State Route (SR) 116 Green Valley Road Safety Improvements Project

SONOMA COUNTY, CALIFORNIA
District 04-SON-116 (PM 21.6/R22.6)
3Q640/0419000234

Initial Study with Proposed Negative Declaration

Prepared by the
State of California, Department of Transportation

November 2025

General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Sonoma County, California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document are available for review at the Caltrans District 4 office, 111 Grand Avenue, Oakland California, Monday through Friday 8am – 5pm. Additional physical copies are separately available upon request. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs.

- Attend the public meeting on Wednesday, November 19, 2025. The meeting will be held in the community room of the Graton Fire Department: 3750 Gravenstein Highway N, Sebastopol, CA 95472.

- Tell us what you think. If you have any comments regarding the proposed project, please attend the public open house and/or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Daniel Chan, District 4 Environmental Division, California Department of Transportation, P.O. Box 23660 MS-8B, Oakland, CA 94623-0660. Submit comments via email to: daniel.chan@dot.ca.gov.

- Submit comments by the deadline: December 7, 2025

What happens next:

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

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 write to or call Caltrans, Attention: Daniel Chan, P.O. Box 23660 MS-8B, Oakland, CA 94623-0660, District 4 Environmental Division, daniel.chan@dot.ca.gov; (510) 496-9435 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

04-SON-116-21.6/R22.6
0419000234

State Route (SR) 116 Green Valley Road Safety Improvements Project

INITIAL STUDY
with Proposed Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: California Transportation Commission, Regional Water Quality Control Board (North Coast, Region 1)

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

11/05/2025
Date

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

Daniel Chan
California Department of Transportation, District 4
P.O. Box 23660, MS-8B Oakland, CA 94623-0660
Daniel.chan@dot.ca.gov
(510) 496-9435 (voice)

PAGE INTENTIONALLY LEFT BLANK

Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: Pending
District-County-Route-Post Mile: 04-SON-116-PM 21.6/R22.6
EA/Project Number: 04-3Q640/0419000234

Project Description

The California Department of Transportation (Caltrans) proposes to improve the safety of SR 116 at the intersection of Green Valley Road in Sonoma County. SR 116 is a two-lane conventional highway, and the intersection is controlled by stop signs only on Green Valley Road in both directions of travel. This study discusses two build alternatives: a signalized intersection and a roundabout.

The signalized intersection alternative proposes to realign and widen the SR 116 and Green Valley Road intersection. The roundabout alternative proposes to construct a 180-foot-diameter roundabout shifted about 35 feet southwest of the existing intersection. Both build alternatives would improve safety for the traveling public by reducing the potential and severity of collisions at the intersection.

DRAFT Determination

This proposed Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Negative Declaration for this project. This does not mean that Caltrans' decision regarding the project is final. This 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 project would have no effect on air quality, cultural resources, geology and soils, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire.

- The project would have less-than-significant effects on aesthetics, agriculture and forestry resources, biological resources, energy, greenhouse gas emissions, hazards and hazardous materials, noise, transportation, and tribal cultural resources.

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

_____

Date

PAGE INTENTIONALLY LEFT BLANK

Table of Contents

List of Figures

List of Tables

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), as the California Environmental Quality Act (CEQA) lead agency and project sponsor, proposes improvements at the intersection of SR 116 and Green Valley Road in Sonoma County (Figure 1).

The proposed project is in Sonoma County on SR 116 between postmiles (PM) 21.6 and R22.6. SR 116 is one of several routes that connect the U.S. 101 corridor to SR 1 and the Pacific Coast in Sonoma County. This segment of SR 116 is part of a larger stretch of highway designated as a state scenic highway. This two-lane highway serves as the primary route connecting communities while also supporting tourism and agriculture in the Russian River Valley. Land use along the highway corridor primarily consists of rural forest and rural residential areas and includes the communities of Sebastopol, Graton, Forestville, and Guerneville.

The intersection of SR 116 and Green Valley Road is currently controlled by stop signs on Green Valley Road requiring motorists to stop before crossing or merging onto SR 116. At the intersection, SR 116 has two (2) lanes in both directions including one (1) through lane and one left-turn lane, where drivers wait for opposing traffic to clear before making left turns onto Green Valley Road. Green Valley Road has two (2) lanes at the intersection with only a through lane in each direction of travel. The lane on eastbound Green Valley Road flares slightly at the intersection and there is a “porkchop” island in the westbound direction. Both features help facilitate right-hand merges onto SR 116. The Project proposes to replace the existing intersection configuration with either a signalized intersection or a roundabout.

If approved, the Project would be funded by the State Highway Operational and Protection Program (SHOPP) under the Safety Improvements Program. The project is included in the Metropolitan Transportation Commission’s (MTC’s) Bay Area Regional Transportation Plan (RTP), Association of Bay Area Governments (ABAG), and Plan Bay Area 2050.

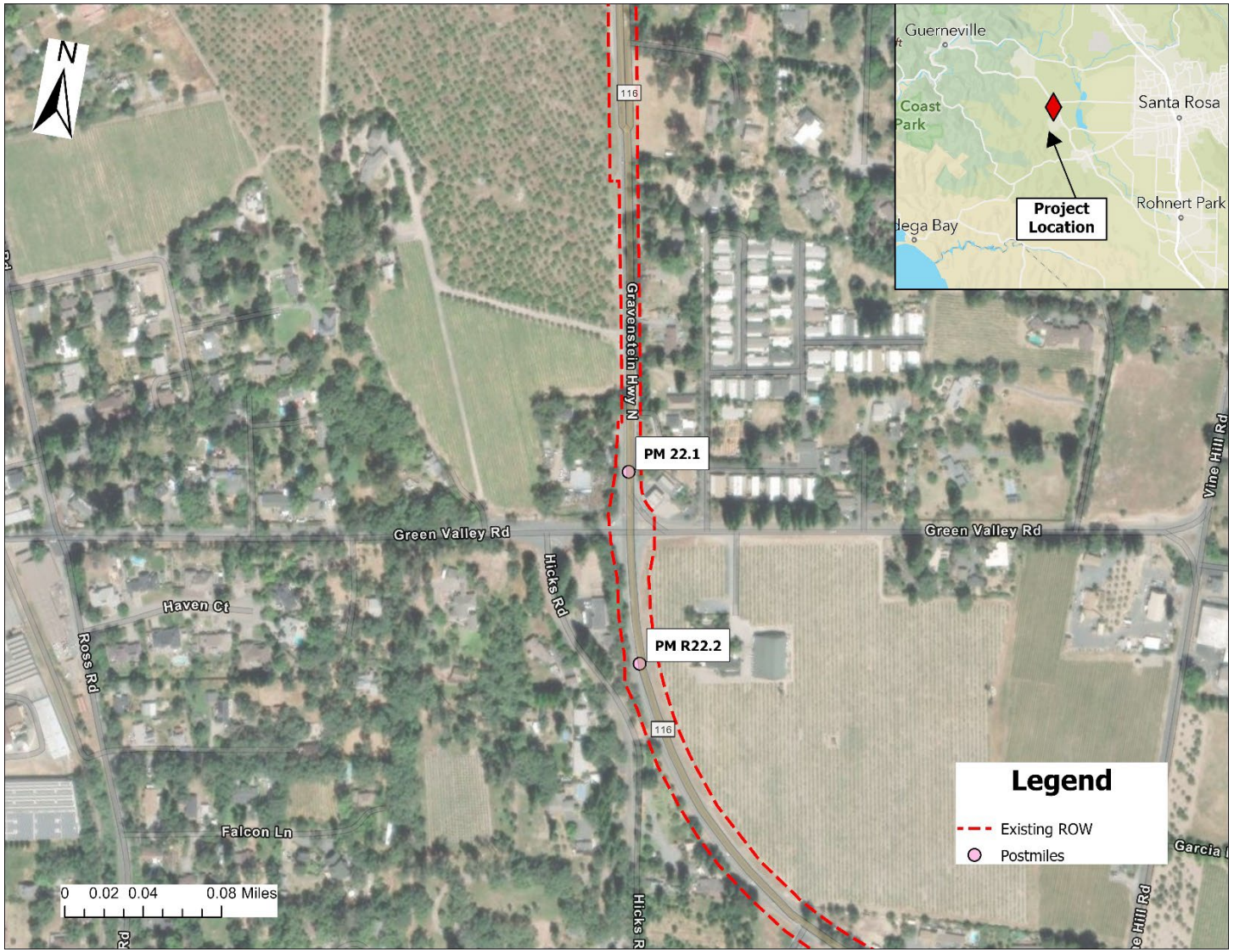


Figure 1. Vicinity Map.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to improve safety at the SR 116 and Green Valley Road intersection by reducing the potential for collisions and decreasing the severity of collisions that may occur.

1.2.2 Need

The initial Traffic Investigation Report (October 1, 2010, to September 30, 2013) identified six correctible collisions within a 1-year period. The latest 5-year collision data (January 1, 2020, to December 31, 2024) at the project location continues to show that "broadside" collisions are the predominant collision type and "failure to yield" is the leading primary collision factor. These findings continue to justify a safety improvement project to address the identified deficiencies.

1.3 Project Description

The proposed project alternatives satisfy the project's purpose and need by replacing the current uncontrolled intersection with traffic control, either traffic signals or a roundabout. The proposed alternatives are discussed below.

1.4 Project Alternatives

1.4.1 Build Alternatives

1.4.1.1 Build Alternative 1 – Signalized Intersection

Alternative 1 (Alt 1) proposes to install traffic signals, 10-foot shoulders, 6-foot sidewalks, and crosswalks on all four legs of the intersection (Figures 2-6). The existing, raised "pork chop" island in front of the gas station in the north-west corner of the intersection would be removed. Electrical elements would include signal poles and mast arms, light poles, pedestrian signals, traffic detection loops, electrical conduit and wire, and connection to electrical service. All existing traffic signs would be replaced with signs upgraded to the most current standards to assist in navigation and traffic management. The drainage systems for the intersection would be rebuilt to meet the requirements of the expanded intersection. Construction is estimated to take 3 months to complete. During construction, traffic will be handled by one way traffic control for each direction.

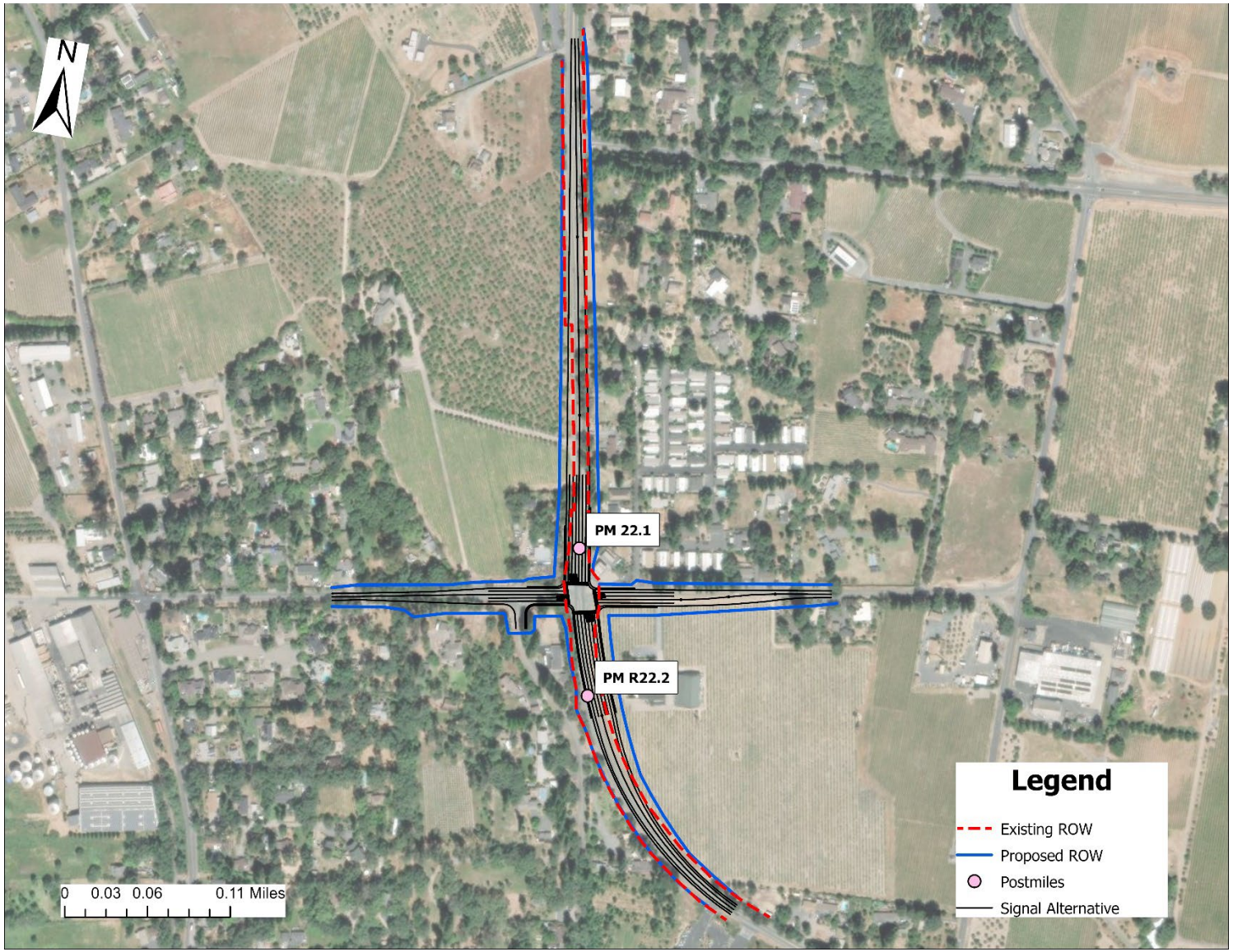


Figure 2. Overview of Alt 1. SR 116 runs north to south, while Green Valley Road runs east to west.

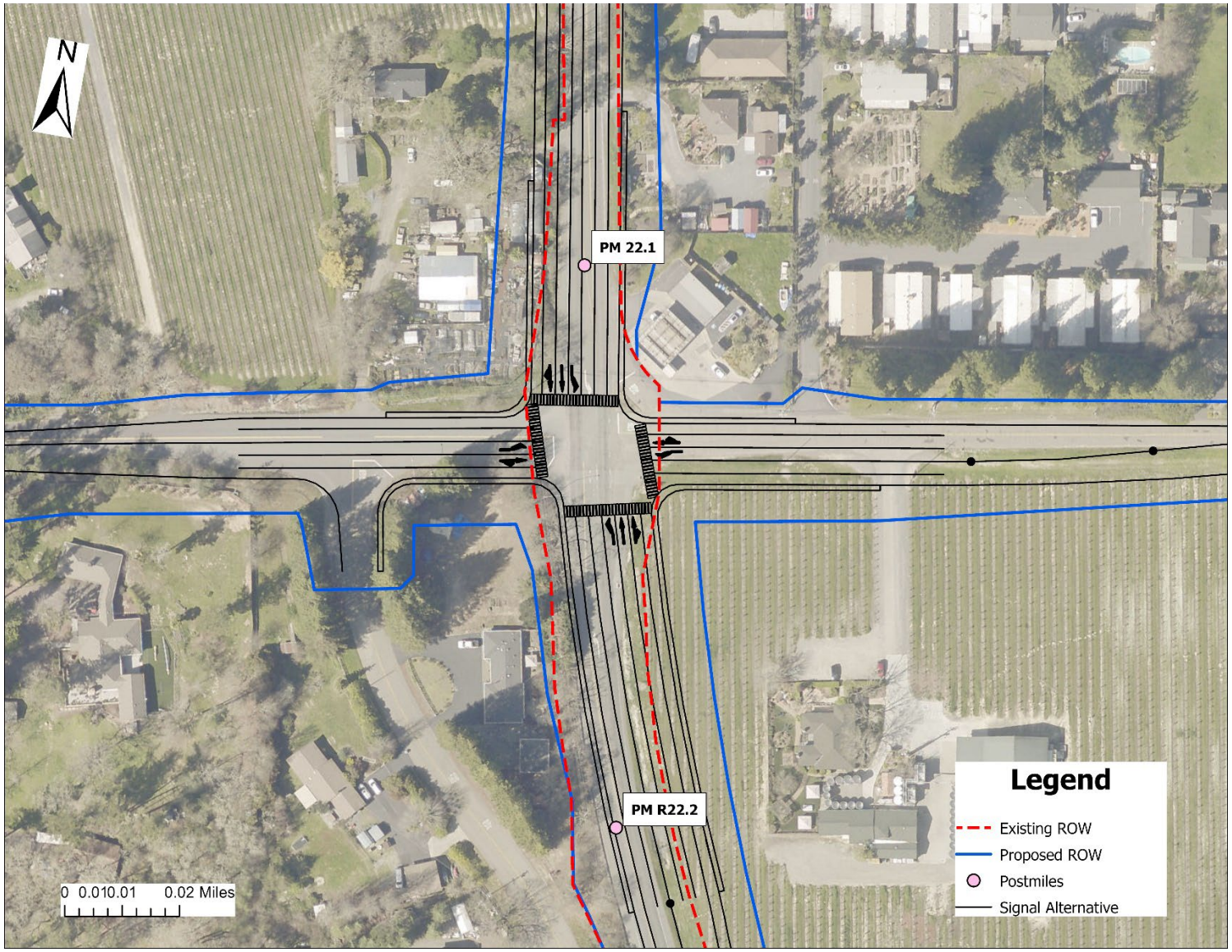


Figure 3. Center view of Alt 1. SR 116 runs north to south, while Green Valley Road runs east to west.

