# Sonoma State Route 116 Capital Preventive Maintenance Project

SONOMA COUNTY, CALIFORNIA
DISTRICT 4 – SON –116 (PM 7.74-25.05)
04-4Q910/0419000496

# Initial Study with Proposed Mitigated Negative Declaration



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

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

**April 2026**

# General Information About This Document

## What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Initial Study with Proposed Mitigated Negative Declaration, which examines the potential environmental impacts of the alternatives being considered for the proposed Project in Sonoma County, California. Caltrans is the lead agency under both the National Environmental Policy Act and the California Environmental Quality Act (CEQA). The document tells you why the Project is being proposed; what alternatives have been considered for the Project; how the existing environment could be affected by the Project; the potential impacts of each of the alternatives; and the proposed avoidance, minimization, and/or mitigation measures.

## What you should do:

- Please read this document.
    - Additional copies of this document and the related technical studies are available for review at the Caltrans District 4 office at 111 Grand Avenue, Oakland, CA 94612.
    - This document may be downloaded at the the District 4 Environmental Documents by County Website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs
- Attend the public hearing. The public hearing will take place on April 21, 2026, from 6:00 pm to 7:30 pm at the El Molina Campus Library at 7050 Covey Rd, Forestville, CA 95436.
- We want to hear what you think. If you have any comments about the proposed Project, please attend the public hearing on April 21, 2026, from 6:00 pm to 7:30 pm at the El Molina Campus Library at 7050 Covey Rd., Forestville, CA 95436. and/or send your written comments via postal mail or email to Caltrans by the deadline.
    - Send comments via postal mail to:
      Caltrans District 4, Office of Environmental Analysis
      Attn: Christopher Pincetich
      P.O. Box 23660, MS-8B Oakland, CA 94623-0660
    - Send comments via email to: Sonoma116repaving@dot.ca.gov
- Be sure to send comments by the deadline: May 4, 2026.

## What happens next:

After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed Project, (2) do additional environmental studies, or (3) abandon the Project. If the Project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the Project.

## Alternative Formats Accessibility Assistance:

Caltrans makes every attempt to ensure our documents are accessible. Due to variances between assistive technologies, there may be portions of this document that are not accessible. Where documents cannot be made accessible, we are committed to providing alternative access to the content. Should you need additional assistance, please contact us at the phone number in the box below.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans District 4 mailing address, Attn: Christopher Pincetich, 111 Grand Avenue Oakland, California; (408) 590-4167 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

04-SON-116 (PM 7.74/25.05)
EA No. 04-4Q910
Project No. 0419000496

Resurface State Route 116 in Sonoma County from postmile 7.74 in Monte Rio to postmile 25.05 near Sebastopol and install/replace streetlights, replace guard rails, repair or replace culverts, widen shoulders to provide Class II bike lanes and bike pull outs, add sidewalks and crosswalks, and upgrade the existing pedestrian infrastructures to current Americans with Disabilities Act standards.

# Initial Study with Proposed Mitigated Negative Declaration

Submitted pursuant to: Division 13, California Public Resources Code

**THE STATE OF CALIFORNIA**
**Department of Transportation**

Responsible Agencies:

California Department of Fish and Wildlife, California Transportation Commission, Regional Water Quality Control Board, National Marine Fisheries Service, United States Army Corps of Engineers, and United States Fish and Wildlife Service

Larry E. Bonner
Office Chief, Office of Environmental Analysis
California Department of Transportation, District 4
CEQA Lead Agency

3/27/2026
Date of Approval

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

Caltrans District 4, Office of Environmental Analysis
Attn: Christopher Pincetich
P.O. Box 23660, MS-8B
Oakland, CA 94623-0660
christopher.pincetich@dot.ca.gov
(408) 590-4167

# Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

## Project Description

The Sonoma State Route 116 Capital Preventative Maintenance Project (Project) proposes to resurface the existing roadway from Church Street (PM 7.74) in Monte Rio to Mill Station Road (PM 25.05) near Sebastopol on State Route 116 in Sonoma County. This Project also proposes to install/replace streetlights, replace guard rails, repair or replace culverts, widen narrow shoulders to provide Class II bicycle lanes and bicycle pull outs, add sidewalks and crosswalks, and upgrade the existing pedestrian infrastructures to current Americans with Disabilities Act standards.

## DRAFT Determination

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

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

- The proposed Project has no anticipated effects on cultural or Tribal cultural resources, geology and soil, hydrology and water quality, mineral resources, land use and planning, population and housing, public services, recreation, or wildfire.

- In addition, the proposed Project is anticipated to have less-than-significant effects on aesthetics, air quality, agriculture and forest resources, energy, greenhouse gas emissions, hazards and hazardous materials, noise, traffic, utilities and service systems, and transportation.

- With the implementation of mitigation measure MM-BIO-1, the Project would have less-than-significant impacts on biological resources, specifically wetlands and other waters.

Christopher Caputo
Deputy District Director
Division of Environmental Science and Engineering
California Department of Transportation

Date

# Table of Contents

General Information About This Document ..... i
Proposed Mitigated Negative Declaration ..... iv
**Chapter 1** Proposed Project ..... 1
1.1 Introduction ..... 1
1.1.1 Project Location ..... 1
1.1.2 Purpose ..... 1
1.1.3 Need ..... 1
1.2 Project Description ..... 3
1.2.1 Project Alternatives ..... 3
1.2.2 Build Alternative – Proposed Project ..... 3
1.2.3 No-Build (No-Action) Alternative ..... 22
1.3 Permits and Approvals Needed ..... 22
**Chapter 2** CEQA Evaluation ..... 23
2.1 CEQA Environmental Checklist ..... 23
2.1.1 Aesthetics ..... 23
2.1.2 Agriculture and Forestry Resources ..... 28
2.1.3 Air Quality ..... 31
2.1.4 Biological Resources ..... 32
2.1.5 Cultural Resources ..... 45
2.1.6 Energy ..... 47
2.1.7 Geology and Soils ..... 48
2.1.8 Greenhouse Gas Emissions ..... 49
2.1.9 Hazards and Hazardous Materials ..... 50
2.1.10 Hydrology and Water Quality ..... 52
2.1.11 Land Use and Planning ..... 54
2.1.12 Mineral Resources ..... 54
2.1.13 Noise ..... 55
2.1.14 Population and Housing ..... 67
2.1.15 Public Services ..... 67
2.1.16 Recreation ..... 68
2.1.17 Transportation ..... 69
2.1.18 Tribal Cultural Resources ..... 70

2.1.19 Utilities and Service Systems ..... 71
2.1.20 Wildfire ..... 73
2.1.21 Mandatory Findings of Significance ..... 74
2.2 Climate Change ..... 76
2.2.1 Regulatory Setting ..... 76
2.2.2 Environmental Setting ..... 76
2.2.3 Project Analysis ..... 79
2.2.4 Greenhouse Gas Reduction Strategies ..... 81
2.2.5 Adaptation ..... 81
**Chapter 3** Coordination ..... 84
3.1 Community Outreach ..... 84
3.2 Consultation and Coordination with Public Agencies ..... 84
**Chapter 4** List of Preparers ..... 86
**Chapter 5** Distribution List ..... 88
5.1 State Agencies ..... 88
5.2 Local Agencies and Organizations ..... 88
5.3 Elected Officials ..... 88

# List of Appendices

**Appendix A** Title VI/Non-Discrimination Policy Statement
**Appendix B** Avoidance and Minimization, and/or Mitigation Summary
**Appendix C** List of Abbreviations and Acronyms
**Appendix D** List of Technical Studies and References
**Appendix E** Project Mapping

# List of Tables


Table 1 Drainage System Design Details ..... 4
Table 2 Pedestrian Facility Locations ..... 8
Table 3 Bicycle Pullout Locations ..... 10
Table 4 Maintenance Vehicle Pullout Locations ..... 10
Table 5 Midwest Guard Rail Locations ..... 11
Table 6 Guard Rail Concrete Barrier Transition Locations ..... 13
Table 7 Proposed Staging Locations ..... 13
Table 8 Proposed Right-of-Way Acquisitions ..... 14
Table 9 Proposed Permanent Drainage Easements ..... 14
Table 10 Proposed Temporary Construction Easements ..... 15
Table 11 Proposed Permits to Enter and Construct ..... 16
Table 12 Permits and Approvals ..... 22
Table 13 Proposed Farmland Acquisition ..... 29
Table 14 Construction Equipment and Vehicles Fuel Consumption ..... 47
Table 15 Summary of Construction-Related Greenhouse Gas Emissions ..... 50
Table 16 Summary Construction Noise Results from Roadway Construction Noise Model ..... 57
Table 17 Guideline Vibration Damage Potential Threshold Criteria ..... 60
Table 18 Guideline Vibration Annoyance Potential Criteria ..... 60
Table 19 Summary of Representative Structures and Vibration Sources ..... 65
Table 20 Regional and Local Greenhouse Gas Reduction Plans ..... 79
Table 21 Agency Coordination Meetings and Contacts ..... 84


# List of Figures


Figure 1 Project Location ..... 2
Figure 2 Proposed Acquisition of Unique Farmland ..... 30
Figure 3 Proposed Acquisition of Farmland of Local Importance ..... 30
Figure 4 Noise Receptors 1 through 4 ..... 58
Figure 5 Noise Receptors 5 through 8 ..... 58
Figure 6 Noise Receptor 9 ..... 59
Figure 7 Vibration Study Area A1 ..... 61
Figure 8 Vibration Study Area A2 ..... 61
Figure 9 Vibration Study Area A3 ..... 62
Figure 10 Vibration Study Area A4 ..... 62
Figure 11 Vibration Study Area A5 ..... 63
Figure 12 Vibration Study Area A6 ..... 63
Figure 13 Vibration Study Area A7 ..... 64
Figure 14 U.S. Greenhouse Gas Emissions ..... 77
Figure 15 California 2023 Greenhouse Gas Emissions by Economic Sector ..... 77
Figure 16 Change in California Gross State Product and Greenhouse Gas Emissions Since 2000 ..... 78

# Chapter 1 Proposed Project

## 1.1 Introduction

State Route (SR) 116 extends 46 miles through Sonoma County, from SR 1 on the Pacific Coast to the intersection with SR 121 south of the City of Sonoma. SR 116 is a designated Scenic Highway from east of SR 1 to the Sebastopol city limit. Within the Sonoma SR 116 Capital Preventative Maintenance Project (Project) limits, SR 116, known as the "Gravenstein Highway," is a two-lane conventional highway, serving as a primary route for communities, tourism, and agricultural areas in West Sonoma County and the Russian River Valley.

The Project proposes to resurface the existing roadway from Church Street in Monte Rio to Mill Station Road near Sebastopol on State SR 116 in Sonoma County. This Project also proposes to install or replace streetlights, replace guard rails, repair culverts, widen narrow shoulders to provide Class II bicycle lanes and bicycle pull outs, add sidewalks and crosswalks, and upgrade the existing pedestrian infrastructure to current Americans with Disabilities Act (ADA) standards.

### 1.1.1 Project Location

The Project is on SR 116 in Sonoma County from Church Street, post mile (PM) 7.74 in Monte Rio to Mill Station Road, to PM 25.05 near Sebastopol (Figure 1). SR 116 is a two-lane highway without a median. It includes left-turn lanes at intersections, two-way left-turn lanes in some residential areas and towns, and parallel parking along the highway in Guerneville and Forestville. The travel lanes range from 10 to 12 feet wide, and the shoulders range from 0 to 11 feet wide. The posted speed limits vary from 35 miles per hour (mph) to 45 mph.

### 1.1.2 Purpose

The purpose of this Project is to preserve, repair, and extend the service life of the existing pavement with well-timed, cost-effective repair strategies; and to improve the ride quality for the traveling public. The Project would also improve drainage facilities and the pedestrian and bicycle infrastructure in compliance with Complete Streets Guidance.

### 1.1.3 Need

The Pavement Condition Report indicates that the existing pavement within the Project limits exhibits signs of distress and deterioration and is currently in "fair" condition. The California Department of Transportation (Caltrans) Culvert Inspection Program has identified cross culverts in 52 locations that are in poor condition or undersized. If not addressed, further deterioration would affect the structural integrity of the highway and require a major roadway rehabilitation. In addition, there are various deficiencies and gaps in the pedestrian and bicycle infrastructure that, if not addressed, would continue to be barriers for and/or impeding the nonmotorized traffic.




**Figure 1 Project Location**

## 1.2 Project Description

This section provides a detailed description of the proposed Project alternatives, components, and construction needs. The proposed components, such as culverts and guard rails, could be modified or removed during the detailed design phase (the next phase of the development of this Project) due to considerations such as cost, environmental impact, and public comment.

### 1.2.1 Project Alternatives

This section describes the proposed Project and the alternatives that have been developed to meet the purpose and need while avoiding or minimizing adverse environmental impacts. For this Project, there are only two alternatives: the Build Alternative and the No Build Alternative.

### 1.2.2 Build Alternative – Proposed Project

The Build Alternative proposes to repave the roadway surface of SR 116; install or replace streetlights, guardrails, and cross culverts; widen narrow shoulders and bicycle pullouts; add missing sidewalks and crosswalks; restripe existing crosswalks; upgrade the existing pedestrian infrastructure to current ADA standards; add rumble strips; construct shoulder backing; add or replace bus and pedestrian landing pads; construct maintenance vehicle pullouts (MVPs); and resurface West County Rodota Trail throughout the Project limits.

It is estimated that constructing this alternative would require 360 working days and cost $34 million. The proposed Project components are described in more detail in the following sections.

#### 1.2.2.1 Repaving

The Project proposes repaving SR 116 throughout the Project limits. Repaving would consist of flexible pavement and shoulder backing. The road surface would be prepared by grinding off the top surface layer, or cold planing, 0.25 feet from edge of pavement to edge of pavement for the entire Project limits (PM 7.74 and PM 25.05). The repaving would consist of an overlay of 0.10 foot of hot-mix asphalt and 0.15 foot of rubberized hot-mix asphalt. Before the overlay, any areas of failed pavement would be removed by digging out the pavement and underlying base layers as needed, rebuilding those, and repairing them using a minimum of 0.25 foot of hot-mix asphalt. This strategy would maintain the existing profile grade of the highway. Shoulder-line rumble strips and potentially center-line rumble strips would be added to the pavement in locations where accidental lane departures are documented or estimated. Shoulder backing consists of placing compacted gravel along the highway at the edge of the pavement and would be used to fill any drop-off at the edge of the pavement.

Repaving would be carried out in segments to keep travel lanes open as much as feasible and minimize traffic disruption. One-way traffic control would be implemented using traffic cones and temporary railings to protect the construction work zones. The proposed repaving work would require lane closures (during off-peak hours, with possible night work) with one-way traffic control, flaggers, and pilot cars to direct traffic.

Equipment would include a pavement milling machine, a pavement recycling unit, asphalt/emulsion trailers, a distributor truck, an asphalt paver, a pickup machine, rollers, a water truck, backhoes, excavators, dump trucks, and sweeper trucks.

### 1.2.2.2 Cross Culvert Replacement

Caltrans hydraulics engineers have identified 52 cross culvert locations within the Project limits that require replacement and/or upsizing due to their damaged or otherwise compromised conditions. Details of each location can be found in Table 1. A definition of the acronyms used in this table can be found in a note at the end of the table.

**Table 1 Drainage System Design Details**

| Culvert Post Mile | Existing Culvert Diameter (inches) | Existing Culvert Length (feet) | Material | Scope of Work |
|---|---|---|---|---|
| 7.88 | 18 | 45 | CSP | Replace with 18-inch by 45-foot CSP. |
| 8.13 | 16 | 40 | CSP | Replace with 18-inch by 40-foot RCP. |
| 8.56 | 18 | 48 | RCP | Replace with 24-inch by 48-foot RCP. |
| 8.61 | 18 | 38 | RCP | Replace with 24-inch by 48-foot RCP. |
| 8.69 | 24 | 55 | CSP | Replace with 24-inch by 55-foot CSP. |
| 9.16 | 18 | 80 | CSP | Replace with 24-inch by 80-foot RCP. |
| 9.63 | 18 | 50 | CSP | Replace with 24-inch by 50-footRCP. |
| 10.16 | 24 | 70 | CSP | Replace with 36-inch by 70-footRCP. |
| 10.47 | 24 | 69 | CSP | Replace with 36-inch by 70-foot RCP. |
| 11.08 | 20 | 58 | CSP | Lower existing DI. |
| 11.29 | 18 | 60 | CSP | Replace with 18-inch by 60-foot CSP. |
| 12.60 | 12 | 46 | RCP | Replace with 24-inch by 46-foot RCP. |
| 12.65 | 8 | 39 | CSP | Replace with 24-inch by 39-foot RCP. |
| 12.86 | 15 | 57 | CSP | Replace with 24-inch by 57-foot RCP. |
| 12.88 | 18 | 57 | CSP | Replace with 32-inch by 57-foot RCP. |

| Culvert Post Mile | Existing Culvert Diameter (inches) | Existing Culvert Length (feet) | Material | Scope of Work |
|---|---|---|---|---|
| 12.99 | 29 x 19 elliptical | 42 | CSP | Replace with 34-inch by 24-inch by 42-foot elliptical CSP. |
| 13.06 | 12 | 34 | CSP | Replace with 24-inch by 34-foot RCP. |
| 13.13 | 12 | 32 | CSP | Replace with 32-inch by 32-foot RCP. |
| 13.45 | 18 | 34 | RCP | Replace with two 18-inch by 34-foot RCP. |
| 13.59 | 18 | 60 | CSP | Replace with two 18-inch by 60-foot RCP. |
| 13.69 | 12 | 28 | CSP | Replace with 32-inch by 28-foot RCP and with 18-inch overside drain. |
| 13.94 | 24 | N/A | CSP | Existing culvert in two sections. Replace second section with 24-inch by 33-foot CSP. |
| 14.03 | 12 | 33 | CSP | Replace with 18-inch by 33-foot CSP. |
| 14.37 | 24 | 40 | N/A | Add 36-inch by 40-foot CSP. |
| 14.41 | 18 | 23 | CSP | Replace 18-inch by 23-foot CSP. |
| 14.91 | 12 | 32 | CSP | Replace with 18-inch by 32-foot CSP. |
| 14.96 | 12 x 12 box | 32 | RCP | Replace box culvert with 18-inch by 32-foot CSP and replace existing 18-inch by 52-foot CSP. |
| 15.16 | 18 | 49 | CSP | Replace with 18-inch by 49-foot CSP. |
| 15.31 | 12 | 42 | CSP | Replace with 18-inch by 42-foot CSP. |
| 15.65 | 12 | 36 | CSP | Replace with 18-inch by 36-foot CSP. |
| 15.75 | 12 | 30 | CSP | Replace with two 24-inch by 30-foot RCP. |
| 16.24 | 12 | 40 | CSP | Replace with 18-inch by 40-foot CSP. |
| 16.44 | 18 | 48 | CSP | Replace with 24-inch by 48-foot RCP. |
| 17.05 | 36 | 30 | CSP | Replace with two 36-inch by 30-foot RCP. |
| 17.60 | 15 | 32 | RCP | Replace with 24-inch by 32-foot RCP. |
| 17.67 | 18 | 32 | CSP | Replace with 36-inch by 32-foot RCP and add RSP. |
| 17.80 | 18 | 90 | CSP | Replace with 36-inch by 60-foot RCP, replace existing rock headwall with standard headwall, and add RSP. |
| 17.84 | 15 | 30 | CSP | Replace with 24-inch by 30-foot RCP. |
| 17.96 | 12 | 53 | CSP | Replace with 24-inch by 53-foot RCP. |
| 18.05 | 18 | 45 | CSP | Replace with 36-inch by 45-foot RCP. |

| Culvert Post Mile | Existing Culvert Diameter (inches) | Existing Culvert Length (feet) | Material | Scope of Work |
|---|---|---|---|---|
| 18.15 | 12 | 13 | RCP | Replace with 24-inch by 13-foot RCP. |
| 18.23 | 12 | 28 | RCP | Replace with 18-inch by 28-foot RCP and replace existing sacked concrete headwall with standard headwall. |
| 18.32 | 32 | 72 | CSP | Replace with 32-inch by 72-foot RCP. |
| 18.34 | 12 | 24 | CSP | Replace with 24-inch by 24-foot RCP. |
| 18.56 | 12 | 32 | RCP | Replace with 18-inch by 32-foot RCP. |
| 18.62 | N/A | N/A | N/A | Install 18-inch by 36-foot RCP with a DI end treatment. |
| 18.80 | 12 | 37 | CSP | Replace with 18-inch by 37-foot CSP, add flared end section. |
| 18.88 | 12 | 54 | CSP | Replace with 24-inch by 54-foot RCP with a concrete flare end. |
| 19.82 | 18 | 10 | CSP | Add junction box and extend culvert approximately 15 feet. |
| 19.82 | 18 | 10 | CSP | Install new DI at new widening location; replace existing DI grate with bicycle-friendly grate. |
| 19.82 | N/A | N/A | N/A | Install two DIs. |
| 19.93 | N/A | N/A | N/A | Repair existing headwall. |
| 20.20 | N/A | N/A | N/A | Add 18-inch by 40-foot RCP with end treatment. |
| 20.22 | N/A | N/A | N/A | Install two 18-inch by 32-foot RCP. |

Notes:

There are 52 locations with 55 issues to be addressed.

DI = drainage inlet
CSP = corrugated steel pipe
N/A = not applicable
RCP = reinforced concrete pipe
RSP = rock slope protection

Cross culvert replacements would primarily be constructed using a cut-and-cover method. The cut-and-cover method entails cutting through the pavement surface to remove the existing culvert, placing the new culvert in the emptied space, and covering the excavated area and new culvert with new road base material and pavement. In some locations, the new culverts would be larger than the existing culvert. Similar to repaving, the cut-and-cover culvert replacement can be carried out in segments to keep one travel lane open and minimize traffic disruption. One-way traffic control would be

implemented using traffic cones and temporary railings to protect the construction work zones, resulting in approximately 5- to 10-minute delays.

Two culvert locations would require rock slope protection (RSP). RSP consists of a layer of rocks used to stabilize slopes and prevent erosion. RSP would be installed at the outlets of culverts at PM 17.67 and PM 17.8. To install RSP, loose rock and sediment would be removed and the slope graded to a depth of relatively stable sediment. Fabric or gravel would then be placed over the sediment and covered with RSP. Rock used in RSP would be sized to serve the intended purpose and prevent erosion. The area covered by RSP would be approximately 360 square feet.

New culvert headwalls are proposed at four culvert locations (PMs 14.91, 17.8, 18.23, and 19.93). Headwalls are concrete walls built on the inlet side of a culvert to prevent the creation of an overly steep side slope; improve water flow; provide anchoring support for the culvert to prevent dislodging under excessive pressures; control erosion and scour from high water velocities; and prevent adjacent soil from eroding into the waterway. Approximate headwall dimensions are 13.5 feet wide by 4.5 feet high, with a 10-inch-thick wall and a 1-foot-deep foundation.

Some vegetation removal, including trees and shrubs, would be required to complete drainage improvement work, culvert replacements, and RSP placement. Where feasible, tree or shrub pruning would be completed to avoid the need for removal.

#### 1.2.2.3 Americans with Disability Act and Complete Streets Improvements

The Project proposes to upgrade the existing pedestrian infrastructure to comply with current ADA standards and pedestrian and bicycle infrastructure, in accordance with Caltrans' current Complete Streets Guidance.

The design of the proposed Project currently includes upgrades, additions, or replacements of 40 ADA curb ramps, three pedestrian landings, six streetlights, eight bicycle pullouts, four MVPs, eight driveways, three bus pads, 12 crosswalk locations, three sidewalk locations, and 34 additional accessible pedestrian signals (APS).

##### *Pedestrian and Transit Facilities*

The proposed Project would upgrade the existing pedestrian infrastructure within the Project limits to comply with current ADA standards. Missing sections of sidewalks would be constructed, new crosswalks would be added, and existing crosswalks would be restriped. Curb ramps would be upgraded to standard as necessary. Additionally, new detectable warning surfaces, also known as pedestrian landing pads, would be installed at curb ramps, providing a bright yellow warning surface with raised bumps to alert pedestrians to potential hazards such as vehicle traffic at the intersection. New APS would be installed at pedestrian crossings as required, and existing APS would be upgraded to the new standard. New concrete pedestrian landing pads and bus stop pads are proposed. Table 2 details the locations of proposed pedestrian landing pads, bus stop pads, sidewalks, crosswalks, and curb ramps in the Project.

**Table 2 Pedestrian Facility Locations**

| Post Mile | Location along SR 116 | Type of Improvements |
|---|---|---|
| 7.740 | Church Street, northwestern and southwestern corners | • Two pedestrian landing pads<br>• Crosswalk restriping<br>• Two detectable warning surfaces |
| 7.760 | F Street | • Pedestrian landing pad |
| 7.850 | E Street, northwestern and southwestern corners | • Crosswalk restriping<br>• Two detectable warning surfaces |
| 8.860 | Westbound | • Two curb ramps<br>• Two detectable warning surfaces<br>• Curb and gutter |
| 11.164 | Hulbert Creek Bridge | • Crosswalk restriping<br>• Detectable warning surface |
| 11.750 | Guerneville Park and Ride | • Four curb ramps<br>• Bus stop pad<br>• Curb and gutter |
| 11.818 | Fife Creek Bridge | • Sidewalk<br>• Curb and gutter |
| 11.900 | Mill Street, northwestern and southwestern corners | • Two curb ramps<br>• Crosswalk restriping<br>• Two accessible pedestrian signal systems<br>• Two detectable warning surfaces |
| 11.980 | Church Street, northeastern and southeastern corners | • Two curb ramps<br>• Crosswalk restriping<br>• Two accessible pedestrian signal systems<br>• Two detectable warning surfaces |
| R12.067 | Armstrong Woods Road | • Bus stop pad |
| R12.377 | SR 116 Eastbound | • Two curb ramps<br>• Detectable warning surface<br>• Curb and gutter<br>• Driveway |
| R12.466 | Neeley Road, southwestern corner | • Curb ramps<br>• Detectable warning surface<br>• Curb and gutter |
| 19.429 | SR 116 Westbound | • Curb and gutter<br>• Driveway |
| 19.518 | SR 116 Eastbound | • Sidewalk<br>• Driveway |

| Post Mile | Location along SR 116 | Type of Improvements |
|---|---|---|
| 19.544 | SR 116 Eastbound | • Driveway |
| 19.614 | SR 116 Eastbound | • Curb and gutter<br>• Driveway |
| 19.810 | Travis Road, northeastern corner and southwestern corner | • Two curb ramps<br>• New crosswalk<br>• Two accessible pedestrian signal systems<br>• Two detectable warning surfaces |
| 19.810 | Packinghouse Road, northwestern corner and southeastern corner | • Two curb ramps<br>• New crosswalk<br>• Two accessible pedestrian signal systems<br>• Two detectable warning surfaces |
| R22.524 | Meuller Road | • Five curb ramps<br>• Crosswalk restriping<br>• Six accessible pedestrian signal systems<br>• Four detectable warning surfaces<br>• Curb and gutters<br>• Replace streetlights |
| 23.050 | Graton Road | • Seven curb ramps<br>• Crosswalk<br>• Eight accessible pedestrian signal systems<br>• Four detectable warning surfaces<br>• Bus stop pad<br>• Curb and gutters |
| R23.395 | Oak Grove Avenue | • Replace streetlights |
| R24.054 | Occidental Road | • Four curb ramps<br>• Crosswalk restriping<br>• Sidewalk<br>• Six accessible pedestrian signal systems<br>• Four detectable warning surfaces<br>• Curb and gutters<br>• Driveway |
| 25.050 | Mill Station Road | • Six curb ramps<br>• Crosswalk restriping<br>• Six accessible pedestrian signal systems<br>• Four detectable warning surfaces<br>• Curb and gutters |

Note:
SR = State Route

### *Bicycle Facilities*

The Caltrans District 4 Bike Plan and the Sonoma County Bicycle and Pedestrian Plan (Sonoma County 2010) propose Class II bicycle lanes on SR 116 in the Project corridor. As listed in Table 3, the Project proposes widening narrow shoulders to provide bicycle pullouts at eight locations, from Church Street (PM 7.74) to Green Valley Road (PM R22.13); and Class II bicycle lanes from Green Valley Road (PM R22.13) to Mill Station Road (PM 25.05). In addition, the Project would repave the West County and Rodota Trail, which is an off-street, Class I bicycle facility. During repaving work, the trail would be temporarily closed between Occidental Road and Mill Station Road. A detour would be provided on the westbound shoulder of SR 116 adjacent to the trail, protected by a continuous temporary railing, with temporary crash cushion modules added at each access opening and intersection.

**Table 3 Bicycle Pullout Locations**

| Bicycle Pull-Out No. | Post Mile | Direction | Proposed Length (feet) |
|---|---|---|---|
| 1 | 14.000 | Eastbound | 410 |
| 2 | 14.900 | Westbound | 660 |
| 3 | 16.400 | Eastbound | 1,770 |
| 4 | 17.160 | Eastbound | 1,819 |
| 5 | 18.600 | Westbound | 2,505 |
| 6 | 21.050 | Westbound | 1,980 |
| 7 | 21.850 | Westbound | 1,317 |
| 8 | R23.395 | Westbound | 370 |

### *Maintenance Vehicle Pullouts*

The Project proposes to construct four MVPs (Table 4). The MVPs would be adjacent to the shoulder, allowing maintenance and operations personnel to park off the road and safely access work sites. MVPs would be in previously disturbed areas.

**Table 4 Maintenance Vehicle Pullout Locations**

| MVP No. | Post Mile | Direction | Proposed Length (feet) |
|---|---|---|---|
| 1 | R12.55 | Eastbound | 780 |
| 2 | 13.55 | Eastbound | 780 |
| 3 | 13.8 | Westbound | 780 |
| 4 | 17.15 | Eastbound | 780 |

Note:
MVP = maintenance vehicle pullout

### 1.2.2.4 Guard Rails

There are 11,803 linear feet of metal beam guard railing (MBGR) on this Project that require replacement because they do not meet current standards. MBGR would be replaced using the Midwest guardrail system (MGS), which is slightly taller and deemed safer than the MBGR design. The existing treated wood posts would be replaced with metal posts, and the treated wood removed from the guardrails would be disposed of at a Class 1 recycling facility. Guard rails would be replaced at 49 locations in the Project area: 32 at locations along eastbound SR 116, and 17 at locations along westbound SR 116 (see Table 5 and Appendix E). In total, 11,964 linear feet of new MGS would replace 11,803 linear feet of MBGR.

A reinforced concrete barrier transition is needed to provide a secure attachment of the new MGS when performing guard rail replacements on structures such as bridges and viaducts. The Project proposes to construct 15-foot-long concrete barrier transitions at six locations, as detailed in Table 6.

Removal of some vegetation, including trees and shrubs, would be necessary to complete guard rail replacements. Where feasible, tree or shrub pruning would be completed to avoid any unnecessary need for removal.

**Table 5 Midwest Guard Rail Locations**

| Direction | Post Mile | Existing MBGR (feet) | Proposed MGS (feet) |
|---|---|---|---|
| Eastbound | 8.15 | 480.0 | 480.0 |
| Westbound | 8.16 | 90.0 | 150.0 |
| Eastbound | 8.28 | 480.0 | 480.0 |
| Westbound | 8.35 | 210.0 | 212.5 |
| Eastbound | 8.43 | 140.0 | 150.0 |
| Eastbound | 10.33 | 88.0 | 150.0 |
| Westbound | 10.43 | 209.0 | 212.5 |
| Eastbound | 10.48 | 1590.0 | 1590.0 |
| Eastbound | 11.11 | 75.0 | 75.0 |
| Westbound | 11.15 | 55.0 | 56.25 |
| Eastbound | 11.26 | 900.0 | 900.0 |
| Westbound | 11.60 | 53.0 | 56.25 |
| Eastbound | 11.67 | 155.0 | 162.5 |
| Eastbound | 11.78 | 25.0 | 25.0 |
| Westbound | R12.31 | 80.0 | 81.25 |
| Westbound | R12.33 | 236.0 | 237.5 |
| Westbound | R12.41 | 82.0 | 82.0 |

| Direction | Post Mile | Existing MBGR (feet) | Proposed MGS (feet) |
|---|---|---|---|
| Westbound | R12.42 | 200.0 | 200.0 |
| Eastbound | R12.44 | 475.0 | 475.0 |
| Eastbound | R12.54 | 295.0 | 295.0 |
| Eastbound | R12.60 | 269.0 | 275.0 |
| Eastbound | 13.69 | 160.0 | 162.5 |
| Westbound | 13.73 | 75.0 | 150.0 |
| Eastbound | 13.81 | 250.0 | 250.0 |
| Eastbound | 14.46 | 315.0 | 325.0 |
| Eastbound | 14.61 | 120.0 | 150.0 |
| Eastbound | 14.64 | 205.0 | 212.5 |
| Eastbound | 14.87 | 100.0 | 150.0 |
| Eastbound | 15.02 | 320.0 | 325.0 |
| Eastbound | 15.19 | 150.0 | 150.0 |
| Eastbound | 15.26 | 140.0 | 150.0 |
| Eastbound | 15.41 | 152.0 | 150.0 |
| Eastbound | 15.52 | 155.0 | 150.0 |
| Westbound | 15.53 | 120.0 | 150.0 |
| Westbound | 15.95 | 60.0 | 62.5 |
| Eastbound | 15.95 | 110.0 | 150.0 |
| Westbound | 16.45 | 145.0 | 150.0 |
| Eastbound | 16.46 | 195.0 | 200.0 |
| Eastbound | 16.75 | 140.0 | 150.0 |
| Westbound | 16.76 | 140.0 | 150.0 |
| Westbound | 19.70 | 200.0 | 200.0 |
| Westbound | 19.73 | 345.0 | 350.0 |
| Westbound | 21.39 | 470.0 | 475.0 |
| Eastbound | 21.39 | 560.0 | 562.5 |
| Eastbound | R22.14 | 184.0 | 187.5 |
| Eastbound | R23.38 | 180.0 | 180.0 |
| Eastbound | R24.16 | 137.0 | 150.0 |
| Eastbound | 24.83 | 125.0 | 150.0 |
| Eastbound | 24.86 | 25.0 | 25.0 |

Notes:

MBGR = metal beam guard railing
MGS = Midwest guardrail system

**Table 6 Guard Rail Concrete Barrier Transition Locations**

| Bridge No. | Post Mile | Bridge Name | Proposed Length (feet) |
|---|---|---|---|
| 20-0071 | 10.38 | Russian River sidehill viaduct (#2) | 15 |
| 20-0072 | 10.46 | Russian River sidehill viaduct (#1) | 15 |
| 20-0049 | 11.16 | Hulbert Creek | 15 |
| 20-0089 | 11.82 | Fife Creek | 15 |
| 20-0254 | 12.19 | Russian River | 15 |
| 20-0255 | 12.42 | Drake Road undercrossing | 15 |

### 1.2.2.5 Equipment and Materials Staging

The Project would use various existing pullout locations as staging areas to store and park equipment and materials at the end of each shift, reducing the need for and cost of hauling large pieces of equipment to and from Contractor storage facilities. Proposed staging areas identified in the Project footprint are listed in Table 7. Staging areas would be in locations that do not require the removal of trees or other native species vegetation, and they must not cause any permanent damage to these areas.

