

# **Marin State Route 1 Drainage System Restoration Project**



## **Draft Initial Study with Proposed Mitigated Negative Declaration**

MARIN COUNTY, CALIFORNIA  
DISTRICT 4 – MRN – 1 (PM 13.05/PM 45.10)  
04-2Q53U/0422000077

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

**July 2023**







## General Information about this Document

### What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the Marin State Route (SR) 1 Drainage System Restoration Project (Project). Caltrans proposes to restore 51 existing drainage systems and perform maintenance work on five drainage systems along 32 miles of SR 1, from the community of Stinson Beach to near the community of Tomales, in Marin County (Post Mile [PM] 13.05 to PM 45.10).

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

### What you should do:

- Please read this document.
- The document, maps, and other Project information are available to download at the [District 4 Environmental Documents by County](https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs) website (<https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs>). In addition, the document will be made available for public review at three locations in the vicinity of the Project:
  - Point Reyes Station Library — 11435 CA-1, Point Reyes Station, CA 94956
  - Stinson Beach Library—3521 Shoreline Hwy, Stinson Beach, CA 94970
  - Tomales Post Office - 27005 CA-1, Tomales, CA 94971
- We would like to hear what you think. Send comments by the August 20, 2023, deadline to:
  - Caltrans, District 4  
Attn: Arnica MacCarthy  
P.O. Box 23660, MS: 8B  
Oakland, CA 94623-0660
  - or [SR1DrainageSystemRestorationProject@dot.ca.gov](mailto:SR1DrainageSystemRestorationProject@dot.ca.gov)

## **What happens next:**

Per CEQA Section 15073, Caltrans will circulate the IS/MND for 30 days, from July 20 to August 20, 2023. During the 30-day public review period, the general public and responsible and trustee agencies can submit comments on this document to Caltrans. Caltrans will consider the comments and respond after the 30--day public review period.

After comments have been received from the public and reviewing agencies, Caltrans may do one of the following:

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

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

## **Alternative formats:**

For individuals with sensory disabilities, the document can be made available in Braille, with large print, on audiocassette, or on computer disk by writing or emailing Caltrans at [Arnica.MacCarthy@dot.ca.gov](mailto:Arnica.MacCarthy@dot.ca.gov), or calling the California Relay Service at (800) 735-2929 (TTY), (800) 735-2922 (voice), or 711.

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

## Initial Study with Proposed Mitigated Negative Declaration

04-MRN-1

13.05-45.10

04-2Q53U

Dist.-Co.-Rte.

PM

EA

|  |  |
|--|--|
| Project title:   | Marin State Route 1 Drainage System Restoration Project  |
| Lead agency name and address:  | California Department of Transportation<br>P.O. Box 23660, MS 8B<br>Oakland, CA 94623  |
| Contact person and phone number:   | Arnica MacCarthy, Senior Environmental Planner<br>(510) 506-0481   |
| Project location:  | Marin County   |
| General plan description:  | Highway  |
| Zoning:  | Transportation Corridor  |
| Other public agencies whose approval is required (e.g., permits, financial approval, participation agreements) | Marin County Local Coastal Program<br>California Coastal Commission<br>National Park Service<br>California Department of Fish and Wildlife<br>California Transportation Commission<br>Regional Water Quality Control Board<br>U.S. Army Corps of Engineers<br>U.S. Fish and Wildlife Service |

The document, maps and other Project information are available to download at the [District 4 Environmental Documents by County](https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs) website (<https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs>).

*Maxwell Lammert*

7/13/2023

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Date

To obtain a copy in Braille, with large print, on computer disk, or on audiocassette, please contact the California Department of Transportation, Attn: Arnica MacCarthy, Senior Environmental Planner, Office of Environmental Analysis, 111 Grand Avenue, MS 8-B, Oakland, CA 94612; call (510) 506-0481 (voice); or use the California Relay Service at (800) 735-2929 (TTY), (800) 735-2929 (voice), or 711.



# Proposed Mitigated Negative Declaration

## Project Description

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the Marin State Route (SR) 1 Drainage System Restoration Project (Project). Caltrans proposes to restore 51 existing drainage systems and perform maintenance work on five drainage systems at various locations along 32 miles of SR 1, from the community of Stinson Beach to near the community of Tomales, in Marin County (Post Mile [PM] 13.05 to PM 45.10). Additional Project information is provided in Chapter 2.

## Determination

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

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

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

With the incorporation of mitigation measures for biological resources, including MM--BIO-1, MM-BIO-2, and MM-BIO-3, the Project would have a less than significant impact.

- **MM-BIO-1, Impacts to Vegetation.** Vegetation removed for the Project would be restored to pre-existing conditions using native species. Trees removed within CDFW jurisdiction will be replanted following construction. Appropriate tree

replacement ratios and locations would be determined during the permitting process and in consultation with the appropriate agencies.

- **MM-BIO-2, Impacts to ESHAs.** Restoration of temporary disturbance areas, including ESHAs, will be accomplished through onsite revegetation. Restoration of temporary impact areas will occur within the same season they are disturbed so that the duration of disturbance at each location will not exceed 12 months. Restoration of temporarily disturbed areas will be performed at a 1:1 ratio. At the end of each construction season, exposed slopes and bare ground will be reseeded with native grasses and shrubs to stabilize and prevent erosion.
- **MM-BIO-3, Impacts to Jurisdictional Waters.** Caltrans will determine the need for mitigation for impacts to jurisdictional waters during the design phase in consultation with agencies including USACE, CCC, and the RWQCB. Caltrans will be obtaining a National CWA Section 401 certification from the RWQCB. Any final mitigation requirements will be determined in coordination with applicable agencies during the permitting process.

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Christopher Caputo  
Acting Deputy District Director  
Environmental Planning and Engineering  
California Department of Transportation, District 4

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Date

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## List of Abbreviated Terms

| Abbreviation      | Definitions   |
|-------------------|---|
| AB                | Assembly Bill   |
| AMM               | avoidance and minimization measure                    |
| APE               | area of potential effects                             |
| BFE               | base flood elevations                                 |
| BMP               | best management practice                              |
| BSA               | biological study area                                 |
| CAL FIRE          | California Department of Forestry and Fire Protection |
| CAL-CET 2020      | Caltrans Construction Emissions Tool 2020             |
| Caltrans          | California Department of Transportation               |
| CARB              | California Air Resources Board                        |
| CCA               | California Coastal Act                                |
| CCC               | California Coastal Commission                         |
| CDFW              | California Department of Fish and Wildlife            |
| CEQA              | California Environmental Quality Act                  |
| CFR               | <i>Code of Federal Regulations</i>                    |
| CGS               | California giant salamander                           |
| CH <sub>4</sub>   | methane   |
| CMP               | corrugated metal pipe                                 |
| CNDDDB            | California Natural Diversity Database                 |
| CNPS              | California Native Plant Society                       |
| CO <sub>2</sub>   | carbon dioxide  |
| CO <sub>2</sub> e | carbon dioxide equivalent                             |
| CRLF              | California red-legged frog                            |
| CSP               | corrugated steel pipe                                 |
| CWA               | Clean Water Act                                       |

| <b>Abbreviation</b>                    | <b>Definitions</b>   |
|--|--|
| dB                                     | decibel(s)   |
| dBA                                    | A-weighted decibel(s)                                      |
| DSA                                    | disturbed soil areas                                       |
| EA                                     | Expenditure Authorization                                  |
| EIR                                    | environmental impact report                                |
| ESA                                    | environmentally sensitive areas                            |
| ESHA                                   | environmentally sensitive habitat areas                    |
| FEMA                                   | Federal Emergency Management Agency                        |
| FESA                                   | federal Endangered Species Act                             |
| FIGR                                   | Federated Indians of Graton Rancheria                      |
| FMMP                                   | Farmland Mapping and Monitoring Program                    |
| FYLF                                   | foothill yellow-legged frog                                |
| GGNRA                                  | Golden Gate National Recreation Area                       |
| GHG                                    | greenhouse gas   |
| GL                                     | grazing land   |
| HFC                                    | hydrofluorocarbon  |
| ID                                     | identification number                                      |
| IPaC                                   | Information for Planning and Conservation                  |
| IS/MND                                 | Initial Study with Proposed Mitigated Negative Declaration |
| LCP                                    | Local Coastal Program                                      |
| LEA                                    | land extensive agriculture                                 |
| LRA                                    | Local Responsibility Area                                  |
| Marin County SR 1<br>Repair Guidelines | <i>Final Marin State Route 1 Repair Guidelines</i>         |
| MLD                                    | Most Likely Descendent                                     |
| MM                                     | mitigation measure   |
| MND                                    | Mitigated Negative Declaration                             |

| <b>Abbreviation</b> | <b>Definitions</b>  |
|---------------------|---|
| MRP                 | Municipal Regional Permit   |
| MRZ                 | Mineral Resource Zone   |
| MSB                 | Myrtle’s silverspot butterfly   |
| MTC                 | Metropolitan Transportation Commission  |
| MTZ                 | Mt. Tamalpais Threat Zone   |
| N <sub>2</sub> O    | nitrous oxide   |
| NAHC                | Native American Heritage Commission   |
| NCAB                | North Coast Air Basin   |
| NES                 | Natural Environmental Study   |
| NMFS                | National Marine Fisheries Service   |
| NOAA                | National Oceanic and Atmospheric Administration   |
| NPDES               | National Pollutant Discharge Elimination System   |
| NSO                 | northern spotted owl  |
| OPC                 | Ocean Protection Council  |
| PA                  | <i>First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of Federal-Aid Highway Program in California</i> |
| PBF                 | physical and biological feature   |
| PDE                 | permanent drainage easement   |
| PF                  | project feature   |
| PHE                 | permanent highway easement  |
| PM                  | post mile   |
| PQP                 | public/quasi-public   |

| <b>Abbreviation</b> | <b>Definitions</b>  |
|---------------------|---|
| PQS                 | Professionally Qualified Staff                                  |
| Project             | State Route 1 Culvert Rehabilitation Project                    |
| RCB                 | reinforced-concrete box   |
| ROW                 | right of way  |
| RR                  | rural residential district                                      |
| RSP                 | rock-slope protection   |
| RWQCB               | Regional Water Quality Control Board                            |
| SFHA                | Special Flood Hazard Area                                       |
| SHOPP               | State Highway Operation and Protection Program                  |
| SHPO                | State Historic Preservation Officer                             |
| SR                  | State Route   |
| SRA                 | State Responsibility Area                                       |
| SRE/VIA             | <i>Scenic Resources Evaluation and Visual Impact Assessment</i> |
| SSC                 | Species of Special Concern                                      |
| SSP                 | Standard Special Provision                                      |
| SWPPP               | Stormwater Pollution Prevention Plan                            |
| SWRCB               | State Water Resources Control Board                             |
| TAM                 | Transportation Authority of Marin                               |
| TCDS                | temporary creek diversion system                                |
| TCE                 | temporary construction easement                                 |
| TMP                 | Traffic Management Plan   |
| TWG                 | tidewater goby  |
| USACE               | United States Army Corps of Engineers                           |
| USFWS               | United States Fish and Wildlife Service                         |
| VIA                 | visual impact assessment  |
| VMT                 | vehicle miles traveled  |

| <b>Abbreviation</b> | <b>Definitions</b>                      |
|---------------------|---|
| WEAT                | worker environmental awareness training |
| WEF                 | wildlife exclusion fencing              |
| WPCP                | Water Pollution Control Program         |
| WPT                 | western pond turtle                     |





# **Chapter 1** Proposed Project

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## **1.1 Introduction**

The California Department of Transportation (Caltrans), as the California Environmental Quality Act (CEQA) lead agency and sponsor for the proposed Marin State Route (SR) 1 Drainage System Restoration Project (Project), has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the Project.

The Project would restore 51 existing drainage systems and perform maintenance on 3 additional drainage systems along 32 miles of SR 1 at various locations from the community of Stinson Beach at the southern limits of the Project, traveling north through the town of Point Reyes Station, and terminating near the community of Tomales at the northern limits of the Project (from 0.02 mile north of Calle Del Arroyo to 0.02 mile south Tomales Petaluma Road). This 32-mile corridor on SR 1 is also referred to as the Project area (Figures 1-1 and 1-2; figures are presented in Appendix A).

The Project would be funded by the State Highway Operation and Protection Program (SHOPP) under program code 201.151 (Drainage System Restoration) for the 2023/2024 construction fiscal year. SHOPP is the state's "fix-it-first" program, which funds the repair and preservation of the state highway system, safety improvements, and some highway operational improvements. The total escalated cost estimate, including capital and support costs, is \$28,600,000.

## **1.2 Purpose and Need**

The purpose of the Project is to restore drainage systems within the Project area. The Project is needed because Caltrans field investigations identified drainage deficiencies within the Project area at various culverts. Identified culverts have lost serviceability due to age or deterioration and need cleaning or improvements to regain their full capacity. If the Project is not constructed, existing pavement within the Project area may begin to deteriorate due to the lack of adequate drainage, which could lead to failure of the highway.



# **Chapter 2** Project Description

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## **2.1 Introduction**

This chapter discusses the condition of the existing facilities, proposed Project construction methodology, and necessary permits from regulatory agencies to implement the Project.

## **2.2 Existing Facilities**

SR 1 within the Project limits serves as a critical connection for the small and relatively isolated communities along its route. Like the rest of this coastal highway, SR 1 in Marin County is known for its scenic views and natural features and passes through or near a variety of federal and State of California (State) parklands and recreational areas frequented by tourists. For most of the route in Marin County, SR 1 is a two-lane rural conventional highway.

SR 1 in the Project vicinity provides access to several state parks, county public parks, national parks, fishing areas, a preserve, and an ecological resource area. The highway is part of the Pacific Coast Bicycle Route and either runs parallel to or is part of the California Coastal Trail. There is limited but daily bus service on SR 1. The Annual Average Daily Traffic in the vicinity of the Project limits is 5,200 vehicles (as of 2017).

Within the Project area, SR 1 is a two-lane undivided highway bordered by rural residential and agricultural land uses. Travel lanes are approximately 12 feet wide, with narrow shoulders ranging from less than 1 foot in width to approximately 3 feet, and no designated pedestrian or bicycle facilities.

## **2.3 Project Components**

This section discusses Project components that would be constructed as part of the Project. The scope of the Project's drainage work at each culvert location includes existing and proposed culvert types, flared-end sections, headwalls, and drainage inlet and/or rock-slope protection (RSP) work as applicable. The majority of the proposed improvement strategies at each site would require culvert replacements. A few locations would require culvert restoration (cleaning out sediment and vegetation) only. Figure 1-2 in Appendix A shows the proposed drainage systems and Table 2-1 summarizes the proposed post-Project conditions.

**Table 2-1. Proposed Drainage Systems**

| Location | PM    | Existing Culvert                            | Proposed Restoration Strategy | Additional Drainage Features  |
|----------|-------|---|-------------------------------|---|
| 1        | 13.05 | Portion 18-inch CMP and portion 18-inch RCP | Replace with 18-inch PP       | Install drainage inlet<br>Install flared-end Section                    |
| 2        | 13.15 | 12-inch CMP                                 | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace headwall               |
| 3        | 13.20 | 12-inch VCP                                 | Replace with 18-inch CSP      | Install flared-end section<br>Remove headwall<br>Install drainage inlet |
| 4        | 13.27 | 12-inch VCP                                 | Replace with 18-inch CSP      | Install flared-end section<br>Remove headwall<br>Install drainage inlet |
| 5        | 13.79 | 18-inch CMP                                 | Replace with 18-inch APC      | Install flared-end section  |
| 6        | 13.82 | 18-inch CMP                                 | Replace with 18-inch PP       | Install flared-end section<br>Install drainage inlet                    |
| 7        | 13.91 | 24-inch RCP                                 | Replace with 24-inch PP       | Install flared-end section<br>Install drainage inlet                    |
| 8        | 14.67 | 12-inch CSP                                 | Replace with 18-inch APC      | Reset RSP   |
| 9        | 14.72 | 12-inch RCP                                 | Replace with 18-inch PP       | Install flared-end section<br>Install drainage inlet                    |
| 10       | 14.77 | 12-inch CSP                                 | Replace with 18-inch PP       | Install flared-end section<br>Install drainage inlet                    |
| 11       | 14.86 | 10-foot by 4-foot RCB                       | Clean Only                    | None  |
| 12       | 15.05 | 18-inch CMP                                 | Replace with 18-inch PP       | Install flared-end section<br>Install headwall                          |
| 13       | 15.32 | 18-inch CSP                                 | Replace with 18-inch PP       | Install flared-end section<br>Install drainage inlet                    |
| 14       | 15.84 | 18-inch RCP                                 | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace drainage inlet         |
| 15       | 15.88 | 12-inch CSP                                 | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace drainage inlet         |
| 16       | 15.97 | 83-inch by 53-inch oval RCP                 | Clean Only                    | None  |

| Location | PM    | Existing Culvert                        | Proposed Restoration Strategy | Additional Drainage Features                                    |
|----------|-------|---|-------------------------------|---|
| 17       | 16.06 | 49-inch by 33-inch CMPA                 | Replace with 36-inch APC      | Install flared-end section<br>Install headwall                  |
| 18       | 16.12 | 18-inch CMP                             | Replace with 18-inch PP       | Install flared-end section<br>Install headwall                  |
| 19       | 16.15 | 21-inch by 15-inch CMPA                 | Replace with 18-inch PP       | Install flared-end section<br>Install headwall                  |
| 20       | 16.19 | 21-inch by 15-inch CMPA                 | Replace with 18-inch APC      | Remove headwall<br>Install drainage inlet<br>Reset RSP          |
| 21       | 16.61 | 18-inch RCP                             | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace drainage inlet |
| 22       | 16.67 | 18-inch RCP                             | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace drainage inlet |
| 23       | 17.81 | 24-inch RCP                             | Replace with 24-inch APC      | Install flared-end section                                      |
| 24       | 18.94 | 18-inch RCP                             | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace RSP            |
| 25       | 19.12 | 12-inch CMP                             | Replace with 18-inch APC      | Install flared-end section                                      |
| 26       | 20.19 | 18-inch CMP                             | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace headwall       |
| 27       | 20.48 | 18-inch CMP                             | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace headwall       |
| 28       | 23.40 | 18-inch CMP                             | Replace with 18-inch APC      | Install flared-end section<br>Remove and replace headwall       |
| 29       | 27.64 | 18-inch CMP                             | Replace with 18-inch PP       | Install flared-end section                                      |
| 30       | 27.92 | 8-foot by 2-foot, 8-inch RCB            | Clean only                    | None  |
| 31       | 27.94 | 24-inch CMP                             | Clean only                    | None  |
| 32       | 28.35 | 12-inch CMP and 17-inch by 13-inch CMPA | Replace with Two 18-inch PP   | Install flared-end sections<br>Remove and replace headwalls     |
| 33       | 29.85 | Tomasini Canyon Bridge                  | Clean only                    | None  |

| Location | PM    | Existing Culvert     | Proposed Restoration Strategy              | Additional Drainage Features   |
|----------|-------|----------------------|--|--|
| 34       | 35.42 | 18-inch CMP          | Replace with 18-inch APC                   | Install flared-end sections  |
| 35       | 36.31 | 18-inch CMP          | Replace with 18-inch APC                   | Install flared-end sections  |
| 36       | 36.45 | 18-inch CMP          | Replace with 18-inch APC                   | Install flared-end sections<br>Reset RSP                                     |
| 37       | 36.64 | 18-inch CMP          | Replace with 18-inch APC                   | Remove and Replace Headwall  |
| 38       | 37.65 | 30-inch CMP          | Replace with 30-inch APC                   | Install flared-end sections<br>Reset RSP                                     |
| 39       | 37.99 | 18-inch CMP          | Replace with 18-inch APC                   | Install flared-end section<br>Remove and replace drainage inlet<br>Reset RSP |
| 40       | 38.20 | 12-inch CMP          | Abandon culvert and divert to Location 40A | None   |
| 40A      | 38.28 | 18-inch CSP          | Replace with 30-inch APC                   | Remove and Replace Headwall  |
| 41       | 38.27 | 18-inch CSP          | Abandon culvert and divert to Location 40A | None   |
| 42       | 38.37 | 18-inch CMP          | Replace with 18-inch PP                    | Install flared-end section<br>Install headwall                               |
| 43       | 39.30 | 8-foot by 4-foot RCB | Clean only                                 | None   |
| 44       | 42.84 | 18-inch CMP          | Replace portion with 18-inch APC           | Install flared-end section   |
| 45       | 43.42 | 18-inch RCP          | Replace with 18-inch APC                   | Install flared-end sections  |
| 46       | 44.01 | 18-inch PP           | Clean only                                 | None   |
| 47       | 44.85 | 12-inch CMP          | Replace with 18-inch PP                    | Install flared-end section<br>Install headwall                               |
| 48       | 44.92 | 18-inch CMP          | Replace with 18-inch APC                   | Install flared-end sections  |
| 49       | 45.05 | 12-inch CMP          | Replace with 18-inch PP                    | Install flared-end section<br>Install drainage inlet                         |
| 50       | 45.10 | 18-inch CMP          | Replace with 18-inch PP                    | Install flared-end section<br>Install drainage inlet                         |

Notes:

APC = alternative pipe culvert

CMP = corrugated metal pipe

CMPA = corrugated metal pipe arch

CSP = corrugated steel pipe

N/A = not applicable

PP = polypropylene pipe

RCB = reinforced-concrete box

RCP = reinforced-concrete pipe

VCP = vitrified clay pipe

### **2.3.1 Replace Culverts**

The existing culvert drainage pipes would be removed by sawcutting the highway pavement and excavating a trench. Each new culvert (with a minimum diameter of 18 inches) would be set in place and covered with fill materials. The highway would be patched with concrete and asphalt at the trenched areas to restore the driving surface and finish grading. Descriptions of existing culverts and proposed replacement of culverts are included in Table 2-1. The locations of the culverts are shown on Figure 1-2.

### **2.3.2 Drainage Inlets**

The Project proposes to construct new drainage inlets as necessary. A drainage inlet is the opening that collects water from roads and conveys it to the culvert. The Project proposes new drainage inlets, with each grate being bicycle friendly to enable safe bicyclist usage. The Project would remove and replace the drainage inlets at five locations (Locations 14, 15, 21, 22, and 39) and install new drainage inlets at 11 locations (Locations 1, 3, 4, 6, 7, 9, 10, 13, 20, 49 and 50).

### **2.3.3 Construct Headwalls**

The Project proposes to construct new headwalls as necessary. A headwall is a concrete wall used to prevent the creation of an overly steep side slope, to improve water flow, provide anchoring support to prevent the culvert from dislodging under excessive pressure, control erosion and scour from high water velocities, and prevent adjacent soil from sloughing into a stream and culvert inlet. Headwalls also confine culvert segments to prevent joint separation that results in the infiltration of water into the soil around the culvert. The Project would remove and replace headwalls at eight locations (Locations 1, 2, 26, 27, 28, 32, 37, and 40A), install new headwalls at six locations (Locations 12, 17, 18, 19, 42, and 47), and remove headwalls at three locations (Locations 3, 4, and 20).



### **2.3.4 Construct Flared-end Sections**

The Project proposes to construct new and flared-end sections as necessary. A flared-end section is a type of treatment used to improve the hydraulic efficiency of a culvert and retention of the surrounding embankment by preventing scouring and undercutting. The Project would install new flared-end sections at 38 locations (Locations 1 through 7, 9, 10, 12 through 15, 17 through 19, 21 through 29, 32, 34 through 36, 38, 39, 42, 44, 45, and 47 through 50).

### **2.3.5 Remove and Replace Rock-slope Protection**

RSP consists of a layer of rocks used to stabilize slopes and reduce erosion downstream of culverts. The existing sakrete (concrete bags) at location 24 would be removed and new RSP would be installed. The RSP at Locations 8, 20, 36, 38, and 39 would be reset (RSP would be removed during construction and put back in place).

### **2.3.6 Temporary Creek Diversion Systems**

Temporary creek diversion systems (TCDS) are anticipated because of the potential for work within surface water body crossings at various culvert locations. Locations 11, 16, and 17 (PMs 14.86, 15.97, and 16.06) are culverts greater than 30 inches and are potentially within jurisdictional waters that may require the use of TCDS. The TCDS would likely comprise an upstream cofferdam, consisting of gravel-filled bags or a water-filled cofferdam, to prevent flows from entering the work zone. Flows that accumulate at the upstream cofferdam would be conveyed through the dry work area in a flexible plastic pipe to an area downstream of the construction area. The TCDS would likely use gravity flow; however, a pump system could be used if gravity flow was not feasible to get flows around the work area. A downstream cofferdam would be placed to ensure there is no backflow from the water leaving the diversion pipe. The TCDS would be within Caltrans right of way (ROW) or within the temporary construction easements (TCEs) identified in Figure 1-2.

### **2.3.7 Amphibian Crossings and Fish Passage**

The Project is considering using amphibian crossings or upsizing culverts in approximately eight locations considered beneficial to special-status species of concern (Section 3.3.4, Biological Resources). Caltrans has identified several locations where amphibian crossing improvements may be added to the Project during the design phase. Details of the improvements could include enhancement of culvert inlet and outflow to enhance amphibian access, directional barrier or fencing, and upsizing of culverts. These improvements would provide potential beneficial

impacts toward amphibian passage and would provide a secondary benefit for amphibians to pass through the culvert and potentially obviate the need for directional fencing and maintenance in wetland areas. Caltrans District 4 will draw on examples from previously designed amphibian crossings such as from Caltrans District 9. Other design solutions will be considered and evaluated in the next phase of design.

In addition, fish passage improvements may be considered at locations along SR 1 within the limits of the proposed Project. If included, these improvements would provide beneficial impacts toward fish passage. Potential design solutions could include upsizing of culverts. The locations and design solutions for fish passage improvements will be considered during later project phases.

### 2.3.8 Sediment and Vegetation Removal at Maintenance Culverts

The Project proposes to clean sediment out of five maintenance culvert inlets, outlets, and roadside ditches along SR 1 at PMs 14.31, 14.86, 15.97, 16.09, and 16.47. The maintenance culvert site at PM 14.86 includes Location 11 and the maintenance culvert at PM 15.97 includes Location 16. Clean-out work at these sites would include sediment and vegetation removal from inlet and outlet areas and roadside ditches. Table 2-2 includes the approximate amount of sediment that would be removed at each maintenance culvert site. Work at the maintenance culverts would occur within Caltrans ROW. The five maintenance culvert sites may require TCDS and dewatering. The maintenance culverts are shown in Figure 1-2.

**Table 2-2. Maintenance Culverts**

| Culvert                                       | Inlet sediment Removal (cubic yards) | Outlet Sediment Removal (cubic yards) | Roadside Ditch Sediment Removal (cubic yards) | Total Cubic Yards of Sediment Removal |
|---|--------------------------------------|---------------------------------------|---|---------------------------------------|
| Maintenance Culvert at PM 14.31               | 15                                   | 15                                    | 120   | 150                                   |
| Maintenance Culvert at PM 14.86 (Location 11) | 40                                   | 40                                    | 15  | 95                                    |
| Maintenance Culvert at PM 15.97 (Location 16) | 15                                   | 15                                    | 120   | 150                                   |
| Maintenance Culvert at PM 16.09               | 15                                   | 15                                    | 0   | 30                                    |
| Maintenance Culvert at PM 16.47               | 35                                   | 35                                    | 3.5   | 73.5                                  |

## **2.4 Construction Methodology**

This section discusses how construction of the proposed Project would occur.

### **2.4.1 Construction Staging**

The proposed Project is expected to be built in three stages, as follows:

- Stage 1: In the first stage, the Project would mobilize and stage all appropriate materials in the designated staging areas (Figure 1-2).
- Stage 2: In the second stage, the Project would use one-way traffic control with flagging for the crew at each location. The work for this stage would begin with clearing and grubbing (removal of trees, stumps, roots, bushes, and other vegetation or debris). During construction, one lane would be closed by flaggers while the other lane remains open for use by traffic in both directions. At the end of each workday, unfinished trenching would be trench-plated with 2-inch-thick trench plates and backfilled with recommended material.
- Stage 3: The third stage would address off-pavement work such as RSP, regrading of existing ditches, and installation of permanent erosion control.

### **2.4.2 Traffic Management**

Traffic would be maintained throughout the Project limits during construction. At least one lane would be open for traffic during construction. A Traffic Management Plan (TMP) is required for the Project and would be developed during subsequent Project phases. The TMP would minimize disruption and manage traffic impacts to the traveling public during construction of the Project. TMP strategies would include (but not be limited to) public information for motorists, businesses, local communities, and local officials about upcoming lane closures.

### **2.4.3 Construction Schedule**

The overall construction period is anticipated to occur over 2 calendar years and is anticipated to require approximately 280 working days. Construction is anticipated to occur between February 2025 and April 2027. Construction activities would be limited to daytime hours. Construction duration at each location would vary from approximately 1 day to 2 weeks depending on the type of restoration required, and if temporary creek diversion were required.

Construction of in-water work would be restricted within identified riparian corridors around jurisdictional waters to June 1 through October 31, when stream channels and drainages are expected to be dry. Where feasible, vegetation and tree removal would be performed between October 1 and January 31.

#### **2.4.4 Staging Areas**

Staging areas for parking of vehicles during construction and overnight storage of equipment and materials would be limited to areas within the Caltrans ROW, such as the closed lane adjacent to the culvert(s) that are being removed, replaced, and maintained. Approximately 4.58 acres of staging at 40 locations along the Project corridor would be required during construction. The staging area locations are shown on Figure 1-2.

#### **2.4.5 Construction Equipment**

Construction equipment may include, but would not be limited to, utility trucks, backhoes, excavators, dump trucks, jackhammers, saws, generators, vacuums, water trucks, street sweepers, air compressors, pavers, augers, compactors, concrete pumps, and hydraulic pumps.

At the maintenance culvert sites, construction equipment may include a vacuum truck, excavator, and loader. Hand tools would be used at the culvert maintenance sites where feasible.

#### **2.4.6 Utilities**

Utility verification (that is, potholing) would occur during the final design phase to confirm the need for utility relocations. If needed, utility relocations would occur prior to the beginning of construction and in consultation with utility providers.

#### **2.4.7 Right of Way**

Construction would occur within, and outside of, Caltrans ROW. The Project would require 50 TCEs for a total of approximately 0.58 acre, and estimated 15 permanent drainage easements (PDEs) for total of approximately 0.11 acre, for conducting construction-related activities outside the Caltrans ROW. TCEs and PDEs anticipated for the Project are identified on Figure 1-2. TCEs and PDEs would be finalized during the Project design phase.

### 2.4.8 Title VI of the Civil Rights Act

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

## 2.5 Permits, Licenses, Agreements, Certifications, and Approvals Needed

Table 2-3 lists the permits, licenses, agreements, certifications, and approvals anticipated to be required for Project construction.

**Table 2-3. Required Permits, Licenses, Agreements, Certifications, and Approvals Needed**

| Agency   | Permit   | Description   |
|--|--|---|
| U.S. Army Corps of Engineers                           | Section 404 Permit                                   | Application submittal anticipated during the final design phase |
| San Francisco Bay Regional Water Quality Control Board | Section 401 Water Quality Certification              | Application submittal anticipated during the final design phase |
| California Department of Fish and Wildlife             | Section 1602 Lake and Streambed Alteration Agreement | Application submittal anticipated during the final design phase |
| U.S. Fish and Wildlife Service                         | Biological Opinion                                   | Targeting to receive by summer of 2023                          |
| Marin County/California Coastal Commission             | Coastal Development Permit                           | Application submittal anticipated during the final design phase |
| California Transportation Commission                   | Project Approval                                     | Targeting to receive by August 28, 2024                         |
| National Park Service                                  | Special Use Permit                                   | Application submittal anticipated during the final design phase |

## Chapter 3 California Environmental Quality Act Evaluation

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The following discussions evaluate potential environmental impacts related to the CEQA checklist to comply with state CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091). The analysis considers potential environmental impacts of the Project as discussed in Chapter 2.

### 3.1 Environmental Factors Potentially Affected

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered, but no impacts were identified: mineral resources, population and housing, public services, and recreation.

The environmental factors noted in the following checklist could be affected by the Project. Further analysis of these environmental factors is provided in the discussion that follows.

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

## 3.2 Determination

On the basis of this initial evaluation:

|  |   |                   |              |                        |           |                                      |             |
|--|---|-------------------|--------------|------------------------|-----------|--------------------------------------|-------------|
|  | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.   |                   |              |                        |           |                                      |             |
| <b>X</b>   | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.  |                   |              |                        |           |                                      |             |
|  | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.  |                   |              |                        |           |                                      |             |
|  | I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and 2) has been addressed by mitigation measures, based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |                   |              |                        |           |                                      |             |
|  | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.                                     |                   |              |                        |           |                                      |             |
| <table border="1" style="width: 100%;"> <tr> <td style="width: 60%;"><b>Signature:</b></td> <td style="width: 40%;"><b>Date:</b></td> </tr> <tr> <td><i>Maxwell Lammert</i></td> <td>7/13/2023</td> </tr> <tr> <td><b>Printed Name: Maxwell Lammert</b></td> <td><b>For:</b></td> </tr> </table> |   | <b>Signature:</b> | <b>Date:</b> | <i>Maxwell Lammert</i> | 7/13/2023 | <b>Printed Name: Maxwell Lammert</b> | <b>For:</b> |
| <b>Signature:</b>  | <b>Date:</b>  |                   |              |                        |           |                                      |             |
| <i>Maxwell Lammert</i>   | 7/13/2023   |                   |              |                        |           |                                      |             |
| <b>Printed Name: Maxwell Lammert</b>   | <b>For:</b>   |                   |              |                        |           |                                      |             |



### 3.3 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the Project. In many cases, background studies performed in connection with projects will indicate that there are no impacts to a particular resource. A “no impact” answer in the last column reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not National Environmental Policy Act, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features (PFs) are measures incorporated into Caltrans projects to reduce environmental impacts that can include both design components of the Project and standardized measures that are applied to all, or most of, Caltrans projects, such as best management practices (BMPs) and measures included in the Standard Plans and Standard Specifications or as Standard Special Provisions. Project features are an integral part of the Project. Avoidance and minimization measures (AMMs) are additional measures to avoid and/or minimize a project’s environmental impacts, but are more specifically tailored to a given project’s particular impacts. The project features and AMMs presented in this section have been considered prior to any significance determinations documented in this section; refer to Sections 3.3.1 through 3.3.20 and Appendix C for a detailed discussion and summary, respectively, of these project features and AMMs.

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

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

### 3.3.1 Aesthetics

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

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Have a substantial adverse effect on a scenic vista?   | 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 |
| 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 that would adversely affect daytime or nighttime views in the area?  | Less Than Significant Impact |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR AESTHETICS

A *Scenic Resources Evaluation and Visual Impact Assessment* (SRE/VIA) was completed for the SR 1 Culvert Rehabilitation Project (Caltrans 2022c). A summary of the findings is presented here.

The entire length of SR 1 is listed as eligible for designation as a State Scenic Highway. SR 1 within the Project corridor is a two-lane undivided highway that runs north/south, fronting the east shore of Tomales Bay. SR 1 is also a major tourist and recreational travel route and is part of the Pacific Coast Bicycle Route to, or is part of, the California Coastal Trail.

The highway traverses an area of high scenic value, with few elements affecting the visual landscape. Travelers along the highway include daily commuters, vacationers, and bicyclists. Within the Project area, SR 1 is a two-lane undivided highway bordered by rural residential and agricultural land uses. Travel lanes are approximately 12 feet wide, with narrow shoulders ranging from less than 1 foot in width to approximately 3 feet, and no designated pedestrian or bicycle facilities. SR 1 has no traffic signals or stop signs, and speed limits range from 25 to 55 miles per hour. Pedestrians cross the highway at various locations, but the highway is not commonly used as a walking route.

SR 1 does not include landscaping installed or maintained by Caltrans. The visual character throughout the corridor is highly scenic and includes low, rolling to

moderately sloping hills and portions of the Marin County coastline dominated by flat sandy coastal areas, tidal salt marsh habitats, and coastal hills.

There are no wild and scenic rivers within or near the Project footprint.

**a, b, c) Less Than Significant Impact**

The Project would not have a substantial adverse effect on scenic vistas, damage scenic resources, or substantially degrade the existing visual character or quality of public views along SR 1. Project elements would not substantially affect the appearance of the SR 1 corridor and would be visually consistent with the character of the surrounding area.

Although vegetation clearing and grubbing is anticipated to occur in work areas adjacent to the culverts, existing mature vegetation and landscaping would be protected in place to the greatest extent possible. Any changes to the visual environment associated with clearing and grubbing are anticipated to be minor and only minimally visible to highway users. Staging areas for construction equipment and materials would occur at 40 locations along SR 1 in unvegetated areas, where visual impacts are minor and would not require screening due to the short duration of visibility as travelers pass by.

Most Project components, including the proposed culverts, drainage inlets, concrete headwalls, amphibian crossings, and RSP, would result in minimal visual changes compared to existing conditions or would be buried and therefore are unlikely to be noticed by highway users. In addition, design and construction of the Project would comply with all applicable elements of the *Final Marin State Route 1 Repair Guidelines* (Marin County SR 1 Repair Guidelines) (Caltrans 2015). Measures identified in the SRE/VIA would be incorporated as PF-AES-1 through PF-AES-6 and AMM-AES-1 through AMM--AES--5 to avoid, reduce, or minimize the visual impacts of the Project and associated construction activities. As a result, the Project would not have a substantial adverse effect on a scenic vista, scenic resources, or the visual character of the area. Impacts on visual resources would be less than significant.

**d) Less Than Significant Impact**

The Project would not create a new source of substantial light or glare. In addition, construction would be limited to daytime and no night work is anticipated. The

Project would not require directional lighting and/or temporary lighting that would affect highway users or nearby residences; therefore, the impact would be less than significant.

### **Project Features**

Caltrans would incorporate the following standard project features into the Project to offset potential impacts to visual resources:

- **PF-AES-1, Minimize Vegetation Impacts.** Impacts on vegetation would be minimized to the greatest extent possible during construction. Vegetation to remain would be protected from construction activities through the installation of temporary fencing when it is close to construction work or staging areas.
- **PF-AES-2, Tree Trimming.** Where the pruning of trees is required to accommodate construction operations, pruning would be performed under the supervision of a certified licensed arborist.
- **PF-AES-3, Staging Areas Positioning.** Construction materials and equipment would be stored in a staging area beyond direct view of the motoring public and residential properties to the extent feasible.
- **PF-AES-4, RSP Treatment.** If it is determined that RSP would be visible to highway users, the Office of Landscape Architecture would determine if aesthetic treatment of the RSP is needed. This may include staining and/or other measures.

### **Avoidance and Minimization Measures**

The following AMMs would avoid or minimize potential impacts to visual resources:

- **AMM-AES-1, Staging Areas Impact Reduction.** Staging areas would not be located where they require the removal of vegetation or result in ground compaction impacting tree roots.
- **AMM-AES-2, Project Design Compliance.** As the design is advanced, any modifications would be required to ensure compliance with the July 2015 *Final Marin State Route 1 Repair Guidelines*, as confirmed by the Office of Landscape Architecture and the Office of Environmental Analysis.
- **AMM-AES-3, Avoid Tree Impacts.** Opportunities to avoid impacts to trees by revising the alignment of culverts would be examined as design advances.

- **AMM-AES-4, Reseeding.** Disturbed areas would be revegetated with a regionally appropriate native seed mix following construction.
- **AMM-AES-5, Materials Selection.** Materials and design site features would be selected as appropriate for the visual character of the location and to maintain corridor consistency, in conjunction with the Office of Landscape Architecture.

### 3.3.2 Agriculture and Forest Resources

In determining whether impacts on 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 on 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 forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, as well as the forest carbon measurement methodology provided in the forest protocols adopted by the California Air Resources Board. Would the project:

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on 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 |
| c) Conflict with existing zoning for, or cause rezoning of, forestland (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 forestland or conversion of forestland to non-forest use?  | No Impact                    |
| e) Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of Farmland to non-agricultural use or forestland to non-forest use?   | No Impact                    |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR AGRICULTURE AND FOREST RESOURCES

The Project footprint is located within areas designated as Grazing Land, Farmland of Local Importance, Urban and Built Up Land, and Other Land (California Department of Conservation 2023). Four parcels at Locations 47 through 50, are within the Project footprint under Williamson Act contracts.

#### **a, b) Less Than Significant Impact**

Within the Project vicinity, land adjacent to SR 1 includes land designated as Farmland of Local Importance by the Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation 2023). Figure 3.3.2-1 shows the location of TCEs for the culvert locations and the acreages of Farmland of Local Importance that would be temporarily affected under the proposed Project.

The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance because no such farmlands are within the Project limits. There would be less than significant impact.

Approximately 0.087 acre of Williamson Act lands would be temporarily affected during construction of the Project. Figure 3.3.2-1 shows the location of Williamson Act lands that would be temporarily affected under the proposed Project.

The Project would not conflict with existing zoning for agriculture use or convert Williamson Act lands to non-agricultural uses; therefore, the impact would be less than significant.

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

No timber or forest lands are in the Project limits or Project vicinity; therefore, the Project would not convert forest land or conflict with existing timberland zoning and there would be no impact to forests, or timberlands.

According to maps prepared pursuant to the FMMP, temporary impacts to land designated as Farmland of Local Importance would occur during construction of culvert replacements. However, the Project would not convert farmlands lands to non-agricultural use; therefore, no impact would occur.

### 3.3.3 Air Quality

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

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR AIR QUALITY

##### a, d) No Impact

The Project falls under activities pertaining to “pavement resurfacing and/or rehabilitation;” it is therefore exempt from air quality conformity determination under 40 *Code of Federal Regulations* (CFR) 93.126, Table 2. Construction activities would not be in conflict with an air quality plan or generate emissions resulting in excessive odors.

The Project would implement project features PF-AQ-1 through PF-AQ-4, presented at the end of this section, to further reduce potential air quality impact. There would be no impact.

##### b, c) Less Than Significant Impact

The Project would be required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air-pollution control rules, regulations, ordinances, and statutes that apply in the Project area. Construction air pollutants are expected to be minimal to negligible and short term. Potential impacts to air quality, including violation of air quality standards, criteria pollutants, exposure of sensitive receptors to pollutants, and creation of odors, are not anticipated based on the scope of the proposed Project. Project feature PF-AQ-1 would help minimize impacts from fugitive dust. Impacts would therefore be less than significant.



### **Project Features**

Caltrans would incorporate the following standard project features into the Project to offset potential impacts to air quality:

- **PF-AQ-1, Control Measures for Construction Emissions of Fugitive Dust.** Dust control measures would be implemented to minimize airborne dust and soil particles generated from graded areas. For disturbed soil areas, the use of an organic tackifier to control dust emissions would be included in the construction contract. Any material stockpiled during construction would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.
- **PF-AQ-2, Construction Vehicles and Equipment.** Construction vehicles and equipment would be maintained and tuned in accordance with manufacturer's specifications. In addition, solar-powered traffic control lights would be used if feasible.
- **PF-AQ-3, Minimize Idling.** Idling times would be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.
- **PF-AQ-4, Recycle Waste and Materials.** If practicable, nonhazardous waste and excess material would be recycled. If recycling is not practicable, dispose of material according to applicable regulations.

### 3.3.4 Biological Resources

Would the project:

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR BIOLOGICAL RESOURCES

A *Natural Environmental Study* (NES) was prepared by the Caltrans Office of Biological Sciences and Permits to evaluate the effects of the Project on biological resources, including sensitive plants and wildlife species (Caltrans 2023a).

A summary of the findings is presented here.

The 23.13-acre biological study area (BSA), which is defined as the entire area of potential direct and indirect Project impacts, includes the 54 individual culvert work locations as well as 42 construction staging areas along both north and southbound lanes of the highway. The BSA includes the current roadway prism and work area footprints along with a surrounding 25-foot survey buffer that encompasses the surrounding waters and vegetation cover types. Land cover types within the BSA for each location include developed, landscaped, major road, and waters, as well as natural vegetation types.

A regional list of special-status wildlife and plant species was compiled using databases to evaluate the potential impacts that could occur to sensitive biological resources as a result of the Project. The database search included the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) Database, a species list from the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS), the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, the National Wetlands Inventory, and soils information from the Natural Resources Conservation Service. The special-status plant and animal species compiled from these data sources were evaluated to determine their potential to occur within the BSA. The lists of special-status wildlife and plant species are included in Appendix D.

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

Various field studies were conducted within the BSA to assess existing natural resources. Field studies used in the preparation of the NES include:

- Biological reconnaissance-level survey and habitat assessments
- Aquatic resource delineation
- Vegetation characterization, rare plant habitat assessment, and tree survey

Pike County Gulch Creek (PM 16.47) has historically transported a large amount of alluvium that is deposited just downstream and within the double box culvert at SR 1. Caltrans and Marin County have historically maintained the culvert by cleaning out alluvium buildup. The last time Pike County Gulch was cleaned out was 2018. The Project includes removing alluvium in an area 8 to 10 feet wide up and downstream within the Caltrans ROW. Caltrans is not proposing mitigation for this work since it will benefit fish passage.

**a) Less Than Significant Impact with Mitigation Incorporated**

Special-status species habitats were evaluated for their potential to occur in the BSA. Suitable habitats for special-status species are considered environmentally sensitive habitat areas (ESHAs). This analysis provides approximate impacts to ESHAs within the BSA and these impacts, and mitigation measures (MMs) would be refined in

consultation with the California Coastal Commission (CCC) and Marin County Local Coastal Program during the permitting phase of the Project.

With implementation of project features, AMMs, and mitigation measures, the Project would have a less than significant impact, either directly or through habitat modification, 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 (CDFW), USFWS, or NMFS.

Special-status species that are potentially present within or adjacent to the BSA are discussed here.

### ***Animals, Critical Habitat, and Essential Fish Habitat***

**Tidewater goby and Tidewater goby critical habitat:** Tidewater goby (*Eucyclogobius newberryi*) (TWG) is federally listed as an endangered species, and there is designated critical habitat for TWG within the Project footprint. Following a review of the USFWS critical habitat database, TWG critical habitat was found to occur within the Project footprint along Bolinas Lagoon on the west side of SR 1 at Locations 2, 3, 6 to 8, 10, 12 to 15, 18 to 20, and 22. Critical habitat within the Project vicinity supports physical and biological features (PBFs) for TWG, including persistent, shallow, still-to-slow moving lagoons, estuaries, and coastal streams with salinity up to 12 parts per thousand. These provide adequate space for normal behavior and individual and population growth that contain aquatic breeding, non-breeding, upland, and dispersal, with known breeding locations within 0.25 mile of the BSA for those locations.