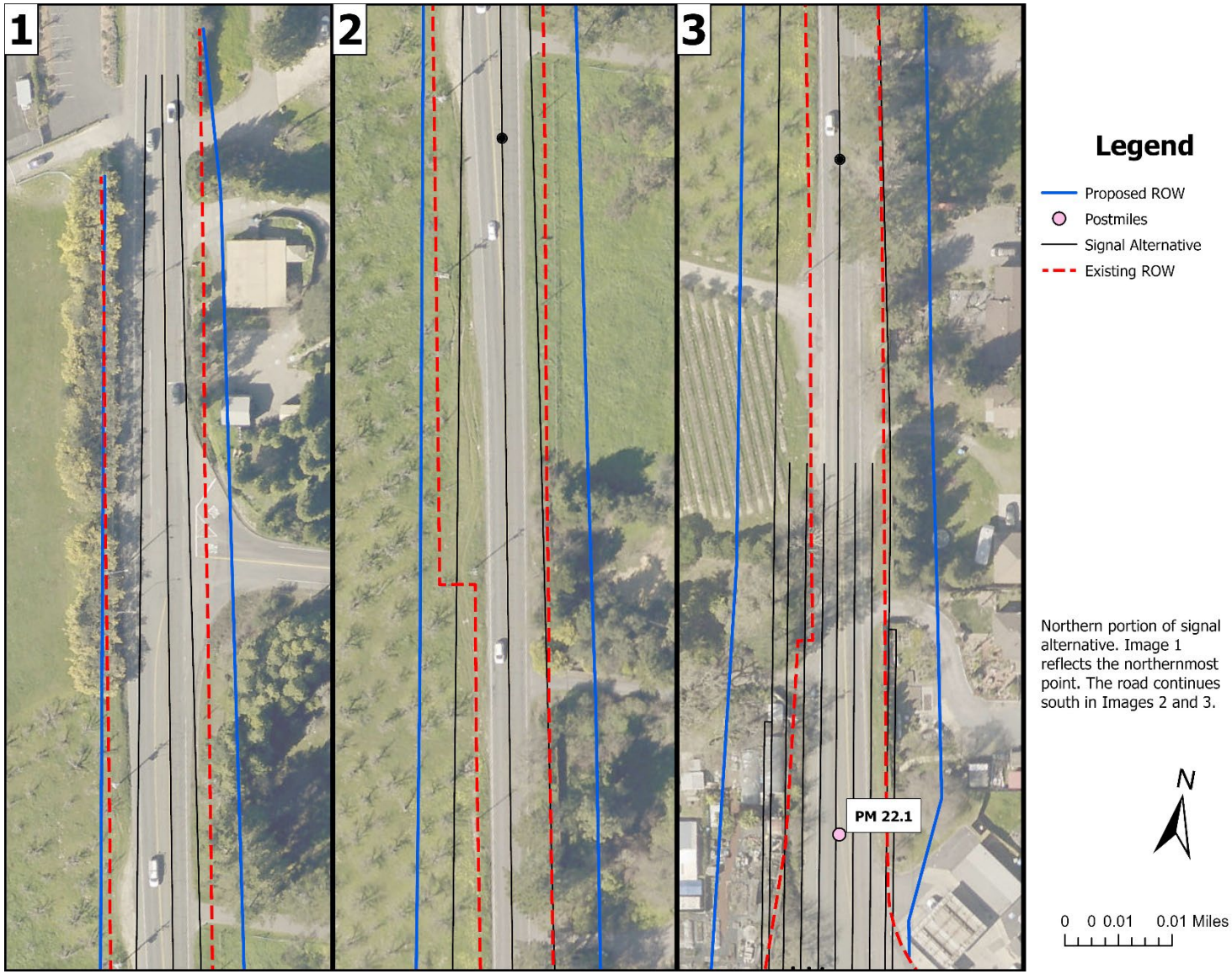


Figure 4. Northern view of Alt 1 along SR 116.

Image 1 depicts the western portion the eastern portion of the signal alternative. Image 2 depicts the eastern portion of the signal alternative.

0 0.01 0.01 0.02 Miles

N

Legend

- Existing ROW
- Proposed ROW
- Postmiles
- Signal Alternative

Figure 5. Eastern and western overview of Alt 1 along Green Valley Road.

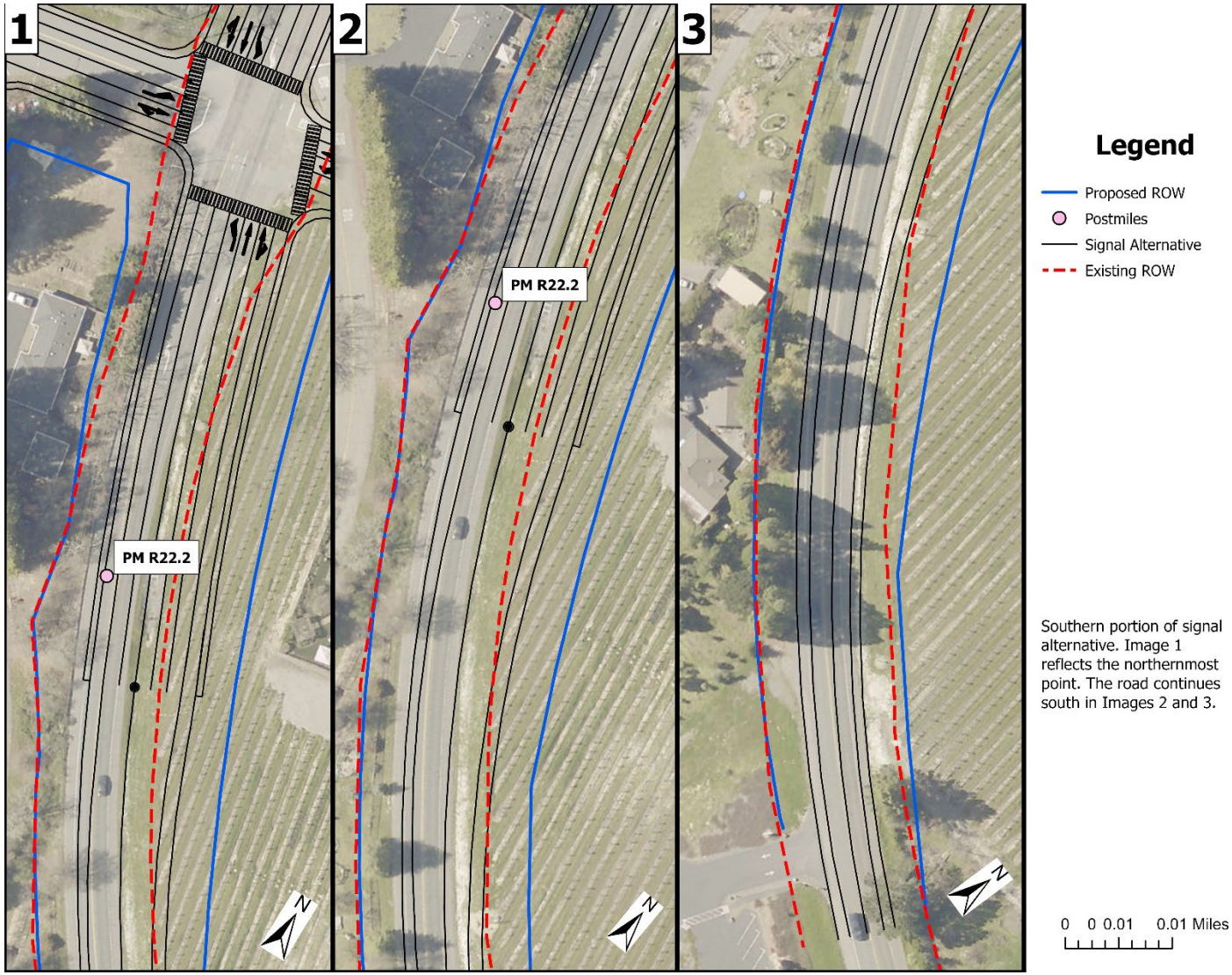


Figure 6. Southern overview of Alt 1 along Green Valley Road.

While the current design is preliminary, due to the extent of widening within the project area, approximately 128 trees would need to be removed. Utility owners within the project limits are Pacific Gas & Electric (PG&E), AT&T and Comcast (telecom), and Sonoma Water. Existing utility poles will be relocated outside of the new state right of way (ROW) as needed.

The existing configuration of SR 116 would be widened to incorporate five lanes at the signal as one approaches the intersection from the north or south. This configuration includes one left-turn lane, one through lane, and one right turn lane in each direction of travel while oncoming traffic would have a through lane and a merge lane for traffic making a right turn from Green Valley Road. Once past the intersection the highway gradually merges back to the existing condition (one-lane in each direction).

On Green Valley Road the existing two-lane configuration would expand to three lanes at the signals. This includes one left-turn lane and one through lane with a right turn lane for vehicles turning right onto SR 116, while opposing traffic would have a combined through lane and merge lane for traffic making a right turn from SR 116.

Right of Way

Alt 1 would require 45 permanent partial acquisitions and temporary construction easements (TCEs) from private property owners and Permits to Enter and Construct (PTE&C) from the County of Sonoma (Table 1; Appendix F). These assumptions are preliminary and subject to change.

Table 1. Proposed ROW acquisitions by Assessor Parcel Number (APN) for Alt 1.

APN	Area (ft^2)
County	123,042
130-110-037	62,983
130-110-027	506
130-110-017	1402
130-101-009	629
130-101-008	7641
130-101-007	10612
130-070-019	1483
130-070-019	33,233
130-070-018	1,300
130-070-014	16,705
130-060-068	4,318
130-060-067	7,071
130-060-056	4,577
130-060-049	704
130-060-048	4,958
130-060-047	8,269
130-060-045	3,015
130-060-031	3,143
130-060-011	5,250
130-060-009	2,664

1.4.1.2 Build Alternative 2 – Roundabout

The roundabout alternative (Alt 2) proposes to construct a 4-legged roundabout with single entrance and exit lanes (Figure 7). The roundabout would be approximately 180 feet in diameter and would accommodate a 65-foot-long truck, the maximum allowable in California. Alt 2 proposes sixteen new streetlights and their associated pull boxes, conduits and wires, and connections to electrical service. All existing traffic signs would be replaced with signs upgraded to the current standards to assist in navigation and traffic management. The drainage systems would be rebuilt to meet the requirements of the roundabout. To construct Alt 2 approximately 58 trees would need to be removed. Construction is estimated to take 7 months to complete. During construction, traffic will be handled by one way traffic control for each direction.

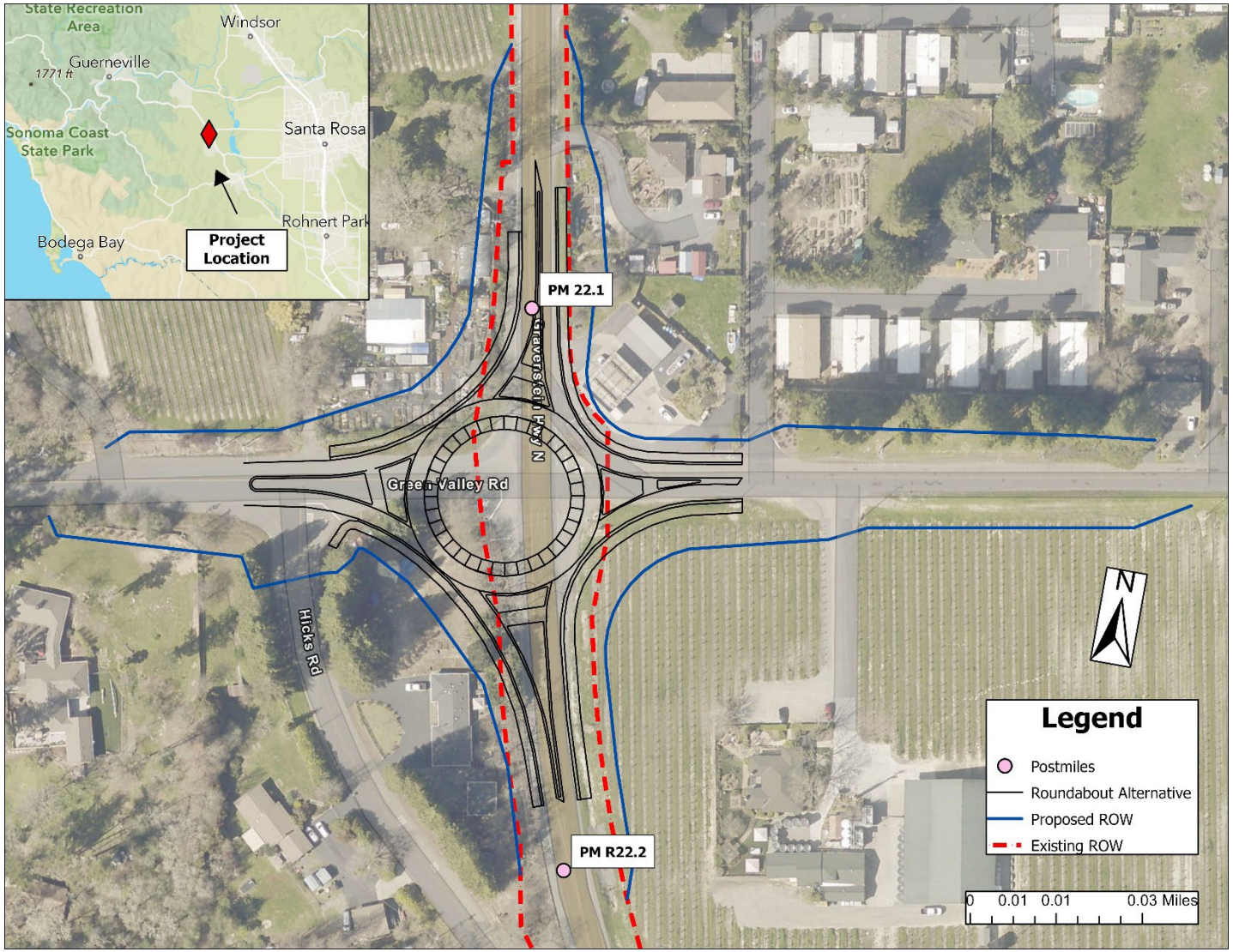


Figure 7. Overview of Alt 2.

