would not cause severe social, economic, or environmental impacts; severe disruptions to established communities; severe environmental justice impacts; or severe impacts to federally protected resources.

iv. The Rehabilitate and Ventilation Upgrade for Bore 3 Only alternative would not result in additional construction, maintenance, or operational costs of an extraordinary magnitude.

v. It does not cause other unique problems or unusual factors.

vi. The Rehabilitate and Ventilation Upgrade for Bore 3 Only alternative would not cumulatively result in impacts of extraordinary magnitude.

Weighing all of the circumstances, the Rehabilitate and Ventilation Upgrade for Bore 3 Only alternative would not be considered prudent in light of the factors in 23 CFR 774.17 (i) and (ii), as analyzed above.

*5.3 Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades*

The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades avoidance alternative would address only the structural deficiencies of the Caldecott Tunnel. This alternative is feasible, as it can be built as a matter of sound engineering judgment. However, this alternative would take no action to address the fire-life safety hazards.

The paragraphs below discuss the six factors that inform prudency.

i. The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternative would compromise the project to a degree that it is unreasonable to proceed with the project in light of the purpose and need because it would not address the tunnel's FSR rating for fire-life safety. The current ventilation systems require updates, and the fans are past their maintenance service life. Not addressing the ventilation upgrades would pose a significant firefighting and life-safety hazard for the continued operation of Bores 1, 2, and 3 and would not meet the purpose and need.

ii. The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternative would not correct the high-risk rating for fire-life safety of the Caldecott Tunnel, which would result in unacceptable safety and operational problems. The Caldecott Tunnel Bores 1, 2, and 3 have been identified with high FRS (10.3 and 10.0) for overall fire-life safety relative to a common benchmark tunnel for ventilation capacity to address vehicle fires of current commercial vehicles. This risk analysis concluded that the Caldecott Tunnel Bores 1, 2, and 3 are of the top risk priority for the State because the current ventilation system requires upgrades, including to ventilation fans that are past their maintenance service life. Thus, not addressing these significant firefighting and life-safety hazards is an unacceptable safety and operational problem.

iii. The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternative would not cause severe social, economic, or environmental impacts; severe disruptions to established communities; severe environmental justice impacts; or severe impacts to federally protected resources.
iv. The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternative would not result in construction, maintenance, or operational costs of extraordinary magnitude.
v. It does not cause other unique problems or unusual factors.
vi. The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternative would not cumulatively result in impacts of extraordinary magnitude.

Weighing all of the circumstances, the Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades avoidance alternative would not be considered prudent in light of the factors in 23 CFR 774.17 (i) and (ii), as analyzed above.

*5.4 Summary of Avoidance Alternatives Analysis*

Section 5 analyzes whether the avoidance alternatives would meet the prudent and feasible standards as defined by 23 CFR 774.17. The No Build alternative, Rehabilitation and Ventilation Upgrade for Bore 3 Only alternative, and Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternatives would not be prudent.

None of these avoidance alternatives would meet the project's purpose and need. The No Build alternative does not take any action and would not rehabilitate Bores 1, 2, or 3 nor address the high FRS for Bores 1, 2, and 3, which does not meet the purpose and need. The Rehabilitation and Ventilation Upgrade for Bore 3 Only alternative would take no action at Bores 1 and 2 and would not address structural deficiencies or the high FRS rating, which does not meet the purpose and need. The Rehabilitate Bores 1, 2, and 3 without Ventilation Upgrades alternative would take no action to address the high FRS rating in Bores 1, 2, and 3 and therefore does not meet the purpose and need.

All three alternatives would result in unacceptable safety and operational problems. None of the avoidance alternatives would address the high FRS rating for Bores 1 and 2 and would thus leave an unacceptable safety and operational problem in place.

Therefore, none of the avoidance alternatives for this project meets the prudent standard as defined by 23 CRF 774.17.

*6.0 Measures to Minimize Harm*

Where there are no feasible and prudent alternatives that avoid the use of the Section 4(f) property, the project approval process requires that the action include all possible planning to minimize harm to the Section 4(f) property. All possible planning means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project. Here, minimization and mitigation measures have been determined through consultation with the official with jurisdiction, the SHPO.

Caltrans seeks to minimize harm to Caldecott Tunnel through the use of in-kind replacement materials for all repair scopes of work, including concrete repair, upper and lower plenum slab, tunnel slab, tunnel pavement, and roof replacement for Portal buildings. These actions avoid the introduction of new materials and minimizes project impacts to the Section 4(f) property.

In order to mitigate the permanent use of the Section 4(f) property, Caltrans has developed a series of robust mitigation measures that have been agreed to in a Memorandum of Agreement (MOA) with SHPO. These measures include the following stipulations:

a) Use of Built Environment Treatment Plan to guide the undertaking's activities in Caldecott Tunnel Bores 1 and 2 along with design review to minimize harm.
b) Complete a Historic American Engineering Record (HAER) for Caldecott Tunnel Bores 1 and 2.
c) Evaluate and nominate Caldecott Tunnel Bores 1 and 2 to the National Register of Historic Places, if the resource retains historic integrity following construction.
d) Install up to 2 interpretive panels in Caltrans right-of-way documenting the history of the area and Caldecott Tunnel Bores 1 and 2.
e) Publicly available virtual tour and presentation about Caldecott Tunnel Bores 1 and 2.
f) Public tours of Caldecott Tunnel West Portal buildings.

*7.0 Least Overall Harm Analysis*

Least harm alternative analysis is required when there is no feasible and prudent avoidance alternative. For the proposed project, both Build Alternative Option 1 and Build Alternative Option 2 would result in the use of Caldecott Tunnel Bores 1 and 2; therefore, the alternative that causes the least overall harm must be analyzed.

Section 4(f) regulation 23 CFR 774.3(c)(1) requires the evaluation and balancing of seven factors to determine the alternative that causes the least overall harm. These factors are:

i. The ability to mitigate adverse effects to each Section 4(f) property (including any measures that result in benefits to the property).
ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection.
iii. The relative significance of each Section 4(f) property.
iv. The views of the official with jurisdiction over each Section 4(f) property.
v. The degree to which each alternative meets the purpose and need for the project.
vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f).
vii. Substantial differences in costs among the alternatives.

The first four factors relate to the net harm that each alternative would cause to Section 4(f) property. The last three factors allow taking into account any substantial problem with any alternative on issues beyond Section 4(f).

An analysis of each factor related to Option 1 and Option 2 are described below.

i. The ability to mitigate adverse effects to Caldecott Tunnel Bores 1 and 2 would be similar for both Option 1 and Option 2. The proposed action for Option 1 and Option 2 requires altering the ceilings of Bores 1 and 2 and therefore mitigation measures would be similar and would include documentation of the existing conditions.
ii. The relative severity of remaining harm, after mitigation, to the protected activities attributes, or features that qualify Caldecott Tunnel Bores 1 and 2 would affect the tunnel ceilings and original ventilation system. For Option 1 the installation of the Saccardo Nozzle System would require the removal of 119 square feet of ceiling in each bore to create a niche for the system's installation and use. Option 2 would remove approximately 4,800 square feet of ceiling in each bore to create a niche in which the jet fans would be installed. Option 1 and Option 2 would adversely impact the design of Caldecott Tunnel Bores 1 and 2 ventilation systems, including the plenums and equipment space. Option 2 would also install four sets of jet fans in each bore, which would adversely impact the resource because the jet fans would be a visually conspicuous modern element. The Saccardo Nozzle System would be less intrusive as the niche requires less square footage to install in the ceiling and the system is installed within the plenum. Under both Option 1 and Option 2 Caltrans would alter the original ventilation systems in Bores 1 and 2 with Option 2 requiring more square footage to accommodate the niches for the jet fans, which would introduce a visually conspicuous modern element to the resource.