Long-term staging for materials and equipment being stored by the contractor would be beyond the direct view of the motoring public.

**Table 7 Proposed Staging Locations**

| Staging Area No. | Proposed Staging Area Approximate location (Post Mile) | Direction |
|---|---|---|
| 1 | 8.16 | Westbound |
| 2 | 8.69 | Westbound |
| 3 | 10.47 | Westbound |
| 4 | 10.63 | Westbound |
| 5 | 11.45 | Westbound |
| 6 | 18.68 | Westbound |
| 7 | R23.7 | Eastbound |

### 1.2.2.6 Right-of-Way Requirements

The proposed Project would require access to areas outside Caltrans right-of-way. It is estimated that up to 17 partial acquisitions of private properties would be needed for the ADA-compliant upgrades and shoulder-widening features of this proposed Project (Table 8). Approximately five permanent drainage easements would be needed to preserve permanent access for maintenance of culverts (Table 9). Additionally, 33 temporary construction easements (Table 10) and several permits to enter and construct would be required to build the proposed Project (Table 11).

**Table 8 Proposed Right-of-Way Acquisitions**

| Parcel/Property | Area of Acquisition (square feet) |
|---|---|
| 085-150-010-000 | 400 |
| 085-150-009-000 | 641 |
| 083-090-079-000 | 657 |
| 084-010-004-000 | 1581 |
| 130-110-023-000 | 815 |
| 130-180-045-000 | 691 |
| 130-110-026-000 | 358 |
| 130-180-048-000 | 443 |
| 130-261-027-000 | 395 |
| 130-262-033-000 | 276 |
| 061-050-062-000 | 198 |
| 130-263-004-000 | 186 |
| 060-400-071-000 | 172 |
| 083-080-023-000 | 169 |
| 083-080-032-000 | 210 |
| 083-080-026-000 | 210 |
| 083-080-027-000 | 191 |

**Table 9 Proposed Permanent Drainage Easements**

| Parcel/Property | Area of Permanent Drainage Easements (square feet) |
|---|---|
| 071-150-005-000 | 560 |
| 071-150-010-000 | 220 |
| 085-060-002-000 | 600 |
| 085-160-008-000 | 340 |
| 084-220-009-000 | 580 |

## Table 10 Proposed Temporary Construction Easements

| Parcel/Property | Area of Temporary Construction Easements (square feet) |
|---|---|
| 094-125-004-000 | 300 |
| 094-160-007-000 | 220 |
| 094-180-018-000 | 280 |
| 071-150-021-000 | 260 |
| 071-290-039-000 | 240 |
| 071-150-005-000 | 764 |
| 071-150-010-000 | 320 |
| 071-300-012-000 | 280 |
| 085-060-002-000 | 800 |
| 085-070-002-000 | 260 |
| 085-150-009-000 | 600 |
| 085-150-002-000 | 230 |
| 085-150-016-000 | 230 |
| 085-160-008-000 | 440 |
| 085-160-007-000 | 200 |
| 085-170-011-000 | 240 |
| 085-170-010-000 | 120 |
| 085-180-007-000 | 120 |
| 085-190-003-000 | 140 |
| 083-240-019-000 | 80 |
| 083-240-016-000 | 200 |
| 083-220-020-000 | 400 |
| 083-210-003-000 | 200 |
| 083-210-012-000 | 200 |
| 083-210-013-000 | 840 |
| 084-220-009-000 | 140 |
| 083-210-019-000 | 260 |
| 083-130-082-000 | 100 |
| 084-031-001-000 | 600 |
| 083-130-078-000 | 460 |
| 084-031-009-000 | 60 |
| 084-070-027-000 | 260 |
| 084-070-001-000 | 200 |

**Table 11 Proposed Permits to Enter and Construct**

| Parcel/Property | Area of Permits to Enter and Construct (square feet) |
|---|---|
| Sonoma County land | 22,207 |
| 083-080-023-000 | 113 |
| 083-080-032-000 | 140 |
| 083-080-026-000 | 140 |
| 083-080-027-000 | 128 |

### 1.2.2.7 Project Features

Project features (PFs) are integral to the Project and can include design elements of the Project and/or standardized measures that are applied to all or most Caltrans projects, measures included in the standard plans and specifications, or standard special provisions (SSPs) (such as best management practices [BMPs]). Such PFs have been considered prior to any significance determinations.

**PF-AQ-1. Implement Caltrans Standard Specifications –** These standard specifications require compliance with air pollution control rules, regulations, ordinances, statutes, and BMPs that apply to work performed under the Contract. Implementation of these specifications would result in reducing greenhouse gas (GHG) emissions from construction activities by requiring regular vehicle and equipment maintenance; limiting idling of vehicles and equipment onsite; if practicable, recycling nonhazardous waste and excess material or, if recycling is not practicable, disposing of materials in certified disposal facilities; and using solar-powered signal boards, if feasible.

**PF-BIO-1. Documentation at Project Site** – A Permit Compliance Binder would be maintained at the construction site at all times and presented to resource agency (e.g., United States Army Corps of Engineers [USACE], United States Fish and Wildlife Service [USFWS], San Francisco Bay Regional Water Quality Control Board [RWQCB], and/or California Department of Fish and Wildlife [CDFW]) personnel upon request. The Permit Compliance Binder would include a copy of all original permits and agreements, and any extensions and amendments to the permits and agreements.

**PF-BIO-2. Work According to Documents** – Except as they are contradicted by measures in the permits and agreements, all work would be conducted in conformance with the Project description in the permits and agreements and the avoidance and minimization measures (AMMs) provided in the permits and agreements.

**PF-BIO-3. Work Period in Dry Weather Only** – Work in bed, bank, or channel of aquatic resources, and in any associated riparian habitat, would only be conducted during periods of dry weather. Forecast precipitation would be monitored. When 0.25 inch or more precipitation is forecast to occur, work would stop before precipitation commences. No Project activities would be started if their associated erosion control

measures cannot be completed prior to the onset of precipitation. After any storm event, all sites currently under construction and all sites scheduled to begin construction within the next 72 hours would be inspected for erosion and sediment problems, and corrective action would be taken as needed; 72-hour weather forecasts from the National Weather Service would be consulted, and work would not start back up until runoff ceases and there is less than a 50 percent forecast for precipitation for the following 24-hour period.

**PF-BIO-4. Environmental Training** – Prior to the start of construction, a biologist would provide a training session for all work personnel to identify any sensitive species that may be in the area, their basic habitats, how they may be encountered in their work area, and procedures to follow when they are encountered. Any personnel joining the work crew later shall receive the same training before beginning work. Upon completion of the education program, employees shall sign a form stating they attended the program and understand all protection measures. A pamphlet that contains images of sensitive species that may occur in the Project area, environmentally sensitive areas (ESAs) in the Project area, key avoidance measures, and employee guidance would be given to each person who completes the training program. These forms would be made available to the resource agencies upon request.

**PF-BIO-5. Mark Environmentally Sensitive Areas** – Before construction begins, ESAs would be clearly delineated using high-visibility orange fencing, flagging, or similar marking to delineate sensitive habitats, including rare plants. The ESA marking would remain in place throughout construction. It may be removed during the wet season (and subsequently reinstalled) if needed to prevent materials from being washed away. The final Project plans would depict all locations where ESA markings would be installed and the manner of installation. The bid solicitation package special provisions would clearly describe acceptable marking material and prohibited construction- related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities in ESAs. ESA markings would be maintained in good condition throughout the Project as needed.

**PF-BIO-6. Nesting Bird Surveys** – If Project activities occur between February 1 and September 30, then a preconstruction survey would be conducted for nesting birds no more than 3 days before construction. If active nests are found, then an appropriate buffer would be established, and the nest would be monitored for compliance with the Migratory Bird Treaty Act and California Fish Game Code Section 3503.

**PF-BIO-7. Active Nest Buffers** – If an active bird nest is found during construction activities, then the following ESA buffers would be established: If an active raptor nest is observed, a 300-foot ESA buffer would be implemented to avoid affecting the young until they have fledged; if an active nest of a migratory bird other than a raptor is observed, a suitable ESA buffer would be determined by a qualified biologist and 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 Migratory Bird Treaty Act and California Fish and Game Code Section 3503.

**PF-BIO-8. Stormwater Best Management Practices** – Water pollution control and erosion control BMPs would be developed and implemented to avoid wind- or water-related erosion. They would follow the requirements of the RWQCB and standards outlined in Construction Site Best Management Practices Manual (Caltrans 2024). At a minimum, protective measures would include the following:

a. Prohibit discharge of pollutants from vehicle and equipment cleaning into storm drains or watercourses.

b. Maintain equipment to prevent the leakage of vehicle fluids, such as gasoline, oils, or solvents. Hazardous materials such as fuels, oils, solvents, etc. would be stored in sealable containers in a designated location that is at least 50 feet from aquatic habitats.

c. Service vehicles and construction equipment, including fueling, cleaning, and maintenance, at least 50 feet from aquatic habitat unless separated by a topographic or engineered drainage barrier.

d. Collect and dispose of concrete wastes and water from curing operations in appropriate washouts, at least 50 feet from watercourses.

e. Maintain spill containment kits on site at all times during construction operations, staging, and fueling of equipment.

f. Use water trucks and dust palliatives to control dust in unvegetated areas and cover temporary stockpiles when weather conditions require.

g. Protect graded areas from erosion using a combination of silt fences, fiber rolls, or straw wattles along toes of slopes or along edges of designated staging areas; erosion control netting (jute or coir); hydraulic mulch; temporary cover; drainage inlet protection; or other appropriate sediment control methods. To prevent wildlife from becoming entangled or trapped in erosion control materials, plastic monofilament netting (i.e., erosion control matting) or similar material would not be used. Acceptable substitutes include coconut coir matting or tackifying hydroseeding compounds.

**PF-BIO-9. Construction Site Management Practices** – The following BMPs would be implemented to biological resources:

a. Enforce a speed limit of 15 mph for Project vehicles in unpaved portions of the site to reduce dust and excessive soil disturbance.

b. Locate construction access, staging, storage, and parking areas in the Caltrans right-of-way and outside of any designated ESA to the extent practicable. Access routes, staging and storage areas, and contractor parking would be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork would be clearly marked before initiating construction.

c. Certify that borrow material is nontoxic and weed free.

d. Enclose food and food-related trash items in sealed trash containers and remove them from the site at the end of each day.

e. Prohibit pets from entering the Project area during construction.

f. Prohibit firearms in the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

**PF-BIO-10. Invasive Weed Control** – To reduce the spread of invasive, nonnative plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health effects. If noxious weeds are disturbed or removed during construction-related activities, the contractor would be required to contain the noxious weed plant material and dispose of it in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance would be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas in the Project area would 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 would be thoroughly cleaned before arriving on the site to prevent the spread of noxious weeds from other locations.

**PF-BIO-11. Minimize Vegetation and Tree Removal** – 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-12. Restore Disturbed Areas –** Temporarily disturbed areas would be restored. Exposed slopes and bare ground would be reseeded with native grasses to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species would be replanted, based on the local species composition.

**PF-BIO-13. Night Lighting –** For unavoidable nighttime work, all lighting would be shielded and directed downward toward the active construction area to avoid exposing nocturnal wildlife to excessive glare.

**PF-CUL-1. Unanticipated Discovery** – If archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 60 feet of the discovery must immediately stop. A qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications for Archaeology would evaluate the find's significance in consultation with the Tribe to determine whether further study is warranted. Additional archaeological survey would be needed if the

Project limits are extended beyond the present survey limits. Contact the Lead Caltrans Archaeologist in the Office of Cultural Resource Studies.

If any tribal cultural resources (TCR) as defined by the Tribe and the California Environmental Quality Act (CEQA) are found during construction, a Professionally Qualified Staff archaeologist would assess the find. The Office of Cultural Resource Studies would notify local consulting Tribes if the resource is a TCR and consult with the contractor and Tribe to determine avoidance. If avoidance is not possible, further consultation with the Tribe would determine treatment.

**PF-CUL-2. Human Remains –** If Caltrans Professionally Qualified Staff determines that cultural materials contain human remains, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains. Caltrans' Cultural Resources Studies Office would contact the Sonoma County Coroner. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner would notify the Native American Heritage Commission (NAHC), which would then notify the Most Likely Descendant. Caltrans, District 4, Cultural Resource Studies Office would work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

**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-HYD-1. Implementation of Construction-Site Best Management Practices** – BMPs would be included in the final Project plans, and SSPs would be included in the final construction package to comply with the conditions of the Caltrans National Pollutant Discharge Elimination System permit. The Caltrans Best Management Practice Guidance Handbook would provide guidance for provisions to be included in the construction contract for measures to protect ESAs and avoid or minimize stormwater and nonstormwater discharges. Construction-site BMPs for stormwater may include, but are not limited to, the following:

- construction tracking control practices;
- job site management;
- temporary sediment control (fiber rolls and silt fencing) ;
- temporary soil stabilization;
- waste management and construction materials pollution control;
- construction materials stockpile management;
- dust and wind erosion controls;
- drainage inlet protection;

- nonstormwater management;
- water quality monitoring; and
- earth-disturbing construction activities should not be made during anticipated rain events.

**PF-HYD-2. Stormwater Pollution Prevention Plan (SWPPP) –** A SWPPP would be prepared by the contractor and approved by Caltrans, pursuant to 2025 Caltrans Standard Specifications Section 13, Water Pollution Control, and the Caltrans SWPPP Preparation Manual, and implemented prior to the beginning of construction.

**PF-NOI-1. Schedule Noisy Operations in the Same Time Frame** – The total noise level would not be significantly greater than the level produced if operations are performed separately.

**PF-NOI-2. Avoid Unnecessary Idling –** Internal combustion engines within 100 feet of sensitive receptors must be shut off to reduce noise and exhaust fumes.

**PF-NOI-3. Stationary Noise-Generating Construction Equipment –** All such equipment must be kept as far as practical from noise-sensitive receptors or baffled housing or sound aprons must be provided for equipment when sensitive receptors adjoin or are near a construction Project area.

**PF-NOI-4. Intake and Exhaust Mufflers for Combustion Engines** – Equip all equipment driven by internal combustion engines with manufacturer-recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

**PF-NOI-5. Use of "Quiet" Equipment** – "Quiet" air compressors and other "quiet" equipment must be used where such technology exists.

**PF-NOI-6**. **Delivery of Construction Equipment Restriction** – No construction equipment would be delivered and dropped off before 6:00 a.m.

**PF-NOI-7. Combustion Engine Maintenance** – Maintain all internal combustion engines properly to minimize noise generation.

**PF-VIS-1. Vegetation Removal –** Revegetate disturbed soil areas with native and climatically appropriate species.

**PF-TRANS-1. 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 congestion and delays. Notifications and instructions for rapid response or evacuation in the event of an emergency would be provided.

### 1.2.3 No-Build (No-Action) Alternative

The “No-Build” alternative would take no actions, and the Project would not be constructed. If no action is taken, further deterioration of the roadway pavement would affect the structural integrity of the highway and require a major roadway rehabilitation at a future date. A major roadway rehabilitation would result in an increase in costs, take longer to construct, and require a commitment of more irretrievable resources. In addition, as identified in the Transportation Planning Scoping Information Sheet, there are various deficiencies and gaps in the pedestrian and bicycle infrastructure that, if not addressed, would continue to be barriers for and/or impediments to the nonmotorized traffic. As a result, the existing pavement would continue to deteriorate, resulting in costly future repairs and risk to the public’s safety. Therefore, the “No-Build” alternative would not meet the Project's purpose and need.

## 1.3 Permits and Approvals Needed

The permits, licenses, agreements, and certifications listed in Table 12 are required for Project construction:

**Table 12 Permits and Approvals**

| Agency | Permit/License/Agreement/ Certification | Status |
|---|---|---|
| California Department of Fish and Wildlife | Lake and Streambed Alteration Agreement | Application will be submitted during detailed design phase. |
| North Coast Regional Water Quality Control | Water Quality Certification (Clean Water Section 401) | Application will be submitted during detailed design phase. |
| United States Army Corps of Engineers | Clean Water Act Section 404 Nationwide Permit | Application will be submitted during detailed design phase. |
| United States Fish and Wildlife Service | Section 7 Consultation<br>Biological Opinion request | Technical Assistance with USFWS was conducted on January 16, 2026, and March 4, 2026, for the California red-legged frog and northern spotted owl. Formal Section 7 consultation will begin with the drafting and submittal of a Biological Assessment during the detailed design phase. |

# Chapter 2 CEQA Evaluation

## 2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed Project. Potential impact determinations include Significant and Unavoidable Impact, Less-than-Significant Impact with Mitigation Incorporated, Less-than-Significant Impact, and No Impact. In many cases, background studies performed in connection with a project would indicate that there are no impacts to a particular resource. A “No Impact” answer reflects this determination. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

**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 AMMs.

**Less-than-Significant Impact with Mitigation Incorporated:** Indicates the potential for a significant impact that would be mitigated with the implementation of a mitigation measure (MM) to a level of less than significant.

**Significant and Unavoidable Impact:** Indicates the potential for a significant and unavoidable environmental impact.

PFs are integral to the Project and can include design elements of the Project and/or standardized measures that are applied to all or most Caltrans projects, measures included in the standard plans and specifications, or SSPs (such as BMPs). Such PFs have been considered prior to any significance determinations. Refer to Section 1.2.2.7 for the complete list and details of the PFs.

Caltrans is the lead agency under CEQA for this proposed Project.

### 2.1.1 Aesthetics

Except as provided in PRC Section 21099, would the Project:

| Question | CEQA Determination |
|---|---|
| a) Have a substantial adverse effect on a scenic vista? | 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? | Less-than-Significant Impact |

| Question | CEQA Determination |
|---|---|
| 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? | 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? | Less-than-Significant Impact |

#### 2.1.1.1 CEQA Significance Determinations for Aesthetics

The following is summarized from the Visual Impact Assessment (VIA) conducted by the Office of Landscape Architecture (Caltrans 2025a). Scenic resource and visual resource identification was first conducted based on a desktop review of available maps, regional and local plans, and other databases. Field visits were then conducted to verify key information about the landscape after the initial desktop review. In the context of the VIA, “scenic resources” are those officially designated by federal, state, regional, tribal, or local authorities; “visual resources” are those that exist in the Project Area of Visual Effect without being officially recognized.

The Project is on the section of SR 116 that was officially designated as a State Scenic Highway in 1988. The Project corridor travels through several different landscape types. The Project spans both the Coastal Franciscan Redwood Forest and the Napa-Sonoma-Russian River Valleys ecoregions of Northern California. The landscape in the northern area of the Project is characterized by hilly steep ravines around the Russian River and “Pocket Canyon” areas with mature forests. Approaching Forestville, the corridor broadens as it continues into the relatively flat and open area of the Santa Rosa Plain to the southeast. The landcover of the northern portion of the Project corridor is characterized by dense vegetation and established forests, with trees that often overhang the roadway. The landcover in the southern portion of the Project corridor is more open, with a mix of agricultural plantings and intermittent stretches of wildland, cultivated trees, and patches of forest and shrubs lining the corridor. Though the corridor passes through the small communities of Monte Rio, Guerneville, and Forestville as well as more suburban areas north of Sebastopol, most of the land along the corridor is rural, with a mix of agricultural, residential, and commercial uses.

**a) Less-than-Significant Impact**

There are scenic vistas of the Russian River, forested hillsides, and the historic Russian River Bridge area in the Project corridor. The main visible elements of the Project would be the newly resurfaced roadway, widened shoulders in multiple locations for bicycle pull-outs and MVPs, guardrail installation, additional pedestrian infrastructure, and vegetation removal to accommodate the new work.

The resurfaced roadway would initially appear darker; with the new roadway striping, the visual contrast would be prominent at first. The asphalt and paint would fade over time, however, reducing visual contrast in the long term.

The bicycle pull-out locations and MVP locations are already paved with gravel and do not contain trees or tall vegetation. At other locations, the wider paved asphalt area would slightly increase the visual dominance but would not have a significant effect on the Area of Visual Effect.

The Project would also replace standard metal beam guardrail (MBGR) with MGS. MGS is 3 inches taller than MBGR, but this difference is negligible to the average viewer. There are no new locations of guardrail along the corridor, though the length of guardrail at some locations would be several feet longer in the Build Alternative. Proposed guardrail replacement would have concrete vegetation control below, which would increase the amount of paved area, slightly increasing the dominance of the roadway. Guardrails are common along the highway, however, and the scale and form would be in keeping with the existing condition.

Proposed crosswalks, curb ramps, flashing beacons, and other pedestrian infrastructure are proposed in or near the small urban centers of Guerneville and Forestville, as well as in the southern, more suburban area of the corridor south of Green Valley Road. In addition, six streetlights would be replaced/upgraded over two intersections near the communities of Sousa Corners and Graton. These elements are common in these more suburban and urban areas and would be in keeping with the scale and form of other such infrastructure along the corridor. No foundation work for the replacements is expected.

The most noticeable permanent visual change would be vegetation removal, particularly around culvert replacement and repair locations. The exact details of tree and vegetation removal are not known at this stage. Tree removals, especially in the northern portion of the Project corridor where dense stands of mature redwoods line the roadway, would be avoided to the greatest extent practicable during final Project design. Should a mature tree be removed in this section of the Project, the visual effect would be negligible due to the density of the surrounding stands.

Eight ornamental street trees have been identified as possibly being removed in downtown Forestville to accommodate pedestrian upgrades in the area. Through the implementation of AMM-VIS-1 (below, Appendix B), the trees would be replaced as practicable in conjunction with community input. Tree removals in downtown Forestville would result in changes to the landscape until the trees mature, although the overall character and quality of the visual environment would remain largely the same due to the urbanized quality of the environment. Views of the small-scale buildings beyond are typical of the downtown corridor; other existing trees visible in the distance and on the opposite side of the street would remain.

Based on the data and analysis provided in the VIA, in conjunction with AMM-VIS-1 through AMM-VIS-7, the impacts to scenic vistas would be less than significant.

**b) Less-than-Significant Impact**

SR 116 through the Project limits is a designated Scenic Highway with scenic resources that include trees, rock outcroppings, rivers, and creeks. The Project does not have historic buildings that would be impacted by the work.

Preliminary assessments estimate that approximately 52 trees may need to be removed to complete construction. The individual trees include redwoods (*Sequoia sempervirens*), California bay laurels (*Umbellularia californica*), oaks (*Quercus* sp.), and nonnative ornamental tree species. One strategy the Project would employ to avoid and minimize tree removal at culvert locations would be to relocate the culvert slightly at some locations. Relocations are possible for those culverts identified for repair or replacement that only facilitate the flow of stormwater under the roadway, collected from sheet flow into roadside ditches, and are not used to facilitate the flow of creek or river waters. When culverts are not specifically at a creek or river crossing, engineers can relocate them along a roadside ditch to avoid construction impacts requiring tree removals, thus maintaining the function of drainage facilities. Trees are the primary scenic resource impacted by Project construction. Because most tree impacts occur in forested areas, the visual effect of removing one or two trees at a specific work location would be negligible, given the density of the surrounding stands. Implementation of AMM-VIS-1 would involve replanting any removed trees at a one-to-one ratio wherever feasible in downtown Forestville. Tree removals in riparian areas may be subject to CDFW permitting that would require tree replacements.

With the implementation of AMM-VIS-1 through AMM-VIS-7, the impacts to scenic resources would be less than significant.

**c) Less-than-Significant Impact**

In nonurbanized areas, various Project actions, such as shoulder widening, vegetation removal, new drainage elements, and new guardrails would result in very low adverse impacts to the visual character or quality of the highway corridor. Additionally, tree removal in the highway foreground, increased roadway dominance from increased paving, and visual clutter from added drainage elements would result in some decline in the overall corridor visual quality.

In urbanized areas, the Project would not conflict with applicable zoning or other regulations that govern scenic quality. The Project is consistent with the Sonoma County General Plan, complying with Section 2.3, Policy for Scenic Corridors, by minimizing tree impacts, avoiding removals where feasible, and providing tree replanting in Forestville to preserve the scenic quality of the corridor. The Project also supports the Sonoma County General Plan, Section 2.5, Policy for Urban Design, by incorporating elements that encourage pedestrian and bicycle activity, specifically through the replanting of street trees that maintain shade, enhance comfort, and reinforce a pedestrian-scaled streetscape.

The proposed Project would implement AMM-VIS-1 through AMM-VIS-7, and the resulting impacts to the existing visual character or quality of public views would be reduced to less than significant.

**d) Less-than-Significant Impact**

The Project proposes to install new pedestrian-activated rectangular flashing beacons at the intersections of Travis Road and Packing House Road. Flashing overhead yellow warning lights are already present at these locations. The new beacons would only illuminate when triggered by a pedestrian. These additional lights are not expected to be

a substantial source of illumination. Temporary lighting used by construction crews during necessary nightwork would be shielded and directed toward the area of work and would not constitute a substantial source of light outside the work area. The six streetlights that would be replaced/upgraded in two of the more urban locations of the would not constitute a new source of substantial light or glare because streetlights already exist at these locations. The Project would not create a new source of light or glare that would adversely affect day or nighttime views, so the impacts would be less than significant

### 2.1.1.2 Avoidance and Minimization Measures for Aesthetics

AMM-VIS-1 through AMM-VIS-7 would avoid or minimize impacts to aesthetics.

**AMM-VIS-1, Minimize Vegetation Removal.** Preserve existing trees, vegetation, and associated root systems to the maximum extent practicable. Use temporary fencing to protect existing trees abutting or in work areas. In downtown Forestville, replant any removed trees at a one-to-one ratio wherever feasible, considering utility conflicts and required clearance areas. The Project team will seek community input on tree species and placement.

**AMM-VIS-2, Drainage Facilities Visual Contrast.** Conceal the inlet and outlet of drainage pipes from view where feasible. Pipes that cannot be hidden would be colored with earth-tone coating to conceal them. Color exposed concrete drainage structures to match adjacent earth tones. Color drainage rock used as dissipators with earth tones and bury them with soil and cover with vegetation where feasible.

**AMM-VIS-3, Concrete Vegetation Control.** Avoid the use of concrete strips under MGS to block vegetation growth under the MGS at locations along SR 116 north of the Russian River. Install narrow vegetation-control concrete strips at new MGS in the remainder of the corridor.

**AMM-VIS-4, Concrete Visual Contrast.** Minimize visual contrast by adding lamp black integral color (typically 0.25 pound of color to each 94-pound sack of concrete) to new concrete for curb ramps, sidewalks, and vegetation control.

**AMM-VIS-5, Lighting and Glare.** Limit construction lighting to the area of work and avoid light trespass with the use of directional screening.

**AMM-VIS-6, Equipment and Materials Staging Areas.** To preserve existing vegetation to the maximum extent practicable, locate staging areas on existing paving and unvegetated surfaces.

**AMM-VIS-7. Screen Equipment and Materials Staging Areas.** Minimize the visibility of construction equipment and staging areas. Screen the staging area from views to the extent practicable. Visual impacts should be minimized by installing woven vinyl screens or similar material attached to chain-link fencing surrounding these areas. All equipment and unsightly materials should be stored behind such screens and beyond direct view of the motoring public and residences wherever possible, and beyond the dripline of trees.

## 2.1.2 Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection (CAL FIRE) 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? | Less-than-Significant Impact |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | No Impact |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | No Impact |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | No Impact |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | No Impact |

### 2.1.2.1 CEQA Significance Determinations for Agriculture and Forestry Resources

The Office of Environmental Analysis, following regulations in CEQA, the Farmland Protection Act, the Williamson Act, the Sonoma County 2022 Census of Agriculture, and the Farmland Conversion Impact Rating worksheet, conducted an analysis of potential impacts to farmland. This analysis was used to make the following significance determinations for potential impacts of the proposed Project (Caltrans 2026a) to agriculture or forestry resources.

### a) Less-than-Significant Impact

The Project proposes to acquire very small areas of right-of-way in the corners of two Sonoma County parcels identified as Unique Farmland and Farmland of Local Importance (refer to Figure 2 and Figure 3). This right-of-way is needed to construct ADA-compliant curb ramps. There is no proposed acquisition of Prime Farmland or Farmland of State Importance in the Project. Sonoma County contains 466,810 acres of farmland (USDA 2026), of which only 0.0571 acre are proposed to be converted for this Project. This would equate to a <0.0001 percent change to existing Farmland in Sonoma County.

The two affected parcels, described in Table 13, equal 16.6925 acres, with permanent total direct impacts equaling 0.0571 acre; this represents 0.0342 percent of the combined total of both parcels. These farmland conversions are needed to facilitate ADA curb ramp construction in compliance with the Complete Streets Directive (Caltrans 2021). Neither of these parcels appear to be currently providing agriculture or range use; proposed acquisitions would not impede future use of the remainder of either parcel, given the small size of proposed acquisitions and each proposed acquisition location at the corner of the existing parcels. Considering the low percentages of acquisition area compared to the total parcel size, along with the current lack of agricultural production, the impact to designated Unique Farmland and Farmland of Local Importance is deemed to be less than significant.

**Table 13 Proposed Farmland Acquisition**

| Assessor's Parcel Number and Location | Parcel Size (Acres) | Proposed Acquisition Amount (Acres) | % of Total Parcel | Current Designation and Use | Proposed Use |
|---|---|---|---|---|---|
| 130-110-026-000<br>Northwestern corner of Mueller Road/ SR 116 | 9.2003 | 0.0082 | 0.09 | Unique Farmland<br>No crops/forest production | ADA<br>curb ramps |
| 130-262-033-000<br>Southwestern Corner of Occidental Road/ SR 116 | 7.4922 | 0.0063 | 0.08 | Farmland of Local Importance/No crops/forest production | ADA<br>curb ramps |
| **Totals** | **16.6925** | **0.0571** | **0.0343** | — | — |

Notes:

ADA = Americans with Disabilities Act
SR = State Route

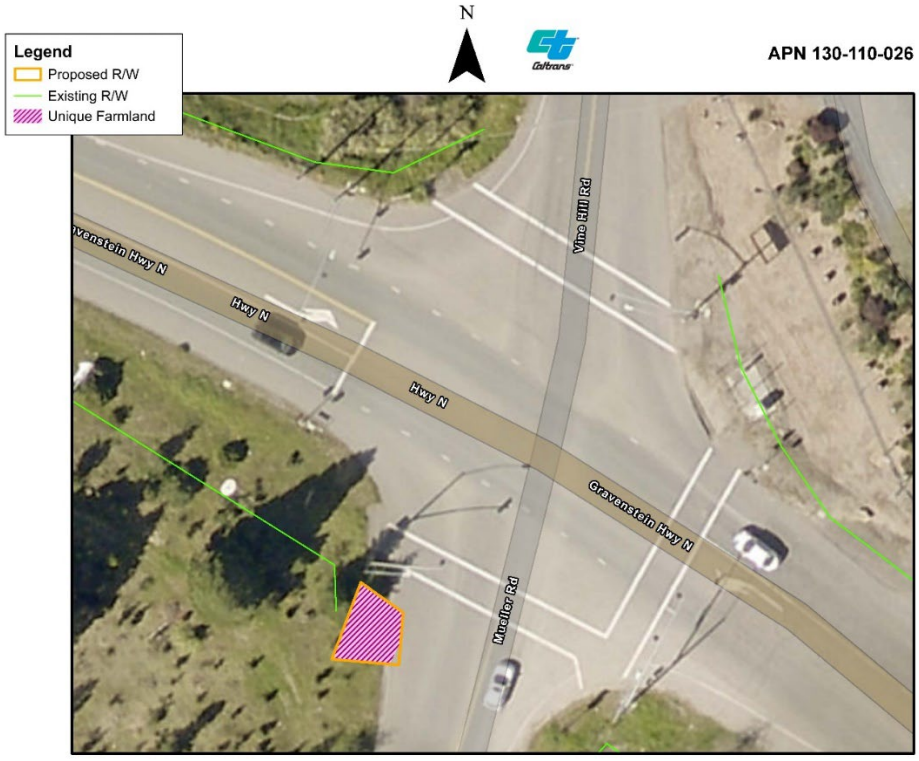



**Figure 2 Proposed Acquisition of Unique Farmland**

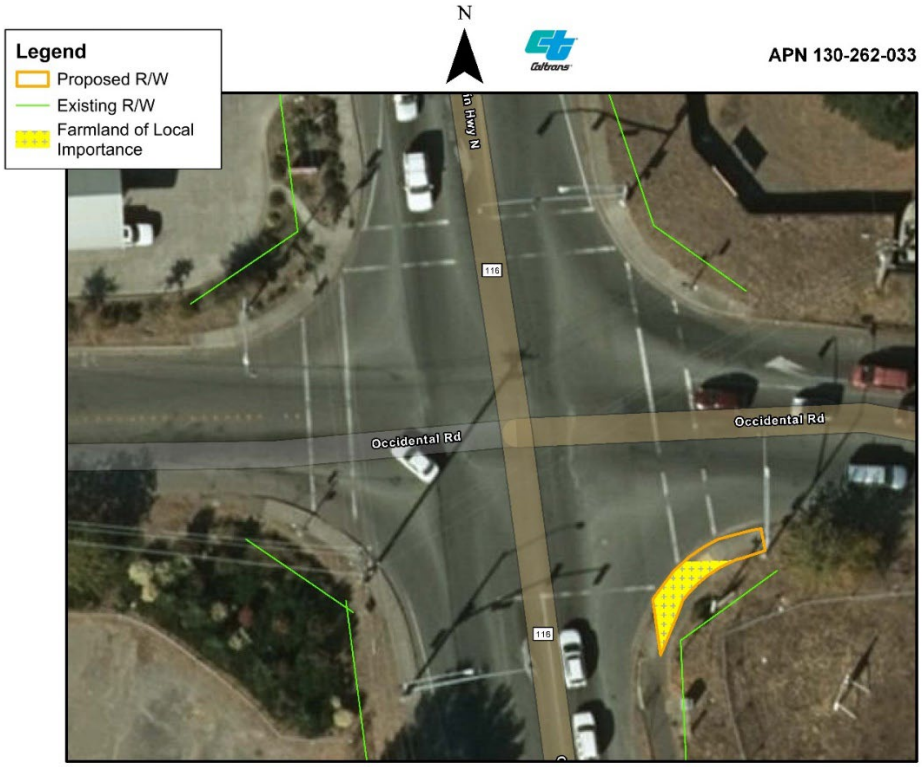



**Figure 3 Proposed Acquisition of Farmland of Local Importance**

**b, c, d, and e) No Impact**

There are no Williamson Act properties in the footprint that would be impacted, and there are no conflicts with local zoning. The Project area does not contain land zoned as forest land, timber land, or timberland production. There would be no loss or conversion of forest land to nonforest land, or other changes to the existing environment that could result in conversion. Therefore, the Project would have no impact on these resources.