Right of Way

Alt 2 would require 25 permanent partial acquisitions and temporary construction easements (TCEs) from private property owners, Permits to Enter and Construct (PTE&C) from the County of Sonoma, partial fee acquisitions, and an acquisition of title of public right of way under Streets and Highways Code Section 83 from the County of Sonoma (Table 2 and Appendix F). These assumptions are preliminary and subject to change.

Table 2. Proposed ROW acquisitions by Assessor Parcel Number (APN) for Alt 2.

APN	Area (ft^2)
County	70,591
130-060-009	3,173
130-060-010	4,145
130-060-011	1,551
130-070-014	13,677
130-070-019	2296
130-070-019	2385
130-060-030	361
130-060-031	5,992
130-101-007	2,797
130-101-008	14,067
130-101-009	619
130-110-037	16,886

1.4.2 No-Build (No-Action) Alternative

If the No Build Alternative is chosen, no improvements to SR 116 would be implemented and the intersection with Green Valley Road would remain in its existing configuration.

1.5 Construction Methodology

The project is anticipated to start construction in 2027 and end in 2028. Construction-related activities would be mostly limited to daytime hours. However, some work may occur during nighttime hours to avoid temporary highway closures for tasks that could interfere with traffic or create safety hazards. Such tasks include pavement resurfacing, re-striping operations, and traffic control setup.

Prior to the beginning of construction-related activities, construction area signs and environmentally sensitive area (ESA) fencing will be installed. Temporary water pollution and erosion control best management practices (BMPs) would also be installed. ESA fencing outlines the construction site limits while also protecting vegetation, trees, and other similarly sensitive areas from construction-related activities. Construction staging areas will not be allowed in locations that damage or remove native vegetation and located to shield residents and motorists from impacts to the maximum extent possible.

Stages of construction for both build alternatives are as follows.

- Remove vegetation, then stockpile excess material for re-use
- Demolish existing features to acquire additional ROW, remove the existing traffic island
- Widen, resurface/reconstruct, and restripe the existing roadway on SR 116 northbound
- Widen, resurface/reconstruct, and restripe the existing roadway on SR 116 southbound
- Widen, resurface/reconstruct, and restripe the existing roadway on Green Valley Road westbound
- Widen, resurface/reconstruct, and restripe the existing roadway on Green Valley Road eastbound
- Modify the drainage systems
- Install electrical components
- Construct Americans with Disabilities Act (ADA) features

Traffic control and various stages of construction work will occur for both alternatives. As construction ends, all temporary construction related materials such as environmentally sensitive area fencing and temporary stormwater construction site BMPs would be removed.

1.6 Standard Measures and Best Management Practices Included in All Build Alternatives

Under CEQA, “mitigation” is defined as avoiding, minimizing, rectifying, reducing/ eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. These are measures that typically result from laws,

permits, agreements, guidelines, resource management plans, and resource agency directives and policies. For this reason, the measures and practices are not considered “mitigation” under CEQA; rather, they are included as part of the project description in environmental documents.

This Project contains a number of standardized project features, standard practices (measures), and Best Management Practices (BMPs) which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. Best Management Practices (BMPs) for this project will include measures to provide for soil stabilization, sediment control, wind erosion control, tracking control, non-storm water management, and waste management/materials pollution control. Additionally, Permanent Erosion Control measures will also be implemented to stabilize all disturbed project areas.

Refer to Appendix B for a summary of Project Features and Avoidance and Minimization Measures for this project.

1.7 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, has been prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.8 Permits and Approvals Needed

Permits, licenses, agreements, and certifications are required for project construction for both Build Alternatives from the Regional Water Quality Control Board (RWQCB) and U.S. Fish and Wildlife Service (USFWS; Table 3).

Table 3. Permits and approvals needed for Project.

Agency	Permit/Approval	Status
RWQCB	Water Discharge Requirement (WDR)	CT has requested technical assistance. Application will be drafted and submitted after project approval.
USFWS	Biological Opinion	CT has requested technical assistance. Application will be drafted and submitted pending BA submission to the USFWS.

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 will 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 thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.

"No Impact" determinations in each section are based on the scope, description, and location of the proposed project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

Considering the information in the Visual Impact Assessment dated 06/20/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
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—Would the project:	CEQA Significance Determinations for Aesthetics
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**

Affected Environment

The proposed project is in the Central California Foothills and Coastal Mountains ecoregion of northern California. The project corridor (i.e., area of land that is visible from, adjacent to, and outside the ROW, and is determined by topography, vegetation, and viewing distance) is in an agricultural valley between east and west portions of the coast range mountains and coast range segments.

The landscape within the project corridor is characterized by the relatively flat and open area of the Santa Rosa Plain to the east with more varied and rolling topography west and north of the project site. Landcover consists of a mix of vineyards and orchards, with intermittent stretches of wildland and cultivated trees and shrubs lining the corridor. In general, the project is within a semi-rural environment with more urbanized communities to the east and more rural communities to the west.

SR 116 is within an *Officially Designated State Scenic Highway* that extends from Sebastopol to SR 1 in Jenner, Sonoma County. This location does not have *Classified Landscape Freeway status* or state plantings. Scenic resources have not been identified within the corridor in a Scenic Resource Evaluation; however, the Open Space and Resource Conservation Element of the Sonoma County General Plan (2020) includes vineyards in Sonoma County as landscapes of special importance. Additionally, several large native oak trees exist within the project area. In accordance with the 1988 Sonoma

County Scenic Highway Corridor Study and the Sonoma County General Plan 2020, tree removals must be minimized and replanted if removed.

Environmental Consequences

Regardless of which build alternative is approved, visual environmental disturbance during construction would include construction vehicle presence, construction signs, material storage, occasional night lighting, as well as demolition of existing pavement. Along with construction of new project elements, effects could range from no impact to moderately high impact depending on minimization.

a) **Less Than Significant Impact**

No designated scenic vistas were identified within the project study area. However, scenic views of a nearby vineyard as well as surrounding semirural and agrarian landscape would be impacted:

- **Alt 1:** Traffic signals would appear in the foreground, but these vertical elements are narrow and would not greatly impact scenic views. As in the Roundabout Alternative, tree removal would open scenic views of the coastal mountains to the west. This would have a moderate degree of visual impacts on existing scenic views, and they would not be substantially affected.

- **Alt 2:** Project elements would appear in the foreground of views from most areas of the two roadways but would not otherwise negatively impact scenic views. Tree removals would open scenic views of the coastal mountains to the west. This would have a moderate degree of visual impacts on scenic views and would be less than substantial.

b) **Less than Significant Impact**

The removal of large, mature trees would likely be the most noticeable impact to scenic resources in the area, however other elements are largely unimpacted.

- **Alt 1:** Approximately 128 trees, including mature trees along both sides of SR 116 and along Green Valley Road west of the intersection, would be removed to accommodate the increased roadway width and realignment for the traffic signal. As noted above, some of the tree

removals would allow for increased views of hills to the west, but removals in general would impact the overall visual quality of the corridor. This impact would be minimized by replanting trees on-site to the maximum extent practicable within the ROW. With minimization measures, impacts of this alternative would rise to a level considered to be moderate, but less than significant.

- **Alt 2:** Although approximately 58 trees would be removed, no trees were identified as a scenic resource. As noted, some of the tree removals would allow for increased views of hills to the west. However, tree removal by the project would impact the overall visual quality of the corridor in general. This impact can be minimized by on-site replanting to the maximum extent practicable within the ROW. With minimization measures, impacts of this alternative would rise to a level considered to be moderate, but less than significant.

c) **Less than Significant Impact**

Project actions under both alternatives, such as roadway widening, realignment, signal installation, roundabout elements, and tree removal would result in degradation of the visual character or quality of the highway corridor. Tree removal in the highway foreground, increased roadway dominance from increased paving, and visual clutter from added signage and other built elements would result in declines in the overall corridor visual quality. With recommended minimization measures, adverse effects on visual resources would become less-than-substantial in the long term.

- **Alt 1:** The addition of new elements like traffic signals would slightly alter the existing visual character and quality of the site by increasing visual clutter. However, the greatest changes to the visual quality would be substantially wider and uniform asphalt paved areas and extensive tree removals. The existing visual character or quality of the project site and its surroundings would be degraded. However, with minimization measures the impacts would be moderate, but less than significant.

- **Alt 2:** The addition of the roundabout and associated built elements would alter the existing visual character and quality of the site by adding elements typically seen in more urban settings to a semi-rural

intersection where these proposed elements are not generally found. These new elements, in addition to the expanded paved area, and tree removals to accommodate the roundabout would degrade the existing visual character and quality of the project site and its surroundings. However, with minimization measures, these impacts would be moderate-low, and less than significant.

d) **Less than Significant Impact**

Traffic signals and lighting of the roundabout would each add new sources of light and glare to an area that is currently only lightly illuminated. Construction lighting for both build alternatives would be temporary, shielded and directed toward the area of work, and would not constitute a substantial source of light outside the work area.

- **Alt 1:** Traffic signals and advance warning beacons would need to be shielded to the extent feasible but would be visible from some distance regardless. In addition, the removal of existing screening vegetation along the west side of the highway would result in increased light trespass from car headlights. With minimization measures, impacts would be moderate, but less than significant.

- **Alt 2:** Increases in light and glare would include construction lighting, advance warning beacons, and several overhead street lights. In addition, the removal of existing screening vegetation along the west side of the highway would result in increased light trespass from car headlights. With minimization measures, impacts would be moderate, but less than significant.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans would incorporate the following Avoidance, Minimization, and Mitigation measures (AMMs) into the project which would be implemented during the design and construction phase to minimize or avoid potential impacts to aesthetics:

AM-AES-1: Construction materials and equipment, to the extent practicable, will be stored in staging areas beyond the view of the traveling public and residential properties.

AM-AES-2: When lighting is added as a permanent feature, it will be designed so that adjacent areas are shielded from light intrusion.

AM-AES-3: Architectural treatment of surfaces (ex. texture and color matching) will blend in with the surrounding area to the extent practicable.

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 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.

Considering information in the Sonoma County 2022 Census of Agriculture, California Important Farmlands dataset, Williamson Act 2020 dataset, and the Farmland Conversion Impact Rating worksheet (Appendix G) the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
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?	**Less Than Significant Impact**

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
c) Conflict with existing zoning, 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**

Affected Environment

The U.S. Department of Agriculture's Farmland Conversion Impact Rating Form for Corridor Type Projects (AD-106) was used to determine farmland impacts for this Project. The form assigns a total score of up to 260 points, 100 points for the relative value of affected farmland plus up to 160 points for the alternative assessment. A value greater than 160 would require farmland mitigation. This project has been determined to have a total score of 39 for Alt 1 and a total score of 37 for Alt 2. As such, significant impacts to farmlands are not anticipated (Appendix G).

The Sonoma County General Plan Land Use Element incorporates policies and programs that recognize the importance of agriculture and the necessity to manage this resource for future use. The planning document also recognizes the need to minimize the conversion of productive agricultural lands. The continued existence of large, nearby areas of agricultural zoning and Williamson Act lands, combined with the policies protecting and promoting agriculture, acknowledge agriculture's importance to Sonoma County.

Within the farmland project study area, the total acreage of prime and unique farmland equals 53.49 acres, while the total acreage of Williamson Act land is 19.15 acres. The below figures show the prime and unique farmland and land enrolled in the Williamson Act that is adjacent to the proposed project (Figure 8 and 9).

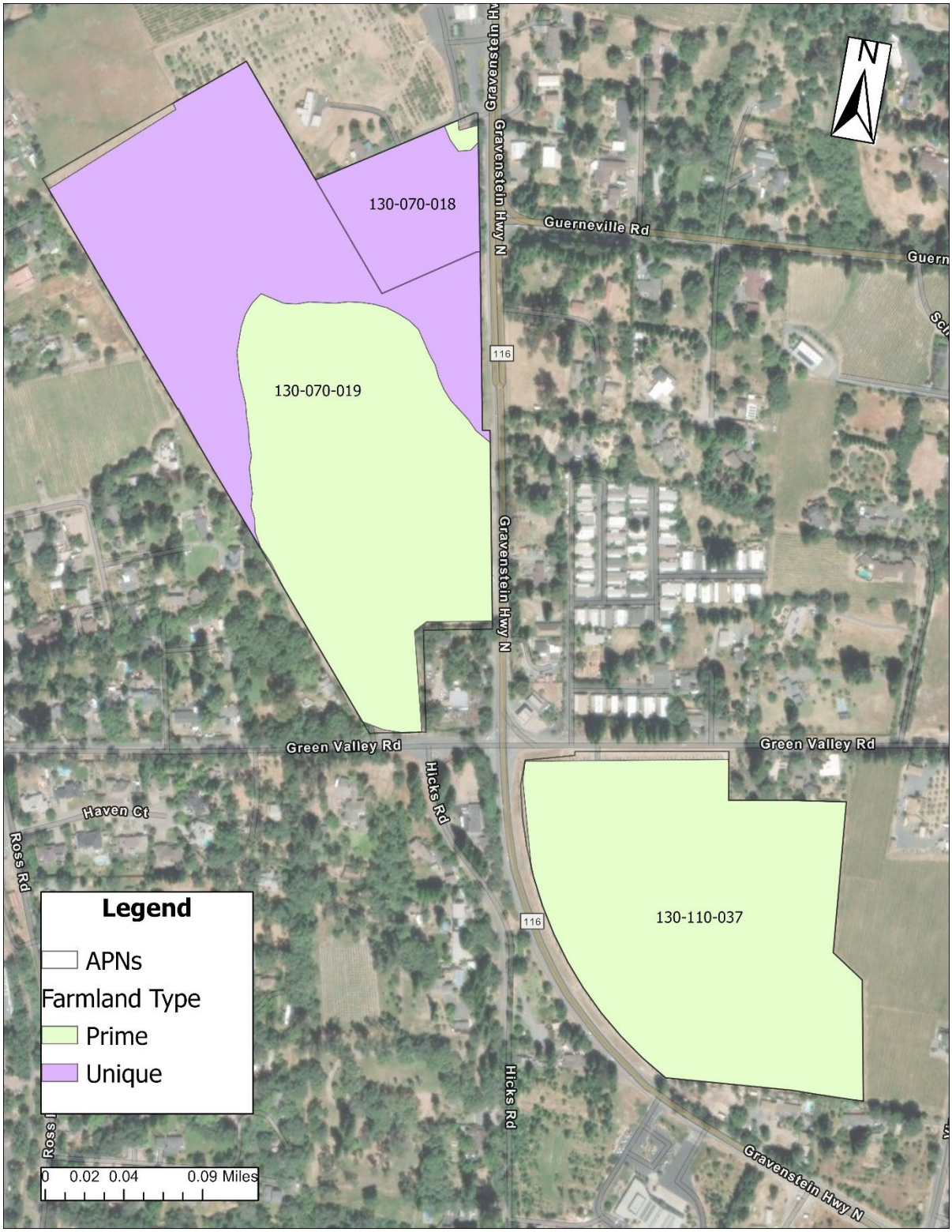


Figure 8. Prime and unique farmland within project vicinity.