iii. Option 1 and Option 2 impact the same Section 4(f) resource, Caldecott Tunnel Bores 1 and 2; therefore, this factor is not relevant because Bore 1 and Bore 2 are both eligible for listing in the National Register and both have the same relative significance as historic resources. In addition, there are no other properties protected under Section 4(f) to compare the relative significance of each Section 4(f) property.

iv. Option 1 and Option 2 have the same official with jurisdiction over the Caldecott Tunnel Bores 1 and 2, which is the SHPO. The SHPO concurred with the Section 106 Finding of Adverse Effect on January 14, 2025.

v. Option 2 meets the purpose and need, while Option 1 does not meet the purpose and need to the same degree. The project seeks to address the high FRS rating for Bores 1 and 2. Option 2 would utilize four rows of jet fans that can provide reversible directional ventilation that would aid in fire-fighting efforts throughout the length of the tunnel and meets NFPA 502 Standard for Road Tunnels, Bridges, and Other Limited Access Highways during a major fire (60MW) caused by commercial vehicles inside the tunnel. Option 2 meets the project purpose and need to improve ventilation performance, life-fire safety rating, and fire-fighting operations to Caldecott Tunnel Bores 1 and 2. Option 1 would install the Saccardo Nozzle Ventilation System that provides single directional ventilation, which would not be effective if a fire is located behind the system in the tunnel bores. The Saccardo Nozzle Ventilation System option does not meet the life-fire safety design requirement in NFPA 502 Standard for Road Tunnels, Bridges, and Other Limited Access Highways during a major fire (60MW) caused by commercial vehicles inside the tunnel. The option also failed the fire emergency analysis on one of the most critical fire scenarios near the exit portal. Option 1 does not fully improve the ventilation performance, life-fire safety, and fire-fighting operations response to Caldecott Tunnel Bores 1 and 2 and does not meet the purpose and need for those considerations. Therefore, when comparing the two design options, Option 2 meets to a higher degree the project purpose and need.

vi. Option 1 and Option 2 would result in similar impacts to resources not protected by Section 4(f), after reasonable mitigation. Excluding the installation of the Saccardo Nozzle Ventilation System or jet fans (which impact Section 4(f) resources), the proposed rehabilitation scope of work for Option 1 and Option 2 is the same. In addition, the number of working days would be similar for both Option 1 and Option 2, which would result in the use of the same Traffic Mitigation Plan. Therefore, there is no differentiation between Option 1 and Option 2 related to impacts to non-Section 4(f) resources.

vii. Cost estimates for Option 1 and Option 2 are estimated to be approximately $75,496,000 for each option; therefore, this factor is not relevant because the cost estimate is the same.

Least overall harm analysis requires balancing the net harm between the seven factors discussed above and each remaining alternative.

Factors (i), (iii), (iv), (vi), and (vii) do not have outcomes that distinguish harm between Option 1 and Option 2.

Factor (ii) analysis states that Option 1 causes less harm after mitigation to the protected attributes or features (tunnel ceilings and original ventilation system design) that qualify Bores 1 and 2 as a Section 4(f) property. Option 2 would alter 4,681 square feet more of each tunnel ceiling to install niches for the more visually conspicuous jet fans than Option 1 to install niches for the Saccardo Nozzle Ventilation System.

Factor (v) analysis states that Option 2 causes less harm because it meets the purpose and need, and Option 1 does not meet the purpose and need to the same degree as Option 2. In fact, Option 1 fails to meet the purpose and need for the critical improvements to Tunnel Bores 1 and 2 for ventilation, life-safety, and fire-fighting operations. These improvements are necessary because Tunnel Bores 1 and 2 are a top risk priority for the State to reduce the current high FRS and address smoke from vehicle fires of current commercial vehicles. Option 1 does not meet this part of the purpose and need because it fails to meet the NFPA 502 Standard for Road Tunnels, Bridges, and Other Limited Access Highways during a major fire (60MW) caused by commercial vehicles inside the tunnel. Therefore, Option 1 does not meet the purpose and need for critical improvements related to ventilation, life-fire safety, and fire-fighting operations.

Therefore, Option 2 results in the least overall harm because it fully meets the project purpose and need for the critical improvements to ventilation, life-fire safety, and fire-fighting operations that are necessary for the continued operation of Caldecott Tunnel Bores 1 and 2. Option 1 would not satisfy the purpose and need to the same degree as Option 2 because it fails to improve ventilation, life-fire safety, and fire-fighting operations to the NFPA 502 Standard. While Option 1 would cause less harm in terms of alterations to the tunnel ceilings and visual elements in Bores 1 and 2, Option 1 would cause more overall harm because it does not meet the purpose and need for vital ventilation, life-fire safety, and fire-fighting operations to the same degree as Option 2. For these reasons, Option 1 has been dismissed from further consideration.

Based on the above considerations, there is no feasible and prudent alternative to the use of Caldecott Tunnel Bores 1 and 2. Build Option 2 includes all possible planning to minimize harm to Caldecott Tunnel Bores 1 and 2 resulting from such use and causes the least overall harm in light of the statute’s preservation purpose.

8.0 Consultation and Coordination

Caldecott Tunnel Bores 1 and 2 are eligible for listing in the National Register of Historic Places, and SHPO is the official with jurisdiction over the two bores. As part of the Section 106 process, public participation efforts and outreach were conducted with local historical societies and Native American tribes.

Caltrans contacted the Native American Heritage Commission (NAHC) on January 19, 2024, requesting a search of their Sacred Lands File (SLF) to determine if there are historically significant or sacred sites within or near the Project area. The NAHC responded that the project area was negative for cultural sites and provided a list of individuals from eleven indigenous groups for additional consultation. Letters initiating Section 106 of the National Historic Preservation Act, and AB 52 were sent to each of the contacts on July 11, 2024. The Tribes contacted included: Amah Mutsun Tribal Band of Mission San Juan Bautista, Amah Mutsun Tribal Band, Confederated Villages of Lisjan Nation, Costanoan Rumsen Carmel Tribe, Guidiville Rancheria of California, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, North Valley Yokuts Tribe, The Ohlone Indian Tribe, Wilton Rancheria, and the Wuksachi Indian Tribe / Eshom Valley Band.

The Muwekma Ohlone Indian Tribe of the San Francisco Bay Area responded on July 15, 2024, with information about the tribe and the area. They concluded that formal tribal consultation is not necessary relative to this specific project and requested to be notified in the future should any ancestral remains or signification subsurface features be uncovered. Caltrans will notify the Tribe of any changes or finds. Confederated Villages of Lisjan Nation responded on July 15, 2024, and would like to be notified of any changes to the project. Caltrans will notify the Tribe of any changes or finds. The Costanoan Rumsen Carmel Tribe responded on July 15 and requested consultation. A field meeting with The Costanoan Rumsen Carmel Tribe was held on September 18, 2024. The Tribe has requested to be involved until the conclusion of the project.

On February 1, 2024, Caltrans Office of Cultural Resource Studies sent Section 106 consultation letters via email to Section 106 stakeholders with an invitation to attend a Section 106 stakeholder meeting scheduled for February 27, 2024.

Caltrans contacted Oakland Heritage Alliance (OHA), County of Alameda Parks, Recreation and Historical Commission, City of Oakland Landmarks Preservation Advisory Board, Contra Costa County Historical Landmarks Advisory Committee, City of Orinda Historic Landmarks Committee, Alameda County Historical Society, California Preservation Foundation (CPF), Contra Costa County Historical Society, Orinda Historical Society, and Lafayette Historical Society. On February 12, 2024, Caltrans contacted Oakland Cultural Heritage Survey. Follow-up emails and phone calls were made on February 14 and February 15 to organizations that had not replied.

