State Route 116 - Stage Gulch Road/Lakeville Highway Intersection Safety Project

DRAFT Initial Study with Proposed Negative Declaration

SONOMA COUNTY, CALIFORNIA
DISTRICT 4 – SON – 116 (PM 39.3)
04-2Q770/0419000047

Prepared by the
State of California, Department of Transportation

March 2023

General Information about this Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Negative Declaration (IS/ND) for the State Route (SR) 116 - Stage Gulch Road/Lakeville Highway Intersection Safety Project (Project). Caltrans proposes two Build Alternatives to improve the safety of this intersection at post mile (PM) 39.3 on SR 116 in Sonoma County: Build Alternative 1 would install traffic signals, or Build Alternative 2 would construct a roundabout. Additional Project information is provided in Chapter 2.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This IS/ND describes why Caltrans proposes the Project, how the existing environment could be affected by the Project, potential environmental impacts, and the Project features and avoidance and minimization measures that would minimize Project impacts.

What you should do:

- Please read this IS/ND.
- This IS/ND, maps, and Project information are available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs). Additionally, a hard copy of this IS/ND will be made available at the following locations in the vicinity of the Project:
  - Sonoma County Regional Library
    755 West Napa Street
    Sonoma, CA 95476
  - Petaluma Regional Library
    100 Fairgrounds Drive
    Petaluma, CA 94952

- We would like to hear what you think. Send comments by the deadline of May 3, 2023 to:

  – Caltrans, District 4
    ATTN: Maxwell Lammert, Office Chief (Acting),
    P.O. Box 23660, MS-8B
    Oakland, CA 94623-0660; or

  – The Project email address: sr116stagegulch@dot.ca.gov

What happens next:

Per CEQA Section 15073, Caltrans will circulate this IS/ND for public review for 30 days from April 3, 2023, to May 3, 2023. During the 30-day public review period, the general public and responsible and trustee agencies can submit comments on this IS/ND to Caltrans. Caltrans will consider the comments and will respond to the comments after the 30-day public review period.

After comments have been received from the general public and responsible and trustee agencies, Caltrans may:

1. Grant environmental approval to the Project.
2. Conduct additional environmental studies.
3. Abandon the Project.

If the Project is granted environmental approval and funding is obtained, Caltrans could design and construct all or part of the Project.

Alternative Formats:

For individuals with sensory disabilities, this IS/ND can be made available in Braille, in large print, on audiocassette, or on computer disk by writing to the Caltrans District 4 mailing or email address or by calling **California Relay Service** at **(800) 735-2929 (TTY)**, **(800) 735-2922 (Voice)**, or **711**.

An accessible electronic copy of this IS/ND is available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

DRAFT Initial Study with Proposed Negative Declaration

04-SON-116	39.3	04-2Q770
Dist. – Co. – Rte.	PM	E.A.

Project title:	SR 116 - Stage Gulch Road/ Lakeville Highway Intersection Safety Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue, Oakland, CA 94612
Contact person and phone number:	Maxwell Lammert, Office Chief (Acting) (510) 506-9862
Project location:	Sonoma County
General plan description:	Two-lane Conventional Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, or participation agreements)	• U.S. Army Corps of Engineers • San Francisco Bay Regional Water Quality Control Board • California Department of Fish and Wildlife • U.S. Fish and Wildlife Service • California Transportation Commission

This IS/ND, maps, and Project information are available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Maxwell Lammert

Maxwell Lammert
Acting Chief, Office of Environmental Analysis
California Department of Transportation, District 4

3/27/2023
Date

To obtain a copy in Braille, in large print, on audiocassette, or on computer disk, please mail Caltrans, District 4, ATTN: Arnica MacCarthy, Senior Environmental Planner, P.O. Box 23660, MS-8B, Oakland, CA 94623-0660; email to: sr116stagegulch@dot.ca.gov; or call **California Relay Service** at **(800) 735-2929 (TTY)**, **(800) 735-2922 (Voice)**, or **711**.

Proposed Negative Declaration

Project Description

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS) with Proposed Negative Declaration (ND) for the State Route (SR) 116 - Stage Gulch Road/Lakeville Highway Intersection Safety Project (Project). Caltrans proposes two Build Alternatives to improve the safety of this intersection at post mile (PM) 39.3 on SR 116 in Sonoma County. Build Alternative 1 would install traffic signals; Build Alternative 2 would construct a roundabout. Additional Project information is provided in Chapter 2.

Determination

This Proposed ND is included to notify the general public, responsible agencies, and trustee agencies that Caltrans intends to adopt a ND for the Project. This ND is subject to change based on comments received from the general public, responsible agencies, and trustee agencies.

Caltrans has prepared this IS/ND for the Project and, pending public review, expects to determine from this study that the Project would not have a significant effect on the environment for the following reasons:

- The Project would have no impacts on mineral resources, population and housing, public services, and recreation.
- The Project would have less than significant impacts on aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, tribal cultural resources, utilities and service systems, and wildfire.

_____ _____

Melanie Brent
Deputy District Director
Environmental Planning and Engineering
California Department of Transportation, District 4

Date

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List of Abbreviated Terms

Abbreviation	Definition
AB	Assembly Bill
ABAG	Association of Bay Area Governments
AMM	Avoidance and Minimization Measure
APC	alternative pipe culvert
APE	area of potential effects
APN	assessor's parcel number
BSA	Biological Study Area
BMP	best management practice
CalFire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGP	Construction General Permit
CGS	California Geological Survey
CH_4	methane
CMP	corrugated metal pipe
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COZEEP	Construction Zone Enhanced Enforcement Program
CRLF	California red-legged frog
CSP	corrugated steel pipe
CWA	Clean Water Act

Abbreviation	Definition
DA	Diverse Agriculture
dBA	A-weighted decibels
DNAC	District Native American Coordinator
DSA	Disturbed Soil Area
ESA	environmentally sensitive area
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gases
GWP	global warming potential
HCP	Habitat Conservation Plan
HPSR	Historic Property Survey Report
IPaC	Information for Planning and Consultation Database
LED	light-emitting diodes
LVFD	Lakeville Volunteer Fire Department
L_{max}	maximum hourly noise level
LOS	Level of Service
LRA	Local Responsibility Area
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
mph	miles per hour
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NES	Natural Environment Study

Abbreviation	Definition
NIS	new impervious surface
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NSSP	Nonstandard Special Provisions
OCRS	Office of Cultural Resources Studies
PF	Project Feature
PG&E	Pacific Gas and Electric Company
PM	post mile
PM_{10}	particulate matter with aerodynamic diameter equal to or less than 10 micrometers
$PM_{2.5}$	particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers
PPV	peak particle velocity
PQS	Professionally Qualified Staff
PTE&C	Permit to Enter and Construct
RCEM	Road Construction Emissions Model
ROW	right of way
SCTA	Sonoma County Transportation Authority
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SHOPP	State Highway Operation and Protection Program
SLF	Sacred Lands File
SR	State Route
SRA	State Responsibility Areas
SSC	Species of Special Concern
STAA	Surface Transportation Assistance Act

Abbreviation	Definition
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCE	temporary construction easement
TCDS	temporary creek diversion system
THPO	Tribal Historic Preservation Officer
TMP	Traffic Management Plan
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
WEF	wildlife exclusion fencing
WPCP	Water Pollution Control Program
WPT	western pond turtle
XPI	Extended Phase I Report

Chapter 1 Introduction

1.1 Introduction

The California Department of Transportation (Caltrans), as the California Environmental Quality Act (CEQA) lead agency and sponsor for the proposed State Route (SR) 116 - Stage Gulch Road/Lakeville Highway Intersection Safety Project (Project), has prepared this Initial Study with Proposed Negative Declaration (IS/ND) for the Project.

The Project would occur along SR 116 at the intersection of Stage Gulch Road and Lakeville Highway at post mile (PM) 39.3 in Sonoma County (Figure 1-1). Caltrans proposes two Build Alternatives: Build Alternative 1 would install traffic signals or Build Alternative 2 would construct a roundabout.

The Project would be funded by the State Highway Operation and Protection Program (SHOPP) under program code 201.010 (Safety Improvements) for the 2023/2024 program year. The SHOPP is California's "fix-it-first" program, which funds the repair and preservation of the State Highway System, safety improvements, and some highway operational improvements. It has been determined that the Project would be eligible for Federal-aid funding. The Project total cost estimate, including capital and support costs, is approximately $9,165,000.

1.2 Purpose and Need

The purpose of the Project is to improve safety on SR 116 at the intersection of Stage Gulch Road and Lakeville Highway, in Sonoma County, at PM 39.3.

The Project is needed to reduce the number and severity of broadside collisions involving northbound through vehicles on Lakeville Highway with left turning vehicles going eastbound on SR 116. There were 15 accidents in the 5-year period from January 1, 2011, to December 31, 2015. From July 1, 2018 through June 30, 2021, there were an additional 15 accidents reported at the Project intersection, of which 5 resulted in injury. With this tally of accidents and the 2016 traffic volume counts, safety improvements to this intersection are warranted.

1.3 Existing Conditions

The SR 116 corridor in Sonoma County, including the portion within the Project limits, is a two-lane, rural conventional highway that provides the only link to several rural inland communities. It is also a tourist and recreational travel route, providing access to wine country destinations, parks and scenic areas. Average daily traffic SR 116 within the Project limits was 27,100 in 2017, with an estimated 7.2 percent truck traffic.

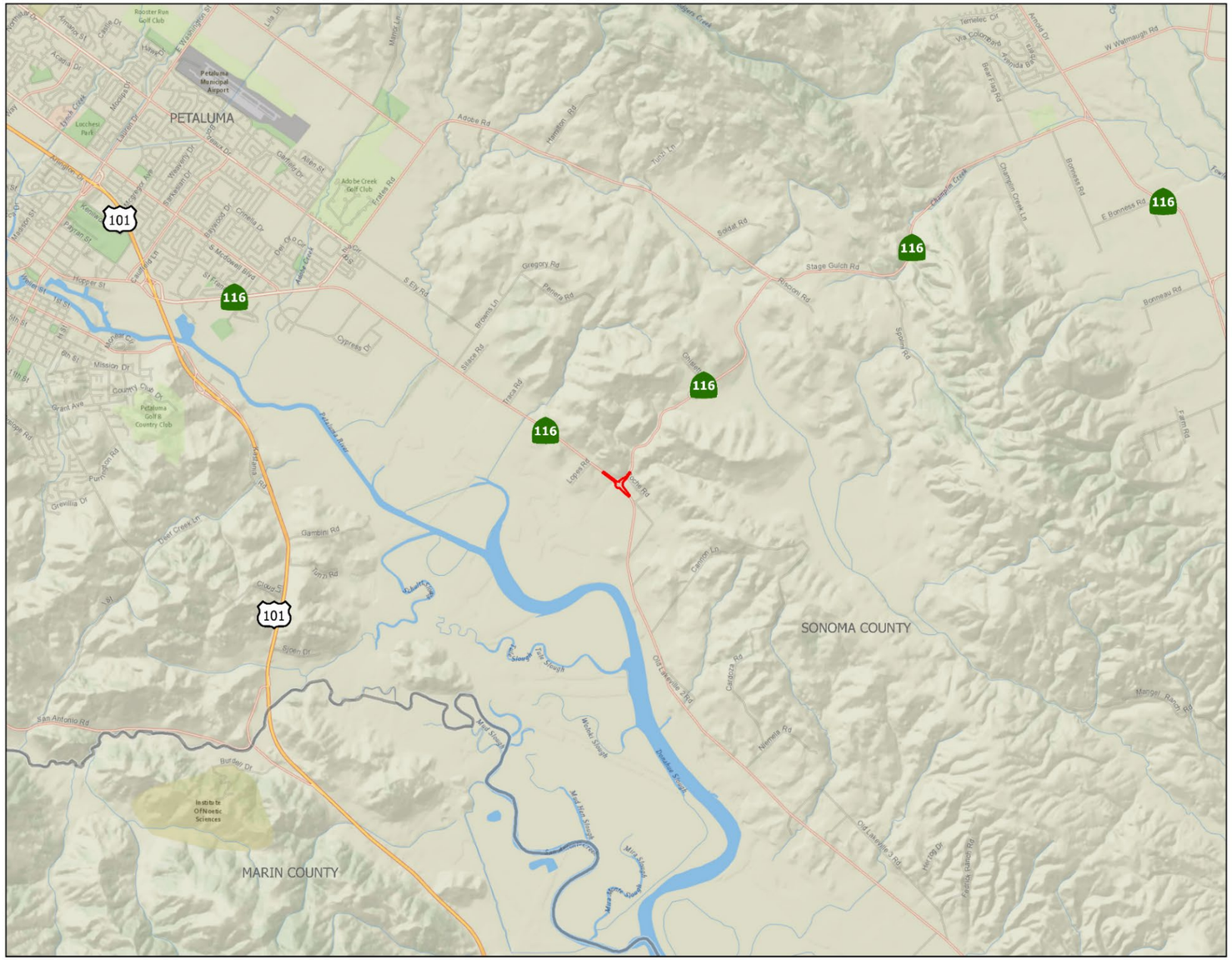
Located southeast of the City of Petaluma, the existing intersection is a three-leg intersection: the northwestern leg is the SR 116 approach from Petaluma, the southern leg is the Lakeville Highway approach linking travelers south to SR 37, and the eastern approach is the Stage Gulch Road/ SR 116 approach connecting east to Schellville and, SR 12 and SR 121 (Figure 1-1). SR 116 traverses southeastward from Petaluma, also named Lakeville Highway along this section, then turns east onto Stage Gulch Road at the T-intersection. Lakeville Highway continues to the south and connects to SR 37. The intersection is a stop-controlled intersection with one stop sign on the Stage Gulch Road/SR 116 approach (Figure 1-2). There is an existing left turn lane for continuous eastbound travel on SR 116. SR 116 crosses Stage Gulch Creek (Bridge Number 20-0142) approximately 120 feet northwest of the intersection. North of the bridge, there is an approximately 230-foot-long retaining wall (Figure 1-2).

The existing two-lane conventional highway at the intersection has 11-foot-wide travel lanes, and shoulder width varying from 0 to 5 feet wide. The lane width and the shoulder widths are existing nonstandard design features.

The Project is bordered by agricultural, open space, and rural residential land uses. Ernie's Tin Bar, a local restaurant/bar that has been operating at this intersection for generations, is located at the northeast corner.

1.3.1 Existing Guardrail

Stage Gulch Creek Bridge has Type ~~9~~ modified bridge barrier railing.



Legend

- Project Limits
- County Boundary

N

0 0.5 1
Miles

Caltrans

FIGURE 1-1
Project Location
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

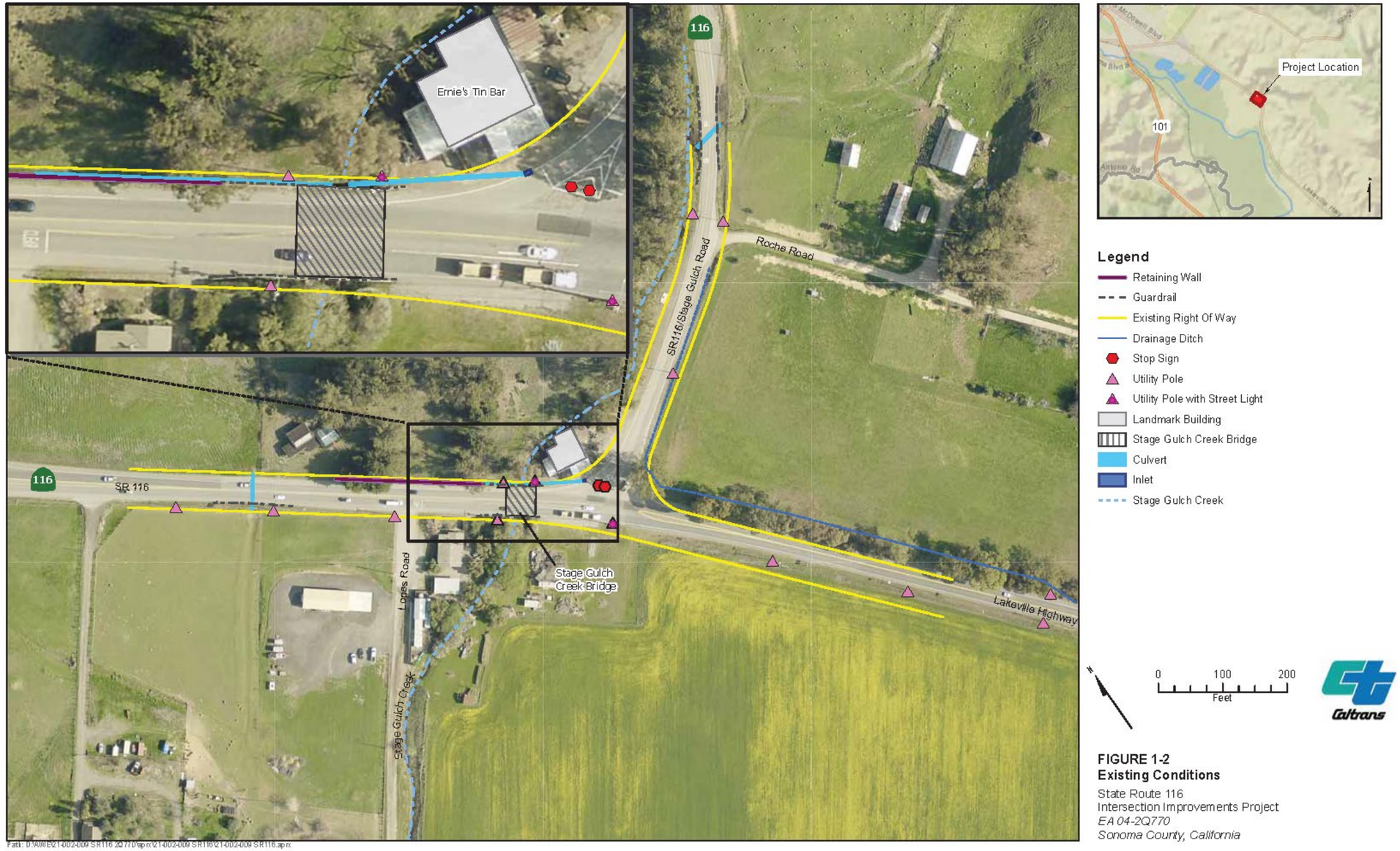


FIGURE 1-2
Existing Conditions
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

1.3.2 Existing Drainage Facilities

Runoff sheet flows off the highway in most areas except the north side of the intersection, adjacent to Ernie's Tin Bar, and along the existing retaining wall. Near the bar, runoff is captured by a drainage inlet at the low point and transported via an 18-inch plastic alternative pipe culvert (APC) under the shoulder and along westbound SR 116 to Stage Gulch Creek. On the northwest leg of the intersection, the existing 230-foot-long retaining wall includes a back-of-wall drainage system that discharges via a 6-inch corrugated metal pipe (CMP) culvert to Stage Gulch Creek.

There are cross-draining culverts and ditches in and around the Project (Figure 1-2). Northwest of the intersection, there is an existing 24-inch corrugated steel pipe (CSP) culvert with a metal plate covering the inlet that conveys runoff under SR 116 from the east to west. A ditch is located along the eastbound side of SR 116/Stage Gulch Road and wraps around the inside corner of the intersection, continuing to the southeast along northbound Lakeville Highway. There is also an existing 36-inch corrugated metal pipe (CMP) culvert that conveys water in an unnamed tributary to Stage Gulch Creek under SR 116/Stage Gulch Road (from south to north) east of Roche Road.

1.3.3 Existing Structures

SR 116 crosses Stage Gulch Creek, an intermittent stream, on an existing bridge approximately 120 feet northwest of the intersection (Figure 1-2). The bridge was originally constructed in 1920 with modifications in 1972 (Caltrans 2018). It is a concrete slab bridge with concrete abutments, approximately 15 feet long and 48 feet wide with an existing Type 9 barrier railing. Type 9 barrier rail consists of a single 2-by-6-inch steel rectangular tube rail attached to welded steel posts mounted on a 15-inch-high concrete parapet for an overall barrier height of 27 inches (Nordlin, E.F., et al., 1970). A concrete weir is located directly under the bridge.

On the northwest leg of the intersection an existing retaining wall is located on the westbound side of the highway (Figure 1-2).

1.3.4 Existing Utilities and Signage

Two stop signs are placed on the westbound SR 116/Stage Gulch Road at the intersection. One for the right turn lane, the other one for the approach lane to the intersection. Overhead utility lines atop wooden poles run along the eastbound side of SR 116, the southbound side of Lakeville Highway, and the eastbound side of SR 116/Stage Gulch Road with drops to the nearby residences and restaurant/bar.

Two light standards for intersection lighting on wooden poles are within the Project footprint (Figure 1-2).

1.3.5 Existing Trees and Vegetation

There are rows of large eucalyptus trees on the northeast side of Lakeville Highway southeast of the intersection and on the north side of SR 116/Stage Gulch Road northeast of the intersection. There are native riparian trees in Stage Gulch Creek just northwest of the intersection. Additional information about existing vegetation communities is provided in Section 3.3.4, Biological Resources.

Chapter 2 Project Description

This chapter describes the proposed action and the Project alternatives developed to meet the identified purpose and need of the Project, while avoiding or minimizing environmental impacts. The three alternatives evaluated include:

- Build Alternative 1: Signalized Intersection
- Build Alternative 2: Roundabout
- No Build Alternative

The two Build Alternatives described below were identified because they achieve the goal of intersection safety improvements while minimizing Caltrans right of way (ROW) needs and environmental impacts. Both Build Alternatives maintain the current level of service. This document analyzes potential environmental impacts of Build Alternative 1 and Build Alternative 2, as described below.

The Build Alternatives have incorporated Project Features (PFs), which include design elements and standardized measures that are applied to all or most Caltrans projects, including Best Management Practices (BMPs), Caltrans Standard Specifications, and Standard Special Provisions. The PFs are considered an integral part of the Project and have been considered prior to any significance determinations for CEQA. The PFs are compiled in Appendix A.

2.1 Build Alternative 1 – Signalized Intersection

The signalization alternative, herein 'Build Alternative 1,' proposes to improve safety at the SR 116 - Stage Gulch Road/Lakeville Highway intersection by adding traffic signals on the three legs of the intersection (Figure 2-1). The traffic signal components would include signal and lighting standards, flashing beacons, and controller cabinets.

To add signals and maintain highway standards, the SR 116 – Stage Gulch Road/ Lakeville Highway intersection would be realigned and widened (Figure 2-1). The Lakeville Highway northbound approach would be widened to provide a 200 foot-long right-turn lane for vehicles turning east onto SR 116/Stage Gulch Road. The SR 116 eastbound approach would be widened to allow for the extension of the existing left-turn pocket for an additional 50 feet (to provide a 150-foot-long pocket). The SR 116/Stage Gulch Road westbound approach would be reconfigured to provide a single lane for vehicles making either left or right turns.

Stage Gulch Creek Bridge would be widened by 3 to 5 feet in both directions. The widening would accommodate standard shoulder widths and the additional 50-foot queue length for the SR 116 left-turn lane. The existing bridge rails would be replaced and upgraded to concrete barrier type 836, and approximately 230 feet of retaining wall type 1A would be reconstructed to align with the new bridge railings.

2.1.1 Pedestrian and Bicycle Facilities

Build Alternative 1 incorporates road widening and shoulder widths that allow for bicycle lanes on all approaches (Figure 2-1). The intersection signalization would create a potential conflict between vehicles and bicycles for through-bicyclists on Lakeville Highway approaching the intersection from the south and continuing onto SR 116 westbound; this would be partially addressed by green conflict zone markings across the intersection. Build Alternative 1 would increase bicyclist safety as shoulder widening would provide bicyclists with more areas for safe passage by motor vehicles.

2.1.2 Structures: Bridge Widening and Retaining Wall Reconstruction

For Build Alternative 1, road widening would require that the existing Stage Gulch Creek bridge deck and abutments are widened (Figure 2-2). The existing Type 9 bridge barrier would be removed and replaced with a Type 836 bridge barrier. The Type 836 barrier is a concrete slope barrier with a total height of 36 inches.

The existing retaining wall, approximately 230 feet in length, on the north side of the SR 116 westbound lane would be removed and reconstructed (Figure 2-1). The new retaining wall would be a Type A new concrete barrier wall on a new barrier slab and is anticipated to be set back into the hillside an additional 5 feet.

2.1.3 Drainage Systems

New drainage systems in the vicinity of the retaining wall would be constructed to accommodate runoff increases from the new construction and the new impervious area, which is estimated to be 0.48 acre for Build Alternative 1. For Build Alternative 1, two culverts would be replaced, a ditch would be reconstructed, and existing drainage systems would be modified and reconstructed.

Legend

- Project Footprint - Alternative 1
- Cut/Fill Limits
- Proposed Lane
- Replace Culvert
- Stage Gulch Creek Bridge (Widening and Railing Upgrade)
- Proposed Edge of Pavement
- Proposed Drainage System/ Reconstruct Ditch
- Remove Existing Guardrail
- Reconstruct Fence
- Remove/Reconstruct Retaining Wall
- Flashing Beacon
- Street Light (Location Approximate)
- Street Light (existing)

N

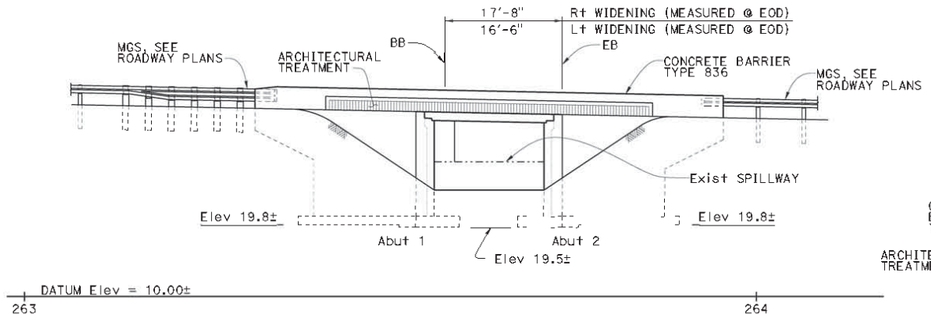
0 100 200
Feet

Caltrans

FIGURE 2-1
Project Components - Alternative 1
Signalization Layout
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

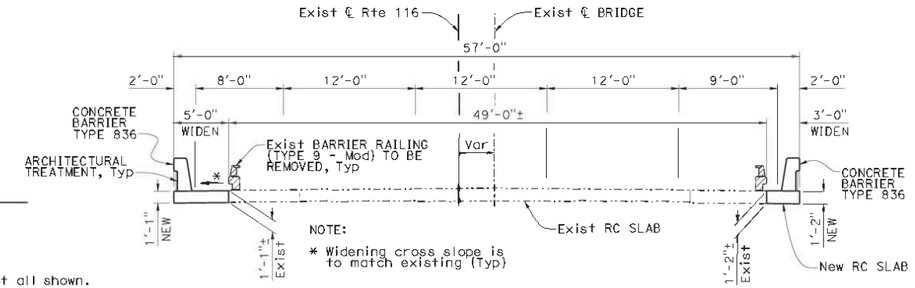
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

Dist	COUNTY	ROUTE	POST MILE
04	Son	116	39.28

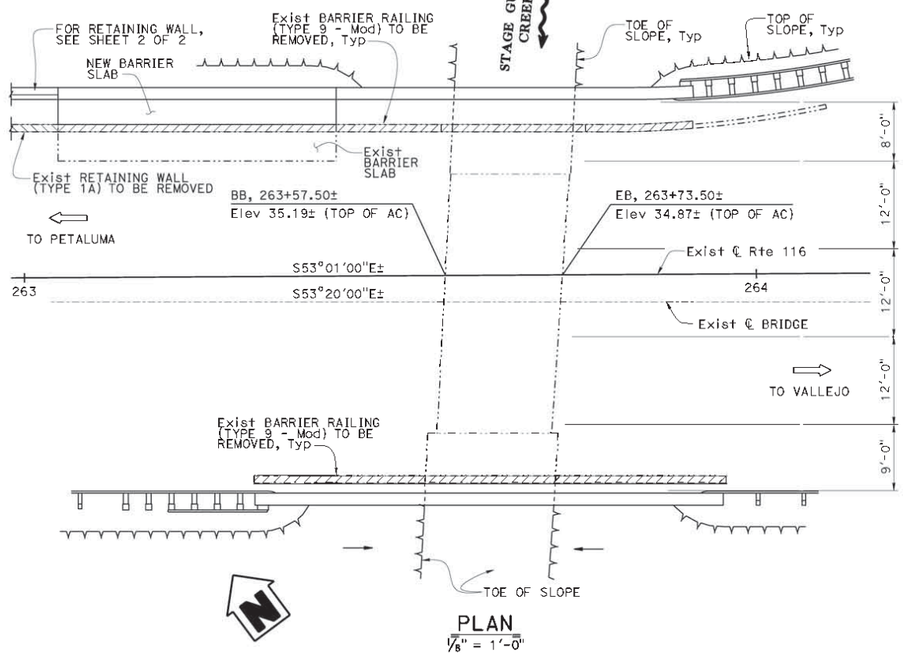


ELEVATION
1/8" = 1'-0"

NOTE:
Existing structures not all shown.



TYPICAL SECTION
3/8" = 1'-0"



PLAN
1/8" = 1'-0"

NOTES:

1. Existing Bridge ℄ is approximate.
2. Bridge Channel skew is approximate.
3. New (widen) abutments is to match the existing.
4. New (widen) wingwalls to the left/right of the bridge is to match the existing and parallel to the road.
5. New (widen) foundation is to match the existing.
6. Top and Toe of slope is approx.