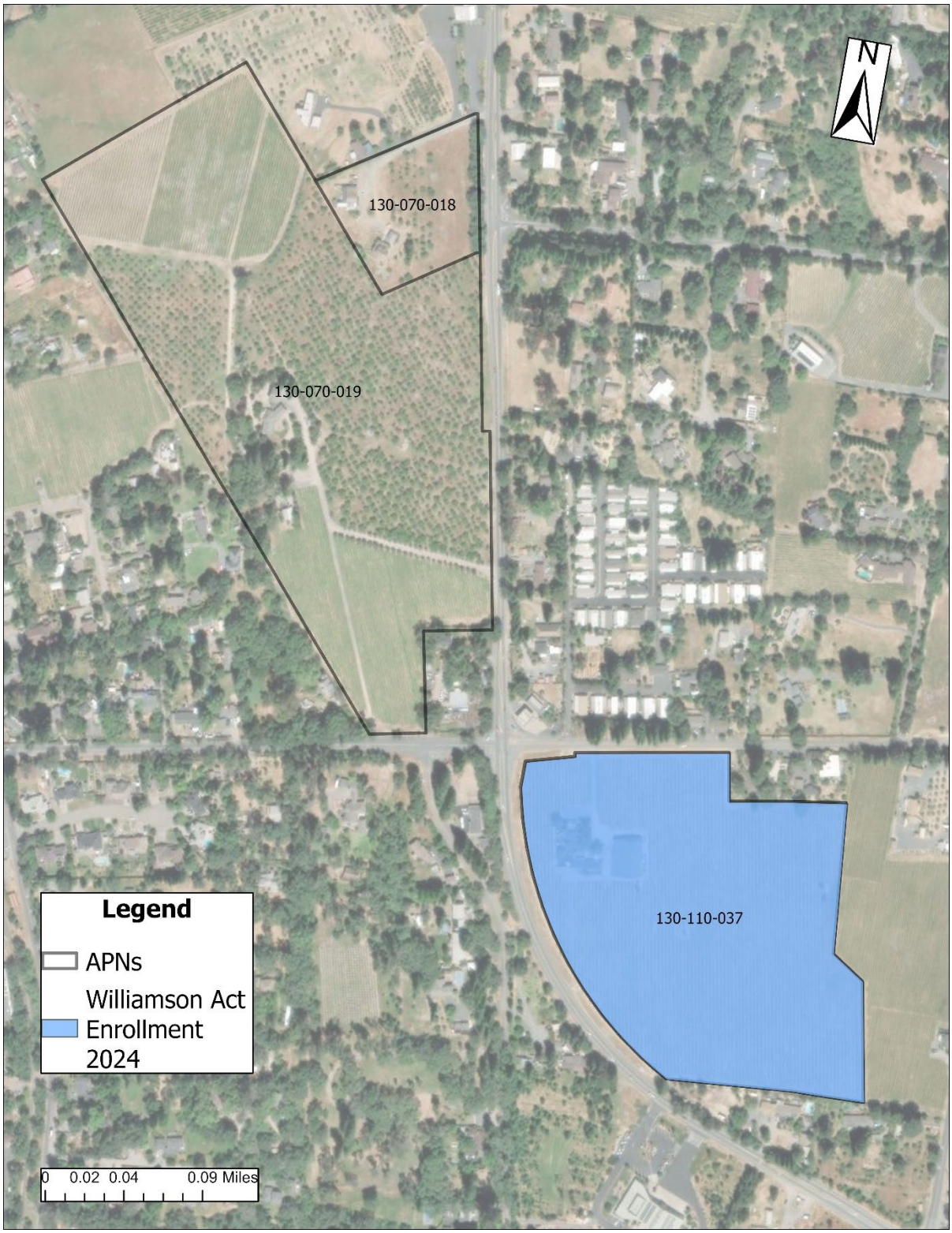


Figure 9. Land enrolled in Williamson Act

Environmental Consequences

Within the farmland project study area, the total acreage of prime and unique farmland equals 53.49 acres, and the total acreage of prime and unique farmland that is anticipated to be directly impacted by the project work ranges from 0.12 to 1.79 acres (Figures 10 and 11).

Alt 1 would result in direct impacts to approximately to 1.79 acres with 1.65 acres of it being prime and 0.14 acres of it being unique farmland (Figures 10 and 11). This alternative would require partial acquisitions from two parcels (130-070-019 and 130-110-037). Alt 2 would result in direct impacts to approximately 0.12 acres of prime farmland (Figure 12). This alternative would require partial acquisition from one parcel (130-110-037). For either build alternative, the acres acquired would not compromise the long-term agricultural capability of the designated Prime Farmland parcel.

For either build alternative, partial acquisition would be needed from the parcel of land in the southeastern portion of the project area (130-110-037). This land is enrolled under the Williamson Act (Figure 9). Table 4 shows the various designated farmland types, parcels, and amount of farmland needed for construction, by alternative.

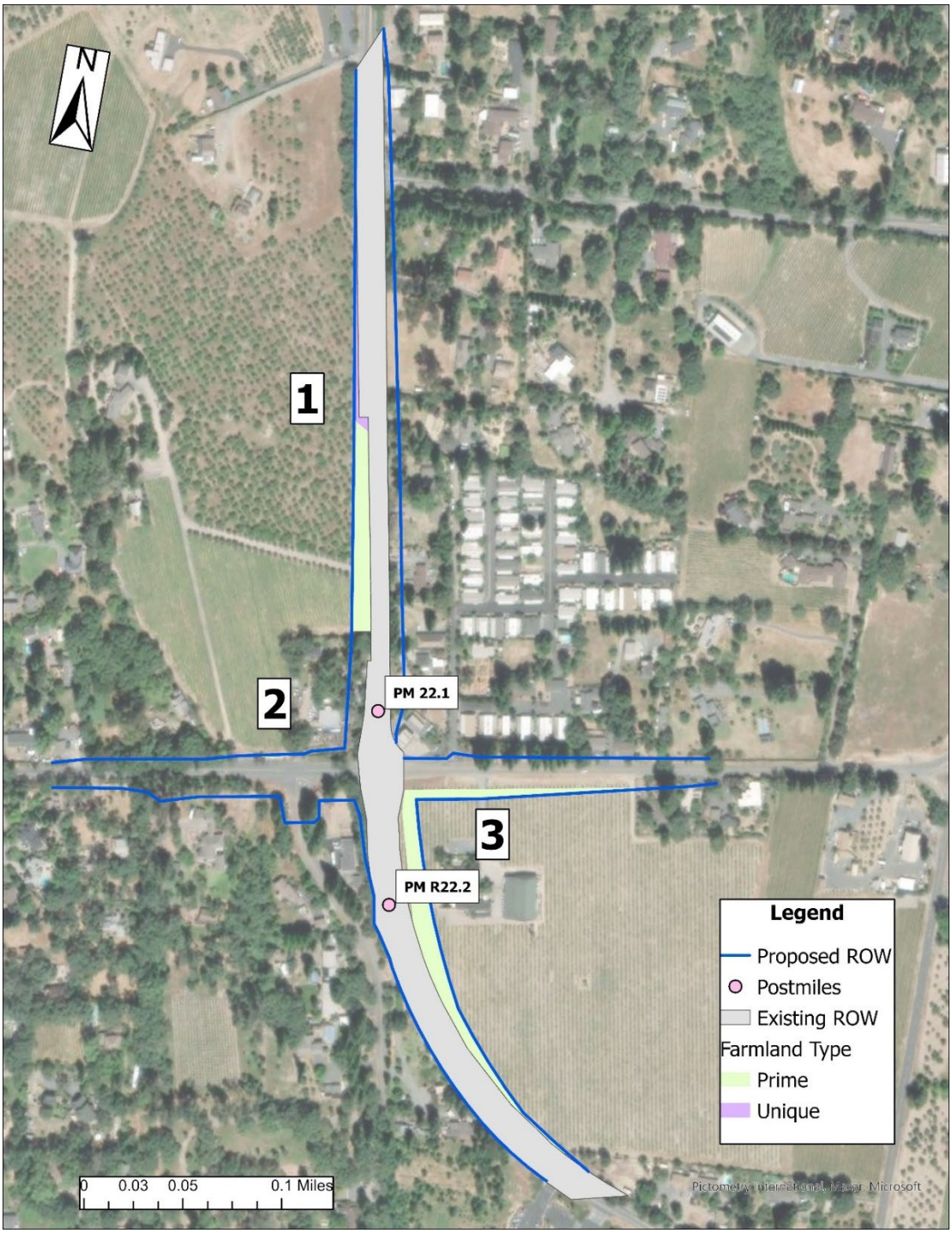


Figure 10. Designated prime farmland needed for construction of Alt 1.

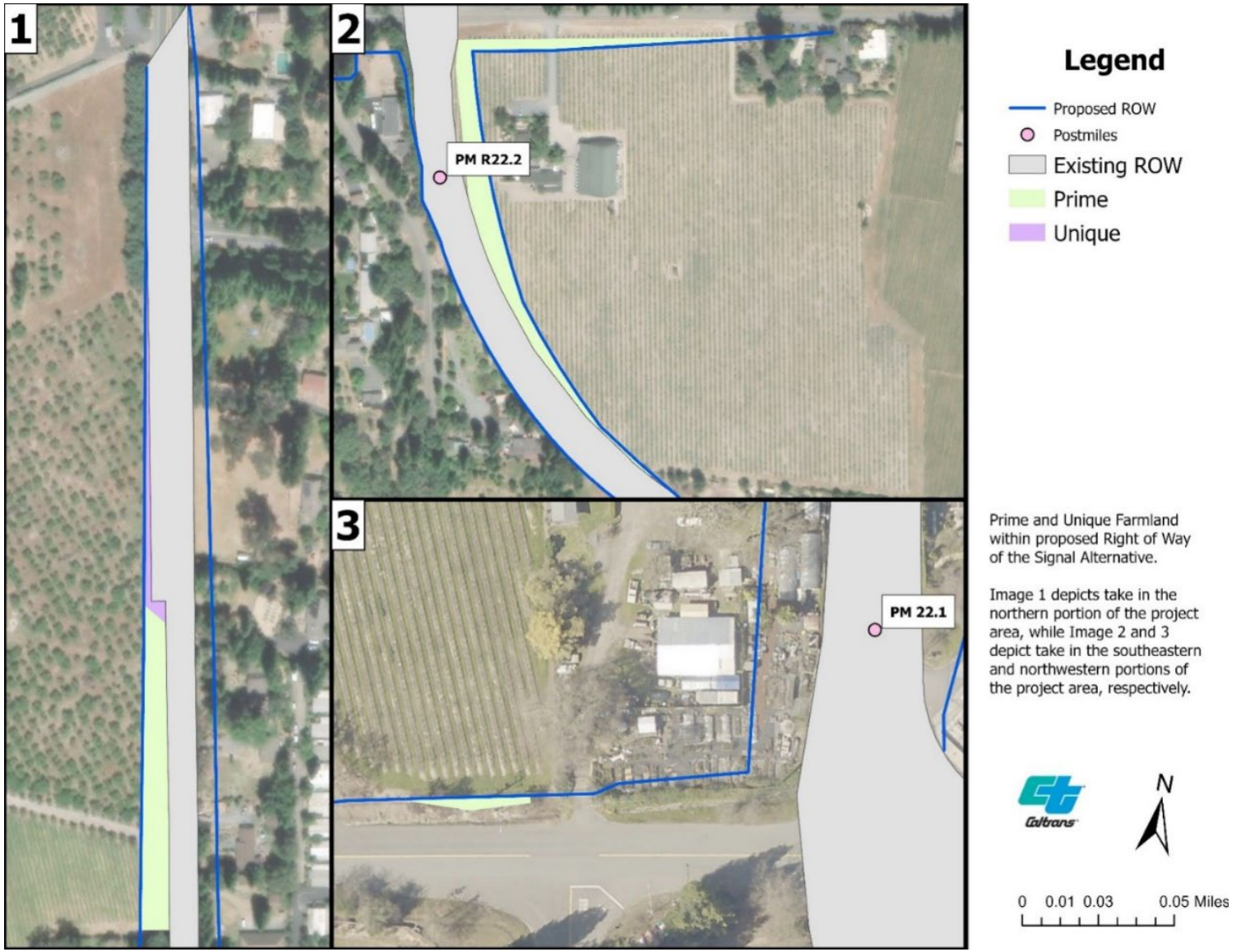


Figure 11. Detailed view of Prime and Unique farmland needed for construction of Alt 1.

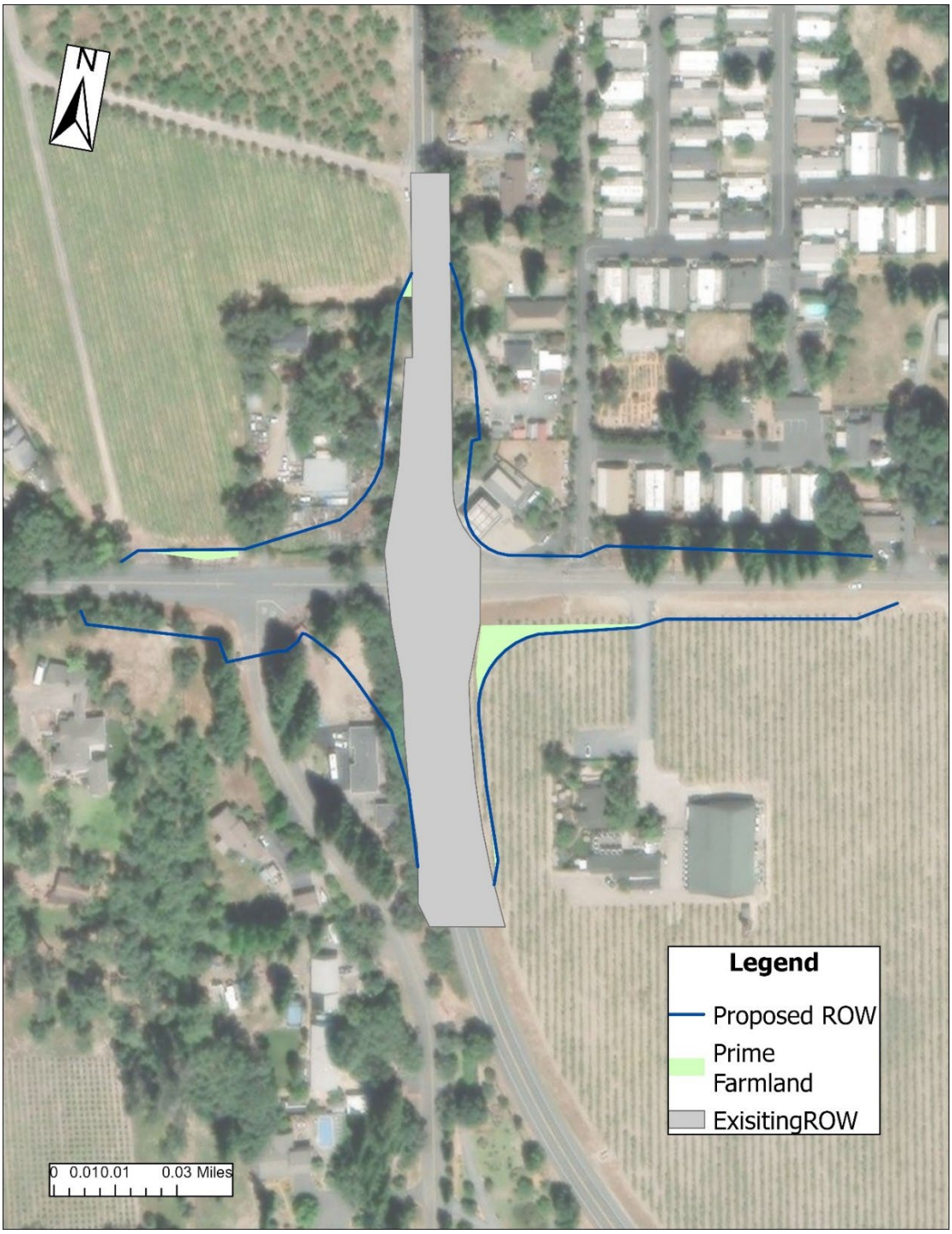


Figure 12. Prime and unique farmland needed for construction of Alt 2.

a) **Less Than Significant Impact**

The Project would have a less than significant impact to Sonoma County parcels identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as a whole. Sonoma County contains 466,810 acres of farmland, of which only 1.79 or 0.12 acres are proposed to be converted for this project. This would equate to a <0.001% change to existing prime and unique farmland within the county.

Table 4. Proposed farmland conversion by alternative.