There are three CNDDDB occurrences of TWG within 2 miles of the BSA (two extirpated and one extant). The extant occurrence is located approximately 1.9 miles northwest, in Estero De San Antonio. However, there are no known occurrences of TWG within Bolinas Lagoon and no near-term plans to release TWG into the lagoon, so this species is not anticipated to be encountered during Project activities at these Project footprint locations. Similarly, the Project footprint locations within Tomales Bay are located in areas that are low quality habitat for the species, which makes them unlikely to occur. These Project footprint locations do not have submerged or emergent vegetation present and are on portions of Tomales Bay that have been straightened and armored with riprap. These areas are anticipated to be low quality habitat for TWG as there is no emergent or submerged vegetation present, and shoreline modification and armoring is anticipated to have lowered the habitat suitability for TWG by increasing water depths and current speeds. These Project

footprint locations are also not in the immediate proximity of freshwater streams, so salinity at these locations is anticipated to not be ideal for TWG. Therefore, there is limited potential for TWG to be present in the Project footprint during construction. Caltrans did not perform protocol-level surveys for TWG but has inferred presence of the goby within the Project footprint due to the locations within the TWG critical habitat units and other locations within Tomales Bay and Bolinas Lagoon that contain suitable PBFs to support the species.

The Project could result in direct temporary impacts to TWG habitat and critical habitat within Bolinas Lagoon and Tomales Bay. Specifically, anticipated impacts to TWG critical habitat include 0.0001 acre of permanent impacts and 0.06 acre of temporary impacts. Impacts to suitable TWG habitat during Project activities are not expected to impact individuals or populations if they occur in the Project footprint in the future, nor impact their long-term suitability to support TWG.

Caltrans has determined that the Project may affect, but is not likely to adversely affect, TWG or its critical habitat. Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to TWG and its habitat. The impact would be less than significant.

**California red-legged Frog and CRLF critical habitat:** California red-legged frog (*Rana draytonii*) (CRLF) is a federally threatened species and a California Species of Special Concern (SSC). CRLF critical habitat was found to occur within the BSA from approximately PM 24.7 to PM 28.4, at Locations 29 through 32. Critical habitat within the Project vicinity supports all four PBFs, including aquatic breeding, non-breeding, upland, and dispersal, with known breeding locations within 0.25 mile of the BSA for those locations. Project locations include culverted waters draining into Olema Creek. In addition, the BSA has the potential to provide upland dispersal habitat and aquatic non-breeding habitat. The Project is located within the current known range of CRLF, and there are four CNDDDB occurrences within a 1- to 3-mile radius of the BSA.

The Project would temporarily impact 0.048 acre of CRLF critical habitat but is not expected to adversely modify or destroy critical habitat PBFs for CRLF within Locations 29 through 32. Two of these (Locations 30 and 31) are only scoped for cleaning activities. Dispersal attributes of critical habitat would be adversely affected at Project locations temporarily as culvert work sites are replaced and wildlife exclusion fence (WEF) temporarily blocks access by CRLF to the sites and the

adjacent work area. There are no anticipated indirect effects to critical habitat PBFs due to implementation of an extensive suite of AMMs implemented by the Project to protect the frog and other protected species and habitats. Improvements to habitat connectivity through design enhancements at the Project work locations within CRLF critical habitat are in early design stages and may result in additional construction impacts to the habitat but will have long-term benefits. The Project is not anticipated to appreciably diminish the capability of the critical habitat to satisfy essential requirements of the species; therefore, the Project may affect but is not likely to adversely affect CRLF critical habitat.

The Project would result in direct temporary effects on both suitable upland dispersal and aquatic non-breeding habitats for CRLF. Approximately 2.29 acres of potential upland dispersal habitat and an additional 0.452 acre of suitable aquatic non-breeding habitat would be temporarily impacted by construction activities including staging, access, culvert replacement, and drainage improvements. Approximately 0.002 acre of impacts to suitable upland dispersal habitat and less than 0.001 acre of suitable aquatic non-breeding habitat would be permanently affected by Project activities. All areas of temporary disturbance would be restored to pre-Project conditions following construction.

Caltrans has concluded that this Project may affect, and is likely to adversely affect, CRLF. Potential impacts to CRLF and its associated upland and aquatic non-breeding ESHA habitat would be mitigated through the implementation of MM-BIO-1. In addition, implementation of the project features and AMMs presented in this section and summarized in Appendix C would avoid or minimize potential impacts to CRLF and its habitat. The impact would be less than significant with mitigation incorporated.

**Northern Spotted Owl:** Northern spotted owl (*Strix occidentalis caurina*) (NSO) is listed as threatened by the state and was federally listed as a threatened species under the federal Endangered Species Act (FESA).

A habitat assessment survey for NSO was performed on October 15, 2021 (Swaim Biological Incorporated 2021). Protocol-level surveys for the NSO were not conducted. Forested habitat within and adjacent to the BSA may be suitable for foraging, nesting, and dispersal use by NSO but is considered marginal quality.

Although suitable nesting habitat in the form of old-growth forest habitat is largely absent from the Project footprint, several mixed conifer forest stands with large trees

suitable for NSO nesting were observed within the BSA and are contiguous or adjacent to large tracts of suitable nesting habitat. Forested habitat within the Project footprint consists of mixed conifer forest adjacent to grasslands and riparian forest with a relatively open canopy and few mature trees that would be unsuitable for NSO nesting.

There are approximately 52 NSO activity centers within 2 miles of the BSA, associated with over 1,000 positive NSO detections (denoting the detection of a territorial pair and located at, or near, a nest site). 29 of those NSO activity centers occur within the estimated 1.3-mile home-range distance of the BSA. Positive detections of NSO or NSO activity centers occur within 0.5 mile of four groups of Project work locations spanning from Locations 23 to 28 (PMs 17.97 to 23.40). In addition, a historic nesting site is present within 0.25 mile of Locations 24 and 25.

The Project does not occur within any designated NSO critical habitat. The Project would result in temporary impacts of 0.136 acre to marginal forest habitat within the Project footprint. This would be limited to potential foraging and roosting habitat, as suitable nesting habitat is not present within the Project footprint.

Impacts would occur following potential vegetation removal and trimming activities for access and staging, culvert replacements, V-ditch and drainage activities, and installation of roadside features. Clusters of trees adjacent or contiguous to potential nesting habitat will be conserved to the greatest extent practicable, therefore reducing potential to impact NSO dispersal habitat.

Each culvert location could require up to 5 days of work. Based on the results of the NSO habitat assessment (Swaim Biological Incorporated 2021), suitable nesting habitat is contained within the BSA, within 25 feet of the Project footprint.

Nesting habitat located within the BSA would not be directly impacted; however, indirect impacts due to noise and auditory disturbance may result from construction due to the magnitude of work activities and distance to potential nesting habitats. The estimated noise levels of all equipment listed (excavator, backhoe, compactor, dump truck, concrete truck, saw cutting machines) is anticipated to be high (81 to 90 dBA). Because anticipated construction-generated sound levels are high (81 to 90 dBA) the estimated harassment distances are 50 meters or 165 feet during the day, and 100 or 330 meters at night. Therefore, based on the minimum estimated 165-foot harassment distance for day work, noise levels generated by construction activities could rise to

the level of harassment if an active NSO nesting is located within 165 feet from active work.

These indirect effects to NSO nesting would be minimized by restricting construction activities to daytime hours wherever possible and thus avoiding the primarily nocturnal foraging behavior of the owl. In addition, species-specific minimization measures such as focused NSO surveys and avoiding auditory and visual disturbance near nests would allow for active nests to be detected and avoided during construction, minimizing the risk of construction noise and harassment of nesting NSO.

No Project activities would occur within designated NSO critical habitat; therefore, NSO pairs nesting within this designated critical habitat would not be impacted by Project activities.

Caltrans has determined that the Project may affect, but is not likely to adversely affect, NSO. Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to NSO and its habitat. The impact would be less than significant.

**Western Pond Turtle:** Western pond turtle (*Emys marmorata*) (WPT) is a California SSC. CNDDDB occurrences for WPT include several documented within 5 miles of the BSA. Two adult WPT were observed in 1992 approximately 400 feet north of PM 47.6 in a pool edged by willows. A WPT was also observed near PM 47.41 in Stemple Creek, a tributary to Estero de San Antonio, just downstream from the SR 1 bridge. In 1995, a WPT was also observed about 0.5 mile southwest of PM 45.03 at Walker Creek. WPT have also been observed in the vicinity of Olema Creek, near Locations 30 to 33, including in 2003 in a ponded area near Point Reyes Station. While no species-specific assessments or surveys for WPT were performed for this Project, suitable habitat corresponds to similar aquatic habitats to those described for CRLF, and therefore WPT could be present in the BSA.

WPT have the potential to occur onsite at multiple culvert locations. However, with implementation of project features, such as pre-construction surveys, environmentally sensitive area (ESA) fencing, and biological construction monitoring, the likelihood of direct impacts to WPTs is low. Impacts to WPT would correspond to those calculated for CRLF aquatic habitat impacts, and total of 0.452 acre of temporary impacts and 0.001 acre of permanent impacts.



Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to WPT and its habitat. The impact would be less than significant.

**California Giant Salamander:** California giant salamander (*Ambystoma californiense*) (CGS) is listed as a California SSC. The closest recorded CNDDDB occurrences of California giant salamander are located in Morses Gulch and Pike County Gulch, east of SR 1 along Bolinas Lagoon. These occurrences included larval detections and are located adjacent to Locations 10, 12, 20, and 21. Additional occurrence data are located along Olema Creek approximately 0.5 mile south of the community of Five Brooks. Based on this occurrence, it is accepted that California giant salamander may be found throughout Olema Creek, which runs parallel to SR 1 from PM 1.9 to PM 28.5 in close proximity to Locations 26 through 32, and therefore could be present in the BSA.

CGS have the potential to occur onsite at the multiple culvert locations. However, with implementation of project features such as pre-construction surveys, ESA fencing, and biological construction monitoring, the likelihood of direct impacts to CGS is low. Potential impacts to forested aquatic and stream habitat for CGS include 0.211 acre of temporary impacts resulting from vegetation trimming and removal for access and staging as well as culvert replacement and drainage enhancement.

Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to CGS and its habitat. The impact would be less than significant.

**Foothill yellow-legged frog:** In late 2019, CDFW recommended that foothill yellow-legged frog (*Rana boylei*) (FYLF) be listed as threatened or endangered or not listed, depending on geography, and published a notice of its findings in March 2020 (USFWS 2021). FYLF in the Project vicinity are part of the Northwest/North Coast clade, where listing was determined to be not warranted at this time; however, this clade is still listed as a state SSC.

A field survey for FYLF was conducted on October 12, 2021, to identify and evaluate suitable FYLF breeding habitat. Features associated with suitable FYLF habitat were observed within the BSA as well as within dispersal distance of the BSA, but were generally considered low quality. While occurrence of FYLF within the Project footprint should be considered low, Project locations with hydrologic connectivity to

these perennial waters could provide suitable temporary cover to FYLF during the rainy season.

CNDDDB contains five records of FYLF within 2 miles of the BSA. Of the five recorded occurrences, two are presumed extant, with the remainder considered extirpated or possibly extirpated. Of the two extant occurrences, only one is less than 50 years old. The nearest presumed extant record was from Pike County Gulch on the west slope of Bolinas Ridge, which crosses SR 1 near PM 16.5; 20 individuals were collected from this location in 1963. Many other populations of FYLF in Marin County are now considered to be extirpated, and most of the remaining FYLF populations in the CNDDDB that are presumed extant are associated with historic observations and have not been surveyed in the past several decades.

Based on the results of the habitat assessment conducted November 1, 2019, the proposed Project is not anticipated to have any direct or indirect impacts on FYLF. Outside of four known creek locations outside of the Project, many populations of FYLF in Marin County are now considered to be extirpated. Habitat for FYLF within the BSA is generally of marginal quality, and breeding habitat was not observed. While culverts, dense vegetation, and leaf litter within the BSA could provide temporary cover for FYLF, the absence of water during the dry season creates conditions that are unfavorable for occupation by FYLF.

Given the lack of recent observations of FYLF in the vicinity of the BSA, the generally marginal habitat onsite, and the planned timing of construction during the dry season, FYLF are not expected to be encountered within the BSA. In addition, AMMs implemented to avoid impacts to CRLF would reduce the potential for Project-related impacts to the FYLF; therefore, the Project is not expected to result in any potential impacts to FYLF individuals or habitat.

Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to FYLF and its habitat. The impact would be less than significant.

**Salt marsh common yellowthroat:** The salt marsh common yellowthroat (*Geothlypis trichas sinuosa*) is a California SSC. CNDDDB occurrences for salt marsh common yellowthroat include four documented occurrences within 2 miles of the BSA. All four documented occurrences were recorded in 1985, but this species is presumed extant throughout Marin County. These occurrences listed a few breeding pairs observed near marsh like vegetation consisting of rushes (*Scripus* sp.), cattails

(*Typha* sp.) and willows (*Salix* sp.). While no species-specific assessments or surveys for salt marsh common yellowthroat were performed for this Project, suitable coastal riparian and marsh habitats are present throughout the Project vicinity.

Salt marsh common yellowthroat have the potential to occur onsite at multiple culvert locations. Foraging habitat surrounding the culverts may be temporarily impacted through increased construction activity as well as culvert replacements. However, this is not expected to result in direct impact to individuals. Nesting habitats present in marsh and riparian vegetation would be temporarily impacted by construction through direct culvert replacement, vegetation trimming and removal, or staging. A total of 0.662 acre of temporary impacts to the marsh vegetation and riparian habitats that is potential nesting habitat would occur as a result of Project activities. All temporary impacts would be restored to pre-construction site condition following construction, and the implementation of pre-construction nesting bird surveys would avoid impacts to active nesting species.

Project features outlined such as pre-construction nesting bird surveys and nest avoidance, worker environmental awareness training and biological construction monitoring, the likelihood of direct impacts to salt marsh common yellowthroat would be avoided.

Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to salt marsh common yellowthroat and its habitat. The impact would be less than significant.

***Species of Special Concern: Bats (Pallid Bat, Western Red Bat, and Townsend's Big-eared Bat)***

The pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillei*), and Townsend's big-eared bat (*Corynorhinus townsendii*) are all listed as state SSC. The BSA was assessed for likelihood of providing habitat for day- or night-roosting bats. Bats are likely to inhabit the BSA for this Project, whether for foraging, day- or night-roosting, or rearing of young.

Several special-status species are known to occur or have the potential to occur within the vicinity of the BSA. Based on queried CNDDDB occurrence data, special-status species including pallid bat, western red bat, and Townsend's big-eared bat have all been observed within 2 miles of the BSA.

Formal acoustic and emergence surveys have not been performed for the Project; however, field site assessments were conducted on October 11, and 12, 2021, by examining potential roosting locations within the BSA likely to be impacted by Project activities, including trees and culvert work locations. No day-roosting bats were observed in any culvert location or adjacent vegetation during the survey. In addition, no sign of night-roosting bats (such as guano or urine staining) was observed within any inspected culvert or below any potentially suitable tree roost habitat that could be safely accessed on foot and within the BSA. A majority of culverts were small, shaded, blocked by vegetation or filled with debris, and deemed unsuitable to support day-roosting bats. Some larger diameter culverts and the Tomasini Canyon Bridge/Location 33 (PM 29.85) may provide marginal day- and night-roost habitat. The highest quality bat roosting habitat observed within the BSA included tree roost habitat adjacent to the work locations and associated staging areas.

#### *Pallid Bat*

Six records of pallid bat were identified within 2 miles of the BSA. Three records occurred within 2 miles of Location 29 (PM 27.64) and consisted of three maternity roosts observed in 1974 (0.65 mile south), 1994 (1.92 miles east) and 2003 (0.83 mile southeast). Two records were observed within 2 miles of Location 33 (PM 29.85) and consisted of historic records of multiple males and females collected in 1940 (0.52 mile northeast) and in 1951 (1.67 miles northwest). The last record consists of individual male and female bats collected in 1987 (0.05 mile south of Location 32 [PM 28.35]). Only one of these records occurred within the last 20 years.

#### *Western Red Bat*

Only one record of western red bat was identified within 5 miles of the Project area. This occurrence was recorded 0.83 mile southeast of Location 29 (PM 27.64) and consisted of two adult male captures within the Olema Creek riparian corridor.

#### *Townsend's Big-eared Bat*

Six records of Townsend's big-eared bat were identified within 2 miles of the BSA, including three occurrences located within 0.5 mile of the work locations from 2013 (0.47 mile west of Location 27 [PM 20.48]), 1987 (0.44 mile south of Location 29 [PM 27.64]), and 1951 (0.32 mile west of Location 32 [PM 28.35]). These ranged from individual observations to large maternity colonies. The other three occurrences within 2 miles of the BSA come from 1993 (1.67 miles southwest of Location 33 [PM 29.85]), 1994 (1.43 miles south of Location 29 [PM 27.64]), and 2006 (1.00 mile northeast of PM 16.47). These include a large colony of 75 to 100 individuals (1993),

a smaller roost of 1 to 4 individuals (1994), and a large maternity colony of 244 females (2006). Only the 2006 and 2013 record were recorded within the last 20 years.

Project impacts include temporary loss of foraging habitat and temporary or permanent loss of potential roosting habitat as a result of tree removal activities. In addition, noise and visual disturbance could impact potential roosting via construction noise.

Direct impacts as a result of tree removal may occur where access is needed to the culvert locations. Moderately suitable tree bat roost habitat was observed at 35 work locations and consisted of large trees with suitable crevice and foliage roost habitat. In addition, two work locations, Locations 13 and 40, are located within 0.1 mile of potentially suitable Townsend's big-eared bat cavernous/open roost habitat in the form of dilapidated buildings adjacent to the work locations.

Although conditions within the BSA are generally unsuitable or provide only marginally suitable habitat for special-status bat species, there is some potential for individuals to roost onsite, possibly originating from more suitable roost sites in nearby areas. With the implementation of AMMs such as pre-construction surveys, the Project is anticipated to avoid direct impacts to SSC bats in the BSA and Project footprint.

Implementation of the project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to special species bats and their habitat. The impact would be less than significant.

#### *Coho Salmon - Central California Coast Evolutionarily Significant Unit*

Coho salmon was determined to have moderate potential to occur within the BSA, in the Pike County Gulch and Tomasini Creek locations. There is one CNDDDB occurrence of coho salmon within 2 miles of the BSA, located approximately 1 mile southwest from Tomasini Creek at PM 29.85 (Location 33) within Lagunitas Creek and Olema Creek (a tributary to Lagunitas Creek). Both Lagunitas Creek and Tomasini Creek have connectivity to Tomales Bay. Tomasini Creek possibly had historic runs of coho salmon.

There is moderate potential for coho salmon to occur within the BSA, at Pike County Gulch and Tomasini Creek. The Project and associated maintenance activities would temporarily impact 0.025 acre of coho salmon habitat at Pike County Gulch at

PM 16.47 and 0.027 acre of coho salmon habitat, which includes designated critical habit, at Tomasini Creek at PM 29.85 (Location 33).

Maintenance activities could temporarily degrade water quality associated with increased turbidity and sediment mobilization. However, cleaning and maintenance activities are anticipated to occur when the creeks are dry, and fish would not be present. With implementation of AMM-BIO-19 and AMM-BIO-20, the likelihood of direct impacts to coho salmon is low and therefore the impact is less than significant. Temporary habitat impacts will be reduced through the onsite restoration of disturbed areas.

#### *Coho Salmon Critical Habitat*

NMFS designated critical habitat for coho salmon on May 5, 1999. Critical habitat for coho salmon encompasses accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda and the San Lorenzo River (inclusive) in California, including two streams entering San Francisco Bay: Arroyo Corte Madera Del Presidio and Corte Madera Creek. This Project falls within critical habitat for coho salmon.

Following a review of the NMFS critical habitat database, coho salmon critical habitat was found to occur within the Project footprint along Tomasini Creek at Location 33. Critical habitat within the Project vicinity supports suitable migratory habitat and low quality spawning habitat.

The Project will temporarily impact 0.027 acre of coho salmon critical habitat at Location 33 but is not expected to adversely modify or destroy critical habitat PBFs for coho salmon. Work expected within coho salmon critical habitat includes potential dewatering and access for cleaning out debris and sediment removal from the channel. There are no anticipated indirect effects to critical habitat PBFs due to AMMs implemented by the Project to protect species and habitats. The Project is not anticipated to appreciably diminish the capability of the critical habitat to satisfy essential requirements of the species and will ultimately improve migration habitat. There are no anticipated indirect effects to critical habitat PBFs due to implementation of AMM-BIO-14 and AMM-BIO-19 to protect species and habitats. No compensatory mitigation is proposed at this time as part of the Project because temporary impacts will be reduced through the onsite restoration of disturbed areas.

### ***Steelhead - Central California Coast DPS***

Steelhead was determined to have moderate potential to occur within the BSA, in the Pike County Gulch and Tomasini Creek locations. There are two CNDDB occurrences of steelhead within 2 miles of the BSA, with the closest occurrence located approximately 1.2 miles east from Tomasini Creek at PM 29.85 (Location 33) within Lagunitas Creek. Both Lagunitas Creek and Tomasini Creek have connectivity to Tomales Bay. Steelhead have been observed in the upper reaches of Tomasini Creek.

There is moderate potential for steelhead to occur within the BSA, at Pike County Gulch and Tomasini Creek. The Project and associated maintenance activities would temporarily impact 0.025 acre of steelhead habitat at Pike County Gulch (PM 16.47) and 0.027 acre of steelhead habitat at Tomasini Creek at PM 29.85 (Location 33). Maintenance activities could temporarily degrade water quality associated with increased turbidity and sediment mobilization. However, cleaning and maintenance activities are anticipated to occur when the creeks are dry, and fish would not be present. With implementation of AMM-BIO-14 and AMM-BIO-19, the likelihood of direct impacts to steelhead is low and the impact would be less than significant. Temporary habitat impacts will be reduced through the onsite restoration of disturbed areas.

### ***Chinook Salmon and Coho Salmon Essential Fish Habitat***

Within the Project footprint, Pike County Gulch at PM 16.47 (maintenance culvert at PM 16.47) and Tomasini Creek at PM 29.85 (Location 33) are freshwater systems. Chinook and coho salmon freshwater essential fish habitat (EFH) is present. During the spring and neap tides, high tide may enter Pike County Gulch resulting in part of the system being periodically saline. Freshwater EFH for Chinook and coho salmon consists of the following four major components:

- Spawning and incubation
- Juvenile rearing
- Juvenile migration corridors
- Adult migration corridors and holding habitat

Of the four major components of freshwater EFH for Chinook and coho salmon, the second, third, and fourth components (juvenile rearing, juvenile migration corridors, and adult migration corridors) are present within particular waterways that overlap with the Project footprint, including Pike County Gulch at PM 16.47 (maintenance culvert at PM 16.47) and Tomasini Creek at PM 29.85 (Location 33).

Project features, including construction-site BMPs, seasonal avoidance, designated ESA, and stormwater management best practices, will be applied to minimize potential erosion and sedimentation and avoid additional temporary impacts to EFH. With implementation of AMM-BIO-14 and AMM-BIO-19, the likelihood of direct impacts to coho salmon and steelhead EFH is low and the impact would be less than significant.

#### **Other Special-status Birds and Nesting Species**

No focused surveys for listed special-status birds or other nesting species have been conducted for this Project. While vegetation characterization and habitat assessment indicated that the BSA and surrounding areas included suitable foraging and potential nesting habitats, nearby occurrences were not associated with active nesting.

Nesting bird surveys would be performed prior to the start of construction activities to determine nest activity and identify potentially active nests within the BSA during construction.

Potential Project impacts include temporary impacts to foraging habitat and temporary or permanent loss of potential nesting habitat as a result of tree removal activities. In addition, noise and visual disturbance could impact potential nesting birds through nest failure or abandonment.

Where possible, vegetation and tree removal activities would be performed outside of active nesting season (February 1 to September 30). In addition, general project features would minimize potential impacts to active nests.

Project features outlined such as pre-construction nesting bird surveys and nest avoidance, worker environmental awareness training and biological construction monitoring, the likelihood of direct impacts to native birds would be avoided.

Implementation of project features and AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to native birds and their habitat. The impact would be less than significant.

#### **Plants and Golden Larkspur Critical Habitat**

Protocol-level rare plant surveys were conducted in April, May, and July of 2022. Two special-status plant species were observed and documented within the BSA: coast rock cress (*Arabis blepharophylla*) and Raiche's red-ribbons (*Clarkia concinna* spp. *raichei*). In addition, one population of golden larkspur (*Delphinium luteum*) was



identified within the vicinity of the Project, and suitable habitat is present within the BSA.

The following sections summarize the results of the protocol survey and detail the existing populations and impacts to each species.

**Coast Rock Cress and Raiche's Red-Ribbons:** Coast rock cress is listed as a CNPS rare plant rank 4.3, and while its natural distribution is limited, it is commonly grown as for horticultural uses. Raiche's red-ribbons is listed as a CNPS rare plant rank 1B.1, meaning the plant is rare throughout its range and seriously threatened in California. This species is eligible for state listing, meeting the definition of Rare or Endangered under CEQA Guidelines 15125 (c) and/or 15380. There is only one recorded occurrence of this species, south of the town of Tomales.

Three populations of coast rock cress, totaling 145 plants, were observed within the BSA on April 1, 2022 (Table 4-5). All mapped plant populations were noted on the east side of the BSA, adjacent to northbound SR 1, on steep, eroding, sandstone bluffs.

Raiche's red-ribbons was identified during reference site surveys on April 1, 2022, within CNDDDB Occurrence 1, broadly mapped between PM 43 and PM 45. This CNDDDB occurrence overlaps with the BSA from Location 45 up to Location 50. During protocol surveys on May 4, 2022, three populations of Raiche's red-ribbons consisting of 149 plants were identified within the BSA (Table 4-4). This CNDDDB occurrence is the only known location of this species (CDFW 2022a). All 149 plants identified during the protocol-level surveys were observed on the east side of the BSA or within the ROW, adjacent to northbound SR 1. One population with 36 plants was observed within the BSA, southeast of the culvert, at approximately PM 43.95 (Table 4-4). In total, 50 plants were identified in the ROW (outside of the BSA) at PM 44.04.

Populations of coast rock cress and Raiche's red-ribbons were both located on the rocky, eroding cliffs along northbound SR 1, within the BSA. Populations were mapped within coastal scrub habitats consisting of coyote brush – poison oak, and California sage brush vegetation communities. All mapped populations of Raiche's red-ribbons are located outside of the construction footprint and would therefore not be impacted by construction; however, one mapped population of coast rock cress has partial overlap with the Project footprint at Location 48. This occurrence contains

nine plants. While this mapped population overlaps with the active Project footprint, it is not known if individual plants occur within the Project footprint.

Implementation of project features and plant-specific AMMs presented in this section and summarized in Appendix C would reduce, avoid, or minimize impacts to coast rock cress and Raiche's red-ribbons. The impact would be less than significant.

**Golden Larkspur and golden larkspur critical habitat:** Golden larkspur is listed as endangered under FESA. The Project falls within federally threatened golden larkspur critical habitat. The plant is distributed within the coastal areas of Sonoma and Marin counties from sea level to about 100 meters in elevation within coastal scrub vegetation communities. It has never been widely abundant, with as little as 200 individuals believed to be in existence as of 2005, and only 11 documented CNDDDB occurrences (3 extirpated) (CNDDDB 2022a). One known CNDDDB occurrence overlaps with portions of the BSA. Due to the close proximity of this element occurrence to the Project and the sensitivity of this species, golden larkspur was determined to have a low to moderate potential to occur, and this occurrence was documented concurrent with the protocol-level surveys.

Three individual golden larkspur plants were observed in flower during the April 2022 surveys. These plants were located on steep, eroding, rocky bluffs along northbound SR 1 approximately 0.15 mile south of the BSA. No populations of golden larkspur were observed within the BSA; however, the BSA does overlap with critical habitat for the species between Locations 43 and 49.

Caltrans has concluded that the Project may affect but is not likely to adversely affect golden larkspur or its critical habitat. If focused pre-construction surveys result in the positive identification of this species within the Project footprint, temporary impacts to habitat for this species following work activities in coastal scrub vegetation may result from this Project. With incorporation of standard project features, along with the plant-specific AMMs listed in this section and in Appendix C, impacts to special-status plants are not anticipated to occur as a result of construction and the impact would be less than significant.

**Point Reyes Salty Bird's-Beak:** Point Reyes salty bird's-beak is an annual herb in the broomrape family, found along coastal salt marsh and tidally influence shorelines in Marin County. It is listed as a CNPS rare plant rank 1B.2, meaning it is rare, threatened, or endangered in California and elsewhere. There are several CNDDDB occurrences along the Tomales Bay shoreline, including one documented within the

BSA for maintenance culvert at PM 14.86 (Location 11). Populations of Point Reyes's salty bird's-beak were documented within the BSA as of the May 5, 2023, surveys. Suitable salt marsh habitat is present within the BSA at maintenance location 2, and a known CNDDDB occurrence has been documented at this location. However, culvert maintenance work is not expected to disturb suitable habitat for this species.

### ***Tree and Vegetation Removal***

Vegetation and tree removal is anticipated for construction access, culvert replacement, and ditch-clearing activities. While no specific demarcation of planned tree removals has been performed, all the accessible trees within the Project footprint may need to be removed to access, remove, and replace the culverts or perform other Project activities. Other trees within the BSA may be trimmed to facilitate construction access. To the extent feasible, vegetation clearing would be conducted between October 1 to January 31 to avoid impacts to nesting birds. Pre-construction nesting bird surveys would be conducted during nesting season (February 1 to September 31) prior to vegetation clearing to identify if nesting bird species are present within the BSA.

Trees removed for the Project would be replaced. Native trees removed from riparian or other habitats within the CDFW jurisdiction will be replanted following construction. Appropriate tree replacement ratios and locations would be determined during the permitting process and in consultation with the appropriate agencies. The Project would have less than significant impacts with mitigation through habitat modification resulting from tree and vegetation removal with implementation of project features, AMMs, and MM-BIO-1 and MM-BIO-2, as presented in this section and summarized in Appendix C.

### **b) Less Than Significant Impact with Mitigation Incorporated**

#### **Environmentally Sensitive Habitat Areas (ESHAs)**

Section 30107.5 of the California Coastal Act (CCA) defines environmentally sensitive natural communities as “any land in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments” (for example, riparian and upland habitats, and EFH).

Section 30240(a) of the CCA calls for the protection of ESHAs and states that “ESHAs shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.”

## **Terrestrial ESHAs**

The designation of terrestrial ESHA includes native vegetation alliances listed in CDFW's California Sensitive Natural Communities List with ranks between S1 to S3 and excludes those that are either substantially disturbed or are co-dominated or dominated by non-native species. Temporary direct impacts to terrestrial ESHA would result from direct culvert replacement, vegetation removal, and dredging of drainage ditches adjacent to various culverts. A total of 0.78 acre of terrestrial ESHA would be temporarily impacted. The total temporary impact includes approximately 0.49 acre of impact to ESHA riparian woodland habitats (within the red alder, coast live oak, arroyo willow, arroyo willow/coast live oak, and California bay alliances) and approximately 0.29 acre of impact to vegetation that supports wetland plant species (salt marsh bulrush, Santa Barbara sedge, saltgrass, gumweed, common rush, pickleweed, Pacific cordgrass, cattail, and Vancouverian freshwater marsh alliances or associations). Permanent impacts resulting from culvert upsizing are negligible, making up less than 0.001 acre.

With the implementation of project features, potential impacts to terrestrial ESHA would be minimized. Project features would be applied to minimize and avoid additional temporary impacts to ESHA. In addition, MM-BIO-2 Impacts to ESHA's will be implemented to further address mitigation and minimize temporary impacts. The impact to terrestrial ESHA would be less than significant with mitigation incorporated. Further measures would be considered in consultation with agencies including the CCC.

## **Aquatic ESHAs**

All coastal streams, wetlands, and riparian areas are considered ESHA. A total of approximately 4.87 acres of aquatic ESHA were mapped within the BSA across both wetland and riparian categories. Temporary impacts to aquatic ESHA include approximately 0.61 acre of impact to wetlands and 0.31 acre of impact to riparian areas, totaling 0.92 acre across both categories.

With the implementation of project features, potential impacts to aquatic ESHA would be minimized. Project features including seasonal avoidance, construction-site BMPs, designated ESA, and stormwater management best practices would be applied to minimize potential erosion and sedimentation and avoid additional temporary impacts. In addition, MM-BIO-2 Impacts to ESHA's will be implemented to further address mitigation and minimize temporary impacts to ESHA. The impact would be

less than significant with mitigation incorporated. Further measures would be considered in consultation with agencies including the CCC.

**c) Less Than Significant Impact with Mitigation Incorporated**

Several jurisdictional aquatic features were identified within the BSA during the aquatic resource delineation surveys. The BSA was found to support 3.64 acres (2,691 linear feet) of waters of the United States and state, including palustrine wetlands (USACE and CCC) (1.89 acres), estuarine intertidal waters (0.91 acre), estuarine wetlands (0.62 acre), other waters such as riverine (0.20 acre/1,383 linear feet), and culvert waters.

Palustrine wetland features were associated with roadside ditches, drainages, downslope seeps and areas abutting tidal marsh habitat in the BSA across 26 culvert work locations and 6 staging locations. Intertidal waters adjacent to Bolinas Lagoon and Tomales Bay are located in the BSA along the west side of SR 1 at 19 culvert locations and 4 staging locations. Associated estuarine wetland features were also present at 15 culvert locations and 5 staging locations. Other waters included within the BSA consisted of 29 culverted waters features and of riverine features associated with constructed ditches and natural drainages.

The BSA was also found to support 0.254 acre of CCC-only jurisdictional wetlands across 10 culvert locations and 2 staging locations. These areas did not meet the three USACE parameters required for jurisdictional wetlands but showed indications of surface hydrology, hydric soils, or hydrophytic vegetation that was enough to support CCC definition as wetland ESHA.

**Jurisdictional Wetlands**

Palustrine wetlands, including forested wetlands, were delineated throughout the BSA. This feature was located upstream of the blocked box culvert at Location 11 (PM 14.86) and had recently received significant sediment deposits, leaving no trace of a defined channel. Vegetation consisted of a dense overstory of arroyo willow and no understory. Palustrine emergent wetlands were observed within roadside ditches, drainages, downslope of seeps, and areas just upslope of tidal wetlands abutting Bolinas Lagoon.

Estuarine wetlands were mapped in vegetated areas below the high tide line of Bolinas Lagoon. There were no estuarine wetlands within the BSA intersecting Tomales Bay.

## **Other Waters**

Ephemeral and intermittent riverine features were located throughout the BSA and consisted of natural drainages descending towards SR 1 from the upslope of the roadway, along with ditches constructed along the shoulder or culverts. Some riverine features with dense in-channel hydrophytic vegetation were mapped as palustrine wetlands.

“Culverted waters” are piped connections between upstream and downstream segments of potentially jurisdictional waters. A total of 28 culverted water features were mapped within the BSA. These features convey potential waters of the United States and waters of the State under SR 1, flowing east to west.

Estuarine intertidal waters were also mapped along Tomales Bay and Bolinas Lagoon. These occurred below the high tide line and mean high water, where hydrophytic vegetation was absent. Many areas of estuarine intermittent waters consist of mudflats at low tide.

## **Impacts to Waters**

Temporary direct impacts to potential waters of the United States and waters of the State would result from dewatering and water diversion activities and from direct culvert replacement. Additional impacts are anticipated as a result of the dredging of v-ditches adjacent to various culvert locations. The Project is anticipated to result in a total of approximately 0.598 acre of temporary impacts to potential jurisdictional waters of the United States or waters of the State, including 0.082 acre of impact to estuarine intertidal waters, 0.080 acre of impact to other waters, 0.038 acre of impact to estuarine wetlands, and 0.398 acre of impact to USACE/CCC jurisdictional wetlands. An additional 0.041 acre of CCC jurisdictional wetland would be temporarily impacted. Permanent impacts resulting from culvert upsizing are negligible, making up less than 0.001 acre.

All anticipated water diversion related impacts would only occur if the jurisdictional feature is wet or if groundwater is encountered during culvert replacement activities. Project features such as seasonal avoidance would restrict work activities to the dry period as much as possible and minimizing impacts.

Grading, clearing, and grubbing of upland areas could result in indirect temporary impacts to waters of the United States from increased erosion and sedimentation.

These indirect impacts would be minimized through implementation of project features, including BMPs such as use of silt fences or fiber rolls.

Caltrans would submit a request subject to Clean Water Act (CWA) Section 404 Nationwide Permit #14. Water Quality Certification under CWA Section 401 would also be required from the San Francisco Bay Regional Water Quality Control Board (RWQCB).

Implementation of project features, AMMs and MM BIO-3 Impacts to Jurisdictional Waters, would help avoid and minimize potential impacts to waters of the United States; therefore, the impact would be less than significant with mitigation.

**d) No Impact**

A fish passage assessment was conducted for the Project. The culverts that make up the Project are within the Tomales Bay, Olema Creek, Lagunitas Creek, or Bolinas Lagoon watersheds. These watersheds are known to support spawning and rearing of salmonid species; additionally, designated critical habitat for CCC steelhead, CCC coho salmon, and tidewater goby exists in either Tomales Bay, Bolinas Lagoon, or several of their tributaries. However, there were no CNDDDB records for any special status fish species in any of the creeks or aquatic features through which the culverts flow.

Culvert replacement would not create or maintain an existing fish passage barrier and, based on the results of the fish passage assessment, all but two of the culverts (PM 16.47 and PM 29.85) associated with the Project are inaccessible to anadromous fish. The culvert at Tomasini Creek below SR 1 at PM 29.85 and the culvert at PM 16.47 at Pike County Gulch contain suitable fish habitat. These locations were not found to represent a barrier to fish passage. The cleaning and maintenance activities at PM 16.47 and PM 29.85 would improve migratory habitat and facilitate fish passage.

The existing roadside drainages and culverts in the Project footprint potentially provide passage for small vertebrates to medium-sized mammals. If wildlife currently use the channels and existing culverts for crossing SR 1, passage may be blocked if new culverts are installed at steep angles or without landings. Access by wildlife to the immediate construction area will be restricted during construction with the installation of ESAs and WEF. These represent temporary obstructions to passage below SR 1 via road culverts. Medium to large sized mammals could be entrapped or

injured by equipment or excavations if they are not completely covered; however, the new culvert footprints would not create any new permanent barriers to passage under SR 1.

Caltrans has identified several locations where amphibian crossing improvements may be added to the Project during the design phase. Details of the improvements would be determined during the design phase and could include enhancement of culvert inlet and outflow to enhance wildlife access, directional barrier or fencing, and upsizing of culverts. These improvements would provide potential beneficial impacts toward wildlife passage.

The Project would not create any new features that would impede the movement of wildlife. Several of the existing culverts that would be replaced are currently blocked by debris buildup and do not allow for the safe passage of animals underneath the roadway. After Project completion it is expected that animals would be able to use the culverts in the Project area to pass underneath the road and avoid hazards associated with vehicle traffic. The culverts also may provide opportunities for cover and areas to escape from predators. Therefore, no adverse effects on wildlife movement are expected to occur as a result of the Project. There would be no impact.

**e) Less than Significant Impact with Mitigation Incorporated**

This Project would not conflict with any local policies or ordinances protecting biological resources.

The Marin Countywide Plan (General Plan) (Marin County 2007) is the comprehensive, long-range general plan that guides land use and development in the unincorporated areas of Marin County. The General Plan states, “restore damaged portions of Stream Conservation Areas [i.e., riparian areas] to their natural state wherever possible, and reestablish as quickly as possible any herbaceous and woody vegetation that must be removed within a Stream Conservation Area, replicating the structure and species composition of indigenous native riparian vegetation.” The Project’s restoration of riparian vegetation is consistent with this requirement. Therefore, the Project would not conflict with the Marin Countywide Plan goals to preserve and restore the natural environment and the impact would be less than significant.

The Marin County Local Coastal Program (LCP) is a land use plan for Marin County’s Coastal Zone that guides land use and development in accordance with the



CCA (Marin County 1981). Impacts to ESHAs within the California Coastal Zone will require the Project to obtain a CCC or local coastal development permit. MM-BIO-2 Impacts to ESHA's will be implemented to minimize temporary impacts to ESHAs. Further measures would be considered in consultation with agencies including the CCC. The impact would be less than significant with mitigation incorporated.

**f) No Impact**

The Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.

***Project Features***

Caltrans would incorporate the following standard project features into the Project to offset potential impacts to biological resources:

- **PF-BIO-1, Seasonal Avoidance.** Construction below top of bank would be constrained to occur during the dry season, during creek low flows (starting June 1 and ending October 31). Work in the creek would be limited to when the creek is dry or mostly dry, as much as practicable, or when the creek diversion has been installed. Caltrans would complete advanced tree removal activities outside bird nesting season (February 1 through September 30) at the culvert work locations.
- **PF-BIO-2, Environmentally Sensitive Area Fencing.** Before starting construction, 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 using high-visibility orange fencing. The ESA fencing will remain in place throughout the Project duration 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.
- **PF-BIO-3, Wildlife Exclusion Fencing.** Before the start of construction, wildlife exclusion fencing (WEF) will be installed along the Project footprint perimeter in areas where specific wildlife could enter the Project site. The final Project plans will depict the locations where WEF will be installed and how it will be assembled/constructed. The location of the WEF will be determined in

coordination with USFWS. 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 throughout the Project duration while construction activities are ongoing and will be regularly inspected for stranded animals and fully maintained. The WEF will be removed following completion of construction activities.

- **PF-BIO-4, 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.
  - Servicing vehicles and construction equipment including fueling, cleaning, and maintenance at least 50 feet from aquatic habitat unless separated by topographic or 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.
  - Establishing permanent erosion control measures such as bio-filtration strips and swales to receive stormwater discharges from the highway or other impervious surfaces to the maximum extent practicable.
- **PF-BIO-5, Construction-site Management Practices.** The following site restrictions will be implemented to avoid or minimize potential impacts 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 ROW 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 non-toxic and weed free.
- Enclosing food and food-related trash items in sealed trash containers and removing them from the site at the end of each day.
- Prohibiting pets from entering the Project footprint during construction.
- Prohibiting firearms within the Project 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, solvents, and similar will be stored in sealable containers in a designated location that is at least 50 feet from aquatic habitats.
- **PF-BIO-6, Night Work.** Nighttime work will be avoided to the maximum extent practicable. Should nighttime work need to be conducted, all 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-7, 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 listed species, as well as the importance of compliance with Caltrans and various resource agency conditions.

- **PF-BIO-8, 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-9, 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 Project area overnight will be inspected before they are subsequently moved, capped, and/or buried.
- **PF-BIO-10, 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 passerines/migratory birds and 300 feet for raptors) before clearing activities begin. All nest avoidance requirements of the Migratory Bird Treaty Act 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 chipped and left onsite if appropriate or removed from the Project footprint if it could be used as nesting habitat.

- **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.

#### ***Avoidance and Minimization Measures***

The following AMMs would avoid or minimize impacts to biological resources:

- **AMM-BIO-1, Restrict In-water Work.** Restrict in-water work and work within identified riparian corridors around jurisdictional waters to June 1 through October 31, when stream channels and drainages are expected to be dry. Work window restrictions will also avoid impacts to sensitive life stages of special-status aquatic species. Restrict construction staging areas to locations within the Project footprint outside any designated ESA.

- **AMM-BIO-2, Minimize Tree Removal.** Attempts to minimize tree removal will include trimming wherever possible. Each individual tree location will be assessed by the Project biologist in coordination with Caltrans construction personnel to see if the work can be performed without impacting the trees. The trees that will be removed would be cut down to the stumps and removed between October 1 and January 31, the season prior to construction, to avoid nesting bird season. If trees are to be removed during bird nesting season, the biologist will survey for active nests, in accordance with permit conditions, prior to removal.
- **AMM-BIO-3. Vegetation Removal Window.** To the extent feasible, vegetation removal would only occur between October 1 and January 31 and would not occur outside of the construction areas to avoid disturbance of bird nesting season.
- **AMM-BIO-5, Pre-construction Surveys for California red-legged Frog.** Pre-construction surveys for CRLF will be conducted by a USFWS-approved biologist no more than 20 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 under Item 4. Fossorial mammal burrows will be inspected for signs of frog usage, to the extent practicable. If it is determined that a burrow may be occupied by CRLF, USFWS will be contacted and work within the vicinity of the burrow will stopped per agency permits.
- **AMM-BIO-6, Protocol for Species Relocation and Reporting.** If CRLF are encountered in the immediate work area the following procedures will be followed:
  - The resident engineer and USFWS-approved biologist will be immediately informed. If a frog gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the construction zone. The capture and removal of CRLF may only be performed following consultation with USFWS and captured CRLF will be released within appropriate habitat

outside of the construction area within the creek riparian corridor. The release habitat will be determined by USFWS.

- The USFWS-approved biologist will have the authority to halt work through coordination with the resident engineer in the event that a CRLF is discovered within the Project footprint. The resident engineer will ensure construction activities remain suspended in any construction area where the qualified biologist has determined that a potential take of CRLF could occur. Work will resume once the animal leaves the site voluntarily or is removed following agency consultation, or it is determined that the CRLF is not being harassed by construction activities. If take occurs, the biologist(s) will notify the USFWS contact by telephone and electronic mail within one working day.
- The biological monitor(s) will take precautions to prevent introduction of amphibian diseases in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005).
- **AMM-BIO-7, Focused NSO Surveys.** NSO-focused surveys should be conducted by a qualified biologist at all Project areas that are within 0.25 mile of NSO nesting habitat and activity centers (Locations 24 through 28). If surveys are not completed, work at these locations should be restricted to between August 1 and February 28, unless surveys determine the suitable habitat or site is unoccupied or the owls are not nesting. For Project work within 0.25 mile of a known nest site or nesting habitat that cannot be scheduled outside of the nesting season and where the 0.25-mile buffers cannot be maintained, reduced buffers should be implemented based on *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (USFWS 2006).
- **AMM-BIO-8, Auditory or Visual Disturbance.** No proposed activity generating sound levels 20 or more A-weighted decibels (dBA) above ambient sound levels or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dBA (excluding vehicle backup alarms) may occur within the suitable NSO nesting and roosting habitat between October 31 and August 1. In addition, no human activities will occur within a visual line-of-sight of 40 meters (131 feet) or less from any known nest locations within the action area. These above-ambient sound level restrictions will be lifted after July 31, after which the above-ambient sound levels are considered as having “no effect” on nesting NSO and dependent young.