## 2.1.3 Air Quality

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

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

### 2.1.3.1 CEQA Significance Determinations for Air Quality

This Project is exempt from the requirement to determine air quality conformity, in accordance with 40 Code of Federal Regulations (CFR) 93.126 Table 2, Safety – Pavement resurfacing and/or rehabilitation. Therefore, an air quality study is not required (Purandar [Caltrans], pers. comm. 2025). However, the Project would be required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air-pollution control rules, regulations, ordinances, and statutes that apply in the Project area.

The Project footprint is in Sonoma County, which is in the San Francisco Bay Area Air Basin and within the jurisdiction of the San Francisco Bay Area Air Quality Management District (BAAQMD) and Northern Sonoma County Air Pollution Control District. BAAQMD comprises all of Marin, Napa, Contra Costa, Alameda, Santa Clara, San Mateo, and San Francisco Counties and the southern and western portions of Sonoma and Solano Counties, respectively.

The Project area is designated as nonattainment for ozone and in attainment for particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers

($PM_{2.5}$) and 10 micrometers ($PM_{10}$) under National Ambient Air Quality Standards (CARB 2024); and as nonattainment for ozone, $PM_{2.5}$, and $PM_{10}$ under California Ambient Air Quality Standards (CARB 2024).

**a) No Impact**

No long-term impacts to air quality in the Project vicinity are anticipated, because the Project would not increase capacity on SR 116 or alter vehicle operations on the roadway once construction is complete. The Project would generate temporary construction emissions; and construction-related activities would comply with federal, state, and local regulations and policies. Emission reduction measures would be implemented as discussed under PF-AQ-1 to reduce temporary construction emissions. With this implementation of emission reduction measures, the Project would not conflict with or obstruct implementation of an applicable air quality plan, and there would be no impact.

**b, c, d) Less-than-Significant Impact**

The Project is required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air pollution rules, regulations, ordinances, and statutes for construction along the SR 116 corridor. Construction activities would be temporary; therefore, Project related air pollutants resulting from construction would be minimal. Potential impacts to air quality, including emissions of pollutants, odors affecting nearby sensitive receptors, and exposure of sensitive receptors, would be less than significant based on the temporary nature of the Project construction-related activities. Additionally, the Project would implement BMPs, which would further reduce potential air quality impacts.

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

## 2.1.4 Biological Resources

Would the Project:

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

| Question | CEQA Determination |
|---|---|
| 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? | Less-than-Significant with Mitigation Incorporated |
| 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? | Less-than-Significant Impact |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | No Impact |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | No Impact |

#### 2.1.4.1 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 habitats, plants, and wildlife species (Caltrans 2026b). A summary of the findings is presented here.

The Biological Study Area (BSA), which is defined as the entire area of potential direct and indirect Project impacts, is 172.54 acres. The BSA includes the Project area and up to 100 feet outside of the Project area. A BSA larger than the Project area was chosen to evaluate resources in the Project vicinity that could experience direct and indirect effects. The BSA is the area that was surveyed to evaluate, identify, and quantify the natural resources associated with the Project.

Upland habitats in the BSA consist of developed areas, commercial agriculture, landscaped/nonnative forest, mixed evergreen forest, redwood forest, oak woodlands, mesic meadow, nonnative annual grasslands, and ruderal disturbed vegetation. Developed portions of the BSA include SR 116, roads, paved trails, parking lots, buildings, and barren areas.

In the BSA, wetland habitats include palustrine emergent wetlands; other waters, including the Russian River and tributaries; developed culverted waters; and ditches. A total of 2.176 acres of wetlands and other waters were delineated in the BSA; this includes 0.716 acre of wetlands, 1.380 acre of nonwetland waters, and 0.080 acre of culverted waters.

Databases were used to query for sensitive biological resources that could occur in the BSA to evaluate potential impacts that could occur from the Project. Database searches included the California Natural Diversity Database (CDFW 2025), the USFWS

Information for Planning and Consultation Database (USFWS 2025), the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2025), and the National Marine Fisheries Service database (NMFS 2025).

In addition to database queries, the following technical studies were conducted for the Project: habitat assessment and vegetation characterization, rare plant habitat assessment, aquatic resource delineation, and tree surveys.

**a) Less-than-Significant Impact**

***Special-Status Plant Species***

Based on the literature and database review, 90 special-status plant species were determined to have a potential occurrence in the BSA. There were no observations of special-status plant species or suitable habitat found during the field studies conducted from August 18 through 21, 2025. Furthermore, most special-status plant species were determined to have no potential to occur due to a lack of suitable habitat.

Seventeen species of special-status plants were identified as having a moderate or high potential to occur in the BSA. Rare plants, identified with a CNPS Rank of 1 through 4, with a medium likelihood to occur in the BSA are listed below:

- Baker's manzanita (*Arctostaphylos bakeri* ssp*. bakeri*, CNPS 1B.1, Critically Rare)
- Rincon Ridge manzanita (*Arctostaphylos stanfordiana* ssp*. decumbens*, CNPS 1B.1)
- Rincon Ridge ceanothus (*Ceanothus confuses*, CNPS 1B.1)
- Vine Hill ceanothus (*Ceanothus foliosus* var. *vineatus*, CNPS 1B.1)
- Glorybush (*Ceanothus gloriosus* var. *exaltatus*, CNPS 4.3)
- Swamp harebell (*Eastwoodiella californica*, CNPS 1B.2)
- Fragrant fritillary (*Fritillaria liliacea*, CNPS 1B.2)
- Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*, CNPS 1B.2)
- Thin-lobed horkelia (*Horkelia tenuiloba*, CNPS 1B.2)
- Golden bristly leptosiphon (*Leptosiphon aureus*, CNPS 4.2)
- Green monardella (*Monardella viridis*, CNPS 4.3)
- White-flowered rein orchid (*Piperia candida*, CNPS 1B.2)
- Sonoma Alopecurus (*Alopecurus aequalis* var. *sonomensis*, CNPS 1B.1)
- Methuselah's beard lichen (*Usnea longissima*, CNPS 4.2)

Rare plants with a high likelihood to occur in the BSA are Napa false indigo (*Amorpha californica* var. *napensis*, CNPS 1B.2) and Harlequin lotus (*Hosackia gracilis*, CNPS 4.2).

In consideration of the disturbed nature of the BSA, lack of suitable habitat, and lack of positive detection during the surveys carried out in August 2025, and with

implementation of Project AMMs, potential impacts to special-status plant species would be less than significant.

### *Special-Status Wildlife Species*

The following are the special-status wildlife species that have suitable habitat and a potential to occur in the BSA:

- California red-legged frog (*Rana draytonii*) – federally threatened, California species of special concern
- Foothill yellow-legged frog (*Rana boylii* pop. 1) – California species of special concern
- California giant salamander (*Dicamptodon ensatus*) – California species of special concern
- Northern spotted owl (*Strix occidentalis caurina*) – federally threatened, state threatened
- Sonoma tree vole (*Arborimus pomo*) – California species of special concern
- Northwestern pond turtle (*Actinemys marmorata)* – federally proposed threatened, California species of special concern
- Coho salmon, Central California Coast evolutionarily significant unit (*Oncorhynchus kisutch*) – federally endangered, state endangered
- Steelhead, Central California Coast distinct population segment (*Oncorhynchus mykiss irideus*) – federally threatened, California species of special concern
- Chinook salmon, California Coastal evolutionarily significant unit (*Oncorhynchus tshawytscha*) – federally threatened
- Russian River tule perch (*Hysterocarpus traskii pomo*) – California species of special concern
- Bat species
- Migratory bird species

No special-status wildlife species were observed during field visits by biologists in the BSA. Suitable habitat for each special-status species varies due to the length of this Project and the various habitat types the Project traverses.

### *California Red-Legged Frog*

The Project would result in direct temporary and permanent impacts on both suitable upland dispersal and aquatic nonbreeding habitats for California red-legged frog from culvert replacement and drainage improvements, shoulder widening, staging, and access activities. Up to 1.22 acres of upland dispersal may be temporarily disturbed and 0.036 acre permanently lost due to Project activities. An estimated 0.127 acre of aquatic nonbreeding habitat for California red-legged frog may be temporarily disturbed and 0.003 acre permanently lost due to Project activities. No designated critical habitat would be affected. All areas of temporary disturbance would be restored to pre-Project conditions following construction. The implementation of the specific AMMs focused on biological resources, specifically AMM-BIO-2, Preconstruction California Red-Legged Frog Surveys; AMM-BIO-3, Wildlife Exclusion Fencing; AMM-BIO-4, Biological Monitor;

AMM-BIO-5, Protocol for Species Reporting; and AMM-BIO-13, Prevent Inadvertent Entrapment, would reduce the likelihood of take to occur. The overall assessment of potential impacts, development of avoidance and minimization measures, and preliminary effects determination to this species was completed in coordination with USFWS through technical assistance (see Chapter 3, Coordination). Due to the foreseeable presence of this species in the Project area and the possibility that Project activities could impact it, Caltrans has concluded that this Project may affect and is likely to adversely affect California red-legged frog.

### *Foothill Yellow-Legged Frog and California Giant Salamander*

Field surveys did not detect foothill yellow-legged frog or California giant salamander, and there were no recent observations of these species in biological databases in the vicinity of the BSA. The aquatic habitat for these species is generally marginal at individual Project work sites, and the planned timing of construction in aquatic habitat during the dry season would avoid these species. Foothill yellow-legged frog and California giant salamander are not expected to be encountered by Project activities. The proposed Project is expected to result in no impacts to foothill yellow-legged frog and California giant salamander individuals; potential habitat impacts would be similar to those described for aquatic nonbreeding habitat for California red-legged frog, and habitats would be restored to pre-Project conditions after construction.

### *Northern Spotted Owl*

Project construction activities would occur in mature forest habitat suitable for northern spotted owl. When possible, vegetation and tree removal activities would be performed outside of the February 1 to September 30 active nesting season for this species. Work in potentially suitable northern spotted owl nesting habitat would be limited to daylight hours to limit disturbance to this nocturnal species. Preconstruction surveys for nesting birds would be conducted prior to the start of any Project activities occurring during the active nesting season. If a nesting bird is discovered, appropriate buffers would be applied to avoid disturbances to northern spotted owl from Project work until all birds have fledged. With the implementation of the Project AMMs, specifically AMM-BIO-7, Preconstruction Northern Spotted Owl Surveys; AMM-BIO-8, Noise Minimization; and AMM-BIO-9, Avoidance of Night Work in Northern Spotted Owl Habitat, individual northern spotted owl would not be adversely affected by noise and visual disturbance from the proposed Project, and nesting behavior and success would not be adversely affected. The overall assessment of potential impacts, development of avoidance and minimization measures, and preliminary effects determination to this species was completed in coordination with USFWS through technical assistance (see Chapter 3, Coordination). Caltrans has determined the Project may affect but is not likely to adversely affect this species.

### *Sonoma Tree Vole*

There is suitable evergreen conifer forest with Douglas fir (*Pseudotsuga menziesii*) trees for foraging and nesting Sonoma tree voles present in the BSA. Individual trees may need to be removed for staging, excavating the existing culverts, or accommodating shifts to culvert locations. Removal of Douglas fir trees could remove

potential habitat for the species, and tree removal could adversely impact individual Sonoma tree voles. Each individual tree requiring trimming or removal would be assessed by the Project biologist in coordination with Caltrans construction personnel to see if the work can be performed without affecting the trees. Tree removal would be performed in a two-step process, allowing time for Sonoma tree voles (and bats) to relocate before tree removal. Tree removal from the Project could directly harm, injure, or kill Sonoma tree voles, and Project AMMs AMM-BIO-4, Biological Monitor; AMM-BIO-8, Noise Minimization; and AMM-BIO-14, Preconstruction Sonoma Tree Vole Surveys would reduce these impacts.

### *Northwestern Pond Turtle*

The Russian River and Pocket Canyon Creek provide suitable aquatic habitat for northwestern pond turtle in the BSA. These aquatic habitats have deep pools for foraging and large rocks and woody debris for basking. The area immediately surrounding Pocket Canyon Creek lacks suitable nesting habitat. Areas along the Russian River, in the BSA but outside of the Project limits, have open, friable soils suitable for northwestern pond turtle nesting. Construction activities such as vehicle operation, foot traffic, vegetation clearing, grubbing, ground disturbance, and removal and installation of new culverts could directly harm, injure, or kill northwestern pond turtle. Impacts could include reduced water quality from increased erosion and sedimentation. In addition, because suitable habitat is present in the Project footprint, and northwestern pond turtle have been observed near the BSA, AMM-BIO-6, Preconstruction Northwestern Pond Turtle Surveys, would be implemented to avoid potential impacts on northwestern pond turtle. The overall assessment of potential impacts, development of avoidance and minimization measures, and preliminary effects determination to this species was completed in coordination with USFWS through technical assistance (see Chapter 3, Coordination). The proposed Project may affect individual northwestern pond turtle but is not expected to affect the overall population and continued existence of this species.

### *Salmonids and Russian River Tule Perch*

Some suitable spawning and rearing conditions may exist in the BSA for all anadromous salmonids and Russian River tule perch. It is unlikely that any life stage of salmon, steelhead, or Russian River tule perch would be found in the BSA and Project culvert work areas during the proposed in-water work window, which would allow in-water work to occur between June 1 and October 31. Many culvert work locations in the BSA are ephemeral drainages, and work would be scheduled to occur under dry conditions when aquatic habitat is not present.

The proposed culvert replacements would not create or maintain an existing fish passage barrier, and the culverts associated with the Project are in most conditions inaccessible to anadromous fish. Grading, clearing, and grubbing at three culvert locations (PM 9.6, PM 10.5, PM 11.3), where the culverts empty onto the slope above the Russian River, could result in temporary indirect impacts to aquatic resources for these fish species. These impacts could include reduced water quality from increased erosion and sedimentation. The implementation of the biological resource AMMs

described at the end of this section are designed to limit these impacts to the maximum extent possible. Caltrans has concluded that this Project would have no effect on state or federally listed salmonids because no work activities that have effects would be reasonably certain to reach these species in the Russian River.

### *Bat Species*

Special-status bat species have potential to occur in the BSA, including western red bat (*Lasiurus blossevilli*), Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). The western red bat, Townsend's big-eared bat, and pallid bat are all California species of special concern (CDFW 2025). All three bat species are expected to roost, migrate through, or forage in riparian woodland and forest habitats present in the BSA. Potential project impacts include injury or mortality to bats from tree removal. In addition, vibration from ground disturbance could cause roosting individuals to flee from roosting sites near the Project footprint.

The following AMMs would be implemented to avoid and/or minimize potential impacts on bats: AMM-BIO-8, Noise Minimization; AMM-BIO-10, Preconstruction Bat Surveys; AMM-BIO-11, Two-Step Tree Removal; and AMM-BIO-12, Bat Protection.

### *Migratory and Nesting Birds*

Preliminary assessments estimate that approximately 52 trees may need to be removed to complete construction for the Project. The individual trees include redwoods, California bay laurels, oaks, and nonnative ornamental tree species. One strategy the Project would employ to avoid and minimize tree removal at culvert locations would be to relocate the culvert slightly along the existing roadside drainage ditches, where feasible, to avoid tree impacts. Tree removal, vegetation removal, and other Project construction activities have the potential to result in the take of nests, eggs, young, or individuals of protected migratory bird species. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to the abandonment of nests. Where possible, vegetation and tree removal activities would be performed outside the active bird nesting season from February 1 to September 30. When work occurs during nesting season, preconstruction surveys for nesting birds would be conducted. If a nesting bird is discovered, appropriate distance buffers would be applied to avoid Project work disrupting nesting until all birds have fledged. Implementation of the Project AMM-BIO-8, Noise Minimization, would avoid and/or minimize impacts on migratory and nesting birds, so that impacts would be less than significant.

**b) Less-than-Significant Impact**

### *Critical Habitat and Essential Fish Habitat*

The Russian River is designated critical habitat for California Coast Chinook salmon, California Central Coast distinct population segment steelhead, and Central California Coast coho salmon. Because the Russian River has historically supported coho and Chinook salmon, it is designated as essential fish habitat (EFH) under the Pacific Coast Salmonid Fisheries Management Plan. Construction activities at three culvert locations

(PM 9.6, PM 10.5, PM 11.3) on the slope above the Russian River could result in temporary indirect impacts to these sensitive natural communities identified for these fish species. The implementation of Project AMMs is designed to avoid these impacts to the maximum extent possible. Caltrans has concluded that this Project would have no effect on salmonid critical habitat or EFH because the adverse impacts of work activities are not likely to impact the Russian River.

### *Sensitive Vegetation Communities*

Big leaf maple forest and woodland (*Acer macrophyllum* Forest and Woodland Alliance) is a sensitive natural community with a State Rarity ranking of S3. This community consists of bigleaf maple as a dominant or co-dominant species, typically with white alder (*Alnus rhombifolia*), Douglas fir, valley oak (*Quercus lobata*), California bay, and coast redwood. This vegetation community occurs along the riparian corridor in the eastern edge of the BSA, approximately 600 feet east from Martinelli Road and just north of SR 116.

California bay forest and woodland (*Umbellularia californica* Forest and Woodland Alliance) is a sensitive natural community with a State Rarity ranking of S3. This alliance is characterized by its dominance of California bay in the canopy layer and is typically co-dominated by other trees, including bigleaf maple, Douglas fir, California buckeye, and coast redwood. California bay forest and woodland is among the most prevalent vegetation communities in the BSA and is widespread throughout the BSA.

Fremont cottonwood forest and woodland (*Populus fremontii – Fraxinus velutina – Salix gooddingii* Forest and Woodland Alliance) is classified with a State Rarity ranking of S3.2 and is considered a sensitive natural community. This vegetation community is typically characterized by Fremont cottonwood (*Populus fremontii*) as a dominant or co-dominant species and willow species, boxelder maple (*Acer negundo*), and Oregon ash as co-dominants or associated species. This vegetation community occurs in Guerneville, approximately 150 feet east of the Local Ish General Store, just south of SR 116.

Oregon ash groves (*Fraxinus latifolia* Forest and Woodland Alliance) have a State Rarity ranking of S3.2 and are classified as a sensitive natural community. They are commonly dominated or co-dominated by Oregon ash and intermixed with bigleaf maple, white alder, or California incense cedar (*Calocedrus decurrens*). In the BSA, Oregon ash is the dominant species in this community and intermixes with bigleaf maple, arroyo willow, red willow (*Salix laevigata*), and California bay. An Oregon ash grove occurs in two stands in a streamside riparian corridor: one stand is just north of and adjacent to Mays Canyon Road and west of SR 116; another stand is also adjacent to Mays Canyon Road to the south and west of SR 116.

Oregon white oak woodland and forest (*Quercus garryana* [*tree*] Forest and Woodland Alliance) has a State Rarity ranking of S3 and is considered a sensitive natural community. It is distinguished by the presence of Oregon white oak (*Quercus garryana*) as a dominant or co-dominant species and typically includes Douglas fir, Jeffrey pine (*Pinus jeffreyi*), coast live oak (*Quercus agrifolia*), and California black oak (*Quercus*

*kelloggii*) as associated or co-dominant species. Oregon white oak is the dominant tree in this community in the BSA, commonly intermixing with Douglas fir and California bay. Oregon white oak woodland and forest communities in the BSA occur in large stands mainly in the eastern side of the BSA; communities are approximately bound by Hidden Lake Road to the east and Skyline Ranch Road to the west.

Redwood forest and woodland (*Sequoia sempervirens* Forest and Woodland Alliance) has a State Rarity ranking of S3 and is classified as a sensitive natural community. It is among the most prominent woodland communities in the BSA. This vegetation community is most prevalent in the western area of the BSA, with occurrences scattered throughout the area. Redwood forest and woodlands are characterized primarily by the presence of coast redwood as a dominant or co-dominant species, commonly intermixing with grand fir (*Abies grandis*), bigleaf maple, Douglas fir, and red alder.

Tanoak forest (*Notholithocarpus densiflorus* Forest Alliance) has a State Rarity ranking of S3.2 and is listed as a sensitive natural community. Tanoak forest is defined by the prominence of tanoak as a dominant or co-dominant species, commonly with other trees such as bigleaf maple, oaks, California nutmeg (*Torreya californica*), and Douglas fir. Tanoak forest in the BSA typically includes tanoak as a dominant in the tree canopy, co-occurring with Douglas fir, coastal redwood, and California bay. This vegetation community occurs in two stands in the western area of the BSA in Monte Rio: one stand is between PM 8.5 and PM 8.6, just north of SR 116; another stand is about 110 feet southwest of PM 20.

Valley oak woodland and forest (*Quercus lobata* Woodland Alliance) has a State Rarity ranking of S3 and is therefore considered a sensitive natural community. Valley oak woodland and forest are commonly dominated by valley oak in the tree canopy, either as a dominant or co-dominant, and include associate species such as Jeffrey pine, ponderosa pine (*Pinus ponderosa*), and California bay. Stands mainly occur in the eastern edge of the BSA; however, this vegetation community intermixes intermittently throughout the BSA with Douglas fir – tanoak forest – madrone forest and woodland and Oregon white oak woodland and forest.

Slough sedge – water-parsley – small-fruited bulrush marsh (*Carex obnupta* – *Oenanthe sarmentosa* – *Scirpus microcarpus* Herbaceous Alliance) is found in one location in the BSA, in a small patch on the northwestern side of SR 116 at BSA-PM 18.88. Small-fruited bulrush (*Scirpus microcarpus*) is dominant in the herbaceous layer, co-occurring with other graminoids such as common velvet grass, spreading rush (*Juncus patens*), and creeping bentgrass (*Agrostis stolonifera*). This vegetation community occurs in freshwater to slightly brackish marshes and low-elevation valleys where soils are seasonally saturated. This vegetation community has a State Rarity ranking of S3 and is considered a sensitive natural community.

The BSA includes 3.474 acres of riparian forest habitat that is a sensitive natural community and considered vulnerable. The Project would result in 0.080 acre of temporary and <0.001 acre of permanent impacts to riparian forest habitat along intermittent riverine features and the Russian River, primarily due to necessary clearing

of vegetation around guard rail replacements, guard rail extensions, and replacement of culverts for construction and construction access. Permanent impacts to riparian habitat would be minimized as much as possible. Temporarily impacted riparian areas would be recontoured to match the re-established riparian corridor and revegetated with native plants where appropriate. Additional Project impacts to sensitive vegetation communities are due to replacement of guardrails and the addition of pavement for safety pullouts, and the clearing of vegetation around them for construction and access. Initial surveys indicate that many of the estimated 52 trees that need removal throughout the Project footprint are redwoods, California bay laurel, and oak species that constitute sensitive natural communities. Impacts to trees would be avoided and minimized to the maximum extent practicable during the later detailed design phase of the Project, following AMM-VIS-1. With the implementation of AMM-VIS-1 and AMM-BIO-1 to avoid and minimize potential impacts on sensitive natural plant and forest communities, there would be less-than-significant impacts to riparian forest and the sensitive natural plant and forest alliances described above.

**c) Less-than-Significant Impact with Mitigation Incorporated**

As stated in the NES and aquatic resource delineation, the Project would result in temporary impacts to wetlands and waters and a small area of permanent impact to other waters. This includes 0.003 acre of temporary impacts to perennial riverine habitat, 0.022 acre of temporary impacts to intermittent riverine habitat, 0.010 acre of temporary impacts to ephemeral riverine habitat, and 0.014 acre of temporary impact to wetland habitat due to construction activities for culvert replacements. Temporary impacts would include, but not be limited to, access to construction areas and temporarily dewatered areas; and grading, clearing, and grubbing of upland areas that could result in erosion and sedimentation. Permanent impacts are estimated to include 0.001 acre to intermittent riverine habitat and <0.001 acre to ephemeral riverine habitat due to culvert replacements. PFs that would protect aquatic resources include working in dry weather only, implementing water pollution control and erosion control BMPs to minimize any potential erosion and sedimentation entering waters or wetlands from upland areas, and restricting construction staging areas to locations in the Project footprint outside any designated ESA. With implementation of Project AMMs and proposed MM-BIO-1, the Project would result in less-than-significant impacts on protected wetlands and riverine habitats.

***Mitigation Measure***

**MM-BIO-1, Impacts to Wetlands.** Caltrans will mitigate for permanent impacts to aquatic resources at a ratio determined appropriate in coordination with the regulatory agencies with jurisdiction, which are anticipated to be USACE and RWQCB. The mitigation credit, in-lieu fee contribution, or mitigation site will be chosen in consultation with regulatory agencies with jurisdiction.

**c) Less-than-Significant Impact**

The BSA does contain suitable habitat for a migration corridor for terrestrial wildlife or wildlife with aquatic life stages. The Project does have the potential to affect movement

of wildlife if they are in the BSA during construction. Culverts are used by wildlife to cross under SR 116, and individual culvert locations will not be accessible to wildlife during culvert replacement work, temporarily reducing wildlife movement. The completion of the proposed Project may improve wildlife migration potential in areas where culverts are upsized. The proposed Project would therefore have a less-than-significant effect on movement of wildlife species.

**e) No Impact**

This Project would not conflict with any local policies or ordinances protecting biological resources. There would be no impact.

**f) No Impact**

This Project would not conflict with the provisions of an adopted Habitat Conservation Plan or other approved local, regional, or state habitat conservation plan. There would be no impact.

### 2.1.4.2 Avoidance and Minimization Measures for Biological Resources

AMM-BIO-1 through AMM-BIO-14 would avoid or minimize impacts to biological resources.

**AMM-BIO-1, Rare Plant Surveys and Rare Plant Salvage and Transplantation Plan.** During the spring season prior to construction, Caltrans will conduct focused preconstruction surveys for the rare plants identified as having potential to occur in the Project area. If found, the extent and abundance of the rare plants will be mapped and flagged in the field for future relocation, salvage, and transplantation. These surveys will be conducted three times—once during the season that the rare plants are detectable and in the correct phenological stage of development for correct identification (typically late spring), and again mid- and late-season. If a rare plant is identified in the Project area during the preconstruction survey, a rare plant transplantation plan will be prepared. The transplantation plan will be submitted to the regulatory agencies for approval prior to the beginning of construction. The rare plant salvage and transplantation plan will include salvage and replanting methods, success criteria, the establishment of photo points, and monitoring methods. The rare plant salvage and transplantation plan will be prepared and approved by the regulatory agencies prior to the beginning of construction.

**AMM-BIO-2, Preconstruction California Red-Legged Frog Surveys.** Preconstruction surveys for California red-legged frog will be conducted by the USFWS-approved biologist(s) no more than 24 hours prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal) beyond the existing pavement. These efforts will consist of walking surveys of the Project footprint, focusing on the wetland areas at the existing culvert intake and outfall and, if possible, on accessible adjacent areas of upland habitat within at least 50 feet of the Project footprint. The biologist(s) will investigate potential cover sites when it is feasible

and safe to do so. This includes a thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites in the project footprint will be documented and relocated to an adequate cover site in the vicinity. Safety permitting, the biologist(s) will investigate areas of disturbed soil for signs of frogs within 30 minutes following initial disturbance of the given area.

**AMM-BIO-3, Wildlife Exclusion Fencing (WEF).** Prior to the start of construction, WEF will be installed along the Project footprint in areas where California red-legged frog could enter the Project site. The WEF location will be surveyed and included on the Project plans. The final Project plans will show where and how the WEF will be installed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and proper WEF installation and maintenance. The WEF will remain in place throughout the duration of the Project and will be regularly inspected and maintained.

**AMM-BIO-4, Biological Monitor.** The USFWS-approved biologist will appoint a biological monitor (e.g., the crew foreman) who will be responsible for ensuring that all crew members comply with permit guidelines. Environmental training will be conducted for new personnel before they can participate in construction activities. The approved biologist will notify the resident engineer, who will address any work stoppage, and the USFWS will be contacted if a California red-legged frog is encountered during Project activities.

**AMM-BIO-5, Protocol for Species Reporting.** If a California red-legged frog is encountered in the immediate work area, the following procedures will be followed:

a. If a California red-legged frog is discovered during surveys or proposed work activities, the resident engineer and USFWS-approved biologist(s) will be immediately informed. If a California red-legged frog gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the construction zone.

b. The USFWS-approved biologist(s) will have the authority to halt work through coordination with the resident engineer if a California red-legged frog is discovered in the Project footprint. The resident engineer will ensure construction activities remain suspended in any construction area where the qualified biologist(s) has determined that a potential take of the California red-legged frog could occur. Work will resume once the animal leaves the site voluntarily, or it is determined that the California red-legged frog is not being harassed by construction activities.

c. Caltrans will submit post-construction compliance reports prepared by the biologist to USFWS within 60 calendar days following completion of Project activities or within 60 calendar days of any break in construction activity lasting more than 60 calendar days. This report will detail (1) dates that relevant Project activities occurred; (2) pertinent information concerning the success of the

Project in implementing avoidance and minimization measures for listed species; (3) an explanation of failure to meet such measures, if any; (4) known Project effects on the California red-legged frog, if any; (5) documentation of employee environmental education; and (6) other pertinent information.

**AMM-BIO-6, Preconstruction Northwestern Pond Turtle Surveys.** An approved biologist will conduct preconstruction surveys for northwestern pond turtle, as needed. A visual encounter survey will be conducted immediately before ground-disturbing activities. Suitable habitat in the Project footprint will be visually inspected. If northwestern pond turtle is found in the Project footprint and at risk of harm, then it will be relocated outside of the Project footprint by the approved biologist.

**AMM-BIO-7, Preconstruction Northern Spotted Owl Surveys.** To ensure that potential impact effects on northern spotted owl are avoided and/or minimized, a preconstruction survey will be conducted during the northern spotted owl breeding season in areas of potential northern spotted owl habitat within a 330-foot visual line of sight from the Project work sites. The focus of the survey should be on the detection of the species and potential active nest sites that could be affected by the proposed Project. If an active nest is found in the survey area, the start of construction will be delayed, and it will be monitored by a USFWS-approved biologist to document when the young have left the nest and construction can start.

**AMM-BIO-8, Noise Minimization.** To minimize noise generated from the proposed Project to the degree possible, all construction equipment, fixed or mobile, will be fitted with properly operating and maintained mufflers, consistent with manufacturers' standards.

**AMM-BIO-9: Avoidance of Night Work in Northern Spotted Owl Habitat.** No night work will be conducted in Project locations in suitable northern spotted owl habitat, to minimize impacts of construction related noise and lighting on northern spotted owl.

**AMM-BIO-10, Preconstruction Bat Survey.** If clearing and grubbing occurs between May 1 and September 1, an agency-approved bat biologist will conduct visual and acoustic bat surveys for roosting, or evidence of roosting. The bat biologist will visually inspect tree foliage, bark, cavities, and any other structures that could provide roosting habitat for bats. If a maternity colony is discovered, construction activity, including tree removal and vegetation trimming, will cease within 100 feet of the colony, and Caltrans will coordinate with CDFW for technical assistance.

**AMM-BIO-11, Two-Step Tree Removal.** Trees will be removed by a two-step process. On the first day, in the afternoon, limbs and branches are removed by a tree cutter using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures are avoided, and only branches or limbs without those features are removed. On the second day, the entire tree would be removed. This two-step process allows bats to relocate during nocturnal movements to minimize take of bats and minimize potential disturbance to roosting habitat. If bats are observed during preconstruction surveys, ESA fencing will be installed to protect the roosting trees before construction begins,

and the Project biologist will coordinate with USFWS and/or CDFW for technical assistance.