Alternative	Total Land Acquisition (acres)	Prime and Unique Farmland (acres)	Percent of Farmland in County	Percent of Farmland in State	Farmland Conversion Impact Rating
1	1.84	1.79	<0.001%	<0.001%	39
2	0.41	0.12	<0.001%	<0.001%	37

b) **Less Than Significant Impact**

The Project would not permanently affect Sonoma County parcels under a Williamson Act Contract, due to the remaining farmland still being accessible and arable. A maximum of 1.2 of Willaimson Act Contract land is anticipated to be acquired for Alternative 1 and 0.1 acres is anticipated to be acquired for Alternative 2. The remaining farmland will still be viable for continued agricultural use.

c and d & e) **No Impact**

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.

Considering the information in the Air Quality Conformity checklist dated 10/29/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Air Quality
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	**No Impact**
c) Expose sensitive receptors to substantial pollutant concentrations?	**No Impact**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**No Impact**

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

2.1.4 Biological Resources

Considering the information in the Natural Environmental Study (NES) dated 08/12/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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 National Oceanic and Atmospheric Administration 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?	**No Impact**
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Biological Resources
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	**No Impact**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**No Impact**
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	**No Impact**

Affected Environment

The Natural Environmental Study describes the biological environment and resources present, or potentially present, within the biological study area (BSA) and evaluates potential impacts to biological resources that could occur due to proposed Project activities. The BSA is 14.93 acres and includes the maximum proposed ROW for both the signal and roundabout alternatives and encompasses the footprint of both alternatives. The BSA is located within a mixed rural, residential, and commercial environment.

Areas outside of the BSA, but adjacent to the Project footprint, were also assessed via visual surveys from accessible areas and aerial imagery.

Information about habitat types and special-status species with the potential to occur within the BSA was obtained from multiple sources:

- United States Fish and Wildlife Service (USFWS)
- California Department of Fish and Wildlife (CDFW)
- California Native Plant Society (CNPS)
- The National Wetlands Inventory (NWI)
- The National Resources Conservation Service (NRCS)
- Western Regional Climate Center (WRCC)
- iNaturalist occurrence data within 5 miles of the BSA

Results from the searches informed the preliminary technical studies that were conducted to evaluate special-status species and resources for this NES. The result of the special-status species' evaluations, including species potential for occurrence is provided via tables and species lists referenced in the NES.

Biological technical studies were conducted for the Project and included the following:

- Reconnaissance-level habitat assessments for special-status plant and wildlife species
- A California red-legged frog (*Rana draytonii*; CRLF) habitat assessment
- Tree survey
- Jurisdictional aquatic resource delineation

Environmental Consequences

a) **Less Than Significant Impact**

Plants

Based off habitat observed during the field assessment surveys, special-status plants have low to no potential to occur within the BSA. Habitats present within the BSA consist of highly disturbed or developed roadsides surrounded by residential, agricultural, and commercial land uses. While there are roadside swales and ditches present along the westbound shoulder of SR 116, north of Green Valley Road, these areas were observed to be comprised of non-native ruderal grasses, forbs, and pine needle duff cover. Developed areas, roadside pullouts, and degraded areas that only support ruderal and non-native species are not considered suitable special-status plant habitats and are unlikely to support potential species.

As no suitable vernal pool or wetland habitats are present, plant species specific to these habitat types are not expected to occur within the study area. Historic occurrences of golden larkspur (*Delphinium lutem*) are noted with non-specific occurrence data overlapping with the Project footprint, but this species is only known to several locations along coastal Marin and Sonoma

Counties. The project area contains no suitable coastal bluff habitat so this species is not expected to be found within the project area.

Of the 72 plant species evaluated during desktop review, none were determined to have a moderate level of potential to occur within the study area following field evaluation. The overall levels of disturbance and low-quality roadside habitats mean there is overall low potential for the occurrence of special-status plants

California Red-legged Frog

The California Red-legged Frog (CRLF) is a federally threatened species and a California State Species of Special Concern (SSC). The BSA is within the currently known range of the CRLF and there are three CNDDB occurrences from 2004 to 2005 within 5 miles of the BSA. The BSA does not include suitable aquatic habitat. However, features including roadside drains and ditches could provide aquatic refuge to dispersing CRLF. Similarly, the BSA contains marginal upland dispersal habitat for the CRLF.

Caltrans has concluded that this project may affect, and is likely to adversely affect, CRLF. The implementation of Project features and AMMs will reduce the likelihood of take to occur. However, not all adverse effects and potential for take would be eliminated as disturbance of marginally suitable upland and dispersal habitat is essential to the Project. The Project may result in direct temporary effects on both suitable upland dispersal habitat and individual CRLF if they were to occur within the project area during construction.

A total of 7.97 acres of fragmented dispersal habitat would be temporarily impacted and 4.32 acres of fragmented dispersal habitat would be permanently impacted by Alt 1 the signalized intersection alternative. A total of 3.27 acres of fragmented dispersal habitat would be temporarily impacted and 1.75 acres of fragmented dispersal habitat would be permanently impacted by the Alt 2, the roundabout alternative. There will be no impact to aquatic habitat.

Waters of the State

Through technical assistance and field reconnaissance, the Regional Water Quality Control Board, Region 1 (RWQCB) took jurisdiction of the existing

roadside ditches along Green Valley Road west of the intersection, determining them to be waters of the state. Caltrans determined there will be no permanent impact to aquatic habitat.

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

Project Features

Caltrans would incorporate standard PFs into the project to reduce potential impacts to Biological Resources (see Appendix B).

2.1.5 Cultural Resources

Considering the information in the Section 106 Closeout Memo dated 05/21/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**No Impact**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**No Impact**
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**No Impact**

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

2.1.6 Energy

Considering the information in the Energy Analysis Memo dated 03/12/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Energy
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**

Affected Environment

Energy use in the region is primarily tied to the transportation sector, which represents the greatest portion of statewide petroleum consumption and is a major contributor to greenhouse gas (GHG) emissions. Fuel used by both passenger and commercial vehicles traveling through the project area is the dominant source of operational energy demand. Construction activities associated with proposed improvements would require energy use, primarily in the form of petroleum-based fuels used to power construction equipment, haul trucks, and worker vehicles.

California's energy regulations emphasize reducing statewide dependence on fossil fuels, improving efficiency, and decreasing GHG emissions (AB 32, CEQA Guidelines § 15126.2(b) and Appendix F). The proposed project is not capacity increasing nor will it provide congestion relief. As such, a qualitative energy analysis is required to comply with CEQA.

Environmental Consequences

Activities that consume energy also generate by-products. GHGs are the most closely studied by-products of energy consumption because they are linked to climate change. To assess energy consumed by construction equipment and vehicles, the Construction Emissions Tool 2021 (CAL-CET 2021, version 1.0.3) was used to quantify carbon dioxide (CO_2) emissions. EPA GHG equivalencies formulas were used to convert CO_2 to fuel volumes (Table 5). It was assumed that diesel will be used by all construction vehicles and equipment, and gasoline will be used during worker's commute.

Table 5. Construction equipment / vehicles fuel consumption.

Alt	Diesel (gallons)	Gasoline (gallons)	Electricity (kWh)
1	12,507	5,388	2,729.402
2	9,567	4,120	2,085.378

a) **Less Than Significant Impact**

The project will consume energy during construction, operation, and maintenance activities. The Caltrans Construction Emissions Tool (CAL-CET) was used to quantify CO2 emissions which were then converted to fuel volumes with additional formulas. Alt 1 will consume 12,507 gallons of diesel

and 5,388 gallons of gasoline. Alt 2 will consume 9,567 gallons of diesel and 4,120 gallons of gasoline.

b) **No Impact**

2.1.7 Geology and Soils

Considering the information in the Caltrans Geologist technical response dated 02/11/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	**No Impact**
ii) Strong seismic ground shaking?	**No Impact**
iii) Seismic-related ground failure, including liquefaction?	**No Impact**
iv) Landslides?	**No Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**No Impact**
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite 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 risks to life or property?	**No Impact**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**No Impact**

a, b, c, d, e, & f) **No Impact**

2.1.8 Greenhouse Gas Emissions

Considering the information in the *Construction-related Greenhouse Gas Emissions Analysis* dated 03/12/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**No Impact**

Affected Environment

Construction-generated GHG includes emissions resulting from material processing by onsite construction equipment, workers commuting to and from the project site, and traffic delays due to construction. The emissions will be produced at different rates throughout the project depending on the activities involved at various phases of construction. The analysis was focused on vehicle-emitted GHG. CO_2 is the single most important GHG pollutant due to its abundance when compared with other vehicle-emitted GHG, including methane (CH_4), nitrous oxide (N_20), hydrofluorocarbon (HFCs) and black carbon (BC).

Environmental Consequences

Construction-related GHG emissions were calculated using CAL-CET. The table below summarizes construction related emissions, including total CO_2e (carbon dioxide equivalent) emissions (Table 6). CO_2e is a standard unit that allows the climate impact of different GHGs to be compared by converting them into a single metric using their global warming potential (GWP). This

method enables consistent reporting, comparison, and tracking of all greenhouse gas emissions by expressing them in terms of CO_2 that would produce an equivalent warming effect.

Table 6. Summary of construction-related GHG emissions.

	Parameters				Project Total
Alternative	*CO_2 (tons)*	*CH_4 (tons)*	*N_2O (tons)*	*HFC (tons)*	*CO2e (metric tons)*
Alt 1	194	0.004	0.011	0.006	198
Alt 2	148	0.003	0.009	0.005	151

a) **Less Than Significant Impact**

Construction-generated GHG includes emissions resulting from material processing by onsite construction equipment, workers commuting to and from the project site, and traffic delays due to construction. The emissions will be produced at different rates throughout the project depending on the activities involved at various phases of construction. The analysis was focused on vehicle-emitted GHG. Carbon dioxide (CO_2) is the single most important GHG pollutant due to its abundance when compared with other vehicle-emitted GHG, including methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbon (HFCs) and black carbon (BC).

Construction-related GHG emissions were calculated using the Caltrans Construction Emissions Tool (CAL-CET), version 1.0.3. Alt 1 is estimated to produce 194 tons of CO_2, 0.004 tons of CH_4, 0.011 tons of N_2O, and 0.006 tons of HFC for a total of 198 metric tons of Carbon dioxide-equivalent (CO_2e). Alt 2 is estimated to produce 148 tons of CO_2, 0.003 tons of CH_4, 0.009 tons of N_2O, and 0.005 tons of HFC for a total of 151 metric tons of CO_2e. The project would not increase SR 116 transportation capacity and therefore would not generate long-term GHG emissions. Therefore, impacts would be less than significant.

b) **No Impact**

2.1.9 Hazards and Hazardous Materials

Considering the information in the email correspondence with the Caltrans Hazardous Waste specialist dated 09/30/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**No Impact**
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	**No Impact**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	**No Impact**
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**Less than significant**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	**No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**No Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**No Impact**

Affected Environment

A gas station, Bridgeway Gas, is located within 100 feet northeast of the intersection at 4115 Gravenstein Highway N. The Dutton Estate Winery vineyard is located within 50 feet southeast of the intersection at 8757 Green Valley Road. Two rural residential properties are located directly adjacent to the project footprint. Other properties are located nearby, on SR 116 northbound.

Based on Regional Water Quality Control Board (RWQCB) databases including Geotracker, groundwater underneath the intersection is contaminated with gasoline originally released from the gas station prior to 1991. Renovations in 1998 removed two leaking underground storage tanks. Further measures taken to clean up the site since then include soil vapor extraction in 1998 and 2001 as well as ozone injection between 2018 and 2020. Fourteen monitoring wells were installed for post-remedial monitoring of the affected groundwater which is not currently being used as a source of drinking water.

The Caltrans Hazardous Waste Office has also found traces of arsenic, benzene, and lead.

Environmental Consequences

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

d) **Less Than Significant**

The project may encounter contaminated groundwater from a previously leaking underground fuel tank at the gas station on the northeast of the intersection. Caltrans special provisions for investigation, characterization, and disposal (PF-HAZ-02 and PF-HAZ-03) would reduce the risk of worker and public exposure to a less-than-significant level.

e, f, & g) **No Impact**

2.1.10 Hydrology and Water Quality

Considering the information in the Hydraulic Floodplain Assessment memo dated 06/04/2024 and Water Quality Study dated 03/27/2024, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
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: (i) result in substantial erosion or siltation onsite or offsite;	**No Impact**
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	**No Impact**
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	**No Impact**
(iv) impede or redirect flood flows?	**No Impact**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**No Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**No Impact**

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

2.1.11 Land Use and Planning

Considering the Land Use Element information in the Sonoma County General Plan 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
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**

a and b) **No Impact**

2.1.12 Mineral Resources

Because this project does not deal with any mineral resources within its limits, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	**No 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**

a and b) **No Impact**

2.1.13 Noise

Considering the information in the construction-related Noise Analysis dated 03/12/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Noise
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**

Question—Would the project:	CEQA Significance Determinations for Noise
b) Generation of excessive groundborne vibration or groundborne noise levels?	**No Impact**
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	**No Impact**

Affected Environment

The proposed project takes place in a rural to semi-rural community that includes vineyards, farms, residential and small businesses. There are six different residences that are considered sensitive noise receptors due to their vicinity to the project. Since the project is not a Type 1 project per 23 CFR 772, noise abatement need not be considered, therefore a noise study is not required.

Representative receptors chosen for this study are shown below (Table 7 and Figures 13 and 14).

Table 7. Receptor identification for noise study.

Label	Receptor Type	Build Alternative
R1	Residential	1 and 2
R2	Residential	1
R3	Residential	1 and 2
R4	Residential	1 and 2
R5	Residential	1 and 2
R6, R7	Residential	1 and 2

Figure 13. Representative receptor locations (R1 - R7) for Alt 1.

Figure 14. Representative receptor locations (R1, R3 – R7) for Alt 2.

Environmental Consequences

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

Caltrans 2024 Standard Specifications 14-8.02 requires Lmax not exceed 86 dBA at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. for residences and hotels. For Alt 1, analysis shows construction noise levels due to excavation (R6 and R7) and paving (R1, R2, R3, R5, R6, and R7) exceed this standard affecting residential receptors (Table 8). Residents will not be affected by curb ramp construction activities since those activities do not exceed Lmax standards. For Alt 2, analysis shows construction noise levels due to excavation (R1, R6, R7), paving (R1, R4, R5, R6, and R7), and curb ramp work (R6) exceed this standard affecting residential receptors (Table 9).

Table 8. Summary of construction noise results for Alt 1.

		Excavation		Paving/Striping	
Receptor Map Label	Receptor Distance (ft)	Lmax	Leq	Lmax	Leq
HP	50	85	83.8	**89.5**	85.9
HP	100	79	77.8	83.5	79.9
HP	200	73	71.7	77.5	73.9
HP	500	65	63.8	69.5	65.9
R1	45	85.9	84.7	**90.4**	**86.9**
R2	57	83.9	82.6	**88.4**	84.8
R3	61	83.3	82.1	**87.8**	84.2
R4	80	80.9	79.7	85.4	81.9
R5	73	81.7	80.5	**86.2**	82.7
R6	44	**86.1**	84.9	**86.2**	82.7
R7	30	**89.4**	**88.2**	**93.9**	**90.4**

Table 9. Summary of construction noise results for Alt 2.