- **AMM-BIO-9, Focused Pre-construction Surveys for Golden Larkspur.** Prior to the start of construction, focused pre-construction surveys for golden larkspur will be performed within work Locations 43 through 50. These surveys will be appropriately timed to capture the blooming period for this species (March through May), following appropriate CDFW and CNPS survey protocols.
- **AMM-BIO-10, Designation of Special-status Plant Populations.** In conjunction with pre-construction survey AMMs, mapping of any observed populations of special-status plants (including golden larkspur, coat rock cress, and Raiche's red-ribbons) within the BSA will be performed the season prior to construction. These areas will be denoted as ESA and avoided as feasible. If avoidance of special-status plants within the Project footprint is not possible, Caltrans will consult with CDFW for use of appropriate relocation or harvesting protocols.
- **AMM-BIO-11, Pre-construction Surveys.** Prior to the start of tree removal activities, a pre-construction bat survey will be performed by an approved biologist. In the event that any commonly occurring non-listed tree roosting bat species are present, the approved biologist will determine if two-phase tree removal methods or other bat tree roost avoidance measures are appropriate. Surveys will be conducted at work locations determined to have moderately to highly suitable tree roost habitat. The biologist will use visual confirmation to determine the presence of any bat roosts and acoustic recognition equipment to identify species to the greatest extent possible. If detected, all appropriate avoidance and minimization measures will be put in place. Because of the cryptic nature of day-roosting by bats, any trees that may provide roosting habitat (such as large snags or trees with cavities) should be removed using the two-phase method of removing limbs from the tree on the afternoon of the first day and stumping the tree on the following day. This technique allows any bats that may be using the trees to leave of their own volition; they are then unlikely to day-roost in or near any trees from which the limbs were removed. It is also recommended, to the maximum extent practicable, that no work occur at dawn or dusk, when bats and small mammals are most active. No bats will be handled as part of this Project.
- **AMM-BIO-12, Inspect Pipes and Culverts.** All construction-related pipes, culverts or similar structures within the Project area should be thoroughly



inspected for the presence of wildlife, including roosting bats, prior to being moved or buried.

- **AMM-BIO-13, Work Window at Locations 2, 3, 6 to 8, 10, 12 to 15, 18 to 20, and 22.** At work locations within TWG critical habitat, work within aquatic areas will be restricted to September 1 and October 31 to comply with the species' work windows.
- **AMM-BIO-14, Block Net Installation.** Block-off nets will be installed and closed during low tide to the extent feasible to prevent fish from entering the work area. Net locations include areas where the Project footprint occurs below the mean-high tide line or with other waters with immediate connectivity to intertidal waters (Locations 1, 7 to 10, 13 to 17, 20, 36, 38, 39, and 41 and maintenance culverts at PM 16.09 and PM 16.47).
- **AMM-BIO-18, Conduct Pre-construction Survey for *Viola adunca*.** A pre-construction surveys for *Viola adunca* would be conducted by a USFWS-approved biological monitor. Visual surveys would be conducted in the early spring, prior to construction, referencing phenology trends observed at nearby reference populations. If *Viola adunca* are found in the work area, they would be flagged for avoidance. Negative findings for *Viola adunca* within the BSA would indicate that the footprint does not contain suitable breeding habitat for MSB.
- **AMM-BIO-19, In-water Activities at Maintenance Culvert at PM 16.47 and Location 33.** When working in the channel at maintenance culvert at PM 16.47 and Location 33, the duration of in-water activities will be limited to the minimum amount of time necessary to conduct maintenance activities.

### **Mitigation Measures**

Caltrans would implement the following mitigation measures to reduce potential impacts to biological resources:

- **MM-BIO-1, Impacts to Vegetation.** Vegetation removed for the Project would be restored to pre-existing conditions using native species. Trees removed within CDFW jurisdiction will be replanted following construction. Appropriate tree replacement ratios and locations would be determined during the permitting process and in consultation with the appropriate agencies.

- **MM-BIO-2, Impacts to ESHAs.** Restoration of temporary disturbance areas, including ESHAs, will be accomplished through onsite revegetation. Restoration of temporary impact areas will occur within the same season they are disturbed so that the duration of disturbance at each location will not exceed 12 months. Restoration of temporarily disturbed areas will be performed at a 1:1 ratio. At the end of each construction season, exposed slopes and bare ground will be reseeded with native grasses and shrubs to stabilize and prevent erosion.
- **MM-BIO-3, Impacts to Jurisdictional Waters.** Caltrans will determine the need for mitigation for impacts to jurisdictional waters during the design phase in consultation with agencies including USACE, CCC, and the RWQCB. Caltrans will be obtaining a National CWA Section 401 certification from the RWQCB. Any final mitigation requirements will be determined in coordination with applicable agencies during the permitting process.

### 3.3.5 Cultural Resources

Would the project:

| Question   | CEQA Determination           |
|--|------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?      | Less Than Significant Impact |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | Less Than Significant Impact |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries?                              | Less Than Significant Impact |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR CULTURAL RESOURCES

A Section 106 Summary Memorandum was prepared by the Caltrans Office of Cultural Resource Studies (Caltrans 2023c). The investigation was performed by a Caltrans archaeologist and architectural historian who are Professionally Qualified Staff (PQS) for prehistoric archaeology and architectural history. A summary of the findings is presented here.

The area of potential effects (APE) for the Project is designated as the Project footprint for each of the proposed culvert locations and includes Caltrans' ROW, staging areas, TCEs, and the known or reasonably anticipated boundaries of archaeological and architectural properties. The APE is shared by Architectural History and Archaeology at all locations except where cultural resources are present within or adjacent to the Project footprint. The vertical APE includes the anticipated depth of construction impacts throughout the Project area. The depth of Project impacts ranges from 0 to 7 feet depending on the proposed repair or replacement.

Five prehistoric and three multi-component (historic and prehistoric) archaeological resources are identified within the APE. Two of these resources are assumed eligible for listing in the National Register of Historic Places (NRHP) for the purposes of the Project on May 2, 2023, pursuant to Stipulation VIII.C.4 of the Section 106 Programmatic Agreement (PA). Six of the resources are assumed eligible for the purposes of the Project, pursuant to Stipulation VIII.C.3 of the PA.

A total of six built environment resources were identified within the APE. One resource is listed in the NRHP, the Olema Valley Dairy Ranches Historic District. The J. Shields & Sons Livery Stable at 20135 Highway 1, Marshall, California, appears eligible for the NRHP, and as a resource under CEQA as it meets the California Register of Historical Resources criteria. Built environment resources located at 20155 Highway 1 (Point Reyes Cooperative Creamery Skimming Station),

20165 Highway 1, 20175 Highway 1, and 18565 Highway 1 in Marshall, California, either lack historic integrity or do not meet the criteria of significance to merit eligibility for the NRHP and California Register of Historical Resources. The State Historic Preservation Officer (SHPO) concurred on these eligibility determinations on July 11, 2023.

The Native American Heritage Commission (NAHC) was contacted in June 2021 with a request to search their Sacred Land Files for Native American cultural resources within the APE and a list of culturally affiliated Native American parties. The NAHC responded on July 6, 2021, with a negative search result for Native American cultural resources as reported from the Sacred Lands File records. Initial consultation letters under Section 106 of the National Historic Preservation Act and CEQA Public Resources Code 210803.1 and Chapter 532 Statutes of 2014 (Assembly Bill 52 [AB 52]) were sent electronically to Kenneth Woodrow, Chairperson of Wukasache Indian Tribe/Eshom Valley Band; Donald Duncan, Chairperson of Guidiville Indian Rancheria; and Greg Sarris, Chairperson of the Federated Indians of Graton Rancheria (FIGR), and Buffy McQuillen, Tribal Historic Preservation Officer for FIGR on July 19, 2021. Follow-up phone calls were made on August 3, 2021, by the Project archaeologist to all parties. Mr. Duncan stated that the Project was outside their traditional territory and voice messages were left with Mr. Woodrow and Ms. McQuillen.

The Project was discussed with Ms. McQuillen during a February 2022 quarterly meeting between Caltrans and FIGR cultural staff. On March 16, 2022 Ms. McQuillen requested continued consultation on the Project. Representatives from FIGR were present during archaeological field survey and testing in April 2022 and updates on the Project were given to Ms. McQuillen at the August 2022, December 2022, and February 2023 quarterly meetings between FIGR and Caltrans. Draft copies of archaeological reports were submitted to FIGR in April 2023. Consultation will remain ongoing through the life of the Project.

The Golden Gate National Recreation Area (GGNRA), the Jack Mason Museum of West Marin History, the Point Reyes Village Association, Point Reyes National Seashore, the Tomales Regional History Center, and the Marin History Center were sent consultation letters on December 22, 2021. Peter Gavette, park archaeologist for GGNRA, responded on February 9, 2022, with concerns about resources in the area. The Caltrans archaeologist followed up with Mr. Gavette on March 2, 2022, and resolved concerns. Mr. Dewey Livingston, of the Jack Mason Museum of West Marin

History, responded on January 4, 2022, with information about the area. Follow-up discussions between Caltrans and Mr. Livingston were held in January and February 2022. Follow-up emails and phone calls were made February 7 and March 24, 2022, respectively, to the Tomales Regional History Center and the Marin History Museum. Additional calls were placed on March 24, 2023, and messages left where possible, to the Point Reyes National Seashore, Tomales Regional History Center, and Marin History Museum, but no response has been received.

**a) Less Than Significant Impact**

The Project would have a less than significant impact on historic resources. The proposed Project would require various TCEs adjacent to SR 1 for drainage system improvements. These TCEs and related Project activity would not adversely affect any structures, landscaping, or supporting infrastructure to historic resources. The impact would be minor, temporary, and have no adverse effect on the Olema Valley Dairy Ranches Historic District or on qualities which qualified the J. Shields & Sons Livery Stable for listing on the National Register.

**b) Less Than Significant Impact**

Five prehistoric and three historic archaeological resources are identified within the APE. These resources will be protected using ESA fencing and/or archaeological monitoring during construction as included in AMM-CULT-1 and AMM-CULT-2. Therefore, the impact would be less than significant.

**c) Less Than Significant Impact**

The procedures for the treatment of discovered human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California Public Resources Code Section 5097. Interred human remains, particularly Native American burials and associated items of patrimony, need to be protected from vandalism and inadvertent destruction. Implementation of PF-CULT-1, PF-CULT-2, and AMM-CULT-1 would reduce, avoid, and/or minimize the impact to less than significant.

**PROJECT FEATURES**

Caltrans would incorporate the following standard project features to reduce potential impacts to cultural resources:

- **PF-CULT-1, Inadvertent Archaeological Discoveries.** If buried archaeological resources are discovered during ground-disturbing activities, work would cease until a Caltrans qualified archaeologist can assess the nature and significance of the resource and appropriate AMMs are implemented. The need for monitoring during the remainder of the Project would be reevaluated. The Caltrans qualified archaeologist would consult with appropriate Native American tribes in determining suitable treatment for inadvertent archaeological discoveries if the resource is Native American in nature.
- **PF-CULT-2, Discovery of Human Remains.** If human remains are discovered during ground-disturbing activities, construction-related activities within a 100-foot radius of the find would be halted immediately and the Caltrans qualified archaeologist would be notified within 24 hours. The Caltrans qualified archaeologist would immediately notify the Marin County coroner. The Marin County coroner is required to examine the find within 48 hours of receiving notification of such a discovery. If the Marin County coroner determines that the human remains are those of a Native American, the NAHC would be contacted by phone within 24 hours of making the determination (California Health and Safety Code Section 7050.5[c]). The Caltrans qualified archaeologist would notify Native American tribes of discovered human remains. The NAHC would contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the discovered human remains. The MLD, in cooperation with the adjacent property owner and the Caltrans qualified archaeologist, would determine the ultimate disposition of the human remains.

#### **AVOIDANCE AND MINIMIZATION MEASURES**

Caltrans would incorporate the following AMMs to avoid or minimize potential impacts to cultural resources:

- **AMM-CULT-1, Establish and Enforce Environmentally Sensitive Area Action Plan.** Prepare an ESA Action Plan, which would establish ESAs to delineate the archaeological site for protection. Specific measures, such as protective fencing, access restrictions, and monitoring of the ESA boundaries by a qualified archaeologist, would be enforced by the responsible parties identified in the ESA Action Plan. Reference Caltrans Standard Specification 14-1.02.
- **AMM-CULT-2. Establish and Enforce Archaeological Monitoring Areas.** Prepare an Archaeological Monitoring Plan to be implemented during construction. This would include establishing Archaeological Monitoring Areas

(AMAs) and having an archaeologist and tribal representative monitor job site activities within the archaeological monitoring areas to reduce the Project's impacts to the resources within the Project limits. No work can be conducted within the AMAs unless the archaeological monitor is present. Reference Caltrans Standard Specification 14-2.03.

### 3.3.6 Energy

Would the project:

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR ENERGY

This energy use analysis is based on the energy analysis report prepared for the Project in May 2023 (Caltrans 2023d). To assess energy consumed by construction equipment and vehicles associated with the Project, CAL-CET 2020, version 1.0, was used to quantify carbon dioxide (CO<sub>2</sub>) emissions. U.S. Environmental Protection Agency greenhouse gas (GHG) equivalency formulas were used to convert CO<sub>2</sub> to fuel volume. Project energy usage in terms of diesel fuel consumption is estimated to be approximately 42,829.08 gallons of diesel fuel.

#### a) Less Than Significant Impact

During Project construction, diesel and gasoline would be consumed during the operation of heavy-duty equipment, material deliveries, and debris hauling. Energy use associated with Project construction is estimated to result in the short-term consumption of approximately 42,829.08 gallons of diesel for powered equipment. This temporary demand would cease once construction is complete; no changes in operational energy use are anticipated. Moreover, the Project would not be a new permanent source of energy demand. The demand for fuel would have no noticeable effect on peak or baseline demands for energy. In addition, PF-AQ-3 and PF-AQ-4 (Section 3.3.3) would minimize energy consumption from construction activities associated with the Project. Therefore, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Impacts would therefore be less than significant.

#### b) No Impact

The Project would restore and upgrade deteriorating drainage systems on SR 1 to prevent potential damage to the highway. It would not obstruct state or local plans for renewable energy or energy efficiency. Therefore, there would be no impact on state or local plans for renewable energy or energy efficiency.



### 3.3.7 Geology and Soils

Would the project:

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR GEOLOGY AND SOILS

A *Geologic and Palaeontologic Analysis for Replacing Culverts* technical memorandum (Caltrans 2022d) was prepared for the Project. A summary of the findings is presented here.

The Project is located in the central portion of the Coast Ranges Geomorphic Province of California. The dominant feature is the San Andreas Fault, an 800-mile-long fault zone that generally forms the dividing line between major tectonic plates, with the Pacific Plate situated west of the fault and the North American Plate situated east of the fault. Soils in the Project vicinity are generally characterized as deep, poorly to well drained, and located on alluvial fans, in basins, on uplands and on coastal uplands and terraces (NRCS 2023).

**a(i), (ii), (iii), (iv) Less Than Significant Impact**

The active San Andreas Fault runs parallel to and occasionally crosses SR 1 along the length of the Project. The Project area would experience strong ground shaking and potential fault ruptures, however, the proposed culvert installations would not further expose the public to seismically related hazards. The Project would be designed according to Caltrans seismic standards, thereby minimizing the risk to construction workers or the traveling public from strong seismic ground shaking. Although surface rupture has the potential to occur, the proposed design would ensure that the culverts would be fabricated, installed, and maintained to ensure an appropriate level of safety. In addition, due to the potential for strong ground shaking in the Project vicinity, seismically related ground failure has the potential to occur in the Project footprint. Surficial soils are predominantly clayey and overlie Franciscan Complex bedrock.

The Project area does not contain expansive soils and is not susceptible to liquefaction and landslides. Erosion control features would be installed as required to prevent surficial erosion and sedimentation at the new drainage systems; therefore, the Project would result in less than significant impact.

**b) Less Than Significant Impact**

Ground-disturbing earthwork associated with clearing and construction activities in the Project footprint has the potential to increase soil erosion rates and loss of topsoil. As described in Section 3.3.10, Hydrology and Water Quality, BMPs related to erosion control and implementation of a Stormwater Pollution Prevention Plan (SWPPP) would minimize erosion and the loss of topsoil. With implementation of the BMPs identified for hydrology and water quality, less than significant impacts are anticipated for the Project.

**c) Less Than Significant Impact**

The Project has potential for strong ground shaking in the area, thus the proposed culverts have the potential to be located on an unstable geologic or soil unit. No additional impacts to the public from landslides, liquefaction, or other geologic or seismic hazards would result from the Project. In addition, the Project would be designed according to Caltrans seismic standards. The Project would result in a less than significant impact.

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

Soft soils may be found within the Project footprint; however, the Project footprint does not contain expansive or collapsible soils. No septic tanks or alternative wastewater delivery systems would be constructed or affected by the Project; therefore, there would be no impact.

In addition, the subsurface throughout the corridor is founded on engineered fill constructed on Franciscan Complex bedrock and minor alluvium and marine terrace deposits. These units are not paleontologically sensitive; therefore, there would be no impact.

### 3.3.8 Greenhouse Gas Emissions

Would the project:

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?       | 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                    |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR GREENHOUSE GAS EMISSIONS

Caltrans prepared a *Construction Greenhouse Gas Emissions Analysis* memorandum on GHG emissions for the Project (Caltrans 2023e). This section summarizes the findings of this review.

##### **a) Less Than Significant Impact**

The GHG emissions resulting from construction activities would not result in long-term impact on the environment. Construction-generated GHG emissions include emissions resulting from material processing by onsite construction equipment, workers commuting to and from the Project footprint, and traffic delays from construction. Emissions would be produced at different levels throughout the Project, depending on the activities involved during various phases of construction.

The GHG analysis prepared for this Project focused on vehicle-emitted GHGs. CO<sub>2</sub> is the single most important GHG pollutant because of its abundance compared with other vehicle-emitted GHGs, including methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbon (HFCs), and black carbon.

Construction-related GHG emissions were calculated using CAL-CET 2020, version 1.0. The total estimated amount of CO<sub>2</sub> produced due to construction would be 436 tons. Table 3-1 summarizes the construction-related emissions, including total carbon dioxide equivalent (CO<sub>2</sub>e) emissions. Frequency and occurrence of GHG emissions would be reduced through PF-GHG-1, described at the end of this section. Impacts would therefore be less than significant.

**Table 3-1. Summary of Construction-Related GHG Emissions**

| CO <sub>2</sub><br>(tons) | CH <sub>4</sub><br>(tons) | N <sub>2</sub> O<br>(tons) | CO <sub>2</sub> e<br>(metric tons) |
|---------------------------|---------------------------|----------------------------|------------------------------------|
| 436                       | 0.010                     | 0.020                      | 401.28                             |

Source: Caltrans 2023e

**b) No Impact**

The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The Project would not increase operational capacity or affect travel demand or travel patterns that would contribute to a long-term increase in GHG emissions. The amount of GHG generated during construction of the Project would be minor; therefore, there would be no impact.

***Project Feature***

Caltrans would incorporate the following standard PF-into the Project to offset unanticipated impacts to greenhouse gases:

- **PF-GHG-1, Control Measures for Greenhouse Gases.** Measures would be determined during later Project phases and implemented during construction to do the following:
  - Ensure regular maintenance of construction vehicle and equipment
  - Limit idling of vehicles and equipment onsite
  - Recycle nonhazardous waste and excess material if practicable
  - Use solar-powered signal boards, if feasible

### 3.3.9 Hazards and Hazardous Materials

Would the project:

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?   | Less Than Significant Impact |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?   | Less Than Significant Impact |
| c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?  | Less Than Significant Impact |
| d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?  | No Impact                    |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the Project site? | No Impact                    |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?   | Less Than Significant Impact |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?  | Less Than Significant Impact |

#### **a, b) Less Than Significant Impact**

During construction, Caltrans Standard Specifications would be implemented to prevent spills or leaks from construction equipment and from the storage of fuels, lubricants, and solvents. Construction-related activities associated with removal, storage, transportation, and disposal of hazardous materials would occur in accordance with the appropriate California Health and Safety Code. Handling of hazardous materials would comply with Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storage, and disposal of hazardous waste. Therefore, the proposed Project would not create a significant hazard to the public related to the routine transport, use, or disposal of hazardous materials, and would not 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.

If required, a site investigation to characterize soil for contaminants, primarily aerially deposited lead, would be conducted during later Project phases. The results of the site investigation would dictate the Project requirements for the safe handling of contaminated soil (Caltrans 2022b). Therefore, with implementation of requirements for the safe handling of contaminated soil, impacts would be less than significant.

**c) Less Than Significant Impact**

Schools within the Project vicinity are part of the Shoreline Unified School District and the Bolinas-Stinson School District. The Project is located approximately 0.16 mile from adjacent Tomales Elementary School and Tomales High School, 0.01 mile from West Marin Elementary School, and 0.03 mile from Stinson Beach School. The Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. In addition, handling of hazardous materials would comply with Caltrans Standard Specification 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste safely; therefore, the impact would be less than significant.

**d) No Impact**

None of the Project locations are on the Government Code Section 65962.5 list (Cortese List) and therefore would not create a significant hazard to the public or the environment. There would be no impact.

**e) No Impact**

The Project is not within an airport land use plan or within 2 miles of a public airport or public use airport. There would be no impact.

**f) Less Than Significant Impact**

The Project would minimally interfere with any emergency response or evacuation plan. One-way alternating traffic control would be required, along SR 1 throughout construction. No detours or full road closures would be required during Project construction. A TMP, as discussed in Section 3.3.17, Transportation, would be developed during the design phase that would identify potential traffic delays, traffic management features, and alternative routes for traffic at the Project footprint. Emergency response times are not anticipated to change during construction because the TMP would provide priority to emergency vehicles during one-way alternating

traffic control. In addition, the TMP is anticipated to provide instructions for response or evacuation in the event of an emergency at or adjacent to the Project footprint. Therefore, the Project would not conflict with emergency response or evacuation plans. The impact would be less than significant.

**g) Less Than Significant Impact**

The Project is located within California Department of Forestry and Fire Protection (CAL FIRE)-designated Very High, High, and Moderate State Responsibility Areas, as well as Federal Responsibility Areas for wildfire prevention and suppression (CAL FIRE 2022). The Marin County Fire Department, which serves the Project corridor, is responsible for emergency services and the management of fire operations during emergency response efforts; the Tomales Fire Station is located at 599 Dillon Beach Road, approximately 4.3 miles north of the Project. Additionally the Stinson Beach Fire Protection District serves the southern portion of the Project area located in Stinson Beach and has two fire stations; the Stinson Beach Fire Station located at 3410 Shoreline Highway and Stinson Beach Fire Station No. 2 located at 100 Calle del Arroyo.

Equipment may be used during construction that has the potential to increase the risk of wildfire. However, construction personnel would be equipped with standard incipient stage fire suppression equipment, such as fire extinguishers and shovels.

Professional fire services would be contacted immediately in the event of a fire. The Project does not have permanent components that would expose people or structures to the risk of loss, injury, or death involving wildland fires. Impacts from the Project that would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires would be less than significant.



### 3.3.10 Hydrology and Water Quality

Would the project:

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?   | Less Than Significant Impact |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?                                      | No Impact                    |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: | Less Than Significant Impact |
| (i) result in substantial erosion or siltation on- or off-site;   |                              |
| (ii) substantially increase the rate or amount of surface runoff in a manner the would result in flooding on- or off-site;  | No Impact                    |
| (iii) create or contribute runoff water that 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 floodflows?   | No Impact                    |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?   | Less Than Significant Impact |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?   | Less Than Significant Impact |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR HYDROLOGY AND WATER QUALITY

Caltrans investigated potential impacts on hydrology and water quality from the Project and prepared a *Water Quality Assessment Report* (Caltrans 2023b) and *Location Hydraulic Study/Floodplain Analysis* (Caltrans 2022a). This section summarizes the findings.

#### Surface Water

The Project is within the jurisdiction of the San Francisco Bay RWQCB (Region 2), which is responsible for implementation and enforcement of state laws and regulations concerning water quality. The Project area is within the Bolinas Lagoon and Tomales Bay watersheds. The southern portion of the Project area (Locations 1 to 25) lie within the Bolinas Lagoon Watershed, and the northern part of the Project area (Locations 26 to 50) are within the Tomales Bay Watershed. There are 22 receiving water bodies within the Project area. Four water bodies (Olema Creek, Lagunitas Creek, Tomales Bay, and Walker Creek) are included on the CWA Section 303(d)

List of Water Quality Limited Segments. The following 12 receiving water bodies within the Project area are listed for surface water beneficial uses:

- Bolinas Lagoon and Unlisted tributaries
- Pine Gulch Creek
- Cooper Mine Gulch Creek
- Pike County Gulch Creek
- Morses Gulch Creek
- McKinnan Gulch Creek
- Stinson Gulch Creek
- Tomales Bay and unlisted tributaries
- Tomasini Canyon Creek
- Walker Creek
- Lagunitas Creek
- Olema Creek and unlisted tributaries

### ***Groundwater***

The northern section of the Project is within the Sand Point Area groundwater sub-basin, a small, coastal basin located just south of the Town of Dillon Beach. The groundwater level of the nearest station from the Project area is approximately 29 feet below ground surface. The Project is entirely within the Marin Coastal Hydrologic Unit.

### ***Floodplains***

The majority of the Project area is located within non-Special Flood Hazard Area (SFHA) unshaded Zone X, which represents most of the areas have a minimal flood hazard, while some specific coastal locations have velocity flood hazards. Project locations are within several Federal Emergency Management Agency (FEMA) Flood Zone Designations, as follows:

- Zone AE indicates areas with 1 percent annual chance of flooding and base flood elevations (BFE) are available within these zones. Location 29, 30, 31, 32 are within designated floodways (Locations 2 to 6, 8 to 10, 12 to 15, 18 to 22, 29 to 32, 36 to 39, and 45).
- Zone X indicates areas between the limits of the base flood and the 0.2 percent annual chance (or 500-year floodplain). (Locations 1 to 30 and 33 to 50).

- Zone A indicates areas with 1 percent annual chance of flooding and no BFEs are available within these zones. (Locations 33 and 46).
- Zone D indicates areas with possible but undetermined flood risk. No analysis of flood hazards has been conducted in these areas. (Location 25).
- Zone VE indicates coastal area with a 1 percent or greater chance of flooding and an additional hazard associated with storm waves. BFEs are available within these zones. (Locations 38 and 39).

### **Coastal Zone**

The Project footprint is located within the California Coastal Zone and therefore requires an analysis of future sea level rise as provided in the California Ocean Protection Council's (OPC) *State of California Sea-Level Rise Guidance, 2018 Update* (OPC 2018). The OPC provides the most current accepted estimates for sea level rise in California. Projected sea level rise based on the OPC guidance at the nearest tide gauge (San Francisco), assuming a high emissions scenario to end of century (that is, the year 2100) with a 1-in-20 (5 percent) probability, indicates that sea level rise at the culvert locations would rise to meet or exceed 4.4 feet above current conditions. To analyze how this projected sea level rise would have impact the Project footprint, the [National Oceanic and Atmospheric Administration Sea Level Rise viewer](https://coast.noaa.gov/digitalcoast/tools/slr.html) (<https://coast.noaa.gov/digitalcoast/tools/slr.html>) and [Point Blue's Our Coast Our Future viewer](https://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map) (<https://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map>) were used to review SR 1 at the Project footprint.

### **a) Less Than Significant Impact**

The majority of Project work would occur within Caltrans ROW and, therefore, the Project would be subject to the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit (Order No. 2012-0011-DWQ). The Project would be subject a Section 401 Water Quality Certification from the San Francisco Bay RWQCB, a Section 404 Nationwide Permit from USACE, and a Section 1602 Lake and a Streambed Alteration Agreement from the CDFW for work within jurisdictional waters. The Project is also required to adhere to the local stormwater treatment and hydromodification criteria stated in the San Francisco Bay Municipal Regional Permit (MRP; Order No. R2-2015-0049) per the Section 401 Water Quality Certification criteria. Coordination and consultation with these agencies would occur during later Project phases.

The Project would result in new impervious surfaces of approximately 0.34 acre. No significant permanent impacts are anticipated because the Project is not adding large amounts of impervious areas and the purpose of the Project is to improve the existing drainage systems. Stormwater impacts would be avoided through the proper implementation of permanent erosion control measures, stormwater treatment measures, and design pollution prevention BMPs. Bioretention swales or basins are the preferred stormwater treatment BMP for reduction of pollutants from and promote infiltration of stormwater runoff. The locations for stormwater treatment BMPs would be determined during later Project phases.

Temporary water quality impacts can result from sediment discharge from disturbed soil areas (DSAs) and construction near water resources or drainage facilities that discharge to water bodies. The Project would have an estimated DSA of more than 1 acre and has the potential to cause water quality impacts to receiving water bodies during construction. These impacts would occur during excavation activities as well as from uncovered or improperly covered stockpiles, unstabilized slopes, construction staging areas, unmaintained construction equipment, and accidental spills of fuels, oils, and other potentially toxic materials. The Project has a high receiving water risk has and a medium sediment risk. Therefore, the Project is classified as Risk Level 2. As a Risk Level 2 project, the contractor would be required to perform quarterly non-stormwater discharge visual inspections, and rain event visual inspections pre-storm, daily during a storm event, and post-storm as well as implement Rain Event Action Plans and comply with Numeric Action Level effluent limits for pH and turbidity. The Project would include the implementation of an SWPPP to address construction period impacts. Temporary impacts to water quality during construction can be minimized by implementing temporary construction-site BMPs.

Erosion control BMPs would be included in the final Project plans and specifications and would be included in the final construction package to comply with the conditions of the NPDES permit. The Caltrans BMP Guidance Handbook (Caltrans 2017) would provide guidance for provisions to be included in the construction contract for measures to protect ESAs and avoid or minimize stormwater and non-stormwater discharges. In addition, implementation of construction BMPs including PF--WQ-1 through PF-WQ-7 have the potential to reduce temporary water quality impacts from Project-related construction. Therefore, the Project would not substantially degrade surface water quality. Impacts would be less than significant.

**b) No Impact**

Neither construction nor operation of the Project would use groundwater. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded. A minor amount of added impervious area would not result in impacts to groundwater recharge; therefore, no impact would occur.

**c(i) Less Than Significant Impact**

The Project would result in an estimated DSA amount of approximately 2.61 acres. Permanent impacts to water quality would result from the addition of impervious area. The Project would result in new and added impervious surfaces of approximately 0.34 acre. Pre-Project impervious areas is estimated at 1.06 acres and post-Project impervious area is estimated at 1.40 acres.

The Project would have potential temporary water quality impacts during construction. Project excavation activities would have the potential to increase erosion and result in temporary water quality impacts. Stormwater runoff over DSAs could potentially cause sediment-laden flows to enter storm drainage facilities sheet flowing discharge into the receiving water bodies, increasing the turbidity, decreasing the clarity, and potentially impacting their beneficial uses. Additional sources of sediment include uncovered or improperly covered active and non-active stockpiles, unstabilized slopes and construction staging areas, and construction equipment that is not properly maintained or cleaned. If fueling or maintenance of construction vehicles occurs within the Project site during construction, there is a risk of accidental spills or releases of fuels, oils, or other potentially toxic materials. An accidental release of these materials may pose a threat to water quality if contaminants enter storm drains, open channels, or receiving water bodies. The magnitude of the impact from an accidental release depends on the amount and type of material spilled.

The Project would include the implementation of an SWPPP to address construction impacts to soils. Temporary impacts to water quality during construction can be avoided by implementing temporary construction-site BMPs (PF-WQ-1 through PF--WQ-7) thereby reducing temporary water quality impacts from construction. Therefore, the Project would not result in substantial erosion or siltation. Impacts would be less than significant.

**c(ii) No Impact**

The Project would result in the addition of minimal new impervious surfaces (0.34 acre). The stormwater treatment BMPs would promote the infiltration into the groundwater table. Long-term dewatering is not expected. The Project would not substantially increase the amount of surface runoff in a manner that would result in flooding on- or offsite; therefore, there would be no impact.

**c(iii) No Impact**

The Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. There would be no impact.

**c(iv) No Impact**

The Project would restore existing drainage systems and would not impede or redirect flood flows. There would be no impact.

**d) Less Than Significant Impact**

The Project is located within the California Coastal Zone. Project locations in the vicinity of Bolinas Lagoon, Tomales Bay, and Keys Creek would be affected by sea level rise. A sea level rise study (WRECO 2021) was funded by this Project within the limits of Bolinas Lagoon, which will be followed by a feasibility study. The Project restores culvert serviceability at single point locations, although due to this limited scope and Project budget, addressing sea level rise is not feasible for this Project. Caltrans will continue to look for funding opportunities to develop interim and long-term solutions for low lying areas along Tomales Bay. The impact would be less than significant.

The Project is within the FEMA 100-year floodplain in several locations, as defined by the agency's Flood Insurance Rates Maps (numbers 06041C0444E, 06041C0442E, 06041C0441E, 06041C0440E, 06041C0430D, 06041C0241D, 06041C0233D, 06041C0115E, 06041C0095E, and 06041C0085E). The Project is not in a seiche or tsunami zone. The Project would not impact natural and beneficial floodplain values or support incompatible floodplain development; therefore, no measures to minimize floodplain impacts would be required. The impact would be less than significant.

**e) Less Than Significant Impact**

With the implementation of PF-WQ-1 through PF-WQ-7, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

***Project Features***

Caltrans would incorporate the following standard project features into the Project to offset potential impacts to hydrology and water quality:

- **PF-WQ-1, Temporary Soil Stabilization.**
  - Temporary Hydraulic Mulch: Fibrous materials mixed with water sprayed onto the soil surface in slurry form to provide layer of temporary protection from wind and water erosion.
  - Temporary Hydroseeding: Protection of disturbed soil from raindrop and wind impacts using a water-based mixture of wood/paper fiber, stabilizing emulsion, and seed from hydro-mulching equipment.
  - Temporary Cover: Plastic covers for stockpiles and rolled erosion control products including erosion control blankets, to stabilize disturbed soil areas and protect soils from erosion by wind or water.
- **PF-WQ-2, Temporary Sediment Control.**
  - Temporary Silt Fence: Linear, permeable fabric barriers to intercept sediment-laden sheet flow. Placed downslope of exposed soil areas, along channels and Project perimeter.
  - Temporary Fiber Rolls: Degradable fibers rolled tightly and placed on the toe and face of slopes to intercept runoff.
  - Temporary Check Dams: Sediment barriers placed within ditches to prevent scour and erosion by reducing flow velocity.
  - Temporary Drainage Inlet Protection: Runoff detainment devices used at storm drain inlets that is subject to runoff from construction activities.
- **PF-WQ-3, Wind Erosion Control.**
  - Dust Control: Applying water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind.

- **PF-WQ-4, Tracking Control.**

- Temporary Construction Entrances/Exits: Points of entrance/exit to a construction site that are stabilized to reduce the tracking of mud and dirt onto public roads.
- Street Sweeping: Self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving.

- **PF-WQ-5, Waste Management and Materials Pollution Control.**

- Temporary Concrete Washout Facilities: Specified vehicle washing areas to contain concrete waste materials.
- All other anticipated waste management and materials pollution control measures are covered under PF-WQ-6, Job Site Management.

- **PF-WQ-6, Job Site Management.**

- General measures included under job site management include the following:
  - Spill prevention and control
  - Materials management
  - Stockpile management
  - Waste management
  - Hazardous waste management
  - Contaminated soil
  - Concrete waste
  - Sanitary and septic waste and liquid waste
- Non-stormwater management consists of the following:
  - Water control and conservation management
  - Illegal connection and discharge detection and reporting
  - Vehicle and equipment cleaning
  - Vehicle and equipment fueling and maintenance
  - Paving, sealing, sawcutting, and grinding operations



- Thermoplastic striping and pavement markers
  - Concrete curing and concrete finishing
- **PF-WQ-7, Miscellaneous Job Site Management.**
  - Training of employees and subcontractors
  - Proper selection, deployment, and repair of construction-site BMPs.
- **PF-WQ-8, Stormwater Treatment BMPs.** Treatment BMPs would address the post-construction water quality impacts and remove pollutants from stormwater runoff before discharging to receiving waters. The Project currently proposes the use of bioretention swales or basins as the stormwater treatment BMPs to meet Project requirements. The locations for stormwater treatment BMPs would be determined during later Project phases.

### 3.3.11 Land Use and Planning

Would the project:

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

SR 1 within the Project limits is used as the primary access road to the West Marin County coastal areas, providing access to state and national parks, other public parks, beaches, vista points, and visitor-serving facilities. State parks include Point Reyes National Seashore, Tomales Bay Ecological Reserve, and Tomales Bay State Park. Some stretches of SR 1 in the Project limits contain Farmland of Local Importance and some Farmland under Williamson Act contracts.

Other land uses include rural residential and clustered areas of visitor-serving commercial and tourist accommodations, such as restaurants, hotels, and bed and breakfast establishments, particularly in the towns of Point Reyes Station and Tomales. No changes in land use would occur for the Project area in the Project vicinity.

#### a) **No Impact**

The Project would not physically divide an established community. There would be no impact.

#### b) **Less than Significant Impact**

##### ***Consistency with State, Regional, and Local Plans and Programs***

Land use plans, policies, and regulations that are applicable to the Project include the Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area 2013 to 2040 (ABAG and MTC 2017); Marin County General Plan (Marin County 2007), Marin County's LCP (Marin County 1981), and the Coastal Zone Management Act of 1972.

State recreational land uses in the vicinity of the Project corridor include Point Reyes National Seashore and the Tomales Bay Ecological Reserve, which contains the Tomales Bay Fishing Area. TCEs would be required within each of these park properties during construction; however, land use within these recreational lands would not change as a result of the Project.

### **Local Coastal Plan**

The Marin County LCP document covers Unit 2 of Marin County's Coastal Zone, the coastal area from Olema north to the Sonoma Marin County border (Marin County 1981). The LCP is a land use plan for Marin County's coast to guide its future development and assure that coastal resources are properly used and protected.

### **Coastal Zone Management Act**

The proposed Project lies within the California Coastal Zone. Resources within this zone are protected by the Coastal Zone Management Act of 1972. States with an approved coastal management plan are able to review federal permits and activities to determine if they are consistent with the state's management plan.

California has developed a coastal zone management plan and has enacted its own law, the CCA, to protect the Coastal Zone. The policies established by the CCA include the following:

- Protection and expansion of public access and recreation
- Protection, enhancement, and restoration of environmentally sensitive areas
- Protection of agricultural lands
- Protection of scenic beauty
- Protection of property and life from coastal hazards

The CCC is responsible for implementation and oversight under the CCA.

The CCA delegates power to local governments to enact their own LCPs; in this case, the Marin County LCP (Marin County 1981). The state-certified LCP is a portion of the Marin County General Plan and includes visual resources policies and recommendations under the Development section of the CCA. The Marin County LCP determines the short- and long-term uses of coastal resources in their jurisdiction, consistently with the CCA goals.

The Project is primarily within the permitting jurisdiction of Marin County and would require a local coastal development permit for construction.

The policies of the CCA (Public Resources Code Division 20) give the highest priority to the preservation and protection of Prime Agricultural Land and Timber Lands. On lands not needed for these classifications, the next priority goes to public recreation and visitor-serving facilities.

Key provisions of the CCA, the Marin County LCP, and the Marin County SR 1 Repair Guidelines, along with an evaluation of permitting activities of the proposed Project, are provided in Tables 3-2, 3-3, and 3-4.

**Table 3-2. Key Provisions of the California Coastal Act**

| Policy Number | Subject of Policy  | Coastal Zone Assessment   |
|---------------|--|---|
| Section 30210 | Provide maximum public access and recreational opportunities                                 | The proposed Project would improve coastal public access by maintaining the safety and reliability of SR 1.   |
| Section 30211 | Note that development shall not interfere with public access to the sea                      | The proposed Project would maintain the safety and reliability, and continue to provide public access to the ocean.   |
| Section 30212 | For new development projects, provide for public access to the shoreline and along the coast | The proposed Project would not be considered new development.   |
| Section 30252 | Public access  | The proposed Project would maintain reliability of SR 1, bicycle safety pullouts, and public access to the ocean. Public access would not be affected by the proposed Project.  |
| Section 30221 | Protect suitable oceanfront land for recreational use  | The Project would not impact public access to recreational facilities or oceanfront land.   |
| Section 30231 | Biological activity; water quality   | Biological and water quality resources would potentially be temporarily affected by construction of the proposed Project; however, all impacts would be minimized, and the affected areas would be restored to pre-existing conditions. Project features and AMMs would be incorporated to minimize environmental effects to biological resources, wetlands, and water quality. |
| Section 30233 | Diking, filling, dredging of wetlands  | The Project would not include diking, filling, or dredging of wetlands. The Project has been designed to avoid wetland impacts as much as possible. Potential wetland impacts would be mitigated to a no-net-loss level during the permitting phase.  |
| Section 30235 | Construction altering natural shoreline  | The Project would not alter the natural shoreline of the Pacific Ocean. By replacing culverts and right-sizing pipes that convey water from creeks and natural runoff, the Project would reduce erosion and sedimentation of downstream waters and the Pacific Ocean.   |
| Section 30240 | ESHAs  | Temporary direct impacts to ESHAs, in the form of coastal aquatic resources, would result from culvert replacement, temporary creek diversion system, metal beam guardrail replacement, and shoulder backing, and may also result from stormwater treatment areas. AMMs and project features would reduce these impacts.  |

| Policy Number       | Subject of Policy   | Coastal Zone Assessment   |
|---------------------|---|---|
| Section 30241-30242 | Agricultural land   | Although Prime Farmland and Williamson Act parcels exist within the Project study area, the Project would not affect these resources.   |
| Section 30244       | Archaeological/paleontological resources  | The Project would not result in an adverse effect to archaeological and historical resources. The Tomales Historic District and the Olema Valley Dairy Ranches Historic District would not be adversely affected by the Project. No effects to paleontological resources are anticipated.   |
| Section 30251       | Scenic and visual qualities   | The Project would not result in adverse effects to scenic vistas/resources in the Project study area. The Project was designed such that scenic and visual qualities of coastal areas would be protected as a resource of public importance. The Project would not alter natural landforms. |
| Section 30254       | Public works facilities   | With the proposed Project, SR 1 would remain a two-lane coastal scenic roadway.   |
| Section 30604       | In coastal development permits, include a finding that the development is in conformity with public access and public recreation policies | The Project would conform with public access public recreational policies, and bicycle safety pullouts for public access.   |
| Section 30609.5     | Consider state lands between the first and public roadway to the ocean  | Caltrans would maintain the land devoted to the existing SR 1 highway and its use for public access to the ocean.   |
| Section 30706       | Coastal hazards   | The purposes of the Project are to maintain continued connectivity for SR 1, and increase reliability.  |

**Table 3-3. Key Provisions of the Marin County Local Coastal Program**

| Policy Subject                            | Coastal Zone Assessment   |
|---|---|
| Shoreline Access                          | The Project would improve coastal public access by increasing the safety and reliability of SR 1. This would be accomplished through minimizing emergency road closures to SR 1, which would interfere with shoreline access to parks, beaches, and oceanfront land.  |
| Recreation and Visitor-Serving Facilities | The Project would not interfere with public access to the ocean and the beach. Coastal recreation and visitor-serving facilities to include bicycle safety pullouts for public access would be protected and maintained.  |
| Transportation                            | The Project would improve coastal public access and bicycle safety pullouts by increasing safety and reliability of SR 1.   |
| ESHAs                                     | Potential adverse effects to ESHAs have been reduced to the extent practicable through project features, AMMs, and mitigation measures. The Project would minimize impacts to ESHAs; and mitigation for impacts to ESHAs, in the form of coastal waters, through onsite restoration (Mitigation Measure BIO-2). |

| Policy Subject              | Coastal Zone Assessment   |
|-----------------------------|---|
| Agriculture                 | Although Prime Farmland and Williamson Act contracts exist within the Project study area, the Project would have no effect on these resources.  |
| Public Works                | The Project would not adversely affect public works in the Project study area. Caltrans would submit the Project to Marin County for review, comments, and findings as to its conformity with the LCP during the coastal development permit process.              |
| Coastal Watersheds          | The Project would be consistent with Marin County's LCP, because it would improve highway reliability with culvert replacements that would minimize erosion and sedimentation, which could harm coastal resources.  |
| Visual and Scenic Resources | The Project would not result in adverse effects to scenic vistas/resources. The Project was designed such that scenic and visual qualities of coastal areas would be protected as a resource of public importance. The Project would not alter natural landforms. |
| Hazards                     | The purpose of the Project is to maintain continued connectivity for SR 1.  |
| Archaeology                 | The Project would not result in an adverse effect to archaeological resources.  |
| Air Quality                 | No air quality impacts are anticipated from the Project.  |

**Table 3-4. Key Provisions of the Marin County State Route 1 Repair Guidelines**

| Design Guideline                                   | SR 1 Repair Recommendation   |
|--|--|
| Parking, Pullouts, Unpaved Shoulders, and Turnouts | No net loss of parking, pullouts, or turnouts. Non-pavement treatments should be used where feasible. Other roadway uses or development of the area beyond the shoulder should be minimized and fit in with the natural environment. The proposed Project would have no effect on existing parking, pullouts, or turnouts.   |
| Drainage Features                                  | Drainage pipes should be hidden from view where feasible. Pipes that cannot be hidden should be colored with earth-tone coating to conceal them. Concrete drainage features should be colored to match adjacent earth tones. Drainage rock used as dissipaters should be colored earth tone to reduce visual impacts. Inlets should be sited outside of where bicyclists are most likely to ride, if feasible, and shall use bicycle-proof grates. |
| Ditches  | Ditches should be designed to blend into the surrounding landscape. Concrete and metal facilities should be treated to match the surrounding terrain. Where appropriate, drainage ditches should be designed in conjunction with the shoulder to reduce the amount of pavement and widening needed, following the guidelines in Chapter 830 of the Highway Design Manual.  |
| Bicycles and Pedestrians                           | Pedestrians and bicyclists should be accommodated in all projects. Dedicated pedestrian facilities should be incorporated into projects on a case-by-case basis where there is an identified need and in coordination with local stakeholders.   |

The proposed Project would be designed to be consistent with the Marin County SR 1 Repair Guidelines. Where the proposed culvert replacements occur coincident with or along the existing California Coastal Trail, the Project would accommodate pedestrian and bicycle users during construction. No permanent impacts to the California Coastal Trail would occur with the proposed Project.