Figure 2-2 Build Alternative 1
Signalization - Bridge Widening
SHEET 1 OF 2

DESIGNED BY: Daniel Ambriz	DATE: 08/12/22	BRIDGE DESIGN	PLANNING STUDY		
DRAWN BY: Carlo Cancino	DATE: 08/12/22	BRANCH 8	STAGE GULCH CREEK (WIDEN)		
CHECKED BY: X	DATE: X		UNIT: 3593	BRIDGE No.: 20-0142	
APPROVED: X	DATE: X		PROJECT EA: 04-2Q770	PROJECT No. & PHASE: 041900004 70	

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 3/10/2021)
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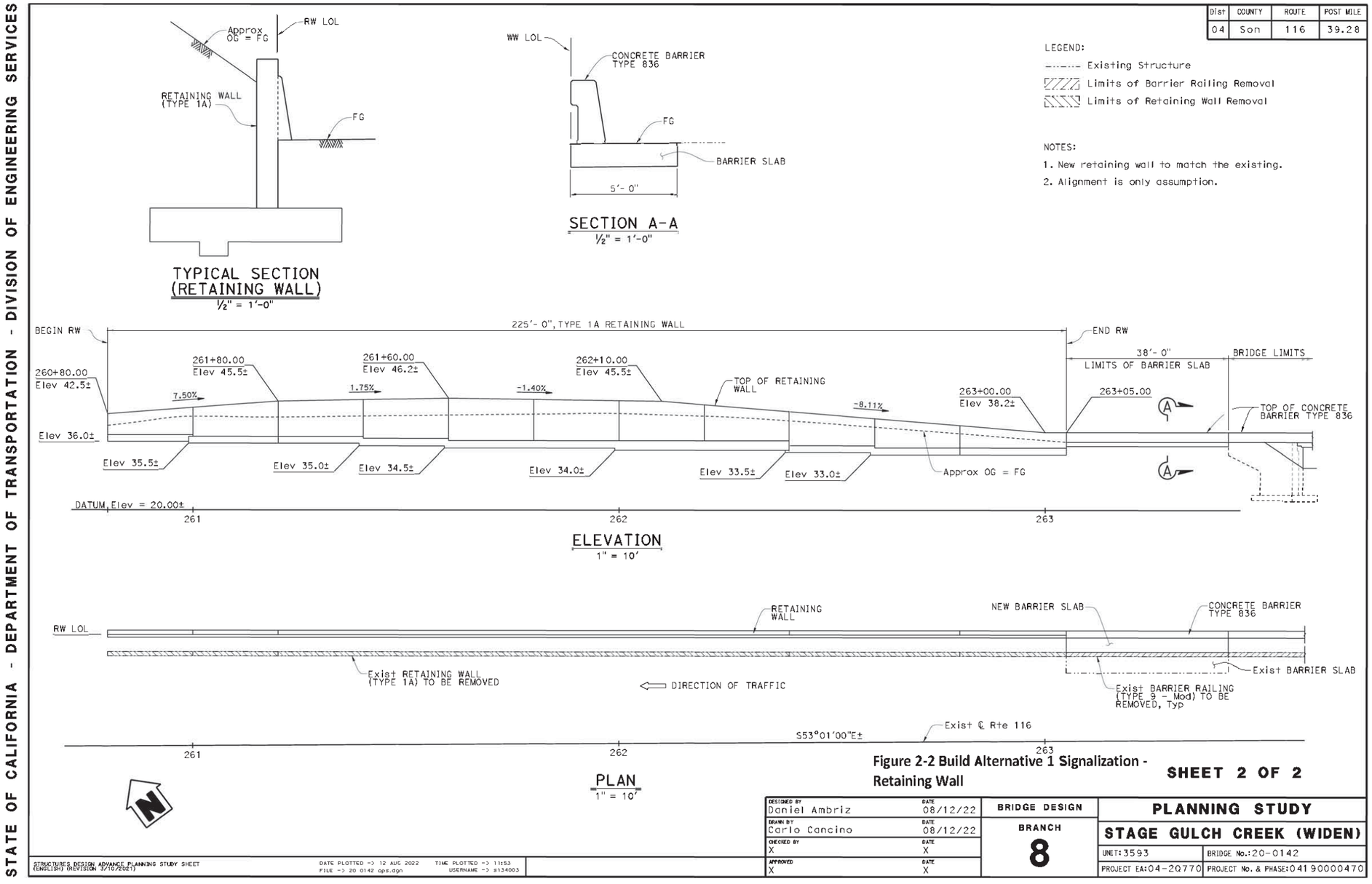


Figure 2-2 Build Alternative 1 Signalization - Retaining Wall

SHEET 2 OF 2

Build Alternative 1 would install drainage inlets and pipes along the north side of the intersection, adjacent to Ernie's Tin Bar. The 18-inch APC parallel to westbound SR 116 near Ernie's Tin Bar would be removed and replaced as part of the new drainage system. The reconstructed retaining wall would, like the existing retaining wall, require a drainage system to intercept highway runoff in front of the wall and stormwater collected behind the wall via a back-of-wall gutter system.

An existing 24-inch culvert and drainage inlet crossing SR 116 northwest of the retaining wall is within the limits of the widening and would be replaced in kind since no significant increase in runoff volume is anticipated at this location. The 18-inch culvert parallel to eastbound SR 116 near Ernie's Tin Bar would be removed and replaced as part of the new drainage system.

Widening along eastbound Stage Gulch Road/ SR 116 and northbound Lakeville Highway would affect the unlined ditch that wraps around the intersection at this location. The ditch would be reconstructed after widening with the capacity maintained. No significant increase in runoff volume is anticipated at this location.

Storm water retention features (i.e., bio swales, biostrips) would be employed to the extent feasible (see section 3.3.10), with specifications determined during the Project Design Phase.

2.1.4 Electrical

Build Alternative 1 proposes a three-legged, fully actuated signals, including three signal mast arms with trenching, three advance warning flashing beacons, controllers, controller cabinets, service equipment enclosures, and lighting. The lighting for intersection safety would be provided by five new overhead streetlights with light-emitting diodes (LED) bulbs and one preexisting LED streetlight (Figure 2-1). Measures to minimize light pollution and related effects on nocturnal wildlife species include retrofitting lights with shields to minimize light spill outside the traveled way and use of lights with lower correlated color temperatures. These measures are further discussed in sections 3.3.1 Aesthetics and 3.3.4 Biological Resources.

2.1.5 Signage

For Build Alternative 1, proposed signing includes removing all existing signs, upgrading all signs to current California Manual on Uniform Traffic Control Devices standards, replacing new roadside-mounted signs to assist in navigation, and installing pedestrian and bike lane signs as necessary to assist in providing safe

navigation on bike lanes. Type XI Retroreflective & Florescent yellow green would be used for all pedestrian warning signs. Steel posts are recommended as needed.

2.1.6 Ground Disturbance, Planting and Irrigation

Build Alternative 1 would disturb approximately 1.45 acres of soil to achieve planned widening and realignment. Cut and fill earthwork associated with Project improvements would be balanced onsite to the extent possible. Preliminary grading estimates indicate that Build Alternative 1 would not require imported borrow materials and may require hauling and disposal of approximately 900 cubic yards of material during construction. The final cut and fill numbers would be defined during the Project design phase. Ground disturbance would include grubbing, grading, and excavation.

Depths of disturbance for grubbing would range from 0 to 4 inches; where tree root removal is required, depth would range from 1 to 3 feet. Installation of conduit would require excavation of 18 to 30 inches. Lighting standards and flashing beacon foundations would require depths ranging from 6 to 8.5 feet. Signalization pole installation would require deeper excavation, with depth of approximately 14 feet. The removal and reconstruction of the retaining wall would require excavation to a depth of approximately 5 feet, and drainage improvements and utility relocations would require excavation to a depth of 3 to 6 feet.

To accommodate the right turn lane on the Lakeville Highway northbound approach, mature eucalyptus trees may need to be removed within the existing ROW. In this area, the existing trees are close to traffic lanes and do not meet current setback requirements. If trees are removed, the area between the edge of the pavement and the ROW line would not be sufficient to allow the trees to be replaced, so replanting is not anticipated. The areas where tree removals occur would be treated for erosion control post construction.

Native and non-native trees at Stage Gulch Creek immediately northwest of the intersection could be impacted by bridge widening; pruning is anticipated. Additionally, there are mature trees on the slope affected by retaining wall reconstruction. At this location, proposed excavation to widen the highway an additional 5 feet would have the potential to damage trees or tree roots and therefore necessitate their removal. The extent of this grading work has not yet been defined; final tree impacts would be determined during the Project design phase.

2.1.7 Erosion Control

In addition to temporary construction site measures designed to limit erosion and stormwater pollution, permanent erosion control measures would be implemented to allow disturbed areas to be stabilized as a means of source control. All State and federal waters and wetlands would be protected from sediment and pollutant discharges in accordance with applicable laws, permits, and Caltrans requirements. Construction spoils and debris would be environmentally cleared for handling and disposal or would be hauled to a permitted disposal site. An array of measures are expected to be employed to achieve permanent erosion control. These include, but are not limited to, rolled erosion control product (netting), fiber rolls, compost socks, hydroseed, hydromulch, compost, the incorporation of materials, and decompaction. These measures would be implemented before the completion of construction at the locations where the soil surface is disturbed, including staging areas. To treat runoff from stormwater collection systems, permanent stormwater treatment may include, but is not limited to, biostrips or bioswales. Detailed erosion control plans and permanent stormwater treatment would be developed during the Project design phase.

2.1.8 Utilities

Overhead utility lines (Pacific Gas and Electric Company [PG&E], Verizon, AT&T, and cable) on wooden poles run along eastbound SR 116, eastbound SR 116/Stage Gulch Road, and southbound Lakeville Highway. Two light standards on wooden poles are proximate to the Project footprint. These overhead utilities would be relocated under both Build Alternative 1.

Utility verification (i.e., potholing) would occur during the Project design phase to confirm the need for utility relocations. Further utilities with facilities located within Project limits that may potentially be affected by the Project include water and sewer. As needed, utility relocations would occur prior to the beginning of construction and in consultation with utility owners. Section 3.3.19 provides more detail on utilities and service systems.

2.1.9 Right of Way

Build Alternative 1 would require permits to enter and construct (PTE&Cs), temporary construction easements (TCEs), and permanent slope easements from Sonoma County. Lakeville Highway (south leg of the intersection) is a Sonoma County road. Build Alternative 1 would not include acquisition of private property, residences or businesses, or displacement of people.

2.2 Build Alternative 2 - Roundabout

The roundabout alternative, herein 'Build Alternative 2,' is a single-lane roundabout with continuous right-turn bypass lane located 15 feet southeast of the existing intersection, away from the Stage Gulch Creek (Figure 2-3). This build alternative proposes to construct a roundabout with a 180-foot inscribed circle diameter and a design entry radius of 100 feet at each approach. The roundabout would have a continuous northbound right-turn bypass lane at the south leg of the intersection (northbound Lakeville Highway turning east onto SR 116/Stage Gulch Road eastbound). The bypass lane would be 200 feet in length and terminate 200 feet past the intersection. Eastbound SR 116/Stage Gulch Road would be widened for a minimum of 200 feet to accommodate the northbound right-turn bypass lane. There would be single-lane entries for the westbound (SR 116/Stage Gulch Road) and eastbound (SR 116) approaches.

Build Alternative 2 would include 8-foot-wide shared-use path sidewalks and curb ramps adjacent to the roundabout. Raised islands would separate pedestrians, bicyclists, and vehicular traffic in the roundabout.

The inscribed circle diameter of the roundabout would be 180 feet to maintain traffic flow and facilitate the movement of truck traffic in the opening year (2026) while preserving room for future improvements. SR 116 is part of the California Terminal Access Network; thus, the federal Surface Transportation Assistance Act (STAA) allows interstate STAA-designated trucks to travel on the route. This roundabout would be designed to accommodate STAA-designed vehicle 'WB67;' WB67 are commonly used, large, single-trailer (53-foot trailer) trucks on the highway and interstate systems.

2.2.1 Pedestrian and Bicycle Lane Improvements

Build Alternative 2 includes 8-foot-wide shared-use path sidewalks and curb ramps adjacent to the roundabout (Figure 2-3). Raised islands would separate the bicyclists and pedestrians from the vehicular traffic in the roundabout. Shared-use path sidewalks would be constructed adjacent to the raised islands. The roundabout option would likely have fewer conflict points than the signalization option for most bicycle movements. This lower number of conflict points is in line with the new Federal Highway Administration (FHWA) *Improving Intersections for Pedestrians and Bicyclists: Informational Guide* (April 2022).

2.2.2 Structures

Build Alternative 2 would not require modification or removal of existing structures.

2.2.3 Drainage Systems

New drainage systems in the vicinity of the roundabout would be constructed to accommodate runoff increases from the new construction and the new impervious area, which is estimated to be 1.79 acres for Build Alternative 2. Two culverts/pipes would be replaced, one new drainage system would be installed, and an existing ditch would be moved and reconstructed (Figure 2-3).

Similar to Build Alternative 1, an existing 24-inch culvert and drainage inlet crossing SR 116 northwest of the retaining wall is within the Project limits and would be replaced in kind since no significant increase in runoff volume is anticipated at this location. The existing 18-inch culvert located by Ernie's Tin Bar would be replaced with Build Alternative 2.

The roundabout location and widening along eastbound SR 116/Stage Gulch Road and northbound Lakeville Highway would affect the unlined ditch that wraps around the intersection at this location. The ditch would be reconstructed after roundabout construction.

A new drainage system consisting of drainage inlets and pipes would be needed to intercept runoff in the roundabout and convey it off the road surface. Runoff would sheet-flow to the outside of the roundabout and flow along the curb face until it reaches a drainage inlet. The drainage systems on the northeastern side of the roundabout would eventually discharge into Stage Gulch Creek, near where the existing drainage system near Ernie's Tin Bar outlets. The drainage systems for the southwestern side of the roundabout would eventually discharge into the creek on the southwest side of the bridge. The drainage system for the southeastern side of the roundabout would discharge into the reconstructed drainage ditch. The area between the roundabout and Ernie's Tin Bar may be used for stormwater treatment, such as a biostrip or bioswale, to treat stormwater before entering the creek. Design for stormwater treatment would be determined during the Project design phase.

Legend

- Project Footprint - Alternative 2
- Curb
- Landscape/Buffer Strip
- Shared Use Path
- Potential Staging Area/New Driveway Access
- ADA Ramp
- Cut/Fill Limits
- Proposed Lane
- Replace Culvert
- Proposed Edge of Pavement
- Proposed Drainage System/ Reconstruct Ditch
- Remove/Replace Existing Guardrail
- Reconstruct Fence
- Crosswalk
- Flashing Beacon
- Street Light (Location Approximate)
- Street Light (existing)

0 100 200
Feet

Caltrans

FIGURE 2-3
Project Components - Alternative 2
Roundabout Layout

State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

2.2.4 Electrical

Build Alternative 2 proposes three advance warning flashing beacons and lighting at the roundabout. The lighting for intersection safety will be provided by fifteen new overhead streetlights with LED bulbs and one preexisting LED streetlight (Figure 2-3). Measures to minimize light pollution and related effects on nocturnal wildlife species include retrofitting lights with shields to minimize light spill outside the traveled way and use of lights with lower correlated color temperatures. These measures are further discussed in sections 3.3.1 Aesthetics and 3.3.4 Biological Resources.

2.2.5 Signage

Signage for Build Alternative 2 is similar to that described for Build Alternative 1. See Section 2.1.5.

2.2.6 Ground Disturbance, Planting and Irrigation

Build Alternative 2 would disturb approximate 1.79 acres of soil to achieve the planned roundabout and road realignment. Cut and fill earthwork associated with Project improvements would be balanced onsite to the extent possible. Preliminary grading estimates indicate that Build Alternative 2 would need approximately 1,500 cubic yards of imported borrow materials and require hauling and disposal of approximately 1,500 cubic yards of material during construction. The final cut and fill numbers will be defined during the Project design phase.

Ground disturbance would include grubbing, grading, and excavation. Depths of disturbance for grubbing would range from 0 to 4 inches; where tree root removal is required, depth would range from 1 to 3 feet. Depths of disturbance for grubbing and grading would not exceed several inches. Depth of disturbance for roundabout construction would be about 3 feet. Drainage improvements, installation of conduit and service equipment enclosures, utility relocations, and new lighting and advance warning beacons, would require excavation depths from 1.5 to 8.5 feet.

Similar to Build Alternative 1, the current design of Build Alternative 2 indicates that the planned footprint of the roundabout and shared use path extends within the dripline of multiple trees. Approximately 18 mature eucalyptus trees would be removed along northbound Lakeville Highway. Most of the existing trees that would be removed from within the ROW under Build Alternative 2 are close to traffic lanes and do not meet current setback requirements. The area between the edge of the pavement and the proposed new ROW line may not be sufficient to allow the trees to

be replaced, while maintaining line of sight for roundabout users. Hence, replanting is not anticipated. The areas where tree removals occur would be treated for erosion control.

2.2.7 Erosion Control

Erosion control for Build Alternative 2 would be the same as described for Build Alternative 1. See Section 2.1.7

2.2.8 Utilities

Utility relocation for Build Alternative 2 would be similar to that described for Build Alternative 1. See Section 2.1.8.

2.2.9 Right of Way

Build Alternative 2 would require ROW acquisitions, PTE&Cs, TCEs, and permanent slope easements from Sonoma County and private landowners. Build Alternative 2 would require ROW acquisitions from private owners, including a full parcel acquisition for a nonresidential lot, and deed transfers from Sonoma County. Figure 2-3 shows the proposed new ROW limits. Build Alternative 2 would not include acquisition of residences, businesses, or displacement of people.

2.3 Construction Methods

This section discusses the anticipated methodology for construction staging, schedule, and construction-related equipment. Exact staging and scheduling of construction activities would be determined by the contractor, within the environmental limitations and permit requirement. Project plans and specifications tell the contractor the end product; however, the contractor determines the final construction means and methods. The following description includes reasonable assumptions made based on the professional judgement of Caltrans engineers and construction personnel.

2.3.1 Construction Schedule

The Project is anticipated to start construction in April 2025 and end construction in September 2026. Construction-related activities would be limited to daytime hours. However, there may be some work during night-time hours to avoid temporary highway closures for tasks that could interfere with traffic or create safety hazards. Examples of these tasks include striping operations, traffic control setup, installation of storm drain crossings, and pavement removal and replacement. Project construction would occur over approximately 5 months for Build Alternative 1 and approximately 7 months for Build Alternative 2.

2.3.2 Construction Sequence

Prior to the beginning of construction-related activities, construction area signs; environmentally sensitive area (ESA) fencing; and construction site, water pollution control, and erosion control BMPs would be installed. ESA fencing would delineate the limits of the work area and protect vegetation, trees, and biologically or archaeologically sensitive areas from construction-related activities.

For both Build Alternatives, staging areas and traffic control would be installed, and utilities would be located and moved. Each alternative has an approximate sequence of construction work, described below.

As construction of the Project concludes, all construction-related items would be removed. This includes removing the temporary erosion control, construction site, and water pollution control BMPs; ESA fencing; temporary barrier systems; temporary end treatments; and construction area signs.

BUILD ALTERNATIVE 1 SIGNALIZATION

Build Alternative 1 would be constructed in three stages.

Stage 1 would include:

- Utility relocation
- Tree removal
- Fence removal and installation of ESA fencing
- Bridge widening
- Retaining wall reconstruction
- Widening the eastbound SR 116 approach from the north
- Widening on both sides of the Lakeville Highway approach from the south
- Drainage system installation
- 24-inch culvert replacement
- Signalization groundwork and pole installation

Stage 2 would include:

- Highway widening on the south side of the eastern leg (eastbound SR 116/Stage Gulch Road)
- Electrical groundwork
- Ditch reconstruction

- Preexisting fence reinstallation

Stage 3 would include:

- Widening on the north side of the eastern leg (westbound SR 116/Stage Gulch Road)
- Electrical groundwork work
- Drainage system installation near Ernie's Bar
- ESA fence removal
- Final paving, lane striping, and clean up

BUILD ALTERNATIVE 2 ROUNDABOUT

Build Alternative 2 would be constructed in five stages.

Stage 1 would include:

- Utility relocation
- Tree removal
- Fence removal and installation of ESA fencing
- Widening (grading and paving) on the south side of the eastern leg (eastbound SR 116/Stage Gulch Road)
- Widening (grading and paving) on the eastern side of the southern leg (southbound Lakeville Highway)
- Electrical groundwork work
- Reconstruction of the existing ditch and fence

Stage 2 would include:

- Widening (grading and paving) on the western side of the intersection
- Widening (grading and paving) on the west side of the southern leg (southbound Lakeville Highway)

- Electrical groundwork work
- ESA fence removal
- Preexisting fence installation
- Construction of a portion of the roundabout (grading, paving, and curb/island construction)

Stage 3 would include:

- Widening the area between the SR 116 and SR 116/Stage Gulch Road
- Replacing the existing 18-inch drainage pipe
- Electrical groundwork work

Stage 4 would include:

- Completion of the roundabout (grading, paving, and curb/island construction)
- Construction of the approach medians
- Lighting groundwork, service equipment enclosure, and lighting standards installations

Stage 5 would include:

- Completion of the multi-use pathway and landscape buffers
- ESA fence removal
- Final paving, lane striping, and clean up

2.3.3 Traffic Control

Preliminary Traffic Management Plan (TMP) Data Sheet and Stage Construction and Traffic Handling Plans have been developed for both Build Alternative 1 and Build Alternative 2 (Caltrans 2022a; Caltrans 2022b). For both Build Alternatives, staged construction and shoulder closures are expected during construction. One-way controlled traffic is not anticipated as an ongoing feature of the construction traffic control plans, but may be required for specific events (e.g., staging and set up of barrier system).

BUILD ALTERNATIVE 1 SIGNALIZATION

This Build Alternative would involve shoulder closures during highway widening, bridge widening, retaining wall reconstruction, and signal installation. The shoulder closures would be delineated with a temporary barrier system (e.g., K rails) including crash cushions. The barrier would be placed to allow 11 to 12-foot widths for the temporary traveled way; including existing shoulders. Portable message signs, ground mounted signs, temporary traffic stripes, and portable delineators would be used. In addition, a Construction Zone Enhanced Enforcement Program (COZEEP) area would be established. For all construction stages (1 through 3), traffic control would remain as existing, with stop signs controlling the traffic approaching the intersection from SR 116/Stage Gulch Road.

BUILD ALTERNATIVE 2 ROUNDABOUT

This alternative would involve shoulder closures and lane routing during highway widening, culvert replacement, ditch reconstruction, roundabout construction, and drainage system installation. The closures and routing would be delineated with temporary barrier systems (e.g., K rails) including crash cushions at high-risk locations. The barriers would be placed to allow 11 to 12-foot widths for the temporary traveled way; the existing highway shoulders and widened road segments would be used for travel. Portable message signs, ground mounted signs, temporary traffic stripes, and portable delineators would be used. In addition, a COZEEP area would be established. For construction stages 1 through 3, traffic control would include stop signs at all intersection approaches. For construction stages 4 and 5, all stop signs would be removed and traffic would be controlled with reduced speeds and temporary roundabout lanes.

2.3.4 Staging Areas

Staging areas for the overnight storage of construction equipment and materials would be limited to areas within the Caltrans ROW, such as the shoulders along the eastern approach to the intersection. Additional storage may be necessary. Construction staging areas shall have no impacts on native vegetation, and residents and motorists would be shielded from its impacts to the maximum extent possible.

2.3.5 Construction Equipment

Construction equipment may include, but is not limited to, backhoes, concrete trucks, dozers, haul trucks, excavators, flatbed trucks, graders, soil compactors, scrapers, pavers, and rollers. The contractor may select alternate equipment based on site-specific considerations.

2.4 Project Features

The proposed Project contains a number of standardized Project components which are employed on most, if not all, of Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed Project. These components are referenced as PFs in Chapter 3 as they pertain to different environmental resources and are separate from Avoidance and Minimization Measures (AMMs), which directly relate to impacts potentially resulting from the proposed Project.

2.5 No-Build Alternative

The No-Build Alternative would mean that the Project would not be constructed, and there would be no improvements to the intersection within the Project limits. As such, there would be no safety improvements for motorists. This alternative does not meet the purpose and need for the Project.

2.6 Alternatives Considered but Eliminated from Further Discussion

Six Build Alternatives were originally considered for this safety improvement Project. Four Build Alternatives were ultimately rejected during the early stages of the Project development phase because they would worsen the existing traffic level of service (LOS), increase the existing travel-time delay, worsen existing environmental conditions, or could not be accommodated under the Safety Improvements / SHOPP funding program.

TRAFFIC SIGNALS WITH TWO NORTHBOUND THROUGH LANES: This alternative would have provided one additional lane for through traffic traveling north from Lakeville Highway. Under this alternative, Stage Gulch Creek Bridge would have been widened by a total of 20 feet. The 20 feet would have accommodated an additional traffic lane and standard shoulder widths and would have provided adequate queue length for the left-turn lane. This alternative would have provided two northbound through lanes beginning at Lakeville Highway and would have accommodated future traffic needs for 20 years.

This alternative would have been capacity increasing, which is not the primary purpose of the Project, and would have involved alternative funding sources and resulted in a delay of Project construction and therein increased the risk to public safety. Therefore, this alternative was rejected.

SINGLE-LANE ROUNDABOUT AT EXISTING INTERSECTION, NO CONTINUOUS RIGHT-TURN BYPASS LANE: The single-lane roundabout would have had an inscribed circle diameter of 180 feet and a design entry radius of 100 feet at each approach. There would have been single-lane entries for the westbound (SR 116/Stage Gulch Road) and eastbound (SR 116) approaches.

This alternative would not accommodate forecasted traffic increases and was therefore rejected.

PARTIAL MULTI-LANE ROUNDABOUT WITH CONTINUOUS RIGHT-TURN BYPASS LANE CONSTRUCTED 15 FEET SOUTHEAST OF THE INTERSECTION: Under this alternative, a 200-foot inscribed circle diameter roundabout would have been constructed 15 feet southeast of the existing intersection, away from the creek. The roundabout would have been a partial multi-lane roundabout with single circulating lane in the southbound direction and dual circulating lanes in the northbound direction. Dual northbound through lanes would have been provided on Lakeville Highway, with the outside through lane terminating 500 feet downstream of the intersection. This alternative would have accommodated future (20-year) traffic needs; widening of the bridge on Stage Gulch Creek would have been required.

This roundabout alternative would have been capacity increasing, which is not the primary purpose of the Project and would have involved alternative funding sources and resulted in a delay of Project construction. The purpose of this Project is to improve safety. To widen the highway for additional through lanes to satisfy 20-year traffic needs would have delayed the opening year and would have impaired public safety. Therefore, this alternative was rejected.

PARTIAL MULTI-LANE ROUNDABOUT WITH CONTINUOUS RIGHT-TURN BYPASS LANE CONSTRUCTED 500 FEET SOUTH OF THE INTERSECTION: Under this alternative, a 200-foot inscribed circle diameter roundabout would been constructed 500 feet south of the existing intersection, away from the Stage Gulch Creek. The roundabout would have been a partial multi-lane roundabout with a single circulating lane in the southbound direction and dual circulating lanes in the northbound direction. Dual northbound through lanes would have been provided on Lakeville Highway, with the outside through lane terminating 500 feet downstream of the intersection. This alternative would have accommodated future (20-year) traffic needs; widening of the bridge on Stage Gulch Creek would have been required.

This roundabout alternative would have been capacity increasing, which is not the primary purpose of the Project, and would have involved alternative funding sources and resulted in a delay of Project construction. The purpose of this Project is to improve safety. To widen the highway for additional through lanes to satisfy future (20-year) traffic needs would have delayed the opening year and would have impaired public safety. Additionally, it would have required more ROW acquisitions than the alternatives under consideration, and would have worsened environmental impacts. Therefore, this alternative was rejected.

2.7 Permits, Licenses, Agreements, Certifications, and Approvals Required

Tables 2-1 and 2-2 list the permits, licenses, agreements, and certifications that are anticipated to be required for Build Alternative 1 and Build Alternative 2, respectively. Because Build Alternative 1 would require widening of the bridge over Stage Gulch Creek, this alternative would require biological review and permitting in addition to that required by Build Alternative 2.

Table 2-1. Build Alternative 1: Permits, Licenses, Agreements, Certifications, and Approvals Required

Agency	Permits, Licenses, Agreements, Certifications, and/or Approval	Status
California Department of Fish and Wildlife	Section 1602 Lake and Streambed Alteration Agreement	Application to be submitted during the design phase
San Francisco Bay Regional Water Quality Control Board	Section 401 Water Quality Certification	Application to be submitted during the design phase
U.S. Army Corps of Engineers	Section 404 Permit	Application to be submitted during the design phase
U.S. Fish and Wildlife Service	Biological Opinion	Targeting to receive during the design phase

Table 2-2. Build Alternative 2: Permits, Licenses, Agreements, Certifications, and Approvals Required

Agency	Permits, Licenses, Agreements, Certifications, and/or Approval	Status
U.S. Fish and Wildlife Service	Biological Opinion	Targeting to receive during the design phase

2.7.1 Other Agreements

Maintenance agreements may be needed, depending on the preferred alternative. The details of the agreements (if needed), including roles and responsibilities, would be further developed in the Project design phase.

2.7.2 Title VI Non-Discrimination Policy Statement

Caltrans is a recipient of Federal Highway Administration federal-aid highway funds. Recipients of federal funds are required to comply with various non-discrimination laws and regulations, including Title VI of the Civil Rights Act of 1964 (Title VI). Title VI forbids discrimination against anyone in the United States on the basis of race, color, or national origin, in the programs and activities of an agency receiving federal financial assistance. Caltrans commitment to upholding the mandates of Title VI is summarized in the Non-Discrimination Policy Statement (Appendix C).

Chapter 3 California Environmental Quality Act Evaluation

The following discussions evaluate potential environmental impacts of the Project related to the CEQA checklist to comply with state CEQA Guidelines (Title 14 California Code of Regulations Division 6, Chapter 3, Section 15091).

3.1 Environmental Factors Potentially Affected

As part of the scoping and environmental analysis carried out for the Project, the following environmental factors were considered, but no impacts were identified: mineral resources, population and housing, public services, and recreation. The environmental factors marked with an "X" would be potentially affected by the Project. Further analysis of these environmental factors is discussed in the subsections that follow.