	Excavation			Paving/Striping			Curb Ramps		
Receptor	Receptor Distance (ft)	Lmax	Leq	Receptor Distance (ft)	Lmax	Leq	Receptor Distance (ft)	Lmax	Leq
HP	50	85	83.8	50	**89.5**	**87.4**	50	85	83.6
HP	100	79	77.8	100	83.5	81.3	100	79	77.5
HP	200	73	71.7	200	77.5	75.3	200	73	71.5
HP	500	65	63.8	500	69.5	67.4	500	65	63.6
R1	43	**86.3**	85.1	43	**90.8**	**88.7**	76	81.4	79.9
R2	131	76.6	75.4	131	81.1	79	N/A	N/A	N/A
R3	79	81	79.8	79	85.5	83.4	N/A	N/A	N/A
R4	68	82.3	81.1	68	**86.8**	84.7	N/A	N/A	N/A
R5	68	82.3	81.1	68	**86.8**	84.7	N/A	N/A	N/A
R6	38	**87.4**	**86.2**	38	**91.9**	**89.7**	43	**86.3**	84.9
R7	26	**90.7**	**89.5**	26	**95.2**	**93**	N/A	N/A	N/A

a) **Less Than Significant Impact**

A temporary increase in noise level is expected due to short-term construction activities over several months. Caltrans' standard noise reduction project features and minimization measures (shown below) will reduce the potential for temporary effects due to increased ambient noise levels. Therefore, the impact would be less than significant.

b, and c) **No Impact**

Avoidance, Minimization, and/or Mitigation Measures

The following AMMs would be implemented:

PF-NOI-1: Noise control and monitoring will be included as part of the Contract documents to minimize construction noise. Construction noise level shall not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

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

PF-NOI-3: Where practicable, loud operations will be scheduled occur within the same time frame. The total noise level will not be significantly greater than the level produced if operations are performed separately.
PF-NOI-4: Avoid unnecessary idling of internal combustion engines within 100 feet of sensitive receptors.
PF-NOI-5: Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.
PF-NOI-6: Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
PF-NOI-7: No construction equipment will be delivered before 6:00 a.m..

2.1.14 Population and Housing

Considering the information in the Housing Element of the Sonoma County General Plan 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Population and Housing
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**

a and b) **No Impact**

2.1.15 Public Services

Considering the Public Facilities and Services Element information in the Sonoma County General Plan 2020, the following significance determinations have been made:

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

a) **No Impact**

2.1.16 Recreation

Considering the information in the Open Space and Resource Conservation Element of the Sonoma County General Plan 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Recreation
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**

a & b) **No Impact**

2.1.17 Transportation

Considering the information in Caltrans Director's Policy 37, the project-specific Caltrans Transportation Management Plan (TMP), and Sonoma Countywide Transportation Plan, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
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?	**No Impact**

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

2.1.18 Tribal Cultural Resources

Considering the information in the Section 106 Closeout Memo dated 5/21/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Tribal Cultural Resources
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**

Question—Would the project:	CEQA Significance Determinations for Tribal Cultural Resources
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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**Less Than Significant Impact**

Affected Environment

As noted in the Section 106 Closeout Memo, Caltrans District 4 Professionally Qualified Staff (PQS) conducted a cultural resources investigation for the Project. An Area of Potential Effects (APE) was established to include the entire area of project activities. Records searches with the Native American Heritage Commission (NAHC), tribal consultation with the Federated Indians of Graton Rancheria (FIGR), and field surveys at the project site determined negative results.

Environmental Consequences

a) **No Impact**

b) **Less than Significant Impact**

Within the project area of potential effects, the finding is No Historical Properties Affected because of the negative results from Cultural studies. However, the FIGR did identify the project location as sensitive for tribal cultural resources and recommended monitoring to avoid and minimize potential impacts. The finding is No Historical Properties Affected.

Avoidance, Minimization, and/or Mitigation Measures

The following AMMs would be implemented:

PF-CUL-1: Unanticipated Discovery. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of

the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find in consultation with the Tribe to determine whether or not additional study is warranted. Additional archaeological survey will be needed if 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 [insert specific name] and CEQA are found during construction, a Professionally Qualified Staff archaeologist shall assess the find. The Office of Cultural Resource Studies will notify local consulting Tribes if the resource is determined to be a TCR and consult with the contractor and the Tribe to determine whether the resources can be avoided by the Project. If the TCR cannot be avoided, then further consultation efforts with the Tribes would be necessary to determine its treatment.

PF-CUL-2: 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 will contact the County Coroner. Pursuant to CA PRC Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent. Caltrans, District 4, Cultural Resources Studies Office will work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

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

AMM-TCR-2: Construction Training, Monitoring, and Discovery Plan for Potential Tribal Cultural Resources - Caltrans will work with FIGR to develop and implement a construction training, monitoring, and discovery

plan for encountering potential Tribal Cultural Resources in the project construction area. The plan may include, but is not limited to, the following:

- Archaeological awareness and TCRs sensitivity training of construction staff, with information about the possibility of encountering cultural resources (including TCRs) and the appearance and types of resources that could be encountered during project construction.
- Native American and archaeological monitoring during ground disturbing activities, as determined through consultation among Caltrans and FIGR prior to construction.
- Work stoppage and tribal consultation protocols if previously unidentified cultural resources are discovered. Recommendations for treatment and disposition of finds could include, but are not limited to ,the collection, recordation, and analysis of any significant cultural materials, or the transfer of TCRs to Tribal representatives for appropriate treatment.
- Implementing a construction training, monitoring, and discovery plan would avoid or reduce impacts to potential TCRs by providing for resource avoidance or protection-in-place measures where possible, and treatment of resources in accordance with tribal cultural values when avoidance or protection is not feasible. The plan for this Project will be developed in coordination with FIGR representatives.

2.1.19 Utilities and Service Systems

Considering the information in the Project Description and construction details provided by Caltrans engineers dated 10/14/2025, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	**No Impact**
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**No Impact**
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	**No Impact**
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**No Impact**

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

2.1.20 Wildfire

Considering the information in the Sonoma County Fire Hazard Severity Zone Map, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Wildfire
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	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Wildfire
that may result in temporary or ongoing impacts to the environment?	
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**

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

2.1.21 Mandatory Findings of Significance

Considering the technical study information referenced earlier in this document, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mandatory Findings of Significance
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 Impact**
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	**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**

a) **Less Than Significant Impact**

The Project would not have a significant impact on individual species or sensitive habitats. The Project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number of or restrict the range of a rare or endangered plant or animal. The Project would generate temporary and permanent impacts to CRLF upland habitat. AMMs would be implemented to minimize these anticipated impacts. Coordination with the appropriate regulatory agencies would also be conducted in the later stages of the project to ensure that, should special-status animals, plants, or habitats be discovered during pre-construction surveys or construction monitoring, potential impacts to animals and habitats would remain less than significant. During construction, ground-disturbing activities are anticipated; standard PFs and AMMs described in Appendix B would avoid and/or minimize impacts to special-status species and habitats. to less than significant levels.

b) **No Impact**

c) **Less Than Significant Impact**

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

Chapter 3 Coordination

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

Native American Tribal Coordination

Tribal consultation was conducted by Caltrans archaeologist Cesar Villanueva. See sections 2.1.5 (Cultural Resources) and 2.1.18 (Tribal Cultural Resources) for comments and recommendations from local tribes.

Resource Agency Coordination

At this time, the only agencies currently anticipated for discussions regarding permits are the North Coast RWQCB and USFWS.

The USFWS coordination proceeded as follows:

- *March 29, 2024 – Caltrans biologists requested technical assistance from USFWS.*
- *May 16, 2024 – Caltrans biologists discussed the Biological Assessment. USFWS concurred with consultation.*

The North Coast RWQCB coordination proceeded as follows:

- *May 20, 2024 – Caltrans biologists requested technical assistance from NCRWQCB, providing project details.*
- *June 26, 2024 - Caltrans biologists met with NCRWQCB at the project location. Additional project details are needed to draw permit conclusions.*

Appendix A Title VI 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 2024

TITLE VI/NON-DISCRIMINATION POLICY STATEMENT

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

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

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

TONY TAVARES
Director

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

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

Project Features

- **PF-BIO-01: Seasonal Avoidance**. To the extent practicable, work will not occur during the wet season. Except for limited vegetation clearing (necessary to minimize impacts to nesting birds), work off paved or bare gravel areas will be limited to the period from June 1 to October 31. On pavement work and work in the compacted road-lens may occur all year, in coordination with the Project Biologist.
- **PF-BIO-02: Worker Environmental Awareness Training**. Prior to ground-disturbing activities, an agency-approved biologist will conduct an education program for all construction personnel. At a minimum, the training will include a description of special-status species, migratory birds, and their habitats, how the species might be encountered within the Project area, an explanation of the status of these species and protection under the federal and state regulations, the measures to be implemented to conserve listed species and their habitats as they relate to the work site, boundaries within which construction may occur, and how to best avoid the incidental take of listed species. The field meeting will include topics on species identification, life history, descriptions, and habitat requirements during various life stages. Emphasis will be placed on the importance of the habitat and life stage requirements within the context of Project maps showing areas where AMMs are to be implemented. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.
- **PF-BIO-03: Environmentally Sensitive Area Fencing.** Before starting construction, environmentally sensitive area (ESAs) (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) will be clearly delineated as needed using high-visibility orange fencing. The ESA fencing will remain in place at each location until work at that location is complete and will prevent construction equipment or personnel from entering sensitive habitat areas. The ESA fencing also serves to delineate the Project footprint in which all construction activity is to occur. The final Project

plans will depict the locations where ESA fencing will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. The ESA fencing will be removed following completion of construction activities.

- **PF-BIO-04: Wildlife Exclusion Fencing**. Before starting construction, at the discretion of the Caltrans biologist, wildlife exclusion fencing (WEF) may be installed along the Project footprint perimeter in the areas where wildlife could enter the Project site. The final Project plans will depict the locations where WEF will be installed, if needed, and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF fencing material and proper WEF installation and maintenance. The WEF will remain in place at each location until work at that location is complete and will be regularly inspected for stranded animals and fully maintained daily. The WEF will be removed following completion of construction activities.
- **PF-BIO-05: Stormwater Best Management Practices**. In accordance with RWQCB requirements, a Stormwater Pollution Prevention Plan will be developed and erosion control BMPs implemented to minimize wind- or water-related erosion. The Caltrans Construction Site BMP Manual (Caltrans 2017) provides guidance for the inclusion of provisions in all construction contracts to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges. At a minimum, protective measures will include the following:
    - Prohibiting discharge of pollutants from vehicle and equipment cleaning into storm drains or watercourses.
    - Maintaining equipment to prevent the leakage of vehicle fluids, such as gasoline, oils, or solvents. Hazardous materials such as fuels, oils, solvents, etc. will be stored in manufacturer approved containers in a designated location that is at least 50 feet from aquatic habitats.
    - Servicing vehicles and construction equipment, including fueling, cleaning, and maintenance at least 50 feet from aquatic habitat, unless separated by topographic or engineered drainage barrier.

- Collecting and disposing of concrete wastes and water from curing operations in appropriate washouts, located at least 50 feet from watercourses.
- Maintaining spill containment kits onsite at all times during construction operations and/or staging or fueling of equipment
- Using water trucks and dust palliatives to control dust in unvegetated areas and covering temporary stockpiles when weather conditions require.
- Protecting graded and designated staging areas from erosion using an appropriate combination of approved erosion control items or methods, in accordance with the Stormwater Pollution Prevention Plan, as indicated in the RWQCB permit, and as stated in the contract plans and special provisions.

- **PF-BIO-06: Construction Site Management Practices**. The following site restrictions will be implemented to avoid or minimize potential effects on listed species and their habitats:
  - Enforcing a speed limit of 15 miles per hour in the Project footprint in unpaved and paved areas to reduce dust and excessive soil disturbance.
  - Locating construction access, staging, storage, and parking areas within the Project footprint outside any designated ESA. Access routes, staging and storage areas, and contractor parking will be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork will be clearly marked before initiating construction or grading.
  - Certifying, to the maximum extent practicable, borrow material is nontoxic and weed free.
  - Enclosing food and food-related trash items in sealed trash containers and removing them from the site at the end of each day.
  - Prohibiting pets from entering the Project footprint area during construction.
  - Prohibiting firearms within the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

    - Maintaining equipment to prevent the leakage of vehicle fluids such as gasoline, oils, or solvents, and developing a Spill Response Plan. Hazardous materials such as fuels, oils, and solvents will be stored in industry or manufactured approved container in a designated location that is at least 50 feet from aquatic habitats.

- **PF-BIO-07: Nighttime Restrictions/Lighting**. Nightwork would be limited wherever possible. If nightwork must be performed, lighting will be directed towards the roadway to the greatest extent practicable to avoid exposing nocturnal wildlife and their habitats to excessive glare.
- **PF-BIO-08: Avoidance of Entrapment**. To prevent inadvertent entrapment of animals during construction, excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day using plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the BSA overnight will be inspected before they are subsequently moved, capped, or buried.
- **PF-BIO-09: Vegetation Removal.** Vegetation that is within the cut and fill line or growing in locations where permanent structures will be placed will be cleared. Vegetation will be cleared only where necessary and will be cut above soil level, except in areas that will be permanently impacted or excavated. This will allow plants that reproduce vegetatively to resprout after construction. Clearing and grubbing of woody vegetation will occur by hand or using construction equipment such as mowers, backhoes, and excavators. If clearing and grubbing occurs between February 1 and September 30, the biological monitor will survey for nesting birds within the areas to be disturbed (including a perimeter buffer of 50 feet for migratory birds and 300 feet for raptors) before clearing activities begin. All nest avoidance requirements of the MBTA and California Fish and Game Code will be observed, such as establishing appropriate protection buffers around active nests until young have fledged. Cleared vegetation will be removed from the Project footprint to prevent attracting animals to the Project site.
- **PF-BIO-10: Pre-construction Nesting Bird Surveys and Nest Avoidance.** During the nesting season (February 1 through September 30), pre-construction surveys for nesting birds will be conducted by a

qualified biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. To minimize and avoid take of migratory birds, their nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season, prior to construction. This work will be limited to vegetation and trees that are within the Project footprint. Additional bird nesting surveys will be required if work must occur during the nesting season.

- **PF-BIO-11: Replant, Reseed, and Restore Disturbed Areas**. Caltrans will restore temporarily disturbed areas to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native grasses and shrubs to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species will be replanted, based on the local species composition.
- **PF-BIO-12: Reduce Spread of Invasive Species**. To reduce the spread of invasive, non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. 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. In the event that noxious weeds are disturbed or removed during construction-related activities, the contractor will be required to contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas within the Project area will be covered to the extent practicable with heavy black plastic solarization material until the end of the Project.
- **PF-AES-1: Vegetation Impacts.** Minimize impacts to vegetation to the greatest extent possible while allowing the Project to be implemented.
- **PF-AQ-02: Construction Vehicles and Equipment**. Maintain and tune the construction vehicles and equipment in accordance with manufacturer's specifications.

- **PF-AQ-03: Limit Idling**. Limit idling times either by shutting construction equipment off when not in use or reducing the maximum idling time to 5 minutes.
- **PF-CUL-01: Unanticipated Discovery.** In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist, that meets the Secretary of the Interior Professional Qualifications for Archaeology, can evaluate the significance of the find in consultation with the Tribe to determine whether or not additional study is warranted. Additional archaeological survey will be needed if 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 [insert specific name] and CEQA are found during construction, a Professionally Qualified Staff archaeologist shall assess the find. The Office of Cultural Resource Studies will notify local consulting Tribes if the resource is determined to be a TCR and consult with the contractor and the Tribe to determine whether the resources can be avoided by the Project. If the TCR cannot be avoided, then further consultation efforts with the Tribes would be necessary to determine its treatment.
- **PF-CUL-02:** 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 will contact the County Coroner. Pursuant to CA PRC Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent. Caltrans, District 4, Cultural Resources Studies Office will work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.
- **PF-ENERGY-01: Recycle Waste and Materials**. Recycle nonhazardous waste and excess construction materials to reduce disposal, if feasible.
- **PF-ENERGY-02: Solar Energy**. Use solar energy as the energy source for construction equipment, such as, but not limited to, signal boards, if feasible.