Existing SR 1 would remain open during construction, with implementation of temporary one-way traffic control as needed. Lane closures, existing pullout areas, and other Caltrans ROW would be used for construction parking, staging, and stockpiling of materials.

In summary, the Project would not conflict with any land use plan, policy, or regulation adopted to mitigate an environmental effect. The Project would be consistent with the Marin County General Plan, Marin County's LCP, the Coastal Zone Management Act, the Marin County SR 1 Repair Guidelines, and other local, regional and state policies. The Project would increase safety for vehicles, bicyclists, pedestrians, and coastal access. There would be a less than significant impact.

### 3.3.12 Mineral Resources

Would the project:

| Question   | CEQA Determination |
|--|--------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?                                 | 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, b) No Impact**

The Project would be located within an area identified by the California Department of Conservation as being within a Classification of Aggregate Resource Areas: North San Francisco Bay Production-Consumption Region (California Department of Conservation 2023). The Project would not result in the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site because SR 1 through the Project limits lies on engineered (artificial) fill. Therefore, no impacts on mineral resources would result from the Project.



### 3.3.13 Noise

Would the project:

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?   | Less Than Significant Impact |
| b) Generate excessive ground-borne vibration or ground-borne noise levels?  | Less Than Significant Impact |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the Project site to excessive noise levels? | No Impact                    |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR NOISE

CEQA requires a strictly baseline versus build analysis to assess whether a project would result in a noise impact. If a project is determined to cause a significant noise impact under CEQA, mitigation measures must be incorporated into the project unless those measures are not feasible. This section describes the potential impacts that have the potential to result from noise associated with construction and operation of the Project.

Caltrans, under 23 CFR 772, provides procedures for preparing operational and construction noise studies as well as evaluating noise abatement considered for federal and federal-aid highway projects. The Project was determined not to be a Type I or Type II project per 23 CFR 772. A Type I Project is defined in 23 CFR 772 as a proposed federal or federal-aid highway project for the construction of a highway at a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. A Type II project is defined as a proposed federal or federal-aid highway project for noise abatement on an existing highway. Because the Project is not determined to be a Type I or Type II project and would not increase highway capacity or include noise abatement, a noise study is not required, and noise abatement need not be considered (Caltrans 2021).

#### a) Less Than Significant Impact

Noise from construction activities may intermittently dominate the environment in the vicinity of the Project work areas. Noise levels generated during construction would

be a function of the individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors. Construction noise would result primarily from operation of heavy construction equipment, the arrival and departure of heavy-duty trucks, and installation of RSP.

The residence near the proposed construction activities at Locations 1, 5, 23, 24, 32, 33, and 35 through 42 may be exposed to elevated noise levels during construction. Implementation of PF-NOI-1 and PF-NOI-2 would reduce the temporary impacts of construction noise. The Project does not increase noise capacity; therefore, the Project would not increase operational noise. The impact would be less than significant.

**b) Less Than Significant Impact**

Construction activities, particularly removal of the existing culverts, would have the potential to generate ground-borne vibration. However, no substantial vibration-inducing construction activities, such as pile-driving or blasting, are proposed for the Project. Given the intermittent and temporary nature of construction activities, assuming that standard construction equipment and techniques would be employed, Project construction would not expose persons to or generate excessive ground-borne vibration or ground-borne noise. This impact would be less than significant.

**c) No Impact**

There are no airports or airstrips within the Project vicinity. There would be no impact.

***Project Features***

Caltrans would incorporate the following standard project features into the Project to offset impacts to noise:

- **PF-NOI-1, Public Outreach.** Public outreach would be required before Project construction and throughout the Project construction to update residents, businesses, and others of upcoming activities and the Project timeframe. Public outreach may entail sending notices to nearby residents, notifying the city, and posting a notice on the Project website.
- **PF-NOI-2, Construction Noise Levels.** The following measures would be implemented to reduce noise levels during construction where feasible:

- Ensure all construction equipment conforms to Section 14-8.02, Noise Control, of the latest Caltrans Standard Specifications.
- Equip an internal combustion engine with a manufacturer-recommended muffler that is in good condition. Do not operate an internal combustion engine within the Project footprint without the appropriate muffler.
- Do not idle construction equipment unnecessarily.
- Maximize the distance between stationary noise-generating construction equipment, such as air compressors and portable power generators, and noise-sensitive receptors.
- Locate staging and storage areas away from residential areas.
- Use quieter alternative methods of equipment.
- If feasible, use solar or electricity as power source instead of diesel generators.

### 3.3.14 Population and Housing

Would the project:

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

#### **a, b) No Impact**

The Project would not induce substantial unplanned population growth either directly or indirectly because it does not increase the capacity of SR 1, remove barriers to future growth, or increase population or housing growth (or demand for new housing, utilities, or public services). The Project would not displace existing people or housing, nor necessitate the construction of replacement housing elsewhere. There would be no impact to population and housing.

### 3.3.15 Public Services

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

#### a) No Impact

The Project would replace culverts and would not result in the substantial alteration of government facilities, such as fire and police protection, schools, parks, or other public facilities, in the Project area. In addition, the proposed Project would not trigger the need for new government facilities or alter the demand for public services. There would be no impact.

The Project area is in unincorporated Marin County and falls under the jurisdiction of the County Sheriff's Office. The closest sheriff department station is the Point Reyes substation of Marin County Sheriff's Office, located at 101 Fourth Street in Point Reyes Station.

The Marin County Fire Department provides fire protection services for Marin County. The closest stations to the Project area are the Point Reyes Fire Station at 101 Fourth Street in Point Reyes Station and the Tomales Fire Station at 599 Dillon Beach Road in Tomales. In addition, the Stinson Beach Fire Protection District serves the southern portion of the Project area located in Stinson Beach and has two fire stations, the Stinson Beach Fire Station at 3410 Shoreline Highway and Stinson Beach Fire Station No. 2 at 100 Calle del Arroyo.

The Project corridor is within the Shoreline Unified School District and the Bolinas-Stinson School District and provides access to four schools within the Project

footprint: Tomales High School, Tomales Elementary School, West Marin Elementary School, and Stinson Beach School.

Traffic delays could occur as a result of one lane closures during construction. A TMP would be prepared that would provide accommodation for police, fire, and medical services in the local area during construction, as described in AMM--TRANS--1 in Section 3.3.17, Transportation.

### 3.3.16 Recreation

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR RECREATION

Six state parks, five county public parks, two national parks, two fishing areas, one preserve, and one ecological resource area are located within or near a 0.5-mile radius of the Project. The county recreational resources include Village Green, Bolinas Lagoon Open Space District, and Upton Beach, all located near Stinson Beach, and Eldrid Preserve and Point Reyes Park, which are both within Point Reyes Station. The state recreational resources include Whitehouse Pool Park located near SR 1 at the crossing of Lagunitas Creek Bridge in Point Reyes Station, Tomales Bay Ecological Reserve, Tomales Bay, Stinson Beach, Mount Tamalpais, Marconi Conference Center, Keys Creek and Tomales Bay Fishing Areas (Figure 3.3.16-1). The two national parks include Point Reyes National Seashore and GGNRA. The one recreational resource that would be affected by the Project would include 18 TCEs along SR 1 that are within the GGNRA.

The portion of SR 1 within the Project limits is a two-lane divided highway with no lanes for high-occupancy vehicles. The highway is part of the Pacific Coast Bicycle Route. Segments of it either run parallel to the California Coastal Trail or are part of the trail.

#### a) **No Impact**

The Project would not increase the use of existing national, state, and regional parks or other recreational facilities and would not directly or indirectly increase the demand of existing recreational facilities such that substantial deterioration of the facilities would occur. There would be no impact.

#### b) **No Impact**

The Project would not include recreational facilities or require the construction of additional recreational facilities. TCEs would be required within GGNRA recreational lands; however, temporary use of these properties during construction

would have no impact on recreation and would not require construction or expansion of new recreation facilities. Any changes to park access as a result of the proposed lane closures needed for construction would be temporary, and implementation of the TMP would maintain access to the park throughout construction. Therefore, there would be no impact.



### 3.3.17 Transportation

Would the project:

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR TRANSPORTATION

SR 1 in Marin County is a paved, two-lane rural conventional highway. The Project would not increase SR 1 transportation capacity and therefore would not increase vehicle miles traveled (VMT).

Marin Transit runs a bus service route from San Rafael to Inverness identified as the 68 West Marin Stagecoach (North). The route passes through the southern portion of the Project area from south of Five Brooks, to Point Reyes Station (Marin Transit 2023). In addition, school bus routes associated with the Shoreline Unified School District run on SR 1 through the Project corridor.

The MTC, which functions as both the State-designated Regional Transportation Planning Agency and federally designated metropolitan planning organization is responsible for regional transportation planning. MTC's Plan Bay Area 2050, adopted in October 2021, serves as the San Francisco Bay Area's Regional Transportation Plan and Sustainable Communities Strategy (ABAG and MTC 2021).

Local transportation planning includes the Transportation Authority of Marin (TAM), which is designated as both the Congestion Management Agency and the Transportation Sales Tax Authority for Marin County. TAM is responsible for managing various transportation projects and programs in Marin County, receiving federal, state, regional, and local funds while working closely with all 11 cities and towns and the County.

The proposed Project does not conflict with any plans, ordinances, or policies related to circulation systems, including the TAM Congestion Management Program (TAM 2021).

SR 1 is eligible for State Scenic Highway designation throughout the Project limits and is located within the Marin County Coastal Zone. Section 30254 of the CCA calls for SR 1 in rural areas of the Coastal Zone to remain a scenic two-lane road.

No park-and-ride facilities exist within the Project limits.

**a) Less Than Significant Impact**

The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The Project would maintain and improve the existing SR 1 two-lane roadway and, therefore, would be in compliance with Section 30254 of the CCA.

The Project would maintain all existing roadway features and would not permanently alter the circulation system. Drainage systems that would be restored as part of the Project would not disrupt access to all businesses, though detours would be provided as necessary.

The Project would not alter or reduce transit service provided by the 68 West Marin Stagecoach (North) on SR 1. The transit services and school bus routes would remain available throughout construction. Although short-term localized traffic congestion and delays may occur, the impact would be temporary.

As outlined in AMM-TRANS-1, a TMP would be developed to minimize potential effects from construction to motorists, bicyclists, or pedestrians. The TMP would include elements, such as detour and haul routes, one-way traffic controls to minimize speeds and congestion, flag workers, and phasing, to reduce impacts to local residents as much as feasible and maintain access to businesses in the local area. Therefore, there would be no permanent impact to components of the transportation system, so impacts to traffic and transportation would be less than significant.

**b) Less Than Significant Impact**

The Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The Project would have less than significant impacts on VMT and therefore on transportation during construction because of

temporary traffic control, including temporary lane closures. The Project would have no permanent impact on VMT and would cause no permanent impacts on transportation.

**c) No Impact**

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

**d) Less Than Significant Impact**

The Project would not result in inadequate emergency access. With implementation of a TMP, emergency and medical vehicles associated with essential (that is, public) services would be given priority to use SR 1 for fire, medical, emergency and law enforcement purposes. The Project could cause short-term, localized traffic congestion and delays resulting from full closure of SR 1 or one-way alternating traffic control during construction. The TMP would identify traffic delays/detours.

To protect construction workers and the traveling public, one-way alternating traffic control would be in place while construction-related activities are underway. A detailed TMP (AMM-TRANS-1) would be prepared 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. Therefore, impacts would be less than significant.

**AVOIDANCE AND MINIMIZATION MEASURES**

Caltrans would incorporate the following AMM to avoid or minimize potential impacts to transportation:

- **AMM-TRANS-1, Traffic Management Plan.** A TMP would be prepared 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 SR 1 within the Project corridor during construction. The TMP would identify traffic delays/detours for, and provide priority to, emergency and medical vehicles associated with essential (that is, public) services during full closure of SR 1 or one-way alternating traffic control, 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.

### 3.3.18 Tribal Cultural Resources

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

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR TRIBAL CULTURAL RESOURCES

Caltrans contacted the NAHC in June 2021, requesting that they conduct a search of their Sacred Land Files to determine if there were known historically significant sites within or near the APE for the Project. The NAHC responded on July 6, 2021, with a list of Native American parties and negative results from the Sacred Land File search. To comply with Section 106 and AB 52, Caltrans initiated consultation with Native American tribes (the Wukasache Indian Tribe/Eshom Valley Band, Guidiville Indian Rancheria, and FIGR). To date, Guidiville Indian Rancheria stated that the Project was outside their traditional territory. Caltrans received a response from the FIGR requesting formal consultation regarding the Project (Section 3.3.5, Cultural Resources). Consultation will remain ongoing through the life of the Project. (Caltrans 2023c)

#### **a, b) No Impact**

The Project would not cause a substantial adverse change in the significance of a tribal cultural resource. No tribal cultural resources were reported in record searches or in consultation with Native American groups and individuals. Therefore, there would be no impact.

PF-CULT-1 and PF-CULT-2, discussed in Section 3.3.5, Cultural Resources, would be implemented if cultural resources or human remains are discovered during Project construction.

### 3.3.19 Utilities and Service Systems

Would the project:

| Question  | CEQA Determination           |
|---|------------------------------|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | Less Than Significant Impact |
| b) Have adequate 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 that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?  | No Impact                    |
| d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?   | No Impact                    |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?  | No Impact                    |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR UTILITIES AND SERVICE SYSTEMS

This section describes the potential impacts on utilities and service systems that have the potential to result from Project construction and operation. Utility verification (that is, potholing) may be required for the Project. If required, utility verification would occur during the final design phase. Utility relocations would occur prior to the beginning of construction.

##### a) Less Than Significant Impact

The Project is not anticipated to result in relocation or construction of new or expanded utilities. However, during construction, potholing would be conducted to determine if utilities are in the construction zone and need to be relocated. Any potential relocations would be handled on an as-needed basis, in coordination with the utility owner, to avoid and minimize interruptions in service (AMM-UT-1). This impact would be less than significant.

##### b) No Impact

The Project would require water only during construction. Water for construction would be provided by water trucks. Therefore, the Project would not require any additional permanent water supplies, and there would be no impact.

**c) No Impact**

The Project would not result in a change with respect to demand for wastewater treatment. Therefore, there is no impact.

**d) No Impact**

Any solid waste produced by the Project would be limited to the construction period and the removal of existing culverts. All solid waste created during construction would be hauled away and disposed of according to state and local standards and would not exceed the capacity of any local infrastructure. Therefore, there is no impact.

**e) Less Than Significant Impact**

All solid waste created during construction would be hauled away and disposed of according to state and local standards. No solid waste would be generated by the Project after construction. Therefore, there is no impact.

***Avoidance and Minimization Measures***

Caltrans would incorporate AMM-UT-1 in the Project to avoid or minimize potential impacts to utilities.

- **AMM-UT-1, Utility Notifications.** Caltrans would notify all affected utility companies of the construction schedule for the Project so that relocations can be conducted by each utility company as necessary prior to the start of construction.

### 3.3.20 Wildfire

If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:

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

#### CEQA SIGNIFICANCE DETERMINATIONS FOR WILDFIRE

The Project is located within CAL FIRE-designated Local Responsibility Areas, State Responsibility Areas, and Federal Responsibility Areas for wildfire prevention and suppression (CAL FIRE 2022). Areas of the Project within the State Responsibility Areas are located in the northern portion of the Project Area, north of Point Reyes Station (Figure 3.3.20-1). In addition, portions of the Project under State Responsibility Areas are located in Very High, High, and Moderate fire hazard severity zones (Figure 3.3.20-1). Areas of the Project within Federal Responsibility Areas are located mostly in the southern portion of the Project area, south of Olema. The Project is primarily located in Federal Responsibility Areas, with a large portion of the Project in Moderate fire hazard severity zones within State Responsibility Areas, and a small portion in a Local Responsibility Area near Stinson Beach (CAL FIRE 2022).

The Marin County Fire Department provides fire suppression, rescue, and emergency services within the Project corridor (Marin County 2023a). The Marin County Fire Service created the Mt. Tamalpais Threat Zone Plan (MTZ Plan) for wildland urban interface fires on and around Mt. Tamalpais in 2005 (Marin County 2023). The goal of the MTZ Plan was to define roles, responsibilities, authorities, and a framework for organization, including maps that defined areas to include Structure Protection Zones and evacuation routes (Marin County 2023a). While the MTZ Plan was expanded in 2008 to include all of the wildland urban interface areas in Marin County, including

additional maps for expanded areas, the Project is not located within a Structure Protection Evacuation Zone or Wildland Urban Interface Zone (Marin County 2023b). The Project, however, is identified as an evacuation route as identified by Marin County (Marin County 2023b, 2023c).

The Marin County Fire Department, which serves the Project corridor, is responsible for emergency services and the management of fire operations during emergency response efforts (Marin County 2023d). The Point Reyes Fire Station is located at 101 4th Street, is located along SR 1 and is directly north of Locations 31 and 32 of the Project. The Tomales Fire Station is located at 599 Dillon Beach Road, approximately 4.3 miles north of the Project. The Stinson Beach Fire Protection District, located on the southern end of the Project, is headquartered at 3410 Shoreline Highway and has a service area that extends along the Project for approximately 4 miles (Stinson Beach Fire Protection District 2023). Stinson Beach Fire Station No. 2 is also located 0.5 mile away, located at 100 Calle del Arroyo (Stinson Beach Fire Protection District 2023).

**a) Less Than Significant Impact**

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. A TMP (AMM-TRANS-1) would be developed during later Project phases that would identify traffic diversion, staging and alternative routes. Emergency response times are not anticipated to change during construction because the TMP would provide measures to ensure priority for emergency vehicles during one-way traffic control. The TMP would provide instructions for response and evacuation in an emergency. In addition, the Project would not conflict with any other emergency response or evacuation plan. The impact would be less than significant.

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

The Project would not exacerbate wildfire risks, require the installation or maintenance of infrastructure that may exacerbate wildfire risk, or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. The Project proposes to restore existing facilities on SR 1; therefore, it does not involve occupation, or habitable structures, and does not include the installation of associated infrastructure that would exacerbate wildfire risk. There would be no impact.



### 3.3.21 Mandatory Findings of Significance

| Question  | CEQA Determination                           |
|---|--|
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | Less Than Significant Impact with Mitigation |
| b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | Less Than Significant Impact                 |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?  | Less Than Significant Impact                 |

#### CEQA SIGNIFICANCE DETERMINATIONS FOR MANDATORY FINDINGS OF SIGNIFICANCE

##### a) Less Than Significant Impact with Mitigation

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 result in temporary, minor, and construction-related impacts; however, with the implementation of the project features, AMMs, and mitigation measures listed in Appendix C, these potentially significant impacts would be reduced to less than significant levels with mitigation.

##### b) Less Than Significant Impact

The Project involves the replacement of existing infrastructure on SR 1, primarily in a rural environment. Current or future projects, located on SR 37 in the Project vicinity, are listed in Table 3-5.

**Table 3-5. Projects along SR 1 in the Project Vicinity**

| Project Name                                      | Location                              | Characteristics  | Status   |
|---|---------------------------------------|--|--|
| Lagunitas Creek Bridge Project                    | Marin SR 1 at PM 28.5                 | Bridge replacement near Point Reyes Station, at Lagunitas Creek Bridge (No. 27-0023).  | Under Plans, Specifications, and Estimates Phase |
| Marin SR 1 Capital Preventive Maintenance Project | Marin SR 1 PM 22.5/28.5 and 45.0/50.5 | Pavement rehabilitation near Point Reyes Station and Olema, from Olema Creek Bridge to north of Cypress Road. Also, near Tomales, from south of Tomales Petaluma Road to south of Valley Road.     | Under Plans, Specifications, and Estimates Phase |
| Bridge Repair Project                             | Marin SR 1 PM 0.42/28.56              | Repair/upgrade railing, patch spalls on bridge columns, bridge misc., remove vegetation, paint bridge in Marin County, at Coyote Creek, Olema Creek, Lagunitas Creek, and Eskoot Creek Along SR 1. | Under Environmental Review Phase                 |
| Plant Establishment Project                       | Marin SR 1 PM 22.8                    | Plant Establishment Period in Marin County near Five Brooks, at Giacomini Creek Bridge.  | K-Phase  |
| 0W710 Major Damage                                | Marin SR 1 PM 37.2                    | Washout of slope on side of highway potentially developing to undermining roadway. In town of Marshall, in Marin County, on Route 1 near Tomales Bay.  | K-Phase Candidate                                |
| State Route 1 Culvert Replacement Project         | Marin SR 1 PM 40.3                    | Replace culvert in Marin County near Marshall at 0.1 miles south of Clark Road.  | Under Environmental Review Phase                 |
| Broadband   | Marin SR 1 PM 0.0/50.5                | Install broadband circuit and fiber infrastructures in Marin County along SR 1.  | Under Environmental Review Phase                 |

Analysis of the proposed Project's potential cumulative environmental effects determines which resources would be significantly impacted by the Project and whether there could be a detrimental condition or deterioration of health in a resource within the context of impacts from past, present, and other reasonably foreseeable future actions. The analysis determines whether, collectively, the Project and the foreseeable condition combine to result in a cumulative impact.

The Project would involve the restoration of existing infrastructure along a transportation corridor. The Project would occur primarily within the Caltrans ROW with the additional use of PDEs and TCEs during construction for access to the culverts and drainage ditches. The Project would not convert lands to new or different uses, increase highway capacity, induce growth, or otherwise change land use patterns. The Project would not result in long-term, adverse environmental effects, and so would not contribute to cumulative environmental impacts. The analysis presented in this IS/MND identifies temporary construction-related impacts on aesthetics, agriculture and forest resources, air quality, cultural resources, energy, geology/soils, GHG emissions, hazards/hazardous materials, hydrology/water quality, land use, noise, transportation/traffic, utilities/service systems, and wildfire. These impacts are anticipated to be minor and incremental in nature. The analysis presented identifies temporary construction-related impacts with mitigation incorporated on biological resources. These impacts are not cumulatively considerable along the entire SR 1 corridor and region.

Other planned highway improvement projects along SR 1 are anticipated to occur within a similar timeframe. Caltrans routinely coordinates with regional transportation managers and local agencies to minimize impacts in the region resulting from construction of multiple planned projects. The short duration and limited scope of this Project would not contribute to substantial cumulative environmental impacts; and Project-related impacts to resources would be reduced with the proper implementation of project features, AMMs, and mitigation measures. Therefore, the impact would be less than significant.

**c) Less Than Significant Impact**

There are residences adjacent to several of the Project locations. Because of the proximity of residences and business to the Project footprint, night work is not anticipated with the Project. In addition, access to residential and commercial driveways in proximity to construction activities would be maintained at all times, and noise and air quality project features, AMMs, and mitigation measures would be implemented to address noise and dust impacts. Therefore, temporary construction-related activities would result in less than significant impacts on human beings.



## **Chapter 4** Community Outreach and Consultation and Coordination with Public Agencies

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To date, public and agency coordination has consisted of the following:

### **4.1 Community Outreach**

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

- Point Reyes Station Library  
11435 CA-1  
Point Reyes Station, California 94956
- Stinson Beach Library  
3521 Shoreline Highway  
Stinson Beach, California 94970
- Tomales Post Office  
27005 CA-1  
Tomales, CA 94971

The deadline for submission of comments on the IS/MND is August 20, 2023.

### **4.2 Consultation and Coordination with Public Agencies**

Coordination between Caltrans and public agencies for this Project is summarized in Table 4-1.

**Table 4-1. Consultation and Coordination with Public Agencies**

| Organization(s)                         | Date   | Topic   |
|---|--|---|
| Native American Heritage Commission     | June 2021  | Requested a search of Sacred Lands File.  |
| Native American Heritage Commission     | July 6, 2021   | The Native American Heritage Commission responded with list of Native American parties.                   |
| Native American Consultation            | July 19, 2021  | Drafted letter to Wukasache Indian Tribe/Eshom Valley Band requesting input.                              |
| Native American Consultation            | July 19, 2021  | Drafted letter to Federated Indians of Graton Rancheria requesting input.                                 |
| Native American Consultation            | July 19, 2021  | Drafted letter to Guidiville Indian Rancheria requesting input; response received August 3, 2021.         |
| Native American Consultation            | Quarterly Meetings;<br>February 2022<br>August 2022,<br>December 2022<br>February 2023 | Held quarterly meetings with Federated Indians of Graton Rancheria.                                       |
| Native American Consultation            | March 16, 2022   | Federated Indians of Graton Rancheria requested continued consultation of the Project.                    |
| Native American Consultation            | April 2022   | Federated Indians of Graton Rancheria were present during archaeological field surveys.                   |
| Point Reyes Village Association         | December 21, 2021  | Drafted letter requesting input.  |
| Tomales Regional History Center         | December 21, 2021  | Drafted letter requesting input.  |
| Jack Mason Museum of West Marin History | December 21, 2021  | Drafted letter requesting input; response received on January 4, 2022.                                    |
| Golden Gate National Recreation Area    | December 21, 2021  | Drafted letter requesting input; response received February 9, 2022. Caltrans responded on March 2, 2022. |
| Marin History Center                    | December 21, 2021  | Drafted letter requesting input; no response received.  |
| Point Reyes National Seashore           | December 21, 2021  | Drafted letter requesting input; no response received.  |
| State Historic Preservation Officer     | May 16, 2023<br>June 15, 2023<br>June 29, 2023<br>July 11, 2023                        | Caltrans Office of Cultural Resources correspondence with SHPO regarding historic resources.              |

## Chapter 5 List of Preparers

The primary people who contributed to, prepared, and reviewed this report are listed in Table 5-1.

**Table 5-1. List of Preparers and Reviewers**

| Organization | Name                | Role  |
|--------------|---------------------|---|
| Caltrans     | Christopher Caputo  | Acting Deputy District Director, Environmental Planning and Engineering                     |
| Caltrans     | Maxwell Lammert     | Office Chief (Acting), Office of Environmental Analysis                                     |
| Caltrans     | Arnica MacCarthy    | Senior Environmental Planner, Office of Environmental Analysis                              |
| Caltrans     | Daniel Cuellar      | Project Manager   |
| Caltrans     | Himabindu Samudrala | Senior Project Engineer, Design   |
| Caltrans     | Archie Tan          | Project Engineer, Design  |
| Caltrans     | Robert Blizzard     | Branch Chief, Office of Biological Sciences and Permits                                     |
| Caltrans     | Celine Tang         | Office of Biological Sciences and Permits   |
| Caltrans     | Kathryn Rose        | Senior Environmental Planner, Office of Cultural Resource Studies                           |
| Caltrans     | Alicia Sanhueza     | Associate Environmental Planner, Architectural History, Office of Cultural Resource Studies |
| Caltrans     | Mark Morancy        | District Branch Chief, Office of Hydraulic Engineering                                      |
| Caltrans     | Shilpa Mareddy      | Branch Chief, Air Quality and Noise   |
| Caltrans     | Va Lee              | Air Quality and Noise   |
| Caltrans     | Joaquin Pedrin      | Branch Chief, Office of Landscape Architecture  |
| Caltrans     | Kristina Montgomery | Senior Archaeologist, Office of Cultural Resource Studies                                   |
| Caltrans     | Chris Risen         | Branch Chief, Office of Geotechnical Design – West  |
| Caltrans     | Nandini Vishwanath  | Hazardous Waste Branch  |
| Caltrans     | Marisol Marin       | Hazardous Waste Branch  |
| Caltrans     | Mojgan Osooli       | Water Quality Engineer, Office of Water Quality   |
| Caltrans     | Chris Wilson        | District Branch Chief, Office of Environmental Engineering                                  |
| Caltrans     | Jim Murphy          | Right of Way Agent, Office of Right of Way Acquisitions & Project Management Services       |
| Jacobs       | Jasmin Mejia        | Project Manager/Senior Reviewer   |
| Jacobs       | David Carlson       | Project Manager/Senior Reviewer   |
| Jacobs       | Julie Petersen      | Environmental Planner   |
| Jacobs       | Morgan Angulo       | Environmental Planner   |

| Organization | Name                     | Role                           |
|--------------|--------------------------|--------------------------------|
| Jacobs       | Loretta Meyer            | Environmental Planner          |
| Jacobs       | Yassaman (Yassi) Sarvian | Environmental Planner          |
| Jacobs       | Rachel Cotroneo          | Senior Biologist               |
| Jacobs       | Chris Archer             | Geospatial Professional        |
| Jacobs       | Clarice Ericsson         | Senior Publications Technician |
| Jacobs       | Leslie O'Connor          | Technical Editor               |
| HDR Inc.     | Andrew Chin              | Water Quality                  |



## **Chapter 6**   Distribution List

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The Initial Study with Proposed Mitigated Negative Declaration will be circulated by July 20, 2023, to the following agencies and government officials.

### **6.1   Agencies**

- Bay Area Air Quality Management District  
1515 Clay Street, Suite 1400  
Oakland, CA 94612
- California Department of Fish and Wildlife  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534
- California Coastal Commission  
45 Fremont Street Suite 2000  
San Francisco, CA 94105-2219
- California Highway Patrol  
53 San Clemente Dr  
Corte Madera, CA 94925
- California Office of Historic Preservation  
1725 23rd St  
Sacramento, CA 95816
- California Native American Heritage Commission  
1550 Harbor Blvd Suite 100  
West Sacramento, CA 95691
- Marin County Planning Division  
3501 Civic Center Drive, Suite 308  
San Rafael, CA 94903
- Marin County Sheriff's Office  
850 Drake Avenue Marin City  
CA 94965

- National Park Service  
333 Bush Street, Suite 500  
San Francisco, CA 94104-2828
- San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612
- State Lands Commission  
100 Howe Avenue #100s  
Sacramento, CA 95825
- State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812
- Transportation Authority of Marin  
900 Fifth Avenue #100  
San Rafael, CA 94901
- U.S. Fish and Wildlife Service  
2800 Cottage Way W-2605  
Sacramento, CA 95825
- U.S. Army Corps of Engineers  
1455 Market Street  
San Francisco, CA 94103
- Governor's Office of Planning and Research  
1400 10th St # 100  
Sacramento, CA 95814
- Marin County Clerk  
3501 Civic Center Dr #234  
San Rafael, CA 94903

## 6.2 Elected Officials

- U.S. Senator Dianne Feinstein  
One Post Street, Suite 2450  
San Francisco, CA 94104
- U.S. Senator Alex Padilla  
333 Bush Street, Suite 3225  
San Francisco, CA 94104
- California State Senator Mike McGuire  
3501 Civic Center Drive, Suite 425  
San Rafael, CA 94903
- Congressman Jared Huffman  
999 Fifth Avenue, Suite 290  
San Rafael, CA 94901
- Assembly Member Marc Levine  
3501 Civic Center Drive, Suite 412  
San Rafael, CA 94903
- Supervisor Dennis Rodoni  
3501 Civic Center Drive, Suite 39  
San Rafael, CA 94903
- Supervisor Eric Lucan  
3501 Civic Center Drive, Suite 39  
San Rafael, CA 94903
- Supervisor Katie Rice  
3501 Civic Center Drive, Suite 39  
San Rafael, CA 94903
- Supervisor Mary Sackett  
3501 Civic Center Drive, Suite 39  
San Rafael, CA 94903

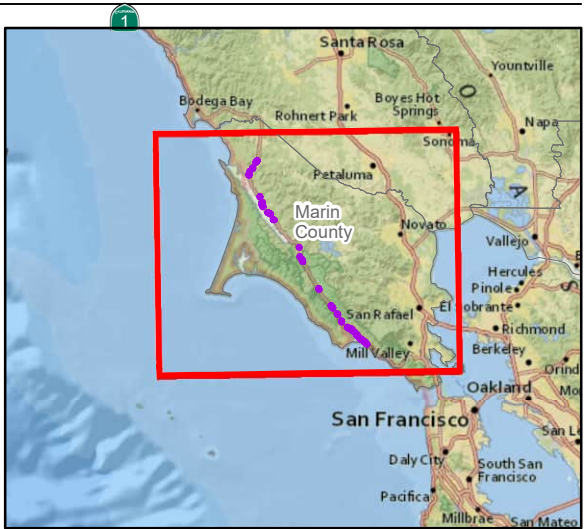
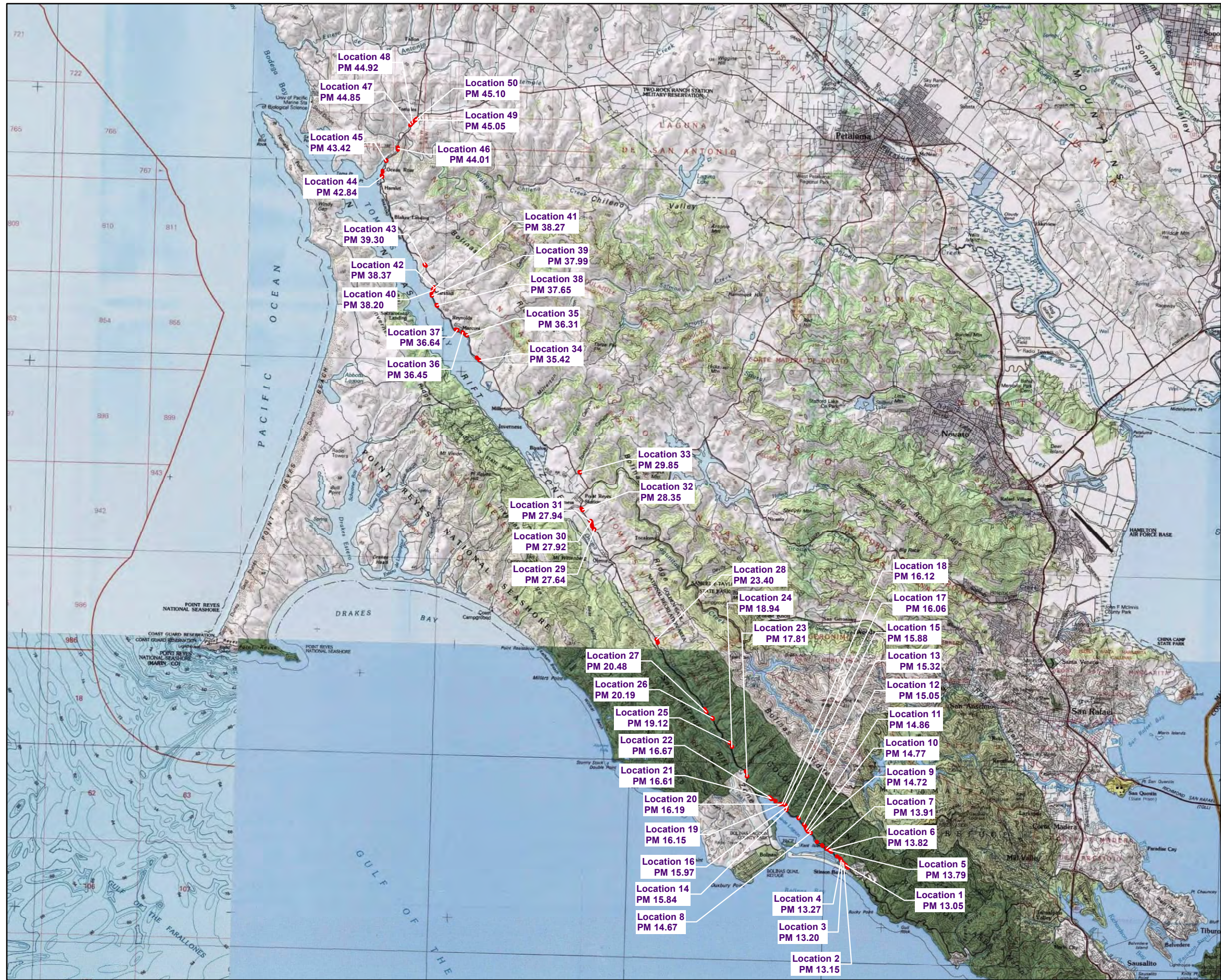
- Supervisor Stephanie Moulton-Peters  
3501 Civic Center Drive, Suite 39  
San Rafael, CA 94903
- Marin County Sheriff Jamie Scardina  
1600 Los Gatos Drive #200  
San Francisco, CA 94903

# **Appendix A** Figures

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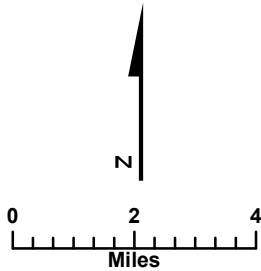






# LEGEND

Biological Study Area (22.97 acres)

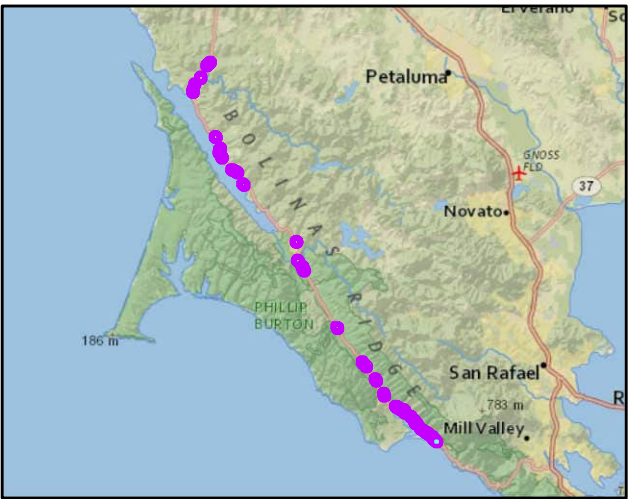
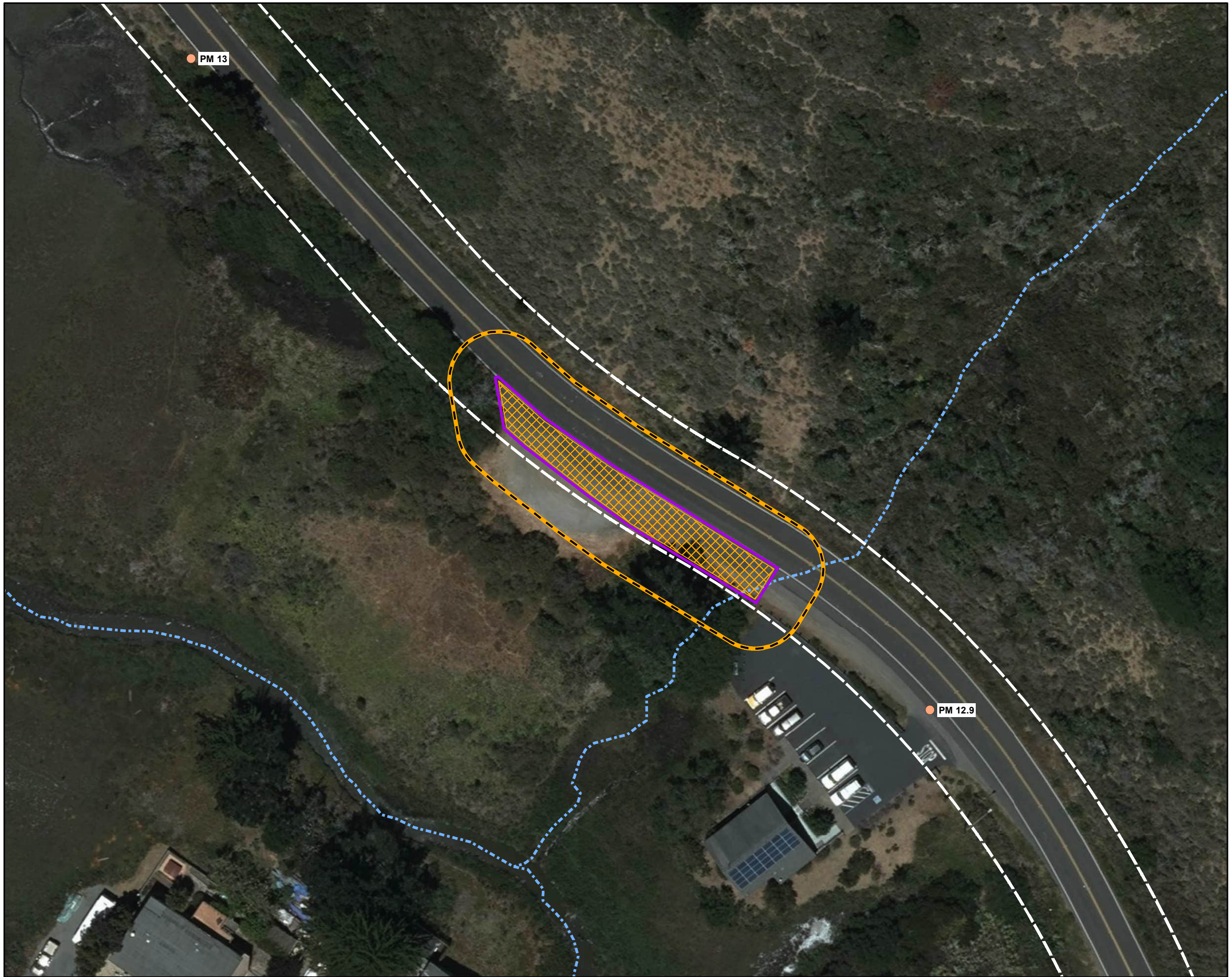


**Figure 1-1**  
**Regional Vicinity**  
 Marin 1 Drainage System Restoration Project  
 EA 04-2Q530 & EA 04-3A250  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





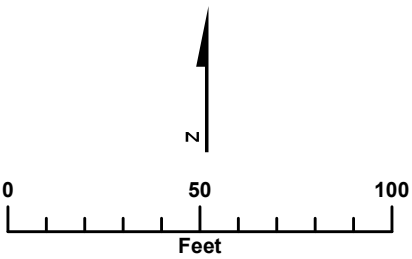




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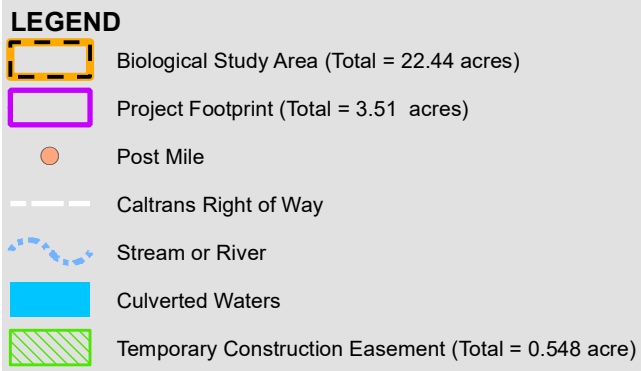
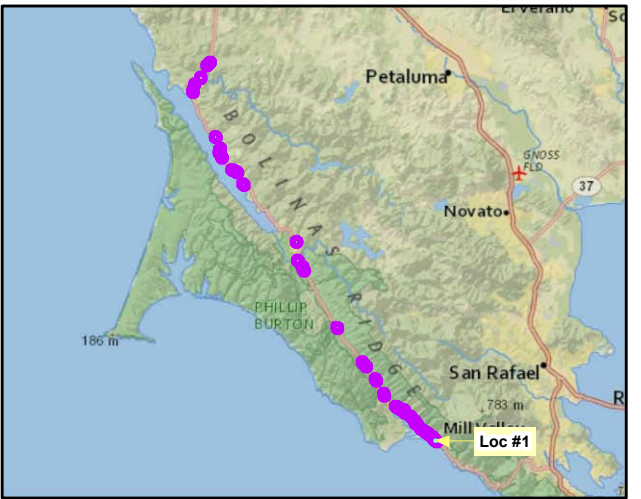
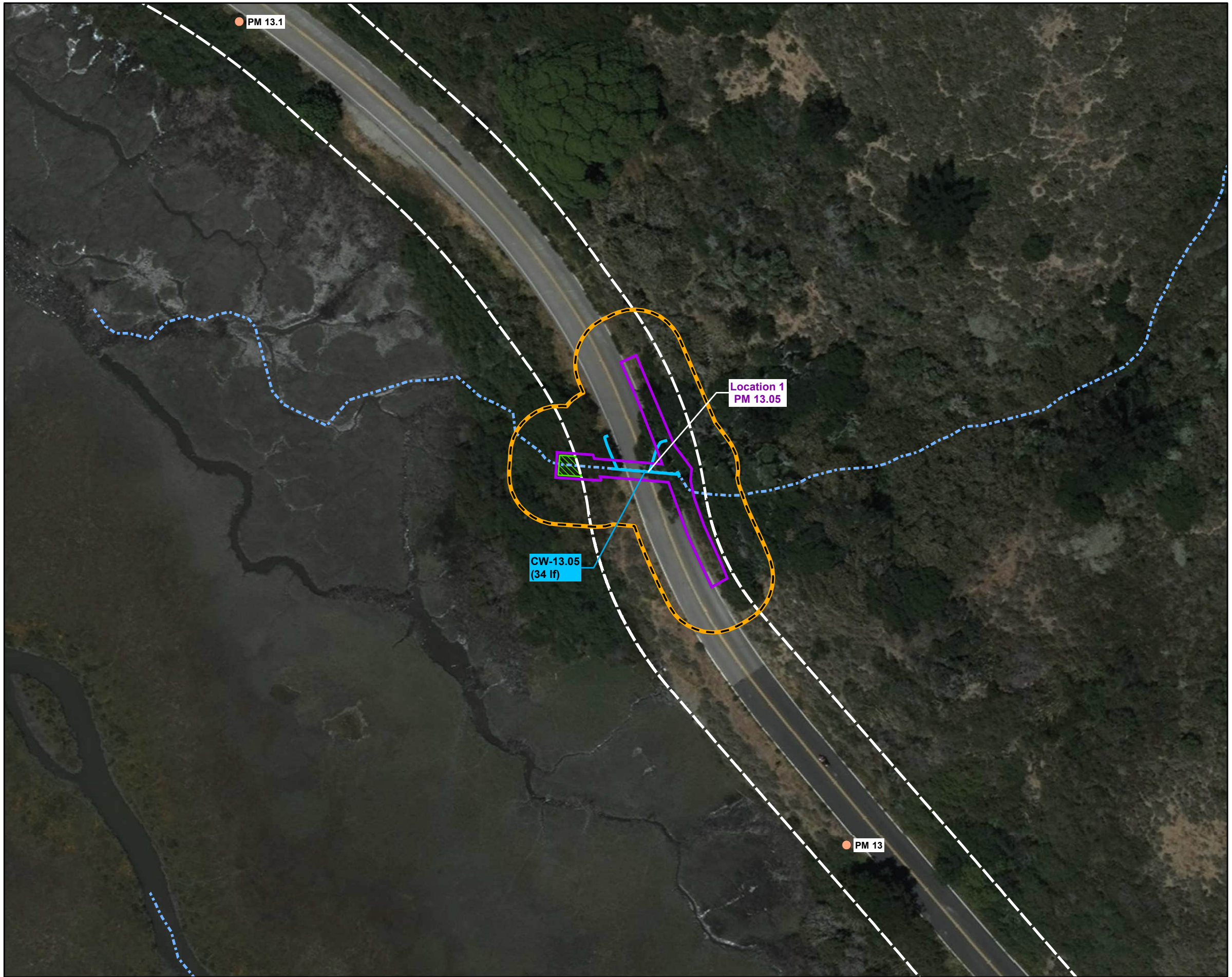
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021