A representative from the County of Alameda Parks, Recreation and Historical Commission replied on February 14 stating that the county reviewed the information Caltrans provided, and had no comments regarding the projects. A representative from

the Oakland Cultural Heritage Survey replied on February 12 on behalf of the Advisory Board stating she did not expect to attend the meeting; a representative of CPF stated on February 15 that CPF might take part in the stakeholder meeting online, but ultimately did not attend; the Contra Costa County Historical Society Executive Director expressed interest in the project but did not attend; a representative from the Orinda Historical Society stated on February 15 that the board did not have any concerns about the project; The Lafayette Historical Society President replied on February 14 and said that she appreciated being invited to the meeting but did not feel the need to attend.

No replies were received from the Contra Costa County Historical Landmarks Advisory Committee or the Alameda County Historical Society.

The stakeholder meeting took place on February 27, 2024, and was attended by OHA President and a board member, and a representative from the City of Orinda, as well as Caltrans representatives from OCRS. The meeting included discussion of two Caltrans Tunnels and Tubes projects, EA 0J540 (Caldecott Bores 1, 2 and 3) and EA 2Y780 (Posey Tube and Webster Tube Ventilation Upgrade Project) because of the similarity of the projects. The OHA's primary concern was maintaining the integrity of the portal buildings. They had no concerns regarding the ventilation upgrades. The City of Orinda's primary interest was traffic and road closures associated with construction. Both organizations requested updates as the project progresses.

The project Draft Environmental Document with the Draft Individual Section 4(f) were circulated for public comment from January 6, 2025, through February 6, 2025. A project public meeting was held on January 22, 2025. The meeting was held in-person and virtually. Public comments were considered as Caltrans moved forward with alternatives analysis. The President of OHA provided requested information during the public meeting, and on February 6, 2025 sent an additional comment letter on behalf of OHA via email. The letter suggested ideas for mitigation measures to be incorporated in the MOA. Many of these were incorporated in the MOA measures listed above in Section 6.0, Measures to Minimize Harm, including: evaluate and potentially nominate Caldecott Tunnel Bores 1 and 2 to the National Register of Historic Places; install up to 2 interpretive panels in Caltrans right-of-way documenting the history of the area and Caldecott Tunnel Bores 1 and 2; conduct a publicly available virtual tour and presentation about Caldecott Tunnel Bores 1 and 2; and conduct public tours of Caldecott Tunnel West Portal building with Oakland Heritage Alliance.

On November 11, 2024, Caltrans notified the consulting parties that a finding of adverse effect (FAE) was appropriate for the project and provided the draft FAE Report. No comments on the report were received. In December 2024 Caltrans provided SHPO with the Finding of Adverse Effect for this project. On January 14, 2025, the SHPO concurred in writing that they have no objection to Caltrans' determination of an adverse effect to the Caldecott Tunnel Bores 1 and 2.

Caltrans prepared the MOA as part of Section 106 consultation with SHPO to resolve the adverse effects to the historic resource for the Build Alternative Option 2 (selected built

alternative). The MOA serves the purpose of outlining the stipulations Caltrans is responsible for carrying out as mitigation measures to offset the adverse effects caused by the project.

In February and March 2025, Caltrans provided stakeholders (the OHA, CPF, and Costanoan Rumsen Carmel Tribe) with an opportunity to comment on the proposed project MOA and proposed Built Environment Treatment Plan to mitigate adverse effects to the Caldecott Tunnel as part of this project. The OHA replied with comments that were included, where possible, into the MOA that was submitted to SHPO. As part of the continued coordination efforts, the MOA was submitted to SHPO on April 1, 2025. The MOA was signed and effective on May 12, 2025.

In accordance with 23 CFR 774.5(a) coordination efforts were conducted for a 60-day period with the Department of Interior (DOI), Office of Environmental Policy and Compliance in Washington DC. On January 6, 2025, Caltrans electronically sent the DOI attachments that included a transmittal cover letter, copy of the NEPA Environmental Assessment and Draft Section 4(f) Evaluation. The DOI in Washington DC outreached to their regional office in Oakland, which is the closest DOI regional office to the project location. On February 11, 2025, Viktoriya Sirova, DOI Regional Environmental Officer in Oakland sent a response letter to Caltrans to acknowledge receipt and review of the Draft Individual Section 4(f) Evaluation. The DOI stated that the National Register-eligible historic resource lies outside of National Park Service lands or areas of interest. The letter also stated that the DOI concurs that there is no feasible and prudent alternative to avoid use of Bores 1 and 2 and that Caltrans has included all possible planning to minimize harm to the Section 4(f) property. A copy of the DOI letter is included in Appendix K of the final environmental document.

## 9.0 References

California Department of Parks and Recreation, Caldecott Tunnel Bore 3 Primary Record, P-01-010128. Caltrans, November 2014.

Caltrans, Caldecott Tunnel Historic Resource Evaluation Report, October 1995. Caltrans District 4, Oakland, California.

Caltrans, Caldecott Tunnel Inspection Report, Division of Maintenance, Structure Maintenance and Investigations, May 2020.

Caltrans, Finding of Adverse Effect for the Caldecott Tunnel Bores I, 2, and 3 Rehabilitation Project. Caltrans Office of Cultural Resources Studies, Division of Environmental Planning and Engineering, December 2024.

Palmer, Charles, Office of Cultural Resources Studies, Caltrans District 4, Section 106 Summary, 04-0J540 Memorandum, to Wahida Rashid, Office of Environmental Analysis, Caltrans, District 4.

Polanco, Julianne, State Historic Preservation Officer, California Department of Parks and Recreation, Finding of Adverse Effect for the Proposed Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation Project Letter, to Julia Prince-Buitenhuys, Caltrans, Cultural Studies Office, Division of Environmental Analysis, January 14, 2025.

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Sirova, Viktoriya, US Department of the Interior, US Department of the Interior Comments – DRAFT Individual Section 4(f) Evaluation for Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project Letter, to Brycelyn Hendrix, Caltrans, Division 4, Office of Environmental Analysis.

Water Quality Assessment Report, O4-0J540, April 2024. Caltrans District 4, Oakland, California.

Wilson, Chris R., 0J540 RFS Hazardous Waste, email communication to C. Yancey, December 7, 2024.

# Appendix B Project Features

| Resource Area | Project Feature Number | Description |
|---|---|---|
| **Aesthetics and Visual Resources** | PF-AES-1 | **Vegetation Preservation**: Project construction activities should avoid and protect existing vegetation where feasible outside the bores from the contractor's operations, equipment, and materials storage. High visibility temporary fencing (THVF) will be placed around vegetation to be protected before roadway work begins. Truck watering for vegetation should be provided when automated irrigation is interrupted by construction. |
| **Aesthetics and Visual Resources** | PF-AES-2 | **Construction Staging**: Construction staging areas should be located in paved areas if possible. |
| **Aesthetics and Visual Resources** | PF-AES-3 | **Erosion Control**: After construction, all areas cleared within the Project limits for uses such as contractor access, staging, and trenching operations would be treated with appropriate erosion control measures (such as mulch, hydroseed, and fiber rolls) where required. |
| **Aesthetics and Visual Resources** | PF-AES-4 | **Construction Lighting**: Construction lighting would be limited to within the area of work and avoid light trespass through the use of directional lighting and shielding as needed. |
| **Aesthetics and Visual Resources** | PF-AES-5 | **Construction Waste**: Unsightly materials, equipment storage and staging should be placed 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 sensitive receptors outside the project area. |
| **Cultural Resources** | PF-CUL-1 | **Discovery of Human Remains**: If remains are discovered during excavation, all work within 60 feet of the discovery would halt and Caltrans' Cultural Resource Studies office would be called. Caltrans' Cultural Resources Studies Office Staff would assess the remains and, if determined human, would 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 would contact the Native American Heritage Commission who would then assign and notify a Most Likely Descendant. Caltrans would consult with the Most Likely Descendant on respectful treatment and reburial of the remains. Further provisions of PRC 5097.98 are to be followed as applicable. |
| **Cultural Resources** | PF-CUL-2 | **Discovery of Cultural Materials:** If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area will be diverted until a Caltrans qualified archaeologist is contacted to assess the nature and significant of the find. |