**AMM-BIO-12. Bat Protection** – A habitat assessment would be conducted for potentially suitable bat roosting habitat prior to construction activities. If the habitat assessment reveals that any structures are suitable roosting habitat for bats, then the appropriate exclusionary measures would be implemented prior to construction during the period from March 1 to April 15 or August 31 to October 15. Potential avoidance may include exclusionary blocking or filling potential cavities with foam, visual monitoring, and/or staging Project work to avoid bats. If bats are known to use Project work sites for roosting, then exclusion netting would not be used.

If the habitat assessment reveals suitable bat habitat in trees, and tree removal is scheduled from April 16 through August 30 and/or October 16 through February 28, then presence/absence surveys would be conducted 2 to 3 days prior to any tree removal or trimming. If presence/absence surveys are negative, then tree removal would proceed following a two-phase tree removal system. If presence/absence surveys indicate bat occupancy, then the occupied trees would only be removed from March 1 through April 15 and/or August 31 through October 15 by following the two-step tree removal system. Bats would not be disturbed without specific notice to, and consultation with, CDFW.

**AMM-BIO-13. Prevent Inadvertent Entrapment** – To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1 foot deep would be covered at the close of each workday 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 would be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project area overnight would be inspected before they are subsequently moved, capped, or buried.

**AMM-BIO-14. Preconstruction Sonoma Tree Vole Surveys.** An approved biologist will conduct preconstruction surveys for Sonoma tree vole, as needed. A visual encounter survey will be conducted immediately before tree removal or ground-disturbing activities. Suitable habitat in the Project footprint will be visually inspected.

## 2.1.5 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? | No Impact |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | No Impact |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | No Impact |

### 2.1.5.1 CEQA Significance Determinations for Cultural Resources

Caltrans District 4 Office of Cultural Resource Studies prepared a Section 106 Closeout Memo for the proposed Project (Caltrans 2025b).

In accordance with Section 106 Programmatic Agreement Stipulation VIII.A, the area of potential effect (APE) for the Project was established in consultation with Caltrans' Professionally Qualified Staff and the Project Manager on June 27, 2025. Caltrans requested a review of the Sacred Lands File (SLF) and contact list from the NAHC on April 4, 2025. The NAHC responded on April 7, 2025, that a search of the SLF was negative and provided a list of indigenous groups and individuals for additional consultation. Consultation was initiated under the Section 106 Programmatic Agreement, and pursuant to Assembly Bill (AB) 52 and CEQA, with letters sent on June 13, 2025, to the following groups: Cloverdale Rancheria of Pomo Indians, Dry Creek Rancheria of Pomo Indians, Federated Indians of Graton Rancheria, Guidiville Rancheria of California, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Lytton Rancheria and Pinoleville Pomo Nation. On June 23, 2025, Lytton Rancheria responded, requesting additional information to inform a consultation decision. A cultural resource fact sheet was provided to Lytton Rancheria on July 7, 2025. On July 11, 2025, Lytton Rancheria responded by deferring consultation to other interested Tribes and requesting notification if any TCRs are identified during the Project. Follow-up calls to Cloverdale Rancheria of Pomo Indians, Dry Creek Rancheria of Pomo Indians, Guidiville Rancheria of California, and Pinoleville Pomo Nation were conducted on June 27, 2025. No responses have been received to date.

The Kashia Band of Pomo Indians of the Stewarts Point Rancheria responded on June 17, 2025, requesting formal consultation under Section 106/AB 52. A field visit to the APE was conducted with Kashia on August 13, 2025. During that field visit and follow up email on August 14, 2025, monitoring for ground disturbance was requested and Tribal monitoring areas were established.

On July 30, 2025, the Federated Indians of the Graton Rancheria (FIGR) responded, requesting formal consultation under Section 106 and AB 52. A cultural resource fact sheet was provided to FIGR on July 7, 2025. On August 18, 2025, a virtual consultation meeting was held, where the Tribe requested to review the Historic Property Survey Report, additional desktop and field survey information, and staging and pullout locations. On October 27, 2025, the draft Historic Property Survey Report, containing the information requested by FIGR regarding the staging and pullout location of work, was sent for review and comment. No response from FIGR has been received to date, and consultation is ongoing.

**a, b, and c) No Impact**

Although there are no known historical or archaeological resources or human remains previously identified in the Project's APE, Caltrans Office of Cultural Resource Studies would educate the contractor and review, consult, and monitor as detailed in

AMM-TCR-1 and AMM-TCR-2 (Section 2.1.18 and Appendix B). Therefore, there is no impact.

## 2.1.6 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? | Less-than-Significant Impact |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | No Impact |

### 2.1.6.1 CEQA Significance Determinations for Energy

The following paragraphs summarize the results of the Construction-Related Energy Analysis, which was completed in April 2025 (Caltrans 2025c).

Activities that consume energy generate byproducts. GHGs are the most extensively studied by products of energy consumption and are linked to climate change. To assess energy consumed by construction vehicles and equipment, the Caltrans Construction Emissions Tool 2021 (CAL-CET 2021), version 1.0.3, was used to quantify carbon dioxide ($CO_2$) emissions. $CO_2$ is the dominant GHG from automotive sources. The United States. Environmental Protection Agency's GHG equivalencies formulas were used to convert $CO_2$ emissions to fuel volumes. It was assumed that diesel fuel would be used for all construction vehicles and equipment, and gasoline and electricity would be used for worker commutes. The estimated fuel consumption of construction vehicles and equipment as well as worker commute vehicles is shown in Table 14.

**Table 14 Construction Equipment and Vehicles Fuel Consumption**

| | Diesel (gallons) | Gasoline (gallons) | Electricity (kWh) |
|---|---|---|---|
| Total | 31,936 | 9,585 | 9,118.668 |

Note:
kWh = kilowatt hour

#### a) Less-than-Significant Impact

During Project construction, operation of heavy-duty equipment, material deliveries, and debris hauling would require diesel consumption, and construction worker commutes to the Project site would require gasoline and electricity. Diesel, gasoline, and electricity use for construction is a one-time, temporary commitment of energy, necessary for any infrastructure improvement project. PF-AQ-1 (Section 1.2.2.7) would minimize energy consumption from construction activities. Therefore, Project construction would not

result in the inefficient, wasteful, or unnecessary consumption of energy. This impact would be less than significant.

The Project is limited to pavement rehabilitation and culvert repair and would not increase the capacity of SR 116 or other roads in the Project area. There would be no permanent increase in motor vehicle travel or operational energy use. By repairing the pavement, the Project is anticipated to reduce future maintenance needs. The Project would have no long-term effect on energy use.

**b) No Impact**

The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Pavement rehabilitation and culvert repair would have no impact on state or local plans for renewable energy or energy efficiency.

## 2.1.7 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:<br>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | No Impact |
| ii) Strong seismic ground shaking? | No Impact |
| iii) Seismic-related ground failure, including liquefaction? | No Impact |
| iv) Landslides? | No Impact |
| b) Result in substantial soil erosion or the loss of topsoil? | No Impact |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | No Impact |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | No Impact |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? | No Impact |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | No Impact |

### 2.1.7.1 CEQA Significance Determinations for Geology and Soils

The Office of Geotechnical Design prepared a memorandum on their geologic, palaeontologic, and seismologic impact evaluation (Caltrans 2025d).

**a – f) No Impact**

Although the Project area traverses three main geologic units—Franciscan Complex, Sandstone, and Wilson Grove Formation—the minor excavation would be in previously disturbed ground and would not expose the public to hazards due to strong ground shaking, fault rupture, liquefaction, slope instability, soft soils, or expansive soils. Any vertical foundation elements would be augured and may encounter native ground. However, the nature of the excavation would destroy the stratigraphic context of any significant finds. Seismicity of the Project area is dominated by the San Andreas fault, which runs offshore west of the Project site, and strong ground shaking could be expected during the life of the Project. However, there would be no impact associated with Project activities.

## 2.1.8 Greenhouse Gas Emissions

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? | Less-than-Significant Impact |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs? | No Impact |

### 2.1.8.1 CEQA Significance Determinations for Greenhouse Gas Emissions

The following paragraphs summarize the results from the Construction-Related GHG Emission analysis, which was completed in July, 2025 (Caltrans 2025e).

**a) Less-than-Significant Impact**

The Project would not increase the motor vehicle capacity of SR 116. Therefore, the Project would not affect travel demand or travel patterns in a way that would contribute to a long-term increase in GHG emissions.

Project construction would result in temporary GHG emissions. Construction-generated GHGs include emissions from onsite construction equipment and worker and vendor vehicle trips. Construction-related GHG emissions were calculated using CAL-CET 2021 v1.0.3. GHG emissions considered Iin the calculation include $CO_2$, which is the dominant GHG due to its abundance when compared to other vehicle-emitted GHG (methane, nitrogen oxide, and hydrofluorocarbon); and carbon dioxide equivalents ($CO_2e$), a measure of how much energy the emissions of 1 ton of a gas would absorb

over a given time, relative to the emissions of 1 ton of $CO_2$. Construction-related GHG emissions are summarized in Table 15.

**Table 15 Summary of Construction-Related Greenhouse Gas Emissions**

| | $CO_2$ (tons) | $CH_4$ (tons) | $N_2O$ (tons) | HFC (tons) | Total $CO_2e$[1] (metric tons) |
|---|---|---|---|---|---|
| Total Emissions | 455 | 0.010 | 0.023 | 0.011 | 467 |

Notes:

[1] Gases are converted to $CO_2e$ by multiplying by their GWP. Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas would absorb over a given period of time, relative to the emissions of 1 ton of $CO_2$.

$CH_4$ = methane
$CO_2$ = carbon dioxide
$CO_2e$ = carbon dioxide equivalent
GWP = global warming potential
HFC = hydrofluorocarbons
$N_2O$ = nitrous oxide

Source: Caltrans 2025e.

GHG emissions during construction would be temporary, and the emission reduction measures included in PF-AQ-1 (Section 1.2.2.7) would limit unnecessary GHG emissions to the extent feasible. Because the Project would not contribute to a long-term change in GHG emissions, and the GHG reduction measures would be implemented during construction, the impact 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, ABs, 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 and the Metropolitan Transportation Commission 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 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.

## 2.1.9 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? | 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? | 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? | Less-than-Significant Impact |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | No Impact |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two nautical miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | No Impact |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Less-than-Significant Impact |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | No Impact |

### 2.1.9.1 CEQA Significance for Hazards and Hazardous Materials

The Caltrans Office of Hazardous Waste provided a preliminary study of frequently encountered contaminants, waste streams, and construction-related hazards (Caltrans 2026c). Investigation of these routine issues, when required, is typically conducted during the Project design phase. SSPs have been developed for the proper handling, treatment, and disposal, if needed, of such routine hazardous materials and waste during construction to protect the health of workers, the public, and the environment. Typical issues included in the preliminary study include aerially deposited lead, yellow thermoplastic or yellow-painted traffic stripe, naturally occurring asbestos, lead-containing paint, asbestos-containing materials, treated wood waste, and electrical equipment.

#### a, b, c) Less-than-Significant impact

Typical contaminants or hazards may be encountered during construction, but would be appropriately handled, treated, and disposed of (if required) with implementation of Caltrans Standard Specifications and Special Provisions. No adverse impacts to human

health or the environment are expected. Therefore, there would be less-than-significant impacts.

**d, e) No Impact**

Because the Project is not listed pursuant to Government Code Section 65962.5, nor within 2 miles of an airport, there would be no impact to the public or environment.

**f) Less-than-Significant Impact**

The Project would have lane closures and one-way traffic control, which could temporarily slow emergency response services. However, there would be no complete closures and, with traffic control implemented, the impact should be less than significant.

**g) No Impact**

The Project does not have permanent components that would expose people or structures to risk of loss, injury, or death involving wildland fires; therefore, there would be no impact.

## 2.1.10 Hydrology and Water Quality

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | No Impact |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | No Impact |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:<br>(i) result in substantial erosion or siltation on- or off-site; | No Impact |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | No Impact |
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | No Impact |
| (iv) impede or redirect flood flows? | No Impact |

| Question | CEQA Determination |
|---|---|
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | Less-than-Significant Impact |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | No Impact |

### 2.1.10.1 CEQA Significance Determinations for Hydrology and Water Quality

The Caltrans District 4 Office of Water Quality and the District 6 Office of Hydraulics Engineering both prepared studies (Caltrans 2025f and Caltrans 2025g) that were consulted for this review. The disturbed soil area is greater than 1 acre, so coverage under the Construction General Permit is required. This requires implementation of a SWPPP during the construction phase to address the temporary water quality impacts resulting from the construction activities. The Project is anticipated to require post-construction stormwater treatment measures for the new impervious surfaces. Measures that are to be considered for this Project would be detailed during the design phase.

**a) and e) No Impact**

With implementation of standard water pollution control BMPs, PF-HYD-1, and PF-HYD-2, 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.

**b) No Impact**

Water would be used temporarily during construction, potentially at staging area entrances and exits. Water for construction-related activities would be brought in by the contractor via water trucks, and groundwater would not be used. Therefore, the Project would not affect groundwater supplies or groundwater recharge areas and there would be no impact.

**c) i, ii, iii, iv) No Impact**

The Project would not alter the drainage pattern, and no permanent increases in erosion or siltation are anticipated. Implementation of BMPs to control water pollution under PF-HYD-1 and a SWPPP under PF-HYD-2 would minimize temporary, construction-related erosion, siltation, and the discharge of polluted runoff on or off site. Construction of the Project would result in 0.69 acre of new impervious surface, the Project; however, with treatment BMPs installed, there would be no increase in permanent runoff, and therefore no impact.

**d) Less-than-Significant Impact**

This Project is not in a tsunami or seiche zone. Although some shoulder widening and sidewalk installations are included in the proposed Project, the work is minor and is not expected to impact the floodplain. Therefore, this Project would not contribute to pollutants due to inundation beyond what already transpires during normal rainfall, and the effects would be less than significant.

## 2.1.11 Land Use and Planning

Would the Project:

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

### 2.1.11.1 CEQA Significance Determinations for Land Use and Planning

The Project is in the Russian River, Sebastopol, and Environs Planning Areas of the Sonoma County General Plan (Sonoma County 2016).

**a and b) No Impact**

The Project would not physically divide an established community. It complies with the stated goals of the Sonoma County General Plan, including goals for the land use element and the circulation and transit element (Sonoma County 2016). Therefore, there would be no impact.

## 2.1.12 Mineral Resources

Would the Project:

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

### 2.1.12.1 CEQA Significance Determinations for Mineral Resources

The California Geological Survey designates the Project as occurring in mineral resource zone (MRZ) Categories 1, 2, and 3. The three zones present on this Project are defined as follows (Miller and Busch 2013):

- MRZ-1 (No Significance): Geologic information shows little likelihood of significant deposits.
- MRZ-2 (Identified Resources): Contains significant mineral deposits, further divided by data quality (MRZ-2a/2b).
- MRZ-4 (Unknown): These are areas of no known mineral occurrences, where geologic information does not rule out either the presence or absence of significant mineral resources.

On this Project, MRZ-2 identifies the Canyon and Blue Rock Quarries.

**a, b) No Impact**

Construction-related activities are limited to previously disturbed areas; are not expected to disturb mineral resources, if present; and would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site. Therefore, no impact would occur.

## 2.1.13 Noise

Would the Project result in:

| Question | CEQA Determination |
|---|---|
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | Less-than-Significant Impact |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | Less-than-Significant Impact |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two nautical miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | No Impact |

### 2.1.13.1 CEQA Significance Determinations for Noise

The information in this section is summarized from the construction-related noise analysis and the construction-related vibration analysis (Caltrans 2025h and Caltrans

2025i). Because the Project is not a Type I project as defined in 23 CFR 772, noise abatement does not need to be considered. Accordingly, a traffic noise study is not required.

**a) Less-than-Significant Impact**

The proposed Project would not increase the capacity of SR 116 and would not result in a permanent increase in ambient noise levels in the Project vicinity. Project construction would result in short-term, temporary increases in noise levels.

Caltrans used the Federal Highway Administration Roadway Construction Noise Model to assess potential construction noise impacts from the loudest anticipated Project activities: pavement rehabilitation, upgrading sidewalks and curb ramps, and culvert replacement and repair. The study measured the maximum hourly noise levels ($L_{max}$) and the average hourly noise levels ($L_{eq}$) that receptors could hypothetically experience at 50 feet, 100 feet, and 200 feet from each construction activity. The study also estimated the construction noise for a mix of residential and commercial properties and a school. Table 16 summarizes the construction noise estimates for locations R1 through R9, as well as the general distances of 50, 100, and 200 feet (represented by hypothetical receptor in Table 16). Figure 4 through Figure 6 show aerial photographs and identify the individual noise study areas and receptors presented in Table 16.

Project construction would result in elevated noise levels and result in temporary adverse impacts, primarily during daytime work hours. Some residents and businesses may experience a maximum of 103.5 A-weighted decibels (dBA) during the day when the loudest construction activities occur. These noise levels would be temporary. Residents or businesses that are 50 feet or more away from the construction activities are not expected to experience noise levels above 89.5 dBA.

There would also be some nighttime construction necessary for this Project. The specific timing, duration, and locations of the nighttime construction activities would be determined during the detailed design and preconstruction phases. Caltrans's standard for temporary construction noise impacts is to not exceed an $L_{max}$ of 86 dBA at 50 feet from the construction site during night work from 9:00 p.m. to 6:00 a.m. The Project would implement AMM-NOI-1, requiring the contractor to develop a plan that is approved by Caltrans to ensure construction noise impacts are not exceeded during this time, and this noise control plan would be reinforced with required noise monitoring.

AMM-NOI-1 also requires the contractor to develop a plan that is approved by Caltrans to ensure construction noise impacts are minimized during the daytime and not exceeded during night work, including minimizing noise experienced in the interior of the school that preliminary modeling indicates may exceed limits established by California Streets and Highway Code, Section 216 (Table 16).

With the implementation of AMM-NOI-1 (below, Appendix B) the increase in ambient noise resulting from the proposed Project would be reduced to less than significant.

## Table 16 Summary Construction Noise Results from Roadway Construction Noise Model

| Map Label | Address | Receptor Distance (feet) | Pavement Rehab $L_{max}$ (dBA) | Pavement Rehab $L_{eq}$ (dBA) | Curb Ramps and Sidewalk $L_{max}$ (dBA) | Curb Ramps and Sidewalk $L_{eq}$ (dBA) | Culvert Work $L_{max}$ (dBA) | Culvert Work $L_{eq}$ (dBA) |
|---|---|---|---|---|---|---|---|---|
| R1 | 20359 CA-116, Monte Rio | 12 | 101.9 | 94.9 | 102 | 95 | 97.4 | 94.4 |
| R2 | Inn on the Russian River | 25 | 95.5 | 88.9 | 95.6 | 88.6 | 91 | 88 |
| R3 | 20385 CA-116, Monte Rio | 17 | 98.9 | 91.9 | 99 | 92 | 94.4 | 91.4 |
| R4 | 20266 CA-116, Monte Rio | 10 | 103.5 | 96.5 | 94.9 | 71.9 | 99 | 96 |
| R5 | Casa Secoya | 42 | 91 | 84 | 91 | 84 | 86.5 | 83.5 |
| R6 | 17532 CA-116, Monte Rio | 12 | 101.9 | 94.9 | 101.9 | 94.9 | 97.4 | 94.4 |
| R7 | Leslie McGarvey DDS, Inc | 35 | 92.6 | 85.6 | 92.6 | 85.6 | 88.1 | 85.1 |
| R8 | Saucy Mama's Restaurant | 16 | 99.4 | 92.4 | 99.4 | 92.4 | 94.6 | 91.9 |
| R9 | Playhouse preschool – exterior | 51 | 89.3 | 82.3 | 89.3 | 82.3 | 84.8 | 81.8 |
| R9 | Playhouse preschool – interior | 51 | **69.3** | **62.3** | **69.3** | **62.3** | **64.8** | **61.8** |
| — | Hypothetical receptor at 50 feet | 50 | 89.5 | 82.5 | 89.5 | 82.5 | 85 | 82 |
| — | Hypothetical receptor at 100 feet | 100 | 83.5 | 76.5 | 83.5 | 76.5 | 79 | 76 |
| — | Hypothetical receptor at 200 feet | 200 | 77.5 | 70.5 | 77.5 | 70.5 | 73 | 69.9 |

Notes:

**Bold** underline indicates locations and readings exceeding 86 dBA.

dBA = A-weighted decibel
$L_{eq}$ = average hourly noise level
$L_{max}$ = maximum hourly noise level

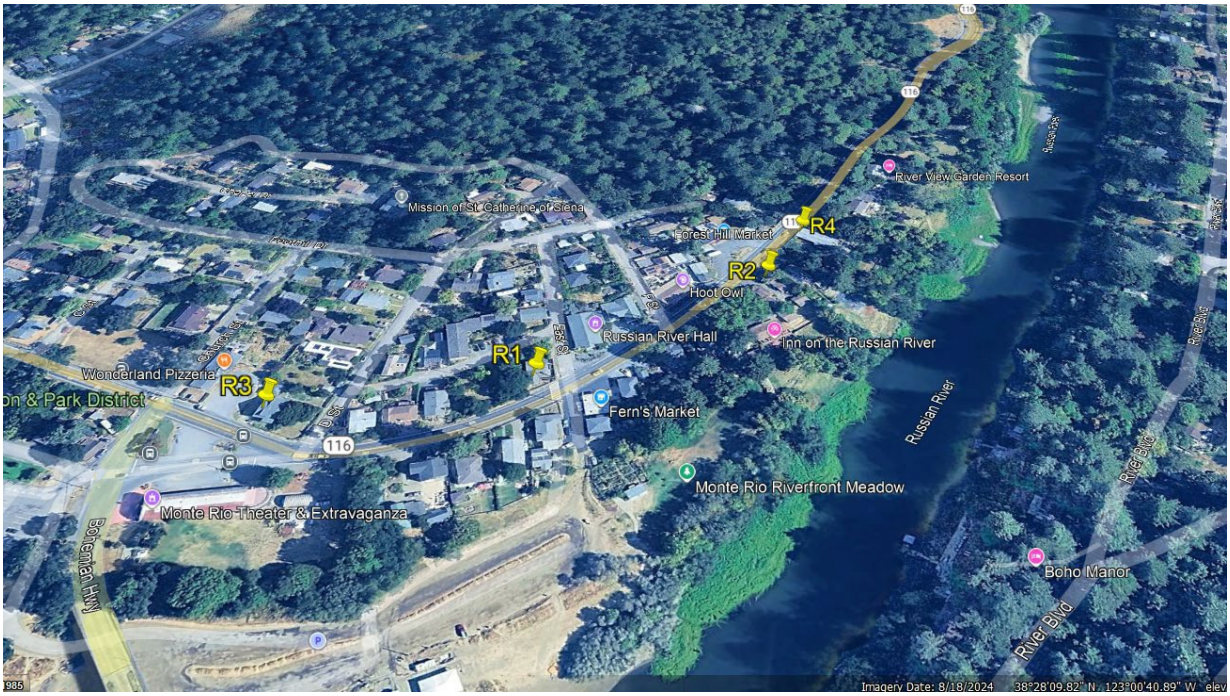



**Figure 4 Noise Receptors 1 through 4**




**Figure 5 Noise Receptors 5 through 8**




**Figure 6 Noise Receptor 9**

### b) Less-than-Significant Impact

The Project would not result in long-term excessive groundborne vibration or groundborne noise because it would not increase road capacity or include features that would generate appreciable ground vibration. No permanent impacts would occur.

Project construction has the potential to temporarily generate groundborne vibration in the vicinity of residences. The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2020) provides guidance criteria for potential structural damage and human annoyance. Table 17 and Table 18 present the criteria considered for the proposed Project. Vibration sources anticipated to be used during Project construction include vibratory rollers, which compact the new pavement.

**Table 17 Guideline Vibration Damage Potential Threshold Criteria**

| Structure and Condition | Continuous Sources Maximum PPV (in/sec) |
|---|---|
| Older residential structures | 0.3 |
| Modern industrial/commercial buildings | 0.5 |

Notes:
in/sec = inches per second
PPV = peak particle velocity

**Table 18 Guideline Vibration Annoyance Potential Criteria**

| Human Response | Continuous Sources Maximum PPV (in/sec) |
|---|---|
| Barely perceptible | 0.01 |
| Distinctly perceptible | 0.04 |
| Strongly perceptible | 0.10 |
| Severe | 0.4 |

Notes:
in/sec = inches per second
PPV = peak particle velocity

Because there were several residential and commercial properties very close to SR 116 within the Project limits, the entire Project area was divided into seven sub areas where there are structures that may exceed the threshold criteria for potential vibration damage (Figure 7 through Figure 13). Vibrations due to vibratory rollers (peak particle velocity, inches per second [in/sec]) were also calculated for hypothetical distances at 10, 12, 25, 50, and 100 feet.

## Receptor Maps




**Figure 7 Vibration Study Area A1**




**Figure 8 Vibration Study Area A2**




**Figure 9 Vibration Study Area A3**




**Figure 10 Vibration Study Area A4**




**Figure 11 Vibration Study Area A5**

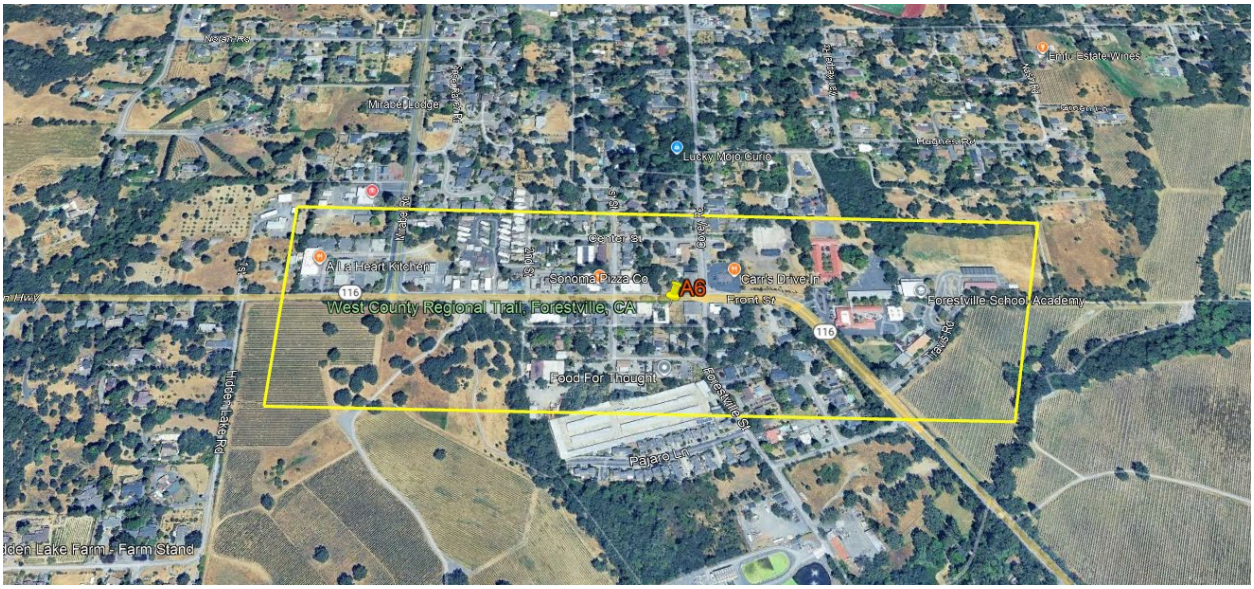



**Figure 12 Vibration Study Area A6**




**Figure 13 Vibration Study Area A7**

**Table 19 Summary of Representative Structures and Vibration Sources**

| Receptor Areas | Approximate Distance between the Nearest Structure and the Construction Activity (feet) | Vibration Due to Vibratory Roller (PPV, in/sec) | Vibration Damage Potential Threshold Criteria PPV (in/sec) (From Table 17) | Vibration Annoyance Potential Criteria PPV (in/sec) (From Table 18) |
|---|---|---|---|---|
| **A1** | 5- O R | **1.233** | 0.3 | S |
| **A1** | 5-C | **1.233** | 0.5 | S |
| **A2** | 12-O R | **0.471** | 0.3 | S |
| **A3** | 8-O R | **0.735** | 0.3 | S |
| **A3** | 7-C | **0.852** | 0.5 | S |
| **A4** | 7-C | **0.852** | 0.5 | S |
| **A5** | 10- C | **0.575** | 0.5 | S |
| **A6** | 13- O R | **0.431** | 0.3 | S |
| **A6** | 5-C | **1.233** | 0.5 | S |
| **A7** | 18- O R | **0.301** | 0.5 | S |
| **A7** | 13-C | **0.431** | 0.5 | S |
| **Hypothetical** | 10 | 0.575 | N/A | S |
| **Hypothetical** | 12 | 0.471 | N/A | S |
| **Hypothetical** | 25 | 0.210 | N/A | SP |
| **Hypothetical** | 50 | 0.098 | N/A | SP |
| **Hypothetical** | 100 | 0.046 | N/A | DP |

Note:

**Bold underline** indicates vibration levels exceeding the vibration damage potential threshold criteria.

Notes:

in/sec = inches per second
PPV = peak particle velocity

Large vibratory rollers are represented in the data presented in Table 19 to estimate a maximum potential impact during construction. When construction equipment that produces groundborne vibration is working adjacent to structures, cracks and other damage to the structures can occur. The values in Table 19 are used as estimates and are not exact thresholds that predict actual damage to structures and buildings in all cases (Caltrans 2020). According to the threshold estimates in Table 19, for structures that are up to18 feet away from the vibratory operation, vibrations greater than the damage threshold criteria of 0.50 in/sec would be experienced by new residential and commercial buildings, and vibrations greater than the damage threshold criteria of 0.30 in/sec would be experienced by older residential structures.

Caltrans would implement AMM-NOI-2 (below, and Appendix B) to require construction vibration control; the construction contractor would be required to submit a plan to Caltrans for approval prior to start of construction, detailing how groundborne vibration near sensitive receptors would be avoided and minimized to below the thresholds of damage and annoyance. The contractor would be required to perform vibration monitoring, crack monitoring, and photographic and video documentation during construction for any activity that may increase groundborne vibration, such as use of a vibratory roller to compact pavement. If vibration monitoring results in measurements that indicate the damage threshold may be exceeded, then work would be halted, and vibration control measures detailed in the approved plan would be implemented. Common options used by contractors to reduce groundborne vibrations include the use of smaller vibratory rollers that minimize vibration, and of nonvibratory rollers that compact pavement without producing measurable vibrations.

Depending on their location, people in the Project vicinity could experience annoyance from construction vibration (Table 19). AMM-NOI-2 would avoid and minimize the potential for vibration impacts from Project construction to reach levels that would cause annoyance. Under AMM-NOI-2, Caltrans would require the construction contractor to avoid construction vibrations exceeding the thresholds of damage and annoyance to sensitive receptors by monitoring vibrations, monitoring cracks, and stopping work if thresholds are exceeded.

Impacts associated with the generation of excessive groundborne noise or groundborne vibration from the proposed Project would be reduced to less than significant with the implementation of AMM-NOI-1 and AMM-NOI-2.

**c) No Impact**

There are no airports or private airstrips within a 2-mile vicinity of the Project footprint. There would be no impact.

### 2.1.13.2 Avoidance and Minimization Measures for Noise

AMM-NOI-1 and AMM-NOI-2 would avoid or minimize impacts to noise and vibration.

**AMM-NOI-1, Noise Control and Noise Monitoring.** Noise control and noise monitoring will be required during construction to avoid and minimize construction noise. The contractor will be required to submit a Noise Control Plan to Caltrans for approval to demonstrate compliance with construction noise limits, which require the contractor to limit construction noise levels to 86 dBA $L_{max}$ from 9:00 p.m. to 6:00 a.m. The contractor must also comply with California Streets and Highway Code, Section 216, which requires interior noise not to exceed 52 dBA $L_{eq}$ in classrooms, library, multipurpose rooms, medical facilities, places of worship, or spaces used for pupil personnel services. Compliance with noise control will be aided by required noise monitoring.

**AMM-NOI-2, Vibration Control and Crack Monitoring.** Vibration control, vibration monitoring, crack monitoring, and photo and video documentation will be required

during construction to avoid and minimize the impacts from groundborne vibration. The contractor will be required to submit a Vibration Control Plan to Caltrans for approval prior to the start of construction activities. It must identify specific sensitive receptors, such as older residential structures, and specific plans for reducing vibration to stay under damage and/or annoyance thresholds. Monitoring will be required for any activity that may increase groundborne vibration, such as use of a vibratory roller to compact pavement. The contactor will be required to halt construction if monitoring demonstrates that thresholds may be exceeded and must implement approved measures to avoid or minimize vibrations prior to restarting.

## 2.1.14 Population and Housing

Would the Project:

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

### 2.1.14.1 CEQA Significance Determinations for Population and Housing

The Office of Environmental Analysis reviewed this subject matter. Its determinations are discussed in the following paragraph.

**a, 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.

## 2.1.15 Public Services

Would the Project:

| Question | CEQA Determination |
|---|---|
| Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:<br>a) Fire protection? | No Impact |
| b) Police protection? | No Impact |
| c) Schools? | No Impact |
| d) Parks? | No Impact |
| e) Other public facilities? | No Impact |

### 2.1.15.1 CEQA Significance Determinations for Public Services

**a, b, c, d, and e) No Impact**

The Project would not result in the substantial alteration of government facilities in the Project corridor, 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. A TMP would be prepared (PF-TRANS-1, as presented in Section 1.2.2.7). Therefore, police, fire, and medical services would not be adversely affected by the proposed Project. There would be no impact.

## 2.1.16 Recreation

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

### 2.1.16.1 CEQA Significance Determinations for Recreation

There are several small recreational facilities along the Project limits, mostly in the towns of Monte Rio, Guerneville, and Forestville.