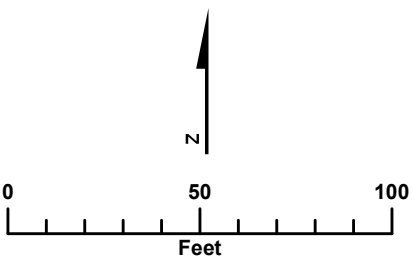


**Figure 1-2**  
**Map 01 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



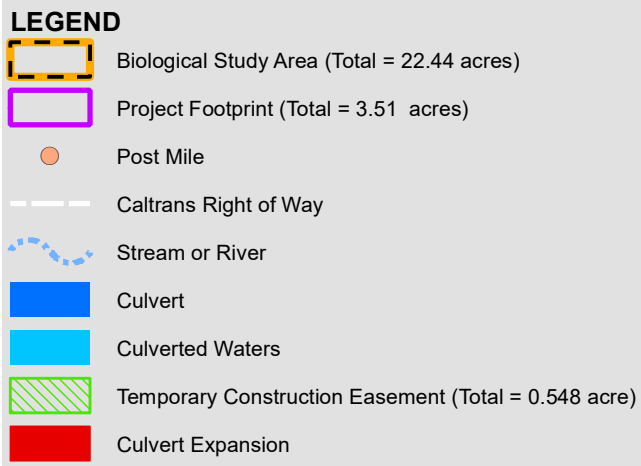
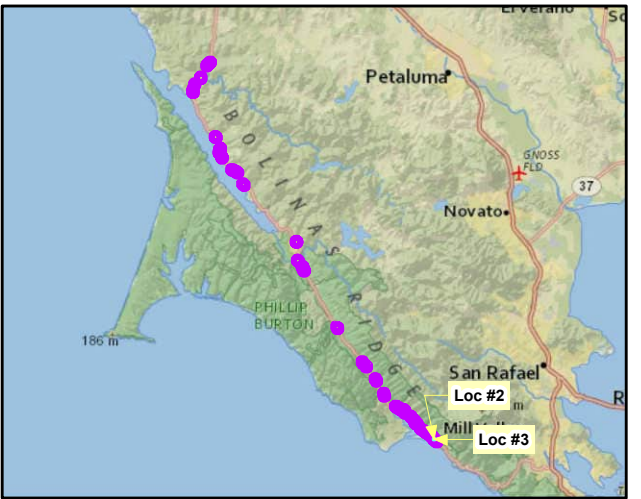
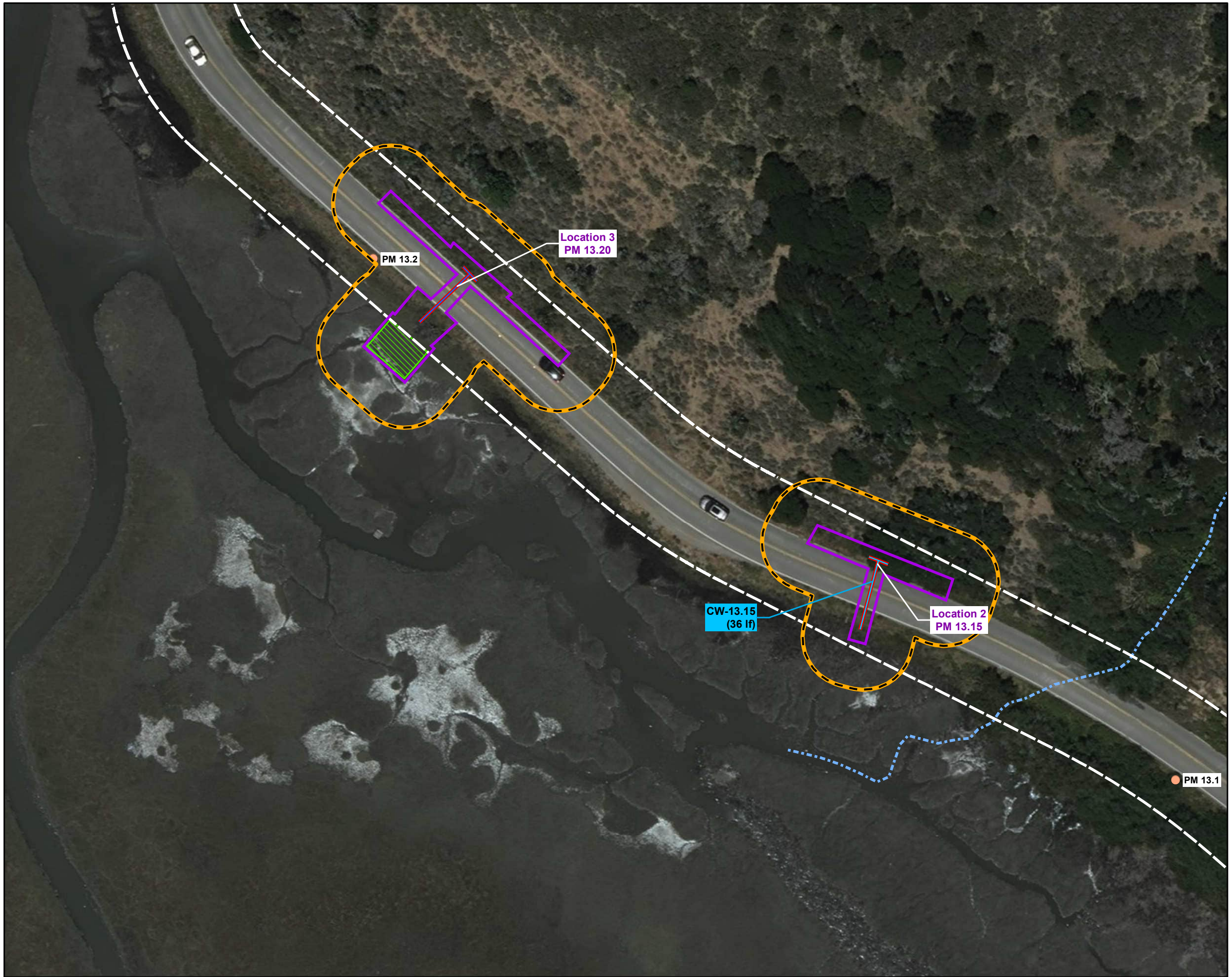


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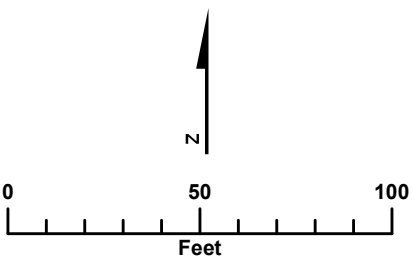


**Figure 1-2**  
**Map 02 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



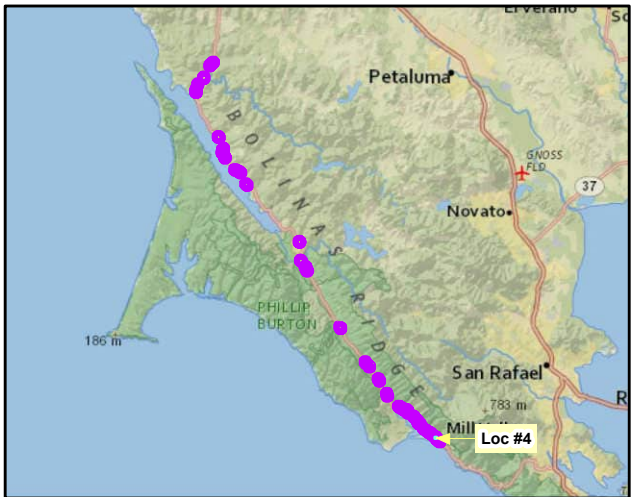
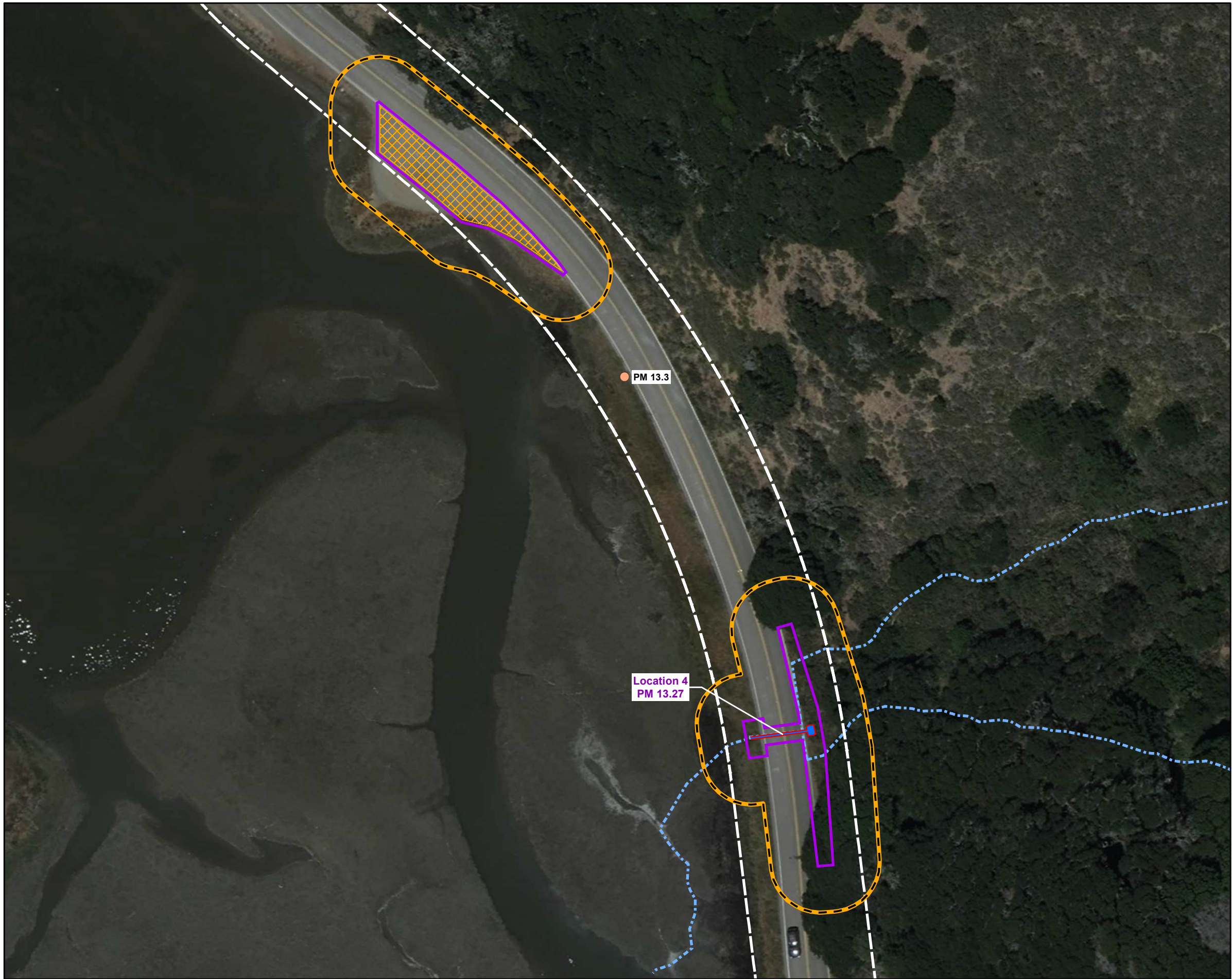


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**Figure 1-2**  
**Map 03 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

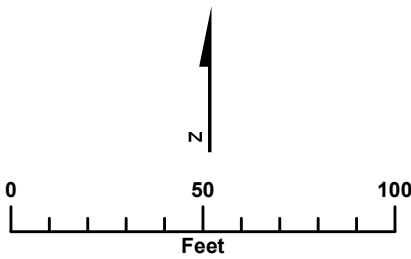




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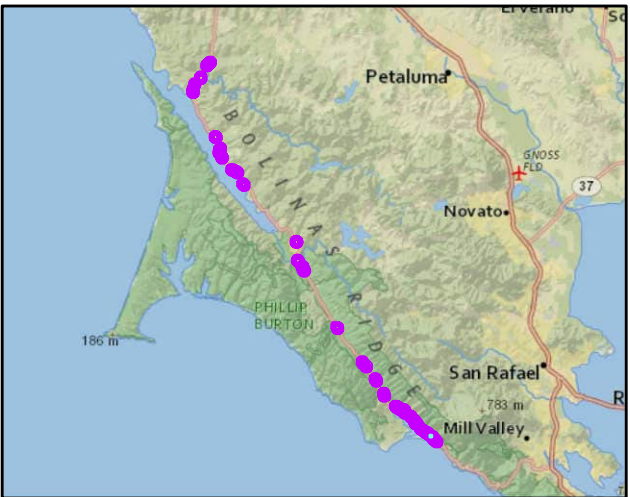
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culvert
- Staging Area
- Culvert Expansion

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 04 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

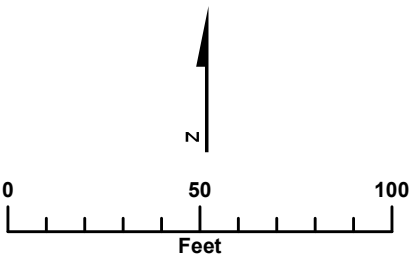




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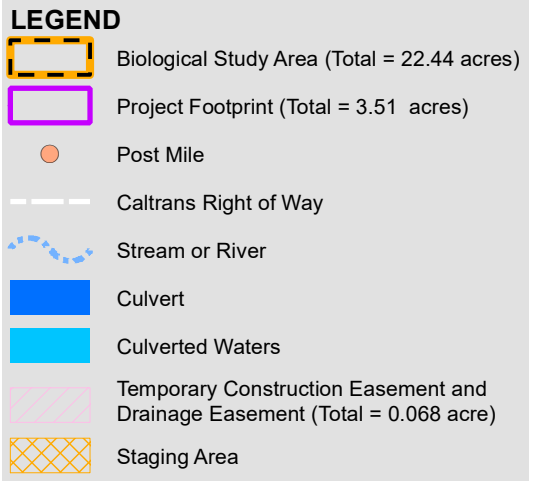
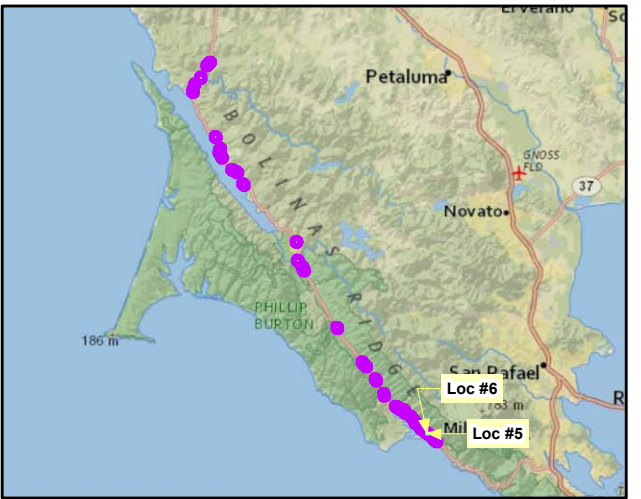
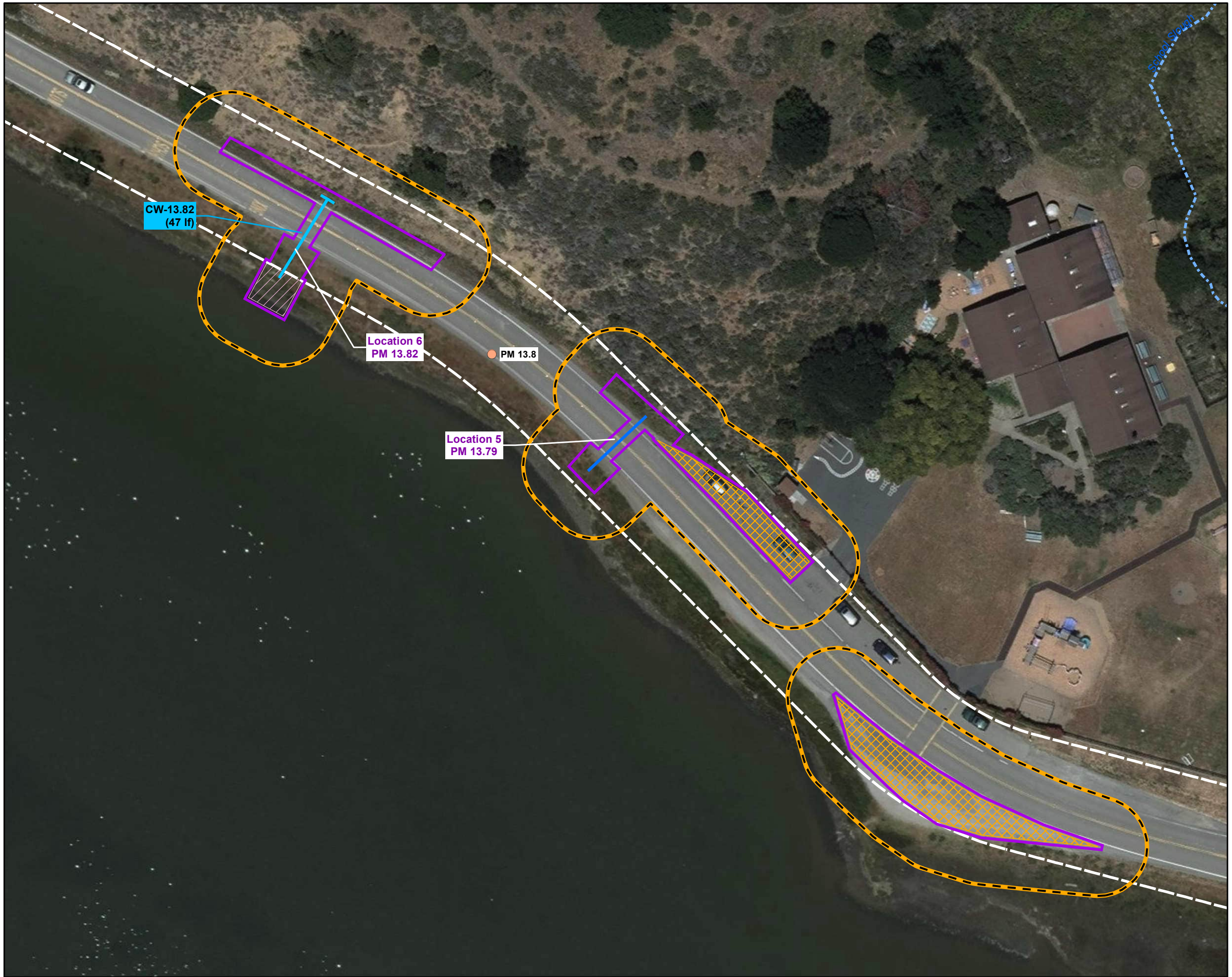
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- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- ~ Stream or River
- Staging Area

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1. Imagery: ESRI, Maxar March 2021

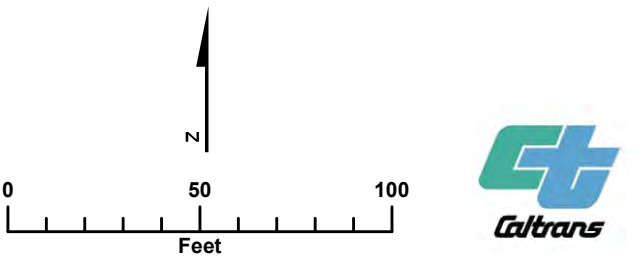


**Figure 1-2**  
**Map 05 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



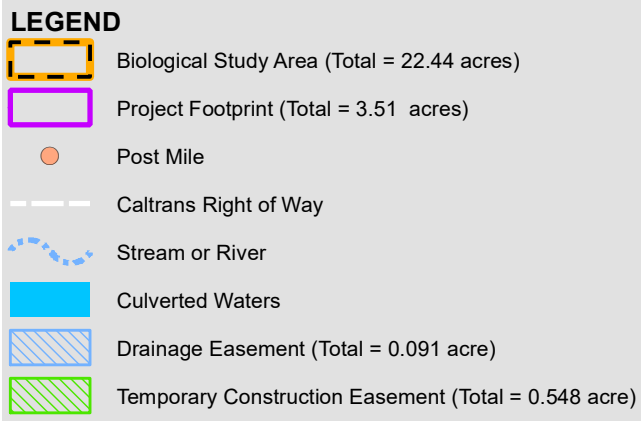
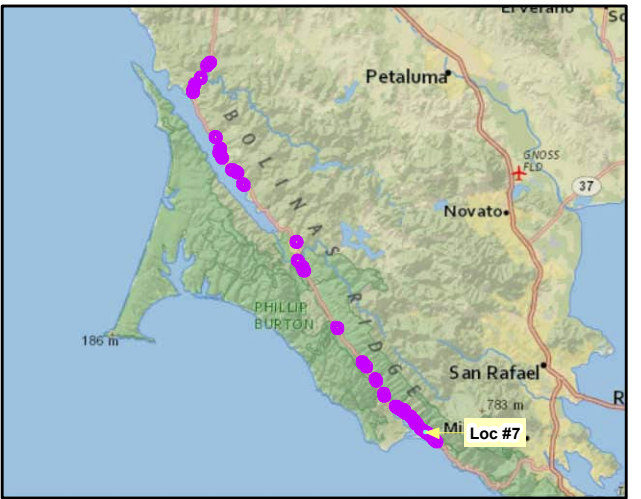


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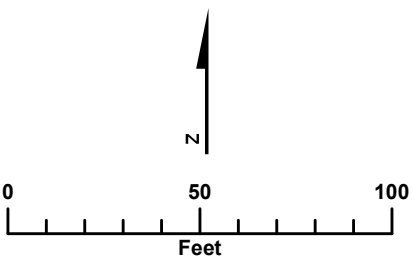


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**Map 06 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



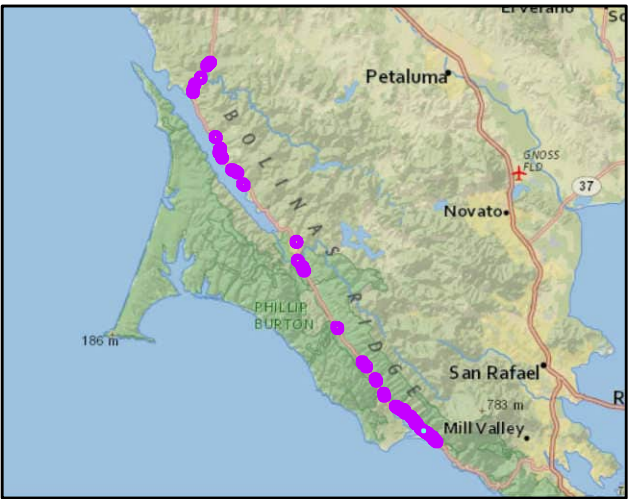


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**Figure 1-2**  
**Map 07 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

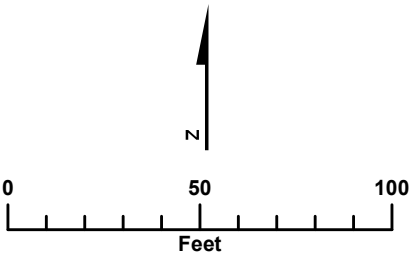




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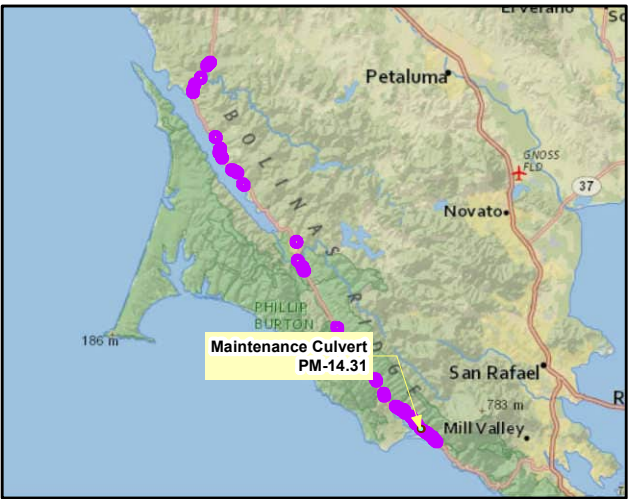
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 08 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

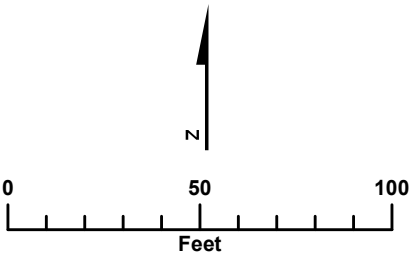




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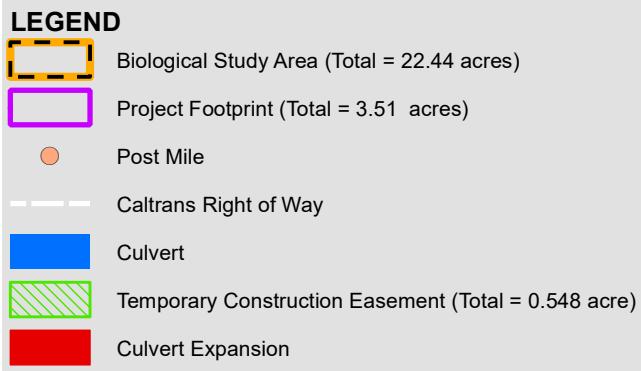
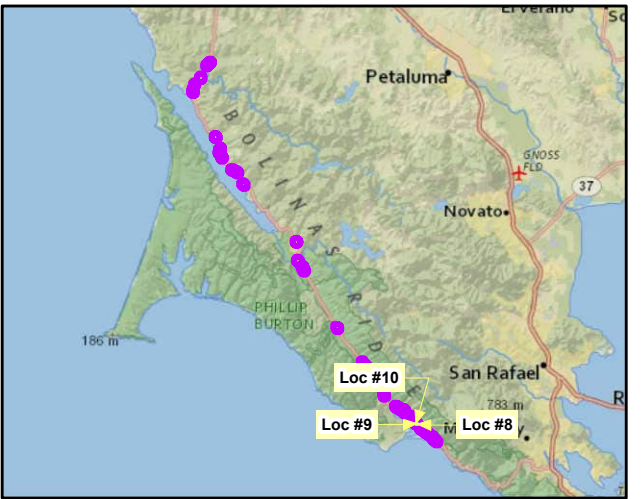
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- Post Mile
- Caltrans Right of Way
- Maintenance Culvert
- Maintenance Culvert Work Areas

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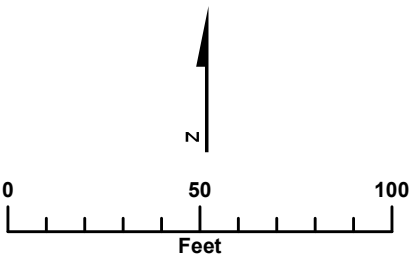


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**Map 09 of 53**  
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Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



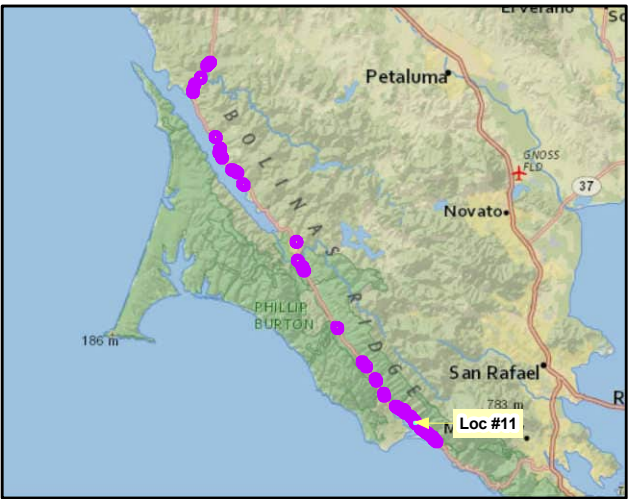
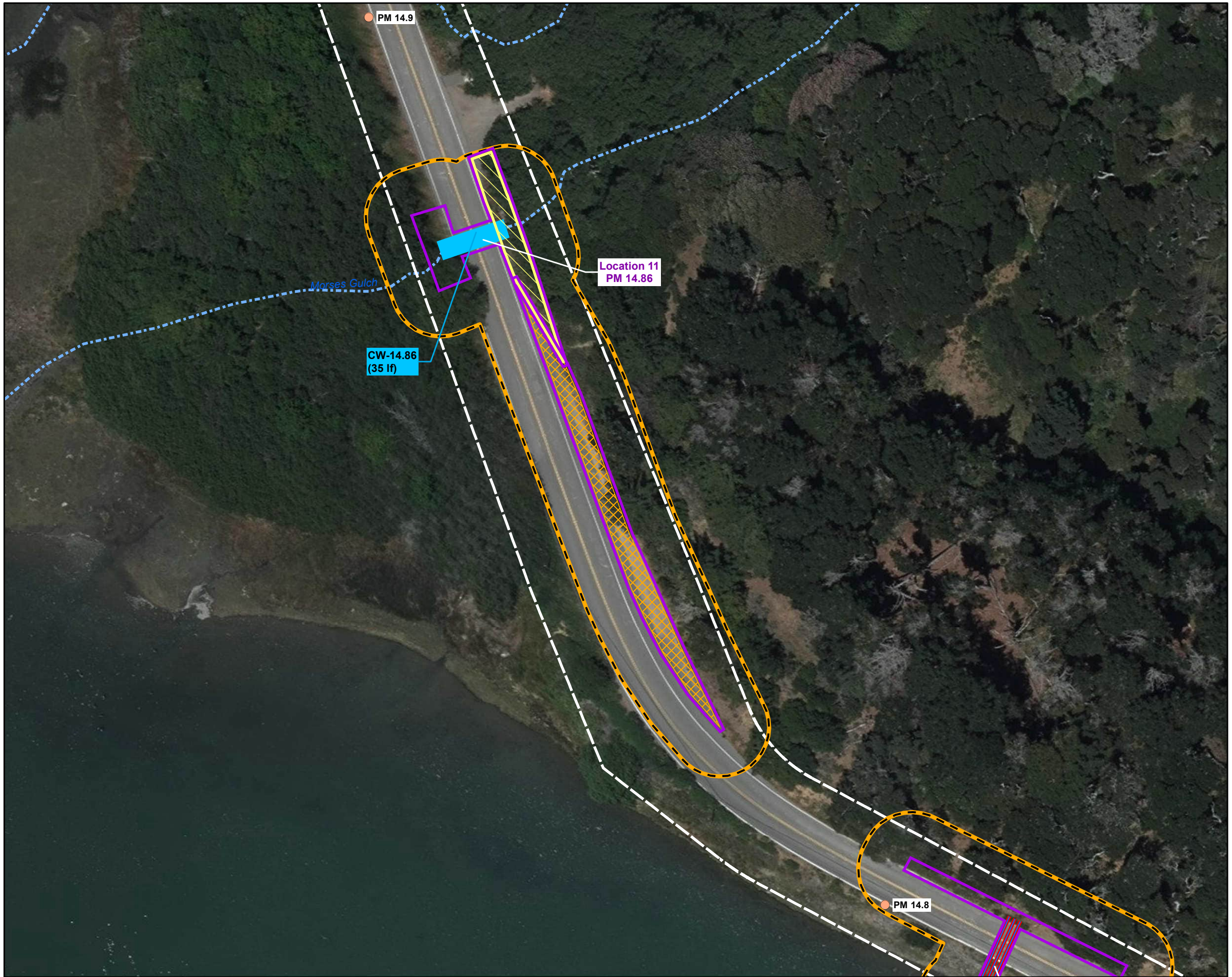


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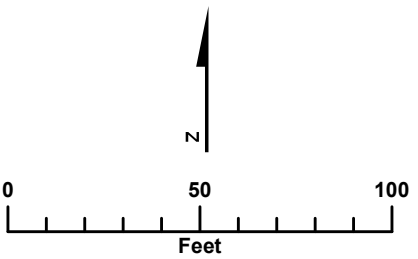
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**Map 10 of 53**  
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Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





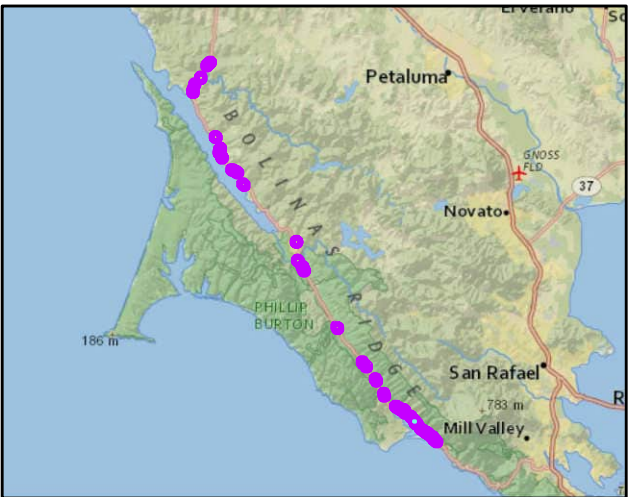
- LEGEND**
- Biological Study Area (Total = 22.44 acres)
  - Project Footprint (Total = 3.51 acres)
  - Post Mile
  - Caltrans Right of Way
  - Stream or River
  - Culvert
  - Culverted Waters
  - Staging Area
  - Culvert Expansion
  - Maintenance Culvert Work Areas

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






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**Map 11 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

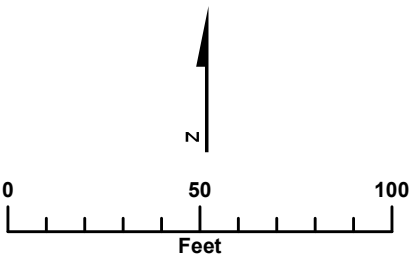




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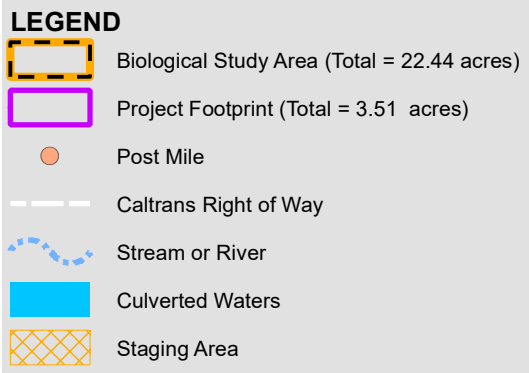
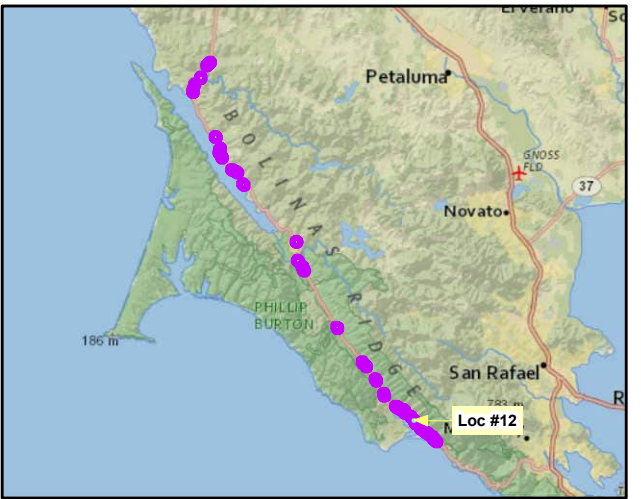
-  Biological Study Area (Total = 22.44 acres)
-  Project Footprint (Total = 3.51 acres)
-  Post Mile
-  Caltrans Right of Way
-  Stream or River
-  Staging Area

**Source:**  
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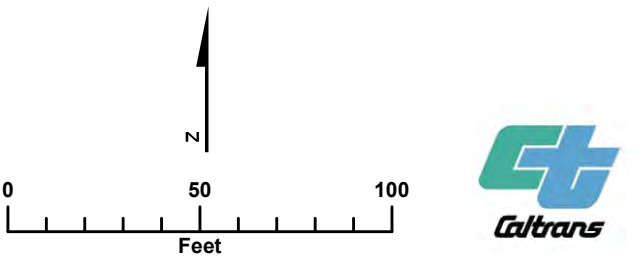


**Figure 1-2**  
**Map 12 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



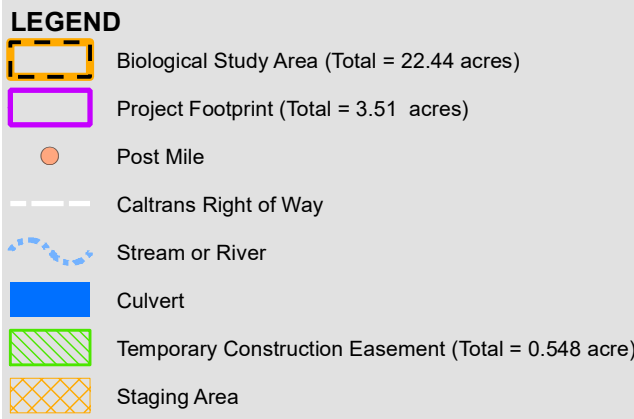
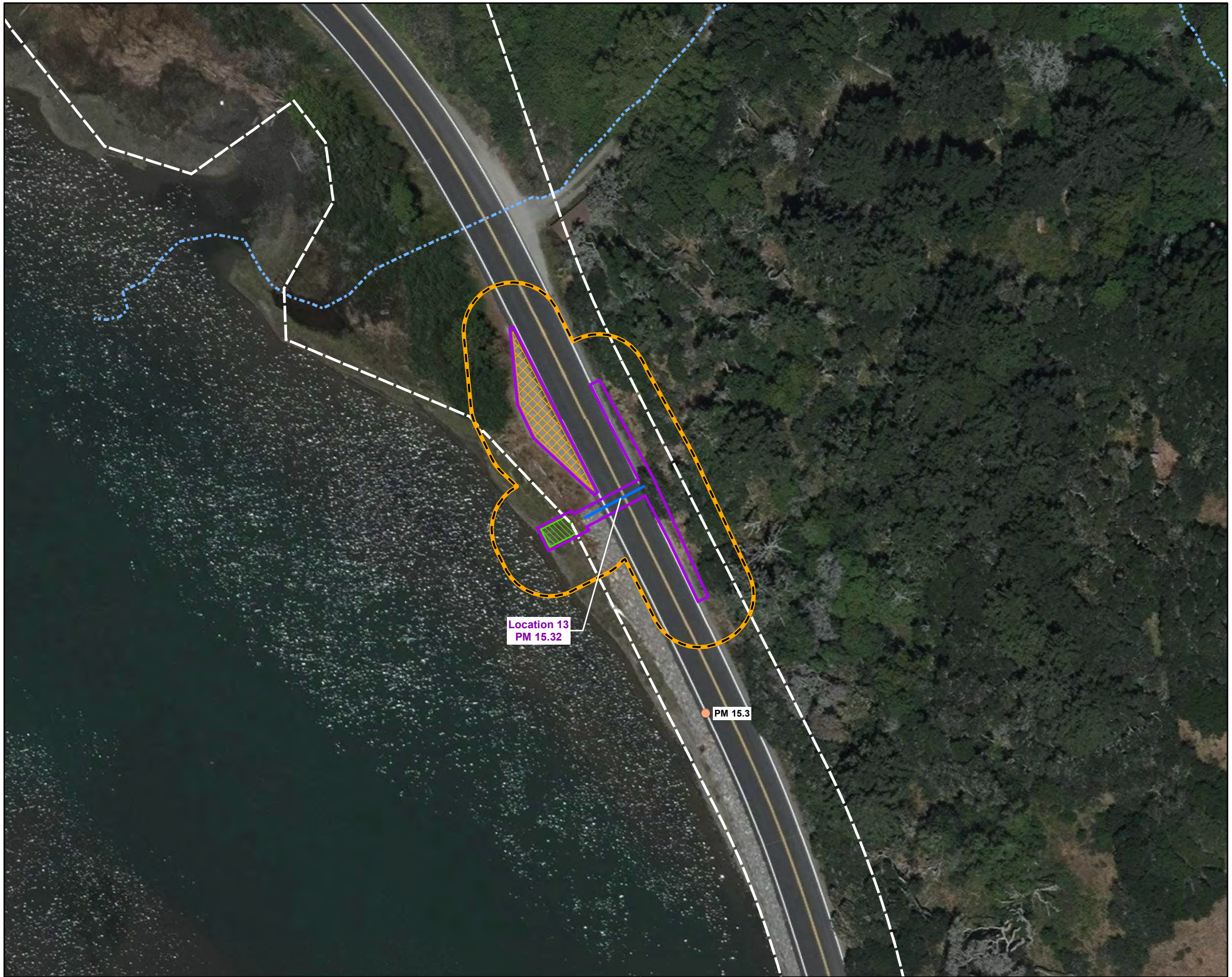


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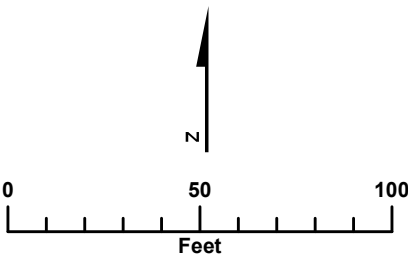


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**Map 13 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



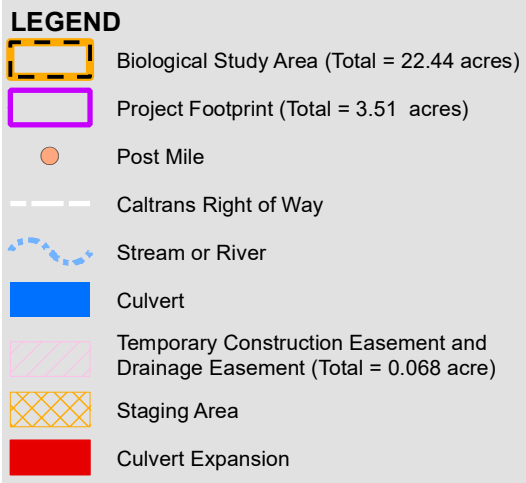
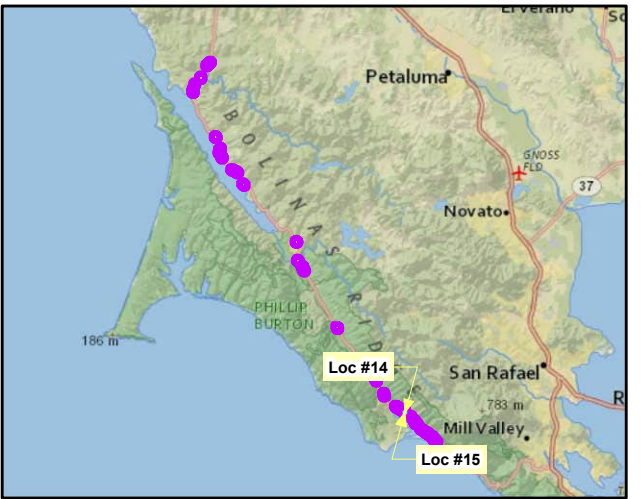
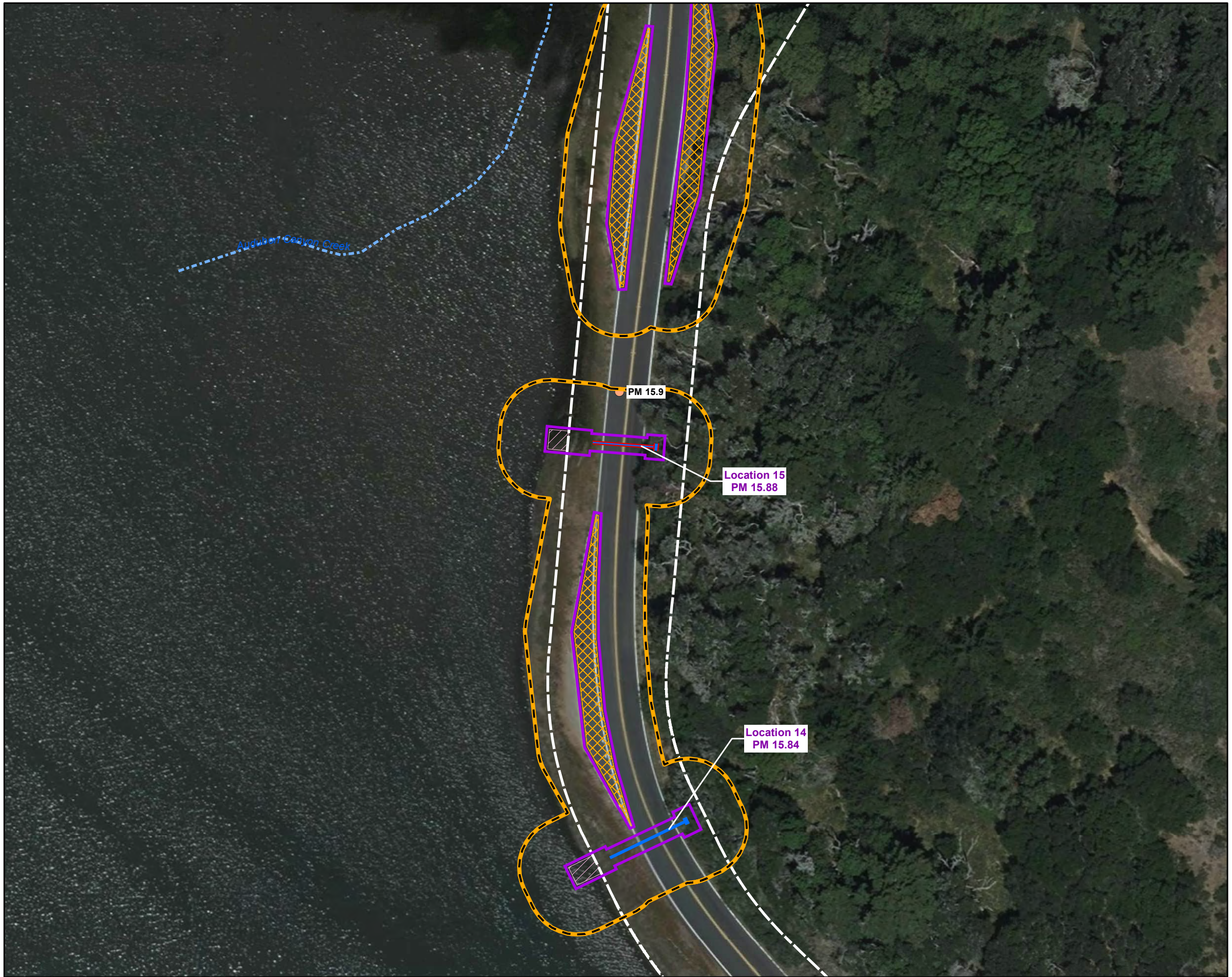