| Resource Area | Project Feature Number | Description |
|---|---|---|
| **Greenhouse Gas Emissions (GHG)** | PF-GHG-1 | **Emissions Reductions for CEQA:** Implementation of Caltrans Standard Specifications, such as complying with air-pollution-control rules, regulations, ordinances, and statutes that apply to work performed under the Contract and the use of construction best management practices, would result in reducing GHG emissions for CEQA from construction activities, including but not limited to:<br>1. Regular vehicle and equipment maintenance.<br>2. Limit idling of vehicles and equipment onsite.<br>3. If practicable, recycle nonhazardous waste and excess material. If recycling is not practicable, dispose of material.<br>4. Use solar-powered signal boards, if feasible. |
| **Paleontology** | PF-PAL-1 | **Discovery of Paleontological Resources:** If unanticipated paleontological resources are discovered at the job site, do not disturb the resources and immediately: 1) stop all work within a 60-foot radius of the discovery, 2) secure the area, and 3) notify the engineer. Caltrans investigates the discovery and modifies the dimensions of the secured area if needed. Do not move paleontological resources or take them from the job site. Do not resume work within the radius of discovery until authorized. |
| **Tribal Cultural Resources** | PF-TCR-1 | **Tribal Cultural Resources:** In the event that archaeological resources (sites, features, or artifacts) or Tribal Cultural Resources (as defined by local consulting Tribes and CEQA) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find, in consultation with local Tribes to determine whether or not additional study is warranted. |
| **Transportation and Traffic** | PF-TRA-1 | **Traffic Management Plan:** A Final Traffic Management Plan (TMP) shall be developed by Caltrans during the Design Phase. The TMP shall include elements such as on- and off-ramp detours, suggested alternative routes, expected lane closures, haul routes, one-way traffic controls to minimize speeds and congestion, flag workers, and phasing to reduce delays and other impacts to local residents as feasible and maintain access for police, fire, and medical services in the area.<br>Prior to construction, Caltrans shall notify adjacent property owners, businesses, and agencies regarding construction activities, access changes, and lane closures and detours. In addition, Caltrans will coordinate with the local Fire Department and emergency response services prior to construction to minimize potential disruption to emergency services. |
| **Utilities and Service Systems** | PR-UTIL-1 | **Trash Management:** All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed at least once daily from the project limits. |

| Resource Area | Project Feature Number | Description |
|---|---|---|
| **Utilities and Service Systems** | PF-UTIL-2 | **Notify Utility Owners of Construction Schedule to Protect Utilities:** Caltrans would notify all affected utility companies, such as PG&E, of construction schedules for project work so that they can relocate the gas, telephone, cable, or overhead distribution lines prior to construction and minimize disruption of any utility service. As plans are further developed during the Design Phase, should any utility impacts be identified, additional Avoidance and Minimization measures may be applied. |
| **Water Quality** | PF-WQ-1 | **Water Quality Best Management Practices:** The calculated disturbed soil area (DSA) is more than one acre, thus preparation of a stormwater pollution prevention plan (SWPPP) is required that includes Best Management Practices (BMPs) to reduce the pollutants in stormwater discharges during construction and permanently to the Maximum Extent Practicable (MEP). The construction activities need to comply with the construction general permit (CGP), Caltrans standard specification and stormwater pollution prevention plan(SWPPP) during construction. BMPs recommended for this project are as follows:<br>• If significant amount of water intrusion is encountered, non-storm water treatment system may be required, pending on the contamination of the water.<br>• The project will involve movement of dirt, demolished materials by construction equipment, adjacent to public roadways. Street sweeping should be utilized to remove tracked sediment.<br>• Sediment control/perimeter control measures such as temporary fiber rolls should be utilized where necessary as a sediment control measure to intercept sheet and concentrated flow runoff.<br>• Temporary drainage inlet protection should be utilized to prevent sediment from entering the current or proposed storm drains.<br>• Concrete wastes shall be managed using concrete washout facilities.<br>• Various waste management, materials handling, and other housekeeping items shall be used throughout the duration of the project. If stockpiles of various kinds are anticipated, it shall be maintained with the appropriate BMPs.<br>• The materials generated may require standard provisions for handling and testing to verify appropriate reuse or disposal options. |

# Appendix C Avoidance, Minimization and/or Mitigation Summary

| Resource Area | Project Feature Number | Description |
|---|---|---|
| **Aesthetics and Visual Resources** | **AMM-AES-1** | **Tunnel Design:** The design, color and aesthetic treatment for the new rehab interior tunnel walls shall be similar in design to the existing adjacent Bore 4 inside tunnels and visually compatible and consistent with the existing structures along the corridor. |
| **Aesthetics and Visual Resources** | **AMM-AES-2** | **Replacement Planting:** Replacement highway planting should be installed where feasible in areas where existing trees and shrubs are impacted and if any are removed to maintain Classified Landscaped Freeways and Designated State Scenic Highway with three years Plant Establishment Period (PEP), to ensure a successful planting to support the aesthetics of the corridor. |
| **Biological Resources** | **AMM-BIO-1** | **Preconstruction Wildlife Surveys**: In areas adjacent to oak woodland and immediately prior to any initial or ongoing ground disturbance, including staging of equipment or materials, preconstruction surveys would be conducted by a qualified biologist. These surveys would consist of walking surveys of the accessible portions of the BSA and PCA to determine presence of wildlife species, nesting birds and any special-status species. In the highly unlikely event that a special-status species is observed within the PCA, all construction activities within the appropriate buffer would cease and the agencies would be notified. Construction activities would not resume without approval from a qualified biologist. Under no circumstances would the capture, handling or relocation of special-status species occur unless expressly authorized by the agencies. |
| **Biological Resources** | **AMM-BIO-2** | **Preconstruction Surveys for Nesting Birds:** Clearing and grubbing of vegetation should occur outside of the nesting bird season (February 1 to September 30), to the degree possible. If tree and vegetation removal or clearing and grubbing must occur prior to or during nesting bird season, preconstruction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction. |
| **Biological Resources** | **AMM-BIO-3** | **Non-Disturbance Buffer:** If work is to occur near active raptor nests or active passerine nests, an appropriately determined non-disturbance buffer would be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. Buffer size would be determined in cooperation with a qualified biologist. Non-disturbance buffers may also need to be established for other special-status species and would be determined in cooperation with a qualified biologist. |
| **Biological Resources** | **AMM-BIO-4** | **Covering of Trenches and Excavated Holes:** To prevent inadvertent entrapment of wildlife during construction excavated holes or electrical trenches more than one-foot-deep with walls steeper than 30 degrees would be covered by plywood or similar materials at the close of each working day. Alternatively, |