X	Aesthetics	X	Agriculture and Forestry	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
X	Geology/Soils	X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials
X	Hydrology/Water Quality	X	Land Use/Planning		Mineral Resources
X	Noise		Population/Housing		Public Services
	Recreation	X	Transportation/Traffic	X	Tribal Cultural Resources
X	Utilities/Service Systems	X	Wildfire	X	Mandatory Findings of Significance

3.2 Determination

On the basis of this initial evaluation:

X	I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature:	**Date:**
Maxwell Lammert	3/27/2023
Printed Name: Maxwell Lammert	**For:**

3.3 CEQA Environmental Checklist

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the Project. In many cases, background studies performed in connection with projects will indicate that there are no impacts to a particular resource. A “No Impact” answer in the “CEQA Determination” column of the impact summary tables at the beginning of each resource category section in this chapter reflects this determination. The words "significant" and "significance" used throughout this IS/ND are related to CEQA, not National Environmental Policy Act, impacts. The questions in each impact summary table are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

3.3 CEQA Environmental Checklist

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the Project. In many cases, background studies performed in connection with projects will indicate that there are no impacts to a particular resource. A “No Impact” answer in the “CEQA Determination” column of the impact summary tables at the beginning of each resource category section in this chapter reflects this determination. The words "significant" and "significance" used throughout this IS/ND are related to CEQA, not National Environmental Policy Act, impacts. The questions in each impact summary table are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project Features are measures incorporated into Caltrans projects to reduce environmental impacts that can include both design components of the project and standardized measures that are applied to most, if not all Caltrans projects, such as construction site BMPs and measures included in the Caltrans Standard Plans and Standard Specifications or as Standard Special Provisions. They are considered to be an integral part of the Project and have been considered prior to any significance determinations documented in this chapter. AMMs are additional measures to avoid and/or minimize a project’s environmental impacts but are more specifically tailored to a given project’s particular impacts. The PFs and AMMs incorporated into the Project are described in this chapter and are compiled in Appendix A.

Sections 3.3.1 through 3.3.20 present the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the Build Alternatives. The level of significance determinations is defined as follows:

- No Impact: Indicates no physical environmental change from existing conditions.
- Less Than Significant Impact: Indicates the potential for an environmental impact that is not significant with or without the implementation of PFs/AMMs.
- Less Than Significant Impact with Mitigation Incorporated: Indicates the potential for a significant environmental impact that would be mitigated with the implementation of mitigation measures to a level of less than significant.
- Potentially Significant Impact: Indicates the potential for a significant and unavoidable environmental impact.

CEQA significance determinations are made for both Build Alternatives. Where impact conclusions of the alternatives differ, the analysis provides descriptions of the environmental impact by Build Alternative and differentiates the conclusions in the checklist impact summary tables. Where impacts are similar for both Build Alternatives, the analysis describes the effect of the Project as a whole.

3.3.1 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?	Both Build Alternatives: Less Than Significant Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Both Build Alternatives: 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?	Both Build Alternatives: Less Than Significant Impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Both Build Alternatives: Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR AESTHETICS

A *Visual Impact Assessment* (Caltrans 2023a) was prepared by the Caltrans Office of Landscape Architecture for the Project, and a summary of the findings is presented in this section.

Although much of SR 116 is an officially designated State Scenic Highway, the highway at the Project is not so listed, and it has not been categorized as eligible for such a designation. Although not eligible to be designated as a State Scenic Highway, the route in general, and at the Project, is nonetheless largely attractive and of good, although not exceptional, scenic quality. The highway is a substantial but not primary visual feature in the landscape. The landscape is expansive in all directions, with views of hillsides in the distance and a variety of agricultural land uses in the foreground.

The primary components of the visual landscape are adjacent agricultural parcels, the various elements of the highway, distant hills, large eucalyptus trees, the riparian vegetation of Stage Gulch Creek, and widely scattered residences and agricultural buildings. While some of the agricultural buildings contribute to a bucolic atmosphere, some are large and of more modern and utilitarian design which do not contribute to the area's visual quality.

The corrugated tin structure of Ernie's Tin Bar, immediately adjacent to and north of the intersection, is likely noticed by most highway users and is visually appealing and

unique. Detracting from its potential charm are a chain-link fence and stored equipment, a row of metal bollards protecting the building from errant vehicles, a large metal shipping container, and various other elements. Due to various changes to the building's original design, it is not considered a resource of visual or cultural significance.

Depending on the time of year, the area surrounding the intersection is primarily green or tan and green, with few structures in the area. Overhead utility lines run along both roadways; there are otherwise few detractors from the quality of the visual landscape. Each road carries a single lane of traffic in each direction, with a left-turn lane from eastbound SR 116 to Stage Gulch Road. The roads carry heavy traffic with a speed limit of 55 miles per hour (mph). The area exemplifies an agricultural landscape typical of Sonoma County.

a) Less Than Significant Impact

While SR 116 at the Project is neither an Officially Designated State Scenic Highway, nor listed as eligible for designation, there are nonetheless scenic resources, including vistas, to be protected. Vistas from the intersection are pleasing; they include distant hillsides and nearby largely undeveloped agricultural properties. The visual quality of the existing corridor would be slightly altered by either of the proposed Build Alternatives. The level of unity and intactness of the long-distance views to the adjacent hills would slightly change under either Build Alternative. However, the dominance of the views beyond the highway would remain and would not be degraded by Project implementation.

Build Alternative 1: Signalization

Build Alternative 1 would have a low degree of visual impact on existing scenic vistas with traffic signals only appearing in the foreground from some vantages. Scenic vistas would not be substantially affected. Therefore, impacts to scenic vistas would be less than significant.

Build Alternative 2: Roundabout

Project elements of the roundabout, Build Alternative 2, would appear in the foreground of scenic vistas from most areas of the highways involved but would not otherwise affect scenic vistas. Build Alternative 2 would have a moderate-low degree of visual impact on scenic vistas and would not be substantial. Standard PFs and AMMs that limit tree work, call for screening and revegetation among other things (PF-AES-01 to PF-AES-04, PF-AES-07, PF-AES-08, and AMM-AES-01) would

further reduce impacts to scenic vistas; impacts to scenic vistas would be less than significant.

b) Less Than Significant Impact

The Project would not adversely affect a designated scenic resource (such as a rock outcropping or historic property) as defined by CEQA statues or guidelines, or by Caltrans policies. The removal of large trees is the Project element most likely to damage the scenic resources of the area. Other scenic resources are largely unaffected.

A large number of trees would be removed under Build Alternative 1 and Build Alternative 2; likely including the entire row of large eucalyptus southeast of the intersection, as well as a large eucalyptus on the southeast corner of the intersection. Due to the limited amount of unpaved roadside within the Caltrans ROW, it is unlikely that this impact can be offset by on-site replanting. Impacts to visual resources would be unmistakable and would rise to a moderate level. Within the context of the surrounding landscape of open fields and expansive views, impacts of both Build Alternatives to scenic resources, even with tree removal, would be moderate-low, and would not substantially degrade the quality of scenic resources. Therefore, impacts to scenic resources would be less than significant.

Implementation of standard PFs, PF-AES-01 to PF-AES-03, and that require avoiding unnecessary vegetation removal, prevent vegetation and tree damage would minimize impacts to scenic resources such as trees.

c) Less Than Significant Impact

Implementation of the standard PFs and AMMs presented at the end of this section would help reduce impacts to visual character.

Build Alternative 1: Signalization

Traffic signals would slightly degrade the existing visual character and quality of the site by adding an element with urban connotations to a rural intersection where there are currently none. Currently, there are two streetlights at the intersection: an overhead streetlight is mounted on a wooden pole adjacent to Ernie's Tin Bar and an overhead street light is mounted on the utility pole on the west side of the intersection. These light poles are not owned by Caltrans and lighting specifications are limited to observable features; lights are LED and do not appear to be shielded.

Build Alternative 1 would expand the highway element and add electric lighting, common elsewhere but currently limited at this location. The existing visual character or quality of the Project footprint and its surroundings would be slightly degraded with the addition of lighting and new pavement; the change would be low. Integration of standard PFs and AMMs (PF-AES-01 to PF-AES-08, and AMM-AES-01) would further reduce impacts to visual character. Therefore, impacts to visual character would be less than significant.

Build Alternative 2: Roundabout

The addition of the roundabout and related transportation facility elements would change the visual character and quality of the site. These changes include the elements discussed for Build Alternative 1 but would be expanded due to the many additional proposed elements of the roundabout not typically found along rural highways and are uncommon on SR 116 near the Project. The roundabout would create a large expansion in paved area and the addition of overhead lighting and signage, as well as advance warning beacons. To minimize visual impacts, the aesthetics of the roundabout would be designed to harmonize with the location and setting. The visual character of the intersection would be moderately changed. Application of standard PFs and AMMs (PF-AES-01 to PF-AES-08, and AMM-AES-01), would further reduce impacts to visual character. Therefore, impacts to visual character would be less than significant.

d) Less Than Significant Impact

Both Build Alternatives include new sources of light and glare to an area that is currently only lightly illuminated.

During construction of either Build Alternative, construction lighting would be limited to the Project footprint for construction-related activities. Lights would be shielded and directed toward the area of work and would not constitute a substantial source of light trespass outside the work area.

Implementation of the standard PFs presented at the end of this section would help limit impacts to light and glare.

Build Alternative 1: Signalization

Although lighting standards would be shielded to the extent feasible, lighting standards, traffic signals and advance warning beacons would be visible from some distance. The degree of added light would be less than substantial, and the degree of

visual change would be low. Build Alternative 1 would not result in new substantial light or glare that would adversely affect nighttime views. The implementation of standard Aesthetic PFs (PF-AES-05, PF-AES-06, and PF-AES-08) and Biological PFs (PF-BIO-19) including the use of directional lighting, shielding, and reduction of color temperature, would minimize lighting perception and light trespass to adjacent residences and to the traveling public. Therefore, the impacts of light and glare would be less than significant.

Build Alternative 2: Roundabout

Build Alternative 2 would require a greater number of overhead electroliers than Build Alternative 1. Impacts of Build Alternative 2 on light and glare conditions at the intersection would be moderate. Similar to Build Alternative 1, Build Alternative 2 would not result in new substantial light or glare that would adversely affect nighttime views. The implementation of standard Aesthetic PFs (PF-AES-05, PF-AES-06, and PF-AES-08) and Biological PFs (PF-BIO-19), including the use of directional lighting, shielding, and reduction of color temperature, would minimize lighting perception and light trespass to adjacent residences and to the traveling public. The impacts of light and glare would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs into the Project for Aesthetics:

- **PF-AES-01, Vegetation Impacts:** Minimize impacts to vegetation to the greatest extent possible while allowing the Project to be implemented.
- **PF-AES-02, Vegetation Protection:** Vegetation to remain should be protected from construction activities by means of temporary fencing (or similar) when vegetation is close to construction work.
- **PF-AES-03, Tree Protection:** Where the pruning of trees is required to accommodate construction operations, pruning must be under the supervision of a certified arborist.
- **PF-AES-04, Screening:** Construction materials and equipment should be stored in staging area(s) beyond direct view of the motoring public and residential properties to the extent feasible.

- **PF-AES-05, Limit Nightwork Impacts:** If nightwork is included, limit light trespass to residences and motorists with the use of directional lighting, shielding, and other measures as needed.

- **PF-AES-06, Minimize Light Pollution:** All lighting on new highways and structures would be designed to limit light pollution and have minimum impact on the surrounding environment. All light fixtures would have light-emitting diodes configured at the minimum necessary number of bulbs, optimal mounting height, mast-arm length, and angle to restrict light to the highway. If applicable, shields on the fixtures to prevent light trespass to adjacent properties would be considered during the Project design phase.

- **PF-AES-07, Reseeding Disturbed Areas:** Apply erosion control seeding and similar measures to all areas of disturbance where they are beyond paved areas unless specifically unwarranted for safety considerations.

- **PF-AES-08, Minimize Visual Resources Impacts during Final Design:** The minimization of impacts to visual resources should be emphasized in highway layouts and all other aspects of Project design and implementation. The Office of Landscape Architecture shall be consulted throughout the Project design process.

- **PF-BIO-19, Lighting Design:** Described in Section 3.3.4

AVOIDANCE AND MINIMIZATION MEASURES

Caltrans would incorporate the following AMMs into the Project to avoid and/or minimize potential impacts to Aesthetics:

- **AMM-AES-01, Selection of Materials:** The need for the architectural treatment of proposed Project elements should be investigated by the Caltrans Office of Landscape Architecture during the Project design phase and incorporated as appropriate. Measures may also include aesthetic treatment of inert surfacing in the roundabout islands, coloring or other treatments to new concrete installations, including concrete paving used as vegetation control beneath barriers and other elements, among other mitigating treatments.

3.3.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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?	Both Alternatives: Less Than Significant Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Both Build Alternatives: Less Than Significant 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))?	Both Build Alternatives: No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Both Build Alternatives: 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?	Build Alternative 1: No Impact Build Alternative 2: Less Than Significant Impact

CEQA Significance Determinations for Agriculture and Forest Resources

The Project is located in rural Sonoma County along SR 116 at the intersection of Stage Gulch Road and Lakeville Highway at PM 39.3. This area is characterized by a mix of undeveloped and agriculture/grazing lands, with rural residential development and infrequent commercial development. The parcels in the footprint of the proposed Project (Build Alternative 1 and Build Alternative 2) have a Sonoma County General Plan land use designation of Diverse Agriculture (DA) (Sonoma County 2016a).

The classification of farmlands Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency (California Department of Conservation 2019) describes the lands northeast of SR 116 at the Stage Gulch Road/Lakeville Highway intersection as grazing or other lands, while the lands on the southwest side of SR 116 at the Stage Gulch Road/Lakeville Highway are classified as farmlands of Local Importance or Other Lands (Figure 3-1). Among these lands of Local Importance is a large parcel, 367.88 acres (Sonoma County assessor's parcel number [APN] 068-020-

001), under a Williamson Act Contract. This parcel is connected to SR 116/Lakeville Highway via a rural access road, Lopes Road. Lopes Road intersects SR 116 at a point directly north of the proposed Project footprint (Sonoma County 2020).

a and b) Less Than Significant Impact

Neither Build Alternative 1, nor Build Alternative 2 would permanently affect Sonoma County APNs located on land under a Williamson Act Contract. Neither Build Alternative 1, nor Build Alternative 2 would affect Sonoma County APNs located on land identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the FMMP of the California Resources Agency (Figure 3-1). However, Build Alternative 2 would require acquisition of land from parcels identified as Farmland of Local Importance and Grazing Land.

Farmland of Local Importance is land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

A summary of area needed for fee title acquisitions and TCEs for each Build Alternative is provided in Table 3-1.

Legend

- Project Limits

Williamson Act Type (2017)

- Type II Contract

FMMP Type (2018)

- D - Urban and Built-Up Land
- G - Grazing Land
- L - Farmland of Local Importance
- P - Prime Farmland
- S - Farmland of Statewide Importance
- U - Unique Farmland
- X - Other Land

N

0 1,000 2,000 Feet

Caltrans

FIGURE 3-1
Williamson Act and Farmland Mapping and Monitoring Program (FMMP) Parcels
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

Path: Z:\Projects Active\21 002 009 SR116 2Q770\GIS\FMMP\21 002 009 SR116 FMMP\21 002 009 SR116 FMMP.aprx

Table 3-1. Right of Way Acquisition by Build Alternative

Assessor's Parcel Number (APN)	Parcel Size (acres)	Zoning	FMMP Farmland Category	Build Alternative 1: Fee Title Acquisition (acres)	Build Alternative 1: TCE (acres)	Build Alternative 2: Fee Title Acquisition (acres)	Build Alternative 2: TCE (acres)
068-020-024	25.94	DA	G	0	0.417	1.334	0.014
068-020-006	110.17	DA	LI	0	0.171	0.345	0
068-030-002	0.27	DA	O	0	0.040	0.27	0
068-030-001	0.54	DA	O	0	0.034	0	0
068-020-019	39.10	DA	LI, O	0	0.112	0	0
068-030-003	1.16	DA	O	0	0.084	0	0
068-030-005	1.36	DA	O	0	0.086	0	0
068-020-001	367.68	LEA	LI, O	0	0.028	0	0
068-020-022	82.20	DA	G, O	0	0.079	0	0.153
Totals	**n/a**	**n/a**	**n/a**	**0**	**1.051**	**1.949**	**0.167**

Notes:
DA = Diverse Agriculture
FMMP = Farmland Mapping and Monitoring Program
G= Grazing Land
LEA= Land Extensive Agriculture
LI= Farmland of Local Importance
n/a = not applicable
O= Other Lands
TCE = temporary construction easement

Build Alternative 1 Signalization

Build Alternative 1 would not require ROW acquisitions from private parcels zoned for agriculture. This alternative would have no permanent impact on agricultural resources. During construction, TCEs would be needed from adjacent property owners, including agricultural parcels and one parcel, 068-020-022, under a Williamson Act contract. The affected area of Williamson Act parcel would be limited to the apron of the established access driveway, where it intersects SR 116; the TCE would not affect agricultural lands associated with this parcel.

The small area (approximately 1 acre) needed for construction access on all parcels and the limited duration of construction activities (approximately 5 months) would

not affect farmland production. Therefore, Build Alternative 1 would have a less than significant impact on farmlands and would not conflict with agricultural zoning or Williamson Act contracts.

Build Alternative 2 Roundabout

Build Alternative 2 would require expansion of the ROW. Approximately 1.95 acres of DA-zoned agricultural land would be acquired for conversion to a non-agricultural use (Table 3-1); of this, 0.35 acre have been categorized as Farmland of Local Importance (LI), an additional 1.34 acres have been categorized by the FMMP as grazing (G), and 0.27 acre are categorized as Other (O). None of these parcels are under Williamson Act contracts.

Table 3-2. Build Alternative 2: Proposed Farmland Conversion as a Percent of Total Available Countywide Land

FMMP Lands	Available Acreage in Sonoma County*	Proposed Acres to be Converted	Acres as Percent of Total Available Countywide
LI	79,915	0.34	< 0.0004
G	415,429	1.33	<0.0003
O	355,236	0.27	<0.00007

Notes: FMMP = Farmland Mapping and Monitoring Program, G= Grazing Land, LI= Farmland of Local Importance, O= Other Lands.

* California Department of Conservation, Division of Land Resource Protection: Appendix A 2014-2016 County Conversion Tables, Sonoma County, Table A-40 (California Department of Conservation 2020)

Within the context of the County of Sonoma landscape, the small percentages of land acquisition (Table 3-2) would not substantially affect agricultural productivity in the region and existing landowners would still retain ownership of the remaining parcel. Build Alternative 2 would reduce the amount of DA-zoned land surrounding the Project by 1.4 percent; in other words, acquisitions for Build Alternative 2 would result in a direct loss of 1.95 acres of agricultural zoned lands, reducing the area from 136.4 acres of DA-zoned land to 134.4 acres of DA-zoned lands. Therefore, although the acquired agricultural lands would be converted to a non-agricultural use, the conversion of farmland and grazing land to ROW would be a less than significant impact on farmland resources and would not conflict with existing zoning.

c and d) No Impact

The Project would not conflict with existing zoning for forest land or timberland as there are no lands zoned as forest lands or timberlands within the Project footprint.

e) No Impact (Build Alternative 1) and Less Than Significant Impact (Build Alternative 2)

As described in response to Questions a and b above, Build Alternative 1 would not convert agricultural lands to a non-agricultural use, so would have no impact. Build Alternative 2 would require an expansion of the ROW and would convert the acquired agricultural lands to a non-agricultural use. This impact is less than significant.

PROJECT FEATURES/AVOIDANCE AND MINIMIZATION MEASURES

There are no applicable standard PFs for Agriculture and Forest Resources. No AMMs are required to avoid and/or minimize potential impacts to Agriculture and Forest Resources.

3.3.3 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?	Both Build Alternatives: 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?	Both Build Alternatives: Less Than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Both Build Alternatives: Less Than Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Both Build Alternatives: Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR AIR QUALITY

The Project is located in Sonoma County within the San Francisco Bay Area Air Basin under the jurisdiction of the Bay Area Air Quality Management District. Sonoma County is designated as non-attainment for ozone and particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers ($PM_{2.5}$) under national ambient air quality standards (U.S. Environmental Protection Agency [USEPA] 2023), and non-attainment for ozone, $PM_{2.5}$, and particulate matter with aerodynamic diameter equal to or less than 10 micrometers (PM_{10}) under state air quality standards (CARB 2019). It is in attainment or unclassified for other federal and state air quality standards.

a) No Impact

The Project would have temporary construction emissions and construction-related activities would comply with state and local regulations and policies. Emission reduction measures would be implemented as standard PFs. Applicable PFs (PF-AQ-01 to PF-AQ-03) to reduce construction emissions are provided at the end of this section and are also found in Appendix A. The Project would not affect vehicle operation on SR 116 or nearby roadways when construction is complete. Long-term emission increases and adverse impacts from the Project are not anticipated. Therefore, the Project would not conflict with the region's air quality plans. There would be no impact to the air quality plans.

b, c, and d) Less Than Significant Impact

Build Alternative 1 and Build Alternative 2 would not alter characteristics of SR 116, Lakeville Highway, or local roadways; increase SR 116 transportation capacity; or change the horizontal or vertical alignments of SR 116. No long-term impacts to air quality would occur.

Construction-generated air pollutants are expected to be short-term. Construction-generated air pollutants include emissions resulting from material processing by onsite construction equipment, workers commuting to and from the Project, and traffic delays due to construction. The emissions would be produced at different rates throughout the Project depending on the construction-related activities occurring at that time. Potential impacts to air quality, including emissions of air pollutants, odors affecting nearby sensitive receptors, and exposure of sensitive receptors to pollutants, would be less than significant based on the temporary nature of the Project construction-related activities.

During construction, the Project would comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with applicable air pollution control rules, regulations, ordinances, and statutes. In addition, the Project would implement the construction site BMPs described in standard PFs (PF-AQ-01 to PF-AQ-03) to further reduce impacts to air quality.

The Project would have no long-term impacts on air quality and temporary construction-related impacts would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs for Air Quality:

- **PF-AQ-01, Dust Control Measures:** Implement dust control measures to minimize airborne dust and soil particles generated from construction-related activities, including watering or applying dust palliative to disturbed areas, preventing and promptly removing trackouts on SR 116 and other public roadways affected by construction traffic, and covering soils or construction materials or providing adequate freeboard (space from the top of the material to the top of the truck) during transport.

- **PF-AQ-02, Construction Vehicles and Equipment:** Maintain and tune the construction vehicles and equipment in accordance with manufacturer's specifications.
- **PF-AQ-03, Limit Idling:** Limit idling times either by shutting construction equipment off when not in use or reducing the maximum idling time to 5 minutes.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Air Quality.

3.3.4 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 or U.S. Fish and Wildlife Service, or National Marine Fisheries Service?	Both Build Alternatives: Less Than Significant Impact
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?	Both Build Alternatives: Less Than Significant 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?	Both Build Alternatives: Less Than Significant 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?	Both Build Alternatives: Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Both Build Alternatives: 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?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Biological Resources

The Caltrans Office of Biological Sciences and Permits prepared a Natural Environment Study (NES) to evaluate the effects of the Project on biological resources, including sensitive plants and wildlife species (Caltrans 2023b). A summary of the findings is presented here.

The Project footprint is defined as the area that would be directly affected by the proposed Project. It demonstrates the maximum extent of ground-disturbing activities as a result of construction activities and includes both temporary and permanent impact areas (Figures 2-1 and 2-3). The Project footprint also encompasses the maximum area needed for traffic staging activities. The Project Biological Study Area (BSA) is 6.98 acres; it encompasses Project Footprint areas for both Build Alternatives plus a 25-foot buffer (Figure 3-2).

Areas outside of the BSA, but adjacent to the Project footprint, were also assessed using visual observation from inside the ROW, literature, aerial images, satellite imagery, and database searches to identify potential wildlife dispersal corridors.

Information about habitat types and special-status species with the potential to occur within the combined BSA of both Build Alternatives was obtained from multiple sources, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation Database (IPaC), the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2022), the National Marine Fisheries Service (NMFS) database, the USFWS National Wetlands Inventory, and the Natural Resources Conservation Service (NRCS) soils and noxious weed information.

Results from the database searches informed the preliminary studies that were conducted to evaluate special-status species and resources as well as determine the need for additional agency coordination. Agency coordination included a request for technical assistance from the USFWS and NMFS.

Reconnaissance surveys to assess existing habitat conditions and potential for species occurrence within the BSA were conducted on March 29, 2021,

January 20 and October 11 of 2022. Field surveys were used to determine:

- Plant community and habitat types
- Potential jurisdictional wetlands and other waters
- Potential presence of special-status species
- Potential impacts to other natural resources
- Need for further sensitive species or critical habitat surveys

The results of the field surveys are summarized below.

a) <u>Less Than Significant Impact</u>

Special-status species that are potentially present within or adjacent to the BSA, as well as the Project's potential impact on those species and their habitat, are discussed in this section.

VICINITY MAP

LEGEND

Biological Study Area (BSA)

Stage Gulch Creek

0 100 200 400

Feet

FIGURE 3-2
Biological Study Area
Install Signals/Construct Roundabout at State Route 116 and Stage Gulch Road in Sonoma County EA 2Q770, SON-116 Post Mile 39.27
Sonoma County, California

Plants

The vegetation community in the Project BSA is primarily comprised of ruderal roadside grass and forb species. The eastbound SR 116 north of Stage Gulch Creek and northbound Lakeville Highway are lined with mature eucalyptus trees, and the understory beneath them consists of ripgut brome (*Bromus diandrus*) and slender oat (*Avena barbata*). The other roadsides, as well as the pasture southeast of the intersection where most of Build Alternative 2 would be constructed, contain the aforementioned grasses, but are more dominated by forbs such as shortpod mustard (*Hirschfeldia incana*), fennel (*Foeniculum vulgare*), prickly lettuce (*Lactuca serriola*), yellow star-thistle (*Centaurea solstitialis*), and wild carrot (*Daucus carota*). Small patches of narrowleaf milkweed (*Asclepias fascicularis*), bristly oxtongue (*Helminthotheca echioides*), and milk thistle (*Silybum marianum*) are also present. The overstory of Stage Gulch Creek downstream of the SR 116 bridge is dominated by California buckeye (*Aesculus californica*). Other riparian tree species include ornamental plantings. Upstream of the SR 116 bridge, the channel is mostly exposed under the high canopy of mature eucalyptus trees and supports only grasses such as bluegrass (*Poa* spp.) and slender oats, and some Himalayan blackberry (*Rubus armeniacus*) near Ernie's Tin Bar. Among these, yellow star-thistle is classified as a California noxious weed by the NRCS (2023).

Eight special-status plant species were determined to have the potential to occur in the BSA; of these, one species was determined to have a 'moderate' potential to occur and seven species were determined to have a 'low' potential to occur, where the range of 'potential to occur' was based on the vegetation types present, the degree of disturbance, and whether suitable habitat for each special-status plant species was observed within the BSA.

No targeted special-status plants were observed within the BSA during the 2022 reconnaissance surveys, however, surveys occurred outside of the known blooming period for most targeted species, occurred during drought conditions, and did not encompass the entirety of the Project footprint due to private land access limitations. No protocol level surveys for listed species were performed; therefore, implementation of AMM-BIO-05, *Targeted Pre-construction Plant Surveys,* and AMM-BIO-11, *Special-Status Plant Protection*, would be implemented.

Both Build Alternatives could adversely affect special-status plants directly (physical removal or damage to plants from dust, erosion, contaminated stormwater, or the introduction of invasive species among other things) and/or indirectly (significant

changes to solar exposure, or soil composition). Site hydrology is also an important factor in special-status species habitat; no significant changes in site hydrology are anticipated (see Section 3.3.9).

Implementation of standard PFs and AMMs (PF-BIO-04, PF-BIO-05, PF-BIO-09 to PF-BIO-13, AMM-BIO-05, and AMM-BIO-11, would avoid and/or minimize impacts to special-status plant species and their habitat. In addition, standard PFs from Air Quality (Section 3.3.2), PF-AQ-01, and Hazardous Materials (Section 3.3.9) PF-HAZ-01 would further reduce impacts to special status plants. Applicable PFs and AMMs are provided at the end of this section and are also found in Appendix A.

For both Build Alternatives, the Project would have a less than significant impact on special-status plants.

Wildlife

Federally listed wildlife species that have the potential or are known to occur in the BSA are:

- California red-legged frog (CRLF; *Rana draytonii*) (Threatened)
- State listed wildlife species that have the potential or are known to occur in the BSA are:
- Western pond turtle (WPT; *Actinemys marmorata*) (Species of Special Concern [SSC])
- Pallid bat (*Antrozous pallidus*) (SSC)
- California red-legged frog (SSC)

California Red-Legged Frog

The CRLF is a federally threatened species and a California SSC. The BSA is within the current known range of CRLF and there are four CNDDB occurrences within 2 miles of the BSA in creeks and ponded areas within creeks. The BSA does not include any designated critical habitat or any designated recovery units. Suitable breeding habitat was not identified within the BSA due to a lack of water depth and duration; however, the BSA has the potential to provide suitable aquatic non-breeding habitat and upland dispersal habitat.

The landscape between the known CRLF occurrences and the BSA features creeks and irrigation ditches that could constitute dispersal habitat, including a stock pond to the northeast of the Project. There is a potential that CRLF individuals could disperse into the BSA, particularly if these nearby aquatic resources support breeding populations of CRLF.

Build Alternative 1 Signalization

Build Alternative 1 would temporarily disturb 0.40 acre of aquatic non-breeding habitat during bridge widening and permanently affect 0.18 acre of upland dispersal habitat. The non-breeding habitat would be protected against permanent impacts during bridge abutment and deck widening with the implementation of standard PFs and AMMs that require revegetation and restoration of disturbed areas.

For Build Alternative 1, potential Project impacts also include direct loss of individuals during construction activities, including, but not limited to the following: vegetation removal, highway and bridge widening, and stream dewatering.

The Project has been designed to minimize long-term changes on CRLF habitat through design modifications, including use of stormwater BMPs and lighting modifications. The Project would implement Water Quality PF-WQ-01 that calls for compliance with the CGP, including the preparation of a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP), and other applicable agency permits. Design for stormwater treatment would be determined during the Project design phase and in coordination with permitting agencies.

The addition of five streetlights with Build Alternative 1 (Figure 2-1) would change the existing nighttime lighting condition at the intersection. Nocturnal animals, including CRLF, are sensitive to lighting changes. The timing, spread, intensity, and color-temperature of the chosen LEDs influence the effect in species. For example, bright-white and blue-white color-temperature LEDs have been shown to have greater effects than yellow-white or amber-white LEDs. To minimize effects on sensitive species, lighting would include retrofitting lights with shields to minimize light spill outside the traveled way (PF-AES-06) and the use of lights with lower correlated color temperature (PF-BIO-19).