- **PF-HAZ-01: Caltrans Standard Specifications and Hazardous Waste Regulations.** The current Caltrans Standard Specifications Section 13-4, Job Site Management, will be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. Handling and management of hazardous materials will comply with the current Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.
- **PF-HAZ-02: Soil Investigation**. A soil investigation for metals, primarily lead, and other contaminants of concern (i.e., petroleum hydrocarbons and volatile organic compounds) will be completed during the Project's design phase to characterize and profile the soil to be encountered by the construction of the Project. Depending upon the findings of the site investigation, appropriate hazardous waste management special provisions will be prepared and included in the Project specifications
- **PF-HAZ-03: Groundwater Testing.** As part of the site investigation work, groundwater samples will be collected and tested for gasoline constituents. This will help determine the extent of the contaminant plume in the groundwater and determine if any portion of it is located below planned project construction activities that might encounter groundwater, such as excavating foundations for new traffic signals.
- **PF-NOISE-01:** Noise control and monitoring will be included as part of the Contract documents to minimize construction noise. Construction noise level shall not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.
- **PF-NOISE-02:** Public outreach shall be required throughout the project duration of construction to update nearby residents, businesses, and other project stakeholders on upcoming construction activities and any changes to the project construction timeline.
- **PF-NOISE-03:** Where practicable, loud operations will be scheduled occur within the same time frame. The total noise level will not be significantly greater than the level produced if operations are performed separately.
- **PF-NOISE-04:** Avoid unnecessary idling of internal combustion engines within 100 feet of sensitive receptors.
- **PF-NOISE-05:** Locate all stationary noise-generating construction equipment as far as practical from noise-sensitive receptors or provide

baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction project area.

- **PF-NOISE-06:** Equip all internal combustion engine driven equipment with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- **PF-NOISE-07:** No construction equipment will be delivered before 6:00 a.m.
- **PF-TRANS-01: Traffic Management Plan.** A Final Traffic Management Plan (TMP) would be prepared by Caltrans prior to the beginning of construction and in consultation with the appropriate agencies to aid in coordinating and providing further safety measures for those accessing the Project corridor during construction. The TMP would identify traffic delays and alternative routes for emergency and medical vehicles associated with essential services, thereby avoiding or minimizing short-term, localized traffic congestion and delays. Notifications and instructions for rapid response or evacuation in the event of an emergency would be provided.
- **PF-WQ-01: Compliance with Water Quality Permits and Programs.** The Project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Caltrans Order No. 2020-0033-DWQ, NPDES No. CAS00003, for projects that result in a land disturbance of one acre or more, and the Construction General Permit (Order 2009 – 0009-DWQ), and any subsequent permits in effect at the time of construction. Since the Project has an approved Project Initiation Report prior to January 1, 2023, it will be ‘grandfathered’ and can continue to apply one-acre minimum threshold of the 2012 Caltrans Permit. As a component of the CGP, the Project will prepare and implement a SWPPP to address all construction related activities, equipment, and materials that have the potential to impact water quality. The SWPPP will identify the sources of pollutants that may affect the quality of stormwater and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-stormwater BMPs.

Avoidance and Minimization Measures

- **AM-AES-01:** Construction materials and equipment, to the extent practicable, will be stored in staging areas beyond the view of the traveling public and residential properties.

- **AM-AES-02:** When lighting is added as a permanent feature, it will be designed so that adjacent areas are shielded from light intrusion.

- **AM-AES-03:** Architectural treatment of surfaces (ex. texture and color matching) will blend in with the surrounding area to the extent practicable.

- **AM-BIO-01: Preconstruction Survey for CRLF**. Pre-construction surveys for CRLF will be conducted by a USFWS-approved biologist no more than 14 calendar days prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal) beyond the existing pavement. Suitable non-breeding aquatic and upland habitat within the Project footprint, including refugia habitat such as under shrubs, downed logs, small woody debris, and burrows, will be inspected. If CRLF is observed, the individual will be evaluated and relocated by the biological monitor in accordance with the observation and handling protocol outlined in the Biological Opinion.
- **AM-BIO-02: Biological Monitoring**. The USFWS-approved biologist would be present during construction activities where take of a listed species could occur including site preparation activities. Through communication with the Resident Engineer or a designee, the USFWS-approved biologist may stop work if deemed necessary for any reason to protect listed species and would advise the Resident Engineer or designee on how to proceed accordingly.
- **AM-BIO-03: Lighting Restrictions.** If nightwork is required, construction personnel would turn portable tower lights on no more than 30 minutes before the beginning of civil twilight, and off no more than 30 minutes after the end of civil sunrise. Portable tower lights would have directional shields attached to them, and personnel would only direct lights downward and toward active construction and staging areas.
- **AM-BIO-04: Rain Events.** The Caltrans biologist would monitor weather and, in coordination with the Resident Engineer, determine which construction activities may need to be halted within 24 hours of a 0.1-inch rain event, or when there is a forecast of 50% or more chance of precipitation, to ensure protection of CRLF. If, by 2:00 p.m., rain is forecast for the remainder of the day or subsequent night with a 70% or greater probability of rain (based on the nearest National Weather Service forecast, available at http://forecast.weather.gov), work may be postponed until 24 hours have passed between the last rain event and the start of work.

- **AM-TCR-01**: Prior to the initiation of construction for the project, the Project contractor, staff, and construction crews shall be made aware of the potential to encounter cultural resources and Tribal Cultural Resources (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants) through a presentation provided by an archaeologist and a representative from FIGR.
- **AM-TCR-02: Construction Training, Monitoring, and Discovery Plan for Potential Tribal Cultural Resources**. Caltrans will work with FIGR to develop and implement construction training, monitoring, and discovery plan for encountering potential Tribal Cultural Resources in the project construction area. The plan may include, but is not limited to, the following:
    - Archaeological awareness and TCRs sensitivity training of construction staff, with information about the possibility of encountering cultural resources (including TCRs) and the appearance and types of resources that could be encountered during project construction.
    - Native American and archaeological monitoring during ground disturbing activities, as determined through consultation among Caltrans and FIGR prior to construction.
    - Work stoppage and tribal consultation protocols if previously unidentified cultural resources are discovered. Recommendations for treatment and disposition of finds could include, but are not limited to ,the collection, recordation, and analysis of any significant cultural materials, or the transfer of TCRs to Tribal representatives for appropriate treatment.
    - Implementing a construction training, monitoring, and discovery plan would avoid or reduce impacts to potential TCRs by providing for resource avoidance or protection-in-place measures where possible, and treatment of resources in accordance with tribal cultural values when avoidance or protection is not feasible. The plan for this Project will be developed in coordination with FIGR representatives.

Appendix C List of Technical Studies

California Department of Transportation (Caltrans). 2025a. *Construction-related Greenhouse Gas Memo*

California Department of Transportation (Caltrans). 2025b. Construction-related *Energy Analysis Memo*

California Department of Transportation (Caltrans). 2025c. *Construction-related Noise Analysis Memo*

California Department of Transportation (Caltrans). 2025d. *Water Quality Report*

California Department of Transportation (Caltrans). 2025e. *Natural Environment Study*

California Department of Transportation (Caltrans). 2025f. *Location Hydraulic Study*

California Department of Transportation (Caltrans). 2025g. *Section 106 Closeout Memo*

California Department of Transportation (Caltrans). 2025h. *Scenic Resource Evaluation/Visual Assessment*

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

Caltrans, District 4
ATTN: Daniel Chan, Office of Environmental Analysis
P.O. Box 23660 MS-8B
Oakland, CA 94623-0660

Or send your request via email to: daniel.chan@dot.ca.gov
Or call: (510) 496-9435

Please provide the following information in your request:

Project title:

General location information:

District number-county code-route-post mile:

Project ID number:

Appendix D List of Abbreviations, Acronyms, and Initialisms

Term	Definition
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AMM	Avoidance and Minimization Measure
APE	Area of Potential Effects
APN	Assessor Parcel Number
BSA	Biological Study Area
BMP	Best Management Practice
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCA	California Coastal Act
CCC	Central California Coast
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CH_4	Methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	Carbon Dioxide
CRLF	California Red-Legged Frog
CWA	Clean Water Act
EFH	Essential Fish Habitat
ESA	Environmentally Sensitive Areas
ESHA	Environmentally Sensitive Habitat Area

FIGR	Federated Indians of Graton Rancheria
GHG	Greenhouse Gas
IS/MND	Initial Study with Proposed Mitigated Negative Declaration
MASH	Manual for Assessing Safety Hardware
MBGR	Metal Beam Guardrail
MGS	Midwest Guardrail System
MCP	Marin Countywide Plan
MLD	Most Likely Descendent
MRZ	Mineral Resource Zone
N_2O	Nitrous Oxide
NAHC	Native American Heritage Commission
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NSO	Northern Spotted Owl
PA	Programmatic Agreement
PF	Project Feature
PM	Post Mile
Project	SR 116 Green Valley Road Safety Improvements
PQS	Professionally Qualified Staff
PS&E	Plans, Specifications, And Estimates
ROW	Right of Way
RWQCB	Regional Water Quality Control Board

Section 106	Section 106 of the National Historic Preservation Act
SHOPP	State Highway Operation and Protection Program
SR	State Route
SSC	Species of Special Concern
SSP	Standard Special Provision
TMP	Traffic Management Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
EPA	U.S. Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WPCP	Water Pollution Control Program

Appendix E Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. 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.

Human activities generate GHGs consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring and necessary component of Earth’s atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. 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.

Regulatory Setting

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

Federal

To date, no nationwide numeric mobile-source GHG reduction targets have been established; however, federal agencies are mandated to consider the effects of climate change in their environmental reviews.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) is the basic national charter for protection of the environment which establishes policy, sets goals, and provides direction for carrying out the policy. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In May 2024, the White House Council on Environmental Quality (CEQ) issued the National Environmental Policy Act Implementing Regulations Revisions Phase 2 (89 Fed. Reg. 35442). The CEQ regulations do not establish numeric thresholds of significance, but mandate that federal agencies consider the effects of climate change in their environmental reviews, including direct, indirect, and cumulative impacts. The CEQ regulations further require that agencies quantify greenhouse gas emissions, where feasible, from the proposed action and alternatives. The regulations also direct agencies to identify reasonable alternatives that reduce climate change-related effects.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level rise, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— "the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global

efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFÉ) standards for on-road motor vehicles sold in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

State

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

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

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

Environmental Setting

The proposed project is in a rural area, with a primarily natural resources based agricultural and tourism economy. SR-116 is the main transportation route to and through the area for both passenger and commercial vehicles. The MTC Regional Transportation Agency guides transportation development. The Sonoma County General Plan Circulation, Safety, and Traffic elements address GHGs in the project area.

GHG Inventories

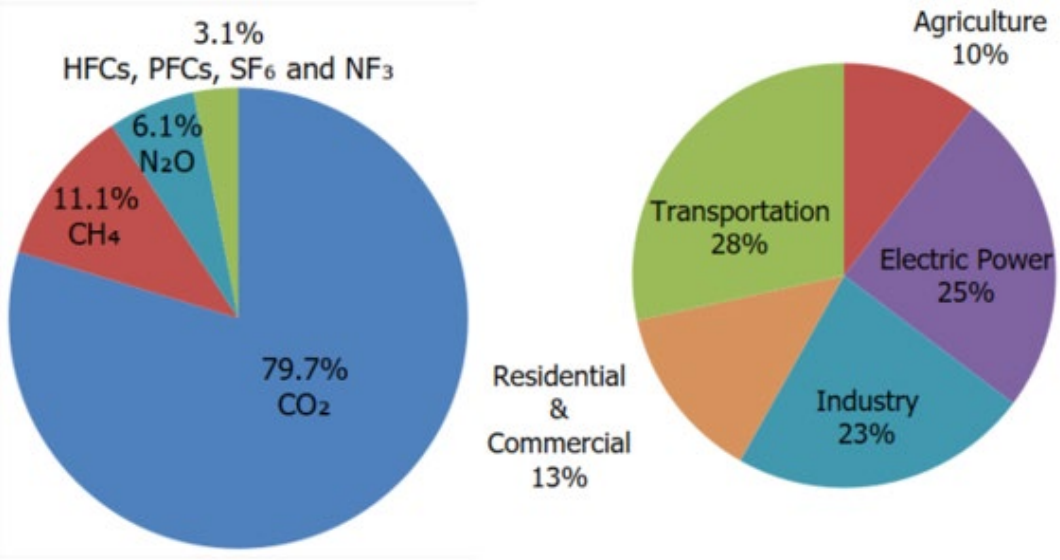
A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2022 were 5,489.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 15% of total U.S. emissions in 2022 [U.S. EPA 2024a].) While total GHG emissions in 2022 were 17% below 2005 levels, they increased by 1% over 2021 levels. Of these, 80% were CO_2, 11% were CH_4, and 6% were N_2O; the balance consisted of fluorinated

gases. From 1990 to 2022, CO_2 emissions decreased by only 2% (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28% in 2022 and continues to be the largest contributing sector (Figure 15). Transportation activities accounted for 37% of U.S. CO2 emissions from fossil fuel combustion in 2022. This is a decrease of 0.5% from 2021 (U.S. EPA 2024a, 2024b)).



(Source: U.S. EPA 2024b)

Figure 15. U.S. 2022 Greenhouse Gas Emissions.

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2021 despite growth in population and state economic output (Figure 16). Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 17; ARB 2023).

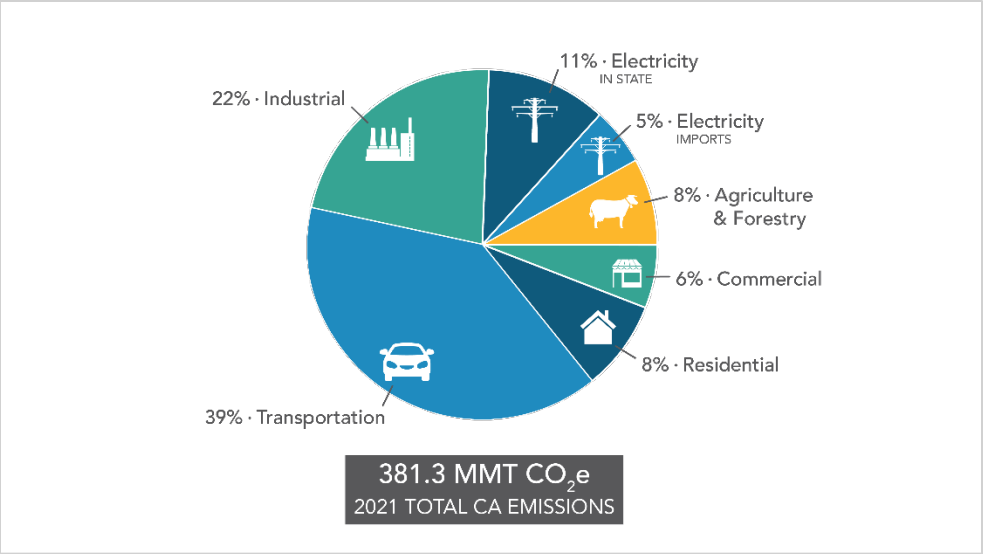


Figure 16. California 2021 Greenhouse Gas Emissions by Economic Sector (ARB 2023).

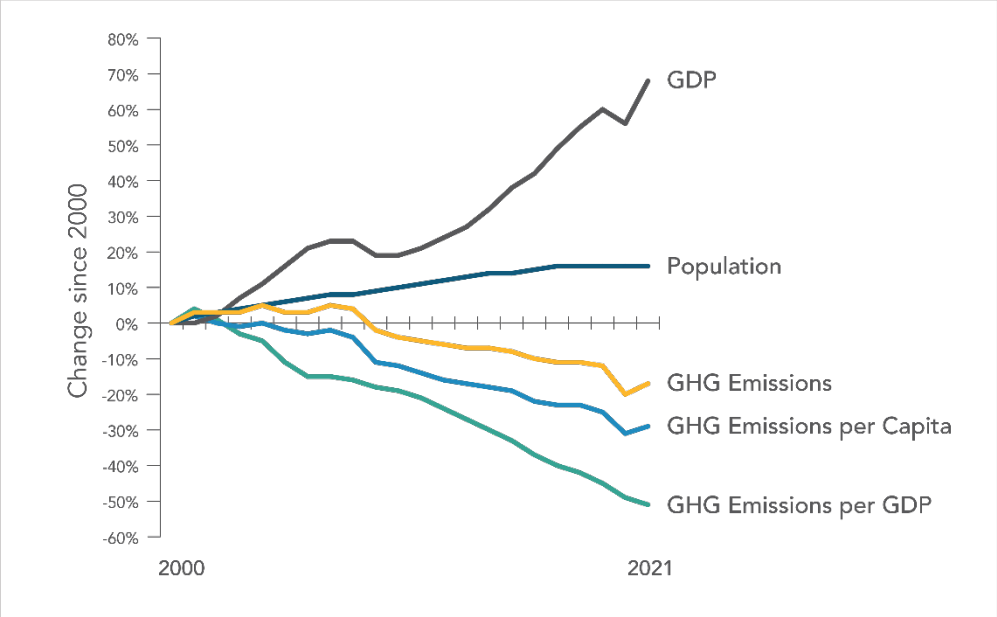


Figure 17. Change in California GDP, population, and GHG emissions since 2000 (ARB 2023).