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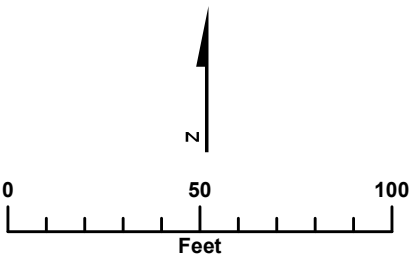


**Figure 1-2**  
**Map 14 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



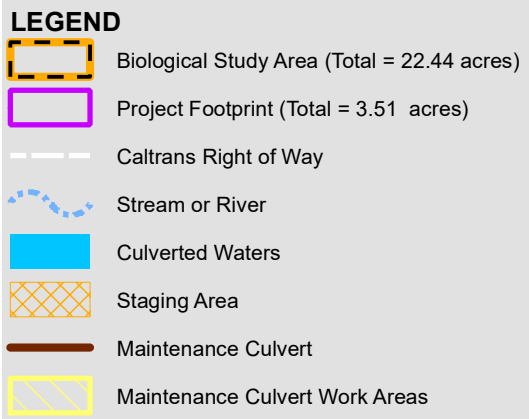
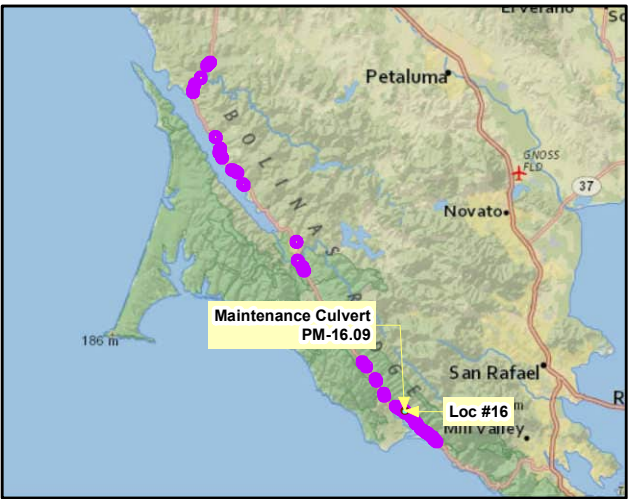


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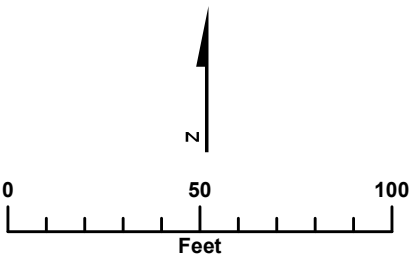


**Figure 1-2**  
**Map 15 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



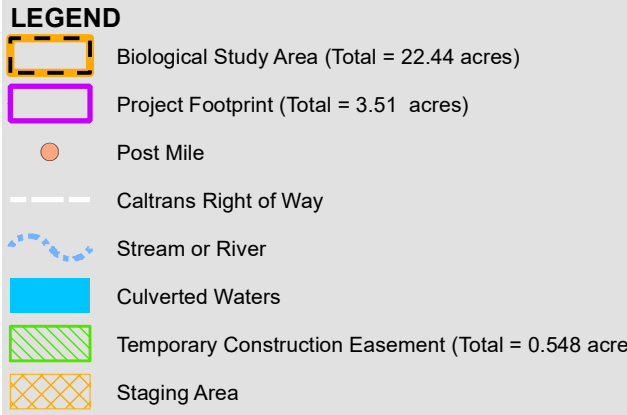
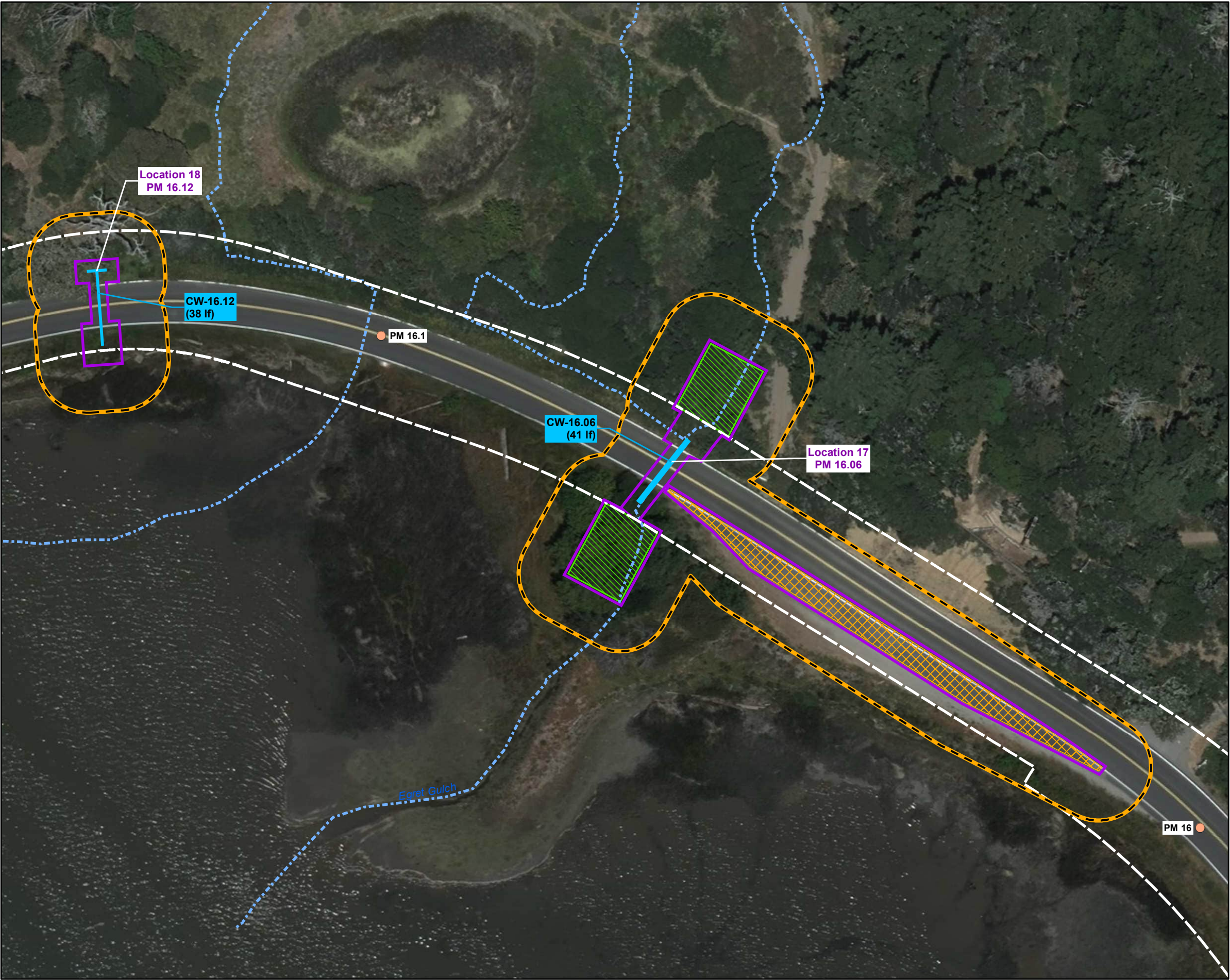


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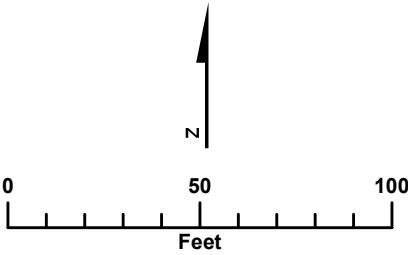


**Figure 1-2**  
**Map 16 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



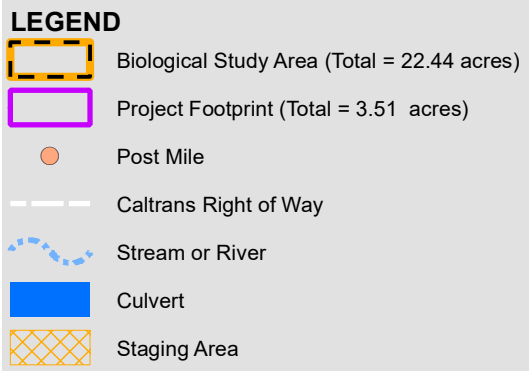
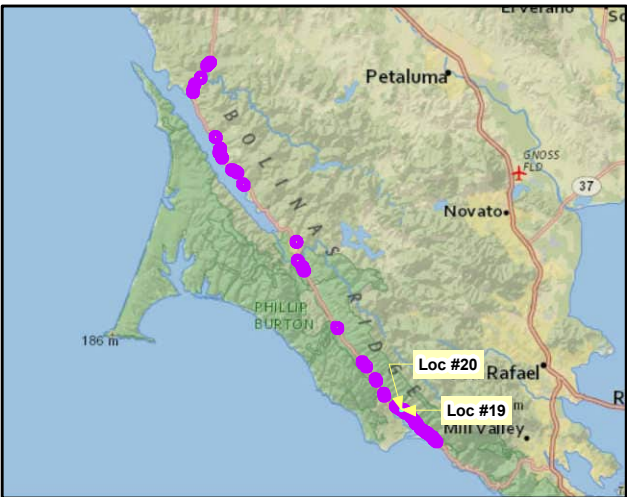
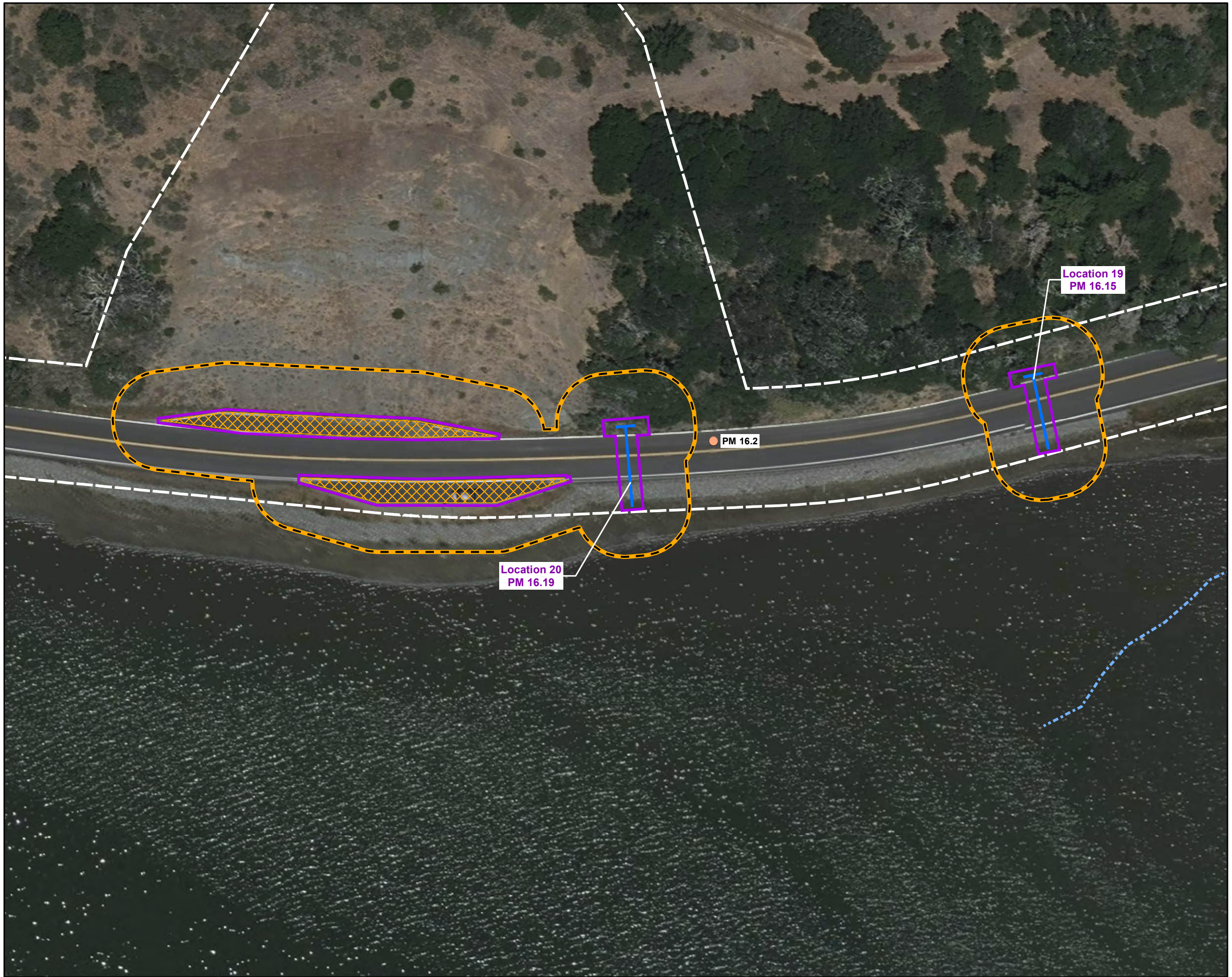


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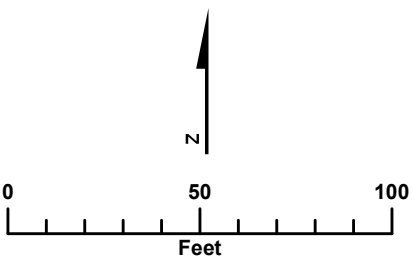


**Figure 1-2**  
**Map 17 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



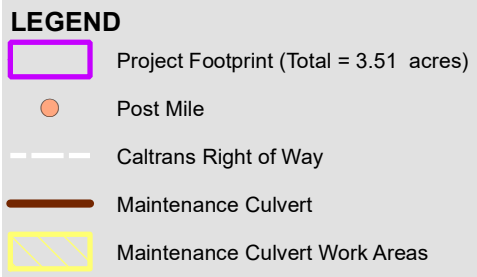
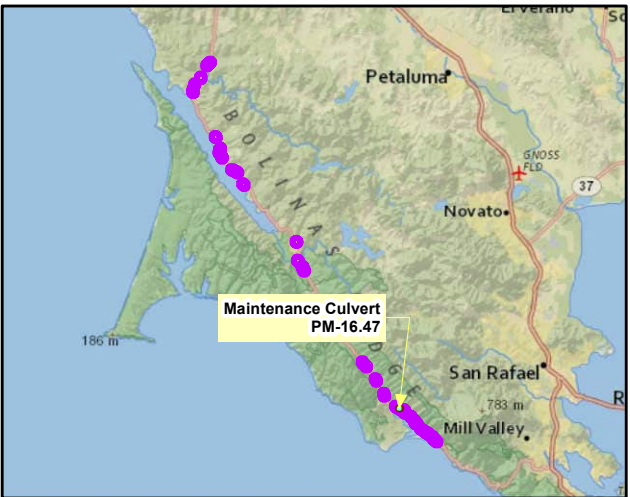


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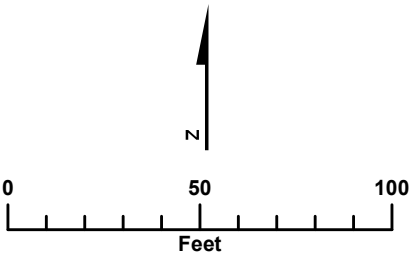


**Figure 1-2**  
**Map 18 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



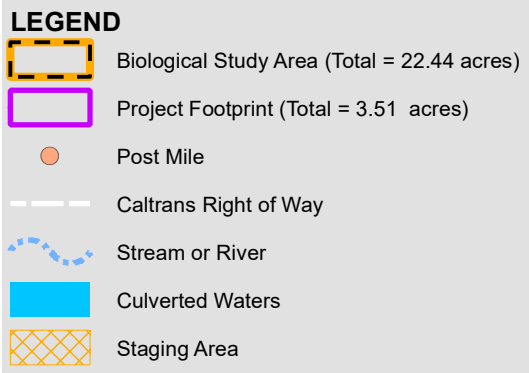
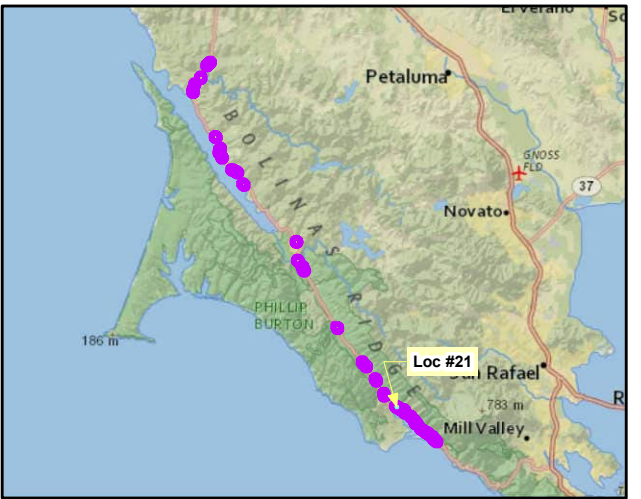


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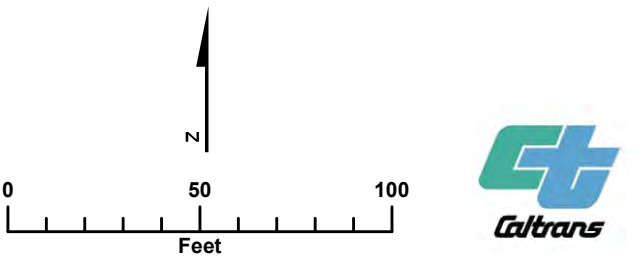


**Figure 1-2**  
**Map 19 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



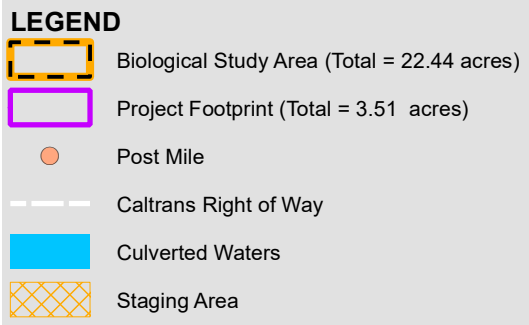


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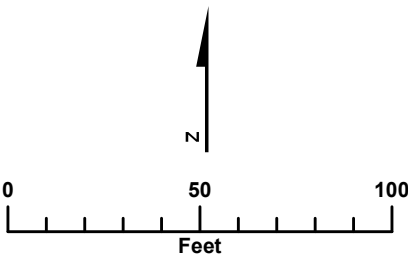


**Figure 1-2**  
**Map 20 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



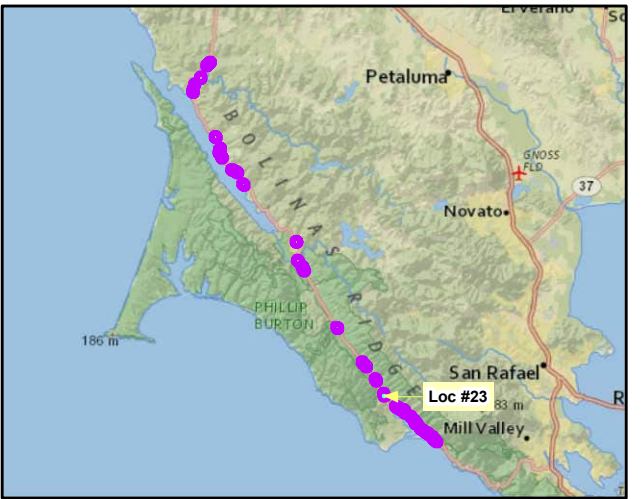
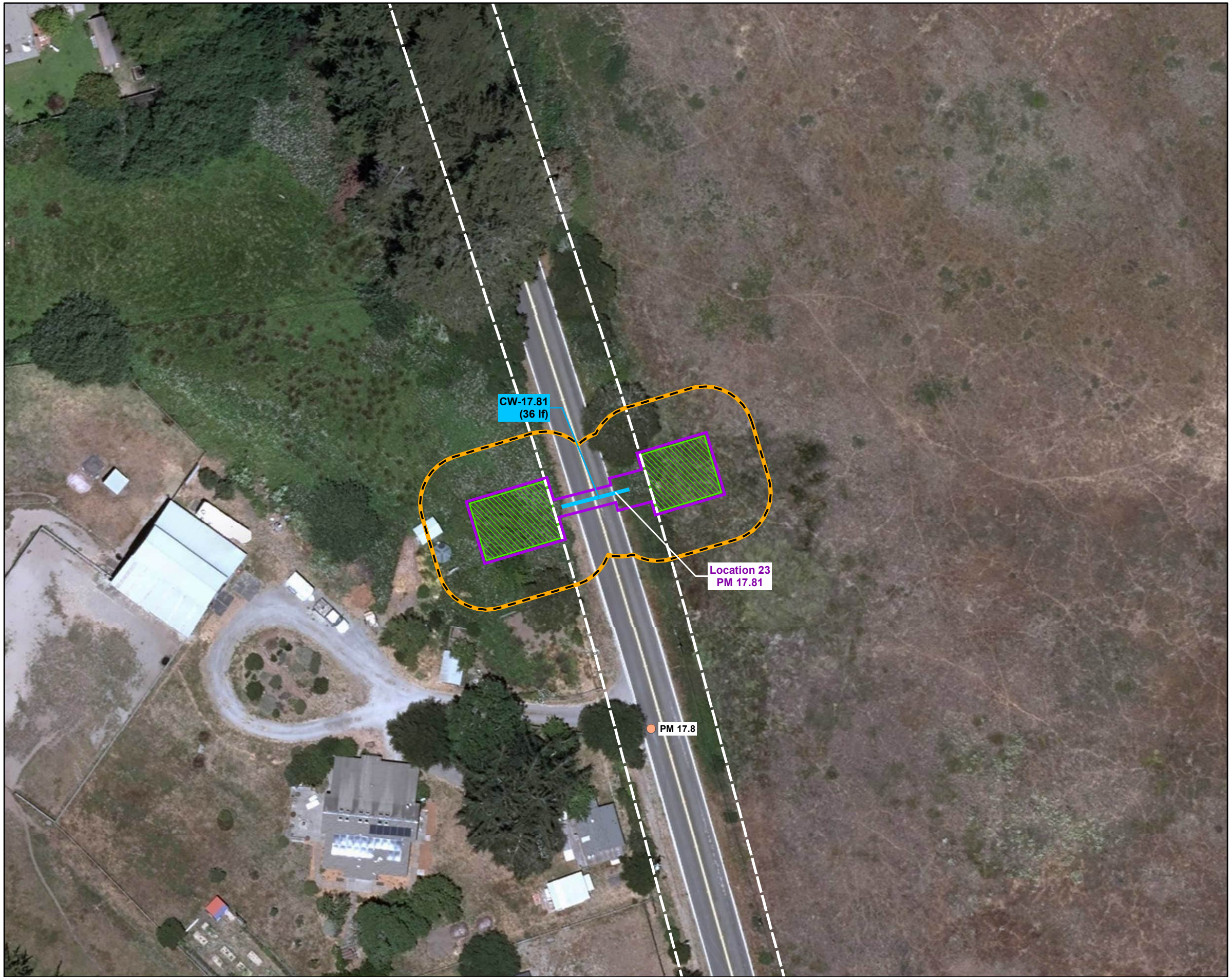


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1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 21 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



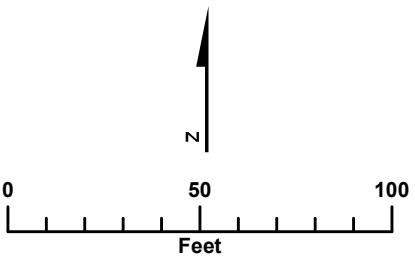


#### LEGEND

- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Culverted Waters
- Temporary Construction Easement (Total = 0.548 acre)

#### Source:

1. Imagery: ESRI, Maxar March 2021



#### Figure 1-2

#### Map 22 of 53

#### Project Components

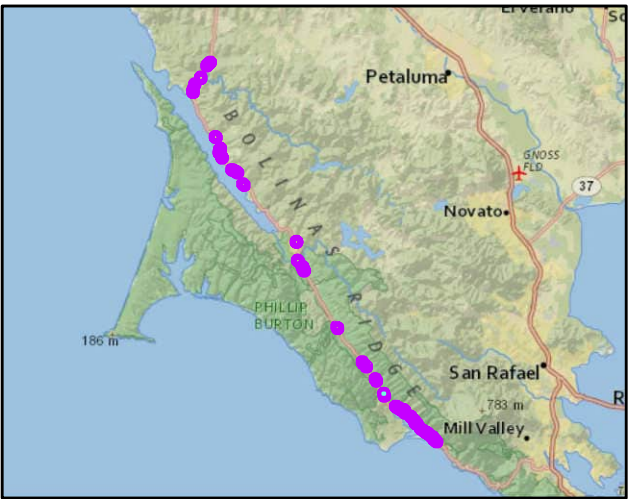
Marin 1 Drainage System Restoration Project

04-2Q53U

MRN-1 Post Mile 13.05/45.10

Marin County, California

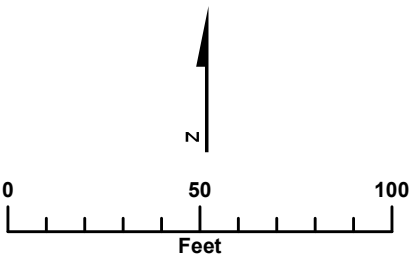




**LEGEND**

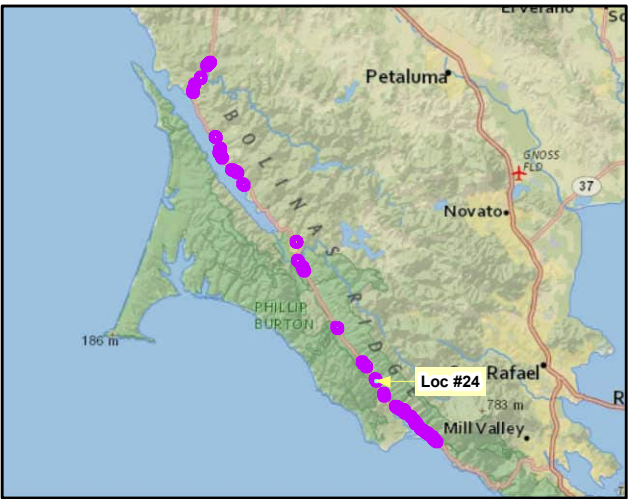
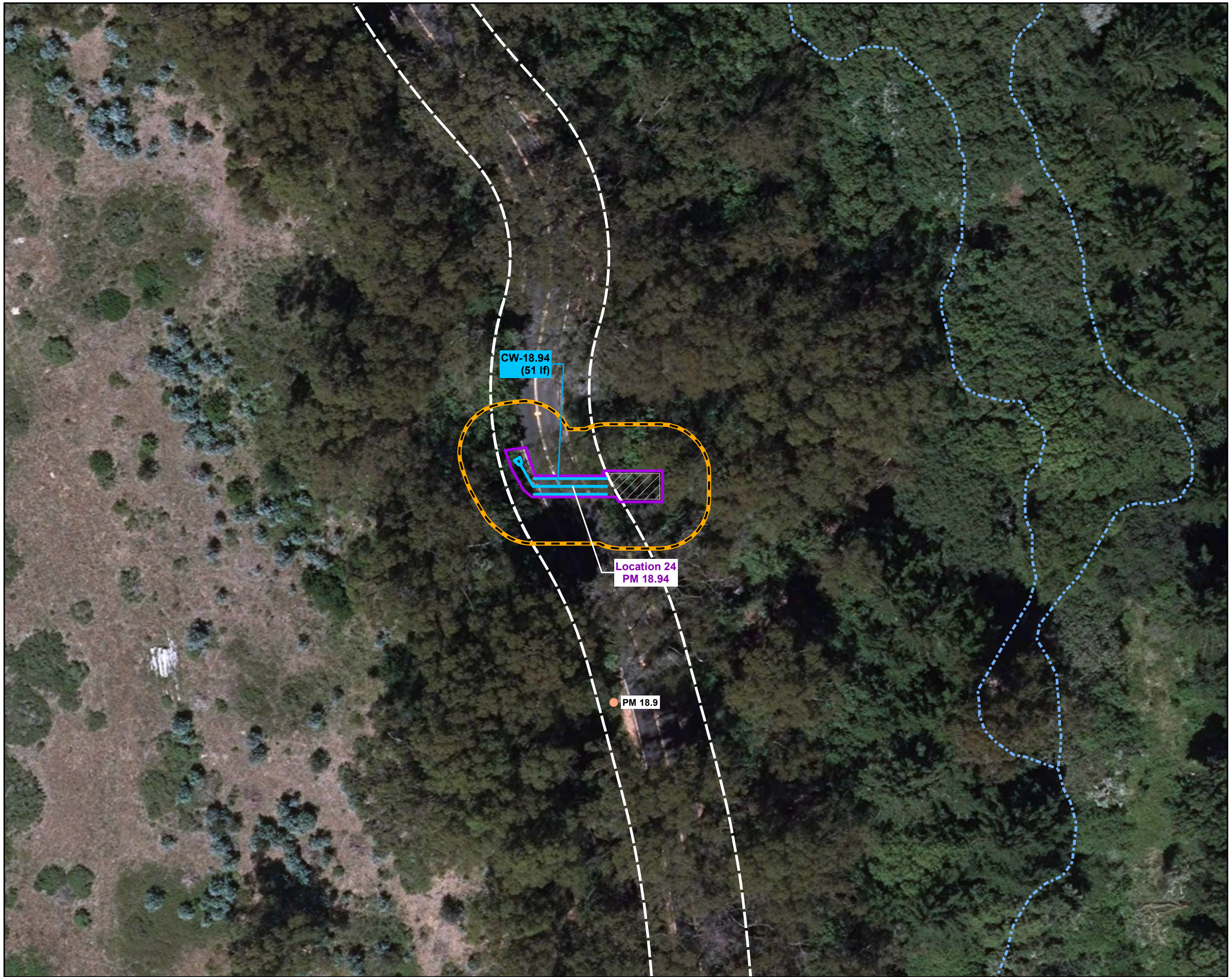
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021



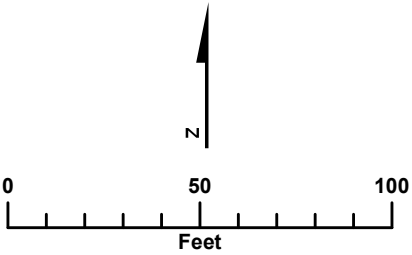
**Figure 1-2**  
**Map 23 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





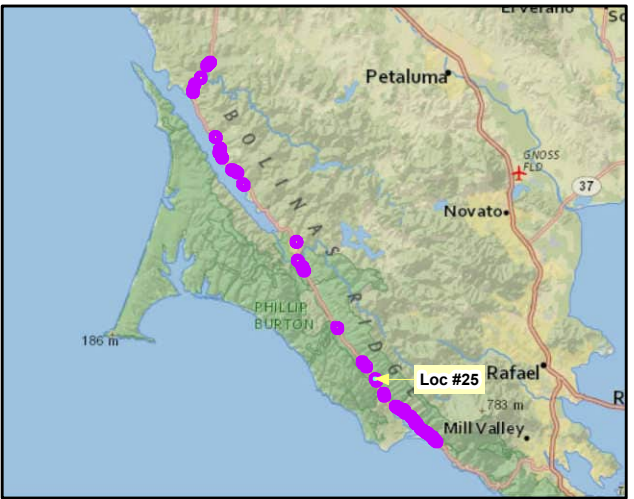
- LEGEND**
- Biological Study Area (Total = 22.44 acres)
  - Project Footprint (Total = 3.51 acres)
  - Post Mile
  - Caltrans Right of Way
  - Stream or River
  - Culverted Waters
  - Temporary Construction Easement and Drainage Easement (Total = 0.068 acre)

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 24 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

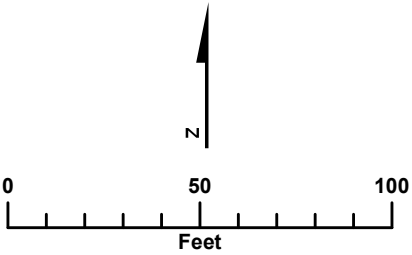




**LEGEND**

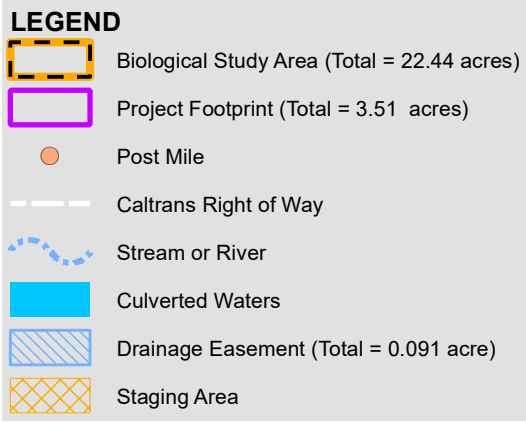
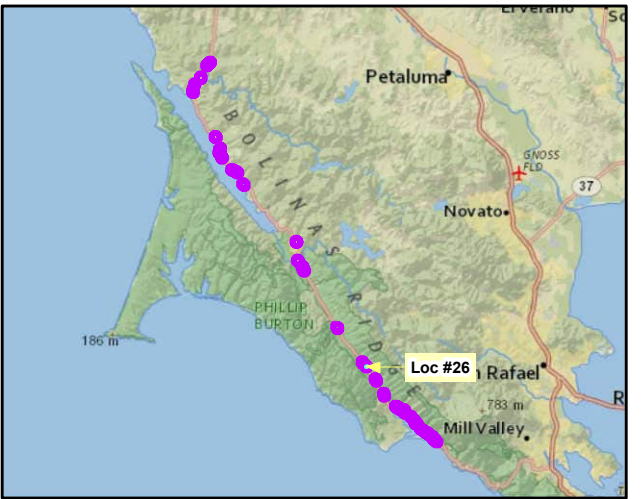
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culvert
- Culvert Expansion

**Source:**  
1. Imagery: ESRI, Maxar March 2021

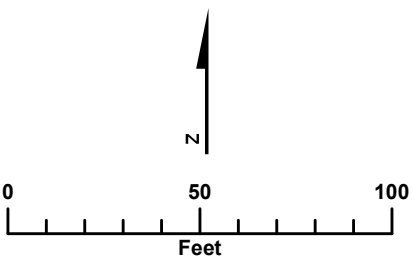


**Figure 1-2**  
**Map 25 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



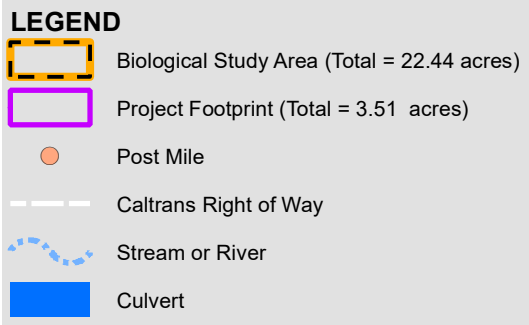
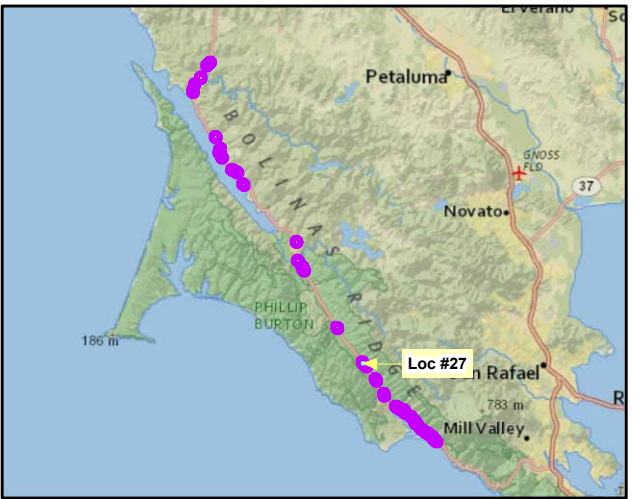


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1. Imagery: ESRI, Maxar March 2021

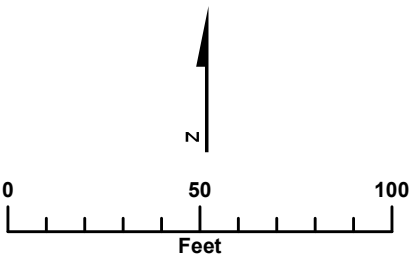


**Figure 1-2**  
**Map 26 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



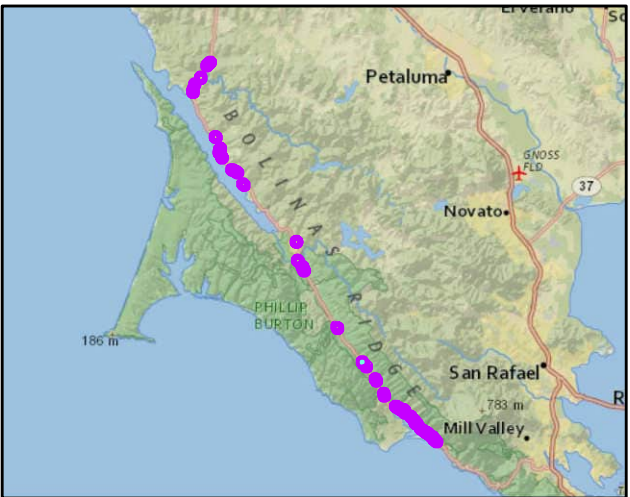
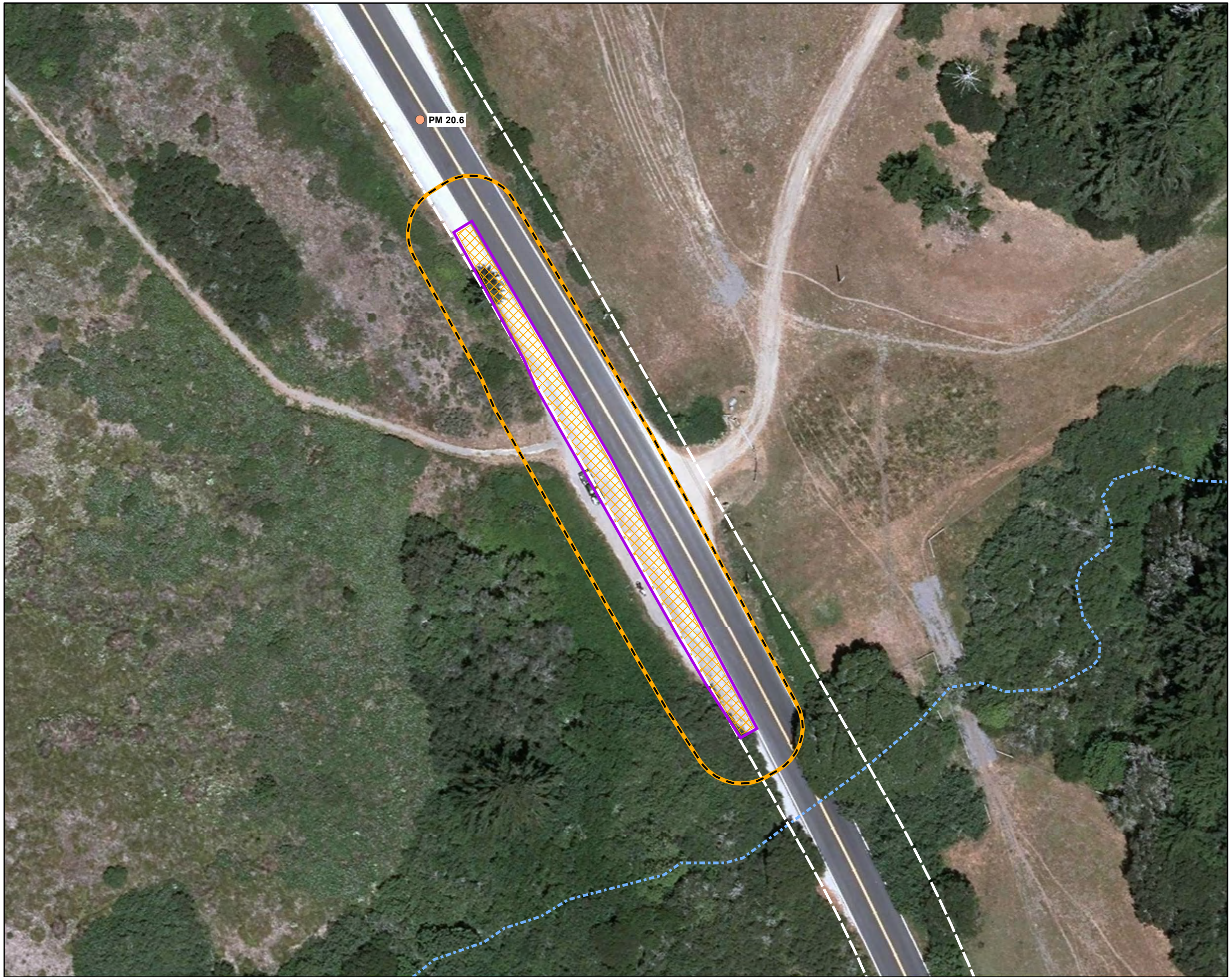


**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 27 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

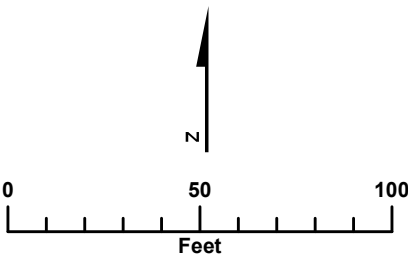




**LEGEND**

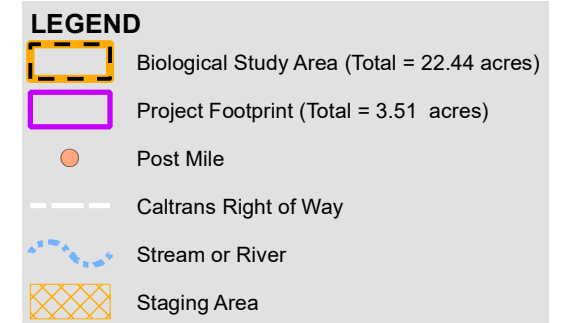
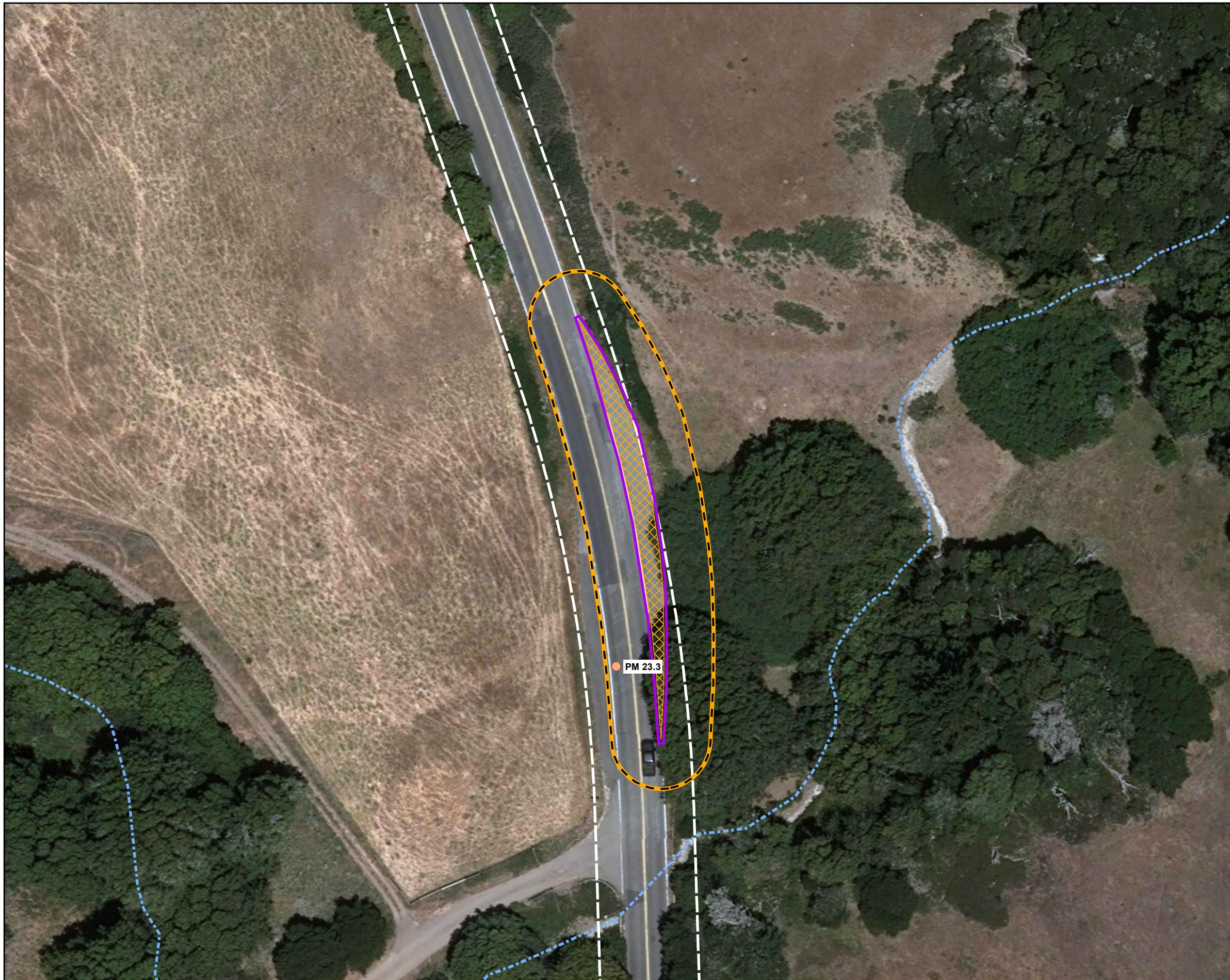
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021