Implementation of standard PFs and AMMs (PF-BIO-01 to PF-BIO-06, PF-BIO-09, PF-BIO-10, PF-BIO-14 to PF-BIO-21, AMM-BIO-01 to AMM-BIO-04) would include measures to avoid direct loss of individuals and would minimize impacts from vegetation removal, highway and bridge widening, new artificial light sources,

and stream dewatering. In addition, standard PFs from Aesthetics (Section 3.3.1) PF-AES-01 to PF-AES-03, and PF-AES-05 to PF-AES-07, Air Quality (Section 3.3.2), PF-AQ-01, Hazardous Materials (Section 3.3.9) PF-HAZ-01 to PF HAZ-04, and Water Quality (Section 3.3.10) PF-WQ-01 would further reduce impacts to CRLF. Applicable PFs and AMMs are provided at the end of this section and are also found in Appendix A.

Build Alternative 2 Roundabout

Implementation of Build Alternative 2 would permanently affect 1.53 acres of upland dispersal habitat. Build Alternative 2 would trigger the need for compensation for the permanent impacts to upland dispersal habitat. As outlined in AMM-BIO-13, this may include the purchase of CRLF credits at a USFWS-approved conservation bank, conducting habitat restoration in the region, contribution to a larger advanced mitigation property acquisition, habitat management, or other beneficial measure that would aid local recovery of the species. These preliminary acreage estimates may change during the Project design phase. Caltrans would make a final determination on impacts and develop a compensation plan after coordination with USFWS.

For Build Alternative 2, potential Project impacts include direct loss of individuals during construction activities, including but not limited to the following: vegetation removal, realignment, and new roadway construction.

Build Alternative 2 has been designed to minimize long-term effects on CRLF through design modifications, including use of stormwater BMPs and lighting modifications. The Project would implement Water Quality PF-WQ-01 that calls for compliance with the CGP, including the preparation of a SWPPP or WPCP, and other applicable agency permits. To treat runoff from stormwater collection systems, permanent stormwater treatment may include, but is not limited to, biostrips or bioswales to treat stormwater before entering Stage Gulch Creek. For example, the area between the roundabout and Ernie's Tin Bar may be used for stormwater treatment, such as a biostrip or bioswale. Design for stormwater treatment would be determined during the Project design phase and in coordination with permitting agencies.

The addition of fifteen streetlights with Build Alternative 2 (Figure 2-3) would change the existing nighttime lighting condition at the intersection. To minimize effects on sensitive species, lighting would include retrofitting lights with shields to minimize light spill outside the traveled way (PF-AES-06) and the use of lights with lower correlated color temperature (PF-BIO-19).

Implementation of standard PFs and AMMs (PF-BIO-01 to PF-BIO-06, PF-BIO-09, PF-BIO-10, PF-BIO-14 to PF-BIO-19, and AMM-BIO-01 to AMM-BIO-04, and AMM-BIO-13) would include measures to avoid direct loss of individuals and would minimize impacts from vegetation removal, realignment, addition of new artificial light sources, and new roadway construction to CRLF. In addition, standard PFs from Aesthetics (Section 3.3.1) PF-AES-01 to PF-AES-03, and PF-AES-05 to PF AES-07, Air Quality (Section 3.3.2) PF-AQ-01, Hazardous Materials (Section 3.3.9) PF-HAZ-01 and PF HAZ-02, and Water Quality (Section 3.3.10) PF-WQ-01 and PF-WQ-02 would further reduce impacts to CRLF. Applicable PFs and AMMs are provided at the end of this section and are also found in Appendix A.

For both Build Alternatives, the Project would have a less than significant impact on CRLF with standard PFs and AMMs incorporated.

Western Pond Turtle

The WPT is listed as a California SSC. This species occurs in a variety of permanent and intermittent aquatic habitats, such as ponds, marshes, rivers, streams, and ephemeral pools. Nests are typically created in grassy, open fields with soils that are high in clay or silt fraction near aquatic habitat. There are five WPT observations within a 5-mile radius of the BSA, all in either ponds or creeks much like Stage Gulch Creek and the stock pond northeast of the BSA. Therefore, while no WPT or evidence of WPT nesting was observed during site visits, there is a potential for this species to be found in upland areas, Stage Gulch Creek, ditches, and drainages near and in the BSA.

Build Alternative 1 Signalization

Build Alternative 1 would temporarily and permanently affect WPT upland habitat and temporarily affect WPT aquatic habitat. Potential Project impacts also include direct loss of individuals during construction activities, including, but not limited to the following: vegetation removal, highway and bridge widening, new sources of artificial lighting, and stream dewatering.

Implementation of standard PFs (PF-BIO-01 to PF-BIO-06, PF-BIO-09, PF-BIO-10, PF-BIO-14 to PF-BIO-21, and AMM-BIO-10) would avoid direct loss of individuals and minimize impacts to WPT from vegetation removal, realignment, new sources of artificial lighting, and new highway construction. In addition, standard PFs from Aesthetics (Section 3.3.1) PF-AES-01 to PF-AES-03, PF-AES-05 to PF-AES-07, Air Quality (Section 3.3.2)PF-AQ-01, Hazardous Materials (Section 3.3.9) PF-HAZ-01 to PF HAZ-04, and Water Quality (Section 3.3.10) PF-WQ-01 would further reduce

impacts to WPT. Applicable PFs are provided at the end of this section and are also found in Appendix A.

Build Alternative 2 Roundabout

Build Alternative 2 would permanently and temporarily affect WPT upland habitat; potential Project impacts include direct loss of individuals during construction, including vegetation removal, realignment, new sources of artificial lighting, and new highway construction.

Implementation of standard PFs (PF-BIO-01 to PF-BIO-06, PF-BIO-09, PF-BIO-10, PF-BIO-14 to PF-BIO-18, PF-BIO-20, and AMM-BIO-10) would avoid direct loss of individuals and minimize impacts to WPT from vegetation removal, realignment, new sources of artificial lighting, and new highway construction. In addition, standard PFs from Aesthetics (Section 3.3.1) PF-AES-01 to PF-AES-03, and PF-AES-05 to PF AES-07, Air Quality (Section 3.3.2) PF-AQ-01, Hazardous Materials (Section 3.3.9) PF-HAZ-1 and PF HAZ-2, and Water Quality (Section 3.3.10) PF-WQ-01 and PF-WQ-02, would further reduce impacts to WPT. Applicable PFs are provided at the end of this section and are also found in Appendix A.

For both Build Alternatives, the Project would have a less than significant impact on WPT with standard PFs and AMMs incorporated.

Pallid Bat

The pallid bat is listed as California SSC. There are CNDDB occurrences of pallid bat within 1.75 miles of the BSA. Pallid bats roost in crevices in rocky outcrops, cliffs, caves, mines, trees, and human structures such as bridges, barns, and porches. There are potentially suitable structures for pallid bat roosting within the BSA; however, no evidence of bat occupation was found during Project field surveys.

Potential Project impacts include direct impacts such as disturbance of bats roosting under the deck of Stage Gulch Creek Bridge, or in surrounding trees, and indirect impacts such as noise during night construction, potentially leading to a temporary loss in foraging habitat and night roosts.

For both Build Alternatives, implementation of standard PFs (PF-BIO-01 to PF-BIO-05, PF-BIO-09, PF-BIO-10, PF-BIO-15 to PF-BIO-18, and AMM-BIO-07 to AMM-BIO-09) would minimize impacts to bats. In addition, standard PFs and AMMs from Aesthetics (Section 3.3.1) PF-AES-05 and PF-AES-06, and Noise (Section 3.3.13) PF-NOISE-01, AMM-NOISE-01, AMM-NOISE-02, would further reduce impacts to

bats. Applicable PFs and AMMs are provided at the end of this section and are also found in Appendix A.

b and c) Less Than Significant Impact

The NWI (Figure 3-3) shows 850 linear feet of presumably jurisdictional waters of the U.S. (also presumed to be waters of state) within the BSA. Stage Gulch Creek is classified as a riverine intermittent streambed, seasonally flooded. Flowing surface water is present for extended periods, especially early in the growing season, but is absent by the end of the growing season in most years. Surface water may remain through the dry season in isolated pools. There is also a stock pond about 700 feet northeast of the BSA that drains into Stage Gulch Creek through a culvert under the highway just beyond the northern edge of the Project footprint.

Site visits during the dry season showed this characterization of aquatic resources in the BSA to be broadly accurate; a delineation of aquatic resources would be conducted during the Project design phase. Limited riparian vegetation was documented as associated with Stage Gulch Creek. No additional sensitive communities were discussed.

Build Alternative 1 Signalization

Build Alternative 1 would temporarily affect 0.40 acre of presumably jurisdictional waters of the U.S./waters of the state, and associated riparian vegetation, through bridge widening. Caltrans would obtain a Clean Water Act (CWA) Section 404 authorization under Nationwide Permit 14 with U.S. Army Corps of Engineers (USACE), CWA Section 401 certification with the SFBRWQCB, and a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from the CDFW.

Riparian vegetation within and around Stage Gulch Bridge is likely to be removed or damaged during the bridge widening work. Replanting and restoration to the extent possible, would minimize impacts to riparian vegetation.

No potentially jurisdictional wetlands, as defined by Section 401/404 of the CWA, were identified within the BSA during field surveys. However, due to delays in obtaining permission to enter private parcels in the BSA, portions of the BSA were not surveyed for wetlands. A jurisdictional aquatic resource delineation would be conducted in the wet season during the Project design phase (AMM-BIO-06). If jurisdictional resources are delineated and avoidance is not feasible, an Aquatic

Resources Compensation Plan would be prepared and agency coordination and permitting initiated (AMM-BIO-12).

For Build Alternative 1, the implementation of standard PFs and AMMs (PF-BIO-01 to PF-BIO-05, PF-BIO-09 to PF-BIO-13, PF-BIO-20, AMM-BIO-05, AMM-BIO-06, and AMM-BIO-12) would avoid or minimize impacts to riparian vegetation, other sensitive natural communities, or wetlands. In addition, standard PFs from Hazardous Materials (Section 3.3.9) PF-HAZ-01 to PF-HAZ-04, and Water Quality (Section 3.3.10) PF-WQ-01 would further reduce impacts to riparian vegetation, other sensitive natural communities, or wetlands. As a result, Build Alternative 1 would have a less than significant impact on sensitive natural communities and wetlands. Applicable PFs and AMMs are provided at the end of this section and are also found in Appendix A.

Build Alternative 2 Roundabout

Build Alternative 2 is not anticipated to affect jurisdictional waters of the U.S. and/or waters of the state or associated riparian vegetation. However, as described above, due to delays in obtaining permission to enter private parcels, portions of the BSA were not surveyed for wetlands. A jurisdictional aquatic resource delineation would be conducted during the Project design phase (AMM-BIO-06). If jurisdictional resources are delineated and avoidance is not feasible, an Aquatic Resources Compensation Plan would be prepared and agency coordination and permitting initiated (AMM-BIO-12).

Implementation of standard Biological PFs and AMMs (PF-BIO-01 to PF-BIO-05, PF-BIO-9 to PF-BIO-13, AMM-BIO-05, and AMM BIO-06, and AMM-BIO-12) would avoid or minimize impacts to riparian vegetation, other sensitive natural communities, or wetlands. In addition, standard PFs from Hazardous Materials (Section 3.3.9) PF-HAZ-01, PF-HAZ-02 and Water Quality (Section 3.3.10) PF-WQ-01, PF-WQ-02, would further reduce impacts to riparian vegetation, other sensitive natural communities, or wetlands As a result, Alternative 2 would have a less than significant impact on sensitive natural communities and wetlands. Applicable PFs and AMMs are provided at the end of this section and are also found in Appendix A.

Legend

- Project Limits

NWI Wetland Type (2021)

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Pond
- Riverine

N

0 500 1,000
Feet

Caltrans

FIGURE 3-3
U.S. Fish and Wildlife Service National Wetlands Inventory Map
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

Path: D:\WIE\21-002-009 SR 116 2Q770\aprx\21-002-009 SR116\21-002-009 SR116 Land Use.aprx

d) Less Than Significant Impact

Neither Build Alternative would interfere substantially with the movement of native resident or migratory fish or wildlife species. Stage Gulch Creek, within the BSA, is an ephemeral drainage with limited or nonexistent summer flows. The technical assistance results from NMFS indicated that there were no historical records of anadromous fish or critical habitat for anadromous fish in Stage Gulch Creek. The Project would not impact movement corridors of anadromous fish.

For both Build Alternatives, numerous protected migratory bird species (USFWS 2022) may occur within the BSA and be affected by Project implementation. Trees, shrubs, ruderal vegetation patches, and other substrates found within the vicinity of the BSA provide potential nesting sites. Implementation of standard PFs (PF-BIO-01, PF-BIO-02, PF-BIO-04, PF-BIO-05, PF-BIO-07, PF-BIO-08, PF-BIO-12, and PF-BIO-15 to PF-BIO-18) would minimize impacts to migratory bird species that may be nesting within the BSA and would avoid and/or minimize impacts to nesting birds. Therefore, impacts to nesting birds would be less than significant.

e) No Impact

The Project would not conflict with any local policies or ordinances protecting biological resources; therefore, there would be no impact.

f) No Impact

As of March 2023, there is no approved Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) covering the BSA. Therefore, the Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs into the Project to reduce potential impacts to Biological Resources. The PFs applicable to both Build Alternatives are listed first, followed by PFs specific to each Build Alternative.

Both Build Alternatives

- **PF-BIO-01, Documentation at Project Site:** A Permit Compliance Binder will be maintained at the construction site at all times and presented to resource agency personnel upon request. The Permit Compliance Binder will include a

copy of all original permits and agreements and any extensions and amendments to the permits and agreements.

- **PF-BIO-02, Work According to Documents:** Except as they are contradicted by measures within the permits and agreements, all work will be conducted in conformance with the Project description in the permits and agreements and the PFs and AMMs provided in this document.

- **PF-BIO-03, Work Period in Dry Weather Only:** Work in the bed, bank, channel, and any associated riparian habitat will only be conducted during periods of dry weather. Work during precipitation events will adhere to the applicable permit conditions.

- **PF-BIO-04, Mark Environmentally Sensitive Areas:** Before construction begins, ESAs will be clearly delineated using high visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking will remain in place throughout construction. It may be removed during the wet season (and subsequently re-installed) if needed to prevent materials from being washed away. The final Project plans will depict all locations where ESA markings will be installed and how it will be installed. The bid solicitation package special provisions will clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings will be maintained in good repair throughout the Project as needed.

- **PF-BIO-05, Worker Environmental Awareness Training:** Prior to the start of construction, the Project biologist will provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later will receive the same training before beginning work. Upon completion of the education program, employees will sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the Project and ESAs within the Project footprint and notes key avoidance measures as well as employee guidance will be given to each person who completes the training program. These forms will be made available to the resource agencies upon request.

- **PF-BIO-06, Wildlife Exclusion Fencing:** Before starting construction, wildlife exclusion fencing (WEF) will be installed where wildlife could enter the Project footprint. Locations of the WEF will be determined in coordination with the onsite Project biologist. WEF installation locations will be identified during the Project design phase of the Project; the final plans will depict the locations where WEF will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF material and proper WEF installation and maintenance. The WEF will remain in place throughout the Project duration while construction activities are ongoing and will be regularly inspected for stranded animals and fully maintained. The WEF will be removed following completion of construction activities or when construction is completed at that location at the discretion of the Project biologist.

- **PF-BIO-07, Nesting Bird Surveys:** If Project activities occur from February 1 to September 30, then a pre-construction survey(s) will be conducted for nesting birds no more than 3 days before any vegetation removal, or initiation of staging, and/or construction. If active nests are found, then an appropriate buffer will be established, and the nest will be monitored for compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503.

- **PF-BIO-08, Active Nest Buffers:** If an active bird nest is found during construction activities, then the following ESA buffers will be established: If an active raptor nest is observed, a 300-foot ESA buffer will be implemented to avoid impacting the young until they have fledged; if an active nest of non-raptor birds is observed, a 50-foot ESA buffer will be implemented to protect the young until they have fledged, or as otherwise determined by consultation with USFWS and CDFW regarding appropriate action to comply with the MBTA and California Fish and Game Code Section 3503.

- **PF-BIO-09, Construction Site Management Practices:** The following restrictions will be implemented to avoid or minimize potential impacts on sensitive biological resources:

    - Enforcing a speed limit of 15 miles per hour for Project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.

    - Locating construction access, staging, storage, and parking areas within the ROW to the extent practicable and outside of any designated ESA. Access routes, staging and storage areas, and contractor parking will be limited to the

minimum necessary to construct the proposed Project. Routes and boundaries of roadwork will be clearly marked before initiating construction.

- Certifying, to the maximum extent practicable, borrow material is nontoxic and weed free.
- Enclosing food and food-related trash items in sealed trash containers and removing them from the site at the end of each day.
- Prohibiting pets from entering the Project footprint during construction.
- Prohibiting firearms within the Project footprint, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

- **PF-BIO-10, Implementation of Best Management Practices:** A SWPPP is anticipated. Project BMPs will be included in the plans and special provisions to comply with the requirements of the SFBRWQCB GCP. Protective measures will include, at a minimum:
  - Disallowing any discharging of pollutants from vehicle and equipment cleaning into any storm drains or watercourses.
  - Keeping vehicle and equipment fueling and maintenance operations at least 50 feet away from watercourses, except at established commercial gas stations or an established vehicle maintenance facility.
  - All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 50 feet from any downstream riparian habitat, aquatic habitat, culvert, or drainage feature, or will be removed from the site at the end of the day.
  - Dedicated fueling and refueling practices will be designated as part of the approved SWPPP.
  - Dedicated fueling areas will be protected from stormwater run-on and will be located at least 50 feet from downslope drainage facilities and water courses. If this is not possible then fueling will be conducted as stated in the SFBRWQCB GCP and in the Caltrans BMP Guidance Handbook (Caltrans 2017a).

- Fueling must be performed on level-grade areas. On-site fueling will only be used when and where it is impractical to send vehicles and equipment off-site for fueling. When fueling must occur on-site, the contractor will designate an area to be used subject to the approval of the Resident Engineer representing Caltrans. Drip pans or absorbent pads will be used during on-site vehicle and equipment fueling.

- Maintaining spill containment kits onsite at all times during construction operations and/or staging or fueling of equipment.

- Dust and erosion control measures will be implemented consistent with the SFBRWQCB GCP and the Caltrans BMP Guidance Handbook.

- Installing coir rolls, straw wattles, or other erosion control items per guidance in the Caltrans BMP Guidance Handbook during construction to capture sediment.

- **PF- BIO-11, Invasive Weed Control**: To reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. If noxious weeds are disturbed or removed during construction-related activities, the contractor will be required to contain the plant material associated with these noxious weeds and dispose of them in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the Project footprint will be covered to the extent practicable with heavy black plastic solarization material until the end of the Project. If work occurs in sensitive habitat, vehicles and equipment will be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds from other locations.

- **PF-BIO-12, Vegetation Removal:** Whenever possible, vegetation removal will be scheduled between September 30 and February 1 to avoid impacts to nesting birds during the nesting season. If work occurs during this time, pre-construction surveys for nesting birds are required. Vegetation would be cleared only where necessary and would be cut above soil level, except in areas that would be

permanently affected or excavated. This would allow plants that reproduce vegetatively to resprout after construction.

- **PF-BIO-13, Landscaping and Revegetation Plan:** Vegetation and trees removed by construction operations within the Project limits will be replaced according to Caltrans policy to the extent feasible. Temporarily disturbed areas will be restored to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with locally appropriate, commercially available, native vegetation or other methods to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, appropriate native species will be used to the maximum extent possible, and trees, shrubs, and groundcover will be selected for drought tolerance and disease resistance and based on local composition. Mulch will be applied to planted areas to reduce weed growth, conserve moisture, and minimize maintenance operations. A plant establishment period may be included in the final revegetation plan, based on state and federal permits.

- **PF-BIO-14, Prevent Inadvertent Entrapment:** To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks at an angle no greater than 30 degrees. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project footprint overnight will be inspected before they are subsequently moved, capped, or buried.

- **PF-BIO-15, Agency-approved Biologist:** A Project biologist approved by USFWS and CDFW will conduct pre-construction surveys for federally and state-listed species. The Project biologist will be present during construction activities including vegetation clearing and grubbing, as required by the resource agencies. If at any point any listed species is discovered within the Project footprint, the Project biologist, through the Resident Engineer or his/her designee, will halt all work within 50 feet of the animal and contact the corresponding agency (USFWS or CDFW) to determine how to proceed.

- **PF-BIO-16 Stop-Work Authority:** Through the Resident Engineer or their designee, the Project biologist(s) shall have the authority to stop Project activities

to minimize take of listed species or if he/she determines that any permit requirements are not fully implemented. Caltrans will provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

- **PF-BIO-17, Discovery of Injured or Dead Special-status Species:** Immediately following the discovery of any dead, injured, or entrapped special-status species regulated by USFWS or CDFW, Caltrans will provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.
- **PF-BIO-18, Wildlife Species Relocation:** When listed wildlife species (that do not have state fully protected status) are present and it is determined that they could be injured or killed by construction activities, the Project biologist, in coordination with the appropriate state and federal wildlife agencies, and as outlined within the applicable permits, will identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected.
- **PF-BIO-19, Lighting Design:** During the Project design phase, lighting fixtures will be selected to reduce standard light temperature (Kelvin), using yellow-white or amber-white LEDs of 2700 Kelvin or less. Light fixtures will be shielded to minimize light trespass or 'spread' to the extent practical while meeting highway safety standards. Lighting design will be coordinated with the Office of Biological Sciences and Permits and the Office of Landscape Architecture during the Project design phase.
- **PF-AES-01, Vegetation Impacts:** Described in Section 3.3.1.
- **PF-AES-02, Vegetation Protection:** Described in Section 3.3.1.
- **PF-AES-03, Tree Protection:** Described in Section 3.3.1.
- **PF-AES-05, Limit Nightwork Impacts:** Described in Section 3.3.1.
- **PF-AES-06, Minimize Light Pollution:** Described in Section 3.3.1.
- **PF-AES-07, Reseeding Disturbed Areas:** Described in Section 3.3.1.
- **PF-AQ-01, Dust Control Measures:** Described in Section 3.3.3.
- **PF-HAZ-01, Caltrans Standard Specifications and Hazardous Waste Regulations:** Described in Section 3.3.9.

- **PF-WQ-01, Compliance with Water Quality Permits and Pollution Prevention Programs:** Described in Section 3.3.10.

- **PF-NOISE-01, Construction Noise Levels:** Described in Section 3.3.13.

Build Alternative 1 Signalization

- **PF-BIO-20, Temporary Creek Diversion System:** For the bridge work associated with the intersection signalization, a temporary creek diversion system (TCDS) will be used to create a dry construction area and prevent construction materials from entering the creek. A TCDS will consist of a diversion pipe with coffer dams at both the upstream and downstream ends of the creek within the Project footprint. This diversion may be used during the duration of construction but will be removed following the completion of construction activities. Construction in the creek will be limited to the dry season, when the creek is at its lowest water level, to reduce impacts on biological resources and soil hydrology. A temporary Stream Diversion Plan will be developed and approved by Caltrans and agencies (may include CDFW, USACE, RWQCB, USFWS) prior to the start of construction.

- **PF-BIO-21, Aquatic Wildlife Relocation:** For the bridge work associated with the intersection signalization: If water is present in Stage Gulch Creek at the beginning of the dry season work window, fish and other aquatic vertebrates within the area to be dewatered shall be removed and relocated to appropriate areas out of the construction area. An approved fish removal and relocation plan shall be developed and approved by the appropriate agencies prior to fish recovery operations.

Build Alternative 2 Roundabout

- **PF-WQ-02, Implementation of Post Construction Water Pollution BMPs:** Described in Section 3.3.10.

AVOIDANCE AND MINIMIZATION MEASURES

Caltrans would incorporate the following AMMs into the Project to avoid or minimize potential impacts to Biological Resources. The AMMs applicable to both Build Alternatives are listed first, followed by AMMs specific to each Build Alternative.

Both Build Alternatives

- **AMM-BIO-01, Timing of Construction:** Construction will occur during the dry season, when CRLF are most likely to be estivating in moist refuges and not dispersing through the Project footprint. If construction activities must take place during the wet season , Caltrans will coordinate with USFWS about the need for CRLF surveys. Work in Stage Gulch Creek for Build Alternative 1 bridge widening will be restricted to the dry season and outside of the CRLF breeding season. No construction activities will occur during rain events or within 24-hours following a rain event. Prior to construction activities resuming, the Project biologist will inspect the action area and all equipment/materials for the presence of CRLF. The animals will be allowed to move away from the Project of their own volition or moved by the Project biologist, as stipulated in the Project Biological Opinion for CRLF from USFWS.

- **AMM-BIO-02, California Red-legged Frog Pre-construction Surveys:** Pre-construction surveys for the CRLF will be conducted by the Project biologist within 14 calendar days of the initiation of Project activities in suitable upland and aquatic habitat prior to ground-disturbing activities, vegetation removal, and WEF installation. Surveys will be conducted as outlined in the 2005 USFWS species survey guidelines for CRLF. Access to habitat during surveys may be limited by appropriate safety measures and protocols, available at https://www.fws.gov/ventura/docs/species/protocols/crlf/caredleggedfrog_survey-guidelines.pdf. Access to habitat during surveys may be limited by appropriate safety measures.

  Pre-construction surveys will include:

  - Foot surveys will be conducted of potential frog habitat within the Project limits and accessible adjacent areas (within at least 50 feet of Project limits).

  - Potential cover sites (burrows, rocks, soil cracks, vegetation, and other potential refuge habitat) and any areas of disturbed soil will be investigated for signs of CRLF.

  Native vertebrates found in cover sites within the Project limits will be documented and, if handling is allowed, relocated to an adequate cover site in the vicinity. Species that cannot be relocated due to special protection status will be addressed in coordination with the appropriate agency(s) with jurisdiction.

- **AMM-BIO-03, California Red-legged Frog Monitoring:** During construction in and near potential CRLF habitat, the following protocols will be observed by the Project biologist during construction monitoring:

    - Within 24 hours prior to initial ground-disturbing activities, portions of the Project footprint where potential CRLF habitat has been identified will be surveyed by a Project biologist(s) to clear the site of frogs moving above ground or taking refuge in burrow openings or under materials that could provide cover.

    - A Project biologist(s) will be present during all initial ground-disturbing activities and vegetation removal in suitable refugia habitats for the CRLF to monitor the removal of the top 12 inches of topsoil.

    - If potential aestivation burrows are discovered, the burrows will be flagged for avoidance.

    - After a rain event, and prior to construction activities resuming, a Project biologist will inspect the work area and all equipment/materials for the presence of CRLF.

    - Upon discovery of a CRLF individual(s) in an active construction area, all work will cease within a 50-foot radius of the frog. The frog will be allowed to leave the site on its own; or if the frog(s) does not leave on its own, it will be relocated as close to the Project footprint as feasible and with permission from the property owner; and placed in a natural burrow by a Project biologist with the appropriate USFWS 10(a)1(A) handling permit.

    - The USFWS will be notified by phone and email within one working day of any CRLF discovery in the Project footprint.

- **AMM-BIO-04, Proper Use of Erosion Control Devices:** To prevent CRLF from becoming entangled or trapped in erosion control materials, the following: plastic monofilament netting (i.e., erosion control matting) or similar material will not be used. Acceptable substitutes will include coconut coir matting or tackified hydroseeding compounds.

- **AMM-BIO-05, Targeted Pre-construction Plant Survey:** Prior to initiation of construction, an experienced botanist will conduct a floristic survey in the BSA. Surveys would occur during the appropriate blooming period for all special-status

plant species with potential to occur within the Project footprint. Surveys would follow CNPS, CDFW, and USFWS protocols.

- **AMM-BIO-06, Aquatic Resources Delineation:** During the growing season, a qualified wetland specialist will conduct a jurisdictional determination of aquatic resources in the BSA. If potential wetlands are identified, delineations according to the USACE protocols, would be conducted and a preliminary jurisdictional determination from the USACE would be secured. Avoidance and disturbance buffers would be established.

- **AMM-BIO-07, Pre-construction Surveys for Bats:** Prior to the start of work at each location, a Project biologist will conduct a visual survey of the area for bat species. Any bats observed in the BSA will be allowed to leave on their own.

- **AMM-BIO-08, Bat Surveys Prior to Vegetation Removal**: A survey by a Project biologist will be conducted prior to vegetation removal to determine if two-phase tree removal methods are appropriate for any trees scheduled for removal, or if a biological monitor will be required to be present during tree removal. The Project biologist will inspect all trees marked for removal for bat roost habitat (e.g., crevice and foliage habitat types).

- **AMM-BIO-09, Bat Monitoring Protocols:** If a bat or bat colony is observed nesting or roosting in active construction areas at the Project footprint, construction activities that would imminently harm bats will stop within 150 feet of the roosting location until a Project biologist develops a site-specific bat avoidance plan to implement at the roosting site. Once the plan is implemented, Project activities may recommence with Project biologist oversight at that location.

- **AMM-BIO-10, Pre-construction Surveys for Western Pond Turtle**: A Project biologist will conduct pre-construction surveys for WPT immediately before ground-disturbing activities in areas identified as suitable WPT habitat within the Project footprint. If WPT is found within the Project footprint and at risk of harm, then it will be relocated by a Project biologist outside of the Project footprint.

- **AMM-BIO-11, Special-status Plant Protection:** If special-status plant species are found during botanical surveys, the following measures would be implemented:

- The botanist would map the exact boundaries of the population in the Project BSA and record the density of plants within the population.
- Special-status plant populations would be included as an ESA "Do not enter without approval from the Project Biologist" in Project plans and specifications. These areas would be marked or fenced for avoidance with a 10-foot buffer.
- Ground-disturbing work near special-status plants would proceed under supervision of a Project biologist.
- If special-status plant species are found in the Project BSA and avoidance is not possible due to the location of the population, Caltrans would consult with the appropriate resource agencies (CDFW, CNPS, and/or USFWS) to develop minimization and/or compensation measures needed to avoid adverse effects to the population.
- Where it is not feasible to avoid special-status plant locations within construction areas, a plan would be developed through consultation with state and Federal agencies. The plan may identify requirements for seed collection and transplanting for annual plant species, native plant nursery propagation and planting for perennial species, redistribution within areas that provide appropriate habitat for the species in the Project BSA, if feasible.