**a and b) No Impact**

The Project would not directly or indirectly increase use of existing recreational facilities to the extent that substantial deterioration of the facilities would occur. Although the Project does include the resurfacing of the West County Rodota Trails, it would not require the construction or expansion of additional recreational facilities. There would be no impact.

## 2.1.17 Transportation

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | No Impact |
| b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | No Impact |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | No Impact |
| d) Result in inadequate emergency access? | Less-than-Significant Impact |

### 2.1.17.1 CEQA Significance Determinations for Transportation

SR 116 is a two-lane conventional highway that serves as a primary route for communities, tourism, and agricultural areas along the Russian River Valley. The existing SR 116 roadway consists of two 11-foot-wide to 12-foot-wide lanes, with shoulders ranging from 1 foot to 8 feet wide depending on location. The Project would not increase the transportation capacity of SR 116, nor would it permanently alter the circulation system, and it would have no temporary or permanent impact on vehicle miles traveled.

**a, b, and c) No Impact**

This Project proposes upgrades and replacement of transportation facilities. It would not conflict with any transportation program, plan, or ordinance, or policy; conflict with CEQA guidelines; or increase hazards. It would therefore have no impact on these aspects of transportation.

**d) Less-than-Significant Impact**

The Project would not result in inadequate emergency access. However, due to one-lane traffic control, some minor delays of emergency vehicle response times could

result. With implementation of PF-TRANS-1, medical and emergency vehicles would be able to continue to use SR 116 and would receive priority for fire, medical, emergency, and law enforcement purposes. The Project has the potential to cause short-term, localized traffic congestion and delays resulting from temporary one-lane closures and rolling one-lane closures during construction that could have a measurable adverse effect on emergency services response times. One-way traffic control would be required, but detours are not anticipated to be required during construction. Therefore, impacts would be less than significant.

## 2.1.18 Tribal Cultural Resources

Would the Project:

| Question | CEQA Determination |
|---|---|
| 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:<br>a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | No Impact |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | No Impact |

### 2.1.18.1 CEQA Significance Determinations for Tribal Cultural Resources

Caltrans District 4 Office of Cultural Resource Studies prepared a Section 106 Closeout Memorandum for the proposed Project (Caltrans 2025b). Please note that many state and federal laws limit the disclosure of sensitive cultural and tribal resource information to the public. Additional information regarding confidentiality of these resources can be found in the Standard Environmental Reference (SER) Volume 2, Cultural Resources, in Section 3.4.13 and Section 5.3.6.

**a, b) No Impact**

Because these resources are not in the Project footprint, and to ensure construction personnel are aware of what to do if such resources are uncovered, Caltrans has determined there is no impact.

### 2.1.18.2 Avoidance and Minimization Measures for Tribal Cultural Resources

AMM-TCR-1 and AMM-TCR-2 would avoid or minimize impacts to TCRs.

**AMM-TCR-1, Tribal Cultural Resource Sensitivity Training**. During the preconstruction meeting, a qualified archaeologist and Tribal representative will discuss TCRs with construction personnel. It will be emphasized that cultural monitoring will occur at specific Project areas. The Resident Engineer will notify the Caltrans Archaeologist at least 2 weeks prior to construction. The Caltrans Archaeologist will then inform consulting Tribes. Before construction begins, the Caltrans Project Archaeologist and the consulting Tribes will identify the monitoring areas in the field with the contractor. Monitoring will be conducted by a qualified archaeologist and the consulting Tribes.

**AMM-TCR-2, Monitoring Areas**. The Caltrans Archaeologist will collaborate with all responsible parties to ensure Environmental Monitoring Areas are accurately represented in plans, specifications, and estimates, and the Resident Engineer Pending File. During the preconstruction meeting, a qualified archaeologist and consulting Tribal representatives will discuss monitoring areas with construction personnel. It will be emphasized that Tribal and archaeological monitoring will occur at specific Project areas. The Resident Engineer will notify the Caltrans Archaeologist at least 2 weeks prior to construction. The Caltrans Archaeologist will then inform the consulting Tribes. Monitoring will be conducted by a qualified archaeologist and the consulting Tribes.

## 2.1.19 Utilities and Service Systems

Would the Project:

| Question | CEQA Determination |
|---|---|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | Less-than-Significant Impact |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | No Impact |

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

### 2.1.19.1 CEQA Significance Determinations for Utilities and Service Systems

The nearest landfill to the Project corridor is the Republic Services of Sonoma County Guerneville Transfer Station (13450 Pocket Drive, Guerneville, CA 95446). The need for potholing and relocation of existing utilities, if any, would be ascertained during the Project's design phase, following the completion of the verification process. Utility relocations would occur prior to the beginning of construction and in consultation with the utility providers.

**a) Less-than-Significant Impact**

The Project would not require or result in the relocation or 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. Utility verification is anticipated to be required for the Project and construction and in consultation with utility providers (AMM-UTIL-1, below and Appendix B). Temporary relocation of some communication and electrical transmission lines may be required, and localized, temporary disruptions may result. The Project proposes replacement of stormwater drainage culverts to improve their function and increase their service life, and these replacements result in minor temporary and permanent adverse effects to the environment, as described in previous sections. Therefore, impacts to utilities would be less than significant.

**b, c, d, and e) No Impact**

The Project would not require the services of a landfill where the Project would impact its capacity. The Project would not exceed wastewater treatment requirements. The Project would not require water supplies from existing entitlements and would not impact new or expanded entitlements. The Project would not require the services of a wastewater treatment provider that would impact the provider's 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, Hazardous

Waste and Contamination (PF-HAZ-1 [Section 1.2.2.7]), 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.

### 2.1.19.2 Avoidance and Minimization Measures for Utilities and Services Systems

AMM-UTIL-1 would avoid or minimize impacts to utilities.

**AMM-UTIL-1: Utility Notifications.** During the plans, specifications, and estimates phase, Caltrans would 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.

## 2.1.20 Wildfire

If located in or near state responsibility areas (SRAs) 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? | No Impact |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | No Impact |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | No Impact |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | No Impact |

### 2.1.20.1 CEQA Significance Determinations for Wildfire

The Project area is partially in the CAL FIRE SRA, which contains moderate and high fire hazard severity zones. A local responsibility area (LRA) is also present for approximately 5.5 miles between Forestville and Mills, California. The LRA consists mostly of a no fire hazard severity zone, but there are three small sections where high and moderate zones exist. There are no very high fire hazard severity zones in or near the Project footprint (CAL FIRE 2025).

**a, b, c, and d) No Impact**

Because the Project does not have any very high fire hazard severity zones, there are no impacts.

## 2.1.21 Mandatory Findings of Significance

| Question | CEQA Determination |
|---|---|
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | Less-than-Significant with Mitigation Incorporated |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | No Impact |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | Less-than-Significant Impact |

### 2.1.21.1 CEQA Significance Determinations for Mandatory Findings of Significance

Studies provided by Caltrans' specialists have been examined by the Office of Environmental Analysis for mandatory findings of significance.

**a) Less-than-Significant Impact with Mitigation Incorporated**

The Project would result in direct temporary and permanent impacts on both suitable upland dispersal and aquatic nonbreeding habitats for California red-legged frog as a result of culvert replacement and drainage improvements, shoulder widening, staging, and access activities. Caltrans will be request formal consultation for the Project from USFWS, and any additional conservation measures required for California red-legged frog would be coordinated during this consultation. As required under the federal Endangered Species Act, Caltrans is implementing PFs and AMMs to avoid and minimize take. By implementing these measures, impacts and potential take of California red-legged frog habitat and individuals would be minimized. Restoration of temporarily disturbed areas includes efforts to remove invasive plants and reseed with local native plants. Refer to Section 2.1.4 a) for the detailed discussion of these impacts.

Project activities would result in small, localized, permanent and temporary impacts to aquatic resources, including emergent wetlands and ephemeral, intermittent, and perennial riverine features. Permanent impacts are expected to occur at one ephemeral drainage and one intermittent drainage. Section 2.1.4 c) discusses in detail the potential impacts and the measures that would be employed to address them. The proposed Project is anticipated to require implementation of MM-BIO-1 to address loss of wetlands and other waters.

The Project would result in small, localized areas of temporary and permanent impacts to riparian forest habitat along intermittent riverine features and the Russian River. Temporary impacts are anticipated during guardrail replacement, pavement rehabilitation, and minor tree pruning for equipment staging. Permanent impacts are anticipated with a culvert replacement that would occur to arroyo willow thicket. Permanent impacts to riparian habitat would be minimized to the degree possible. Impacted riparian areas would be recontoured to match the re-established riparian corridor and revegetated where appropriate.

The Project would result in some permanent and temporary construction-related impacts. Project AMMs and MMs (refer to Appendix B) would avoid, minimize, and/or mitigate impacts to less than significant with mitigation.

**b) No Impact**

A review of other 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 AMMs summarized in Appendix B.

With respect to population and housing, the Project would not be growth-inducing. With respect to land use and planning, the Project is generally consistent with State Scenic Highway Program, Sonoma County General Plan 2020 (Sonoma County 2016), and the Guidelines. Although the Project would require the acquisition of a small amount of Unique Farmland and Farmland of Local Importance, taking these resources out of the potential for farmland production and using the area for transportation right-of-way, the impacts to these two parcels are less than significant, as discussed in Section 2.1.2. The impacts to California red-legged frog, wetlands, and riparian habitat are small and primarily temporary, and these resources are relatively healthy in the proposed Project area. With these considerations, the relatively small direct and indirect impacts of the Project, which are spread out in localized areas throughout a large corridor of relatively healthy environmental resources, would not contribute measurably to cumulative impacts. Therefore, there would be no impact.

**c) Less-than-Significant Impact**

The Project would potentially affect aesthetics, air quality, biological, agriculture and forest resources, energy, GHG emissions, hazards and hazardous materials, noise, transportation, utilities and service systems, and wildfire. However, with implementation of Project AMMs, these potential impacts would be reduced, avoided, and/or minimized to a

less-than-significant level. Construction-related activities would temporarily increase criteria air pollutant emissions, ambient noise levels, and emergency response times, and the Project would incorporate Project AMMs to reduce, avoid, or minimize potentially adverse effects to humans. Therefore, the Project would not have a substantial direct or indirect impact on the human environment. Impacts would be less than significant.

## 2.2 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to GHG emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

The impacts of climate change are already being observed in the form of sea-level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation Project.

### 2.2.1 Regulatory Setting

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

### 2.2.2 Environmental Setting

The entire Project area is an Officially Designated State Scenic Highway that is overwhelmingly rural in nature. There are a few small municipalities that increase in population as SR 116 nears Graton and Sebastopol, California. The area’s economy is reliant primarily on natural resource-based agriculture and tourism. SR 116 is the main transportation route through the Project area for both passenger and commercial vehicles. There are no alternate routes through this area. Plan Bay Area 2050, the Regional Transportation Plan/Sustainable Communities Strategy for the nine-county Bay Area, guides transportation and housing development in the Project area. The Sonoma County Board of Supervisors’ Climate Change Action Resolution addresses GHGs in the Project area.

### 2.2.2.1 Greenhouse Gas Inventories

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

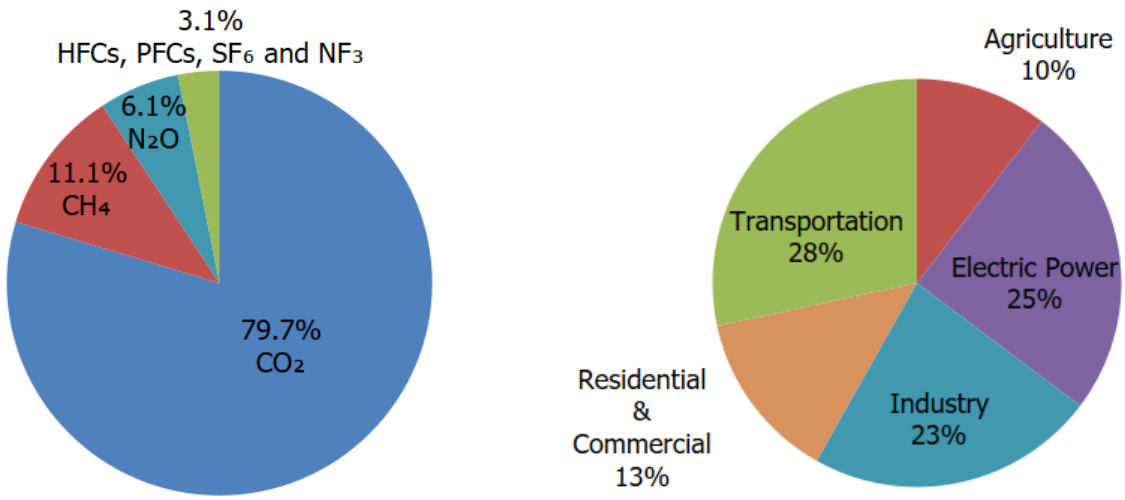
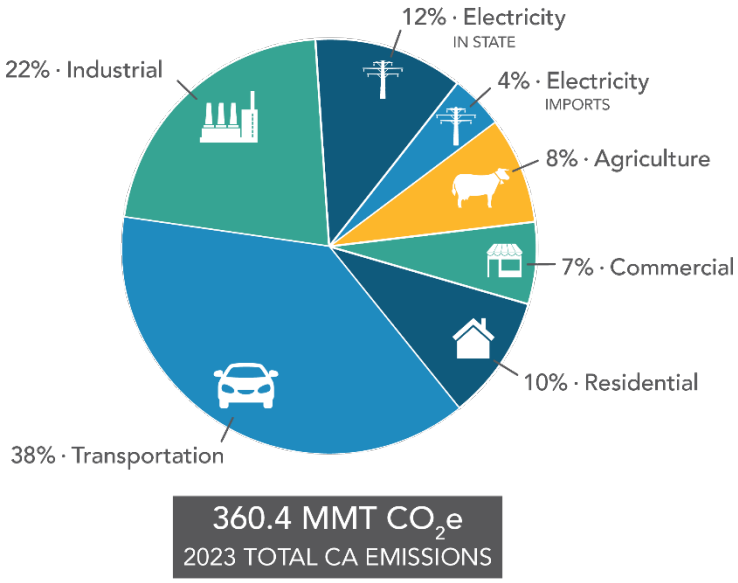
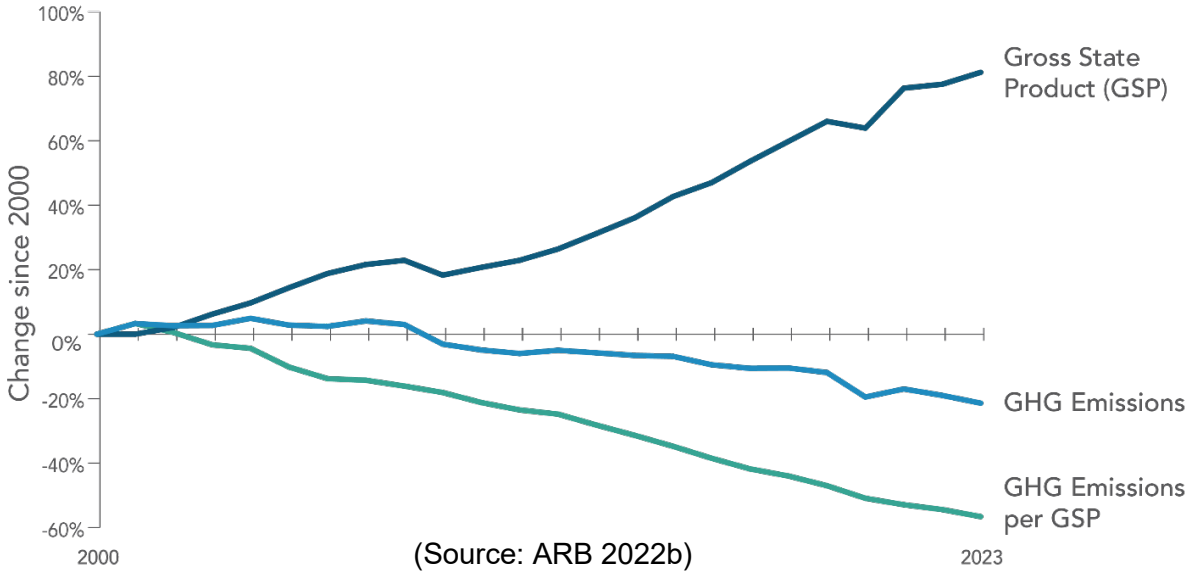



**Figure 14 U.S. Greenhouse Gas Emissions**




)

**Figure 15 California 2023 Greenhouse Gas Emissions by Economic Sector**




(Source: ARB 2022b)

**Figure 16 Change in California Gross State Product and Greenhouse Gas Emissions Since 2000**

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

### 2.2.2.2 Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375)*, CARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations to achieve through planning future projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy. Targets are set as a percentage reduction in passenger vehicle GHG emissions per person, based on 2005 levels.

**Table 20 Regional and Local Greenhouse Gas Reduction Plans**

| Title | Greenhouse Gas Reduction Policies or Strategies |
|---|---|
| Association of Bay Area Governments Plan Bay Area 2050/Sustainable Communities Strategy and Regional Transportation Plans for Sonoma County (adopted October 2021) | • Promote compact, mixed-use commercial and residential development close to mass transit, jobs, recreation, etc.<br>• Expand the public transit network.<br>• Make strategic capacity and technology enhancements to existing highways. |
| Sonoma County Transportation Authority Bicycle and Pedestrian Master Plan (adopted 2014) | • Class II bicycle lanes |
| Sebastopol 2023 General Plan (adopted January 2023) | • Sustainability Element |

## 2.2.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are $CO_2$, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. $CO_2$ emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of methane and nitrous oxide. Additionally, the transportation sector emits a minor amount of hydrofluorocarbon emissions, which are related to refrigeration and air conditioning systems used in vehicles.

GHGs vary in their ability to trap heat in the atmosphere, a characteristic known as global warming potential. $CO_2$ is the most significant GHG due to its abundance and impact. Accordingly, the amounts of other gases are expressed relative to $CO_2$ using a metric called $CO_2e$. The global warming potential of $CO_2$ is assigned as a value of 1, and the global warming potential of other gases is assigned as multiples of $CO_2$. Both operational and construction emissions associated with the proposed Project are analyzed in the sections below; emission values, if required, are expressed in $CO_2e$ to provide a standardized measure of their impact.

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

effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

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

#### 2.2.3.1 Operational Emissions

The purpose of the proposed Project is to rehabilitate and replace existing roadway pavement and facilities and not to increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the Project would not increase the number of travel lanes on SR 116, no increase in vehicle miles traveled would occur. Although some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

#### 2.2.3.2 Construction Emissions

Construction GHG emissions would result from material processing and transportation, onsite construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. Construction GHG emissions are only produced for a short time, but they have long-term effects in the atmosphere; they cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed. This data on construction GHG emissions is detailed in Section 2.1.8 Table 11.

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

#### 2.2.3.3 CEQA Conclusion

The Project would not increase the motor vehicle capacity of SR 116. Therefore, the Project would not affect travel demand or travel patterns in a way that would contribute to a long-term increase in GHG emissions. GHG emissions during construction would be temporary, and the emission reduction measures included in PF-AQ-1 (Section 1.2.2.7) would limit unnecessary GHG emissions to the extent feasible. Because the Project would not contribute to a long-term change in GHG emissions, and the GHG reduction measures would be implemented during construction, the impact would be less than significant. Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in Section 2.2.4.

Plans and policies adopted for the purposes of reducing GHG emissions in California include multiple Senate Bills, ABs, 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 and the Metropolitan Transportation Commission 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 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.

## 2.2.4 Greenhouse Gas Reduction Strategies

### 2.2.4.1 Statewide Efforts

In response to AB 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Additionally, Caltrans has enacted policies and initiatives to reduce GHG emissions in transportation to reach the state's climate goals. For a full list of statewide and Caltrans GHG reduction strategies, refer to SER, Chapter 16, Climate Change.

### 2.2.4.2 Project-Level Greenhouse Gas Reduction Strategies

Caltrans standard PFs serve to reduce GHG emissions and potential climate change impacts that could result from the Project. Refer to PF-AQ-1, PF-BIO-11 and 12 and PF-VIS-1 in Section 1.2.2.7.

## 2.2.5 Adaptation

Reducing GHG emissions is crucial in combating climate change, but it is only one part of the solution. Caltrans must proactively plan for the impact of climate change on California's transportation infrastructure. This involves modifying and protecting facilities to reduce potential damage and build resilience against future climate-related challenges.

Caltrans has conducted District Climate Change Vulnerability Assessments to identify segments of the State Highway System that are vulnerable to climate change impacts, such as sea-level rise, increased temperatures, and extreme weather events. These assessments help prioritize areas for adaptation efforts and inform the development of strategies to enhance the resilience of critical infrastructure.

Additionally, Caltrans periodically prepares a Sustainability Roadmap, which outlines the agency's strategic plans and progress reports aimed at achieving state sustainability goals. The roadmap is a 2-year progress report on several important milestones

achieved by Caltrans while implementing Executive Orders B-16-12 and B-18-12, and the adaptation planning process of Executive Orders B-30-15, N-19-19, and N-82-20.

Refer to SER, Chapter 16, Climate Change for additional information regarding federal, state, and Caltrans adaptation efforts.

#### 2.2.5.1 Project Adaptation Analysis

***Sea-Level Rise***

The proposed Project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, there are no potential threats to transportation facilities in the Project area due to projected sea-level rise.

***Precipitation and Flooding***

SR 116 follows the Russian River, beginning at PM 7.74, where Dutch Bill Creek flows into the river, and extending to the Russian River Bridge in Guerneville at approximately PM 12.10. Along this stretch, the highway crosses Hulbert Creek at PM 11.16 and Fife Creek at PM 11.82. This section of SR 116 is primarily in Zone AE of the Russian River, with base flood elevations (BFEs) ranging from 47.5 feet to 60.1 feet. Zone AE consists of areas inundated by a 1 percent annual chance flood (also known as the 100-year flood), for which BFEs have been determined through detailed analysis.

From PM 12.10 to approximately PM 17.05, SR 116 follows Pocket Canyon Creek. In this section, the highway is partially in Zone AE of Pocket Canyon Creek, with BFEs ranging from 60.1 feet to 226.5 feet.

From PM 17.05 to the Project's end, SR 116 is in a Zone X floodplain—except at PM 18.66, where it crosses into a Zone A floodplain associated with Green Valley Creek near Martinelli Road. Zone A includes areas that are inundated in a 1 percent annual chance flood (the base flood), where no detailed analysis has been conducted, meaning no BFEs have been established. Zone X covers areas outside the 0.2 percent annual-chance flood (the 500-year flood). Additionally, SR 116 crosses Jones Creek at PM 19.90, where no floodplain is indicated.

Throughout the Project, Caltrans is replacing, upgrading, repairing, or installing culverts and their components in 52 locations. These activities should result in facilitating runoff from more frequent and increased amounts of precipitation that, prior to construction activities, might result in an increase in flooding. The overall effect of this work is designed to reduce the impact and severity of impacts to the transportation system during flood events.

Caltrans would institute BMPs such as erosion control and revegetation to reduce inundation event impacts.

Although the proposed Project includes minor shoulder widening and sidewalk installations, these features of the Project are not expected to affect the floodplain.

### *Wildfire*

Portions of the Project are in a SRA, or LRA; other portions are outside of both designations. From Monte Rio to just east of Forestville, the Project is in either a moderate or high fire hazard severity zone; however, no portion of the Project is in a very high severity zone. The Project would serve the same use and vehicular capacity as the existing facility and would not increase wildfire risks. The replacement of treated wood poles with metal poles for the guardrail system would reduce the likelihood of contributing to a wildfire. The Project is not likely to be subject to the effects of wildfire that could occur under climate change.

### *Temperature*

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

# Chapter 3 Coordination

Caltrans is in coordination with Sonoma County in the development of this proposed Project. Specifically, in the areas of Guerneville and Forestville there is a cooperative effort to plan and implement ADA and Complete Streets components in the proposed Project footprint in areas owned and/or managed by Sonoma County.

## 3.1 Community Outreach

The Initial Study, maps, Project information, and supporting technical studies are available for review weekdays from 8:00 a.m. to 5:00 p.m. at the Caltrans District 4 Office, 111 Grand Avenue, Oakland, CA 94612. The document is also available to download at the District 4 Environmental Documents by County Website.

Additionally, the Initial Study will be made available at the Guerneville Regional Library at 14107 Armstrong Woods Road in Guerneville, Forestville Community Library at 7050 Covey Rd., Forestville, CA 95436, and the Sebastopol Regional Library, 7140 Bodega Ave., Sebastopol, CA 95472. The deadline for submission of comments on the Initial Study/Mitigated Negative Declaration is May 4, 2026.

## 3.2 Consultation and Coordination with Public Agencies

Consultation with several agencies occurred during the environmental evaluation process. A list of coordination activities and contacts is provided in Table 21.

**Table 21 Agency Coordination Meetings and Contacts**

| Organizations | Date | Topic |
|---|---|---|
| Native American Heritage Commission | April 4, 2025 | Caltrans requested a search of the Sacred Lands File. |
| Native American Heritage Commission | April 7, 2025 | The NAHC responded with negative results for the Sacred Lands File search and included a list of representatives from Native American Tribes for additional consultation. |
| Native American Consultation | June 13, 2025 | Section 106 and AB 52 letters were sent to Cloverdale Rancheria of Pomo Indians, Dry Creek Rancheria of Pomo Indians, FIGR, Guidiville Rancheria of California, Kashia Band of Pomo Indians of the Stewarts Point Rancheria (Kashia), Lytton Rancheria and Pinoleville Pomo Nation. |
| Native American Consultation | June 17, 2025 | Kashia Band of Pomo Indians of the Stewarts Point Rancheria requested formal consultation under Section 106 and AB 52. Consultation is ongoing (refer to Section 2.2.5). |

| Organizations | Date | Topic |
|---|---|---|
| Native American Consultation | July 30, 2025 | FIGR responded, requesting formal consultation under Section 106 and AB 52. Consultation is ongoing (refer to Section 2.1.5). |
| Sonoma County Department of Public Works | October 2, 2025 | Right-of-way boundaries and detailed scope of work for ADA and bicycle improvements were discussed in a field meeting at both downtown Forestville and Guerneville. |
| United States Fish and Wildlife Service | January 16, 2024 | Caltrans requested technical assistance from USFWS and provided the draft Natural Environment Study and associated figures. |
| Sonoma County Regional Parks | March 4, 2026 | Temporary construction occupancy of the West County Rodota trail during repaving was discussed. |
| United States Fish and Wildlife Service | March 4, 2026 | Caltrans and USFWS discussed probable species impacts and the resulting effects determinations that formal consultation for California red-legged frog, informal consultation for northern spotted owl, and no effects to listed plants are likely. |

Notes:

AB = Assembly Bill
ADA = Americans with Disabilities Act
Caltrans = California Department of Transportation
FIGR = Federated Indians of the Graton Rancheria
NAHC = Native American Heritage Commission
USFWS = United States Fish and Wildlife Service

# Chapter 4 List of Preparers

| Name | Title | Division/Office |
|---|---|---|
| Austin Bossetti | Project Manager | Project Management North |
| Alexander Lim | Project Manager | Project Management North |
| Lawrence Bonner | Office Chief | Environmental Analysis |
| Christopher Pincetich | Branch Chief | Environmental Analysis - North |
| Pamela Ward | Environmental Scientist | Environmental Analysis - North |
| Katherine Neylan | Environmental Scientist | Environmental Analysis – North |
| Kifle Abishu | Project Engineer | Design Central Region |
| Sergio Ruiz | Office Chief | Pedestrian and Bicycle Planning |
| Ahmed Rahid | Office Chief | Design Sonoma, Solano |
| Shilpa Mareddy | Branch Chief | Air and Noise |
| Sam Badawia | Branch Chief | Design Central Region |
| Ramon Lopez | Branch Chief | Hydraulics Central Region |
| Jacob F. Duncan | Branch Chief | Materials and Pavements – West |
| Steve Lee | Branch Chief | Traffic Design Central Region |
| Alex McDonald | Branch Chief | Landscape Architecture |
| Greg Pera | Branch Chief | Biological Sciences |
| Shella Orson | Branch Chief | Right-of-Way Project Coordination |
| John Cardarelli | Branch Chief | Right-of-Way Engineering |
| Rick Yeung | Branch Chief | Traffic Safety |
| William Woolery | Branch Chief | Highway Operations |
| Mojgan Osooli | Branch Chief | Water Quality |
| Helen Blackmore | Branch Chief | Cultural Resource Studies |
| Chris Risden | Branch Chief | Geological Design West |
| Gregory Currey | Branch Chief | Pedestrian and Bicycle Planning |
| Sallie Holt | Landscape Associate | Landscape Architecture |
| Carolina de la Torre Martinez | Environmental Scientist | Biological Sciences |
| Jiayi Pan | Transportation Engineer | Water Quality |

| Name | Title | Division/Office |
|---|---|---|
| Charles Palmer | Architectural Historian | Cultural Resource Studies |
| Denise Frazier | Archaeologist | Cultural Resource Studies |
| Janelle Hardzeichyk | Transportation Engineer | Hazardous Waste |
| Dylan Mathias | Environmental Scientist | Construction Liaison |
| Lawrence Fleming | Environmental Scientist | EPPM Planner |
| Masis Kayaian | Hydraulics Engineer | Hydrology Central Region |
| Preeti Purandar | Transportation Engineer | Air and Noise |
| Andrea Suarez | Landscape Associate | Visualizations |

# Chapter 5 Distribution List

The following agencies and government officials received copies of this Initial Study with Proposed Mitigated Negative Declaration.

## 5.1 State Agencies

- BAAQMD
- CDFW
- RWQCB

## 5.2 Local Agencies and Organizations

- Sonoma County Regional Parks
- Sonoma County Transportation Agency

## 5.3 Elected Officials

- The Honorable Mike McGuire (SD 2)
- The Honorable Chris Rogers (District 2)
- The Honorable Supervisor Lynda Hopkins (District 5)

# Appendix A Title VI/Non-Discrimination Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

**California Department of Transportation**

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS–49 | SACRAMENTO, CA 94273–0001
(916) 654-6130 | FAX (916) 653-5776 TTY 711
www.dot.ca.gov

September 2025

## TITLE VI/NON-DISCRIMINATION POLICY STATEMENT

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. Related non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. Caltrans will make every effort to ensure nondiscrimination in all of its services, programs, and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

Dina El-Tawansy (Sep 12, 2025 16:52:12 PDT)

DINA A. EL-TAWANSY
Director

"Improving lives and communities through transportation."

# Appendix B Avoidance and Minimization, and/or Mitigation Summary

***Mitigation Measure***

**MM-BIO-1: Impacts to Wetlands.**

The California Department of Transportation (Caltrans) will mitigate for permanent impacts to aquatic resources at a ratio determined appropriate in coordination with regulatory agencies with jurisdiction, which are anticipated to be United States Army Corps of Engineers and San Francisco Bay Regional Water Quality Control Board. The mitigation credit, in-lieu fee contribution, or mitigation site will be chosen in consultation with regulatory agencies with jurisdiction.

***Avoidance and Minimization Measures (AMMs)***

**AMM-BIO-1, Rare Plant Surveys and Rare Plant Salvage and Transplantation Plan.**

During the spring season prior to construction, Caltrans will conduct focused preconstruction surveys for the rare plants identified as having potential to occur in the Project area. If found, the extent and abundance of the rare plants will be mapped and flagged in the field for future relocation, salvage, and transplantation. These surveys will be conducted three times—once during the season that the rare plants are detectable and in the correct phenological stage of development for correct identification (typically late spring), and again mid- and late-season. If a rare plant is identified in the Project area during the preconstruction survey, a rare plant transplantation plan will be prepared. The transplantation plan will be submitted to the regulatory agencies for approval prior to the beginning of construction. The rare plant salvage and transplantation plan will include salvage and replanting methods, success criteria, the establishment of photo points, and monitoring methods. The rare plant salvage and transplantation plan will be prepared and approved by the regulatory agencies prior to the beginning of construction.

**AMM-BIO-2, Preconstruction California Red-Legged Frog Surveys.**

Preconstruction surveys for California red-legged frog will be conducted by the United States Fish and Wildlife Service (USFWS)-approved biologist(s) no more than 24 hours prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal) beyond the existing pavement. These efforts will consist of walking surveys of the Project footprint, focusing on the wetland areas at the existing culvert intake and outfall and, if possible, on accessible adjacent areas of upland habitat within at least 50 feet of the Project footprint. The biologist(s) will investigate potential cover sites when it is feasible and safe to do so. This includes a thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites in the Project footprint will be documented and relocated to an adequate cover site in the

vicinity. Safety permitting, the biologist(s) will investigate areas of disturbed soil for signs of frogs within 30 minutes following initial disturbance of the given area.

**AMM-BIO-3, Wildlife Exclusion Fencing (WEF).**

Prior to the start of construction, WEF will be installed along the Project footprint in areas where California red-legged frog could enter the Project site. The WEF location will be surveyed and included on the Project plans. The final Project plans will show where and how the WEF will be installed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and proper WEF installation and maintenance. The WEF will remain in place throughout the duration of the Project and will be regularly inspected and maintained.

**AMM-BIO-4, Biological Monitor.**

The USFWS-approved biologist will appoint a biological monitor (e.g., the crew foreman) who will be responsible for ensuring that all crew members comply with permit guidelines. Environmental training will be conducted for new personnel before they can participate in construction activities. The approved biologist will notify the resident engineer, who will address any work stoppage, and the USFWS will be contacted if a California red-legged frog is encountered during Project activities.