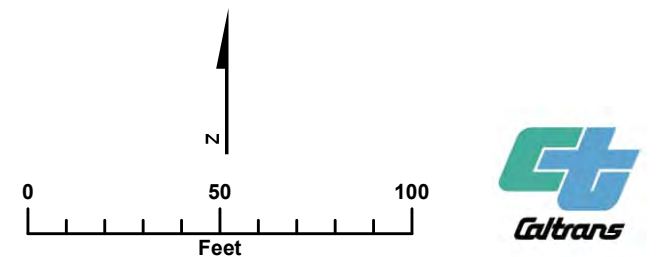


**Figure 1-2**  
**Map 28 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



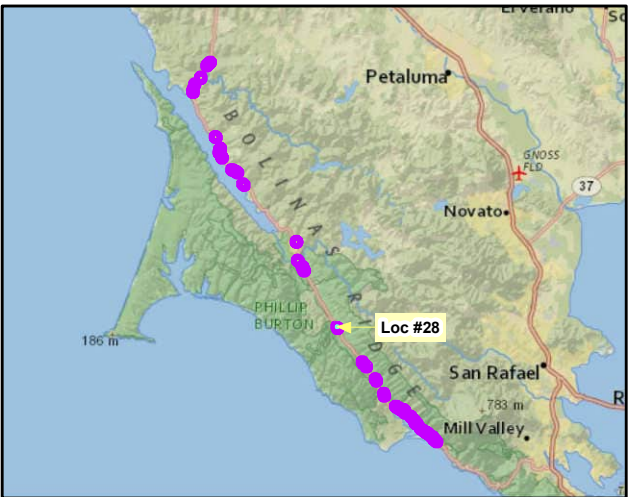
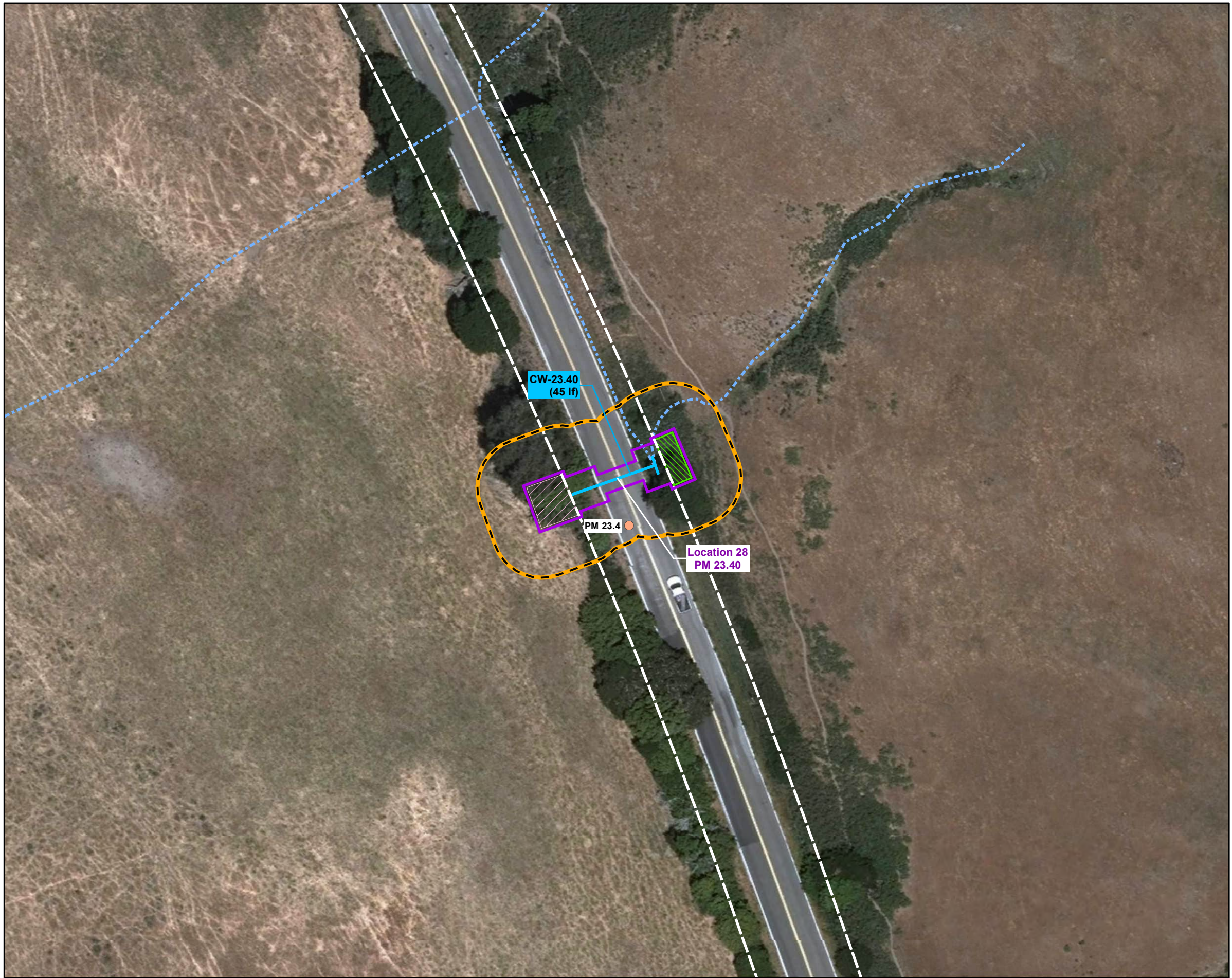


**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 29 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



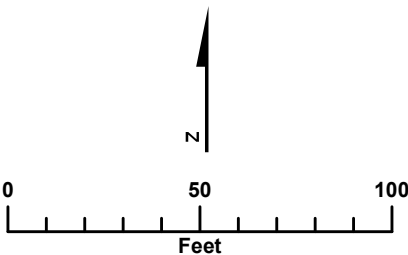


#### LEGEND

- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Temporary Construction Easement (Total = 0.548 acre)
- Temporary Construction Easement and Drainage Easement (Total = 0.068 acre)

#### Source:

1. Imagery: ESRI, Maxar March 2021

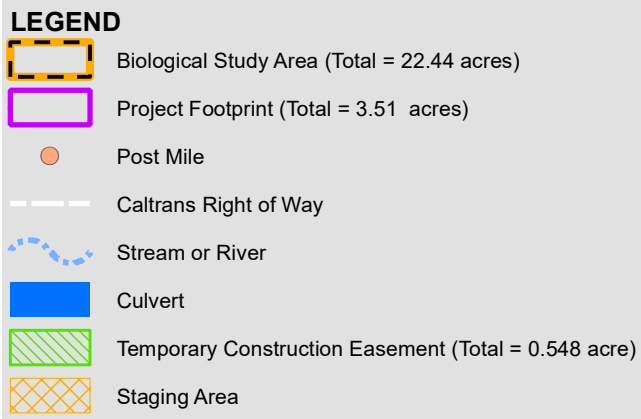
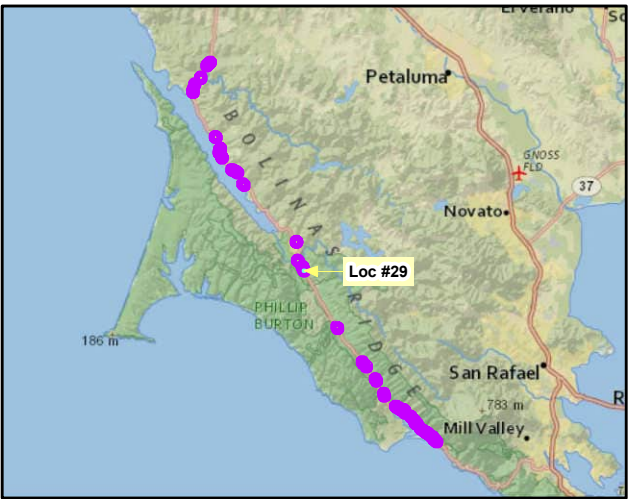
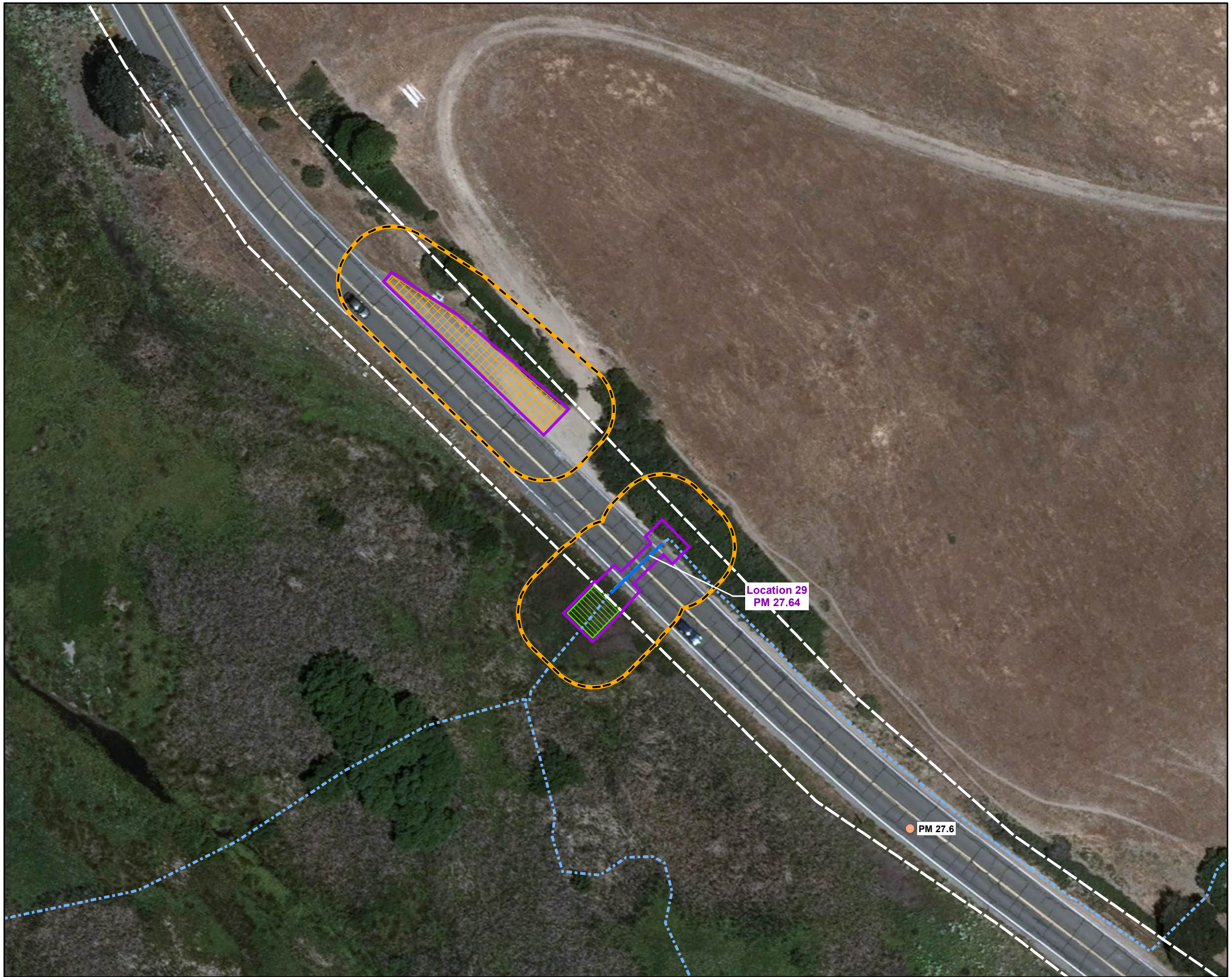


#### Figure 1-2 Map 30 of 53

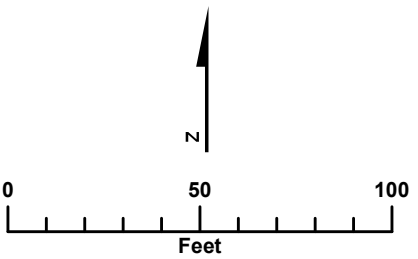
#### Project Components

Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



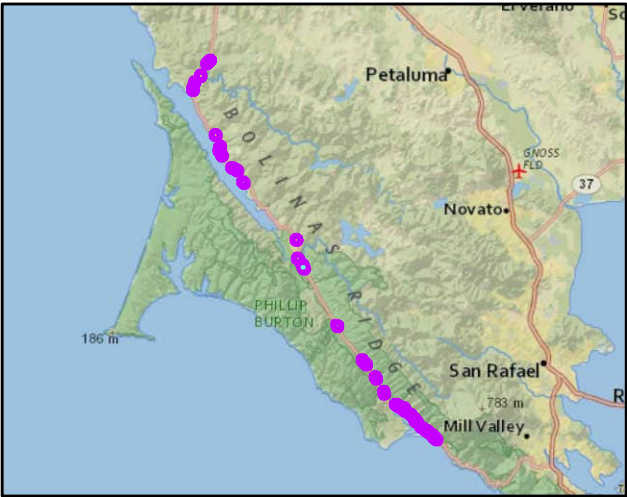


**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 31 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

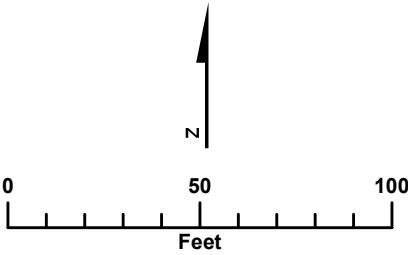




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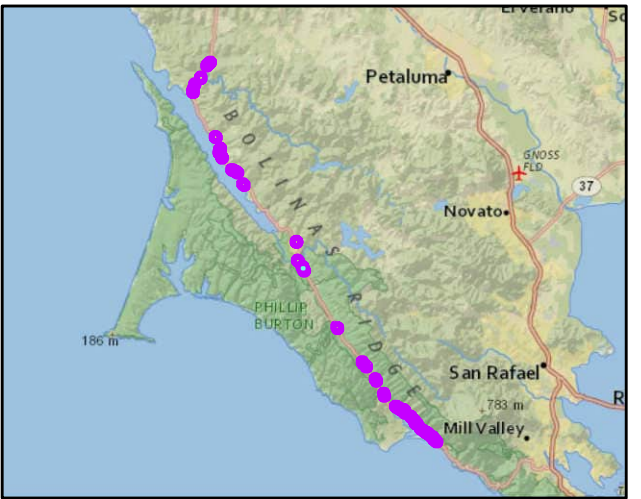
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 32 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

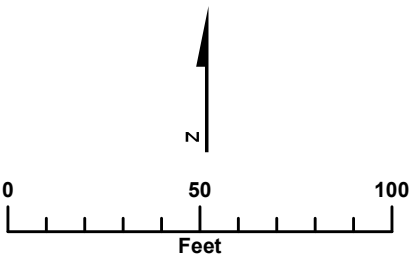




**LEGEND**

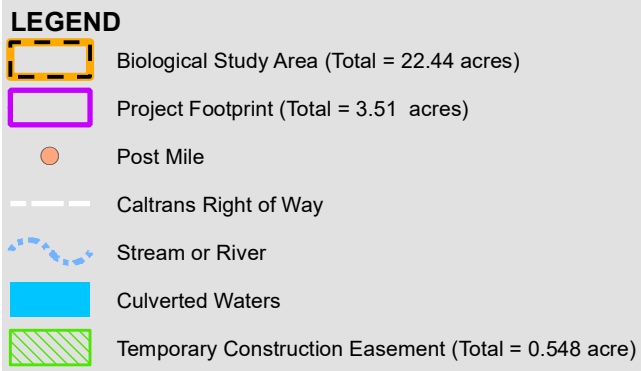
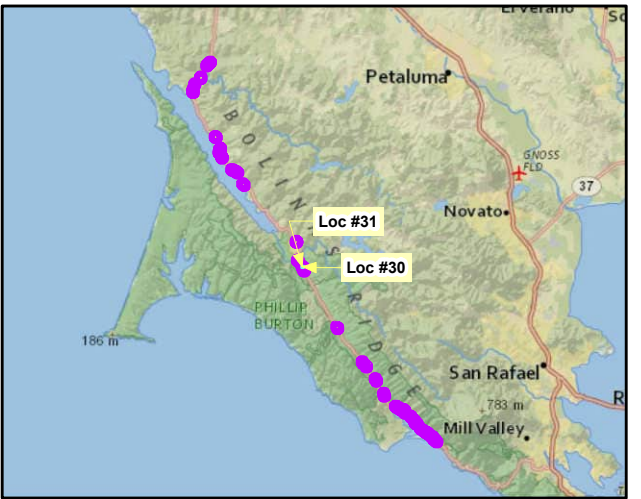
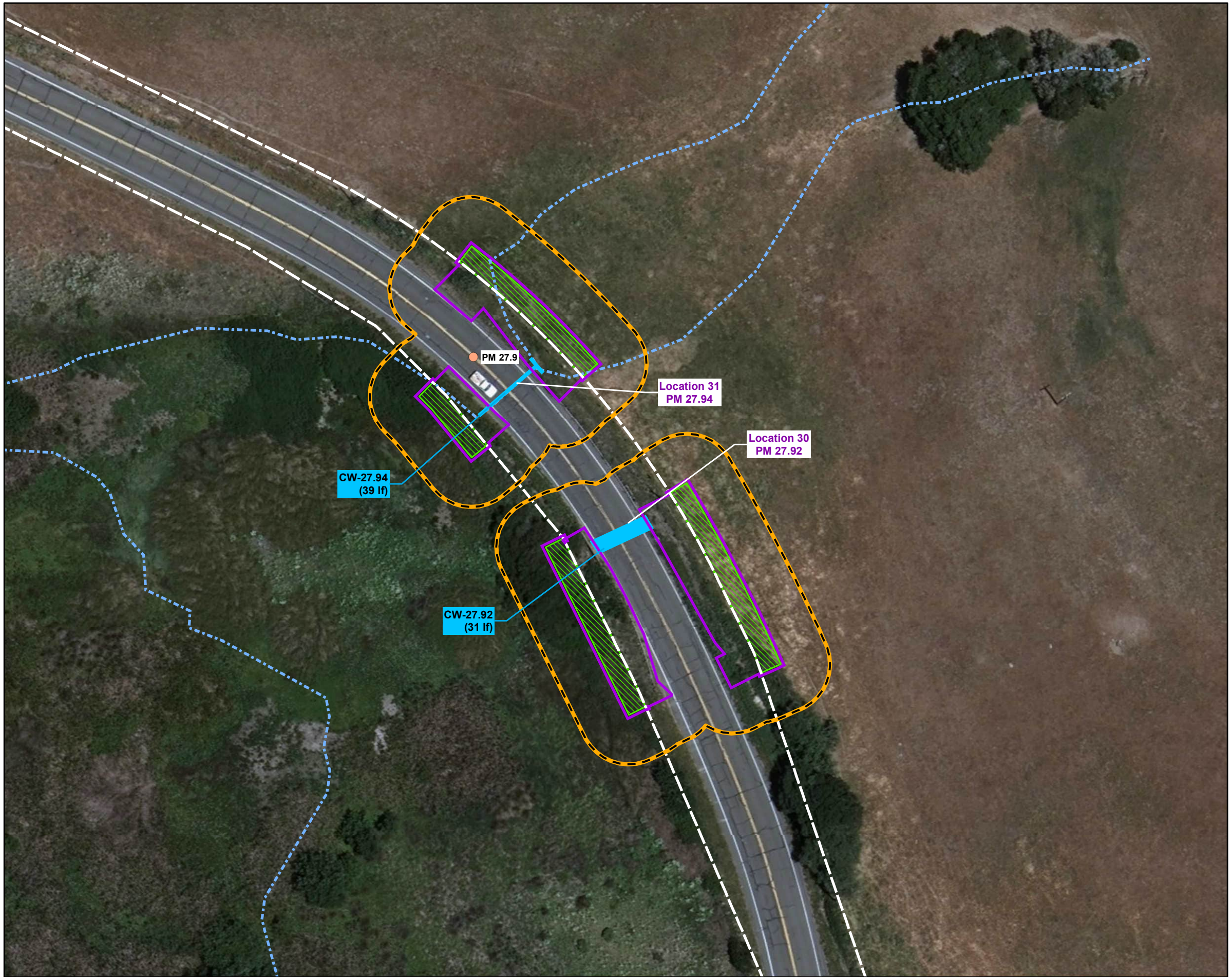
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021

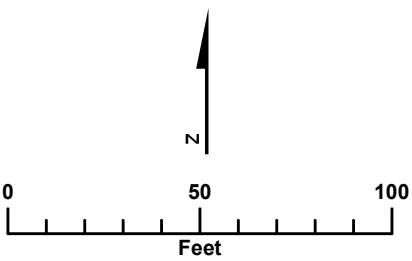


**Figure 1-2**  
**Map 33 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



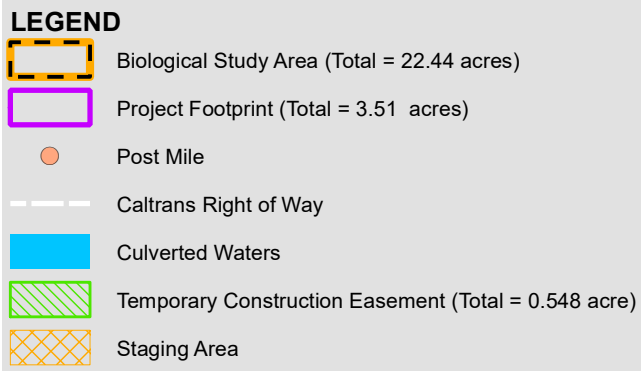
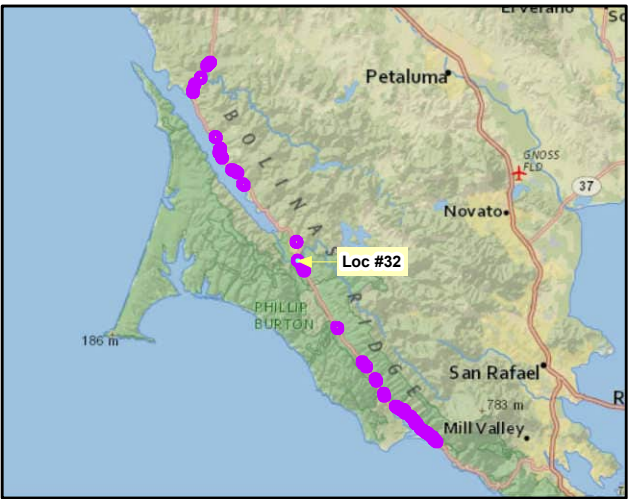
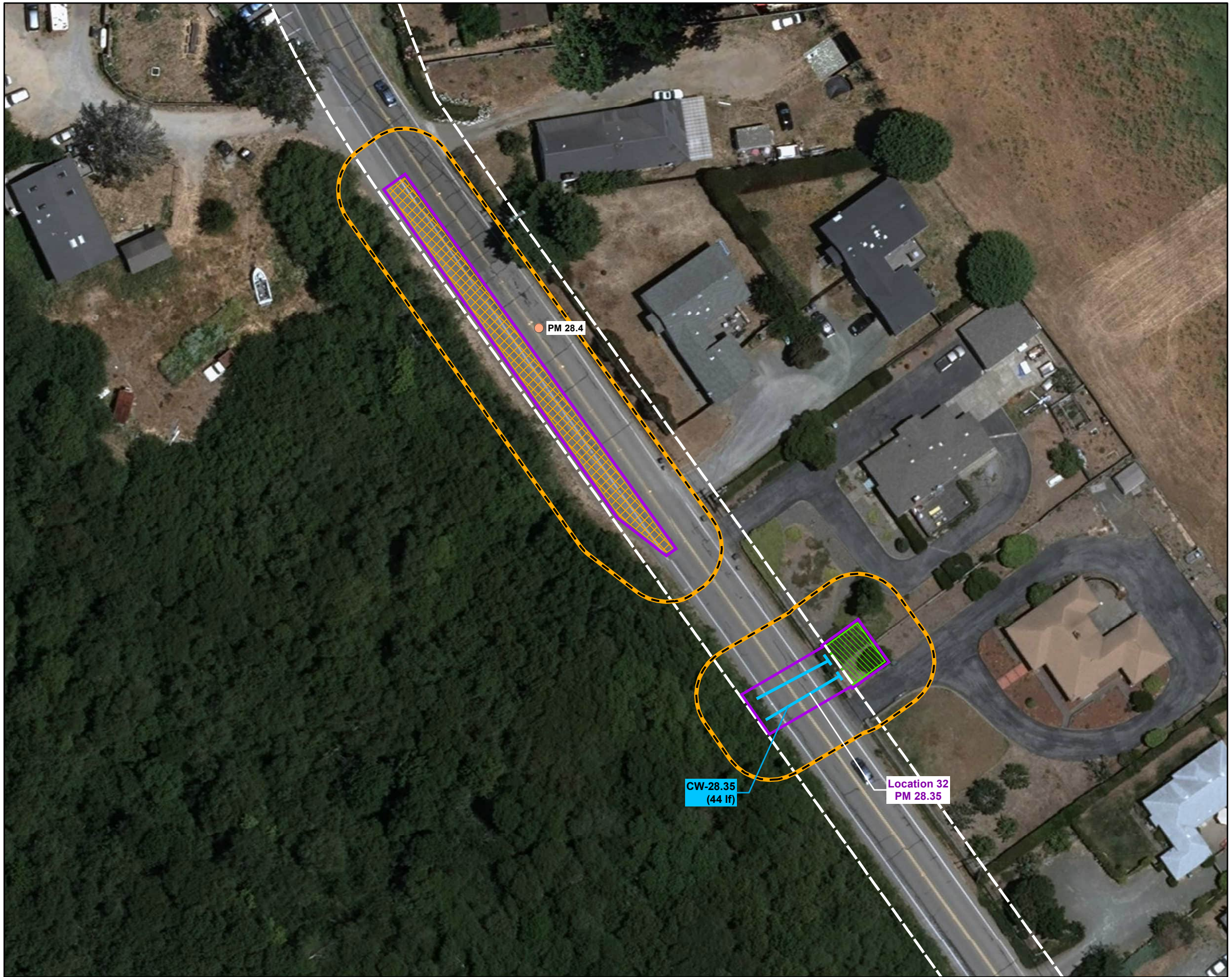


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1. Imagery: ESRI, Maxar March 2021

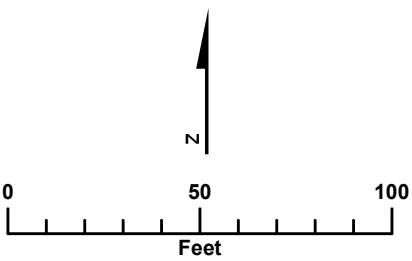


**Figure 1-2**  
**Map 34 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



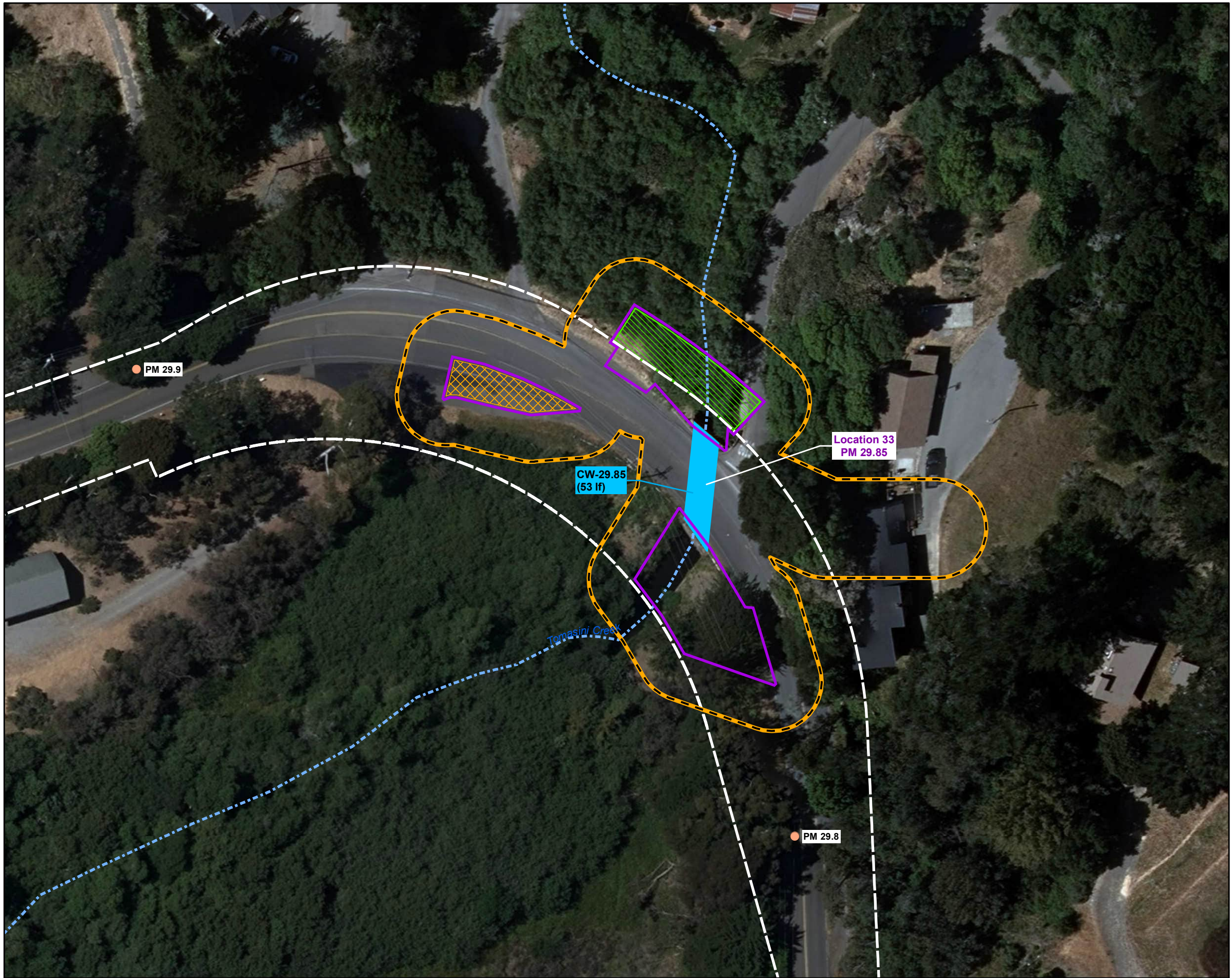


**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 35 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

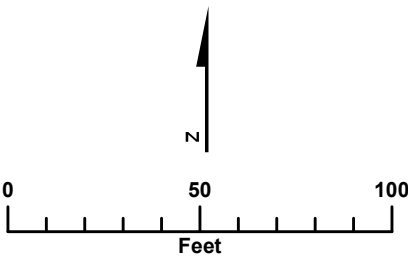




#### LEGEND

- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Temporary Construction Easement (Total = 0.548 acre)
- Staging Area

Source:  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 36 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

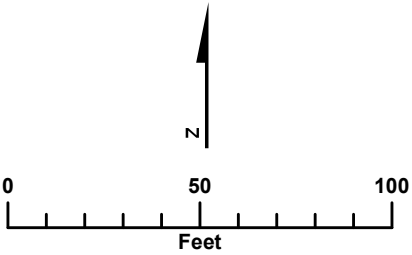




**LEGEND**

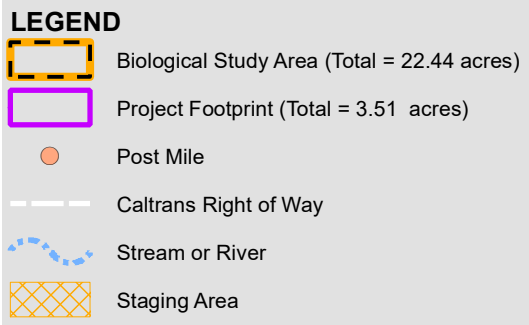
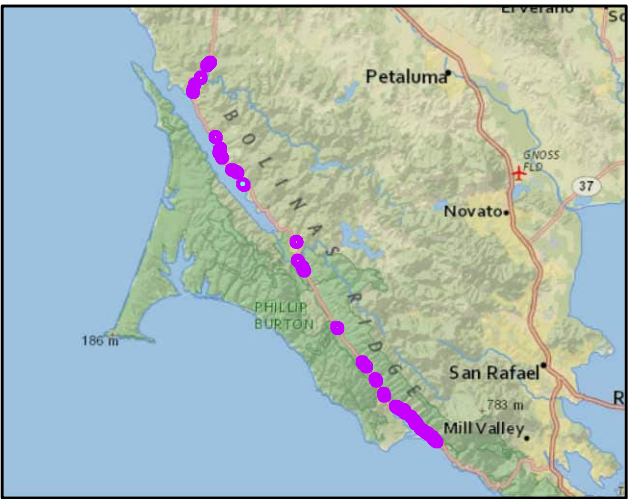
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culvert

**Source:**  
1. Imagery: ESRI, Maxar March 2021

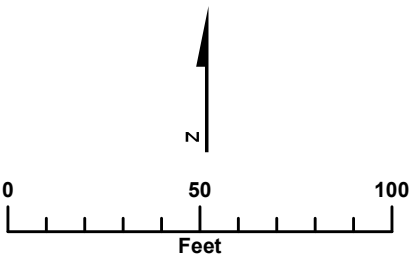


**Figure 1-2**  
**Map 37 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



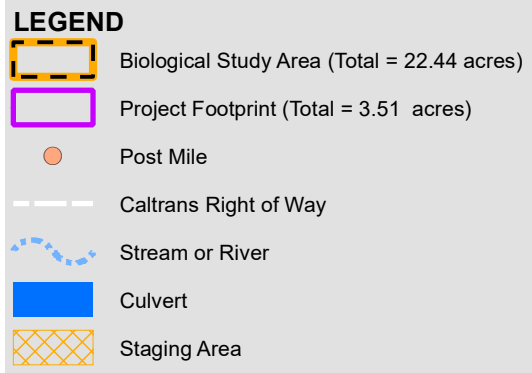


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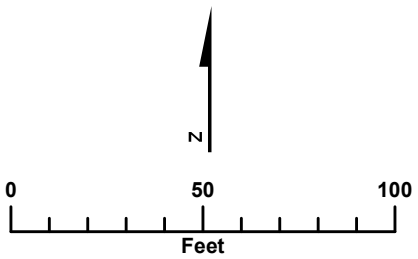


**Figure 1-2**  
**Map 38 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



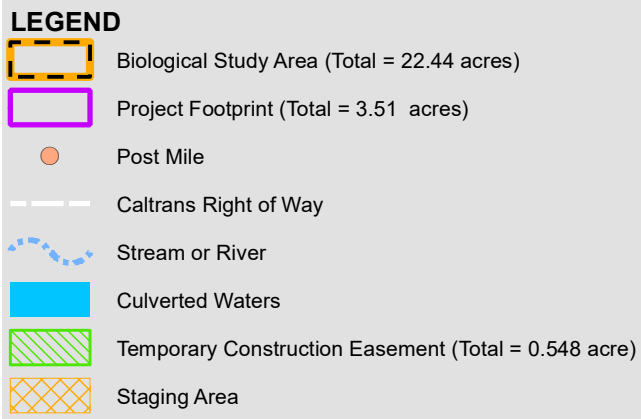
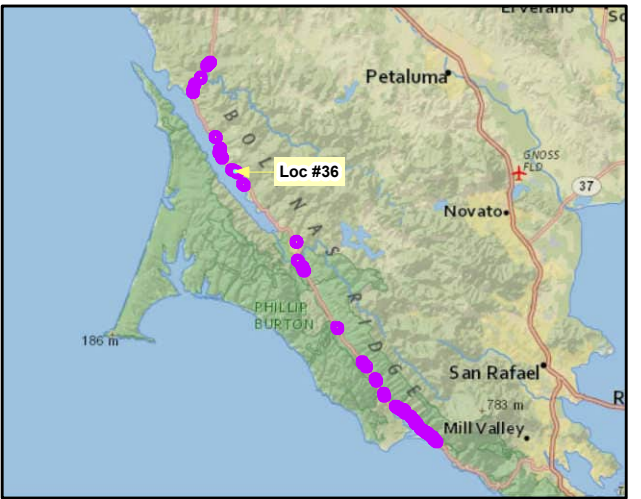


**Source:**  
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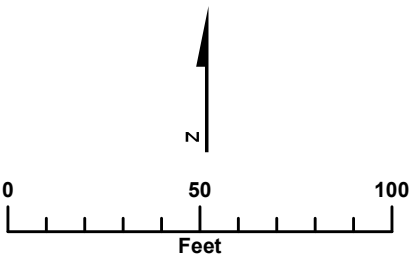


**Figure 1-2**  
**Map 39 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



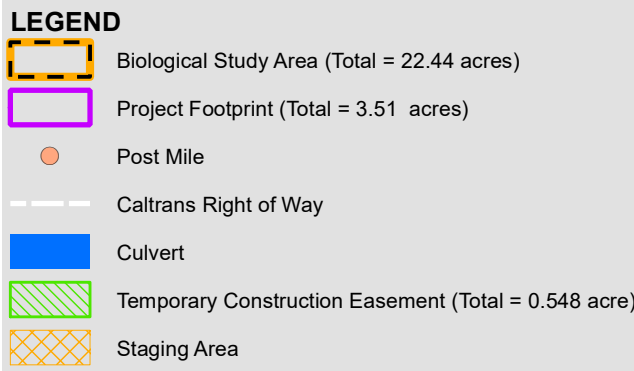
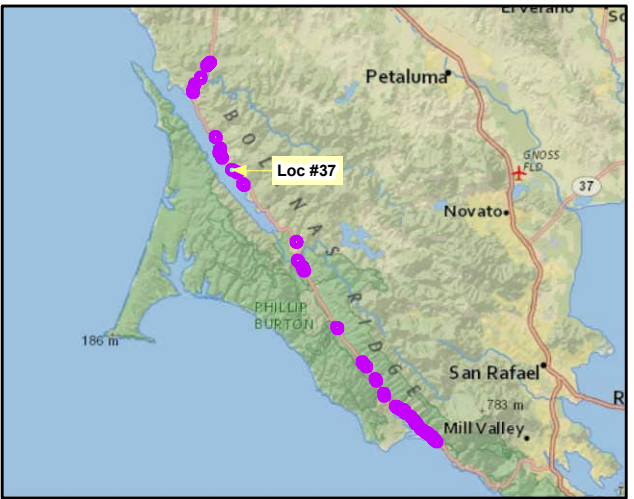


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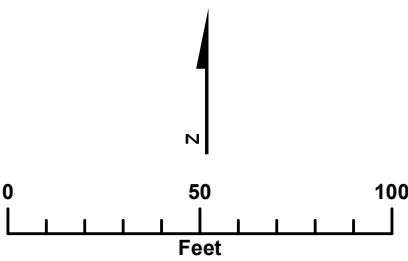


**Figure 1-2**  
**Map 40 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



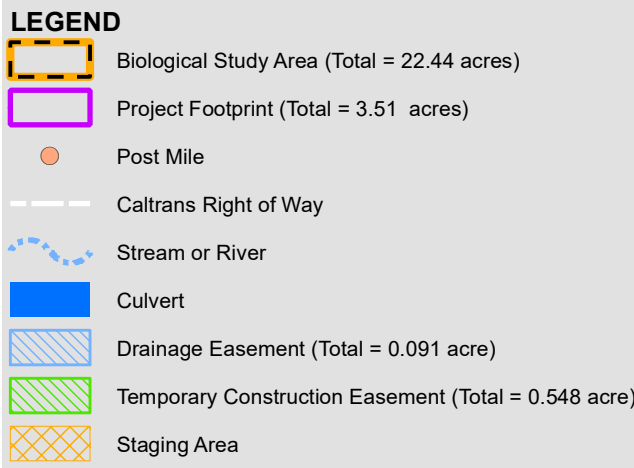


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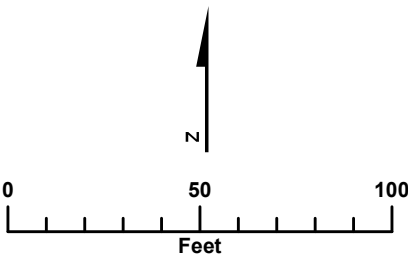


**Figure 1-2**  
**Map 41 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



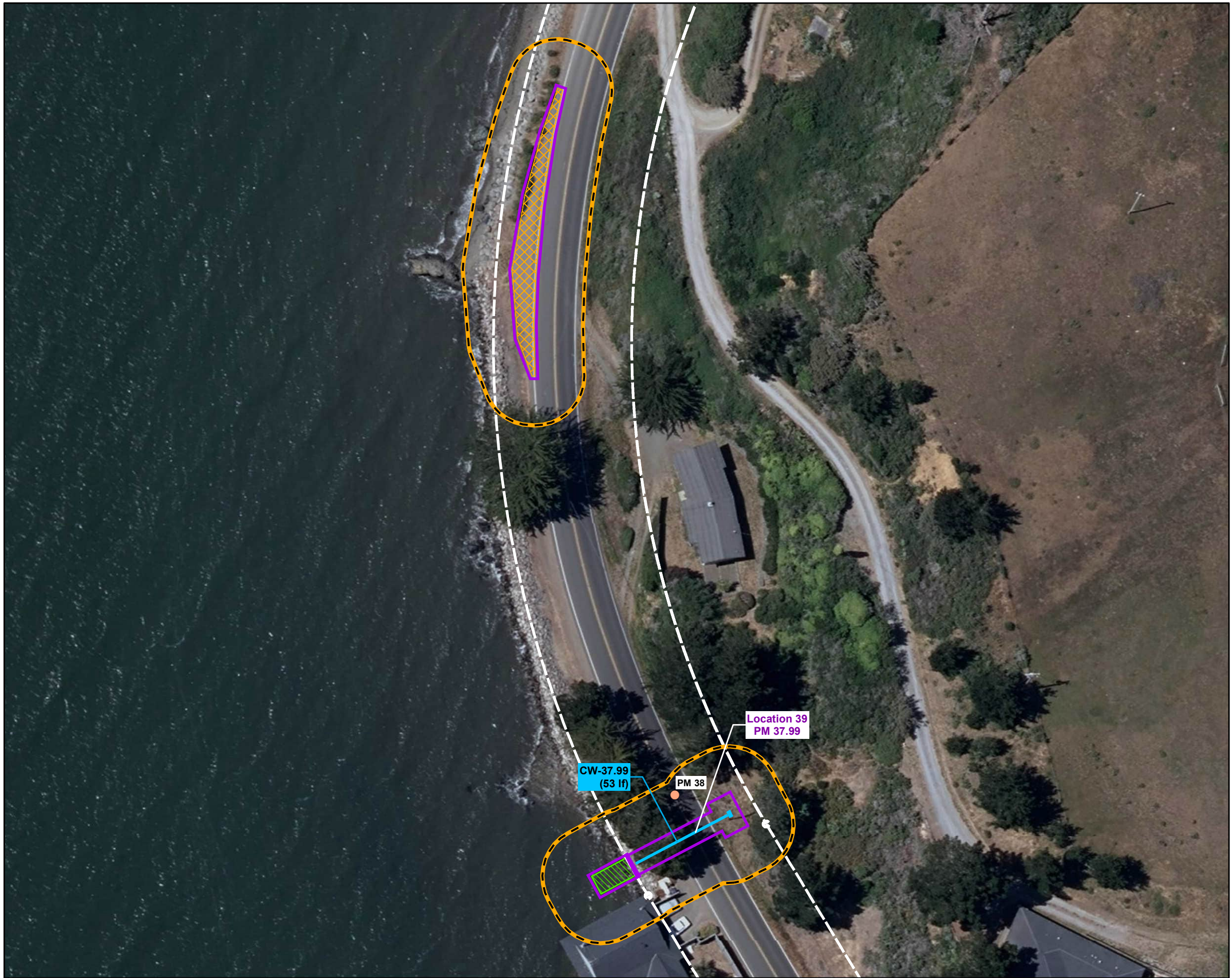


**Source:**  
1. Imagery: ESRI, Maxar March 2021










**Figure 1-2**  
**Map 42 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



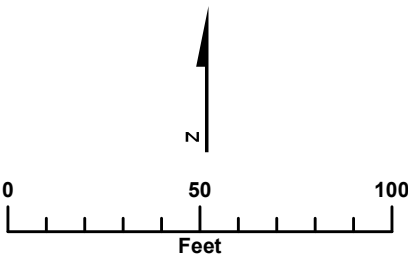


#### LEGEND

-  Biological Study Area (Total = 22.44 acres)
-  Project Footprint (Total = 3.51 acres)
-  Post Mile
-  Caltrans Right of Way
-  Culverted Waters
-  Temporary Construction Easement (Total = 0.548 acre)
-  Staging Area