- **AMM-BIO-12, Aquatic Resources Compensation:** If avoidance is not feasible, agency consultation and CWA section 401 and 404 permits will be initiated. A Compensation Plan, in coordination with state and federal agencies will be developed.
- **AMM-NOISE-01, Construction Noise Levels:** Described in Section 3.3.13**.**
- **AMM-NOISE-02, Vibration Control Measures:** Described in Section 3.3.13.

Build Alternative 2: Roundabout

- **AMM-BIO-13, California Red-legged Frog Habitat Compensation:** If Build Alternative 2 is selected, Caltrans would pursue opportunities for offsite compensation for the upland dispersal habitat permanently lost through construction of the Roundabout through the purchase of species credits at a USFWS approved, appropriate conservation bank. This may include the purchase of CRLF credits at a USFWS-approved conservation bank conducting habitat

restoration in the region, contribution to a larger advanced mitigation property acquisition, habitat management, or other beneficial measure that would aid local recovery of the species. These preliminary estimates may change during the design phase. Caltrans would make a final determination on impacts and develop a plan after coordination with USFWS.

3.3.5 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?	Both Build Alternatives: No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Both Build Alternatives: Less Than Significant Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Both Build Alternatives: Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR CULTURAL RESOURCES

Caltrans prepared a memorandum documenting cultural resources regulatory compliance for the Project titled *Office of Cultural Resource Studies (OCRS) Section 106 Closeout Memo for the Signal Installation/Construct Roundabout Project at post mile (PM) 39.27 on State Route 116 in Sonoma County* (Caltrans 2023c). The investigation was performed and documented by a Caltrans archaeologist and architectural historian who are Professionally Qualified Staff (PQS) for prehistoric archaeology and architectural history. A summary of the findings is presented here.

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under 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* (Programmatic Agreement) (FHWA 2014) 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 Section 5024 and Governor's Executive Order W-26-92, as addended 2019* (California State Historic Preservation Officer 2015). A Historic Property Survey Report (HPSR) and an Extended Phase I Report (XPI) were prepared for the Project. The HPSR and XPI contain confidential information that cannot be publicly shared. The documents will be archived in the Caltrans OCRS files and the Northwest Information Center of the California Historical Resources Information System.

The Caltrans OCRS review consisted of a detailed search of records, maps, plans, and digital files; a field investigation conducted in February 2023; and consultation with local tribes.

In accordance with Stipulation VI.B.8 and VIII.A and Attachment 3 of the Programmatic Agreement, the area of potential effects (APE) for the Project, which includes all areas of direct impact and the maximum extent of construction-related activities, was established by Caltrans' PQS architectural historian and archaeologist and the Project Manager on May 12, 2022. Both the Archaeological and Architectural APE's are comprised of the entire Project footprint, including all areas of potential direct and indirect effects. The vertical APE consists of all activities below the current ground surface, including excavation. The maximum depth of ground disturbance extends from ground surface to 14 feet for the widening of Stage Gulch Creek Bridge proposed for Build Alternative 1.

Caltrans contacted the Native American Heritage Commission (NAHC) on October 28, 2021, requesting a review of their Sacred Lands File (SLF) to determine if there were known cultural resource sites within or near the APE of the proposed Project. The NAHC responded on December 2, 2021, with negative SLF search results. A list of Native American contacts with potential interest or information regarding the Project was provided, and Section 106 of the National Historic Preservation Act and Assembly Bill (AB) 52 consultation letters regarding the proposed Project were sent to all listed contacts on December 13, 2022, as further described in Section 3.3.18, Tribal Cultural Resources.

Background research did not identify any cultural resources within the APE; however, due to the high cultural sensitivity of the area, XPI testing was proposed. On February 1, 2023, Caltrans archaeologists conducted an intensive pedestrian survey and XPI subsurface testing of the APE within the anticipated area of direct impacts to test for the presence or absence of archaeological resources. No cultural resources were identified in the APE.

In accordance with Stipulation IX.A of the Programmatic Agreement, the OCRS determined a finding of "No Historic Properties Affected" under Section 106 and "No Historical Resources Present" under CEQA were appropriate for the undertaking (Caltrans 2023c).

a) No Impact

There were no historical resources identified in the APE. Therefore, there would be no impact.

b and c) Less Than Significant Impact

The Project would not adversely affect known cultural resources. No AMMs are needed. However, during construction, ground-disturbing activities with either Build Alternative could inadvertently disturb previously unknown buried archaeological resources, including human remains.

California law recognizes the need to protect interred human remains, particularly Native American burials and associated items of patrimony, from vandalism and inadvertent destruction. The procedures for the treatment of discovered human remains are contained in the California Health and Safety Code Sections 7050.5 and 7052, and the California Public Resources Code Section 5097.

Implementation of standard PFs (PF-CUL-01 and PF-CUL-02) would reduce potential impacts to undiscovered cultural resources associated with ground-disturbing activities during construction. Therefore, impacts to archaeological resources and human remains would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs for Cultural Resources:

- **PF-CULT-01, Cease Work Upon Discovery of Cultural Resources:** Cease work in the vicinity (60-foot radius) if cultural resources are encountered during Project-related ground-disturbing activities, Caltrans OCRS will be contacted, a qualified archaeologist will assess the significance of the resource, and appropriate avoidance or treatment measures will be implemented, in consultation with local consulting tribes.

- **PF-CULT-02, Procedures for Discovery of Human Remains:** In accordance with the California Health and Safety Code, if human remains are uncovered during construction-related activities, all such activities within a 60-foot radius of the find will be halted immediately and the Project's designated representative will be notified. The contractor or lead person on the Project will immediately notify the OCRS Office Chief and/or the District Native American Coordinator

(DNAC). Once the remains are determined human, the lead person, OCRS Office Chief, or DNAC will contact the County Coroner. If the Coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making the determination (California Health and Safety Code Section 7050.5[c]). The Project's designated representative will be responsible for acting upon notification of discovery of Native American human remains, as identified in detail in California Public Resources Code Section 5097.9. The Project's designated representative and the professional archaeologist will contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the property owner and Caltrans, will determine the ultimate disposition of the remains. The lead person ensures that the recommendations are followed. After the appropriate actions are taken, Project work may resume.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Cultural Resources.

3.3.6 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?	Both Build Alternatives: Less Than Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Both Build Alternatives: No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR ENERGY

Construction activities would be planned and scheduled to maximize the efficient use of construction personnel and equipment to reduce the use of fuel and power consumption.

An Energy Analysis Report was prepared by the Caltrans Office of Environmental Engineering (Caltrans 2022c). A summary of the findings is presented here.

a) Less Than Significant Impact

Activities that consume energy also generate by-products. Greenhouse gases (GHGs) are the most extensively studied by-products of energy consumption because they are linked to climate change. To assess gasoline and diesel consumed by construction equipment and vehicles, the Road Construction Emissions Model (RCEM), version 9.0.0, provided by the Sacramento Metropolitan Air Quality Management District, was used to quantify carbon dioxide (CO_2) emissions and Vehicle Miles Traveled (VMT) of workers' vehicles. The USEPA's GHG equivalencies formulas were used to convert GHG and VMT to fuel volumes. It was assumed diesel would be used for all construction vehicles and equipment, and gasoline would be used during worker's commute. The Project is anticipated to consume approximately 22,299 diesel gallons and 1,315 gasoline gallons for Build Alternative 1 and approximately 18,296 diesel gallons and 1,089 gasoline gallons for Build Alternative 2 (Caltrans 2023d).

Implementation of standard PFs (PF-ENERGY-01 and PF-ENERGY-02) during construction would improve energy efficiency of construction equipment. In addition, Air Quality (Section 3.3.3) standard PFs (PF-AQ-02 and PF-AQ-03) would further improve energy efficiency and reduce energy consumption by Project construction. Applicable PFs are provided at the end of this section and are also found in Appendix A.

Construction-related activities would be short-term and would not increase SR 116 transportation capacity or otherwise alter long-term vehicle traffic, and thus do not have the potential to substantially affect energy use. During Project operation, energy consumption would be limited to routine maintenance-related activities that are anticipated to be similar to existing conditions. Therefore, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation. The Project would have a less than significant impact.

b) No Impact

The Project would not result in changes in traffic volumes, vehicle mix, or any other factor that would cause an increase in energy consumption. The Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the Project would not conflict with the regional/statewide goals on renewable energy or energy efficiency. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs for Energy:

- **PF-ENERGY-01, Recycle Waste and Materials:** Recycle nonhazardous waste and excess construction materials to reduce disposal, if feasible.
- **PF-ENERGY-02, Solar Energy:** Use solar energy as the energy source for construction equipment, such as, but not limited to, signal boards, if feasible.
- **PF-AQ-02, Construction Vehicles and Equipment:** Described in Section 3.3.3.
- **PF-AQ-03, Limit Idling:** Described in Section 3.3.3.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Energy.

3.3.7 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.	Both Build Alternatives: No Impact
(ii) Strong seismic ground shaking?	Both Build Alternatives: No Impact
(iii) Seismic-related ground failure, including liquefaction?	Both Build Alternatives: No Impact
(iv) Landslides?	Both Build Alternatives: No Impact
b) Result in substantial soil erosion or the loss of topsoil?	Both Build Alternatives: Less Than Significant 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?	Both Build Alternatives: No Impact
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?	Both Build Alternatives: 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?	Both Build Alternatives: No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Both Build Alternatives: Less Than Significant Impact

CEQA Significance Determinations for Geology and Soils

The Project is located within the central portion of the Coast Ranges Geomorphic Province of California with the Northern Coastline Sub Province to the west and south of the Project. The dominant geologic feature of the Coast Ranges Geomorphic Province on the coast is the San Andreas Fault, an approximately 800-mile-long fault zone that generally forms the dividing line between major tectonic plates, with the Pacific Plate situated west of the San Andreas Fault and the North American Plate situated east of the San Andreas Fault (W.A. Bryant, et al., 2002).

In the seismically active Bay Area of California, there exist many additional fault zones, like the San Andreas in that they are considered hazardous and development in and around these faults are subject to special investigation pursuant to the Alquist-

Priolo Fault Zoning Act of 1972. The Project is 2.5 miles west of the Rodgers Creek Fault; the Rodgers Creek Fault zone is an earthquake zone of required investigation. The Rodgers Creek Fault Zone runs north, northwest to south, southeast and is approximately 35 miles long; the Rodgers Creek Fault Zone crosses the following U.S. Geological Survey (USGS) 7.5-minute quadrangles: Healdsburg, Santa Rosa, Cotati, Glen Ellen, Petaluma River, and Sears Point (M.C. Blake, et al., 2000).

There are two Quaternary Faults in the immediate vicinity of the Project that follow a similar path to the Rodgers Creek Fault Zone, running north, northwest to south, southeast; these are the Lakeview Fault and the Tolay Fault. At its closest point, the Lakeview Fault is mapped as occurring approximately 300 feet southwest of the Project. At its closest point, the Tolay Fault is mapped as occurring 1,970 feet to the northeast of the Project. The USGS describes Quaternary Faults as having been active within the last 1.6 million years. These faults do not represent hazard areas of required investigation (California Geological Survey [CGS] 2022a).

In general, the Coast ranges consist of complexly folded Mesozoic and Cenozoic sedimentary, metamorphic, and volcanic rock (Blake, et al, 2000). Geologic units in the Project footprint consist of surficial deposits of river-based Alluvium underlain by Franciscan Schist (CGS 2015). Franciscan Schist here is generally Blueschist, a metamorphic rock with primary components of deformed quartz-mica and minor components of metamorphosed graywacke.

The CGS maps the Project as outside of a tsunami zone (CGS 2022b).

Liquefaction hazards have not been mapped in the Project footprint by the CGS. Data sets from the USGS describe most of Sonoma County; the Project footprint is mapped as moderately susceptible to liquefaction (USGS 2000).

The nearest mapped landslide feature, as identified by the CGS, Landslide Inventory (CGS 2015) is approximately 2,000 feet to the northeast of the Project. The feature is identified as a point feature or deposit. No landslide features occur in the immediate vicinity of the Project. Deep-seated landslide susceptibility does not include very high landslide susceptibility, as defined in the report *Susceptibility to Deep-Seated Landslides in California* (C. J. Wills et al., 2011).

The NRCS Web Soil Survey identifies the Project footprint as dominated by map unit ‘CcA’, Clear Lake Clay loam. The Clear Lake soil series is composed of fine textured alluvium and is found in flood basins, plains and swales; these soils are characterized

by low slopes, a high water table, poor drainage and high plasticity (NRCS 2018). As a soil type high in clay content with high plasticity, CcA soils are considered expansive soils.

a(i), (ii), (iii), (iv) No Impact

Soils may be subject to strong shaking and potential liquefaction during a strong seismic event. However, Project construction would not further add to a liquefaction or shaking hazard; nor would the ongoing operations of the Project result in increased risk of loss, injury, or death. The Project is not capacity increasing so would not attract more people to seismically active areas (K.L. Knudsen et al., 2000).

The Project is not mapped on an unstable geologic unit. The Project does not include locations of construction-related activities within an Alquist-Priolo Earthquake Zone of Required Investigation. The Project does not include proposed activities within a mapped Tsunami Hazard Area or areas with historic landslide activities. Therefore, both Build Alternatives would have no impact.

b) Less Than Significant Impact

Build Alternative 1 Signalization

Ground disturbance would include grubbing, grading, and excavation. Depths of disturbance for grubbing and grading would not exceed four inches. Signalization pole installation would require excavation to a depth of up to 14 feet, bridge widening would require excavation to a depth of about 14 feet, lighting standards and flashing beacon foundations would require depths ranging from 6 to 8.5 feet, the removal and reconstruction of the retaining wall would require excavation to a depth of approximately 5 feet, and drainage improvements and utility relocations would require excavation to a depth of 3 to 6 feet. The total disturbed surface area (DSA) for Build Alternative 1 is approximately 1.45 acres.

Cut and fill associated with highway and bridge widening, retaining wall replacement, drainage, and electrical improvements would be balanced onsite to the extent possible, thereby conserving topsoil onsite.

Construction activities related to proposed ground disturbances for Build Alternative 1 could result in temporary erosion due to wind, track out, or rain events. Implementation of Caltrans construction site, water pollution control, and erosion control BMPs contained in Biological Resources (Section 3.3.4) PF-BIO-10, and

Hydrology and Water Quality (Section 3.3.10) PF-WQ-01, would minimize soil erosion and loss of topsoil due to erosion. Build Alternative 1 would not result in substantial erosion or loss of topsoil; the impact would be less than significant.

Build Alternative 2 Roundabout

Ground disturbance for Build Alternative 2 would include grubbing, grading, and excavation. Depths of disturbance for grubbing would not exceed 4 inches. Depth of disturbance for roundabout construction would be about 3 feet, and drainage improvements, lighting, and utility relocations would require excavation to a maximum depth of 8.5 feet. The DSA for Build Alternative 2 is approximately 1.79 acres.

Cut and fill associated with highway widening and roundabout creation, drainage, and electrical improvement would be balanced onsite to the extent possible, thereby conserving topsoil onsite.

Construction activities related to proposed ground disturbances for Build Alternative 2 could result in temporary erosion due to wind, track out, or rain events. The implementation of Caltrans construction site, water pollution control, and erosion control BMPs contained in Biological Resources (Section 3.3.4) PF-BIO-10, and Hydrology and Water Quality (Section 3.3.10 PF-WQ-01, would minimize soil erosion and loss of topsoil. Build Alternative 2 would not result in substantial erosion or loss of topsoil; the impact would be less than significant.

c and d) <u>No Impact</u>

The Project footprint is not underlain by soluble rock (salt beds and domes, gypsum, limestone and other carbonate rock) or a mapped groundwater basin and is therefore not likely to experience sinkholes or other subsidence events.

Based on mapping and soil unit descriptions from the NCRS, clay (expansive) soils may be found within the Project footprint that impact native soils; fill soils are expected within the existing highway prisms. Where expansive soils are not considered, impacts to a highway system may include surface deformation and cracking. The underlying material of the existing hillslope with retaining wall that would be reconstructed by Build Alternative 1 has a high clay content (shale and greywake) that is strongly associated with landslides, but there are no historic landslides in the immediate vicinity of the Project.

Per the Caltrans Highway Design Manual (2020), soil type would be evaluated and would determine engineering specifications for bridge and retaining wall work (Build Alternative 1) as well as new highway installation (Build Alternatives 1 and 2). By design, the Project would limit direct risk to life or property due to the potential presence of expansive soils and potential landslides. The Project would not increase risks to life and property from unstable soils. Both Build Alternatives would have no impact.

e) No Impact

No septic tanks or alternative wastewater delivery systems would be constructed or affected by the Project; therefore, no impact would occur.

f) Less Than Significant Impact

There are known paleontological features in Sonoma County, in western Sonoma County near the community of Bloomfield (Powell, et. al., 2019), and the petrified forests near Calistoga in northeastern Sonoma County. There are no documented paleontological resources in the Project vicinity, and field surveys have not identified surficial paleontological resources within the APE (see Section 3.3.5).

The alluvial deposits identified in the Project footprint are a relatively young formation, described as Pleistocene to Holocene in age. This category of younger alluvium is described as thin, generally less than 30 feet thick, and in the North Bay region, including Sonoma County, has been assigned a low paleontological sensitivity both because young alluviums in the area have not produced fossils in the past and because Pleistocene to Holocene alluviums generally consist of sediments too young to produce fossils (Kunkel and Upson 1960). The other rock type in the Project footprint is metamorphic. Metamorphic rock, due to the heat and pressure associated with the metamorphic process, only very rarely preserves fossils or other biological information (Galvez, M.E., et. al., 2012).

The lack of findings and characteristics of underlying deposits demonstrates an apparent low paleontological sensitivity, or probability of a paleontological discovery. The Project is unlikely to expose fossils or significantly affect sensitive palaeontologic resources. Therefore, the Project would have less than significant impact. However, as a conservative measure, implementation of an AMM (AMM-PALEO-01) would address potential undiscovered paleontological resources associated with ground-disturbing activities during construction.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs:

- **PF-BIO-10, Implementation of Best Management Practices:** Described in Section 3.3.4.
- **PF-WQ-01, Compliance with Water Quality Permits and Programs:** Described in Section 3.3.10.

AVOIDANCE AND MINIMIZATION MEASURES

Caltrans would incorporate the following AMM to avoid and/or minimize potential impacts to Paleontological Resources:

- **AMM-PALEO-01, Paleontological Evaluation Report:** During the Project design phase, Caltrans will determine whether the Project footprint has a low or high sensitivity for paleontological resources. If Caltrans determines the Project area footprint is sensitive for paleontological resources, a person who meets Caltrans requirements of a Principal Paleontologist would prepare a Paleontological Evaluation Report. The Paleontological Evaluation Report would identify measures to avoid or/and minimize impacts to paleontological resources.

3.3.8 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?	Both Build Alternatives: Less Than Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Greenhouse Gas Emissions

A Construction GHG Emissions Analysis was prepared by the Caltrans Office of Environmental Engineering (Caltrans 2023d). A summary of the findings is presented here.

a) Less Than Significant Impact

Construction-generated GHGs include emissions resulting from material processing by on-site construction equipment, workers commuting to and from the Project, and traffic delays due to construction of the Project. The emissions would be produced at different rates throughout the Project, depending on the construction-related activities occurring in the phases of construction. The analysis focused on vehicle-emitted GHG. Carbon dioxide (CO_2) is a more important GHG pollutant due to its abundance when compared with other vehicle-emitted GHGs, including methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbon, and black carbon.

Construction-related GHG emissions were calculated using the RCEM, version 9.0.0. During construction, the Project is anticipated to emit approximately 231.34 tons of CO_2, 0.06 ton of CH_4, and 0.01 ton of N_2O for Build Alternative 1 and 189.90 tons of CO_2, 0.05 ton of CH_4, and 0.01 ton of N_2O for Build Alternative 2 (Table 3-3). Total construction emissions of GHG of the Project for Build Alternative 1 is 212.93 metric tons of CO_2e and for Build Alternative 2 is 174.92 metric tons of CO_2e (Caltrans 2022c). The Project would not increase SR 116 transportation capacity and therefore would not generate long-term GHG emissions.

Table 3-3. Summary of Construction-related GHG Emissions by Build Alternative

Parameter	CO_2 (tons)	CH_4 (tons)	N_2O (tons)	CO_{2e} (metric tons)*
Build Alternative 1 Total emissions:	231.34	0.06	0.01	212.93
Build Alternative 2 Total emissions:	189.90	0.05	0.01	174.92

Notes: CH_4 = methane, CO_2 = carbon dioxide, CO_{2e} = carbon dioxide equivalent, GWP = global-warming potential, N_2O = nitrous oxide

* Gases are converted to CO_{2e} by multiplying by their GWP. Specifically, GWP is a measure of how much energy the emission of 1 ton of a gas will absorb over a given period of time relative to the emission of 1 ton of CO_2.

The Project would implement Caltrans Standard Specifications such as complying with applicable air pollution control rules, regulations, ordinances, and statutes and the use of construction site BMPs to minimize short-term GHG emissions from construction activities. Implementation of Air Quality (Section 3.3.3) PF-AQ-02, PF-AQ-03, and Energy (Section 3.3.6) PF-ENERGY-01, and PF-ENERGY-02) would reduce air emissions, energy consumption, and GHG emissions.

The Project would not generate GHG emissions that may have a significant impact (i.e., long-term adverse effects) on the environment. Therefore, impacts would be less than significant.

b) No Impact

Plans and policies adopted for the purposes of reducing GHG emissions in California include multiple Senate Bills, Assembly Bills, and Executive Orders. These policies establish GHG emissions reduction goals, set low-carbon fuel standards, support rapid commercialization of zero-emission vehicles, fund clean vehicle programs, and require climate adaptation planning. The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) developed the Plan Bay Area, a Regional Transportation Plan and Sustainable Communities Strategy for the Bay Area, which includes strategies and policies for reducing GHG emissions (ABAG and MTC 2021).

The Project would comply with applicable state and regional GHG reduction policies and implement emission control measures to minimize or reduce GHG emissions. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The Project would not contribute

to a long-term increase in GHG emissions. Therefore, the Project would not conflict with applicable plans, policies, or regulations adopted for the purposes of reducing the emissions of GHGs. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs:

- **PF-AQ-02, Construction Vehicles and Equipment:** Described in Section 3.3.3.
- **PF-AQ-03, Limit Idling:** Described in Section 3.3.3.
- **PF-ENERGY-01, Recycle Waste and Materials:** Described in Section 3.3.6.
- **PF-ENERGY-02, Solar Energy:** Described in Section 3.3.6.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to GHG emissions.

3.3.9 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?	Both Build Alternatives: Less Than Significant 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?	Both Build Alternatives: Less Than Significant 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?	Both Build Alternatives: 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?	Both Build Alternatives: Less Than Significant Impact
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	Both Build Alternatives: No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Both Build Alternatives: 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?	Both Build Alternatives: Less Than Significant Impact

CEQA Significance Determinations for Hazards and Hazardous Materials

SR 116/ Stage Gulch Road/ Lakeville Highway are public highways, with motorists frequently traveling along the route. The Lakeville Volunteer Fire Department (LVFP) is located approximately 100 feet southwest down Lopes Road from the Project footprint, with an address of 5090 Lakeville Highway. No residential structures are located within the footprint of the Project; rural residential properties are located nearby on Lopes Road, Roche Road, and Old Lakeville Road.

Based on records from the State Water Resources Control Board (SWRCB), it is probable that the groundwater under at least a portion of the intersection is contaminated with gasoline originally released from the former service station that operated at the property immediately north of the intersection, at the current location of Ernie's Tin Bar. The leaking underground gasoline storage tanks at the former service station were removed in 1994, with remediation and groundwater monitoring work continuing until 2017. The former Leaking Underground Storage Tank Cleanup

Site case located immediately north of the intersection of Stage Gulch Road and Lakeville Highway, at the current location of Ernie's Tin Bar, has been closed as of February 2019 (Sonoma County LOP Case #00001533; SFBRWQCB Case # 49-0241) (SWRCB 2022). An underground storage tank site qualifies as "closed" once the owner or operator meets all appropriate corrective action requirements, and the RWQCB has determined that the leaking underground storage tank case is generally considered to present a low threat to human health, safety and the environment (SFBRWQCB 2023).

Screening of environmental regulatory databases, including the SWRCB's GeoTracker and California Department of Toxic Substances Control's EnviroStor, revealed no additional known hazardous materials or hazardous waste sites in the immediate vicinity of the Project.

a and b) Less Than Significant Impact

The Project would not involve the routine transport or use of hazardous materials once the Project becomes operational.

During construction, standard PFs (PF-HAZ-01) would be implemented to prevent spills or leaks from construction equipment and from storage of fuels, lubricants, and solvents. All aspects of Project construction associated with removal, storage, transportation, and disposal of hazardous materials would be done in accordance with the appropriate California Health and Safety Code. Handling of hazardous materials would comply with Caltrans Standard Specifications section 14-11, Hazardous Waste and Contamination, which outlines handling, storage, and disposal of hazardous waste.

During the final design phase, the Caltrans Office of Environmental Engineering would assess the extent of ground disturbance involved in the scope of the selected Build Alternative and would complete a site investigation led by the Hazardous Waste Branch to characterize soil and groundwater for contaminants (PF-HAZ-02 and PF-HAZ-03). The results of the site investigation would dictate the special provisions required for proper soil management, disposal, and liability.

Build Alternative 1 Signalization

Excavations for the signal foundations in Build Alternative 1 would likely be deep enough (up to 14 feet) to encounter groundwater. Given the likely presence of a residual contaminant plume from the former leaking underground fuel tank, the

Hazardous Waste Branch would conduct site investigation work to screen the soils and groundwater where the traffic signal foundations would be excavated. The investigation would be planned and completed during the Project design phase when well-developed plans and cross-sections are available for reference. The Hazardous Waste Branch would use the results of the investigation to determine if any identified gasoline contamination levels could affect the Project's construction practices, plans, or cost, and would recommend special provisions to be included in the Project specifications.

Build Alternative 1 would include the widening and upgrading of the SR 116 Stage Gulch Creek Bridge. The National Emission Standards for Hazardous Air Pollutants issued by the USEPA require that any bridge undergoing refurbishment (or demolition) be surveyed for hazardous materials (PF-HAZ-04), such as asbestos-containing construction materials and lead-based coatings, that might be disturbed by the bridge refurbishment work. Any hazardous materials identified by the bridge survey and any related requirements would be disclosed to the contractor in the construction contract special provisions prepared by the Hazardous Waste Branch.

Build Alternative 1 would also include some highway widening (e.g., the widening of SR 116 shoulder for a bike lane). The preliminary plans indicate that most, if not all, of the widening would be constructed on fill material.

Build Alternative 2 Roundabout

Shallow soil excavations (approximately 3 feet deep) would be required in Build Alternative 2 to construct the roundabout; deeper excavation (up to 8.5 feet) is needed to install warning beacons and lighting. Although any groundwater contaminant plume under the Intersection is not likely to be a factor in Build Alternative 2 construction, the Hazardous Waste Branch would conduct site investigation work to screen the soils and groundwater where the lighting and warning beacon foundations would be excavated (PF-HAZ-03). Also, the Stage Gulch Creek Bridge is not a part of the roundabout alternative's construction scope, so the Hazardous Waste Branch would not need to conduct a bridge survey for hazardous materials.

The site investigation scope for Build Alternative 2 would be largely focused on quantifying the aerially deposited lead levels in the proposed shallow excavation areas for the roundabout. Based on past site investigation work in this general area of the SR 116 corridor, the excavated shallow soils are expected to have a very limited accumulation of aerially deposited lead due to the rural area's low traffic volumes during the era of leaded fuel use. The results would be used to classify the waste

characteristics of the soils and estimate their disposal cost for the Project construction.

The lack of operational impacts from hazardous materials, along with implementation of standard PFs (PF-HAZ-01, PF-HAZ-02, and PF-HAZ-03) and compliance with Caltrans Standard Specifications section 14-11, would reduce the potential construction impacts caused by the transportation, use, and disposal of hazardous materials or an accidental release of hazardous materials. Therefore, impacts would be less than significant.

c) No Impact

No existing or proposed school is within 0.25 mile of the Project. The nearest existing schools are River Montessori Charter and Cypress Secondary School, which are located approximately 2.25 miles northwest of the Project footprint. In addition to the lack of schools located within 0.25 mile of the Project, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during operation. Therefore, no impact to schools would result from the Project.

d) Less Than Significant

As described above, the Project may encounter contaminated groundwater from a closed case of leaking underground fuel tank at the site of the former gas station north of the intersection. Caltrans special provisions for investigation, characterization, and disposal (PF-HAZ-02 and PF-HAZ-03) would reduce the risk of worker and public exposure to a less-than-significant level. See response to Questions a and b.

e) No Impact

The Project footprint is not within an airport land use plan or within 2 miles of a public airport or public use airport. The nearest airport is the Petaluma Municipal Airport, located approximately 3.75 miles northwest of the Project footprint.

No Project components, including construction equipment, would reach heights or have the potential to pose a safety hazard to airport operations. Further, the Project would not generate excessive noise that would impact people residing or working adjacent to the Project footprint, as discussed in Section 3.3.13. Therefore, no impact to airports would result from the Project.

f) Less Than Significant Impact

Through implementation of Transportation (Section 3.3.17) standard PFs (PF-TRANS-1), a TMP would be developed for both Build Alternative 1 and Build Alternative 2. For both Build Alternatives, staged construction and shoulder closures are expected during construction. One-way controlled traffic is not anticipated as an ongoing feature of the construction traffic control plans, but may be required for specific events (e.g., staging and set up of barrier system). Potential localized delays to traffic along SR 116/ Stage Gulch Road/ Lakeville Highway would result from the reduced speeds associated with construction zones. Emergency service response times are not anticipated to change substantially during construction because the TMP would provide priority to emergency and medical vehicles. The TMP would not disrupt access of the LVFD to SR 116. The TMP would provide notifications and instructions for rapid response or evacuation in the event of an emergency based on the evacuation zones in the Project limits. In addition, the Project would not conflict with the Sonoma County Emergency Operations Plan (Sonoma County 2022), the City of Petaluma Emergency Operations Plan (City of Petaluma 2022), or other emergency response or evacuation plans. The impact on adopted emergency response plans or emergency evacuation plans caused by the Project would be less than significant.

g) Less Than Significant Impact

Areas north and east of the intersection of Stage Gulch Road and Lakeville Highway are located within a California Department of Forestry and Fire Protection (CalFire)-designated High Fire Hazard Severity Zone (State Responsibility Areas [SRA]) (CalFire 2022). South and west of the intersection of Stage Gulch Road and Lakeville Highway are located within local responsibility areas, namely the LVFD. Several fire agencies serve the Project vicinity and are responsible for emergency services and the management of fire operations during emergency response efforts.