**AMM-BIO-5, Protocol for Species Reporting.**

If a California red-legged frog is encountered in the immediate work area, the following procedures will be followed:

a. If a California red-legged frog is discovered during surveys or proposed work activities, the resident engineer and USFWS-approved biologist(s) will be immediately informed. If a California red-legged frog gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the construction zone.

b. The USFWS-approved biologist(s) will have the authority to halt work through coordination with the resident engineer if a California red-legged frog is discovered in the Project footprint. The resident engineer will ensure construction activities remain suspended in any construction area where the qualified biologist(s) has determined that a potential take of the California red-legged frog could occur. Work will resume once the animal leaves the site voluntarily, or it is determined that the California red-legged frog is not being harassed by construction activities.

c. Caltrans will submit post-construction compliance reports prepared by the biologist to USFWS within 60 calendar days following completion of Project activities or within 60 calendar days of any break in construction activity lasting more than 60 calendar days. This report will detail (1) dates that relevant Project activities occurred; (2) pertinent information concerning the success of the Project in implementing avoidance and minimization measures for listed species;

(3) an explanation of failure to meet such measures, if any; (4) known Project effects on the California red-legged frog, if any; (5) documentation of employee environmental education; and (6) other pertinent information.

**AMM-BIO-6, Preconstruction Northwestern Pond Turtle Surveys.**

An approved biologist will conduct preconstruction surveys for northwestern pond turtle, as needed. A visual encounter survey will be conducted immediately before ground-disturbing activities. Suitable habitat in the Project footprint will be visually inspected. If northwestern pond turtle is found in the Project footprint and at risk of harm, then it will be relocated outside of the Project footprint by the approved biologist.

**AMM-BIO-7, Preconstruction Northern Spotted Owl Surveys.**

To ensure that potential impact effects on northern spotted owl are avoided and/or minimized, a preconstruction survey will be conducted during the northern spotted owl breeding season in areas of potential northern spotted owl habitat within a 330-foot visual line of sight from the Project work sites. The focus of the survey should be on the detection of the species and potential active nest sites that could be affected by the proposed Project. If an active nest is found in the survey area, the start of construction will be delayed, and it will be monitored by a USFWS-approved biologist to document when the young have left the nest and construction can start.

**AMM-BIO-8, Noise Minimization.**

To minimize noise generated from the proposed Project to the degree possible, all construction equipment, fixed or mobile, will be fitted with properly operating and maintained mufflers, consistent with manufacturers' standards.

**AMM-BIO-9: Avoidance of Night Work in Northern Spotted Owl Habitat.**

No night work will be conducted in Project locations in suitable northern spotted owl habitat, to minimize impacts of construction related noise and lighting on northern spotted owl.

**AMM-BIO-10, Preconstruction Bat Survey.**

If clearing and grubbing occurs between May 1 and September 1, an agency-approved bat biologist will conduct visual and acoustic bat surveys for roosting, or evidence of roosting. The bat biologist will visually inspect tree foliage, bark, cavities, and any other structures that could provide roosting habitat for bats. If a maternity colony is discovered, construction activity, including tree removal and vegetation trimming, will cease within 100 feet of the colony, and Caltrans will coordinate with the California Department of Fish and Wildlife (CDFW) for technical assistance.

**AMM-BIO-11, Two-Step Tree Removal.**

Trees will be removed by a two-step process. On the first day, in the afternoon, limbs and branches are removed by a tree cutter using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures are avoided, and only branches or limbs without those features are removed. On the second day, the entire tree would be removed. This two-step process allows bats to relocate during nocturnal movements to minimize take of bats and minimize potential disturbance to roosting habitat. If bats are observed during preconstruction surveys, environmentally sensitive area (ESA) fencing will be installed to protect the roosting trees before construction begins, and the Project biologist will coordinate with USFWS and/or CDFW for technical assistance.

**AMM-BIO-12, Bat Protection.**

A habitat assessment would be conducted for potentially suitable bat roosting habitat prior to construction activities. If the habitat assessment reveals that any structures are suitable roosting habitat for bats, then the appropriate exclusionary measures would be implemented prior to construction during the period from March 1 to April 15 or August 31 to October 15. Potential avoidance may include exclusionary blocking or filling potential cavities with foam, visual monitoring, and/or staging Project work to avoid bats. If bats are known to use Project work sites for roosting, then exclusion netting would not be used.

If the habitat assessment reveals suitable bat habitat in trees, and tree removal is scheduled from April 16 through August 30 and/or October 16 through February 28, then presence/absence surveys would be conducted 2 to 3 days prior to any tree removal or trimming. If presence/absence surveys are negative, then tree removal would proceed following a two-phase tree removal system. If presence/absence surveys indicate bat occupancy, then the occupied trees would only be removed from March 1 through April 15 and/or August 31 through October 15 by following the two-step tree removal system. Bats would not be disturbed without specific notice to, and consultation with, CDFW.

**AMM-BIO-13, Prevent Inadvertent Entrapment.**

To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than 1 foot deep would be covered at the close of each workday 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 would be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the Project area overnight would be inspected before they are subsequently moved, capped, or buried.

**AMM-BIO-14, Preconstruction Sonoma Tree Vole Surveys.**

An approved biologist will conduct preconstruction surveys for Sonoma tree vole, as needed. A visual encounter survey will be conducted immediately before tree removal

or ground-disturbing activities. Suitable habitat in the Project footprint will be visually inspected.

**AMM-NOI-1, Noise Control and Noise Monitoring.**

Noise control and noise monitoring will be required during construction to avoid and minimize construction noise. The contractor will be required to submit a Noise Control Plan to Caltrans for approval to demonstrate compliance with construction noise limits, which require the contractor to limit construction noise levels to 86 A-weighted decibels (dBA) maximum hourly noise levels from 9:00 p.m. to 6:00 a.m. The contractor must also comply with California Streets and Highway Code, Section 216, which requires interior noise not to exceed 52 dBA average hourly noise levels in classrooms, library, multipurpose rooms, medical facilities, places of worship, or spaces used for pupil personnel services. Compliance with noise control will be aided by required noise monitoring.

**AMM-NOI-2, Vibration Control and Crack Monitoring.**

Vibration control, vibration monitoring, crack monitoring, and photo and video documentation will be required during construction to avoid and minimize the impacts from groundborne vibration. The contractor will be required to submit a Vibration Control Plan to Caltrans for approval prior to the start of construction activities. It must identify specific sensitive receptors, such as older residential structures, and specific plans for reducing vibration to stay under damage and/or annoyance thresholds. Monitoring will be required for any activity that may increase groundborne vibration, such as use of a vibratory roller to compact pavement. The contactor will be required to halt construction if monitoring demonstrates that thresholds may be exceeded and must implement approved measures to avoid or minimize vibrations prior to restarting.

**AMM-TCR-1, Tribal Cultural Resource Sensitivity Training.**

During the preconstruction meeting, a qualified archaeologist and Tribal representative will discuss tribal cultural resources with construction personnel. It will be emphasized that cultural monitoring will occur at specific Project areas. The Resident Engineer will notify the Caltrans Archaeologist at least 2 weeks prior to construction. The Caltrans Archaeologist will then inform consulting Tribes. Before construction begins, the Caltrans Project Archaeologist and the consulting Tribes will identify the monitoring areas in the field with the contractor. Monitoring will be conducted by a qualified archaeologist and the consulting Tribes.

**AMM-TCR-2: Monitoring Area.**

The Caltrans Archaeologist will collaborate with all responsible parties to ensure Environmental Monitoring Areas are accurately represented in plans, specifications, and estimates, and the Resident Engineer Pending File. During the preconstruction meeting, a qualified archaeologist and consulting Tribal representatives will discuss monitoring areas with construction personnel. It will be emphasized that Tribal and archaeological monitoring will occur at specific Project areas. The Resident Engineer will notify the

Caltrans Archaeologist at least 2 weeks prior to construction. The Caltrans Archaeologist will then inform the consulting Tribes. Monitoring will be conducted by a qualified archaeologist and the consulting Tribes.

**AMM-UTIL-1: Utility Notifications.**

During the plans, specifications, and estimates phase, Caltrans would 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.

**AMM-VIS-1, Minimize Vegetation Removal.**

Preserve existing trees, vegetation, and associated root systems to the maximum extent practicable. Use temporary fencing to protect existing trees abutting or in work areas. In downtown Forestville, replant any removed trees at a one-to-one ratio wherever feasible, considering utility conflicts and required clearance areas. The Project team will seek community input on tree species and placement.

**AMM-VIS-2, Drainage Facilities Visual Contrast.**

Conceal the inlet and outlet of drainage pipes from view where feasible. Pipes that cannot be hidden would be colored with earth-tone coating to conceal them. Color exposed concrete drainage structures to match adjacent earth tones. Color drainage rock used as dissipators with earth tones and bury them with soil and cover with vegetation where feasible.

**AMM-VIS-3, Concrete Vegetation Control.**

Avoid the use of concrete strips under Midwest guardrail system (MGS) to block vegetation growth under the MGS at locations along State Route 116 north of the Russian River. Install narrow vegetation-control concrete strips at new MGS in the remainder of the corridor.

**AMM-VIS-4, Concrete Visual Contrast**

Minimize visual contrast by adding lamp black integral color (typically 0.25 pound of color to each 94-pound sack of concrete) to new concrete for curb ramps, sidewalks, and vegetation control.

**AMM-VIS-5, Lighting and Glare.**

Limit construction lighting to the area of work and avoid light trespass with the use of directional screening.

**AMM-VIS-6, Equipment and Materials Staging Areas.**

To preserve existing vegetation to the maximum extent practicable, locate staging areas on existing paving and unvegetated surfaces.

**AMM-VIS-7. Screen Equipment and Materials Staging Areas.**

Minimize the visibility of construction equipment and staging areas. Screen the staging area from views to the extent practicable. Visual impacts should be minimized by installing woven vinyl screens or similar material attached to chain-link fencing surrounding these areas. All equipment and unsightly materials should be stored behind such screens and beyond direct view of the motoring public and residences wherever possible, and beyond the dripline of trees.

# Appendix C List of Abbreviations and Acronyms

| Abbreviation | Definition |
|---|---|
| AB | Assembly Bill |
| ABAG | Association of Bay Area Governments |
| ADA | Americans with Disabilities Act |
| AMM | avoidance and minimization measure |
| APE | area of potential effect |
| APS | accessible pedestrian signal |
| BAAQMD | Bay Area Air Quality Management District |
| BFE | base flood elevation |
| BMP | best management practice |
| BSA | Biological Study Area |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CAL-CET 2021 | Caltrans Construction Emissions Tool 2021 |
| Caltrans | California Department of Transportation |
| CARB | California Air Resources Board |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| $CH_4$ | methane |
| CNPS | California Native Plant Society |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| CSP | corrugated steel pipe |
| dBA | A-weighted decibel |
| DI | drainage inlet |
| EFH | essential fish habitat |
| ESA | environmentally sensitive area |
| FIGR | Federated Indians of the Graton Rancheria |
| GHG | greenhouse gas |
| GWP | global warming potential |
| HFC | hydrofluorocarbons |

| Abbreviation | Definition |
|---|---|
| in/sec | inches per second |
| kWh | kilowatt hour |
| $L_{eq}$ | average hourly noise level |
| $L_{max}$ | maximum hourly noise level |
| LRA | local responsibility area |
| MBGR | metal beam guard railing |
| MGS | Midwest guardrail system |
| MM | mitigation measure |
| mph | miles per hour |
| MRZ | mineral resource zone |
| MTC | Metropolitan Transportation Commission |
| MVP | maintenance vehicle pullout |
| NAHC | Native American Heritage Commission |
| NES | Natural Environment Study |
| NMFS | National Marine Fisheries Service |
| $N_2O$ | nitrous oxide |
| PF | Project feature |
| PM | post mile |
| $PM_{2.5}$ | particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers |
| $PM_{10}$ | particulate matter with aerodynamic diameter equal to or less than 10 micrometers |
| PPV | peak particle velocity |
| PRC | Public Resources Code |
| Project | Sonoma State Route 116 Capital Preventative Maintenance Project |
| RCP | reinforced concrete pipe |
| RSP | rock slope protection |
| RWQCB | San Francisco Bay Regional Water Quality Control Board |
| SER | Standard Environmental Reference |
| SLF | Sacred Lands File |
| SR | State Route |
| SRA | state responsibility area |
| SSP | standard special provision |

| Abbreviation | Definition |
|---|---|
| SWPPP | stormwater pollution prevention plan |
| TCR | tribal cultural resource |
| TMP | traffic management plan |
| USACE | United States Army Corps of Engineers |
| USC | United States Code |
| USDA | United States Department of Agriculture |
| USFWS | United States Fish and Wildlife Service |
| VIA | Visual Impact Assessment |
| WEF | wildlife exclusion fencing |

# Appendix D List of Technical Studies and References


ABAG (Association of Bay Area Governments) and MTC (Metropolitan Transportation Commission). 2021. *Plan Bay Area 2050*. October. Available online at: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed February 2026.

CAL FIRE (California Department of Forestry and Fire Protection). 2025. *Fire Hazard Severity Zone Maps*. Available online at: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed December 2025.

Caltrans (California Department of Transportation). 2020. *Transportation and Construction Vibration Guidance Manual.* Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf.

Caltrans (California Department of Transportation). 2021. *Director's Policy 37 Complete Streets.* December. Available online at: https://dot.ca.gov/-/media/dot-media/programs/esta/documents/complete-streets/dp-37-complete-streets-a11y.pdf. Accessed March 2026.

Caltrans (California Department of Transportation). 2024. Construction Site Best Management Practices (BMP) Manual. Available online at: https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/construction-site-bmps_final-march-2024_a11y.pdf.

Caltrans (California Department of Transportation). 2025a. *04-SON-116, PM 7.74, EA 04-4Q910, E-FIS 0419000496. Visual Impact Assessment for Sonoma SR 116 CAPM*, November 14, 2025. Office of Landscape Architecture.

Caltrans (California Department of Transportation). 2025b. *Office of Cultural Resource Studies (OCRS) Section 106 Closeout Memo for the Sonoma 116 CAPM Project from Post Mile (PM) 7.74 – 25.05 on State Route 116, in Sonoma County*. December 24, 2025.

Caltrans (California Department of Transportation). 2025c. *Energy Analysis Report*, June 22, 2025. District 4 Air Quality and Noise Branch, Office of Environmental Engineering.

Caltrans (California Department of Transportation). 2025d. *Environmental Support Memorandum*, August 22, 2025. District 4 Office of Geotechnical Design – West.

Caltrans (California Department of Transportation). 2025e. *Construction-Related Greenhouse Gas (GHG) Emissions Analysis*, July 1, 2025. District 4 Air Quality and Noise Branch, Office of Environmental Engineering.

Caltrans (California Department of Transportation). 2025f. *Location Hydraulic Study*, July 23, 2025. District 4 Office of Hydraulic Engineering.

Caltrans (California Department of Transportation). 2025g. *Water Quality Study EA: 4Q910*, June 2025. District 4 Office of Water Quality.

Caltrans (California Department of Transportation). 2025h. *Construction Noise Analysis*, September 19, 2025. District 4 Air Quality and Noise Branch, Office of Environmental Engineering.

Caltrans (California Department of Transportation). 2025i. *Construction-Related Vibration Analysis*, September 25, 2025. District 4 Air Quality and Noise Branch, Office of Environmental Engineering.

Caltrans (California Department of Transportation). 2026a. *Community Impact Assessment Memo*, March 27, 2026. District 4 Office of Environmental Analysis.

Caltrans (California Department of Transportation). 2026b. *Natural Environment Study State Route 116 Minor Pavement Rehabilitation Project*, February 5, 2026. District 4 Office of Biological Sciences and Permits.

Caltrans (California Department of Transportation). 2026c. *K/0-Phase Initial Site Assessment, EA 04-4Q910, Minor Pavement Rehabilitation – AC Resurfacing*, February 9, 2026. District 4 Hazardous Waste Branch, Office of Environmental Engineering.

CARB (California Air Resources Board). 2022. *2022 Scoping Plan for Achieving Carbon Neutrality.* Executive Summary. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.Accessed February 2026.

CARB (California Air Resources Board). 2024. Area Designations Maps/State and National. Available online at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed March 2026.

CDFW (California Department of Fish and Wildlife). 2025. *California Natural Diversity Database* Available online at: https://wildlife.ca.gov/Data/CNDDB. Accessed September 2025.

CNPS (California Native Plant Society). 2025. Inventory of Rare and Endangered Plants (Online Edition, v7-08d). Available online at: https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants. Accessed 2025.

Miller, R.V., and L.D. Bush. 2013. Mineral Land Classification of Aggregate Resources in Sonoma County, California. California Geological Survey.

NMFS (National Oceanographic and Atmospheric Administration National Marine Fisheries Service). 2025. California Species List Tool. Available online at: https://archive.fisheries.noaa.gov/wcr/maps_data/california_species_list_tools.html. Accessed 2025.

Purandar, Preeti. 2025. Personal communication (email) from Preeti Purandar/ Transportation Engineer, Office of Environmental Engineering, Air Quality and Noise Branch, District 4, California Department of Transportation (Caltrans) to Pamela Ward, Caltrans. July 1.

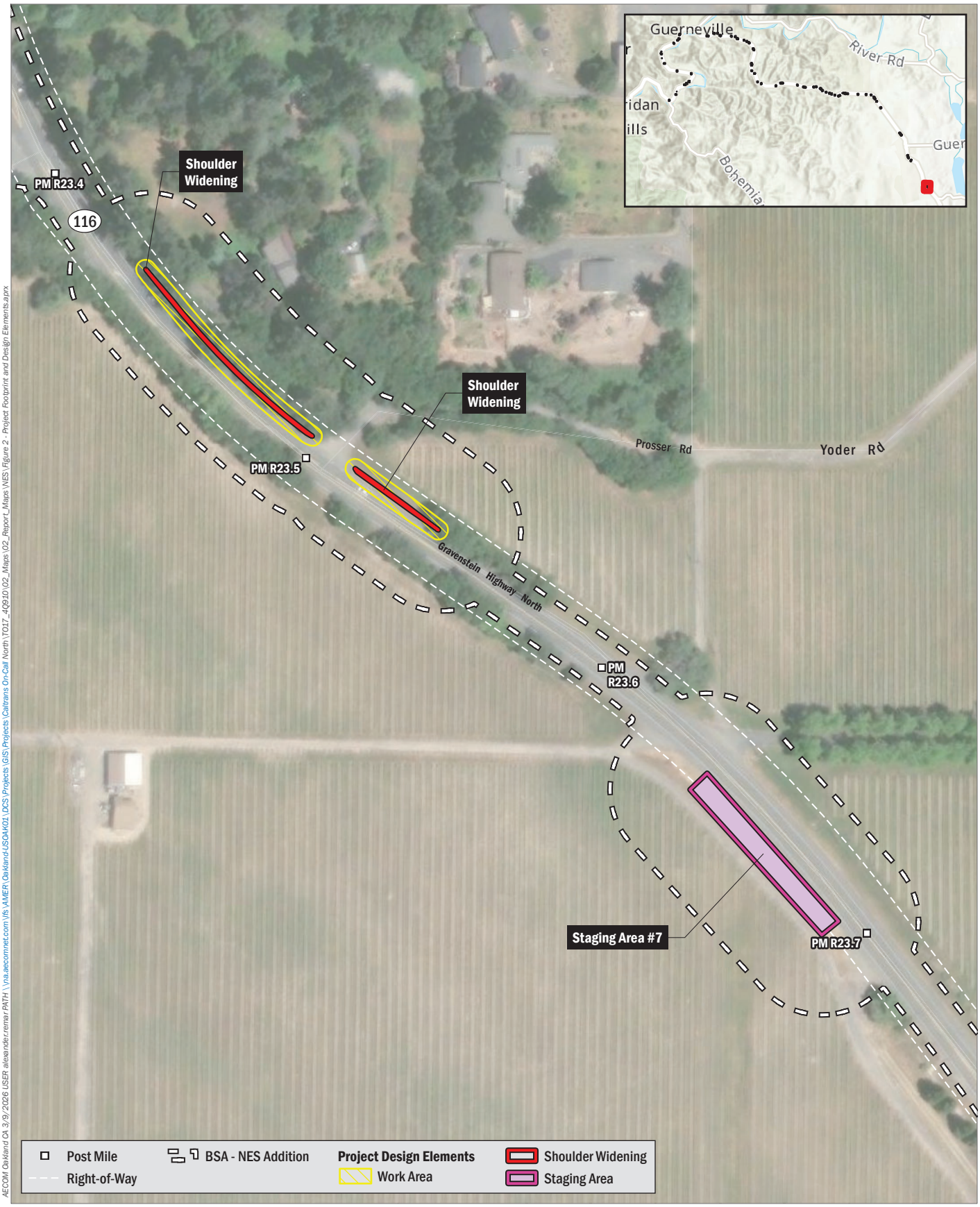
Sonoma County. 2010. Sonoma County Bicycle and Pedestrian Plan. August 24. Available online at: https://permitsonoma.org/regulationsandlongrangeplans/longrangeplans/bicycleandpedestrianplan. Accessed March 2026.

Sonoma County. 2016. *General Plan 2020*. Adopted September 23, 2008. Amended August 2, 2016. Available online at: https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/. Accessed December 2025.

USDA (United States Department of Agriculture). 2026. Agricultural Census 2022. California, Sonoma County, California. https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_2_County_Level/California/ Accessed March 25, 2026.

USFWS (United States Fish and Wildlife Service) 2025. Information for Planning and Consultation Database.

# Appendix E Project Mapping




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

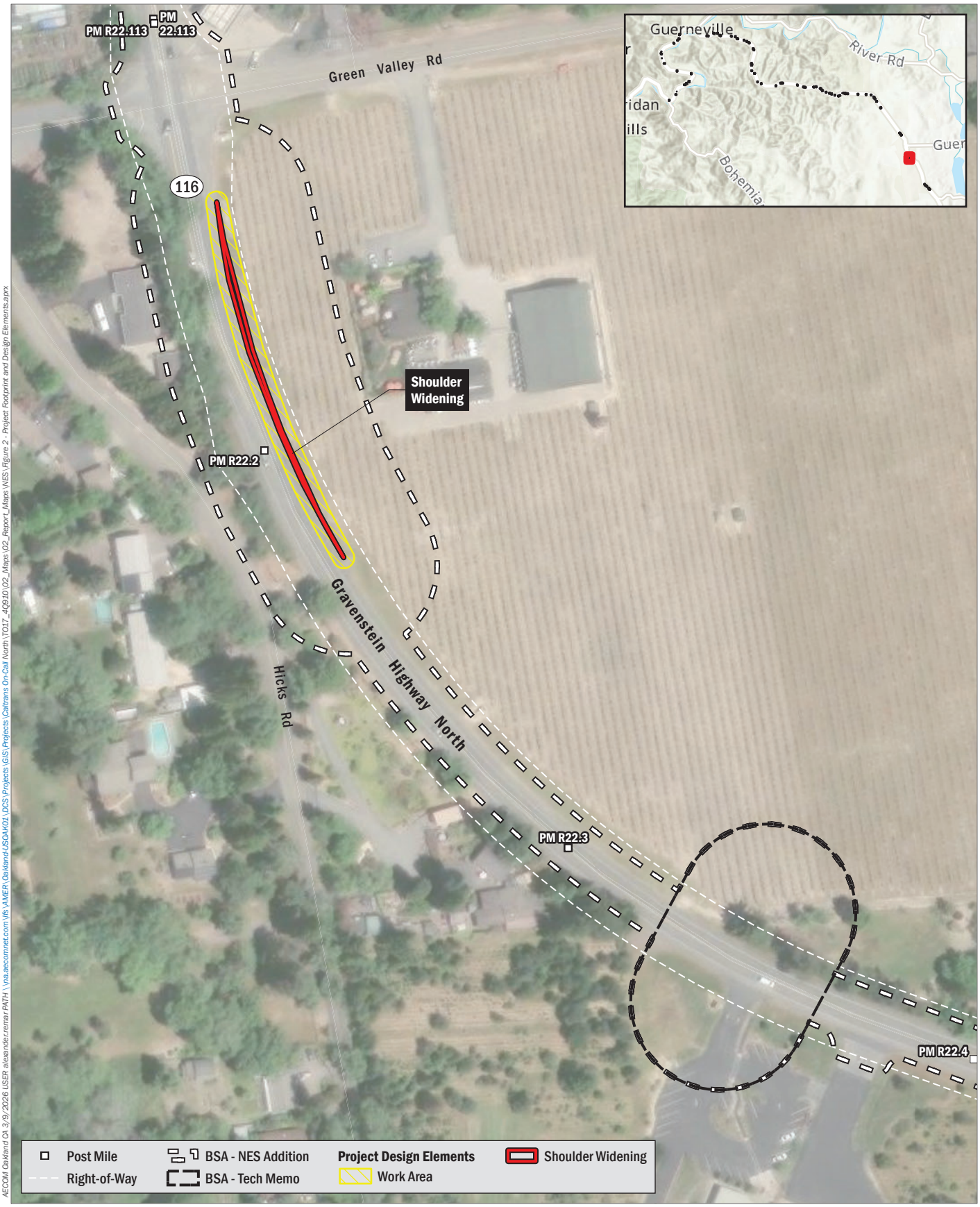
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*

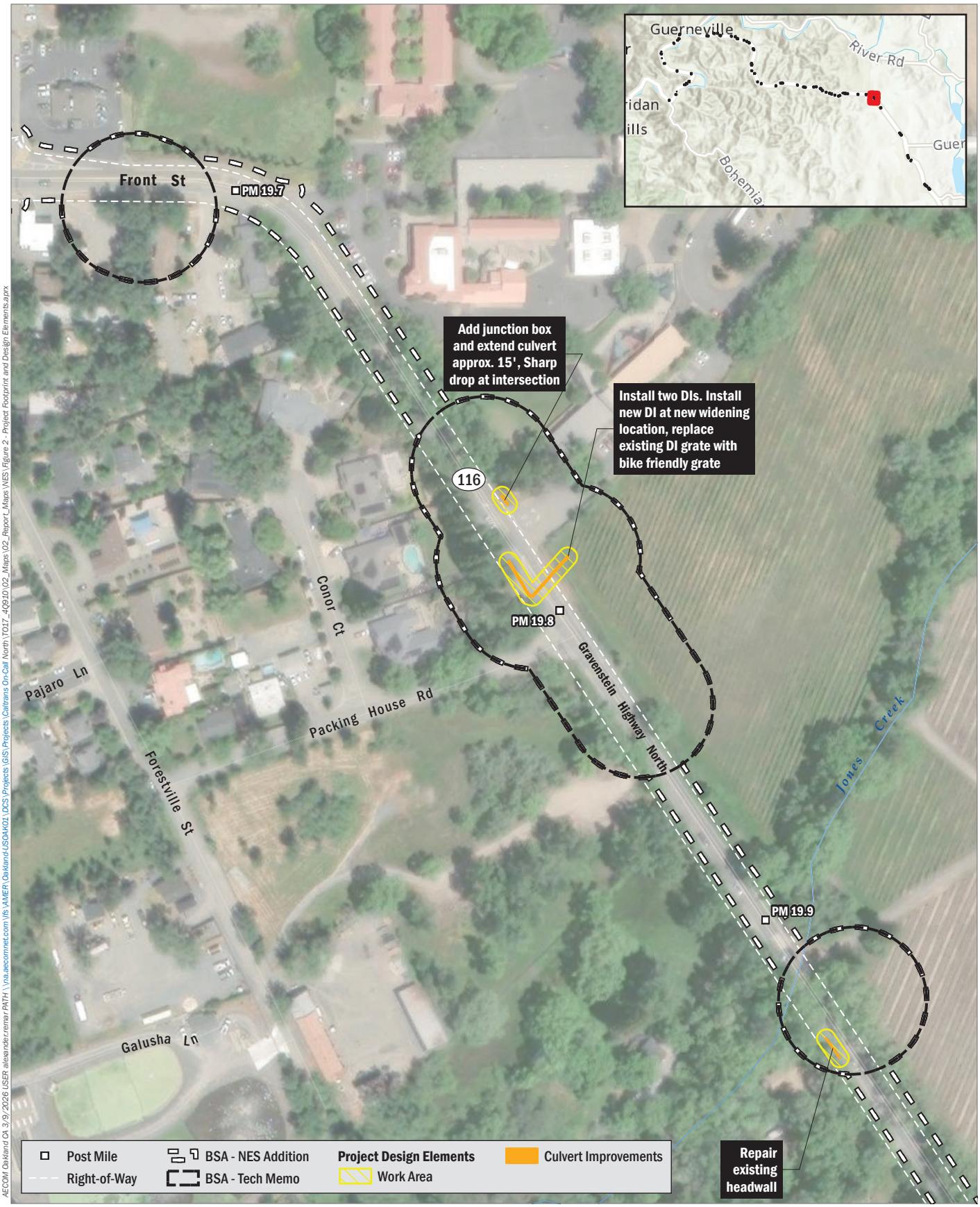



AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_409910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Sonoma SR-116
*Sonoma County, CA*
EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0
04-SON-116-PM 7.74-25.05

*Project Mapping*
*Page 4 of 29*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH: \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

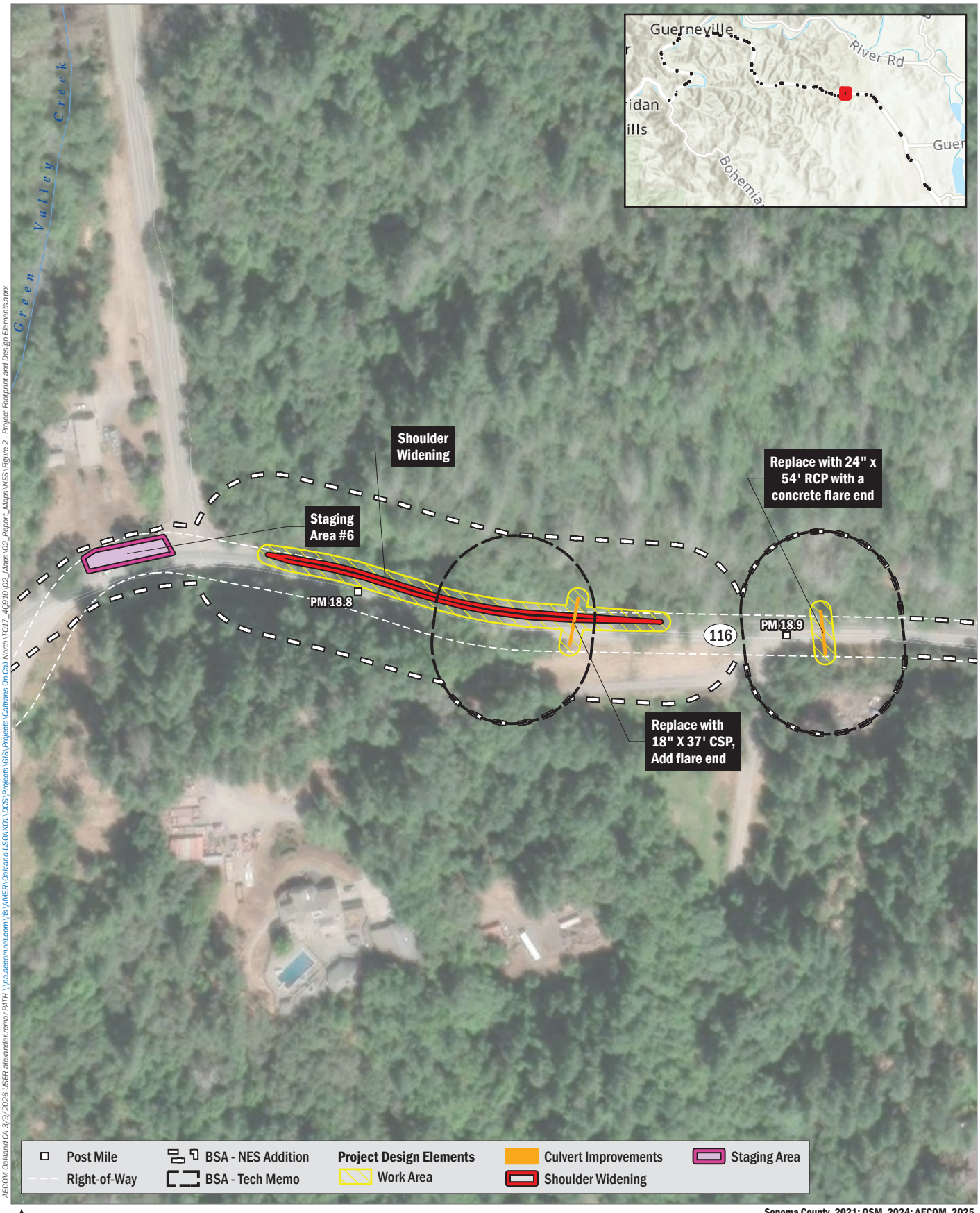
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