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| | | an additional four-foot-high vertical barrier, independent of exclusionary fences, would be used to further prevent the inadvertent entrapment of wildlife. If it is not feasible to cover an excavation or provide an additional four-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals. If at any time a trapped special-status species is discovered, the department biologist would immediately place escape ramps or other appropriate structures to allow the animal to escape or the agencies would be contacted by telephone for guidance |
| **Biological Resources** | **AMM-BIO-5** | **Work on Previously Disturbed Areas and Vehicle Use:** To the extent practicable, work will remain on paved surfaces or on previously disturbed areas. Project employees would be required to comply with guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards. Vehicles would remain on paved roads to the maximum extent practicable, and speeds would be limited to 10 miles per hour when off the pavement. |
| **Biological Resources** | **AMM-BIO-6** | **Preconstruction Surveys for Bats:** Prior to construction at work sites where structures would be removed or otherwise disturbed prior to the initiation of construction, preconstruction surveys for bats will be conducted by a qualified biologist no more than 72 hours prior to the start of construction. If bats or suitable bat roosting habitat is detected, CDFW shall be notified immediately for consultation and possible on-site monitoring if bats are day roosting in trees or buildings within the BSA, construction activity cannot begin until 30 minutes after sunset as established by U.S. Naval Observatory Astronomical Applications Department. |
| **Biological Resources** | **AMM-BIO-7** | **Protected Species in Work Zone:** The resident engineer would immediately contact the qualified Department-approved biologist(s) in the event that a special-status species gains access to the PCA. If a special-status species is discovered within the work area, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the species or nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. The resident engineer would suspend construction activities within the non-disturbance buffer of the animal that could reasonably result in a take of the special-status species until the animal leaves the site voluntarily. |
| **Biological Resources** | **AMM-BIO-8** | **Trash:** All food-related trash items such as wrappers, cans, bottles, and food scraps would be disposed of in closed containers and removed weekly from the work area. |
| **Biological Resources** | **AMM-BIO-9** | **Firearms:** No firearms would be allowed in the BSA except for those carried by authorized security personnel, or local, state, or federal law enforcement officials. |
| **Biological Resources** | **AMM-BIO-10** | **Pets:** To prevent harassment, injury, or mortality of sensitive species, no pets would be permitted in the BSA. |
| **Biological Resources** | **AMM-BIO-11** | **Caltrans Standard Best Management Practices (BMPs):** The potential for adverse effects to water quality will be avoided by implementing temporary and permanent BMPs outlined in Section 7-1.01G of the Caltrans Standard Specifications. |

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| | | Caltrans erosion control BMPs will be used to minimize any wind or water-related erosion. The State Water Resources Control Board has issued a National Pollution Discharge Elimination System Statewide Storm Water Permit to Caltrans to regulate storm water and non-storm water discharges from Caltrans facilities. A Storm Water Pollution Prevention Program (SWPPP) or Water Pollution Control Program (WPCP) will be developed for the Project, as required. The SWPPP or WPCP complies with the Caltrans Storm Water Management Plan (SWMP). The SWMP includes guidance for Project design staff to include provisions in construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges.<br>The SWPPP or WPCP will reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found at the following website:<br>http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm<br>Protective measures will be included in the contract, including, at a minimum:<br>• No discharge of pollutants from vehicle and equipment cleaning are allowed into storm drains or water courses.<br>• Vehicle and equipment fueling and maintenance operations must be at least 50 feet away from water courses.<br>• Concrete wastes are collected in washouts and water from curing operations is collected and disposed of and not allowed into water courses.<br>• Dust control would be implemented, including use of water trucks and tackifiers to control dust in excavation and fill areas, rocking temporary access road entrances and exits, and covering temporary stockpiles when weather conditions require.<br>• Coir rolls would be installed along or at the base of slopes during construction to capture sediment and temporary organic hydro-mulching would be applied to all unfinished disturbed and graded areas.<br>• Work areas where temporary disturbance has removed the pre-existing vegetation would be restored and re-seeded with a native seed mix.<br>• Graded areas would be protected from erosion using a combination of silt fences, fiber rolls along toe of slopes or along edges of designated staging areas, and erosion-control netting (such as jute or coir) as appropriate.<br>A Revegetation Plan would be prepared for restoration of temporary staging areas. |
| **Biological Resources** | **AMM-BIO-12** | **Monofilament Netting:** To prevent wildlife from being entangled, trapped or injured, erosion control materials with plastic mono-filament netting would not be used within the BSA. |

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| **Biological Resources** | **AMM-BIO-13** | **Asphalt Waste:** All grindings and asphaltic-concrete waste would be stored within previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature. |
| **Biological Resources** | **AMM-BIO-14** | **Replanting with Native Species:** All staging areas that are temporarily affected during construction would be revegetated with native plant species appropriate to the habitat that was disturbed in order to restore habitat values. Invasive, exotic plants would be controlled within the PCA to the maximum extent practicable, pursuant to Executive Order 13112 (Invasive Species). |
| **Noise** | **AMM-NOI-1** | **Daytime Construction:** Any operation exceeding 86 dBA shall not be allowed at nighttime from 9:00 p.m. to 6:00 a.m. |
| **Noise** | **AMM-NOI-2** | **Public Outreach:** Public outreach shall be required throughout the project duration of construction to update nearby residents, businesses, and other project stakeholders on upcoming construction activities and any changes to the project construction timeline. |
| **Noise** | **AMM-NOI-3** | **Scheduling:** Schedule noisy operations within the same time frame. The total noise level will not be significantly greater than the level produced if operations are performed separately. |
| **Noise** | **AMM-NOI-4** | **Prevent Idling:** Prevent idling of equipment within 100 feet of sensitive receptors. |
| **Noise** | **AMM-NOI-5** | **Staging and Storage Areas:** Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area. |
| **Noise** | **AMM-NOI-6** | **Alternative Methods or Equipment:** Use quieter alternative methods or equipment, if feasible. (e.g. “quiet” air compressors and other “quiet” equipment where such technology exists). Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment. |
| **Noise** | **AMM-NOI-7** | **Equipment Delivery:** No construction equipment will be delivered and dropped off before 6:00 a.m. |
| **Noise** | **AMM-NOI-8** | **Internal Combustion Engine Maintenance:** Maintain all internal combustion engine properly to minimize noise generation. |
| **Tribal Cultural Resources** | **AMM-TCR-1** | **Tribal Cultural Resources:** Prior to the initiation of construction for the project, the Project contractor, staff, and construction crews shall be made aware of the potential to encounter cultural resources and Tribal Cultural Resources (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants) through a presentation provided by an archaeologist and a representative from local consulting Tribes. |
| **Tribal Cultural Resources** | **AMM-TCR-2** | Tribal Cultural Resources: Native American monitoring will occur during construction, as determined through consultation among Caltrans and interested Native American Tribes. |
| **Cultural Resources** | **MM-CUL-1** | **Historic Resource Preservation:** Prior to construction, Caltrans will prepare a Built Environment Treatment Plan, and HAER (Historic American Engineering Record) documentation. In consultation with Section 106 stakeholders and the State Historic Preservation Officer (SHPO), Caltrans will develop a |

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| | | webinar and virtual tour and conduct a limited number of in-person tours of Bores 1 and 2. After construction, Caltrans and Section 106 stakeholders will develop and install interpretive panels explaining the history of the tunnels. These strategies are captured in a Memorandum of Agreement (MOA) negotiated between Caltrans as the CEQA and NEPA lead agency, the stakeholders, and the SHPO. |

# Appendix D List of Acronyms and Abbreviations

This list contains the most common acronyms and abbreviations found on the SER and may also be adapted for use in environmental documents.