The LVFD provides emergency services to the Lakeville community, along with surrounding areas, and is located approximately 100 feet southwest down Lopes Road from SR 116 adjacent to the Project. They respond to a wide variety of incidents including hazardous materials, public assists, vehicle accident extrications, land and water rescue, and commercial and residential fire alarms. The TMP would not disrupt access of the LVFD to SR 116.

During construction, equipment may be used that has the potential to increase the risk of wildfire. However, construction crews would be equipped with standard incipient stage fire suppression equipment such as fire extinguishers and shovels. Professional fire services are stationed nearby and would be contacted immediately in the event of a fire. The Project does not have permanent components that would expose people or structures to risk of loss, injury, or death involving wildland fires. Impacts from the Project that would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs for Hazards and Hazardous Materials:

Both Build Alternatives

- **PF-HAZ-01, Caltrans Standard Specifications and Hazardous Waste Regulations:** The current Caltrans Standard Specifications Section 13-4, Job Site Management, will be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. Handling and management of hazardous materials will comply with the current Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.

- **PF-HAZ-02, Soil Investigation:** A soil investigation for metals, primarily lead, and other contaminants of concern (i.e., petroleum hydrocarbons and volatile organic compounds) will be completed during the Project's design phase to characterize and profile the soil to be encountered by the construction of the Project. Depending upon the findings of the site investigation, appropriate hazardous waste management special provisions will be prepared and included in the Project specifications.

- **PF-HAZ-03, Groundwater Testing:** As part of the site investigation work, groundwater samples will be collected and tested for gasoline constituents . The aim of this work will be to determine the extent of the contaminant plume in the groundwater and to determine if any portion of it is located below planned Project construction work that might encounter groundwater, such as excavating foundations for new traffic signals. The findings from the groundwater sampling

will also define the contaminant concentration contours and help establish what water treatment will be required, if any, and what discharge options will be available for any groundwater pumped out and stored during subsurface construction work.

- **PF-TRANS-01, Transportation Management Plan:** Described in Section 3.3.17.

Build Alternative 1

- **PF-HAZ-04, Materials Testing:** Stage Gulch Creek Bridge will be inspected by a certified professional during the Project design phase for possible asbestos-containing materials, e.g., bridge railing base plate shims and structure bearing pads. Any suspect materials will have samples taken from them to be screened for asbestos content via polarized light microscopy. The bridge survey for hazardous materials will also include collecting samples of any paints, primers, coatings, or traffic stripes on the bridge for lead screening. The findings of the bridge survey will be used to address bridge alteration work that might disturb identified hazardous materials and any necessary remediation work preceding the bridge work.

- **PF-TRANS-01, Transportation Management Plan:** Described in Section 3.3.17.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts due to Hazards and Hazardous Materials.

3.3.10 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?	Both Build Alternatives: Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such 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: (i) result in substantial erosion or siltation on- or off-site;	Both Build Alternatives: Less Than Significant Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Both Build Alternatives: Less Than Significant 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	Both Build Alternatives: Less Than Significant Impact
(iv) impede or redirect flood flows?	Both Build Alternatives: No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	Both Build Alternatives: No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Hydrology and Water Quality

A Stormwater Data Report (Caltrans 2022d) and a Drainage Recommendation, by the Office of Hydraulics Engineering (Caltrans 2022e), were prepared for the Project. Findings are presented here.

The Project intersection is located directly adjacent to Stage Gulch Creek, an intermittent stream that crosses beneath SR 116 north of the intersection. From the bridge at SR 116, Stage Gulch Creek flows approximately 1.1 miles to the Petaluma River which drains into the San Pablo Bay.

The Project is within the Petaluma River Hydrologic Area (Hydrologic Unit is the San Pablo Bay, 180500020605) and is located within the jurisdiction of the SFBRWQCB, which is responsible for the implementation and enforcement of state laws and regulations concerning water quality. To that end, the SFBRWQCB has developed a Water Quality Control Plan for the San Francisco Bay Basin (SWRCB,

2017). The Basin plan describes beneficial uses for Petaluma River as cold and warm freshwater habitat, fish migration, fish spawning, wildlife habitat, preservation of rare and endangered species, navigation, and contact and non-contract recreation.

Impacts from agriculture runoff, construction, hillside development, and urban runoff have resulted in the 303(d) listing of the Petaluma River (SWRCB Resolution 2020-0018). The Petaluma River has a Total Maximum Daily Load (TMDL) for Diazinon, Nutrients, Pathogens, and Sediment. The TMDL was approved by USEPA in 2021.

Floodplains within the Project limits were identified using Flood Insurance Rate Map panel 06097C1008F, dated 10/2015, developed by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (Figure 3-4). The proposed Project is within Flood Zone X, an area of minimal flood hazard and is not within a FEMA base floodplain or floodway (FEMA 2015).

The existing drainage pattern of the intersections allows sheet flow off roads with ditches and pipes that convey road runoff to Stage Gulch Creek.

a) Less Than Significant Impact

Construction projects can disturb soil and add new impervious surfaces (NIS), which are actions that can increase the potential for sediment and pollutant mobilization. Caltrans' Stormwater Quality Handbook (Caltrans 2017a) identifies thresholds that help determine when action is required to prevent and monitor water quality and runoff impacts due to the NIS and soil disturbance.

NIS over 1 acre would require post-construction stormwater treatment measures. For soil disturbance, Caltrans defers to the SWRCB Construction General Permit (CGP), which requires that projects that involve 1 acre or more of contiguous (less than 0.3 mile apart) soil disturbance or are otherwise identified (by the RWQCB) as having water quality risk, would require a SWPPP. If a project disturbs less than 1 acre of soil, Caltrans policy, as described in the Stormwater Quality Handbook (2017b), mandates the implementation of a WPCP (Caltrans 2021a).

The purpose of both the SWPPP and the WPCP is to identify construction/contractor activities that could discharge pollutants in stormwater and provide descriptions of measures or practices to control these pollutants.

The Project has the potential to contribute stormwater runoff and pollutants to Stage Gulch Creek and the Petaluma River during construction-related activities. The Project would increase existing paved/build areas and would therefore add NIS.

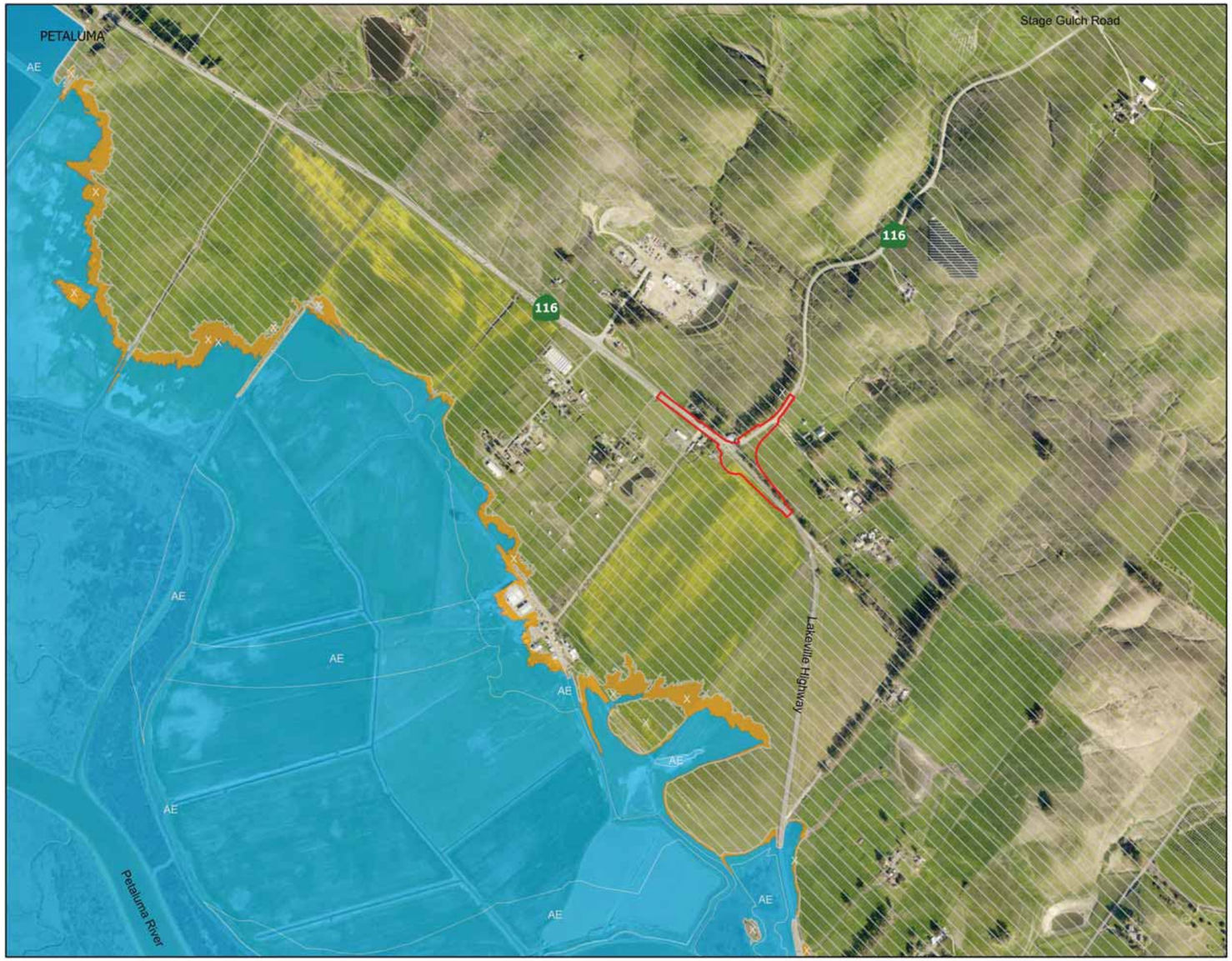
Build Alternative 1 Signalization

The DSA for Build Alternative 1 is estimated to be 1.45 acres. The DSA would exceed 1 acre, and therefore, Build Alternative 1 would be subject to the SWRCB CGP. To comply with the conditions of the SWRCB CGP and to reduce impacts associated with water quality and hydrology, a SWPPP would be prepared and implemented prior to the beginning of construction. Potential water quality impacts would be reduced to the maximum extent practicable through proper implementation of the SWPPP and inclusion of the Standard Special Provisions for water pollution control BMPs.

The Stormwater Data Report (Caltrans 2022d) estimates the NIS for Build Alternative 1 to be 0.48 acre. Because the new impervious surface would be less than 1 acre, post-construction treatment BMP's are not required under the Caltrans Municipal Separate Storm Sewer System (MS4) Permit Order No. 2012-011-DWQ (NPDES No. CAS 000003). However, stormwater treatment for Build Alternative 1 would be further reviewed with minimization measures determined during agency coordination and permitting. The Project would not violate any water quality standards or waste discharge requirements; the Project would adhere to standards and provisions of the CGP, SWPPP and Project permits (PF-WQ-01). Build Alternative 1 would have a less than significant impact.

Build Alternative 2 Roundabout

The DSA for Build Alternative 2 is estimated to be 1.79 acres. The DSA would exceed 1 acre, and therefore, Build Alternative 2 would be subject to the SWRCB CGP. To comply with the conditions of the SWRCB CGP and to reduce impacts associated with water quality and hydrology, a SWPPP would be prepared and implemented prior to the beginning of construction. Potential water quality impacts would be reduced to the maximum extent practicable through proper implementation of the SWPPP and inclusion of the Standard Special Provisions for water pollution control BMPs.



LEGEND

Project Area

FEMA Flood Zone and Subtype/Study Type

AE, 1.0 PCT ANNUAL CHANCE FLOOD HAZARD, SFHAs (Special Flood Hazard Areas) WITH HIGH FLOOD RISK

X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

X, AREA OF MINIMAL FLOOD HAZARD

N

0 1,000 2,000 Feet

Caltrans

FIGURE 3-4
Federal Emergency Management Agency (FEMA) Flood Zones
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

Path: Z:\Projects Active\21 002 009 SR116 2Q770\GIS\FEMA\21 02 009 FEMA\21 02 009 FEMA.aprx

For Build Alternative 2, the NIS is estimated to be 1.79 acres. Because the new impervious surface would be more than 1 acre, in addition to the requirements of the SWPPP, post-construction treatment BMP's are required under the Caltrans Municipal Separate Storm Sewer System (MS4) Permit Order No. 2012-011-DWQ (NPDES No. CAS 000003). The Project would not violate any water quality standards or waste discharge requirements; the Project would adhere to standards and provisions of the CGP, SWPPP, and NPDES (PF-WQ-01, PF-WQ-02). Build Alternative 2 would have a less than significant impact to water quality.

b) No Impact

Water for construction-related activities (e.g., dust control and concrete washout) would be brought in by the contractor and on-site groundwater would not be used. The Project would not affect groundwater supplies or groundwater recharge areas. There would be no impact.

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

The Project would not result in substantial erosion or siltation. Implementation of a SWPPP and standard PFs (PF-WQ-01) would minimize erosion, siltation, and the discharge of polluted runoff on- or offsite. In addition, Biological Resources (Section 3.3.4) standard PFs (PF-BIO-09 and PF-BIO-10) and associated water pollution control BMPs, would further minimize erosion, siltation, and the discharge of polluted runoff on- or offsite.

The Project would not substantially increase the rate or volume of surface water in a manner that would result in flooding. The Drainage Study (Caltrans 2022e) describes new stormwater conveyance systems for each alternative that have been designed to accommodate changes in NIS and resulting timing and volume of runoff.

Build Alternative 1 Signalization

Build Alternative 1 preserves existing flow patterns. Build Alternative 1 includes new drainage elements that are similar to the existing system, where water is conveyed to Stage Gulch Creek. Highway widening would maintain the existing system of sheet flow into nearby ditches, culverts, and pipes. The existing systems would not be adversely affected by stormwater runoff increases associated with 0.48 acre of NIS. Refer to Section 2.1.3 for more information about proposed drainage improvements. Build Alternative 1 would not result in an increase in runoff substantial enough to increase flooding on- or offsite. The impact would be less than significant.

Build Alternative 2 Roundabout

Build Alternative 2, modifies the flow pattern slightly in the vicinity of the roundabout. The roundabout would require new drainage inlets and pipes; refer to Section 2.2.3 for further information about drainage improvements. Stormwater that would have flowed off the highway into the grass and ditch, would, under Build Alternative 2, be collected in drainage inlets and directed to treatment areas before discharging to Stage Gulch Creek. Because the affected area is limited to the roundabout area only, the diversion from the existing patterns would not result in significant hydraulic impacts. Under Build Alternative 2, the roundabout would require new drainage inlets and pipes. Refer to Section 2.2.3 for further information about drainage improvements. Build Alternative 2 would result in 1.79 acre of NIS. The Project would not result in an increase in runoff substantial enough to increase flooding on- or offsite. The impact would be less than significant.

c(iv) and d) No Impact

As discussed under Questions a and c, the Project would not contribute new substantial sources of runoff or result in increased flooding. The Project is not located within a tsunami hazard area (CGS 2022b). Therefore, the Project would have no impact on floodplains or areas prone to tsunami or flooding.

Sea level rise (SLR) has the potential to increase the frequency of flooding, the damage from flooding, and the size of the area affected by floodplain risk. According to the National Oceanic and Atmospheric Administration (NOAA) sea level rise maps (NOAA 2022), the Project location is not susceptible to sea level rise.

e) No Impact

With development and implementation of standard SWPPPs standard PFs (PF-WQ-01), and BMPs in Biological Resources and Hazards and Hazardous Materials standard PFs (PF-BIO-01 to PF-BIO-3, PF-BIO-09, PF-BIO-10, PF-BIO-19, and PF-HAZ-01 to PF-HAZ-04), the Project would not conflict with, or obstruct, implementation of a water quality control plan or suitable groundwater management plan. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs for Water Quality:

Both Build Alternatives

- **PF-WQ-01, Compliance with Water Quality Permits and Programs:** The Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Caltrans Order No. 2020-0033-DWQ, NPDES No. CAS00003, for projects that result in a land disturbance of one acre or more, and the Construction General Permit (Order 2009 – 0009-DWQ), and any subsequent permits in effect at the time of construction. Since the Project has an approved Project Initiation Report prior to January 1, 2023, it will be 'grandfathered' and can continue to apply one-acre minimum threshold of the 2012 Caltrans Permit. As a component of the CGP, the Project will prepare and implement a SWPPP to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP will identify the sources of pollutants that may affect the quality of stormwater and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs.

- **PF-HAZ-01, Caltrans Standard Specifications and Hazardous Waste Regulations:** Described in Section 3.3.9.

- **PF-HAZ-02, Soil Investigation:** Described in Section 3.3.9.

- **PF-HAZ-03, Groundwater Testing:** Described in Section 3.3.9.

- **PF-BIO-01, Documentation at Project Site:** Described in Section 3.3.4.

- **PF-BIO-02, Work According to Documents:** Described in Section 3.3.4.

- **PF-BIO-03, Work Period in Dry Weather Only:** Described in Section 3.3.4.

- **PF-BIO-09, Construction Site Management Practices:** Described in Section 3.3.4.

- **PF-BIO-10, Implementation of Best Management Practices:** Described in Section 3.3.4.

Build Alternative 1 Signalization

- **PF-BIO-20, Temporary Creek Diversion System:** Described in Section 3.3.4.

- **PF-HAZ-04, Materials Testing:** Described in Section 3.3.9.

Build Alternative 2 Roundabout

- **PF-WQ-02, Implementation of Post Construction Water Pollution BMPs:** The Project would incorporate post-construction water pollution prevention and design measures consistent with the 2016 Caltrans Storm Water Management Plan. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ).

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Water Quality.

3.3.11 Land Use and Planning

Would the Project:

Question	CEQA Determination
a) Physically divide an established community?	Both Build Alternatives: 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?	Build Alternative 1: No Impact Build Alternative 2: Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR LAND USE AND PLANNING

The Project is located in rural Sonoma County along SR 116 at the Stage Gulch Road/Lakeville Highway intersection at PM 39.3. Within Sonoma County, SR 116 provides the only link to several rural inland communities. This area is characterized by a mix of undeveloped and agriculture/grazing lands, with rural residential development and infrequent commercial development.

The parcels in the footprint of the proposed Project have a Sonoma County General Plan land use designation of DA (Sonoma County 2016b) and are zoned DA District (Figure 3-5). Stage Gulch Creek is zoned as a Riparian Corridor Zone. The purpose of the DA zoning designation is to "*enhance and protect land where soil, climate, and water conditions support farming but where small acreage intensive farming and part-time farming activities are predominant, and where farming may not be the principal occupation of the farmer*". Allowable land uses in areas zoned DA include, but are not limited to, agricultural crop production and cultivation, small-scale agricultural processing, livestock and animal husbandry, rural sports and recreation, agricultural employee housing, and single-family rural residential homes and accessory dwelling units. Land uses at the Project intersection include a restaurant/bar (Ernie's Tin Bar), scattered rural residences, LVFD equipment storage, farming-associated structures, field crops, and pasture.

The Project is not within the Sonoma Coastal Zone boundary.

a) <u>No Impact</u>

Due to the scope of work, safety improvements to an existing highway, the proposed Project would not divide any existing established communities. There would be no impact.

b) No Impact (Build Alternative 1) and Less Than Significant Impact (Build Alternative 2)

The Project would not change existing land uses in the Project vicinity. Build Alternative 2 would require acquisition of portions of adjacent agricultural lands, as described in Section 3.3.2 Agriculture and Forest Resources. Table 3-1 lists the land acquisitions and TCEs expected for each alternative. The proposed acquisitions would not substantially change existing land uses or conflict with zoning regulation and land use policies.

SR 116 would remain open during construction. The Project, during both construction and operation, would have no effect on public access to nearby communities, businesses, recreation resources, and visitor-serving facilities.

CONSISTENCY WITH STATE, REGIONAL, AND LOCAL PLANS AND PROGRAMS

The Project would not conflict with any land use plan, policy, or regulation adopted to mitigate an environmental effect. The Project would not alter existing land uses along the highway corridor. No impact to land use or planning would occur.

The Build Alternatives would be consistent with most Sonoma County General Plan policies (Sonoma County 2016b) and all Sonoma County Comprehensive Transportation Plan policies (SCTA 2021).

State Scenic Highway Program

SR 116 at the Project location in Sonoma County is not designated as a State Scenic Highway. Policy OSRC-3i of the Sonoma County Open Space and Resource Conservation Element of the Sonoma County General Plan (Sonoma County 2016b) states that the County should "Recognize Highway 116 from Highway 1 to the southern edge of Sebastopol." Project effects on scenic vistas are discussed in Section 3.3.1 Aesthetics.

Legend

- Project Limits

Land Use Designation

- DA - Diverse Agriculture
- LEA - Land Extensive Agriculture
- PQP - Public/Quasi-Public

N

0 1,500 3,000
Feet

Caltrans

FIGURE 3-5
Sonoma County General Plan Land Use Designations

State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

Path : D:\WIP\E\21-002-009 SR 116 2Q770\aprx\21-002-009 SR116\21-002-009 SR116 Land Use.aprx

Sonoma County General Plan 2020

The Project complies with the stated goals of the Sonoma County General Plan (Sonoma County 2016b), including goals for recreation, transportation and safety. The proposed Project supports the following policies and goals by providing a safe, reliable road for motorized vehicles and multi-modal users:

- Goal OSRC-3: Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy.

- Objective OSRC-3.1: Designate the scenic corridors on Figures OSRC-5a through OSRC-5i along roadways that cross highly scenic areas, provide visual links to major recreation areas, give access to historic areas, or serve as scenic entranceways to cities.

- Policy OSRC-3h states: Design public works projects to minimize tree damage and removal along scenic corridors; where trees must be removed, design replanting programs so as to accommodate ultimate planned highway improvements; require re-vegetation following grading and roadway cuts.

- Objective CT-3.8: Increase the safety, convenience, and comfort of all pedestrians and bicyclists by eliminating the potential obstacles to this mode choice that is associated with the lack of continuous and well-connected pedestrian walkways and bicycle facilities, and the lack of safe crossing facilities, especially focusing on short trips that could result in a decrease in automobile travel.

Build Alternative 2, would not be consistent with the following agricultural land goal of the Sonoma County General Plan, 2020:

- GOAL LU-9: Protect lands currently in agricultural production and lands with soils and other characteristics that make them potentially suitable for agricultural use. Retain large parcel sizes and avoid incompatible non-agricultural uses.

Build Alternative 2 would require permanent conversion of 1.761 acres of agricultural land. However, this property acquisition would be at the edges of continuous agricultural parcels, with large parcels remaining intact. Refer to Section 3.3.2 for further information about impacts to agricultural resources.

Sonoma County Comprehensive Transportation Plan

The stated goals of the Sonoma County Comprehensive Transportation Plan, Moving Forward 2050 (SCTA 2021) include:

- Goal 1 — Connected and Reliable
- Goal 2 — Safe and Well-Maintained
- Goal 3 — Community Oriented and Place-Based
- Goal 4 — Zero-Emissions

Goals 3 and 4 do not apply to the Project, because the Project is not capacity increasing or growth inducing. Both Build Alternatives would increase bicycle and pedestrian accessibility and overall intersection safety. As such, the Project meets Goals 1 and 2 of the Sonoma County Comprehensive Transportation Plan.

Caltrans Complete Streets Policy

Director's Policy 37, Complete Streets (Caltrans 2021b), was developed to ensure that travelers of all ages and abilities can move safely and efficiently along and across a network of complete streets. The Project provides an opportunity to modify the existing intersection to provide increased user safety. The Project scope addresses Complete Streets requirements by proposing bike lanes and pedestrian facilities in both Build Alternatives and within the Project footprint.

The Project would not substantially affect existing land use or conflict with land use policies. The Project would be generally consistent with the State Scenic Highway Program, Sonoma County General Plan 2020, Sonoma County Comprehensive Transportation Plan, and the Caltrans Complete Streets Policy. Build Alternative 1 would have no adverse impact on land use.

Build Alternative 2 would not be consistent with Sonoma County General Plan policies for preservation of agricultural lands. The implementation of Build Alternative 2 would have a less than significant impact to agricultural lands (see Section 3.3.2), and a comparable less than significant impact on land use.

PROJECT FEATURES/ AVOIDANCE AND MINIMIZATION MEASURES

There are no applicable standard PFs for Land Use and Planning. No AMMs are required to avoid and/or minimize potential impacts to Land Use and Planning.

3.3.12 Mineral Resources

Question	CEQA Determination
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Both Build Alternatives: 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?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Mineral Resources

An active quarry (fill dirt; Mine ID 91-41-0021) is located directly north of the Project on Sonoma County APNs 068-020-022 and 068-020-023. The quarry is outside of the Project footprint for both Build Alternatives. Another registered mine, an open pit mine (rock; Mine ID 91-49-0045) is located off of SR 116 approximately 4.2 miles east of the Project. The CGS identifies these mines as representative of an aggregate production area (Clinkenbeard et al., 2018). The entrance/exit for the quarry is located northwest of the Project Area; the haul route for the quarry is SR 116 and may also include Lakeville Highway.

a and b) No Impact

The Project would have no direct impacts on mineral resources. SR 116 would remain open during construction and there would be no significant impacts to quarry haul routes.

Construction-related activities are limited in scale and would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site. The Project would have no impact on mineral resources.

Project Features/ Avoidance and Minimization Measures

There are no applicable standard PFs for Mineral Resources. No AMMs are required to avoid and/or minimize potential impacts to Mineral Resources.

3.3.13 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?	Both Build Alternatives: Less Than Significant Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	Both Build Alternatives: 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 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?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Noise

The proposed Project is not considered Type 1 work per 23 CFR 772 and the Caltrans noise analysis protocol. The proposed Project would not increase highway capacity. As such, a Noise Abatement Decision Report need not be considered. However, there are sensitive receptors located in proximity to where noisy construction activities may be taking place.

A Construction-related Noise Analysis Memorandum (Caltrans 2022f) and a Construction-related Vibration Analysis Memorandum (Caltrans 2022g) were completed by Caltrans Office of Environmental Engineering. A summary of the report findings is presented here.

a) Less Than Significant Impact

The Project would not permanently increase ambient noise levels in the vicinity of the intersection. The Project corridor is along SR 116, a highway that creates background noise levels for nearby businesses and residences. The Project would not change highway capacity or substantially alter long-term ambient noise levels. Therefore, impacts to ambient noise levels would be less than significant.

There are three sensitive receptors within approximately 350 feet of the Project footprint (Figure 3-6): Ernie's Tin Bar (R1) and two residential properties near the corner of SR 116 and Lopes Road at 5070 Lakeville Highway (R2), and at 5090 Lakeville Highway on Lopes Road (R3). The Project would potentially expose noise-sensitive receptors to a short-term increase in noise levels during construction, but the

increase would be temporary. Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, Noise Control, which limits maximum hourly noise levels (L_{max}) to 86 A-weighted decibels (dBA) at 50 feet from a project from 9:00 p.m. to 6:00 a.m. in residential areas.

Build Alternative 1: Signalization

Based on noise modeling of construction activities, construction noise would exceed 86 dBA at a distance of 50 feet from the activity for all phases of construction. Construction noise would not exceed 86 dBA at a distance of 100 feet, 200 feet, or 500 feet. Therefore, most sensitive receptors would not experience construction noise in excess of the 86-dBA criteria. The commercial building R1 would experience the loudest construction noise due to its proximity to the Project footprint. The noisiest operations at R1 would be bridge widening and culvert replacement, which would occur within approximately 10 feet of the commercial building (restaurant/bar), would produce an estimated sound level of 103.6 dBA (L_{max}). R2 would experience the loudest construction noise for a residential property; the bridge widening, which would occur approximately 25 feet from this residence, would result in a sound level of 95.6 dBA (L_{max}).

Implementation of standard PFs and AMMs (PF-NOISE-01 and AMM-NOISE-01) would reduce this impact to a less-than-significant level.

Build Alternative 2: Roundabout

Based on noise modeling of construction activities, construction noise would exceed 86 dBA at a distance of 50 feet from construction activity when removing existing pavement, constructing sidewalks and curb ramps, and during culvert replacement. Construction noise would not exceed 86 dBA at a distance of 100 feet, 200 feet, or 500 feet. The commercial building R1 would experience the loudest construction noise for all phases overall due to its proximity to the Project footprint. The noisiest operations for R1 would be removing existing pavement and paving, which would occur as close as 4 feet from the commercial building, with a modeled sound level of 111.5 dBA (L_{max}). R2 would experience the loudest construction noise for a residential property; overlay activities, which would occur approximately 35 feet from this residence, would result in an estimated sound level of 88.1 dBA (L_{max}).

Construction activities are short-term and would not result in long-term adverse effects on ambient noise levels. Implementation of standard PFs and AMMs (PF-NOISE-01 and AMM-NOISE-01) would further reduce impacts to ambient noise

levels due to temporary construction noise. Therefore, construction-related noise impacts would be less than significant.

b) Less Than Significant Impact

Vibratory motion is identified by the Peak Particle Velocity (PPV) in inches per second. Vibratory rolling during paving would be the highest vibration source. Ernie's Tin Bar (R1) is a historic-era building located approximately 10 feet from the Project footprint and would be the most sensitive to construction-related vibratory impacts. The predicted PPV during vibratory rolling (0.575 inch per second) would exceed the Vibration Damage Potential Threshold for "historic and some old buildings" (0.25 inch per second). This assessment triggers the need for construction vibration Nonstandard Special Provisions (NSSPs) to be included in Project design and specifications. NSSPs recommended during construction are included in standard AMMs (AMM-NOISE-02); Implementation of standard AMMs (AMM-NOISE-02) would minimize construction-related vibration impacts. Applicable AMMs are provided at the end of this section and are also found in Appendix A.

c) No Impact

The Project footprint is not within the vicinity of an airstrip, an airport land use plan, or within two miles of a public airport or public use airport. The Petaluma Municipal Airport is the nearest airport and is located approximately 3.75 miles northwest of the Project footprint. Therefore, the Project would not generate excessive noise that would permanently impact or expose people residing or working within two miles of an airport.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs for Noise:

- **PF-NOISE-01, Implement Noise Control During Construction:** Temporary noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, Noise Control. Caltrans Standard Specifications 14-8.02 requires L_{max} not to exceed 86 dBA at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. in residential areas and near hotels.