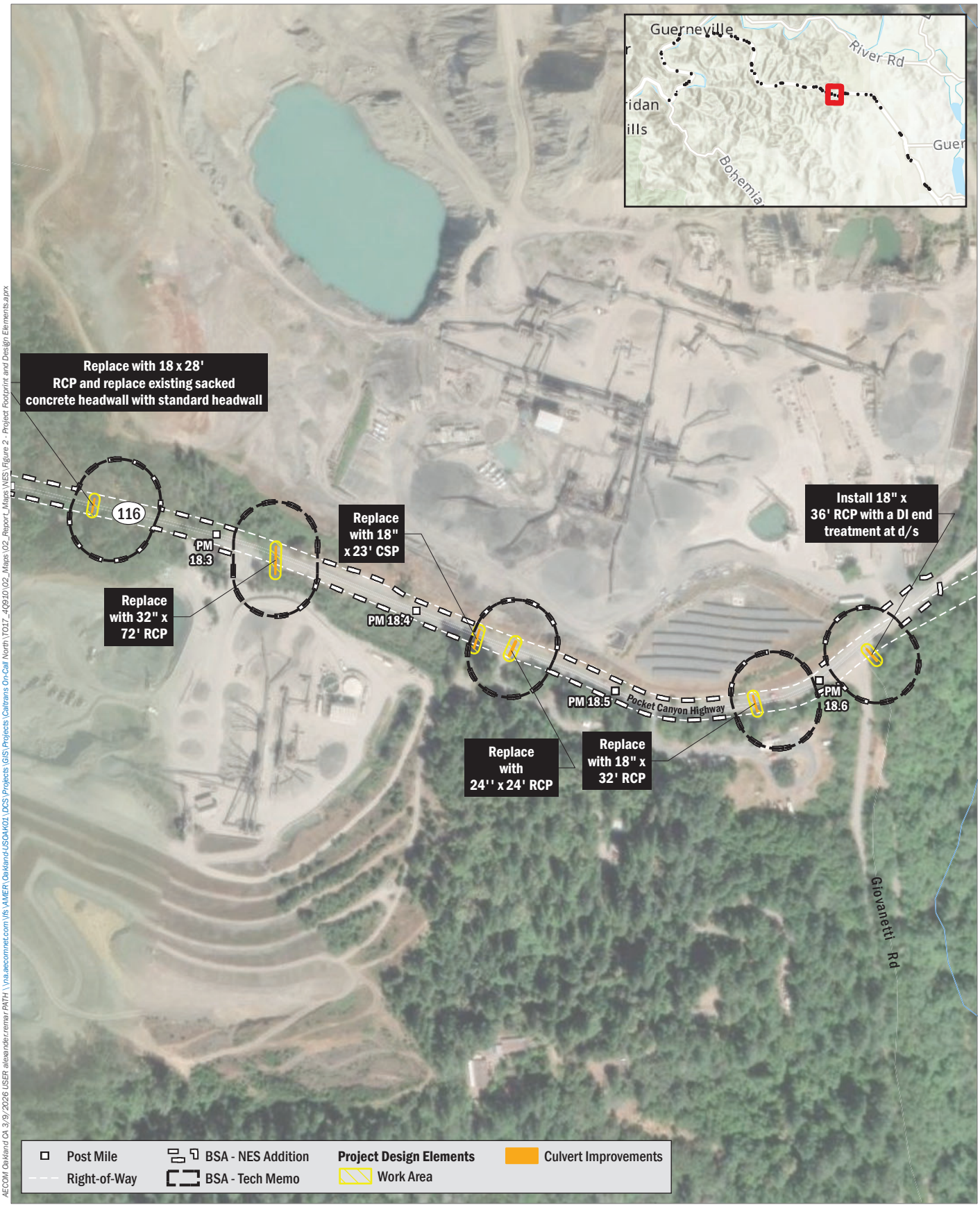
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

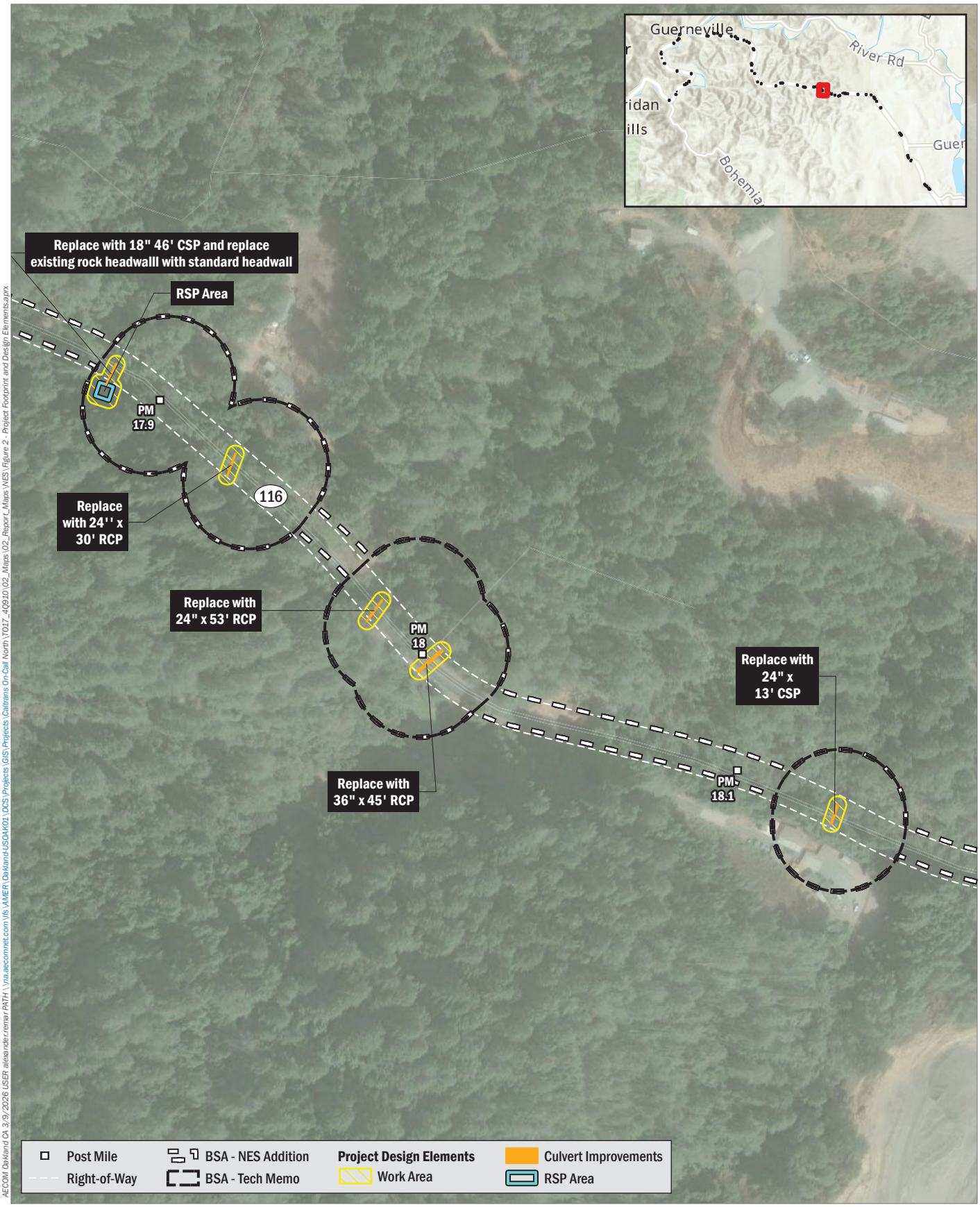
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

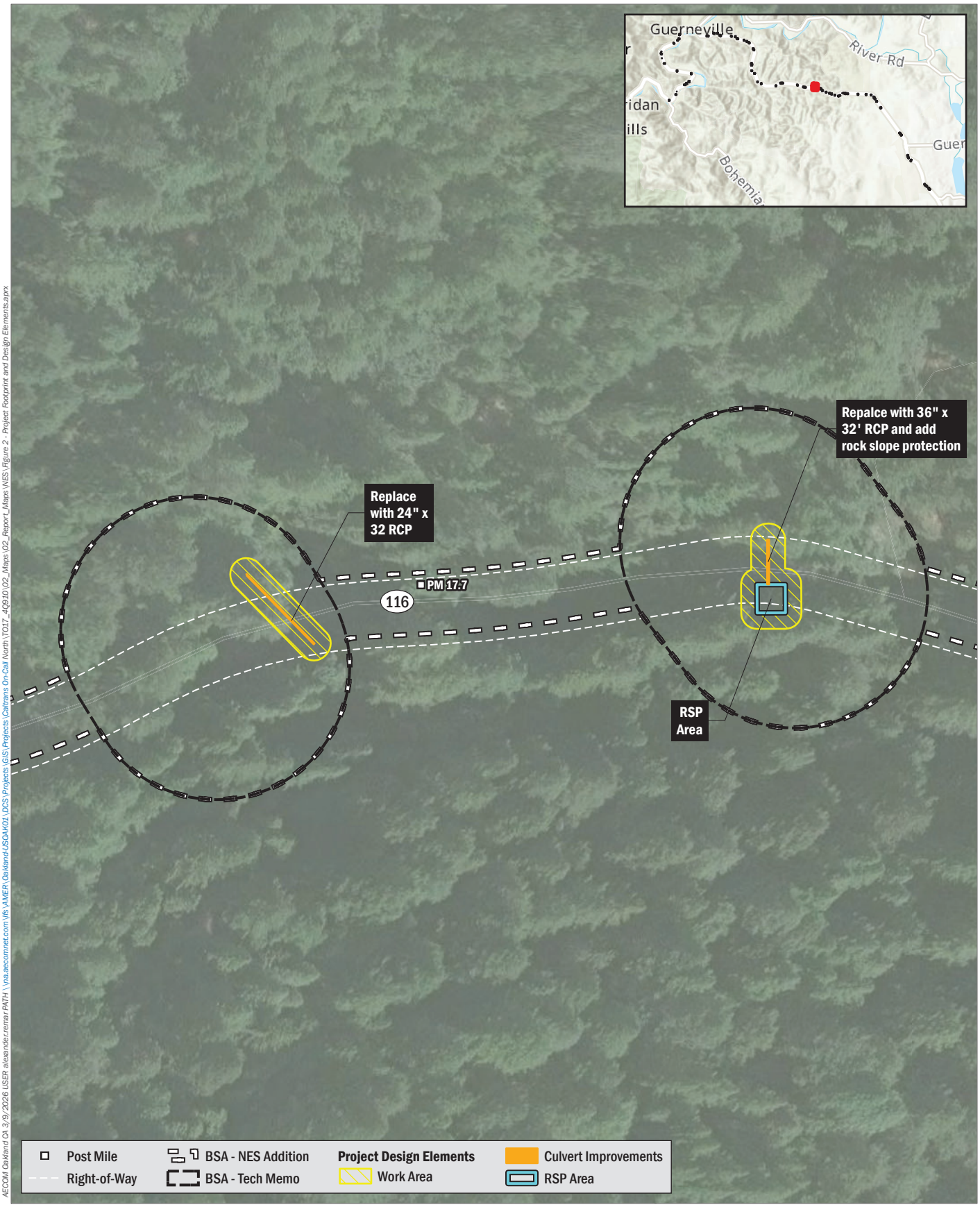
*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Sonoma SR-116
*Sonoma County, CA*
EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0
04-SON-116-PM 7.74-25.05




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

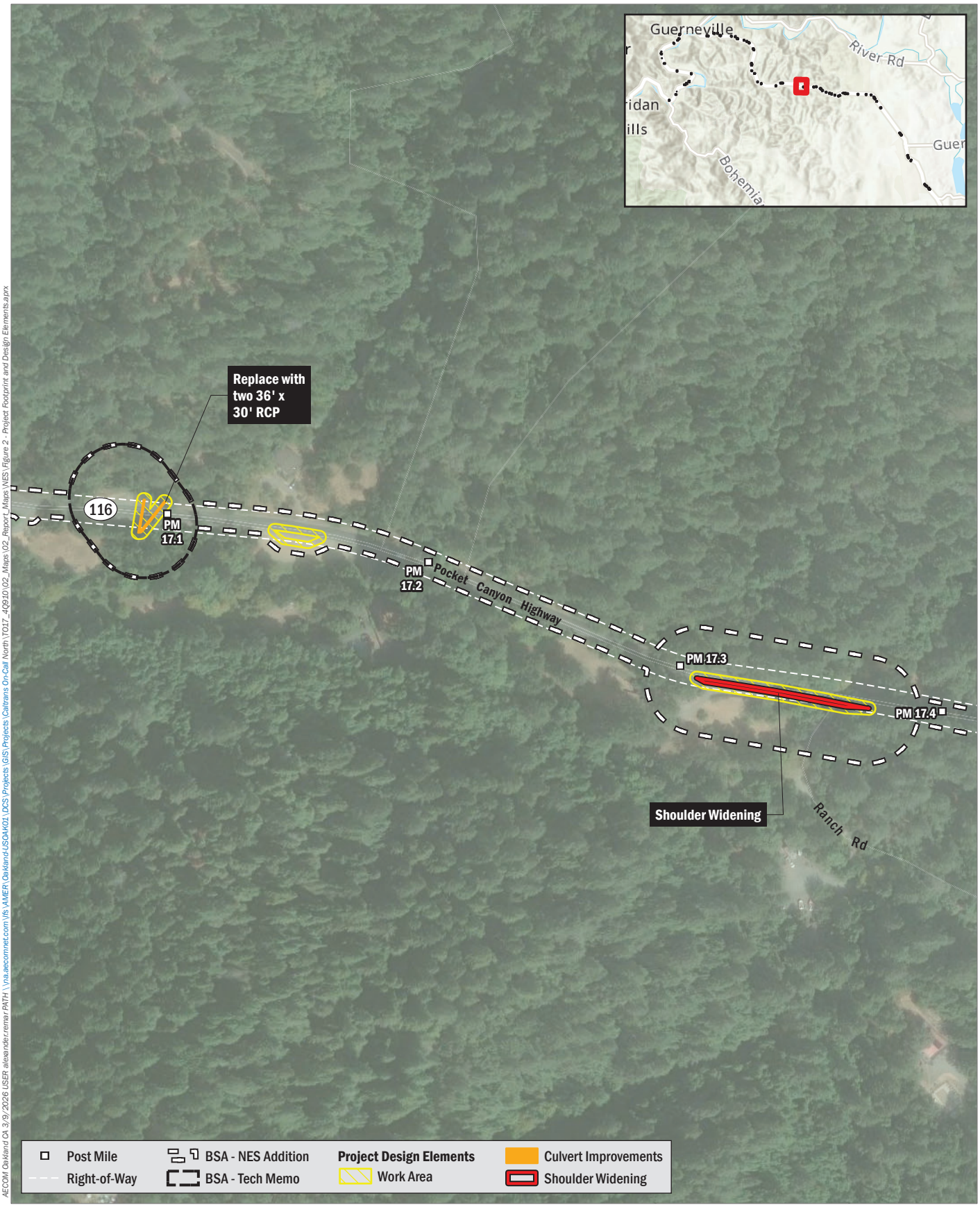
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

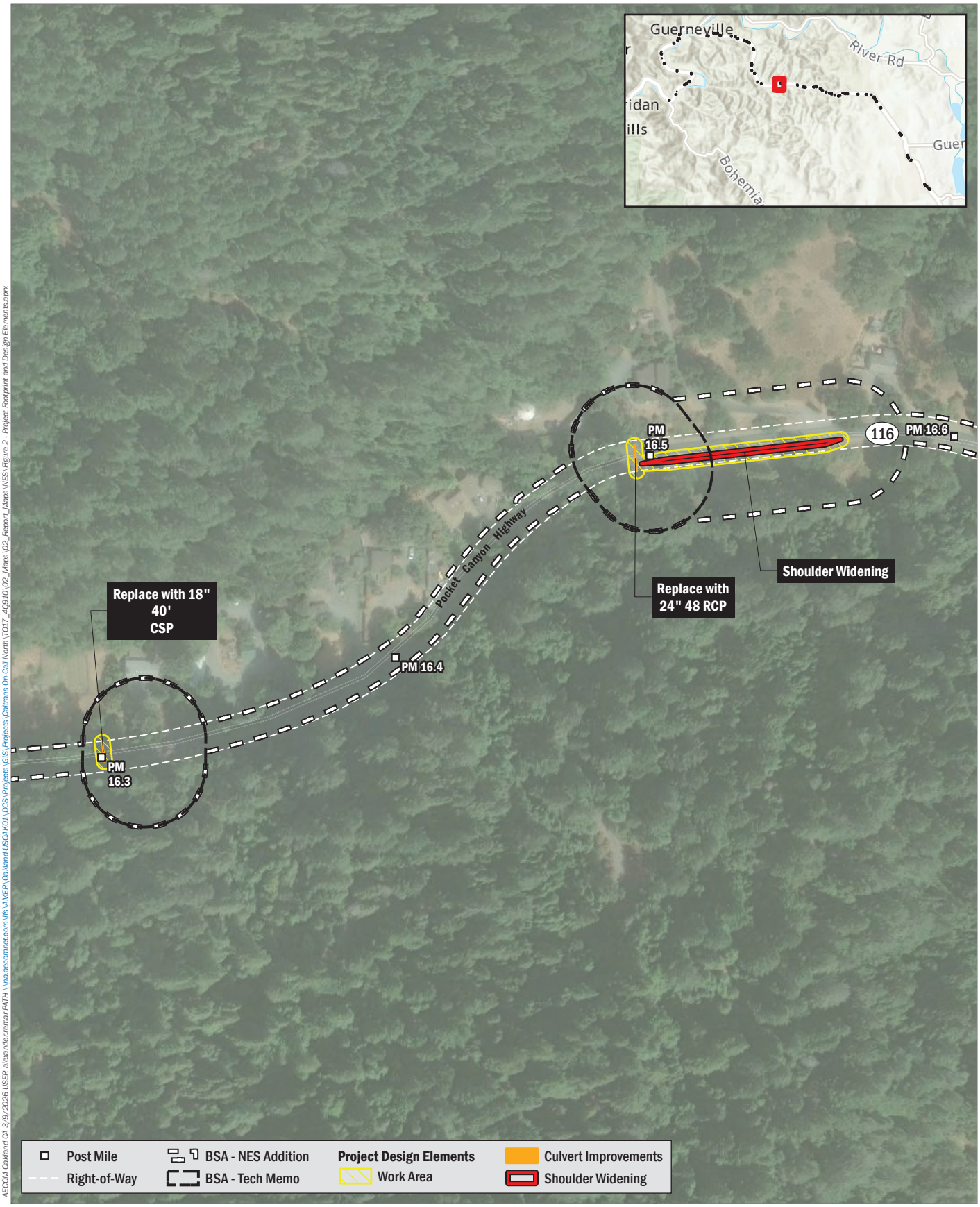
Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

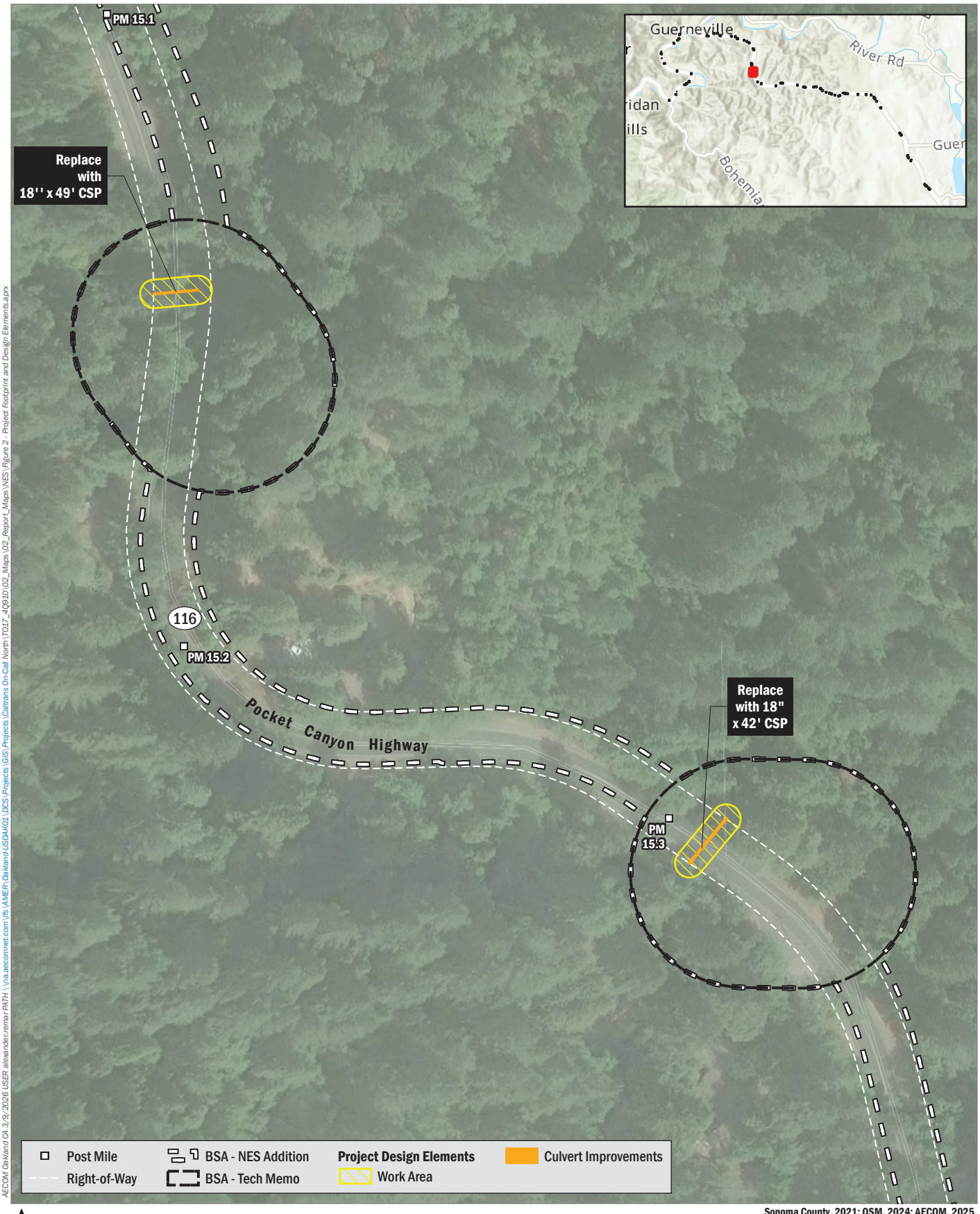
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*

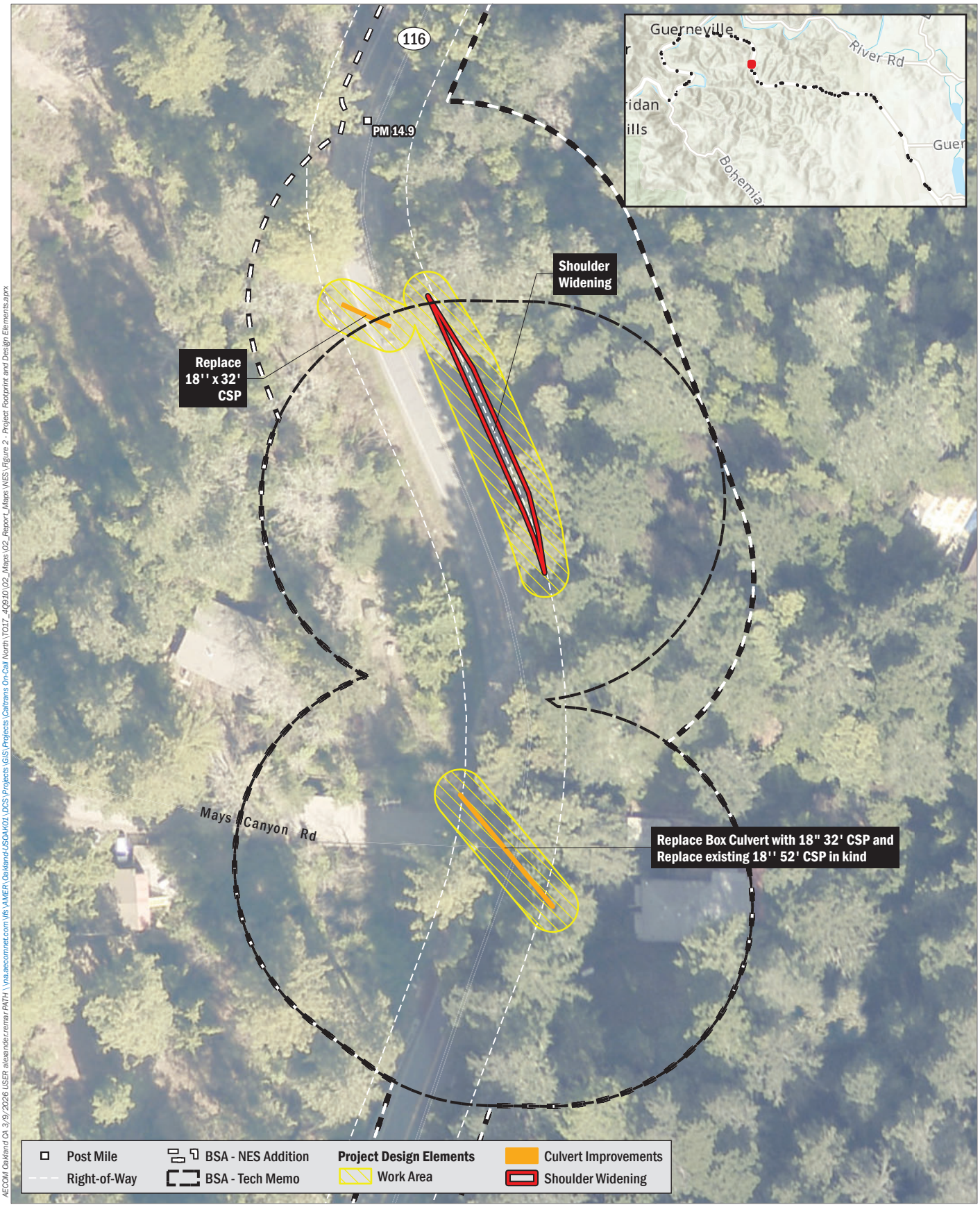



AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Sonoma SR-116
*Sonoma County, CA*
EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0
04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-US\OAK01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

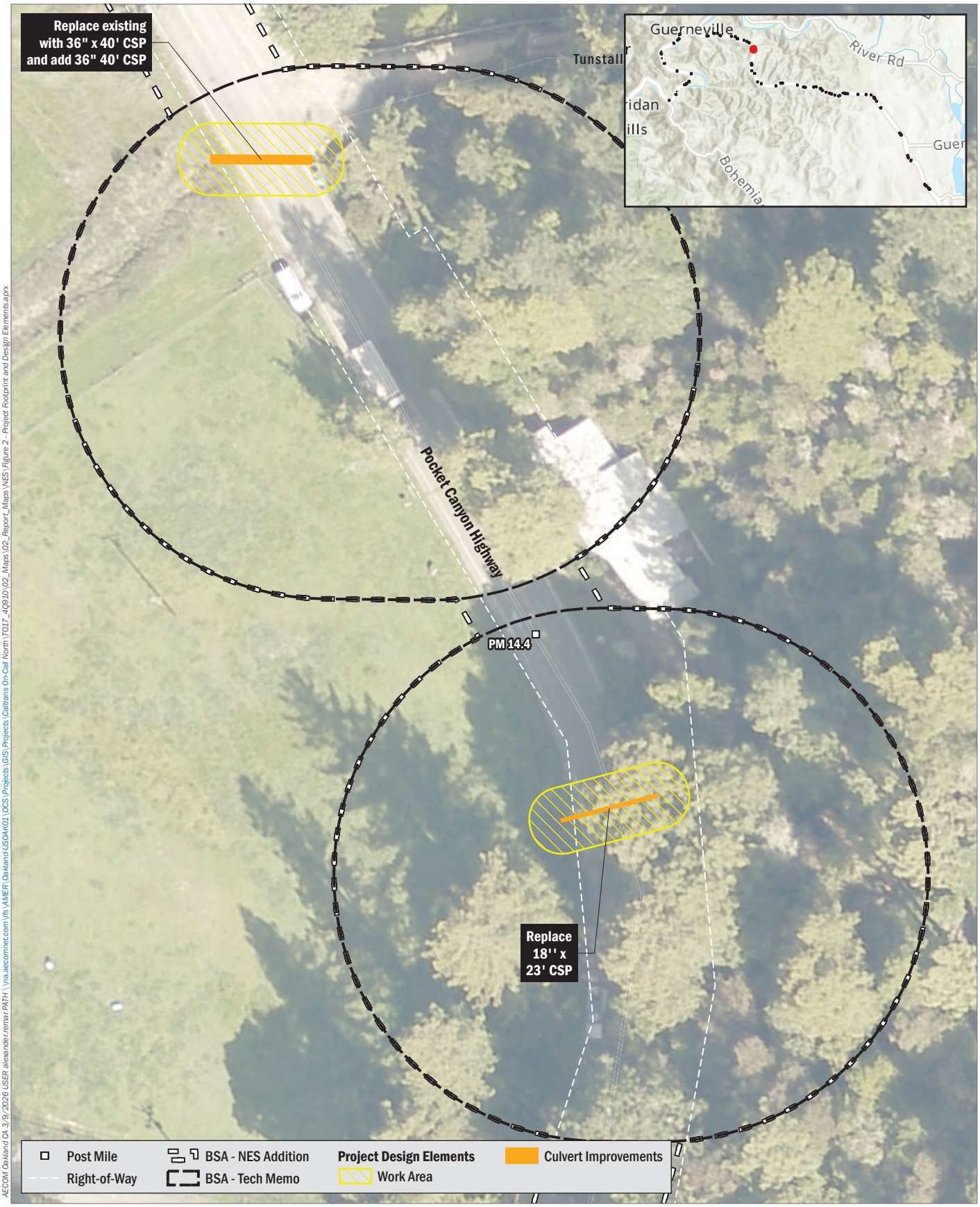
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH: \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Caltrans

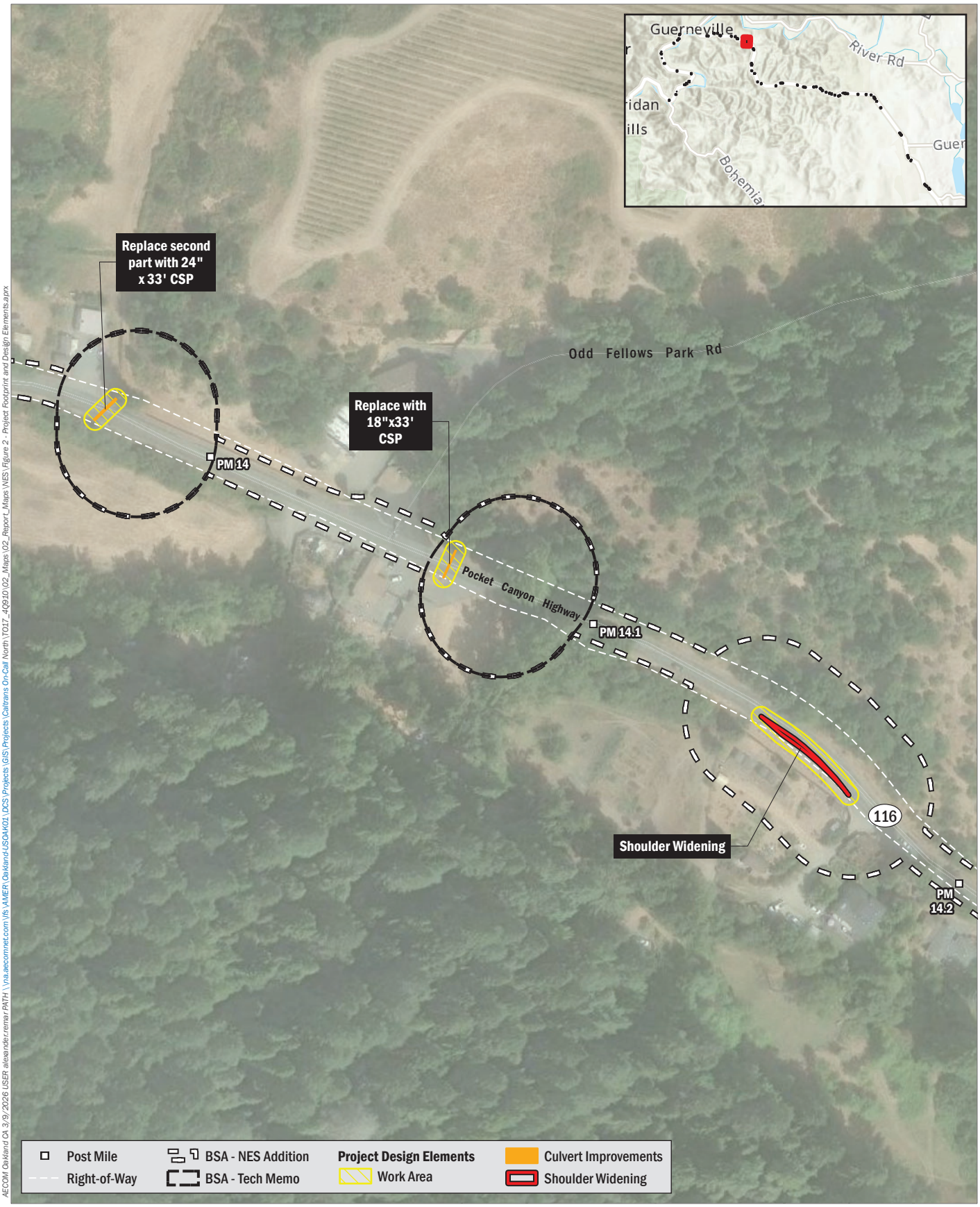
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