## A

**AB:** Assembly Bill

**ABAG:** Association of Bay Area Governments

**ACHP:** Advisory Council on Historic Preservation

**ADA:** Americans with Disabilities Act

**ADL:** aerially deposited lead

**ADT:** average daily traffic

**AE:** Adverse Effect

**AHERA:** Asbestos Hazard Emergency Response Act

**AIRFA:** American Indian Religious Freedom Act

**AMM:** Avoidance, Minimization, and/or Mitigation measure

**APCD:** Air Pollution Control District

**APE:** Area of Potential Effects

**AQMD:** Air Quality Management District

**ARB:** Air Resources Board

**ARPA:** Archaeological Resources Protection Act of 1979

**ASR:** Archaeological Survey Report

## B

**BMP:** Best Management Practice

## C

**CAA:** Clean Air Act

**Cal/EPA:** California Environmental Protection Agency

**Cal/OSHA:** California Division of Occupational Safety and Health Administration

**CCAA:** California Clean Air Act

**CDFW:** California Department of Fish and Wildlife

**CE:** Categorical Exclusion (NEPA) or Categorical Exemption (CEQA)

**CEQ:** Council on Environmental Quality

**CEQA:** California Environmental Quality Act

**CERES:** California Environmental Resources Evaluation System

**CERLA:** Comprehensive Environmental Response, Compensation, and Liability Act

**CESA:** California Endangered Species Act

**CFR:** Code of Federal Regulations

**CGS:** California Geological Survey

**CHP:** California Highway Patrol

**CHRIS:** California Historical Resources Information System

**CIA:** Community Impact Assessment

**CIDH:** cast-in-drilled-hole

**CNDDB:** California Natural Diversity Database

**CNPS:** California Native Plant Society

**CO:** carbon monoxide

**$CO_2$:** carbon dioxide

**COG:** Council of Governments

**COZEEP:** Construction Zone Enhanced Enforcement Program

**CPRA:** California Public Records Act

**CRHR:** California Register of Historical Resources

**CRM:** Cultural Resources Management

**CSO:** Cultural Studies Office

**CTC:** California Transportation Commission

**CTP:** California Transportation Plan

**CUPA:** Certified Unified Program Agencies

**CWA:** Clean Water Act

## D

**dBA:** A-weighted decibel

**dBA Leq:** A-weighted noise level

**DEA:** Division of Environmental Analysis

**DED:** Draft environmental document

**DNAC:** District Native American Coordinator

**DOC:** California Department of Conservation

**DOT:** Department of Transportation [general]

**DPR:** Draft Project Report

**DPR:** California Department of Parks and Recreation

**DSA:** Disturbed Soil Area

**DSI:** Detailed Site Investigation

**DTSC:** California Department of Toxic Substances Control

**DWR:** California Department of Water Resources

## E

**EA:** Environmental Assessment [NEPA}

**ECL:** Environmental Construction Liaison/Coordinator

**ECR:** Environmental Commitments Record

**ED:** environmental document

**EFH:** Essential Fish Habitat

**EH:** Environmental Handbook

**EIR:** Environmental Impact Report [CEQA]

**EIS:** Environmental Impact Statement [NEPA]

**EMO:** Environmental Management Office

**EO:** Executive Order

**ESA:** Environmentally Sensitive Area

**ESA:** Endangered Species Act

**ESR:** Environmental Study Request

## F

**FAE:** Finding of Adverse Effect

**FBFM:** Flood Boundary and Floodway Map

**FED:** Final environmental document

**FEIR:** Final Environmental Impact Report (CEQA)

**FEIS:** Final Environmental Impact Statement (NEPA)

**FEMA:** Federal Emergency Management Agency

**FESA:** Federal Endangered Species Act

**FHWA:** Federal Highway Administration

**FIRM:** Flood Insurance Rate Map

**FLPMA:** Federal Land Policy and Management Act of 1976

**FNAE:** Finding of No Adverse Effect

**FOE:** Finding of Effect

**FOIA:** Freedom of Information Act

**FONSI:** Finding of No Significant Impact [NEPA]

**FPPA:** Farmland Protection Policy Act

**FR:** Federal Register

**FSTIP:** Federal State Transportation Improvement Program

**FTIP:** Federal Transportation Improvement Program

**FY:** Fiscal Year

## G

**GHG:** greenhouse gas

**GIS:** Geographic Information Systems

**GPS:** Global Positioning System

## H

**HABS:** Historic American Building Survey

**HAER:** Historic American Engineering Record

**HASR:** Historic Architectural Survey Report

**HCM:** Highway Capacity Manual

**HCP:** Habitat Conservation Plan

**HDM:** Highway Design Manual

**HGM:** Hydrogeomorphic Method

**HMDD-A:** Hazardous Materials Disclosure Document-Acquisition

**HMDD-D:** Hazardous Materials Disclosure Document-Disposal

**HPSR:** Historic Property Survey Report

**HRC:** Heritage Resources Coordinator

**HRCR:** Historical Resources Compliance Report

**HRER:** Historical Resources Evaluation Report

**HSWA:** Hazardous and Solid Waste Amendments

## I

**IGR:** Intergovernmental Review

**IIP:** Interregional Improvement Program

**IS:** Initial Study [CEQA]

**IS/EA:** Initial Study [CEQA]/Environmental Assessment [NEPA]

**ISA:** Initial Site Assessment

**ITIP:** Interregional Transportation Improvement Program

**ITP:** Incidental Take Permit

**ITSP:** Interregional Transportation Strategic Plan

## J

JD: Jurisdictional Determination

## K

## L

**LAPM:** Local Assistance Procedures Manual

**LEDPA:** Least Environmentally Damaging Practicable Alternative

**LESA:** Land Evaluation and Site Assessment

**LUST:** leaking underground storage tank

**LWCFA:** Land and Water Conservation Fund Act of 1965

## M

**MAP-21:** Moving Ahead for Progress in the 21st Century Act

**MBTA:** Migratory Bird Treaty Act

**MCCE:** Mitigation and Compliance Cost Estimate

**MEP:** Maximum Extent Practicable

**MMPA:** Marine Mammal Protection Act

**MMRR:** Mitigation Monitoring and Reporting Record

**MND:** Mitigated Negative Declaration [CEQA]

**MOA:** Memorandum of Agreement

**MOU:** Memorandum of Understanding

**MPO:** Metropolitan Planning Organization

**MS4:** Municipal Separate Storm Sewer System

**MSAT:** Mobile Source Air Toxics

**MTP:** Metropolitan Transportation Plan

**MTIP:** Metropolitan Transportation Improvement Program

## N

**NAAQS:** National Ambient Air Quality Standards

**NAC:** Noise Abatement Criteria

**NADR:** Noise Abatement Decision Report

**NAE:** No Adverse Effect

**NAGPRA:** Native American Graves Protection and Repatriation Act of 1990

**NAHC:** Native American Heritage Commission

**NCCP:** Natural Community Conservation Planning

**NCHRP:** National Cooperative Highway Research Program

**ND:** Negative Declaration [CEQA]

**NEPA:** National Environmental Policy Act

**NES:** Natural Environment Study

**NES-MI:** Natural Environmental Study (Minimal Impact)

**NFIP:** National Flood Insurance Program

**NFSAM:** National Flood Security Act Manual

**$NH_3$:** ammonia

**NHL:** National Historic Landmark

**NHPA:** National Historic Preservation Act

**NHS:** National Highway System

**NNL:** National Natural Landmark

**NOA:** naturally occurring asbestos

**NOA:** Notice of Availability

**NOAA:** National Oceanic and Atmospheric Administration

**NOAA-Fisheries:** National Marine Fisheries Service

**NOC:** Notice of Completion

**NOD:** Notice of Determination

**NOE:** Notice of Exemption

**NOI:** Notice of Intent

**NOP:** Notice of Preparation

**NOx:** nitrogen oxide

**NPDES:** National Pollutant Discharge Elimination System

**NPL:** National Priorities List

**NPPA:** [California] Native Plant Protection Act

**NPRM:** Notice of Proposed Rule Making

**NPS:** National Park Service

**NR:** National Register [of Historic Places]

**NRCS:** National Resources Conservation Service

**NRHP:** National Register