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first scoping plan in 2008. The second updated plan, California's 2017 Climate Change Scoping Plan,

adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality,* adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022a).

Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008*, ARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the RTP/SCS for the MTC. The regional reduction target for the MTC is 19 percent by 2035 (ARB 2021).

Table 10. Regional and Local Greenhouse Gas Reduction Plans.

Title	GHG Reduction Policies or Strategies
Association of Bay Area Governments (ABAG) 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. • Expand the public transit network • Strategic capacity and technology enhancements to existing highways
Sonoma County Transportation Authority Bicycle and Pedestrian Master Plan (adopted 2014)	• Class II bike lanes
Sebastopol 2023 General Plan (adopted January 2023)	Sustainability Element

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary

GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called “carbon dioxide equivalent”, or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

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

Operational Emissions

The purpose of the proposed project is a safety improvements project. 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 (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

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

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

Construction-related GHG emissions were calculated using the Caltrans Construction Emissions Tool (CAL-CET), CAL-CET2-21 version 1.0.3. Alt 1 is estimated to produce 194 tons of CO_2, 0.004 tons of CH_4, 0.011 tons of N_2O, and 0.006 tons of HFC for a total of 198 metric tons of Carbon dioxide-equivalent (CO_2e). Alt 2 is estimated to produce 148 tons of CO_2, 0.003 tons of CH_4, 0.009 tons of N_2O, and 0.005 tons of HFC for a total of 151 metric tons of CO_2e.

PF-AQ-2, PF-AQ-3, PF-GHG-1, and PF-GHG-2 would be implemented to reduce or eliminate construction-related GHG emissions where practicable.

PF-AQ-2: Idling and Access Points. Idling times would be minimized either by shutting off equipment when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure [Title 13, Section 2485 of California Code of Regulations]). Clear signage would be provided for construction workers at all access points. Construction activities involving the extended idling of diesel equipment or vehicles would be prohibited, to the extent feasible.

PF-AQ-3: Maintaining Construction Equipment and Vehicles. All construction equipment and vehicles would be maintained and properly tuned in accordance with manufacturer's specifications. All equipment would be checked by a certified mechanic and determined to be running in proper condition prior to operation.

PF-GHG-1: Waste Reduction. If practicable, nonhazardous waste and excess material would be recycled. If recycling is not practicable, the material would be disposed of appropriately.

PF-GHG-2: Energy Reduction. Solar energy would be used to reduce the use of non-renewable energy during construction.

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

CEQA Conclusion

While The project would not increase roadway capacity along SR 116. Non-capacity increasing projects are considered by Caltrans to have less than significant GHG impacts under CEQA.

Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (ARB 2022b).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) Reducing petroleum use by up to 50 percent by 2030; (3) Increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) Reducing emissions of short-lived climate pollutants; and (5) Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015).

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

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

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022).

Caltrans Activities

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

Climate Action Plan for Transportation Infrastructure

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

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

communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

Caltrans Policy Directives and Other Initiatives

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

Project-Level GHG Reduction Strategies

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

PF-AES-1: Vegetation Protection. Existing trees and vegetation will be preserved to the extent feasible. Trees and vegetation outside of the clearing and grubbing limits would be protected from the contractor's operations, equipment, and materials storage. Tree trimming and pruning, where required, would be under the direction of a qualified biologist.

PF-BIO-13: Vegetation and Tree Removal. Vegetation would be cleared only where necessary and 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-14: Restore Disturbed Areas. Temporarily disturbed areas would be restored to the maximum extent practicable. 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 will be replanted, based on the local species composition.

PF-TRA-1: Traffic Management Plan. A Traffic Management Plan (TMP) will be developed by Caltrans during the design (PS&E) phase. The TMP will include public information, motorist information, incident management,

construction, and alternate routes. In addition, one-way traffic control, lane closures, flaggers and phasing, portable changeable message signs, flaggers and the California Highway Patrol's Construction Zone Enhanced Enforcement Program will be incorporated into the TMP to minimize delays to local residents and highway users, as feasible. The TMP will also provide access for police and emergency service providers. Lane closures will be planned in coordination with Caltrans and Sonoma County and will include notices to emergency services providers, and the public in advance.

Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

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

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and "analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25

to 100 years … to support informed decision-making across the United States." Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of the department's top priorities (U.S. DOT 2023). FHWA's policy is to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).

The National Oceanic and Atmospheric Administration provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

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

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 *California Climate Adaptation Strategy*, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio,* and the CAPTI (described above). Priorities in the 2023 *California Climate Adaptation Strategy* include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all

planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to “anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone.” As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

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

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Caltrans Sustainability Programs

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

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, direct impacts to transportation facilities due to projected sea level rise are not expected.

Precipitation and Flooding

This project is located within a Zone X floodplain: an area of minimum flood hazard outside the 0.2% annual chance floodplain. The project would not change the 100-year water surface elevation within the Project area. Stormwater runoff from the roadway would continue to sheet flow off the pavement similar to existing conditions. The Project would also implement temporary construction site BMPs to reduce the amount of pollutants being discharged into the receiving waterbodies and avoid storing hazardous and non-hazardous materials within the Zone X floodplain.

Wildfire

The project is located along a State Responsibility Area and the project is not located within a very high or high severity fire area. The project would serve the same use and vehicular capacity as the existing facility and would not increase wildfire risks. 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.

References

California Air Resources Board (ARB). 2008. *Climate Change Scoping Plan Appendices. Volume II: Analysis and Documentation*. Appendix I, p. I-19. December.https://ww3.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2021. *SB 375 Regional Plan Climate Targets*. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2022a. *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: June 14, 2024.

California Air Resources Board (ARB). 2022b. *Climate Change*. https://ww2.arb.ca.gov/our-work/topics/climate-change. Accessed: June 14, 2024.

California Air Resources Board (ARB). 2023. *California Greenhouse Gas Emissions Inventory Data–2023 Edition, 2000-2021*. https://ww2.arb.ca.gov/ghg-inventory-data. Accessed: June 14, 2024.

California Department of Transportation (Caltrans). 2020. *Caltrans Greenhouse Gas Emissions and Mitigation Report*. Final. August. Prepared by ICF, Sacramento, CA. https://dot.ca.gov/programs/public-affairs/mile-marker/summer-2021/ghg. Accessed: June 14, 2024.

California Department of Transportation (Caltrans). 2021a. *California Transportation Plan 2050*. February. https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/state-planning-equity-and-engagement/california-transportation-plan. Accessed: June 14, 2024.

California Department of Transportation (Caltrans). 2021b. *Caltrans 2020-2024 Strategic Plan*. https://storymaps.arcgis.com/stories/f190b9755a184b268719dac9a11153f7. Accessed: June 14, 2024.

California Department of Transportation. 2023. *Sustainable Operations at Caltrans*. https://dot.ca.gov/programs/esta/sustainable-caltrans. Accessed: June 14, 2024.

California Governor's Office of Planning and Research (OPR). 2015. *A Strategy for California @ 50 Million.* November. https://opr.ca.gov/planning/environmental-goals/. Accessed: June 14, 2024.

California Natural Resources Agency. 2022. *Nature-Based Climate Solutions: Natural and Working Lands Climate Smart Strategy*. https://resources.ca.gov/Initiatives/Expanding-Nature-Based-Solutions. Accessed: June 14, 2024.

California Natural Resources Agency. 2023. *California Climate Adaptation Strategy*. https://climateresilience.ca.gov/overview/index.html. Accessed: June 14, 2024.

California Ocean Protection Council. 2022. *State Agency Sea-Level Rise Action Plan for California*. February. https://www.opc.ca.gov/climate-change/sea-level-rise-2/. Accessed: June 14, 2024.

California State Transportation Agency. 2021. *Climate Action Plan for Transportation Infrastructure (CAPTI)*. https://calsta.ca.gov/subject-areas/climate-action-plan. Accessed: June 14, 2024.

Climate-Safe Infrastructure Working Group. 2018. *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. September. https://resources.ca.gov/CNRALegacyFiles/docs/climate/ab2800/AB2800_Climate-SafeInfrastructure_FinalNoAppendices.pdf. Accessed: June 14, 2024.

Federal Highway Administration (FHWA). 2022. *Sustainability*. https://www.fhwa.dot.gov/environment/sustainability/resilience/. Last updated July 29, 2022. Accessed: June 14, 2024.

Federal Highway Administration (FHWA). No date. *Sustainable Highways Initiative*. https://www.fhwa.dot.gov/environment/sustainability/initiative/. Accessed: June 14, 2024.

National Oceanic and Atmospheric Administration (NOAA). 2022. *2022 Sea Level Rise Technical Report*. https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html. Accessed: November 13, 2023.

State of California. 2018. *California's Fourth Climate Change Assessment.* http://www.climateassessment.ca.gov/. Accessed: June 14, 2024.

U.S. Department of Transportation (U.S. DOT). 2014. *Corporate Average Fuel Economy (CAFE) Standards*. https://www.transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards. Accessed: June 14, 2024.

U.S. Department of Transportation. 2023. *Climate Action*. January. https://www.transportation.gov/priorities/climate-and-sustainability/climate-action. Accessed: June 14, 2024.

U.S. Environmental Protection Agency (U.S. EPA). 2021. *Final Rule to Revise Existing National GHG Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026*. December. https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions. Accessed: June 14, 2024.

U.S. Environmental Protection Agency. 2024a. *Data Highlights*. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: June 14, 2024.

U.S. Environmental Protection Agency. 2024b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022*. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: June 14, 2024.

U.S. Global Change Research Program. 2023. *Fifth National Climate Assessment*. https://nca2023.globalchange.gov/chapter/front-matter/. Accessed: June 14, 2024.

Appendix F Right of Way Acquisitions

Figure 18. Proposed Right of Way acquisitions for Alt 1.

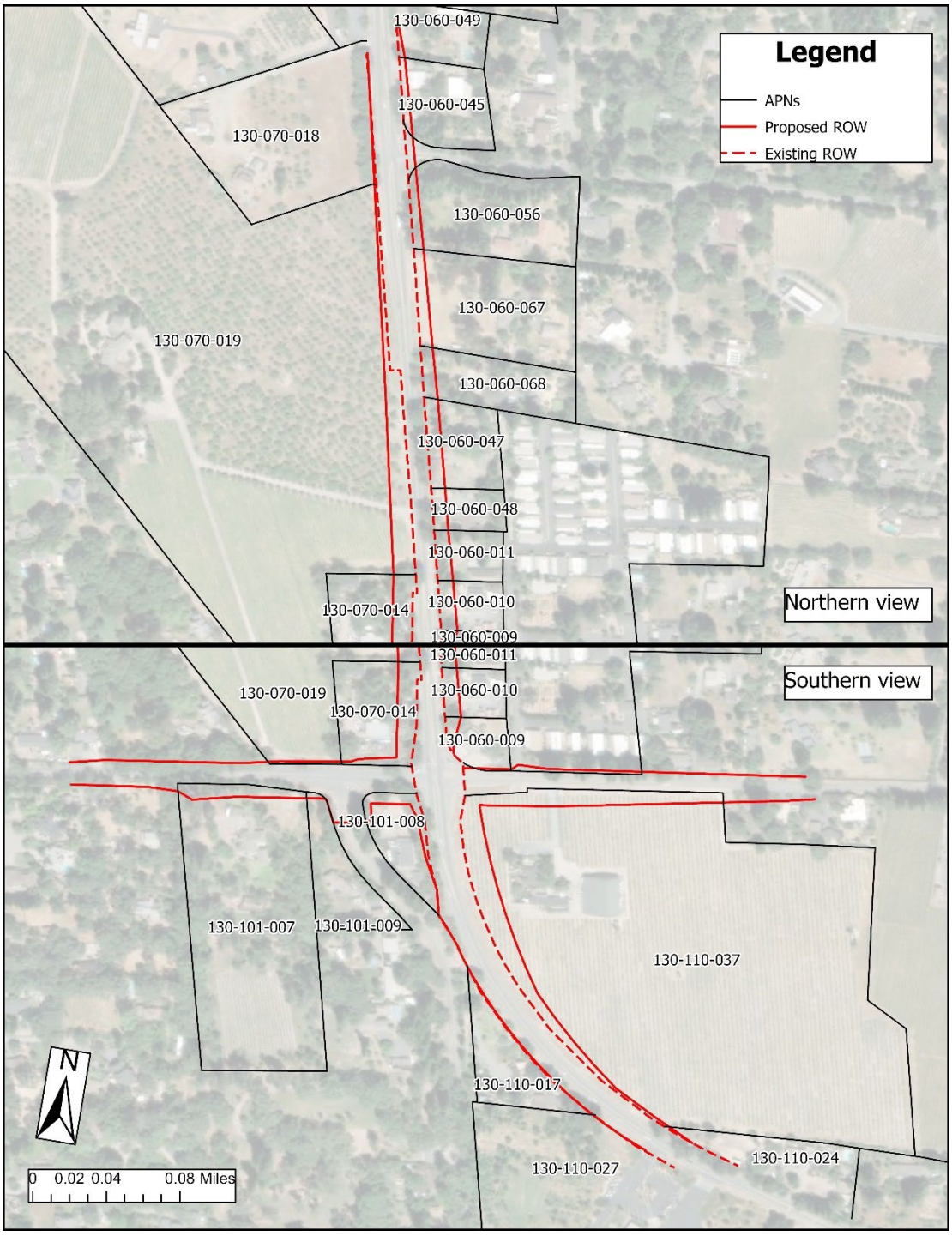


Figure 19. Northern and southern views of proposed Right of Way acquisitions for Alt 2.

Appendix G Farmland Conversion Impact Rating

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request	4. Sheet 1 of 1
1. Name of Project **Green Valley Road Safety Improvements**	5. Federal Agency Involved **FHWA/Caltrans**	
2. Type of Project **Transportation**	6. County and State **Sonoma County and California State**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐		4. Acres Irrigated | Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment State Route 116			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		0.41		
B. Total Acres To Be Converted Indirectly, Or To Receive Services	0	0		
C. Total Acres In Corridor		4.32		
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*				
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	8	8		
2. Perimeter in Nonurban Use — 10	1	1		
3. Percent Of Corridor Being Farmed — 20	0	0		
4. Protection Provided By State And Local Government — 20	20	20		
5. Size of Present Farm Unit Compared To Average — 10	0	0		
6. Creation Of Nonfarmable Farmland — 25	0	0		
7. Availablility Of Farm Support Services — 5	0	0		
8. On-Farm Investments — 20	10	8		
9. Effects Of Conversion On Farm Support Services — 25	0	0		
10. Compatibility With Existing Agricultural Use — 10	0	0		
TOTAL CORRIDOR ASSESSMENT POINTS — 160	39	37	0	0
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment) — 160	39	37	0	0
TOTAL POINTS *(Total of above 2 lines)* — 260	39	37	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
To Be Determined in Final Environmental Document	**Maximum 1.79 acres**		YES ☐ NO ☑

5. Reason For Selection:
Preferred corridor selection will be determined in the Final Environmental Document.

Amanda Goldsmith — 10/22/2025
Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

Figure 20. Farmland Conversion Impact Rating (NRCS-CPA-106).