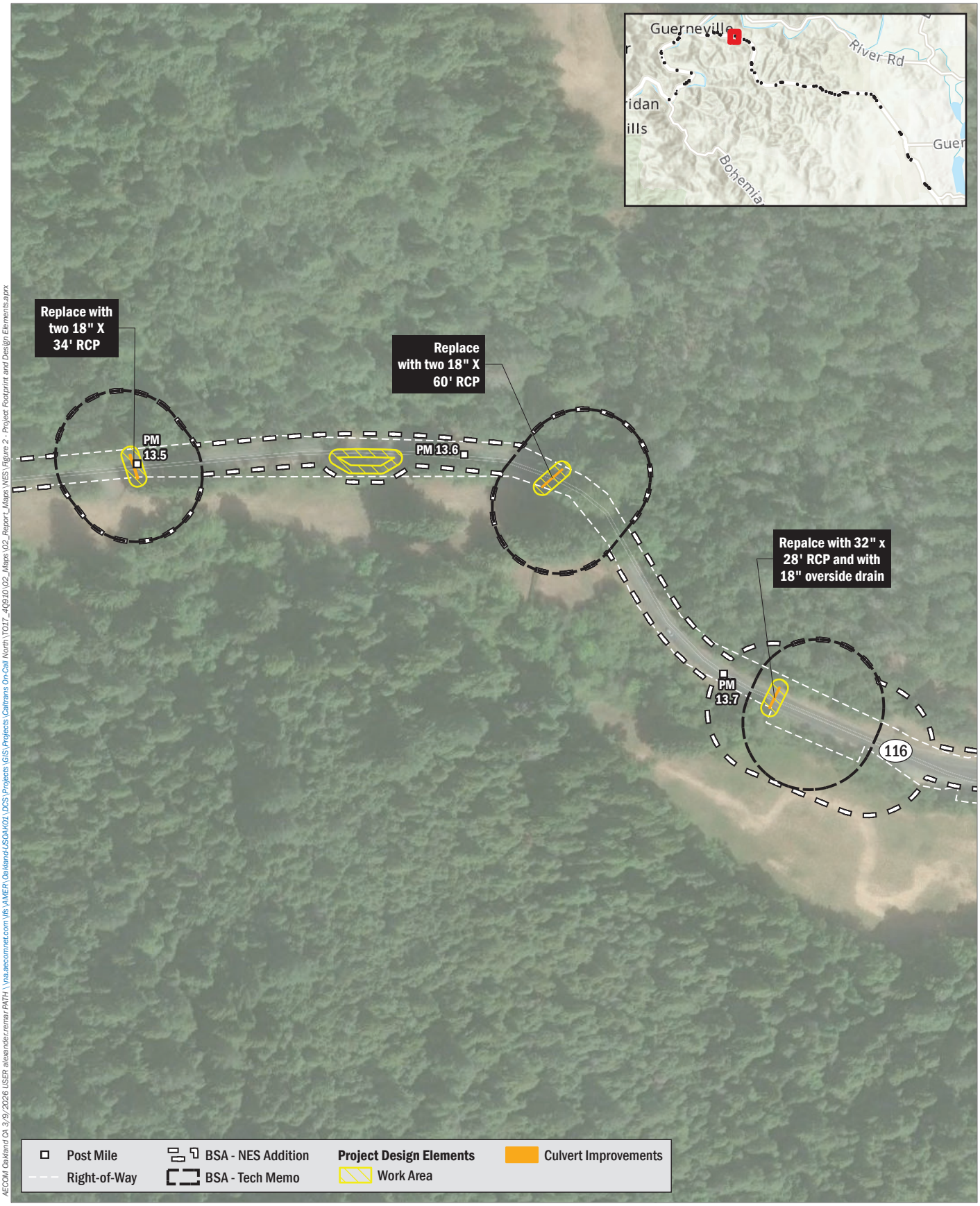
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Caltrans

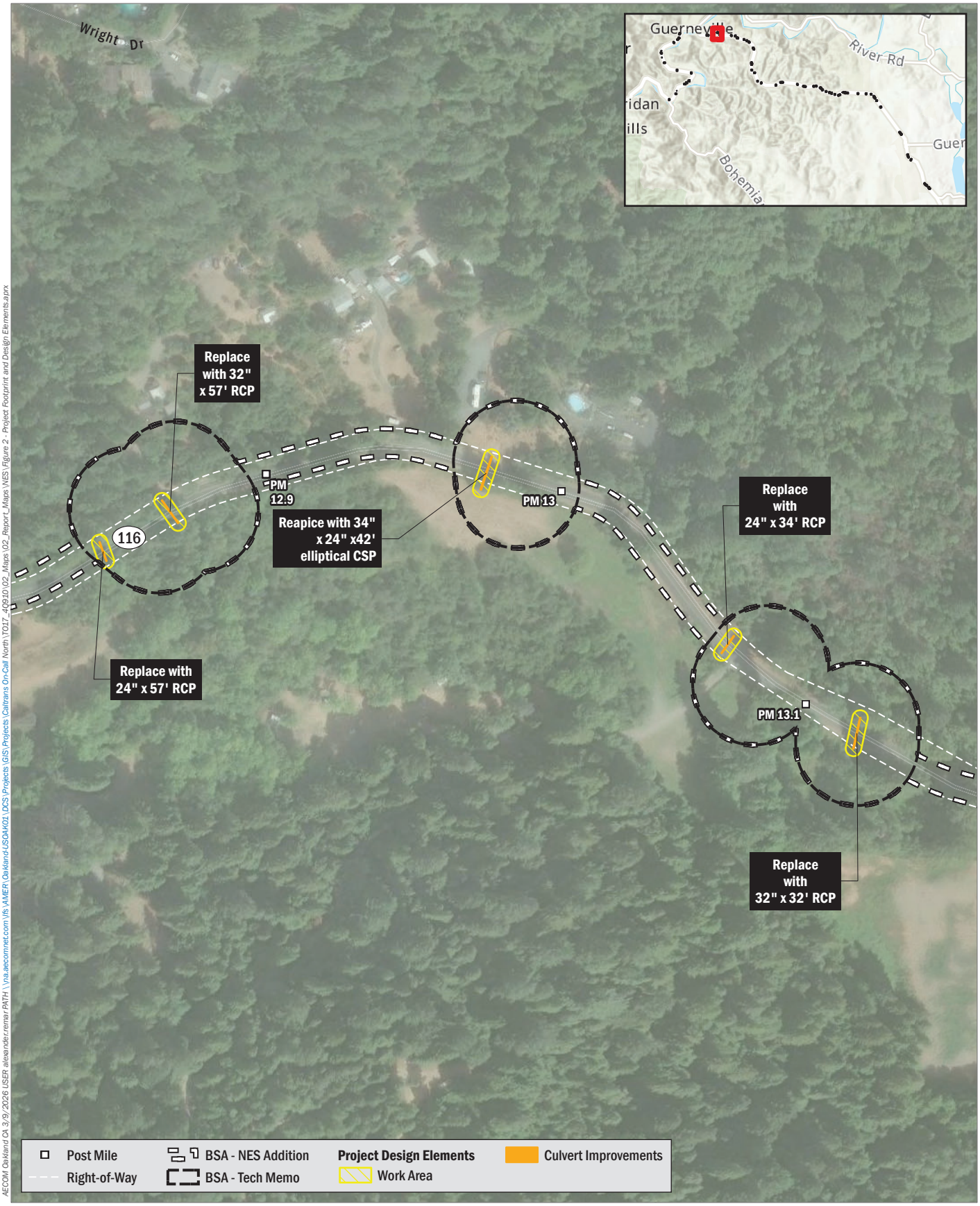
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_409310\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

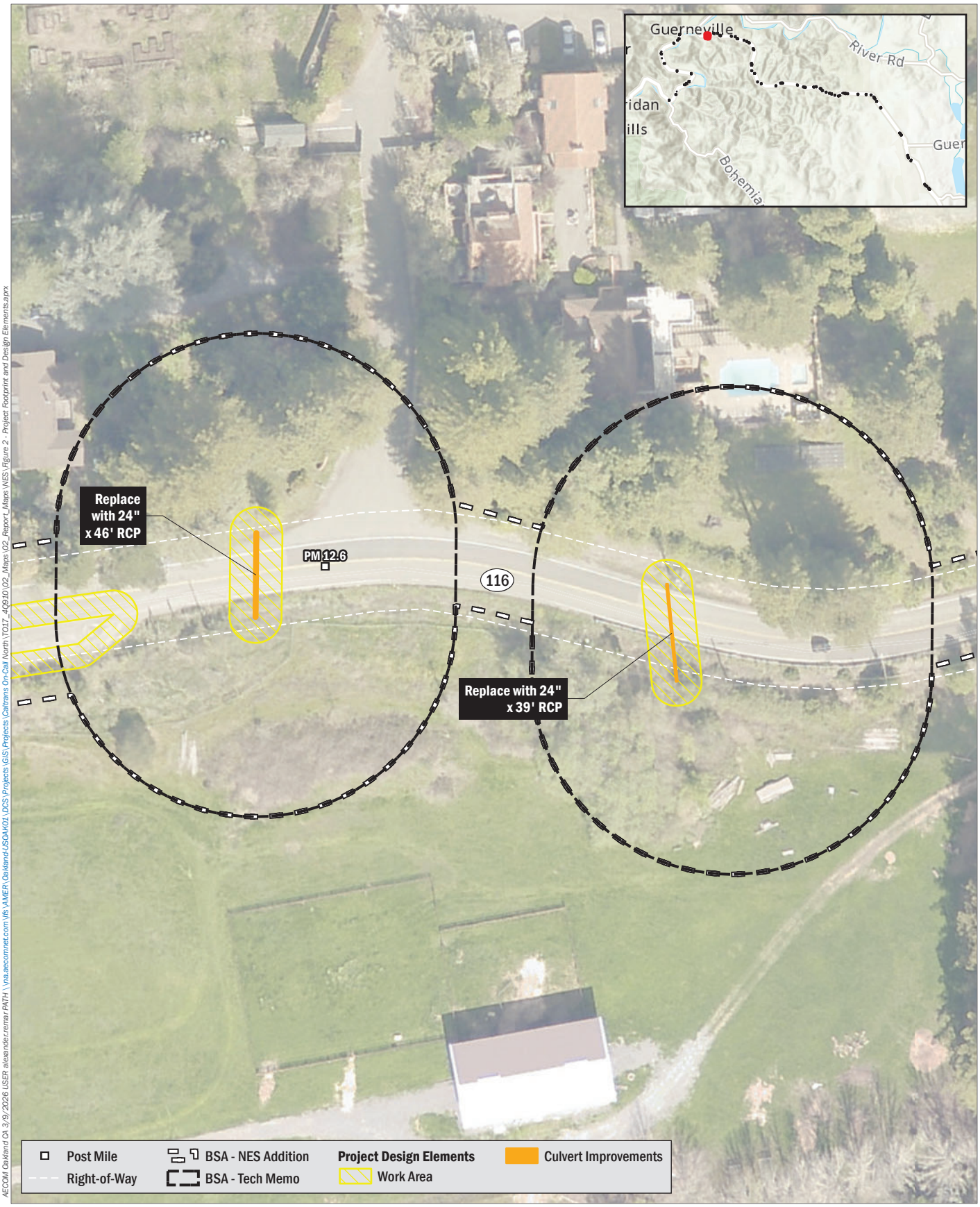
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_409310\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

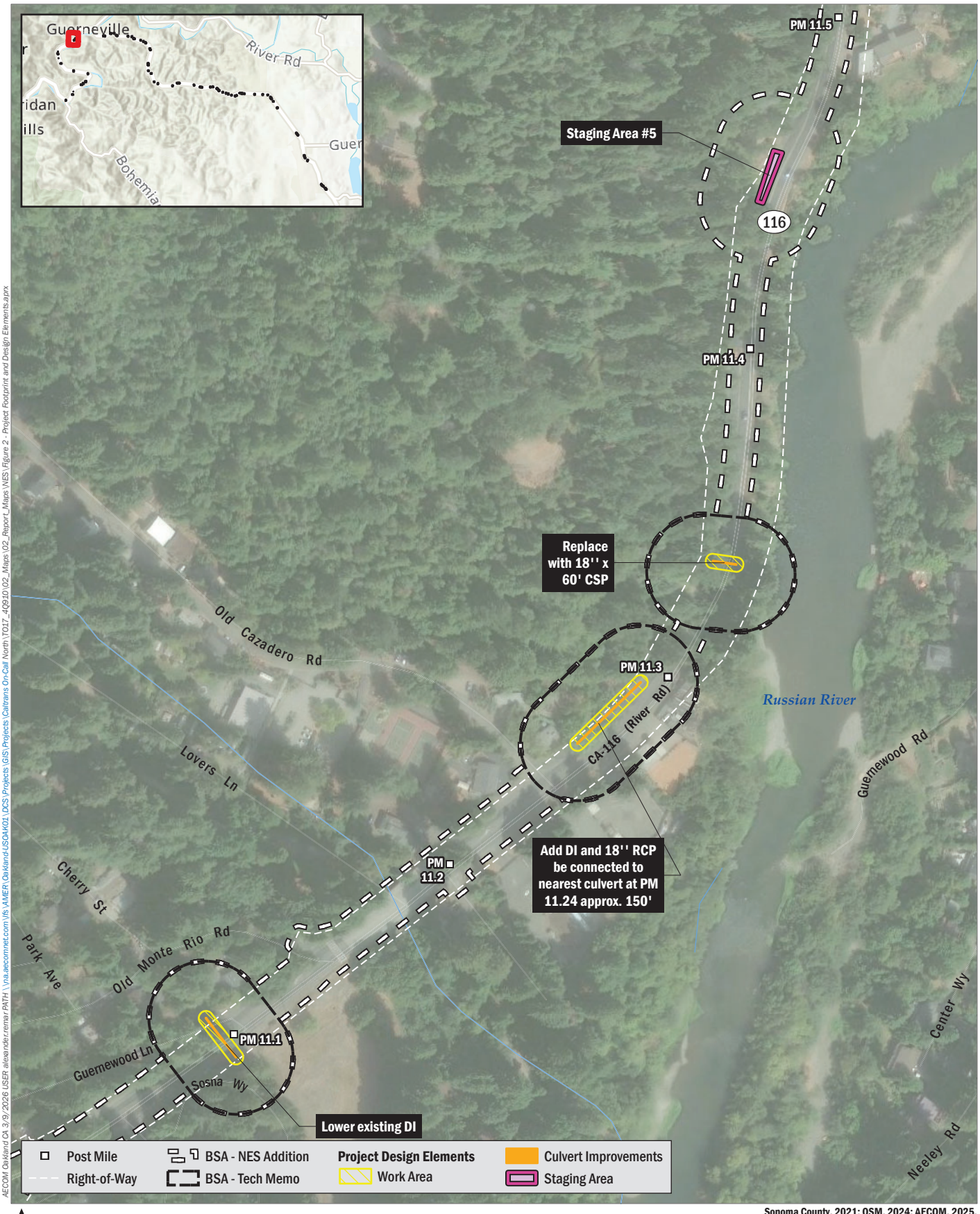
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_409910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Caltrans

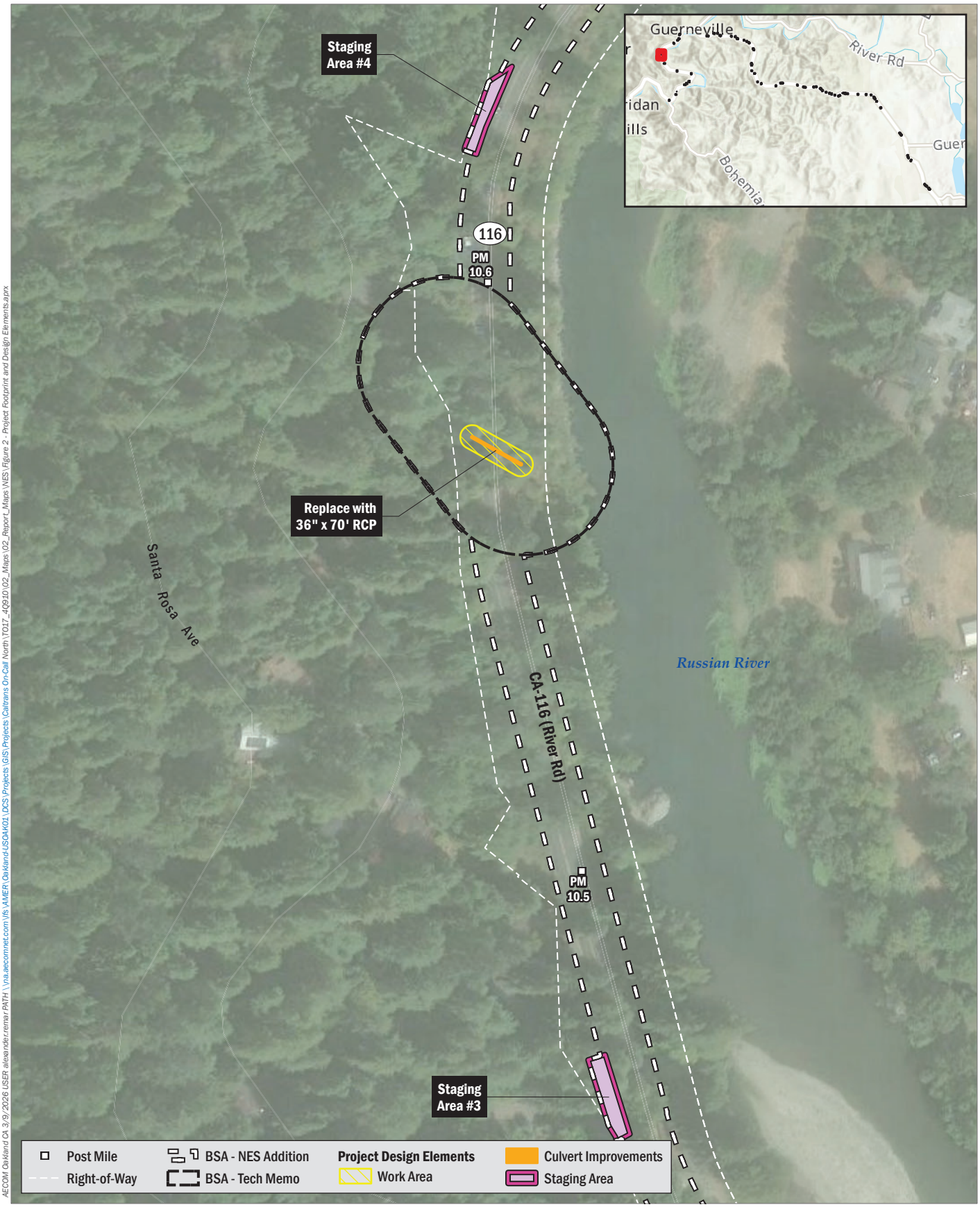
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*

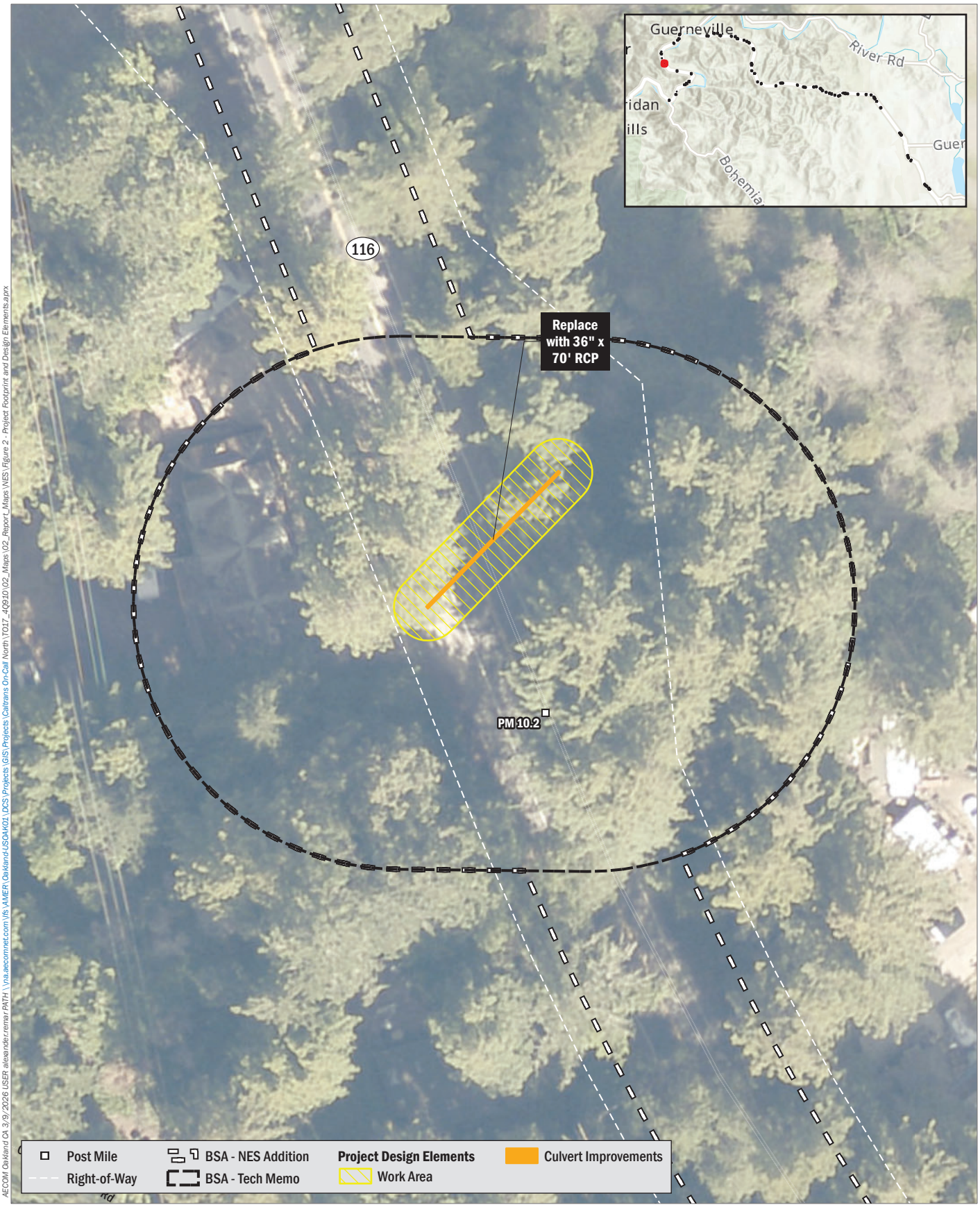



AECOM Oakland CA 3/9/2026 USER alexander.remar PATH: \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Sonoma County, 2021; OSM, 2024; AECOM, 2025.

Sonoma SR-116
*Sonoma County, CA*
EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0
04-SON-116-PM 7.74-25.05

*Project Mapping*
*Page 23 of 29*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_4Q910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

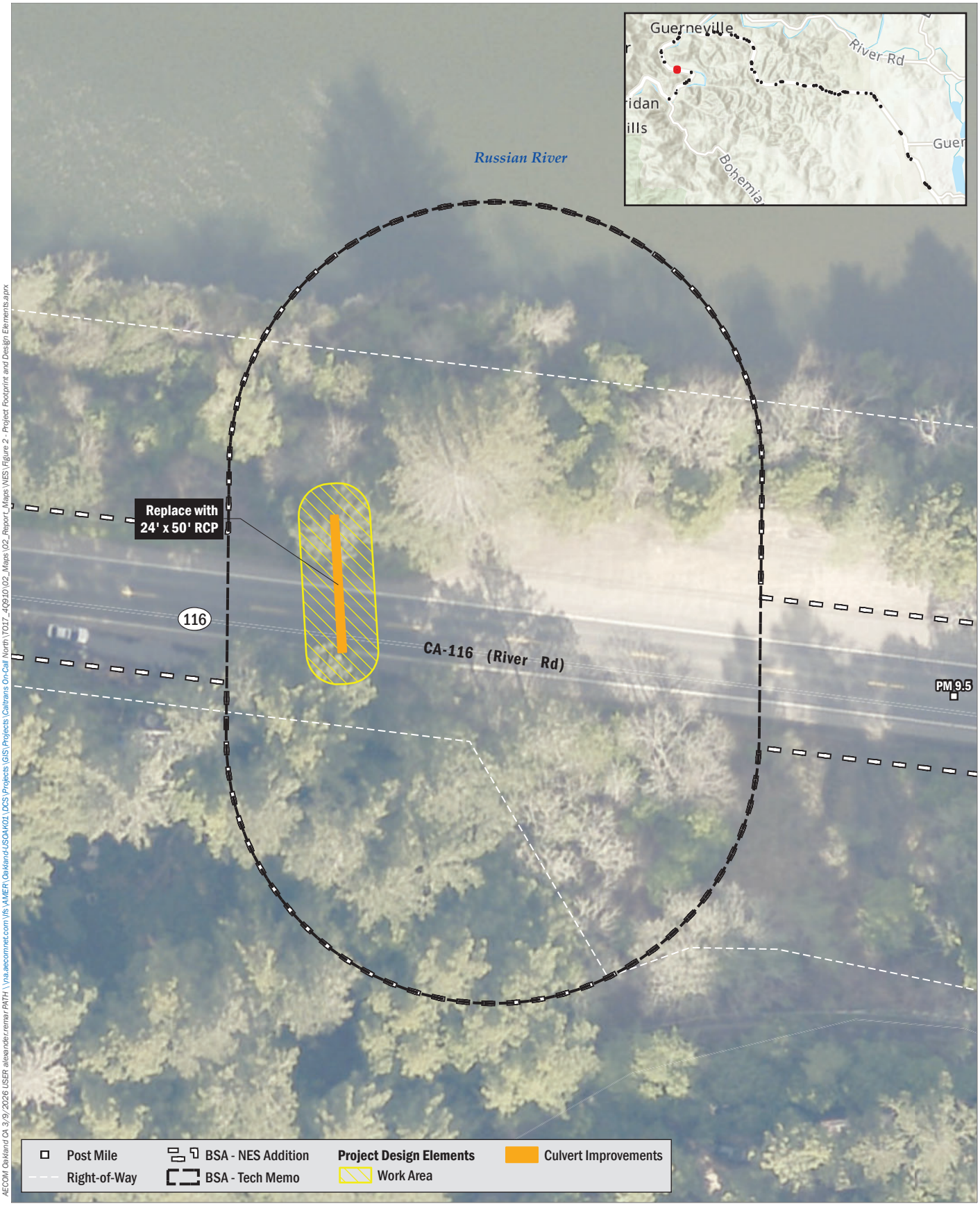
Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAK01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_409910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO1\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

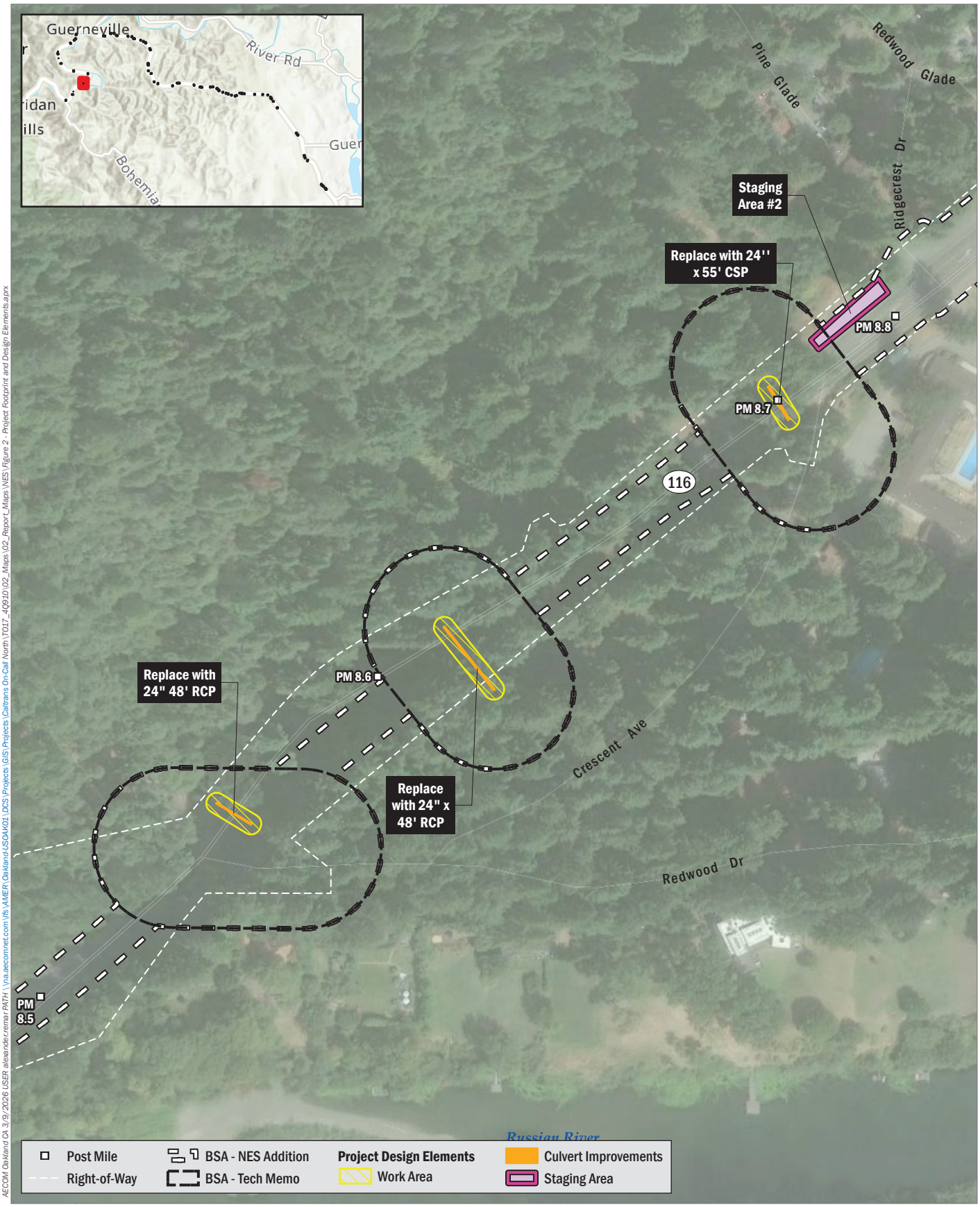
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

N

0 200

US Feet

Caltrans

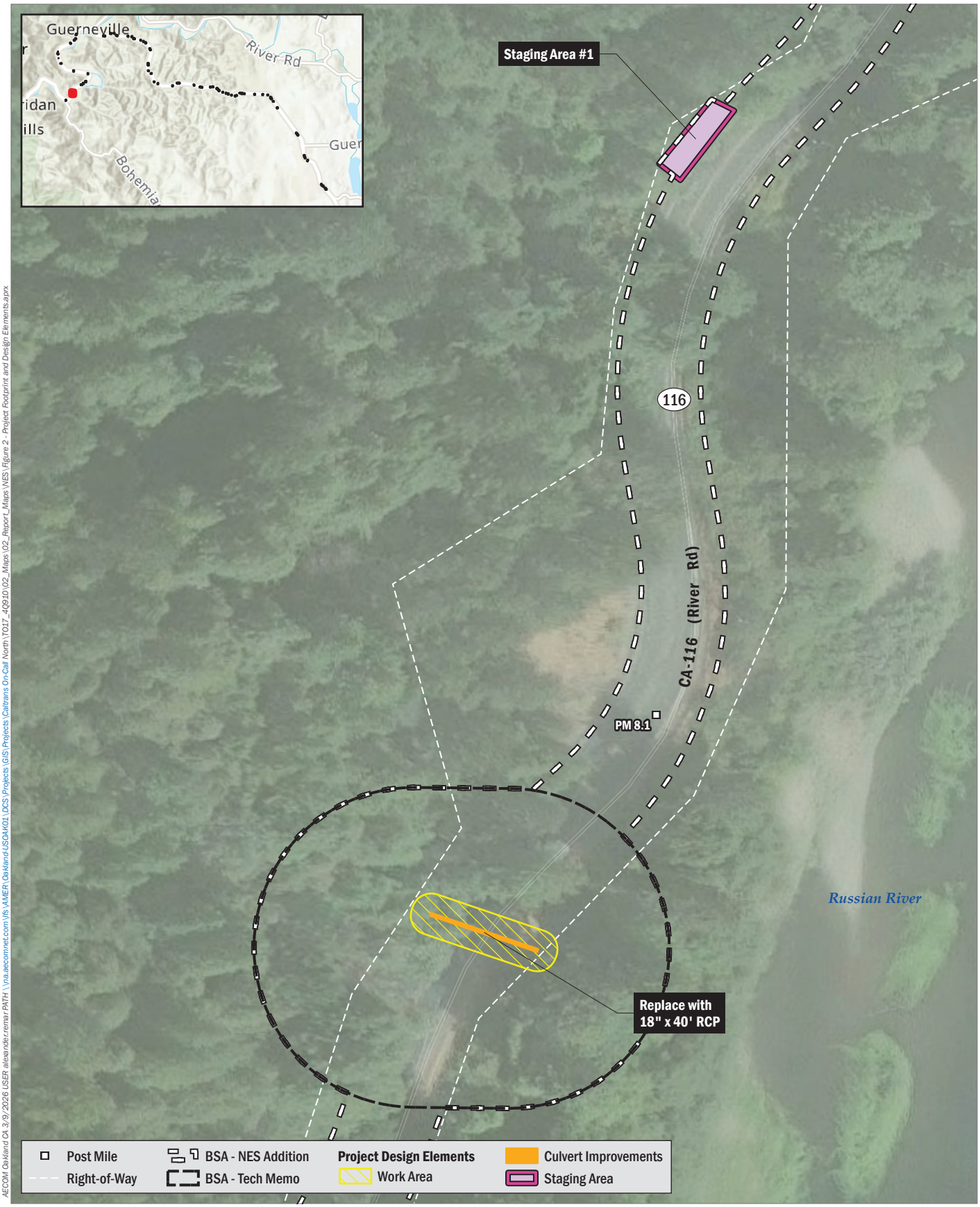
Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




Sonoma County, 2021; OSM, 2024; AECOM, 2025.

AECOM Oakland CA 3/9/2026 USER alexander.remar PATH: \\na.aecomnet.com\ifs\AMER\Oakland-USOAKO01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*




AECOM Oakland CA 3/9/2026 USER alexander.remar PATH \\na.aecomnet.com\ifs\AMER\Oakland-US\OAK01\DCS\Projects\GIS\Projects\Caltrans On-Call North\TO17_40910\02_Maps\02_Report_Maps\NES\Figure 2 - Project Footprint and Design Elements.aprx

Caltrans

Sonoma SR-116

*Sonoma County, CA*

EA-04-4Q910 / PROJECT ID 04-1900-0496 PHASE 0

04-SON-116-PM 7.74-25.05

*Project Mapping*