of Historic Places

**NSSP:** Nonstandard Special Provision

**NWP:** Nationwide Permit

## O

**O.C.:** Overcrossing

**OCRM:** National Oceanic and Atmospheric Administration-Office of Ocean and Coastal Resource Management

**OHP:** [California] Office of Historic Preservation

**OHWM:** Ordinary High-Water Mark

**OPR:** [California] Office of Planning and Research

**OSHA:** Occupational Safety Hazard Administration

## P

**PA:** Programmatic Agreement

**PA&ED:** Project Approval and Environmental Document

**Pb:** lead

**PDPM:** [Caltrans] Project Development Procedures Manual

**PDT:** Project Development Team

**PE:** Project Engineer

**PEAR:** Preliminary Environmental Assessment Report

**PEER:** Permit Engineering Evaluation Report

**PER:** Paleontological Evaluation Report

**PF:** Project Feature(s)

**PG:** Professional Geologist

**PG&E:** Pacific Gas and Electric Company

**PID:** Project Initiation Document

**PIR:** Paleontological Identification Report

**PLAC:** Permits, Licenses, Agreements, and Certifications

**PM:** particulate matter

**PM:** post mile

**PM10:** particulate matter less than 10 microns in diameter

**PM2.5:** particulate matter less than 2.5 microns in diameter

**PMP:** Paleontological Mitigation Plan

**PMR:** Paleontological Mitigation Report

**POAQC:** Project of Air Quality Concern

**POC:** Pedestrian Overcrossing

**ppb:** parts per billion

**ppm:** parts per million

**PR:** Project Report

**PRC:** [California] Public Resources Code

**PS&E:** Plans, Specifications, and Estimates

**PSI:** Preliminary Site Investigation

**PSI:** pounds per square inch

**PUC:** Public Utilities Commission [California]

## Q

## R

**RAP:** Relocation Assistance Program

**RCRA:** Resource Conservation and Recovery Act of 1976

**RIP:** Regional Improvement Program

**ROD:** Record of Decision [NEPA]

**ROW:** right-of-way

**RTIP:** Regional Transportation Improvement Program

**RTP:** Regional Transportation Plan

**RTPA:** Regional Transportation Planning Agency

**RWQCB:** Regional Water Quality Control Board

## S

**SARA:** Superfund Amendments and Reauthorization Act

**SB:** Senate Bill

**SCH:** [California] State Clearinghouse

**SDWA:** Safe Drinking Water Act

**SEE:** social, economic, and environmental

**SER:** Standard Environmental Reference

**SFHA:** Special Flood Hazard Area

**SHA:** State Highway Agency

**SHBSB:** State Historical Building Safety Board

**SHL:** State Historical Landmark

**SHOPP:** State Highway Operation and Protection Program

**SHPO:** State Historic Preservation Officer

**SHS:** State Highway System

**SI:** Safety Index

**SIP:** State Implementation Plan

**SLC:** [California] State Lands Commission

**SMARA:** Surface Mining and Reclamation Act of 1975

**SOC:** Statement of Overriding Considerations [CEQA]

**SOL:** Statute of Limitations

**SR:** State Route

**SSP:** Standard Special Provision

**STIP:** Statewide Transportation Improvement Program

**SWMP:** Storm Water Management Plan

**SWPPP:** Storm Water Pollution Prevention Plan

**SWRCB:** State Water Resources Control Board

## T

**TAC:** Technical Advisory Committee

**TASAS:** Traffic Accident Surveillance and Analysis System

**TCE:** Temporary Construction Easement

**TDM:** Transportation Demand Management

**THPO:** Tribal Historic Preservation Officer

**TIP:** Transportation Improvement Program

**TMDL:** Total Maximum Daily Load

**TMP:** Traffic Management Plan

**TSM:** Transportation Systems Management

## U

**UC:** Undercrossing

**U.S. EPA:** United States Environmental Protection Agency

**USACE:** United States Army Corps of Engineers

**USDOT:** United States Department of Transportation

**USFS:** United States Forest Service

**USFWS:** United States Fish and Wildlife Service

**USGS:** United States Geological Survey

**UST:** underground storage tanks

## V

**VMT:** Vehicle Miles of Travel

**VOC:** volatile organic compound

## W

**WPCP:** Water Pollution Control Program

**X**

**Y**

**Z**

# Appendix E List of Technical Studies

The following studies and/or technical analyses have been prepared and are incorporated by reference into this Initial Study/Environmental Assessment and can be located at:

Caltrans District 4 Office 111 Grand Ave. #300, Oakland, CA 94612

Please note, many state and federal laws limit the disclosure of sensitive cultural and tribal resource information to the public. Additional information regarding confidentiality of these resources can be found in the Standard Environmental Reference Volume 2 in Section 3.4.13 and Section 5.3.6.


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[22] See above.

[23] See above

# Appendix G Title VI/Non-Discrimination Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

**California Department of Transportation**

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS–49 | SACRAMENTO, CA 94273–0001
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September 2024

**TITLE VI/NON-DISCRIMINATION POLICY STATEMENT**

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Related non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. 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 (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

TONY TAVARES
Director

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

# Appendix H Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2024-0119879
Project Name: Caldecott Tunnels

05/01/2025 15:40:54 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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

Attachment(s):

- Official Species List

# OFFICIAL SPECIES LIST

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

This species list is provided by:

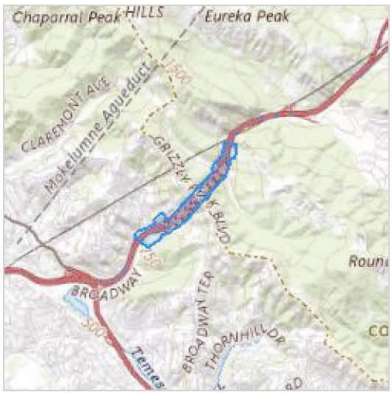
**Sacramento Fish And Wildlife Office**
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

## PROJECT SUMMARY

Project Code: 2024-0119879
Project Name: Caldecott Tunnels
Project Type: Road/Hwy - Maintenance/Modification
Project Description: The California Department of Transportation (Caltrans) proposes the Caldecott Bores 1, 2, and 3 Rehabilitation Project (Project) along the State Route (SR) 24 in Alameda and Contra Costa Counties, through the Berkely Hills to Orinda, California. The Project proposes to rehabilitate the Caldecott Tunnel Bores 1, 2, and 3 on SR 24.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.8580299,-122.21340051369296,14z




Counties: Alameda and Contra Costa counties, California

## ENDANGERED SPECIES ACT SPECIES

There is a total of 14 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

---

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

| NAME | STATUS |
|---|---|
| Tidewater Goby *Eucyclogobius newberryi*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/57 | Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRUSTACEANS

| NAME | STATUS |
|---|---|
| Vernal Pool Fairy Shrimp *Branchinecta lynchi*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/498 | Threatened |

## FLOWERING PLANTS

| NAME | STATUS |
|---|---|
| Pallid Manzanita *Arctostaphylos pallida*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8292 | Threatened |
| Presidio Clarkia *Clarkia franciscana*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/3890 | Endangered |
| Robust Spineflower *Chorizanthe robusta var. robusta*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9287 | Endangered |

## CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

| NAME | STATUS |
|---|---|
| Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus*<br>https://ecos.fws.gov/ecp/species/5524#crithab | Final |