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FIGURE 3-6
Sensitive Receptors

State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

AVOIDANCE AND MINIMIZATION MEASURES

Caltrans would incorporate the following AMMs into the Project to avoid and/or minimize potential temporary construction-related impacts to Noise:

- **AMM-NOISE-1, Construction Noise Levels:** The following measures will be incorporated to reduce noise levels during construction:
    - The Contract Specifications would include a Special Provision requiring Noise Monitoring and Control.
    - Any operation exceeding 86 dBA will not be allowed at nighttime from 9:00 p.m. to 6 a.m.
    - Public outreach will be required throughout the Project construction to update residents, businesses, and others regarding upcoming construction-related activities and timeframe of Project.
    - Schedule noisy operations within the same time frame where feasible. The total noise level will not be significantly greater than the level produced if operations were performed separately.
    - Avoid unnecessary idling of internal combustion engines within 100 feet of sensitive receptors.
    - Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons for equipment when sensitive receptors adjoin or are near a Project construction area.
    - Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
    - Utilize “quiet” air compressors and other “quiet” equipment where such technology exists.
    - No construction equipment will be delivered and dropped off before 6:00 a.m.
    - Maintain all internal combustion engines properly to minimize noise generation.

- **AMM-NOISE-2, Vibration Control Measures:** The following measures and non-standard specifications will be incorporated to reduce vibratory impacts during construction:

    - Use a non-vibratory road roller when construction activities are less than 25 feet from structures.

    - Prevent idling of other equipment within 100 feet of structures.

    - Develop and implement a construction vibration monitoring plan in accordance with Caltrans requirements, to document conditions prior to, during, and after construction. A photo-video survey, elevation survey, and crack monitoring survey shall be completed prior to construction, in regular intervals during construction, and after completion of construction to document the condition of foundations, walls and other structural elements in the interior and exterior of nearby structures.

3.3.14 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)?	Both Build Alternatives: No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Population and Housing

a and b) No Impact

The Project would not induce population growth because it does not increase the capacity of SR 116, remove barriers to future growth, or increase population or housing growth (or demand for new housing, utilities, or public services). The Project would not induce substantial population growth, displace housing, or displace people; therefore, there would be no impact to population and housing.

Implementation of standard PF (PF-TRANS-01) during construction would require that access to all properties be maintained for property owners and users and would further reduce impacts to population and housing.

Project Features

Caltrans would incorporate the following standard PFs:

- **PF-TRANS-01, Transportation Management Plan:** Described in Section 3.3.17.

Avoidance and Minimization Measures

No AMMs are required to avoid and/or minimize potential impacts to Population and Housing.

3.3.15 Public Services

Question	CEQA Determination
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	Both Build Alternatives: No Impact
Police protection?	Both Build Alternatives: No Impact
Schools?	Both Build Alternatives: No Impact
Parks?	Both Build Alternatives: No Impact
Other public facilities?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Public Services

Fire protection is provided by the Lakeville Volunteer Fire Department (LVFD). The LVFD responds to a wide variety of incidents including hazardous materials, public assists, vehicle accident extrication's, land and water rescue, commercial and residential fire alarms. The LVFD is located at 5090 Lakeville Highway, off Lopes Road adjacent to the Project.

CalFire is responsible for responding to incidents occurring in State Responsibility Areas (SRAs). The nearest CalFire station to the Project is outside of the community of Glen Ellen; an approximate 14-mile drive via SR 116 and SR 12.

The Sonoma County Sheriff's Department provides law enforcement services to unincorporated areas of the county. The California Highway Patrol provides law enforcement along all state routes within California, including SR 116 within the Project vicinity, and assists local governments during emergencies when requested.

There are no schools in the Project vicinity; the nearest school to the Project is River Montessori Charter school outside of Petaluma (2.25 miles northwest of the Project).

There are no parks in or immediately adjacent to the Project. There are local and public parks within 3 miles of the Project, as discussed in Section 3.3.16.

a) No Impact

The Project is a safety project and is not capacity increasing. It would not result in the substantial alteration of government facilities, such as fire and police protection, schools, parks, or other public facilities, nor trigger the need for new government facilities or alter the demand for public services.

With Implementation of Transportation (Section 3.3.17) standard PFs (PF-TRANS-01), police, fire, and medical services and response times would not be substantially affected during construction. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs:

- **PF-TRANS-01, Transportation Management Plan:** Described in Section 3.3.17.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Public Services.

3.3.16 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?	Both Build Alternatives: 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?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Recreation

The roads affected by the Project, SR 116 and Lakeville Highway, provide access to local and regional parks. Tolay Lake Regional Park is a 3,400-acre Sonoma County regional park with 11 miles of trails for hiking, mountain biking, and horseback riding. Tolay Lake Regional Park is accessed via Lakeview Highway and Cannon Lane, approximately 3 miles south of the Project. Additionally, within the city limits of Petaluma, SR 116 provides access to Rocky Memorial Dog Park, Del Oro Park, and Shollenberger Park. These local parks are approximately 3 miles northwest of the Project.

a and b) No Impact

The Project is a safety project, not a capacity increasing project. The Project would not directly or indirectly increase use of existing recreational facilities such that substantial deterioration of the facilities would occur. The Project would not require the construction of additional recreational facilities or directly affect existing parks. There would be no impacts.

Project Features/ Avoidance and Minimization Measures

There are no applicable standard PFs for Recreation. No AMMs are required to avoid and/or minimize impacts to Recreation.

3.3.17 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?	Both Build Alternatives: No Impact
b) Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Both Build Alternatives: Less Than Significant 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)?	Both Build Alternatives: No Impact
d) Result in inadequate emergency access?	Both Build Alternatives: Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR TRANSPORTATION

SR 116 is a two-lane, rural conventional highway that provides the only link to several rural inland communities. It is also a tourist and recreational travel route, providing access to wine country destinations, parks, and scenic areas. Average daily traffic on mainline SR 116 within the Project limits was 27,100 in 2017, with an estimated 7.2 percent truck traffic.

The existing two-lane conventional highway at the Project intersection has 11-foot-wide travel lanes, and shoulder width varying from 0 to 5 feet wide. There is an existing left turn lane for continuous eastbound travel on SR 116. For vehicles on SR 116/Stage Gulch Road, a stop sign at the intersection constitutes existing road control. At this T-intersection, there were 15 accidents in the 5-year period from January 1, 2011 to December 21, 2015. From July 1, 2018 through June 30, 2021, there were an additional 15 accidents reported at the Project intersection, of which 5 resulted in injury. With this tally of accidents and the traffic volume counts, the Project proposes two Build Alternatives to improve safety: installation of traffic signals or a roundabout.

The construction of a roundabout is also being considered at this location because a roundabout would maintain traffic flow, handle a high volume of truck traffic, and need fewer lanes at the approaches to the intersection. According to *Rounding Out a Traffic Strategy* (Caltrans 2017c), roundabouts reduce delays, improve traffic flow, and cut air pollution due to vehicles not idling at streetlights. Reduced speeds at roundabouts help accommodate pedestrians and bicyclists. Reduced conflict points between vehicles reduces the frequency and severity of vehicle collisions, thus

improving safety. Roundabouts are proven safety countermeasures for traffic calming for complete street designs according to the Highway Design Manual (Caltrans 2020).

a) No Impact

The Project would not conflict with programs, plan, ordinances, or policies regarding the circulation system, public transit, and bicycle or pedestrian facilities. As stated in Section 1.2, the purpose of the Project is to improve traffic safety on SR 116 where it intersects Lakeville Highway.

The Project would not conflict with the SCTA Comprehensive Transportation Plan (2021). Both Build Alternatives would increase bicycle and pedestrian accessibility and overall intersection safety, thereby furthering the goals of the Sonoma County Comprehensive Transportation Plan.

The Project is also consistent with the intent of Caltrans Director's Policy 37, Complete Streets (Caltrans 2021b) to ensure that travelers of all ages and abilities can move safely and efficiently along and across a network of complete streets. The proposed Project is located in a rural farmland area. There are no pedestrian facilities within the Project footprint to connect to and/or transit stops along the Project corridor. The Project proposes bike lanes and pedestrian facilities with Build Alternatives 1 and 2, which would improve the roadway network for pedestrians and cyclists.

The Project would not conflict with these plans and policies; there would be no impact.

b) Less Than Significant Impact

The Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The Project would not increase the number of through travel lanes on SR 116, nor would it permanently alter the circulation system, and would have no temporary or permanent impact on VMT. The Project would have less than significant impacts on VMT and transportation during construction because of temporary traffic control. The Project would have no permanent impact on VMT and would cause no permanent impacts on transportation. The impact would be less than significant.

c) No Impact

The Project would not increase hazards because of a geometric design feature. The Project does not include design features or Project components that would substantially increase hazards. There would be no impact.

d) Less Than Significant Impact

The Project would not result in inadequate emergency access. To protect construction workers and the traveling public, traffic control would be in place while construction-related activities are underway. A standard PF that coordinates and provides safety measures for those accessing the Project corridor during construction (PF-TRANS-01) would further reduce impacts to transportation. Medical and emergency vehicles would be able to continue to use SR 116 for fire, medical, emergency, and law enforcement purposes during construction. The Project has the potential to cause short-term, localized traffic congestion and delays during construction. Shoulder closures with modified traffic lanes are described in the preliminary TMP as the ongoing traffic management methodology for Build Alternatives 1 and 2 through all construction stages. The TMP would provide priority to emergency vehicles during traffic control. Detours are not anticipated to be required during construction. With implementation of standard PFs (PF-TRANS-01), impacts would be less than significant.

PROJECT FEATURES

Caltrans would incorporate the following PFs for Transportation:

- **PF-TRANS-01, Transportation Management Plan:** A Final TMP would be prepared by Caltrans prior to the beginning of construction and in consultation with the appropriate agencies to aid in coordinating and providing further safety measures for those accessing the Project corridor during construction. The TMP would identify traffic delays and alternative routes for emergency and medical vehicles associated with essential services, thereby avoiding or minimizing short-term, localized traffic congestions and delays. Notifications and instructions for rapid response or evacuation in the event of an emergency would be provided.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Transportation.

3.3.18 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	Both Build Alternatives: Less Than Significant Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Both Build Alternatives: Less Than Significant Impact

CEQA Significance Determinations for Tribal Cultural Resources

Caltrans initiated formal notification under Assembly Bill 52 and Section 106 of the National Historic Preservation Act with letters for each individual and/or organization provided by the NAHC on December 13, 2021. Individuals contacted include:

- Patricia Hermosillo, Chairperson, Cloverdale Rancheria of Pomo Indians
- Dino Franklin, Chairperson, Kashia Band of Pomo Indians of the Stewarts Point Rancheria
- Chris Wright, Chairperson, Dry Creek Rancheria Band of Pomo Indians
- Marjorie Mejia, Chairperson, Lytton Rancheria
- Gene Buvelot, Tribal Cultural Consultant, Federated Indians of Graton Rancheria
- Greg Sarris, Chairperson, Federated Indians of Graton Rancheria
- Jose Simon III, Chairperson, Middletown Rancheria
- James Rivera, Tribal Historic Preservation Officer, Middletown Rancheria
- Donald Duncan, Chairperson, Guidiville Indian Rancheria
- Scott Gabaldon, Chairperson, Mishewal-Wappo Tribe of the Alexander Valley

- Monica Arellano, Vice Chairwoman, Muwekma Ohlone Indian Tribe of the SF Bay Area
- Leona Williams, Chairperson, Pinoleville Pomo Nation
- Beniakem Cromwell, Chairperson, Robinson Rancheria Band of Pomo Indians

Responses were received from two Tribes: from the Tribal Historic Preservation Officer (THPO) for the Federated Indians of Graton Rancheria (Graton Rancheria) on January 4, 2022, requesting consultation for the undertaking, and the THPO for the Kashia Band of Pomo Indians of the Stewarts Point Rancheria on March 7, 2022, indicating that the Project was outside of the Tribe's aboriginal territory and that the Tribe had no comments.

Follow-up emails were sent to remaining contacts on February 25, 2022; however, no further responses have been received to-date.

From January 2 to February 2, 2023, correspondences in the form of online meetings and emails transpired between Caltrans OCRS and Graton Rancheria to keep the Tribe apprised of Project details, schedule, and archaeological studies. A Tribal Monitor from Graton Rancheria was present for the archaeological survey and XPI subsurface testing conducted on February 1, 2023. The negative results of the fieldwork were sent via email to the Tribe on February 2, 2023, and to inform the Tribe that the cultural documents for the Project would be sent to the Tribe once they were completed. Consultation with Graton Rancheria is ongoing.

a and b) Less Than Significant Impact

No tribal cultural resources were reported in record searches, through pedestrian survey, XPI testing, or in consultation with Native American groups and individuals. Therefore, the Project would have no impact on tribal cultural resources.

Implementation of Cultural Resources (Section 3.3.5) standard PFs (PF-CUL-01 and PF-CUL-02) would further minimize impacts to tribal cultural resources if an inadvertent discovery of potential tribal cultural resources occurs during construction. Applicable PFs are provided below and are also found in Appendix A.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs:

- **PF-CUL-1, Cease Work Upon Discovery of Cultural Resources:** Described in Section 3.3.5.
- **PF-CUL-2, Procedures for Discovery of Human Remains:** Described in Section 3.3.5.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Tribal Cultural Resources.

3.3.19 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?	Both Build Alternatives: 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?	Both Build Alternatives: 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?	Both Build Alternatives: 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?	Both Build Alternatives: No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Utilities and Service Systems

Utility verification (i.e., potholing) would occur during the Project design phase to confirm the need for utility relocations. It is anticipated that overhead electrical lines and lighting would be relocated. Utility owners with facilities located within the Project footprint that may potentially be impacted by the Project include PG&E and AT&T. There is no public water or sewer service in the Project footprint, though underground septic and well systems may be present. There are several state-managed stormwater/drainage systems in the Project footprint; there is one culvert and a retaining wall drainage system along westbound SR 116 northwest of the intersection. Additional stormwater systems include an 18-inch pipe that conveys water from the area south of Ernie's Tin Bar to Stage Gulch Creek and a ditch that borders northbound Lakeville Highway and eastbound SR 116/Stage Gulch Road.

a) Less Than Significant Impact

The Project would not require or result in the construction of new or expanded water, wastewater treatment, electrical power, or natural gas facilities. The Project is not anticipated to require utility relocations for gas, water, and sewer systems. However, the Project would require the relocation of telephone and electric power poles that are within some of the shoulder widening locations. Utility verification is anticipated to

be required for the Project and would occur during the Project design phase to confirm the need for utility relocations. Utility relocations would occur prior to the beginning of construction and in consultation with utility providers, all as part of standard PFs (PF-UTIL-01). The relocation of existing overhead utilities could result in the slight expansion of the utility facilities (extra pole or lines); however, the relocation of utilities would not result in a major expansion of the existing facilities. Therefore, the impact would be less than significant.

The existing stormwater drainage system (see Section 1.3.2) has been evaluated by the Caltrans Office of Hydraulic Engineering. Recommendations for both Build Alternatives include replacing two existing drainage pipes, reconstructing an existing ditch, and adding at least one new storm drainage feature. Refer to Sections 2.1.3 and 2.2.3 for a description of drainage improvements for each Build Alternative. These new drainage systems would not directly affect lands outside of the footprints of the Build Alternatives. Therefore, the new drainage systems would not result in a major expansion of the existing facilities and would not have a significant environmental impact.

The impact to utilities would be less than significant.

b, c, d, and e) No Impact

The Project would not require water supplies to serve the Project from existing entitlements or where the Project would require new or expanded entitlements.

The Project would not require the services of a wastewater treatment provider where the Project would impact the provider's capacity. The Project would not exceed wastewater treatment requirements. During construction, pursuant to California Code of Regulations (sec. 1526), portable toilets would be provided for construction workers.

The Project would not require the services of a landfill where the Project would affect its capacity. All construction-related waste would be properly disposed of, or recycled, at an approved facility in compliance with both Caltrans Standard Specification 14-11, and Hazards and Hazardous Materials (Section 3.3.9) standard PFs (PF-HAZ-01), and the requirements of the facility to which the construction-related waste is hauled. Construction-related activities would comply with all federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, there would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following PFs for Utilities and Service Systems:

- **PF-UTIL-01, Utility Notifications:** During Project design phase, Caltrans will coordinate with all affected utility companies regarding the construction schedule for the Project so that relocations can be conducted by each utility company as necessary prior to the start of construction. Prior to utility relocation activities, the Resident Engineer will coordinate with affected utility providers regarding potential utility relocations and inform affected utility users in advance of the date and timing of potential service disruptions.

- **PF-HAZ-01, Caltrans Standard Specifications and Hazardous Waste Regulations: (**Described in Section 3.3.9).

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Utilities and Service Systems.

3.3.20 Wildfire

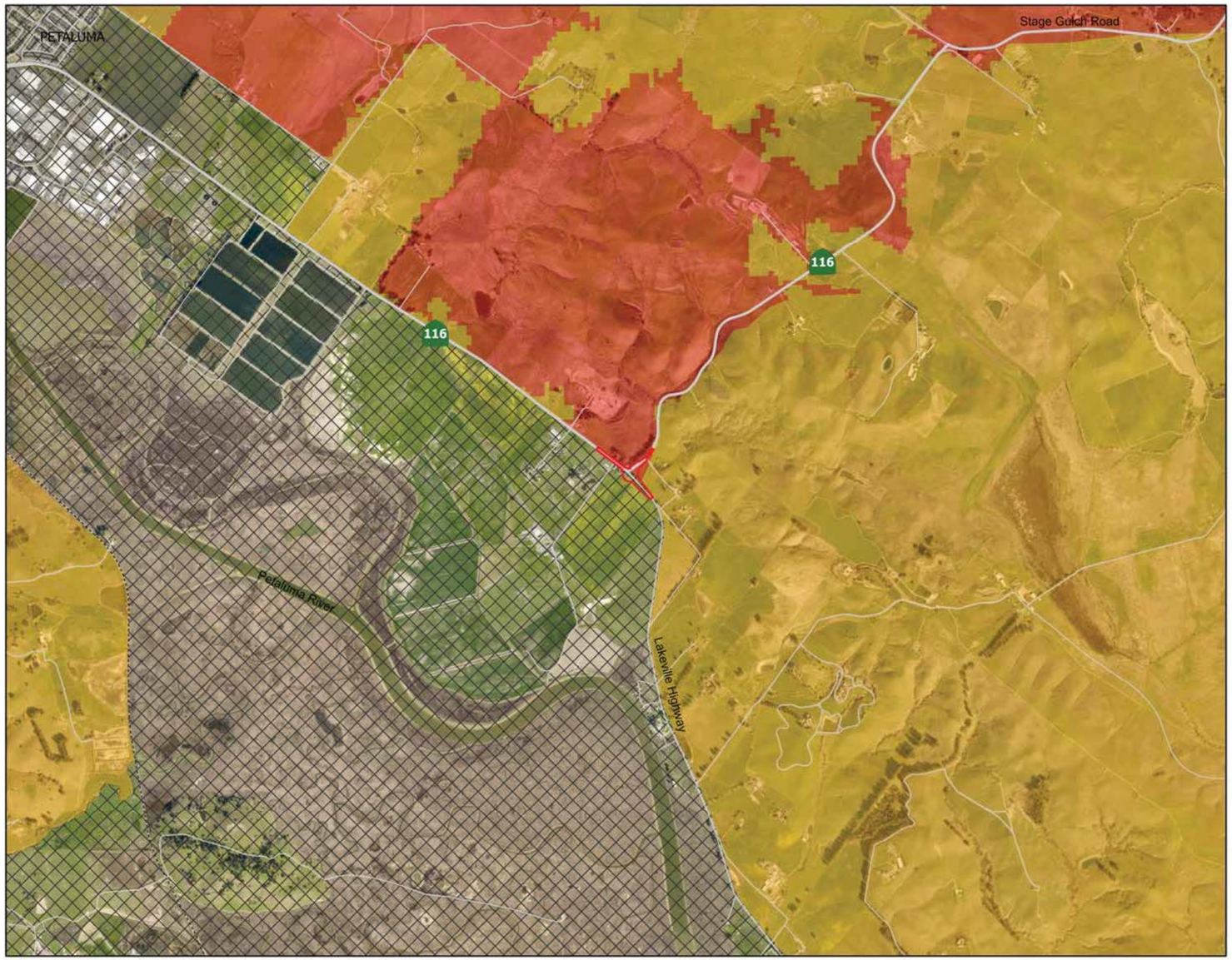
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Both Build Alternatives: 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?	Both Build Alternatives: 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?	Both Build Alternatives: 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?	Both Build Alternatives: No Impact

CEQA Significance Determinations for Wildfire

The Project is located within Sonoma County and is partly within a State Responsibility Area (SRA) and partly within a Local Responsibility Area (LRA) (Figure 3-7). The Sonoma County Fire District and volunteer fire companies operating through the County of Sonoma Emergency Readiness Response and Recovery, as well as CalFire, provide fire suppression, rescue, and emergency services within the Project corridor (Sonoma County 2022). The LVFD is located adjacent to the Project on SR 116 and Lopes Road (5090 Lakeville Highway).

The SRA occurs to the northeast of Lakeville Highway and encompasses the eastern turn of the 116 and Stage Gulch Road. Within SRAs, CalFire has developed a hazard mapping system where the hazard score (moderate, high, and very high) is based on the factors that influence fire likelihood and fire behavior, such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. The fire hazard severity score in the SRA within the Project footprint is mapped as ‘High’ (CalFire 2022)



Legend

- Project Limits
- Local Responsibility Area

Fire Hazard Severity Zone Hazard Class (State Responsibility Area)

- High
- Moderate

N

0 1,500 3,000
Feet

Caltrans

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FIGURE 3-7
CAL FIRE Fire Hazard Severity Zones
State Route 116
Intersection Improvements Project
EA 04-2Q770
Sonoma County, California

The County of Sonoma Emergency Readiness, Response and Recovery, along with incorporated cities, have established standardized evacuation zones that would remain consistent for multiple incidents (Sonoma County 2022). The "Evacuation" annex to the Sonoma County Operational Area Emergency Operations Plan (Sonoma County 2021) clarifies that while the zones are consistent, evacuation routes would be selected by law enforcement officials and approved at the time of the evacuation decision. Evacuation routes may include interstate, state and surface roads (like SR 116) and would be chosen based on the relative safety of highway infrastructure and current traffic conditions (Sonoma County 2021).

a) Less Than Significant Impact

As discussed above, Sonoma County has designated evacuation zones, with incident-based determinations of evacuation routes. SR 116 is an important east-west route in Sonoma County and is anticipated as a likely evacuation route. For both Build Alternatives, a final TMP would be prepared.

The final TMP would be developed in consultation with emergency responders and transportation agencies, such as CalFire, LVFD, the SCTA, SCTA Paratransit Services, Sonoma County School Districts, the Sonoma County Office of Education, public transportation providers from neighboring jurisdictions including cities and counties, and/or private sector transportation providers. Emergency response times are not anticipated to change during construction because the TMP would provide measures to ensure priority for emergency vehicles during traffic control.

The TMP would also include public information and press releases to notify and inform motorists, local businesses, community groups, local entities, emergency services, and local officials of upcoming closures and detours (if needed).

For both Build Alternatives, the development and implementation of the final TMP as a Transportation (Section 3.3.17) standard PF (PF-TRANS-01), would mean that the proposed Project would not conflict with emergency response or evacuation plans. The impact would be less than significant.

b, c and d) No Impact

The Project proposes to install traffic signals or a roundabout to control the intersection. Signalization and warning lights would be installed with buried electrical components and existing intersection lighting and utility poles would be relocated as

part of Utilities and Service Systems (Section 3.3.19) standard PF (PF-UTIL-01) in coordination with utility providers. Buried electrical connections do not constitute a wildfire risk and all utility work would be completed with coordination of utility providers. No new structures or ember sources would be added as a result of Project implementation. The Project would not exacerbate wildfire risk, nor would it require the installation of new associated infrastructure that would exacerbate fire risk. There would be no impact.

PROJECT FEATURES

Caltrans would incorporate the following standard PFs:

- **PF-TRANS-01, Transportation Management Plan:** Described in Section 3.3.17
- **PF-UTIL-01, Utility Notifications:** Described in Section 3.3.19.

AVOIDANCE AND MINIMIZATION MEASURES

No AMMs are required to avoid and/or minimize potential impacts to Wildfire.

3.3.21 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?	Both Build Alternatives: Less Than Significant Impact.
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)?	Both Build Alternatives: No Impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Both Build Alternatives: Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR MANDATORY FINDINGS OF SIGNIFICANCE

a) <u>Less Than Significant Impact</u>

As determined in Section 3.3.4, Biological Resources, the Project would not have a significant impact on individual species or sensitive habitats. The Project would not 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, or substantially reduce the number of or restrict the range of a rare or endangered plant or animal.

The Project would generate temporary and permanent impacts to CRLF upland habitat. AMMs would be implemented to minimize these anticipated impacts. Coordination with the appropriate regulatory agencies would also be conducted in the later stages of the Project to ensure that, should special-status animals, plants, or habitats be discovered during pre-construction surveys or construction monitoring, potential impacts to animals and habitats would remain less than significant.

During construction, ground-disturbing activities are anticipated; standard PFs and AMMs as described in Appendix A would avoid and/or minimize impacts to special-status species and habitats.

The Project would also result in other temporary, minor, and construction-related impacts. PFs, and AMMs (Appendix A), would avoid and/or minimize impacts to less than significant levels.

b) No Impact

A review of projects in the vicinity of the Project determined that no past, present, or future projects would pose a cumulative effect together with implementation of the Project. For biological resources, no cumulative impacts are anticipated due to the implementation of the standard PFs, and AMMs as summarized in Appendix A. Because future projects would also comply with state and federal agencies, proposed Build Alternatives would not contribute to a cumulative impact to CRLF, special-status plants, wetlands or waters.

With respect to population and housing, the Project would not be growth inducing; the Project is not capacity increasing and would not modify existing circulation patterns or volumes. The Project would not have cumulative impacts; therefore, there would be no impact.

c) Less Than Significant Impact

The Project would have no impact on forest resources, mineral resources, population and housing, public services, and recreation. The Project would have less-than-significant impacts on aesthetics, agricultural resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, tribal cultural resources, utilities and service systems, and wildfire. Implementation of PFs and AMMs would further reduce these impacts. Construction-related activities would temporarily increase criteria air pollutant emissions, ambient noise and vibration levels, and soil disturbance and transport. The Project would incorporate PFs and AMMs to avoid or minimize potentially adverse effects to humans during construction. Therefore, the Project would not have a substantial direct or indirect impact on the human environment. Impacts would be less than significant.

Chapter 4 Community Outreach and Consultation and Coordination with Public Agencies

To date, public and agency coordination consists of the following:

4.1 Community Outreach

This IS/ND, maps, and Project information are available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs). In addition, a hardcopy of this IS/ND will be made available at the following locations in the vicinity of the Project:

- Sonoma County Regional Library
  755 West Napa Street
  Sonoma, CA 95476

- Petaluma Regional Library
  100 Fairgrounds Drive
  Petaluma, CA 94952

An online community meeting will be held on April 20, 2023; refer to the public notice posted on the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs) for the Zoom meeting link.

The deadline for submission of comments on this IS/ND is May 3, 2023.

4.2 Consultation and Coordination with Public Agencies

Caltrans has consulted with agencies during the preparation of this environmental document. A list of coordination activities and contacts is provided in Table 4-1.

Table 4-1. Agency Coodination Meetings and Contacts

Organization(s)	Date	Topic
Native American Heritage Commission (NAHC)	October 28, 2021	Caltrans contacted the NAHC requesting a review of the Sacred Lands File (SLF). The results of the SLF were negative and a list of Native American contacts with potential interest or information regarding the APE was provided.
Local Native American Contacts provided by the NAHC	December 13, 2021	Caltrans sent consultation initiation letters, under AB 52 and Section 106 of the National Historic Preservation Act, regarding the Project, to all NAHC contacts that were provided.
Federated Indians of Graton Rancheria	January 4, 2022	Tribal Historic Preservation Officer (THPO) requested consultation on the Project.
Local Native American Contacts provided by the NAHC.	February 25, 2022	Caltrans sent follow-up emails to all NAHC contacts that were provided and had not responded.
Kashia Bank of Pomo Indians of the Stewarts Point Rancheria	March 7, 2022	THPO responded that Project is outside of the Tribe's aboriginal territory.
Federated Indians of Graton Rancheria	August 23, 2022 to January 31, 2023	Multiple contacts between Caltrans OCRS and the Graton Rancheria's THPO and Cultural Resources Specialist to arrange a Tribal monitor for the Extended Phase I Report conducted by Caltrans on February 1, 2023,
USFWS	October 10, 2022	Caltrans biologist emailed the Caltrans District 4 Liaison/USFWS to request technical assistance for the Project.
NMFS	October 12, 2022	Caltrans biologist emailed NMFS to inquire about records of anadromous fish in Stage Gulch Creek.
NMFS	October 18, 2022	NMFS responded by email that there were no historical records of anadromous fish or critical habitat for anadromous fish in Stage Gulch Creek.

Chapter 5 List of Preparers and Reviewers

The primary people responsible for preparing and reviewing this IS/ND are summarized in Table 5-1.

Table 5-1. List of Preparers and Reviewers

Organization	Name	Role
Caltrans	Maxwell Lammert	Office Chief (Acting), Office of Environmental Analysis
Caltrans	Arnica MacCarthy	Senior Environmental Planner, Office of Environmental Analysis
Caltrans	Nicholas Piucci	Environmental Planner, Office of Environmental Analysis
Caltrans	Samira Norouzpour	Project Management, Division of Engineering Services
Caltrans	Alexander Lim	Project Management Assistance, Division of Engineering Services
Caltrans	Atif Abrar	Senior Transportation Engineer, Office of Design South, Special Projects
Caltrans	Yenha Nguyen	Engineer, Design Special Projects
Caltrans	Robert Blizard	Branch Chief, Office of Biological Sciences and Permits
Caltrans	Lindsay Vivian	Office Chief (Acting), Office of Biological Sciences and Permits
Caltrans	Jonathan Hogg	Environmental Scientist, Office of Biological Sciences and Permits
Caltrans	Richard Melko	Supervising Engineer, Office of Bridge Design West, Structure Design, Division of Engineering Services
Caltrans	Qudama Jasim	Engineer, Office of Bridge Design West, Structure Design, Division of Engineering Services
Caltrans	Althea Asaro	Branch Chief (Acting), Office of Cultural Resource Studies
Caltrans	Brian Gassner	Senior, Archaeology Branch, Office of Cultural Resource Studies
Caltrans	Charles Palmer	Senior, Architectural History, Office of Cultural Resource Studies
Caltrans	Britt Schlosshardt	Lead Archaeological Surveyor, Office of Cultural Resource Studies
Caltrans	Douglas Bright	Architectural Historian, Office of Cultural Resource Studies
Caltrans	Shilpa Mareddy	Branch Chief, Office of Environmental Engineering
Caltrans	Va Lee	Specialist, Office of Environmental Engineering

Organization	Name	Role
Caltrans	Ben Mitrsongkroh	Senior Transportation Engineer, Office of Highway Operations/TMP
Caltrans	Charuni Kurumbalapitiya	Transportation Engineer, Office of Highway Operations/TMP
Caltrans	Chris Wilson	District Branch Chief, Office of Environmental Engineering
Caltrans	Chris Risden	Branch Chief, Office of Geotechnical Design – West
Caltrans	Kathleen Reilly	District Branch Chief, Office of Hydraulic Engineering
Caltrans	Nghia Nguyen	Hydraulic Engineer, Office of Hydraulic Engineering
Caltrans	Joaquin Pedrin	Branch Chief, Office of Landscape Architecture – North
Caltrans	Chris Else	Project Landscape Associate, Office of Landscape Architecture
Caltrans	Alex McDonald	Senior Landscape Architect, Office of Landscape Architecture
Caltrans	Wesley Bexton	Landscape Architect, Office of Landscape Architecture
Caltrans	Brian Rowley	Branch Chief, Office of Water Quality
Caltrans	Vahid Zand	Water Quality Engineer, Office of Water Quality
Caltrans	Bryan Chew	Utility Engineer, Office of Right of Way – Utilities
Caltrans	Jim Murphy	Acting Branch Chief, Office of Right of Way Acquisitions & Project Management Services
Caltrans	Syd Valeh	Senior Construction Manager, Office of North Bay Construction
Jacobs	Audrey Van	Senior Environmental Planner
Jacobs	David Carlson	Environmental Program Manager
Area West Environmental, Inc.	Aimee Dour-Smith	Senior Environmental Planner
Area West Environmental, Inc.	Breeanna Kalson	Environmental Planner, Biologist
Area West Environmental, Inc.	Kimberly Mays	Environmental Planner
Area West Environmental, Inc.	Rachel Freund	GIS Analyst

Chapter 6 Circulation List

This Draft IS/ND will be circulated to the agencies and elected officials listed in the following sections.

6.1 Agencies

- Association of Bay Area Governments
- Bay Area Air Quality Management District
- California Department of Fish and Wildlife
- California Highway Patrol
- California Transportation Commission
- National Marine Fisheries Service
- San Francisco Bay Regional Water Quality Control Board
- Sonoma County Planning Division
- Sonoma County Sheriff's Office
- Sonoma County Transportation Authority
- State Water Resources Control Board
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers

6.2 Elected Officials

- The Honorable Dianne Feinstein
- The Honorable Alex Padilla
- The Honorable Mike Thompson (California District 4)
- The Honorable Bill Dodd (California State Senate District 3)
- The Honorable Mike McGuire (California State Senate District 2)
- The Honorable Damon Connolly (California State Assembly District 12)
- The Honorable Supervisor David Rabbitt (Sonoma County Supervisorial District 2)

Appendix A Summary of Project Features, and Avoidance and Minimization Measures

Project Features

- **PF-AES-01, Vegetation Impacts:** Minimize impacts to vegetation to the greatest extent possible while allowing the Project to be implemented.
- **PF-AES-02, Vegetation Protection:** Vegetation to remain should be protected from construction activities by means of temporary fencing (or similar) when vegetation is close to construction work.
- **PF-AES-03, Tree Protection:** Where the pruning of trees is required to accommodate construction operations, pruning must be under the supervision of a certified arborist.
- **PF-AES-04, Screening:** Construction materials and equipment should be stored in staging area(s) beyond direct view of the motoring public and residential properties to the extent feasible.
- **PF-AES-05, Limit Nightwork Impacts:** If nightwork is included, limit light trespass to residences and motorists with the use of directional lighting, shielding, and other measures as needed.
- **PF-AES-06, Minimize Light Pollution:** All lighting on new highways and structures would be designed to limit light pollution and have minimum impact on the surrounding environment. All light fixtures would have light-emitting diodes configured at the minimum necessary number of bulbs, optimal mounting height, mast-arm length, and angle to restrict light to the highway. If applicable, shields on the fixtures to prevent light trespass to adjacent properties would be considered during the Project design phase.
- **PF-AES-07, Reseeding Disturbed Areas:** Apply erosion control seeding and similar measures to all areas of disturbance where they are beyond paved areas unless specifically unwarranted as for safety considerations.
- **PF-AES-08, Minimize Visual Resources Impacts during Final Design:** The minimization of impacts to visual resources should be emphasized in highway

layouts and all other aspects of Project design and implementation. The Office of Landscape Architecture shall be consulted throughout the Project design process.

- **PF-AQ-01, Dust Control Measures:** Implement dust control measures to minimize airborne dust and soil particles generated from construction-related activities, including watering or applying dust palliative to disturbed areas, preventing and promptly removing trackouts on SR 116 and other public roadways affected by construction traffic, and covering soils or construction materials or providing adequate freeboard (space from the top of the material to the top of the truck) during transport.

- **PF-AQ-02, Construction Vehicles and Equipment:** Maintain and tune the construction vehicles and equipment in accordance with manufacturer's specifications.

- **PF-AQ-03, Limit Idling:** Limit idling times either by shutting construction equipment off when not in use or reducing the maximum idling time to 5 minutes.

- **PF-BIO-01, Documentation at Project Site:** A Permit Compliance Binder will be maintained at the construction site at all times and presented to resource agency personnel upon request. The Permit Compliance Binder will include a copy of all original permits and agreements and any extensions and amendments to the permits and agreements.

- **PF-BIO-02, Work According to Documents:** Except as they are contradicted by measures within the permits and agreements, all work will be conducted in conformance with the Project description in the permits and agreements and the PFs and AMMs provided in this document.

- **PF-BIO-03, Work Period in Dry Weather Only:** Work in the bed, bank, channel, and any associated riparian habitat will only be conducted during periods of dry weather. Work during precipitation events will adhere to the applicable permit conditions.

- **PF-BIO-04, Mark Environmentally Sensitive Areas:** Before construction begins, ESAs will be clearly delineated using high visibility orange fencing, flagging, or similar marking to delineate sensitive habitats. The ESA marking will remain in place throughout construction. It may be removed during the wet season (and subsequently re-installed) if needed to prevent materials from being washed

away. The final Project plans will depict all locations where ESA markings will be installed and how it will be installed. The bid solicitation package special provisions will clearly describe acceptable marking material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. ESA markings will be maintained in good repair throughout the Project as needed.

- **PF-BIO-05, Worker Environmental Awareness Training:** Prior to the start of construction, the Project biologist will provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habits, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later will receive the same training before beginning work. Upon completion of the education program, employees will sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur within the Project and ESAs within the Project footprint and notes key avoidance measures as well as employee guidance will be given to each person who completes the training program. These forms will be made available to the resource agencies upon request.

- **PF-BIO-06, Wildlife Exclusion Fencing:** Before starting construction, wildlife exclusion fencing (WEF) will be installed where wildlife could enter the Project footprint. Locations of the WEF will be determined in coordination with the onsite Project biologist. WEF installation locations will be identified during the Project design phase of the Project; the final plans will depict the locations where WEF will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF material and proper WEF installation and maintenance. The WEF would will in place throughout the Project duration while construction activities are ongoing and will be regularly inspected for stranded animals and fully maintained. The WEF will be removed following completion of construction activities or when construction is completed at that location at the discretion of the Project biologist.

- **PF-BIO-07, Nesting Bird Surveys:** If Project activities occur from February 1 to September 30, then a pre-construction survey(s) will be conducted for nesting birds no more than 3 days before any vegetation removal, or initiation of staging, and/or construction. If active nests are found, then an appropriate buffer will be

established, and the nest will be monitored for compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Section 3503.

- **PF-BIO-08, Active Nest Buffers:** If an active bird nest is found during construction activities, then the following ESA buffers will be established: If an active raptor nest is observed, a 300-foot ESA buffer will be implemented to avoid impacting the young until they have fledged; if an active nest of non-raptor birds is observed, a 50-foot ESA buffer will be implemented to protect the young until they have fledged, or as otherwise determined by consultation with USFWS and CDFW regarding appropriate action to comply with the MBTA and California Fish and Game Code Section 3503.

- **PF-BIO-09, Construction Site Management Practices:** The following site restrictions will be implemented to avoid or minimize potential impacts on sensitive biological resources:

    - Enforcing a speed limit of 15 miles per hour for Project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.

    - Locating construction access, staging, storage, and parking areas within the ROW to the extent practicable and outside of any designated ESA. Access routes, staging and storage areas, and contractor parking will be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork will be clearly marked before initiating construction.

    - Certifying, to the maximum extent practicable, borrow material is nontoxic and weed free.

    - Enclosing food and food-related trash items in sealed trash containers and removing them from the site at the end of each day.

    - Prohibiting pets from entering the Project footprint during construction.

    - Prohibiting firearms within the Project footprint, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

- **PF-BIO-10, Implementation of Best Management Practices:** A Storm Water Pollution Prevention Program (SWPPP) is anticipated. Project BMPs will be included in the plans and special provisions to comply with the requirements of

the SFBRWQCB general construction permit (GCP). Protective measures will include, at a minimum:

- Disallowing any discharging of pollutants from vehicle and equipment cleaning into any storm drains or watercourses.
- Keeping vehicle and equipment fueling and maintenance operations at least 50 feet away from watercourses, except at established commercial gas stations or an established vehicle maintenance facility.
- All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 50 feet from any downstream riparian habitat, aquatic habitat, culvert, or drainage feature, or will be removed from the site at the end of the day.
- Dedicated fueling and refueling practices will be designated as part of the approved SWPPP.
- Dedicated fueling areas will be protected from stormwater run-on and will be located at least 50 feet from downslope drainage facilities and water courses. If this is not possible then fueling will be conducted as stated in the SFBRWQCB GCP and in the Caltrans BMP Guidance Handbook.
- Fueling must be performed on level-grade areas. On-site fueling will only be used when and where it is impractical to send vehicles and equipment off-site for fueling. When fueling must occur on-site, the contractor will designate an area to be used subject to the approval of the Resident Engineer representing Caltrans. Drip pans or absorbent pads will be used during on-site vehicle and equipment fueling.
- Maintaining spill containment kits onsite at all times during construction operations and/or staging or fueling of equipment.
- Dust and erosion control measures will be implemented consistent with the SFBRWQCB GCP and the Caltrans BMP Guidance Handbook.
- Installing coir rolls, straw wattles, or other erosion control items per guidance in the Caltrans BMP Guidance Handbook during construction to capture sediment.

- **PF- BIO-11, Invasive Weed Control:** To reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. If noxious weeds are disturbed or removed during construction-related activities, the contractor will be required to contain the plant material associated with these noxious weeds and dispose of them in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the Project footprint will be covered to the extent practicable with heavy black plastic solarization material until the end of the Project. If work occurs in sensitive habitat, vehicles and equipment will be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds from other locations.

- **PF-BIO-12, Vegetation Removal:** Whenever possible, vegetation removal will be scheduled between September 30 and February 1 to avoid impacts to nesting birds during the nesting season. If work occurs during this time, pre-construction surveys for nesting birds are required. Vegetation would be cleared only where necessary and would be cut above soil level, except in areas that would be permanently affected or excavated. This would allow plants that reproduce vegetatively to resprout after construction.

- **PF-BIO-13, Landscaping and Revegetation Plan:** Vegetation and trees removed by construction operations within the Project limits will be replaced according to Caltrans policy to the extent feasible. Temporarily disturbed areas will be restored to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with locally appropriate, commercially available, native vegetation or other methods to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, appropriate native species will be used to the maximum extent possible, and trees, shrubs, and groundcover will be selected for drought tolerance and disease resistance and based on local composition. Mulch will be applied to planted areas to reduce weed growth, conserve moisture, and minimize maintenance operations. A plant establishment period may be included in the final revegetation plan, based on state and federal permits.

- **PF-BIO-14: Prevent Inadvertent Entrapment:** To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1-foot deep will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earthen fill or wooden planks at an angle no greater than 30 degrees. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project footprint overnight will be inspected before they are subsequently moved, capped, or buried.

- **PF-BIO-15, Agency-approved Biologist:** A Project biologist approved by USFWS and CDFW will conduct pre-construction surveys for federally and state-listed species. The Project biologist will be present during construction activities including vegetation clearing and grubbing, as required by the resource agencies. If at any point any listed species is discovered within the Project footprint, the Project biologist, through the Resident Engineer or his/her designee, will halt all work within 50 feet of the animal and contact the corresponding agency (USFWS or CDFW) to determine how to proceed.

- **PF-BIO-16, Stop-Work Authority:** Through the Resident Engineer or their designee, the Project biologist(s) shall have the authority to stop Project activities to minimize take of listed species or if he/she determines that any permit requirements are not fully implemented. Caltrans will provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

- **PF-BIO-17, Discovery of Injured or Dead Special-status Species:** Immediately following the discovery of any dead, injured, or entrapped special-status species regulated by USFWS or CDFW, Caltrans will provide appropriate notifications based on language in the permits and agreements to agency(s) with jurisdiction.

- **PF-BIO-18, Wildlife Species Relocation:** When listed wildlife species (that do not have state fully protected status) are present and it is determined that they could be injured or killed by construction activities, the Project biologist, in coordination with the appropriate state and federal wildlife agencies, and as outlined within the applicable permits, will identify appropriate methods for capture, handling, exclusion, and relocation of individuals that could be affected.

- **PF-BIO-19, Lighting Design:** During the Project design phase, lighting fixtures will be selected to reduce standard light temperature (Kelvin), using yellow-white or amber-white LEDs of 2700 Kelvin or less. Light fixtures will be shielded to minimize light trespass or 'spread' to the extent practical while meeting highway safety standards. Lighting design will be coordinated with the Office of Biological Sciences and Permits and the Office of Landscape Architecture during the Project design phase.

- **PF-BIO-20, Temporary Creek Diversion System:** For the bridge work associated with the intersection signalization, a temporary creek diversion system (TCDS) will be used to create a dry construction area and prevent construction materials from entering the creek. A TCDS will consist of a diversion pipe with coffer dams at both the upstream and downstream ends of the creek within the Project footprint. This diversion may be used during the duration of construction but will be removed following the completion of construction activities. Construction in the creek will be limited to the dry season, when the creek is at its lowest water level, to reduce impacts on biological resources and soil hydrology. A temporary Stream Diversion Plan will be developed and approved by Caltrans and agencies (may include CDFW, USACE, RWQCB, USFWS) prior to the start of construction.

- **PF-BIO-21, Aquatic Wildlife Relocation:** For the bridge work associated with the intersection signalization: If water is present in Stage Gulch Creek at the beginning of the dry season work window, fish and other aquatic vertebrates within the area to be dewatered shall be removed and relocated to appropriate areas out of the construction area. An approved fish removal and relocation plan shall be developed and approved by the appropriate agencies prior to fish recovery operations.

- **PF-CUL-01, Cease Work Upon Discovery of Cultural Resources:** Cease work in the vicinity (60-foot radius) if cultural resources are encountered during Project-related ground-disturbing activities, Caltrans Office of Cultural Resource Studies (OCRS) will be contacted, a qualified archaeologist will assess the significance of the resource, and appropriate avoidance or treatment measures will be implemented, in consultation with local consulting tribes.

- **PF-CULT-02, Procedures for Discovery of Human Remains:** In accordance with the California Health and Safety Code, if human remains are uncovered

during construction-related activities, all such activities within a 60-foot radius of the find will be halted immediately and the Project's designated representative will be notified. The contractor or lead person on the Project will immediately notify the OCRS Office Chief and/or the District Native American Coordinator (DNAC). Once the remains are determined human, the lead person, OCRS Office Chief, or DNAC will contact the County Coroner. If the Coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making the determination (California Health and Safety Code Section 7050.5[c]). The Project's designated representative will be responsible for acting upon notification of discovery of Native American human remains, as identified in detail in California Public Resources Code Section 5097.9. The Project's designated representative and the professional archaeologist will contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the remains. The MLD, in cooperation with the property owner and Caltrans, will determine the ultimate disposition of the remains. The lead person ensures that the recommendations are followed. After the appropriate actions are taken, Project work may resume.

- **PF-ENERGY-01, Recycle Waste and Materials:** Recycle nonhazardous waste and excess construction materials to reduce disposal, if feasible.

- **PF-ENERGY-02, Solar Energy:** Use solar energy as the energy source for construction equipment, such as, but not limited to, signal boards, if feasible.

- **PF-HAZ-01, Caltrans Standard Specifications and Hazardous Waste Regulations:** The current Caltrans Standard Specifications Section 13-4, Job Site Management, will be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. Handling and management of hazardous materials will comply with the current Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.

- **PF-HAZ-02, Soil Investigation:** A soil investigation for metals, primarily lead, and other contaminants of concern (i.e., petroleum hydrocarbons and volatile organic compounds) will be completed during the Project's design phase to characterize and profile the soil to be encountered by the construction of the Project. Depending upon the findings of the site investigation, appropriate

hazardous waste management special provisions will be prepared and included in the Project specifications.

- **PF-HAZ-03, Groundwater Testing:** As part of the site investigation work, groundwater samples will be collected and tested for gasoline constituents. The aim of this work will be to determine the extent of the contaminant plume in the groundwater and to determine if any portion of it is located below planned Project construction work that might encounter groundwater, such as excavating foundations for new traffic signals. The findings from the groundwater sampling will also define the contaminant concentration contours and help establish what water treatment will be required, if any, and what discharge options will be available for any groundwater pumped out and stored during subsurface construction work.

- **PF-HAZ-04, Materials Testing:** Stage Gulch Creek Bridge will be inspected by a certified professional during the Project design phase for possible asbestos-containing materials, e.g., bridge railing base plate shims and structure bearing pads. Any suspect materials will have samples taken from them to be screened for asbestos content via polarized light microscopy. The bridge survey for hazardous materials will also include collecting samples of any paints, primers, coatings, or traffic stripes on the bridge for lead screening. The findings of the bridge survey will be used to address bridge alteration work that might disturb identified hazardous materials and any necessary remediation work preceding the bridge work.

- **PF-WQ-01, Compliance with Water Quality Permits and Programs:** The Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Caltrans Order No. 2020-0033-DWQ, NPDES No. CAS00003, for projects that result in a land disturbance of one acre or more, and the Construction General Permit (Order 2009 - 0009-DWQ), and any subsequent permits in effect at the time of construction. Since the Project has an approved Project Initiation Report prior to January 1, 2023, it will be ‘grandfathered’ and can continue to apply one-acre minimum threshold of the 2012 Caltrans Permit. As a component of the CGP, the Project will prepare and implement a SWPPP to address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP will identify the sources of pollutants that may affect the quality of stormwater and include BMPs to control the pollutants, such

as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs.

- **PF-WQ-02, Implementation of Post Construction Water Pollution BMPs**: The Project would incorporate post-construction water pollution prevention and design measures consistent with the 2016 Caltrans Storm Water Management Plan. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ).

- **PF-NOISE-01, Construction Noise Control During Construction:** Temporary noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, Noise Control. Caltrans Standard Specifications 14-8.02 requires L_{max} not to exceed 86 dBA at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. in residential areas and near hotels.

- **PF-TRANS-01, Traffic Management Plan:** A Final Traffic Management Plan (TMP) would be prepared by Caltrans prior to the beginning of construction and in consultation with the appropriate agencies to aid in coordinating and providing further safety measures for those accessing the Project corridor during construction. The TMP would identify traffic delays and alternative routes for emergency and medical vehicles associated with essential services, thereby avoiding or minimizing short-term, localized traffic congestions and delays. Notifications and instructions for rapid response or evacuation in the event of an emergency would be provided.

- **PF-UTIL-01, Utility Notifications:** During Project design phase, Caltrans will coordinate with all affected utility companies regarding the construction schedule for the Project so that relocations can be conducted by each utility company as necessary prior to the start of construction.

  Prior to utility relocation activities, the Resident Engineer will coordinate with affected utility providers regarding potential utility relocations and inform affected utility users in advance of the date and timing of potential service disruptions.

Avoidance and Minimization Measures

- **AMM-AES-01, Selection of Materials:** The need for the architectural treatment of proposed Project elements should be investigated by the Caltrans Office of

Landscape Architecture during the Project design phase and incorporated as appropriate. Measures may also include aesthetic treatment of inert surfacing in the roundabout islands, coloring or other treatments to new concrete installations, including concrete paving used as vegetation control beneath barriers and other elements, among other mitigating treatments.

- **AMM-BIO-01, Timing of Construction:** Construction will occur during the dry season, when CRLF are most likely to be estivating in moist refuges and not dispersing through the Project footprint. If construction activities must take place during the wet season, Caltrans will coordinate with USFWS about the need for CRLF surveys. Work in Stage Gulch Creek for Build Alternative 1 bridge widening will be restricted to the dry season and outside of the CRLF breeding season. No construction activities will occur during rain events or within 24-hours following a rain event. Prior to construction activities resuming, the Project biologist will inspect the action area and all equipment/materials for the presence of CRLF. The animals will be allowed to move away from the Project of their own volition or moved by the Project biologist, as stipulated in the Project Biological Opinion for CRLF from USFWS.

- **AMM-BIO-02, California Red-legged Frog Pre-construction Surveys:** Pre-construction surveys for the CRLF will be conducted by the Project biologist within 14 calendar days of the initiation of Project activities in suitable upland and aquatic habitat prior to ground-disturbing activities, vegetation removal, and WEF installation. Surveys will be conducted as outlined in the 2005 USFWS species survey guidelines for CRLF. Access to habitat during surveys may be limited by appropriate safety measures and protocols; available at https://www.fws.gov/ventura/docs/species/protocols/crlf/caredleggedfrog_survey-guidelines.pdf. Access to habitat during surveys may be limited by appropriate safety measures.

  Pre-construction surveys will include:

  - Foot surveys will be conducted of potential frog habitat within the Project limits and accessible adjacent areas (within at least 50 feet of Project limits).

  - Potential cover sites (burrows, rocks, soil cracks, vegetation, and other potential refuge habitat) and any areas of disturbed soil will be investigated for signs of CRLF.

- Native vertebrates found in cover sites within the Project limits will be documented and, if handling is allowed, relocated to an adequate cover site in the vicinity. Species that cannot be relocated due to special protection status will be addressed in coordination with the appropriate agency(s) with jurisdiction.

- **AMM-BIO-03, California Red-legged Frog Monitoring:** During construction in and near potential CRLF, the following protocols will be observed by the Project biologist during construction monitoring:

  - Within 24 hours prior to initial ground-disturbing activities, portions of the Project footprint where potential CRLF habitat has been identified will be surveyed by a Project biologist(s) to clear the site of frogs moving above ground or taking refuge in burrow openings or under materials that could provide cover.

  - A Project biologist(s) will be present during all initial ground-disturbing activities and vegetation removal in suitable refugia habitats for the CRLF to monitor the removal of the top 12 inches of topsoil.

  - If potential aestivation burrows are discovered, the burrows will be flagged for avoidance.

  - After a rain event, and prior to construction activities resuming, a Project biologist will inspect the work area and all equipment/materials for the presence of CRLF.

  - Upon discovery of a CRLF individual(s) in an active construction area, all work will cease within a 50-foot radius of the frog. The frog will be allowed to leave the site on its own; or if the frog(s) does not leave on its own, it will be relocated as close to the Project footprint as feasible and with permission from the property owner; and placed in a natural burrow by a Project biologist with the appropriate USFWS 10(a)1(A) handling permit.

  - The USFWS will be notified by phone and email within one working day of any CRLF discovery in the Project footprint.

- **AMM-BIO-04, Proper Use of Erosion Control Devices:** To prevent CRLF from becoming entangled or trapped in erosion control materials, the following: plastic monofilament netting (i.e., erosion control matting) or similar material will

not be used. Acceptable substitutes will include coconut coir matting or tackified hydroseeding compounds.

- **AMM-BIO-05, Targeted Pre-construction Plant Survey:** Prior to the initiation of construction, an experienced botanist will conduct a floristic survey in the biological study area (BSA). Surveys would occur during the appropriate blooming period for all special-status plant species with potential to occur within the Project footprint. Surveys would follow California Native Plant Society (CNPS), CDFW, and USFWS protocols.

- **AMM-BIO-06, Aquatic Resources Delineation:** During the growing season, a qualified wetland specialist will conduct a jurisdictional determination of aquatic resources in the BSA. If potential wetlands are identified, delineations according to the USACE protocols, would be conducted and a preliminary jurisdictional determination from the USACE would be secured. Avoidance and disturbance buffers would be established.

- **AMM-BIO-07, Pre-construction Surveys for Bats:** Prior to the start of work at each location, a Project biologist will conduct a visual survey of the area for bat species. Any bats observed in the BSA will be allowed to leave on their own.

- **AMM-BIO-08, Bat Surveys Prior to Vegetation Removal**: A survey by a Project biologist will be conducted prior to vegetation removal to determine if two-phase tree removal methods are appropriate for any trees scheduled for removal, or if a biological monitor will be required to be present during tree removal. The Project biologist will inspect all trees marked for removal for bat roost habitat (e.g., crevice and foliage habitat types).

- **AMM-BIO-09, Bat Monitoring Protocols:** If a bat or bat colony is observed nesting or roosting in active construction areas at the Project footprint, construction activities that would imminently harm bats will stop within 150 feet of the roosting location until a Project biologist develops a site-specific bat avoidance plan to implement at the roosting site. Once the plan is implemented, Project activities may recommence with Project biologist oversight at that location.

- **AMM-BIO-10, Pre-construction Surveys for Western Pond Turtle (WPT):** An approved biologist will conduct pre-construction surveys for WPT immediately before ground-disturbing activities in areas identified as suitable

WPT habitat within the Project footprint. If WPT is found within the Project footprint and at risk of harm, then it will be relocated by a Project biologist outside of the Project footprint.

- **AMM-BIO-11, Special-status Plant Protection:** If special-status plant species are found during botanical surveys, the following measures would be implemented:
    - The botanist would map the exact boundaries of the population in the Project BSA and record the density of plants within the population.
    - Special-status plant populations would be included as an ESA "Do not enter without approval from the Project Biologist" in Project plans and specifications. These areas would be marked or fenced for avoidance with a 10-foot buffer.
    - Ground-disturbing work near special-status plants would proceed under supervision of a Project biologist.
    - If special-status plant species are found in the Project BSA and avoidance is not possible due to the location of the population, Caltrans would consult with the appropriate resource agencies (CDFW, CNPS, and/or USFWS) to develop mitigation and/or compensation measures needed to avoid adverse effects to the population.
    - Where it is not feasible to avoid special-status plant locations within construction areas, a plan would be developed through consultation with state and Federal agencies. The plan may identify requirements for seed collection and transplanting for annual plant species, native plant nursery propagation and planting for perennial species, redistribution within areas that provide appropriate habitat for the species in the Project BSA, if feasible.
- **AMM-BIO-12, Aquatic Resources Compensation:** If avoidance is not feasible, agency consultation and CWA section 401 and 404 permits will be initiated. A Compensation Plan in coordination with state and federal agencies will be developed.
- **AMM-BIO-13, California Red-legged Frog Habitat Compensation:** If Build Alternative 2 is selected, Caltrans would pursue opportunities for offsite compensation for the upland dispersal habitat permanently lost through

construction of the Roundabout through the purchase of species credits at a USFWS approved, appropriate conservation bank. This may include the purchase of CRLF credits at a USFWS-approved conservation bank conducting habitat restoration in the region, contribution to a larger advanced mitigation property acquisition, habitat management, or other beneficial measure that would aid local recovery of the species. These preliminary estimates may change during the design phase. Caltrans would make a final determination on impacts and develop a plan after coordination with USFWS.

- **AMM-PALEO-01, Paleontological Evaluation Report:** Prior to construction, Caltrans would determine whether the Project footprint has a low or high sensitivity for paleontological resources. If Caltrans determines the Project footprint is sensitive for paleontological resources, a person who meets Caltrans requirements of a Principal Paleontologist would prepare a Paleontological Evaluation Report. The Paleontological Evaluation Report would identify measures to avoid or/and minimize impacts to paleontological resources.

- **AMM-NOISE-01, Construction Noise Levels:** The following measures will be incorporated to reduce noise levels during construction:

    - The Contract Specifications would include a Special Provision requiring Noise Monitoring and Control.

    - Any operation exceeding 86 dBA will not be allowed at nighttime from 9:00 p.m. to 6 a.m.

    - Public outreach will be required throughout the Project construction to update residents, businesses, and others regarding upcoming construction-related activities and time frame of Project.

    - Schedule noisy operations within the same time frame where feasible. The total noise level will not be significantly greater than the level produced if operations were performed separately.

    - Avoid unnecessary idling of internal combustion engines within 100 feet of sensitive receptors.

    - Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound

aprons for equipment when sensitive receptors adjoin or are near a Project construction area.

- Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.
- No construction equipment will be delivered and dropped off before 6:00 a.m.
- Maintain all internal combustion engines properly to minimize noise generation.

- **AMM-NOISE-02, Vibration Control Measures:** The following measures and non-standard specifications will be incorporated to reduce vibratory impacts during construction:
  - Use a non-vibratory road roller when construction activities are less than 25 feet from structures.
  - Prevent idling of other equipment within 100 feet of structures.
  - Develop and implement a construction vibration monitoring plan in accordance with Caltrans requirements, to document conditions prior to, during, and after construction. A photo-video survey, elevation survey, and crack monitoring survey shall be completed prior to construction, in regular intervals during construction, and after completion of construction to document the condition of foundations, walls and other structural elements in the interior and exterior of nearby structures.

Appendix B List of Technical Studies and References

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Appendix C Caltrans Title VI Policy Statement

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August 2020

NON-DISCRIMINATION POLICY STATEMENT

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

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

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To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at <Title.VI@dot.ca.gov>.

Original signed by
Toks Omishakin
Director