## MAMMALS

| NAME | STATUS |
|---|---|
| Salt Marsh Harvest Mouse *Reithrodontomys raviventris*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/613 | Endangered |

## BIRDS

| NAME | STATUS |
|---|---|
| California Least Tern *Sternula antillarum browni*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8104 | Endangered |
| California Ridgway"s Rail *Rallus obsoletus obsoletus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/4240 | Endangered |
| Western Snowy Plover *Charadrius nivosus nivosus*<br>Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8035 | Threatened |

## REPTILES

| NAME | STATUS |
|---|---|
| Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus*<br>There is **final** critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5524 | Threatened |
| Northwestern Pond Turtle *Actinemys marmorata*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1111 | Proposed Threatened |

## AMPHIBIANS

| NAME | STATUS |
|---|---|
| California Red-legged Frog *Rana draytonii*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/2891 | Threatened |
| Foothill Yellow-legged Frog *Rana boylii*<br>Population: Central Coast Distinct Population Segment (Central Coast DPS)<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5133 | Threatened |

## FISHES

| NAME | STATUS |
|---|---|
| Tidewater Goby *Eucyclogobius newberryi*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/57 | Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Proposed Threatened |

## CRUSTACEANS

| NAME | STATUS |
|---|---|
| Vernal Pool Fairy Shrimp *Branchinecta lynchi*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/498 | Threatened |

## FLOWERING PLANTS

| NAME | STATUS |
|---|---|
| Pallid Manzanita *Arctostaphylos pallida*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/8292 | Threatened |
| Presidio Clarkia *Clarkia franciscana*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/3890 | Endangered |
| Robust Spineflower *Chorizanthe robusta var. robusta*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/9287 | Endangered |

## CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

| NAME | STATUS |
|---|---|
| Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus*<br>https://ecos.fws.gov/ecp/species/5524#crithab | Final |

## IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 4
Name: Cherish Cartagena
Address: 1814 Franklin St Ste 504
City: Oakland
State: CA
Zip: 94612
Email ccartagenamills@kleinfelder.com
Phone: 5108910024

# Appendix I Notice of Availability

## PUBLIC NOTICE

**NOTICE OF AVAILABILITY (NOA) FOR INITIAL STUDY - PROPOSED MITIGATED NEGATIVE DECLARATION / ENVIRONMENTAL ASSESSMENT (IS-PROPOSED MND / EA) WITH DRAFT INDIVIDUAL SECTION 4(F) EVALUATION AND AN OPPORTUNITY FOR A HYBRID PUBLIC MEETING**

**Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project**

Public Comment Period - January 6th, 2025 to February 6th, 2025
Hybrid Public Meeting - Wednesday, January 22nd, 2025, 6:00 - 7:30 p.m.
Project Website and Hybrid Meeting Link -
https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

### WHAT IS BEING PLANNED?

The California Department of Transportation (Caltrans) proposes the Caldecott Tunnel Bores 1, 2 and 3 Rehabilitation and Ventilation Upgrade Project (Project) to preserve the structural integrity of the tunnel, improve ventilation performance and fire-fighting operational response, and extend its service life. The Project is located along State Route (SR-) 24 in Alameda and Contra Costa Counties (postmiles R5.80/R6.24 and R0.00/R0.60).

Bores 1 and 2 are listed on the National Register of Historic Places. The proposed work will have an adverse effect on this historic property. The proposed Project will also result in a "use" under Section 4(f).

### WHY THIS NOTICE:

Caltrans has studied the effects the proposed Project may have on the environment. The results of these studies are summarized in a Draft Environmental Document (DED) known as an initial Study with proposed Mitigated Negative Declaration / Environmental Assessment and Draft individual Section 4(f) Evaluation.

The IS-PROPOSED MND/EA is available on the Project website:
https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade.
Printed copies that can be reviewed on site can also be found at the Caltrans District 4 office (111 Grand Avenue, Oakland 94612), the Orinda Library (26 Orinda Way, Orinda, CA 94563), Oakland-Rockridge Branch Library (5366 College Ave, Oakland, CA 94618), and Berkeley Public Library - Claremont Branch (2940 Benvenue Ave, Berkeley, CA 94705).

### WHERE YOU COME IN:

**Caltrans will host a hybrid public meeting on Wednesday, January 22nd, 2025, 6:00 - 7:30 p.m.**

- The in-person portion of the meeting will be held at the Orinda Library Auditorium at 26 Orinda Way, Orinda, CA 94563.
- If you cannot attend the meeting in person, please use the link to attend the virtual meeting, held at the same date and time, which can be accessed on the project website: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

**Please submit your written comments anytime from January 6th through February 6th, 2025, in the following ways:**

- If you'd prefer to submit your comment through email, please email: Brycelyn.Hendrix@dot.ca.gov
- If you'd prefer to submit your comments via voicemail, please call: (855) 367-3269
- If you'd prefer to submit your comments in writing, address them to:
  - Office of Environmental Analysis
    Attn: Brycelyn Hendrix
    Caltrans, District 4
    P.O. Box 23660, Mail Station: 8B Oakland, CA 94623-0660

- If you'd prefer to submit your comments online, fill out a digital comment form on the Project website: https://dot.ca.gov/caltrans-near-me/district-4/d4-projects/d4-caldecott-tunnel-upgrade

**To request a hardcopy of the DED or technical studies via mail and/or special accommodations to attend the hybrid public meeting please contact Brycelyn Hendrix at Brycelyn.Hendrix@dot.ca.gov.**

# Appendix J Memorandum of Agreement

**Memorandum of Agreement in separate PDF document**

# Appendix K Department of Interior Letter

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
1111 Broadway, Suite 1200
Oakland, CA 94607

February 11, 2025

IN REPLY REFER TO:
ER 25/0007
4111

Brycelyn Hendrix
Environmental Scientist
Office of Environmental Analysis
Caltrans, District-4
Brycelyn.Hendrix@dot.ca.gov

Subject: U.S. Department of the Interior Comments – DRAFT Individual Section 4(f) Evaluation for Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project, Alameda County & Contra Costa County, California

Dear Brycelyn Hendrix:

The U.S. Department of the Interior (Department), as required by the Department of Transportation Act of 1966 (49 U.S.C. §303 and 23 U.S.C. §138), has reviewed the October 2024 *DRAFT Section 4(f) Evaluation for the Caldecott Tunnel Bores 1, 2, and 3 Rehabilitation and Ventilation Upgrade Project, Alameda County and Contra Costa County, California* prepared by the California Department of Transportation (CalTrans). Bores 1 and 2 are deemed eligible for listing on the National Register of Historic Places (NHR). The Proposed Build Alternative would result in a use of these Section 4(f) properties as defined in 23 CFR 774.17. CalTrans has included measures to minimize harm to Caldecott Tunnel Bores 1 and 2.

The Department, through the National Park Service (NPS), concurs that there is no feasible and prudent alternative that would avoid use of Bores 1 and 2. These NHR-eligible properties lie outside of NPS lands or areas of interest. If you have specific questions related to our comments, please contact Danette Woo Nolan at Danette_Woo@nps.gov. For all other questions, please contact me at Viktoriya_Sirova@ios.doi.gov.

Sincerely,

VIKTORIYA SIROVA
Digitally signed by VIKTORIYA SIROVA
Date: 2025.02.11 10:10:38 -08'00'

Viktoriya Sirova
Regional Environmental Officer

TRANSMITTED ELECTRONICALLY – NO HARDCOPY TO FOLLOW

Electronic distribution: Brycelyn.Hendrix@dot.ca.gov

cc: Roxanne Runkel, National Park Service: Roxanne_Runkel@nps.gov
Danette Woo, National Park Service: Danette_Woo@nps.gov