#### Source:

1. Imagery: ESRI, Maxar March 2021

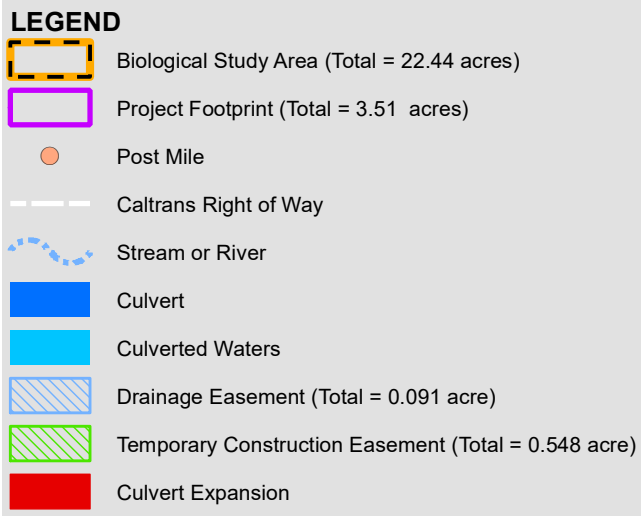


**Figure 1-2**  
**Map 43 of 53**

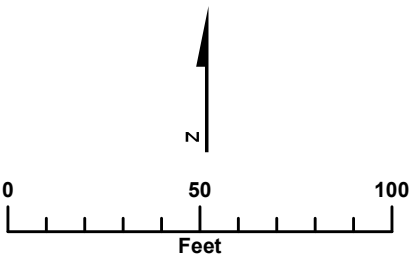
#### Project Components

Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



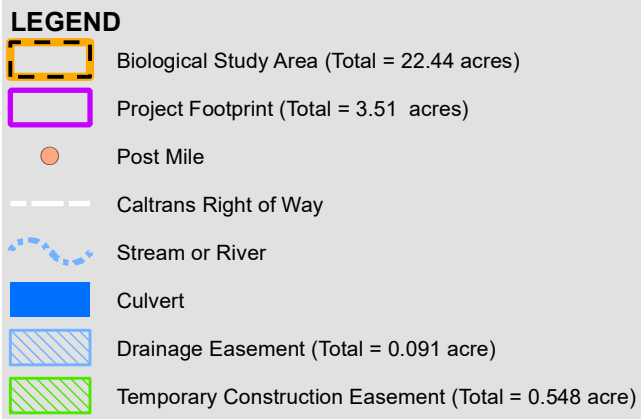
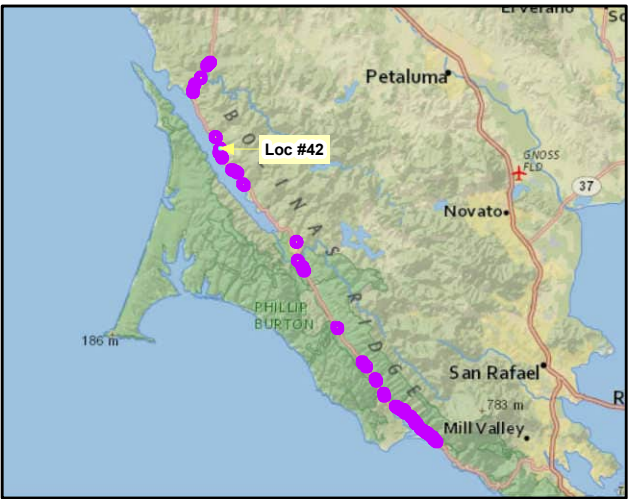
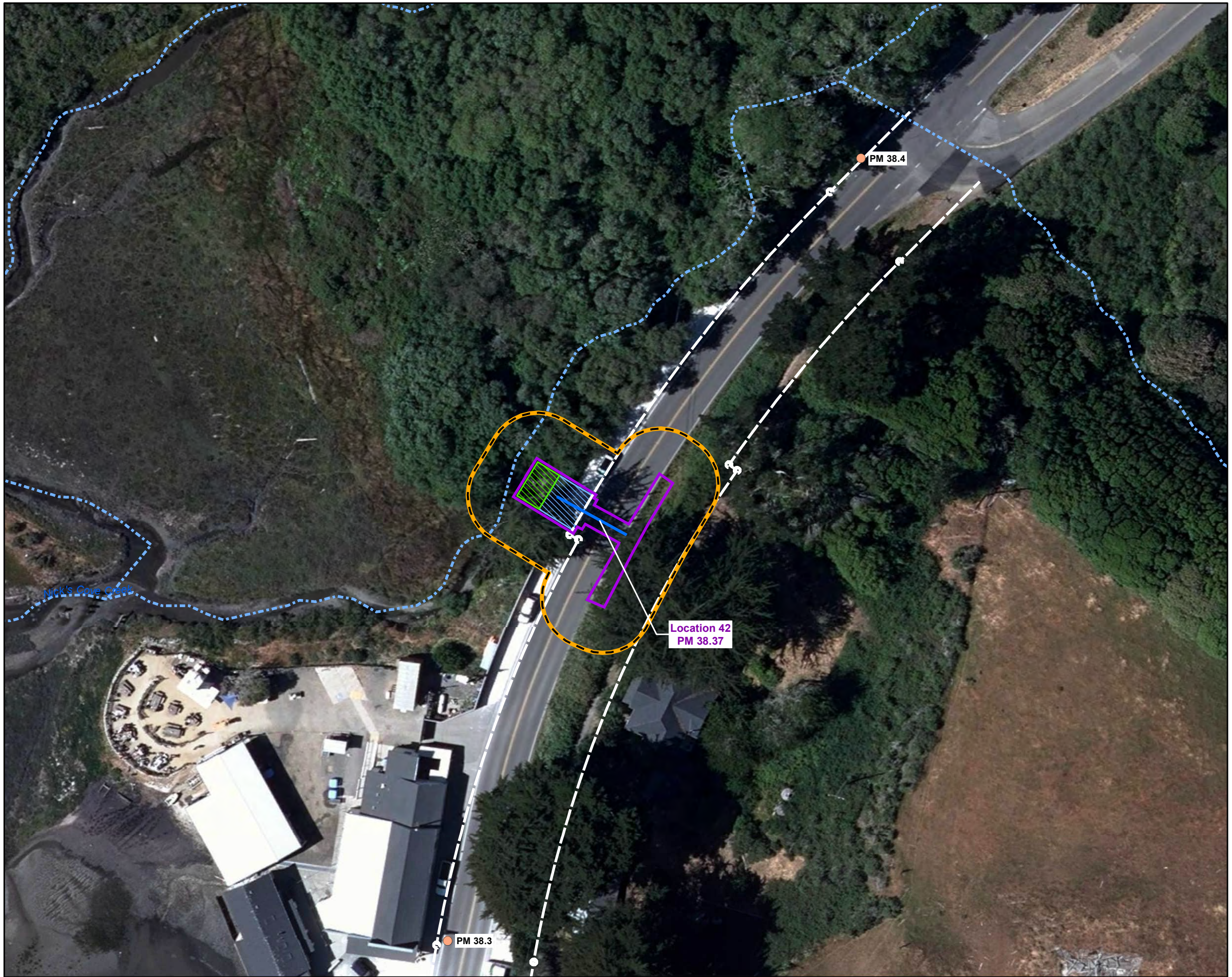


**Source:**  
1. Imagery: ESRI, Maxar March 2021

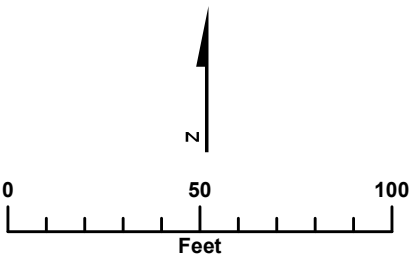


**Figure 1-2**  
**Map 44 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



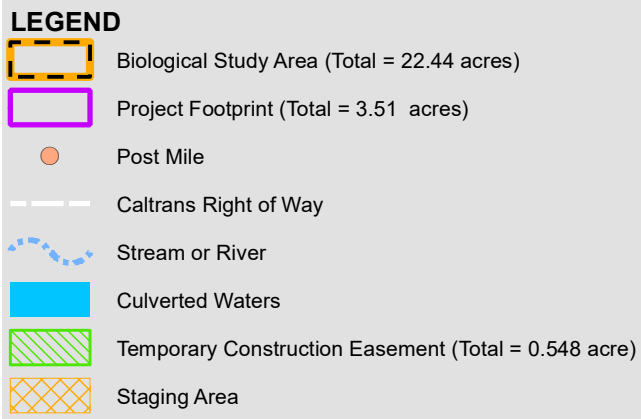
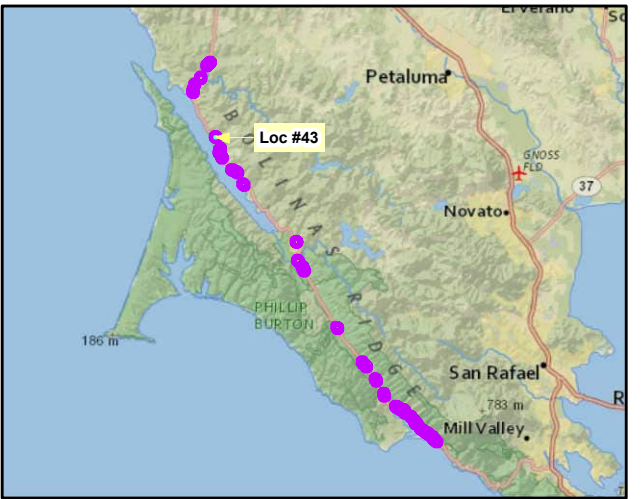


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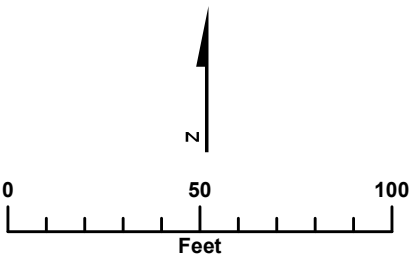


**Figure 1-2**  
**Map 45 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



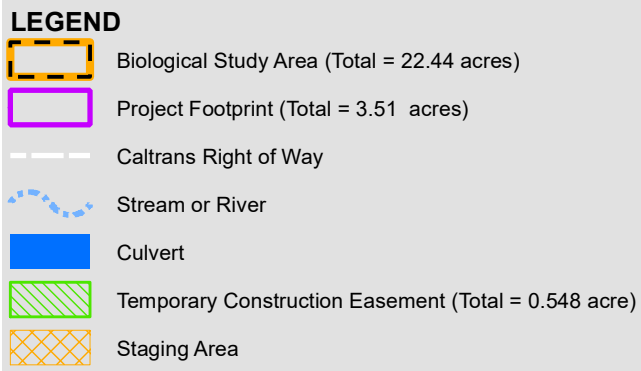
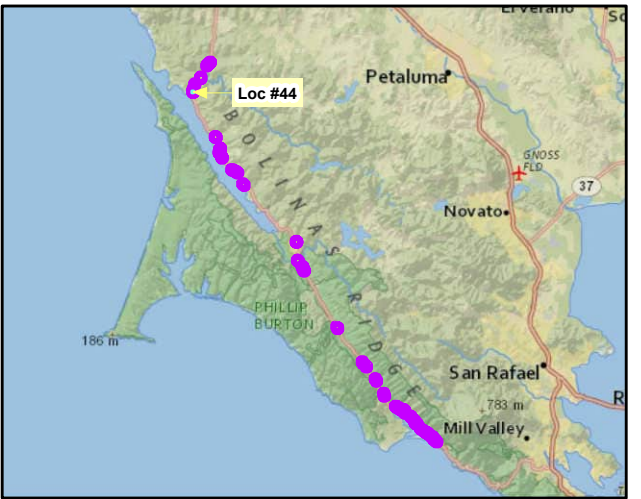


**Source:**  
1. Imagery: ESRI, Maxar March 2021

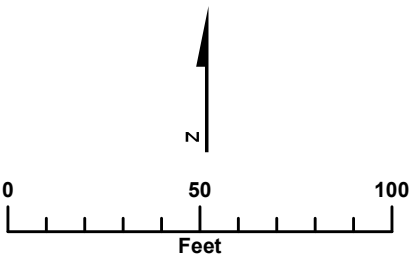


**Figure 1-2**  
**Map 46 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



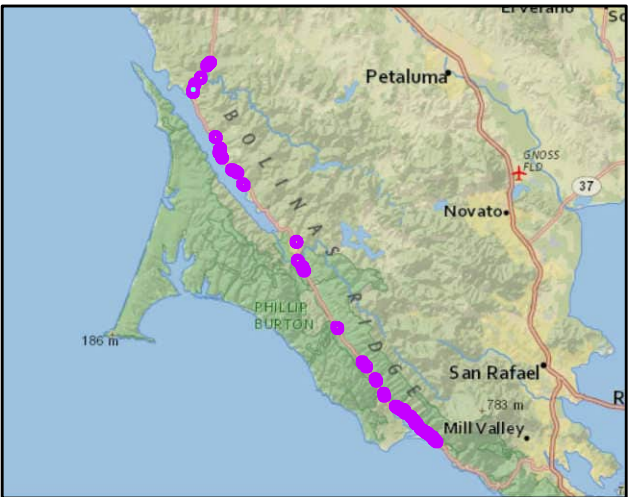


**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 1-2**  
**Map 47 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

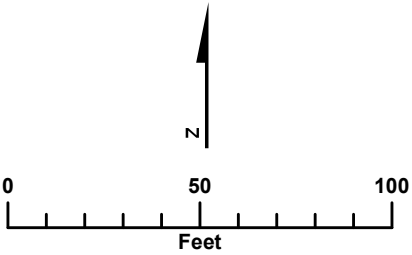




**LEGEND**

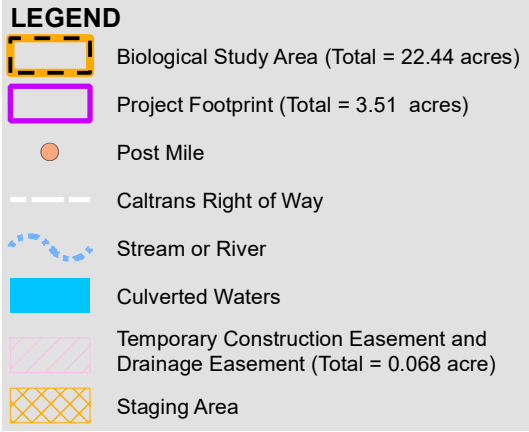
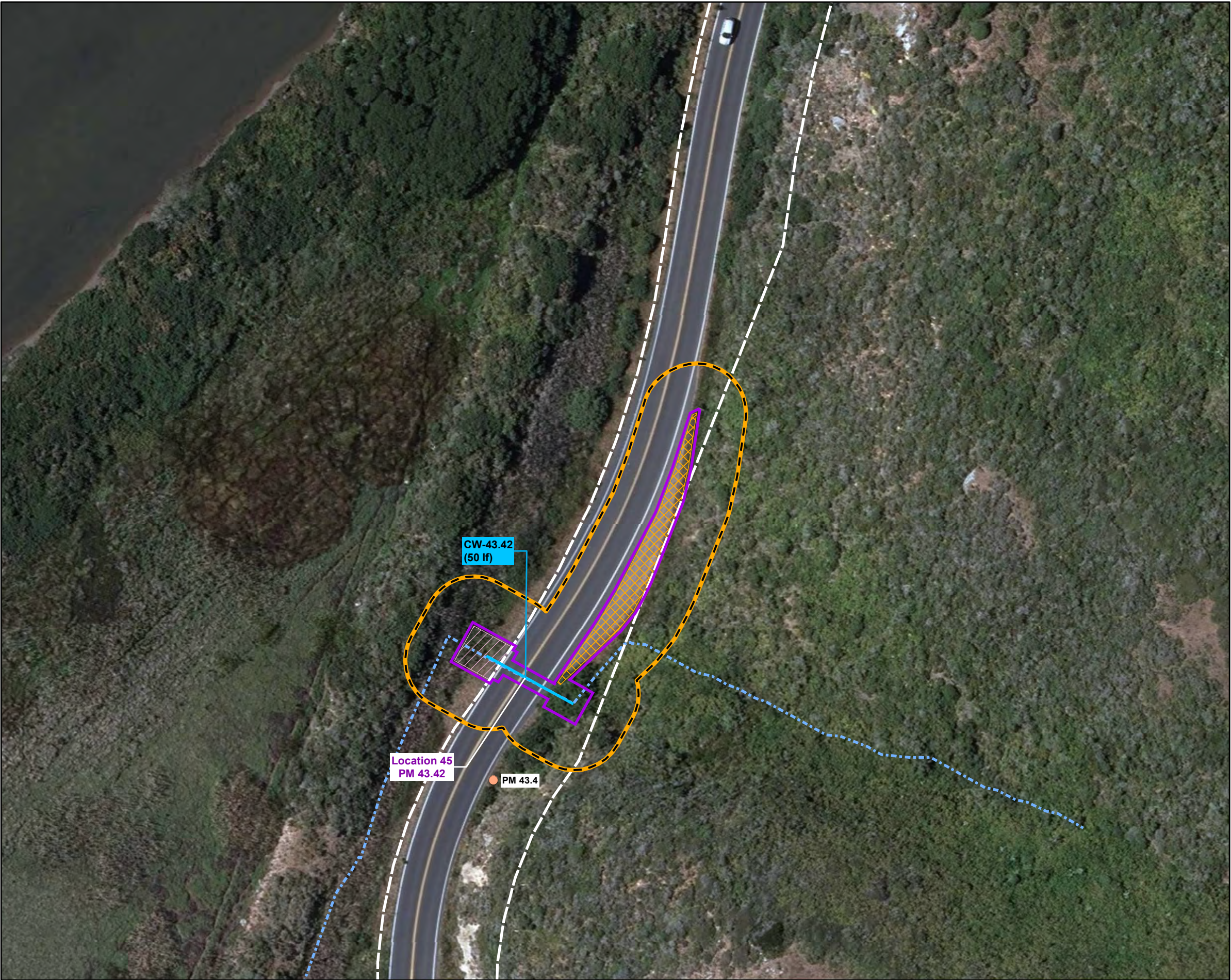
- Biological Study Area (Total = 22.44 acres)
- Project Footprint (Total = 3.51 acres)
- Post Mile
- Caltrans Right of Way
- Staging Area

**Source:**  
1. Imagery: ESRI, Maxar March 2021

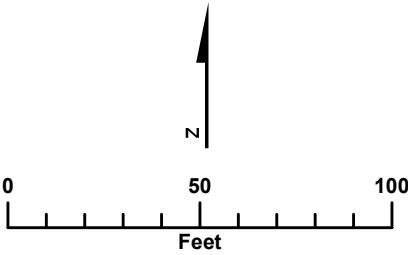


**Figure 1-2**  
**Map 48 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



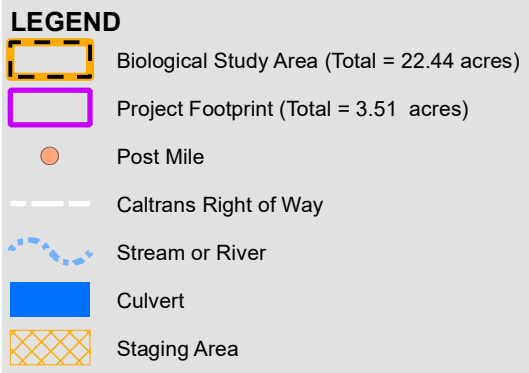
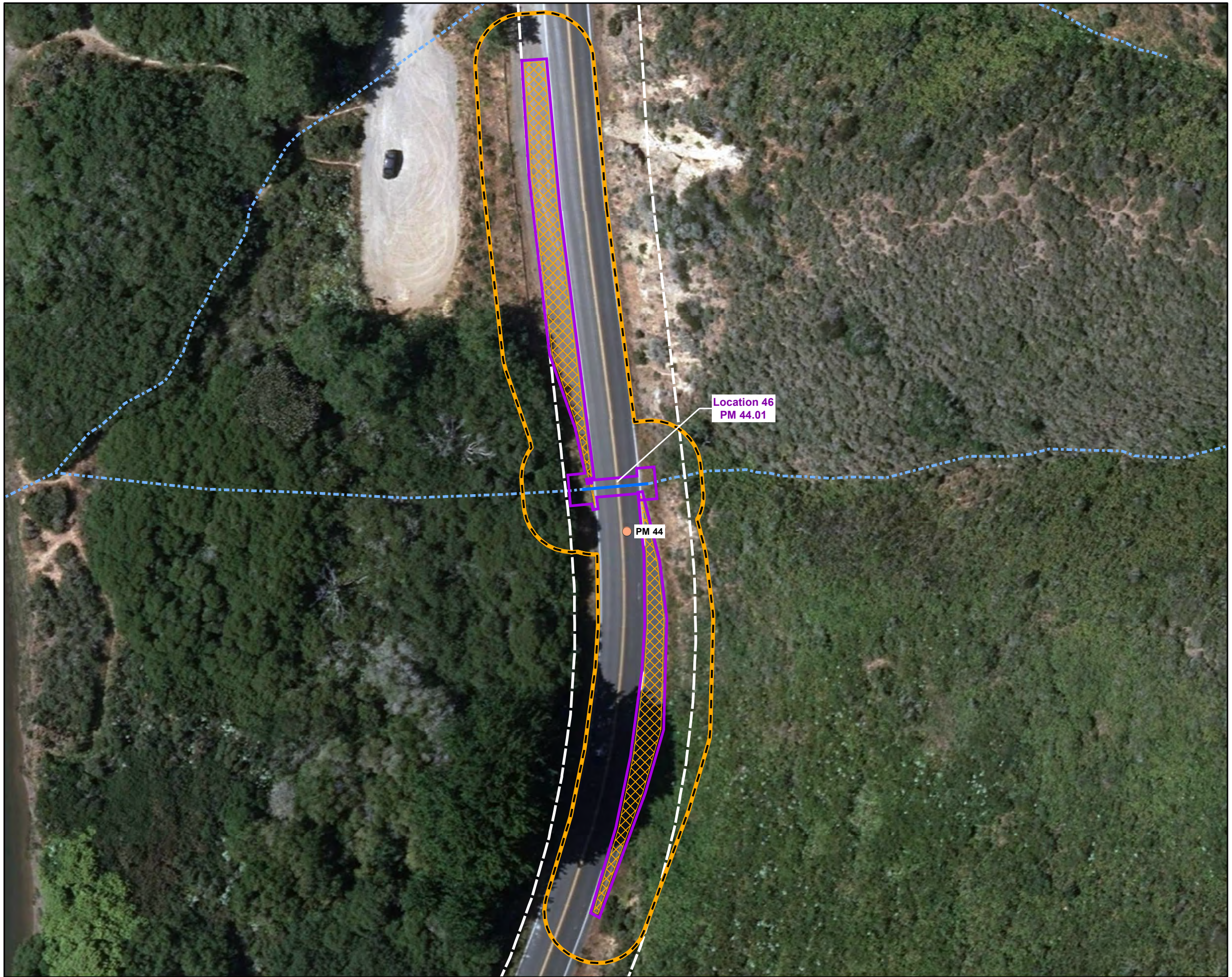


**Source:**  
1. Imagery: ESRI, Maxar March 2021

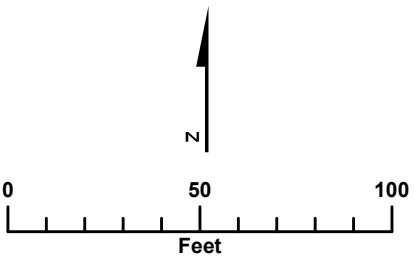


**Figure 1-2**  
**Map 49 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



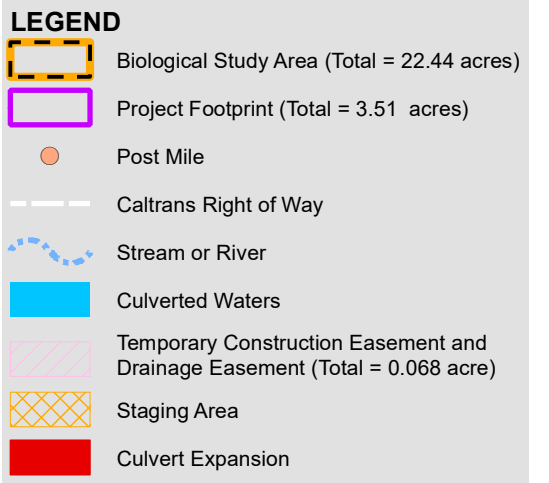
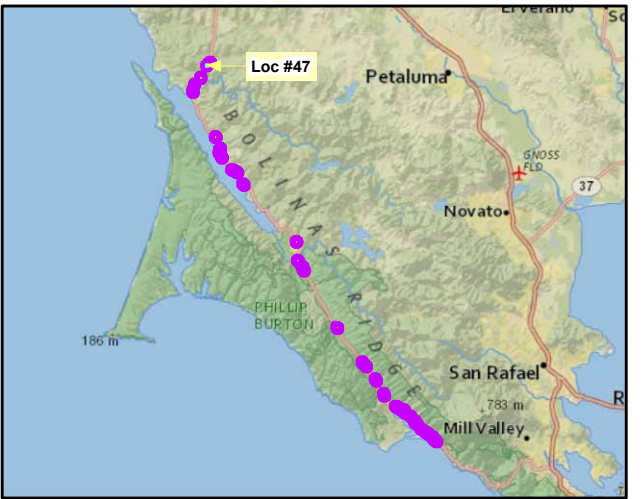
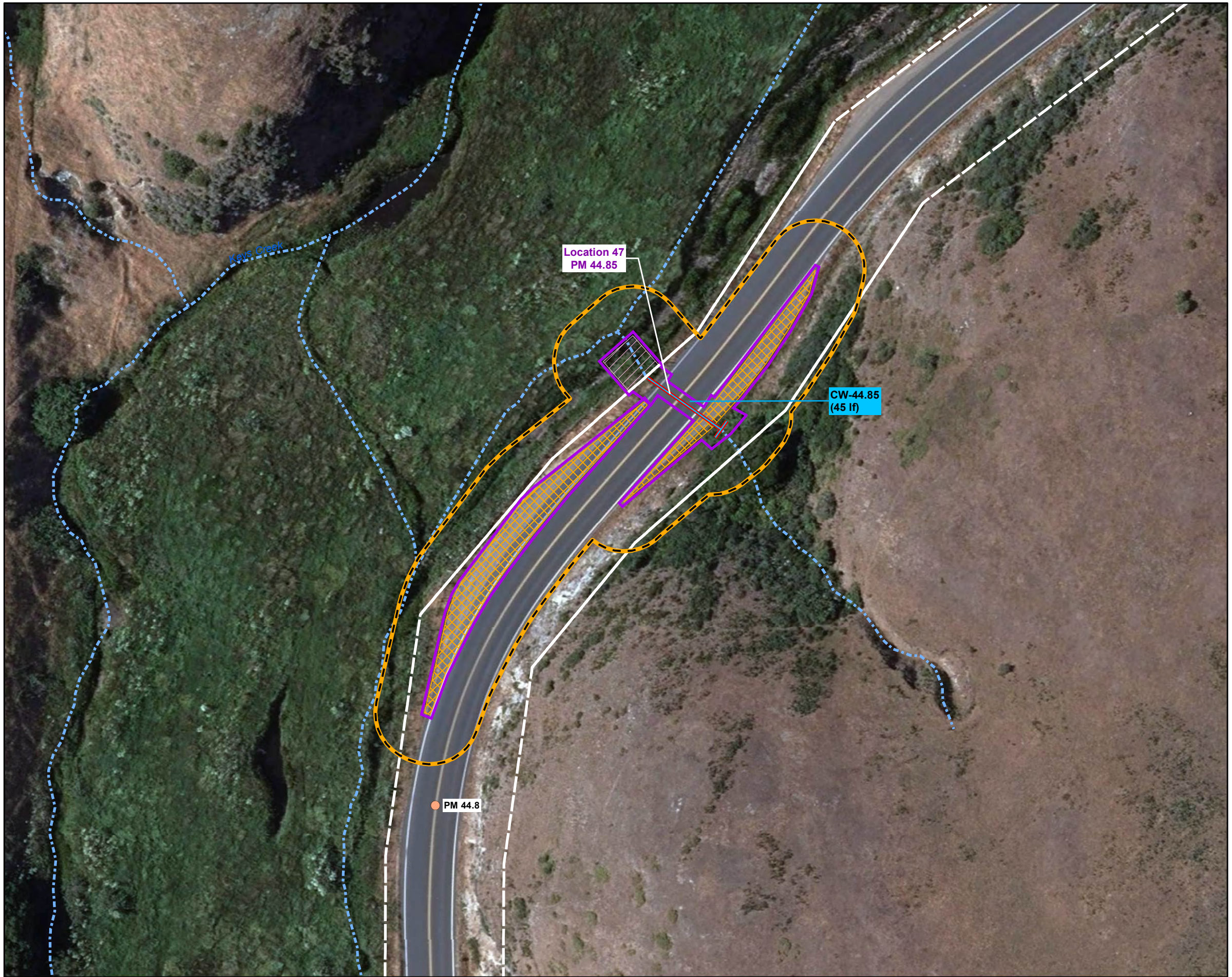


**Source:**  
1. Imagery: ESRI, Maxar March 2021

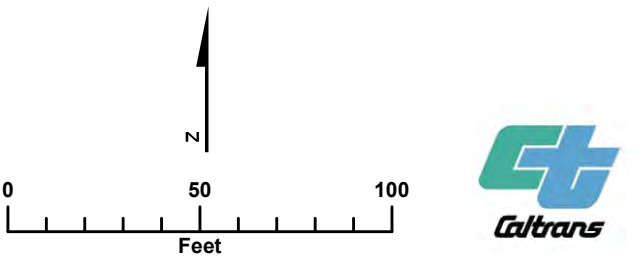


**Figure 1-2**  
**Map 50 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



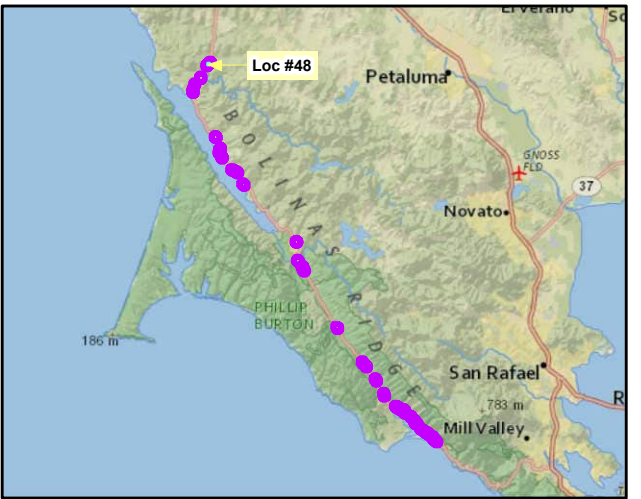
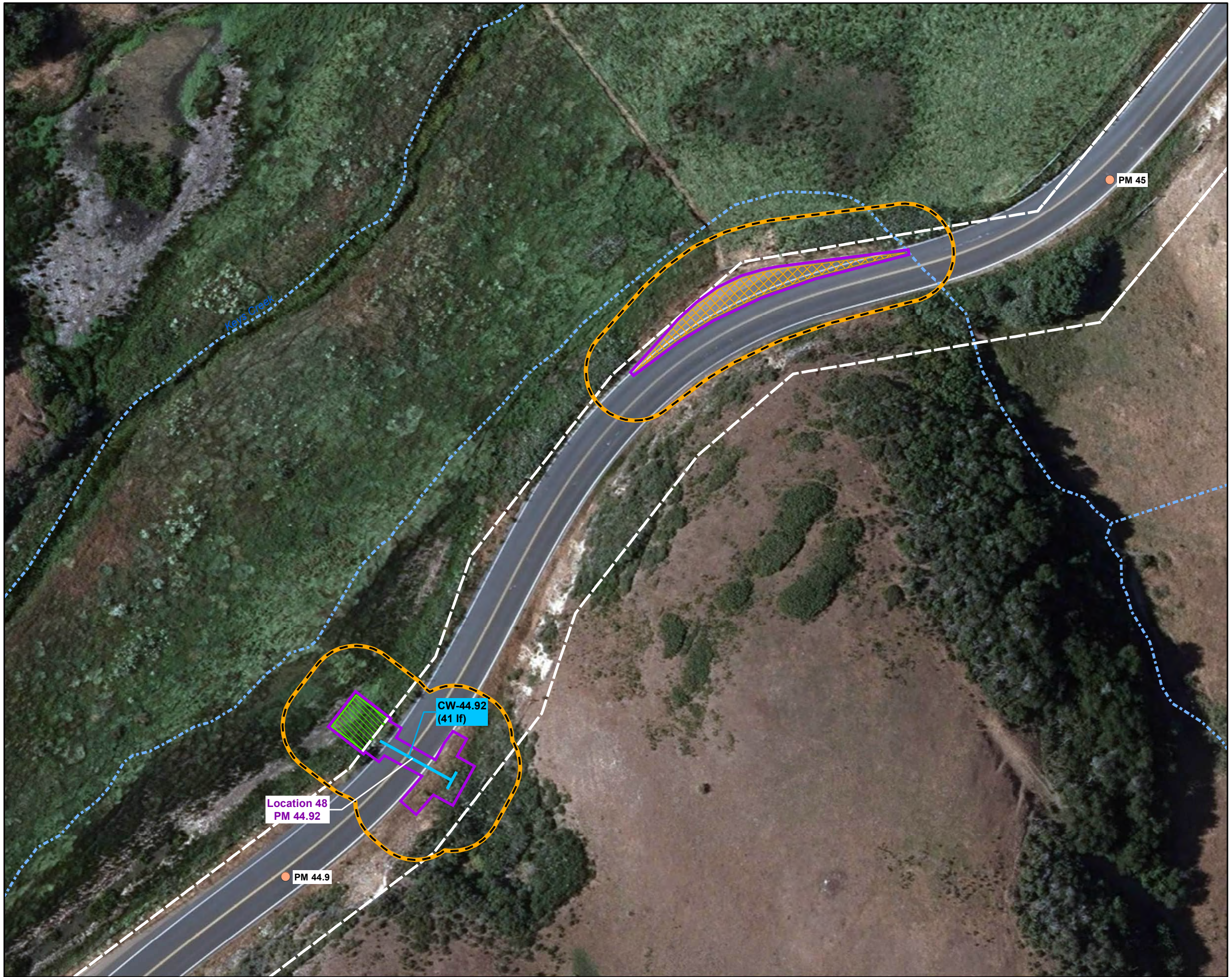


**Source:**  
1. Imagery: ESRI, Maxar March 2021











**Figure 1-2**  
**Map 51 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



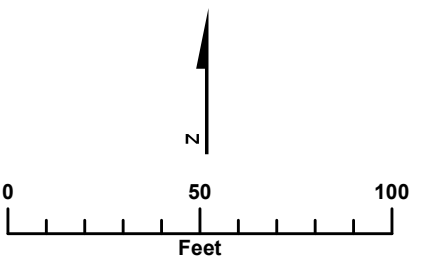


#### LEGEND

-  Biological Study Area (Total = 22.44 acres)
-  Project Footprint (Total = 3.51 acres)
-  Post Mile
-  Caltrans Right of Way
-  Stream or River
-  Culverted Waters
-  Temporary Construction Easement (Total = 0.548 acre)
-  Staging Area

#### Source:

1. Imagery: ESRI, Maxar March 2021



#### Figure 1-2

#### Map 52 of 53

#### Project Components

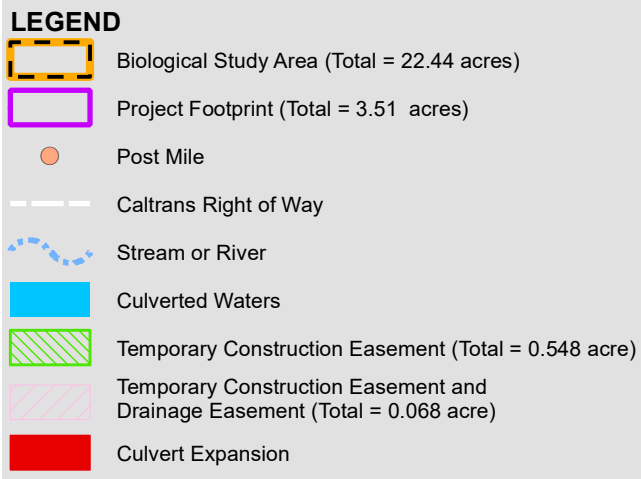
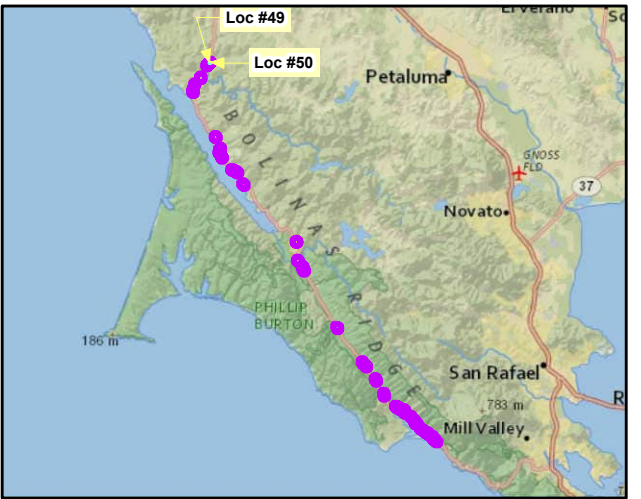
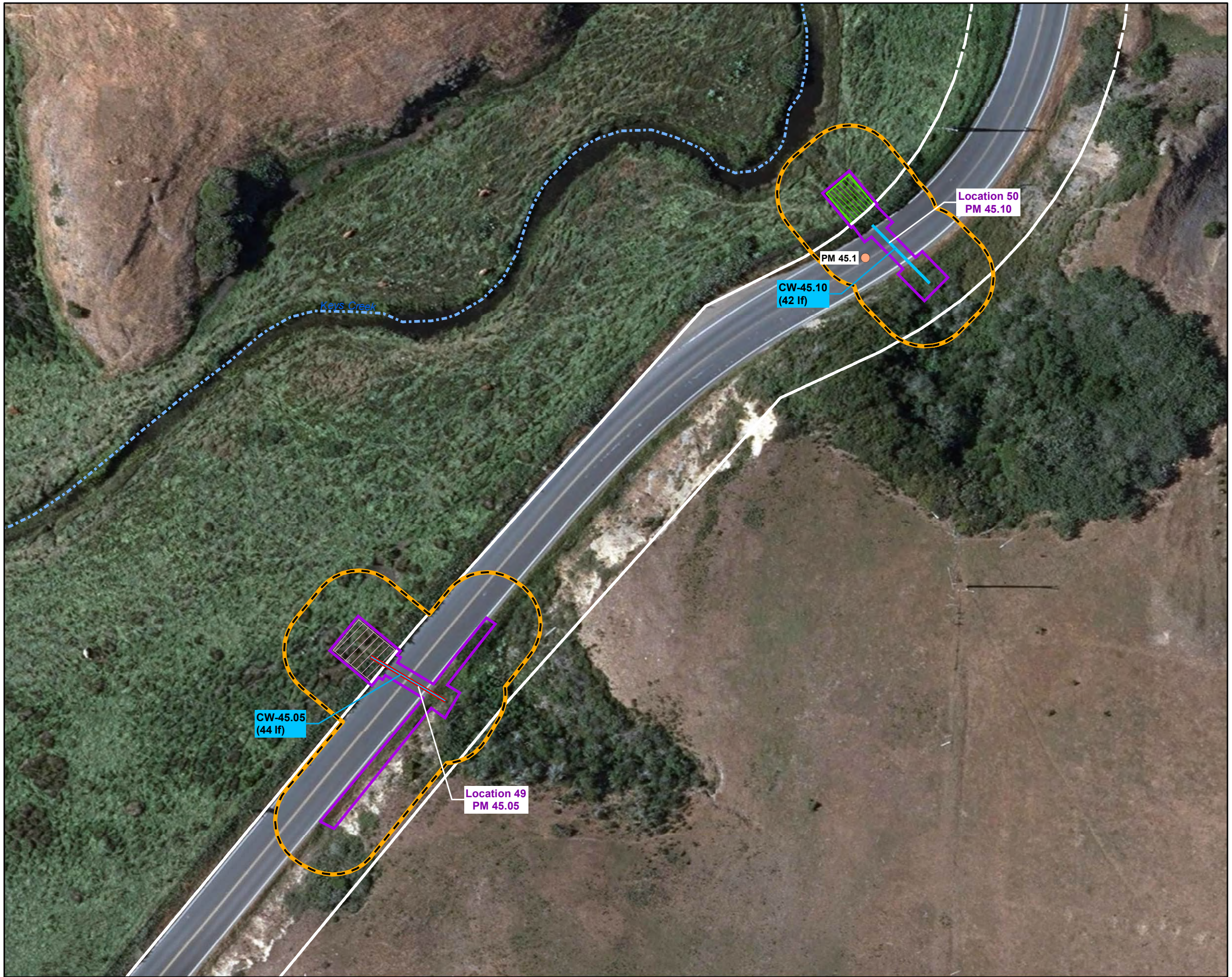
Marin 1 Drainage System Restoration Project

04-2Q53U

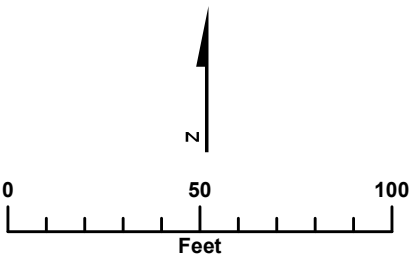
MRN-1 Post Mile 13.05/45.10

Marin County, California





**Source:**  
1. Imagery: ESRI, Maxar March 2021

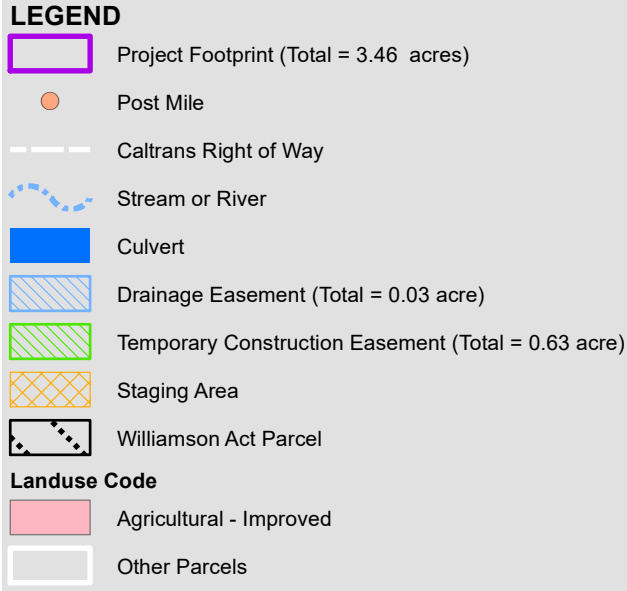
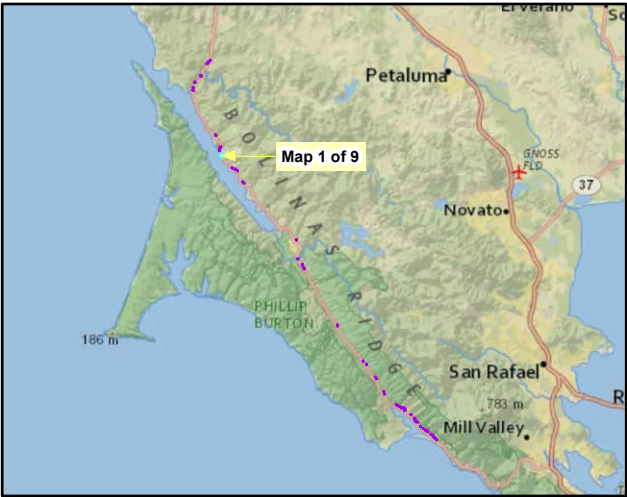
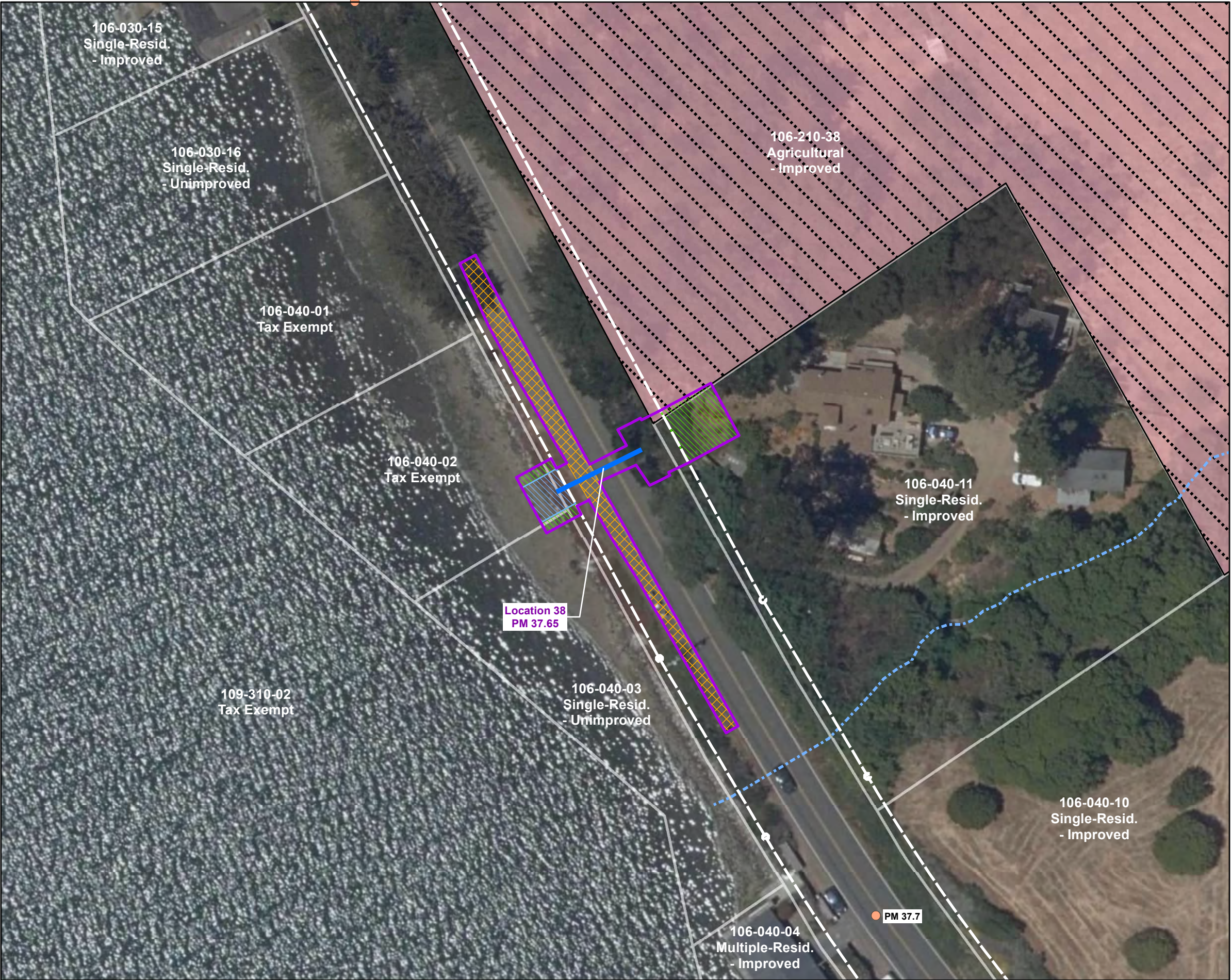


**Figure 1-2**  
**Map 53 of 53**  
**Project Components**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

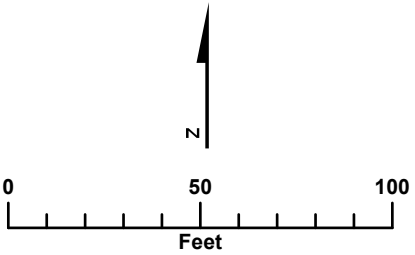






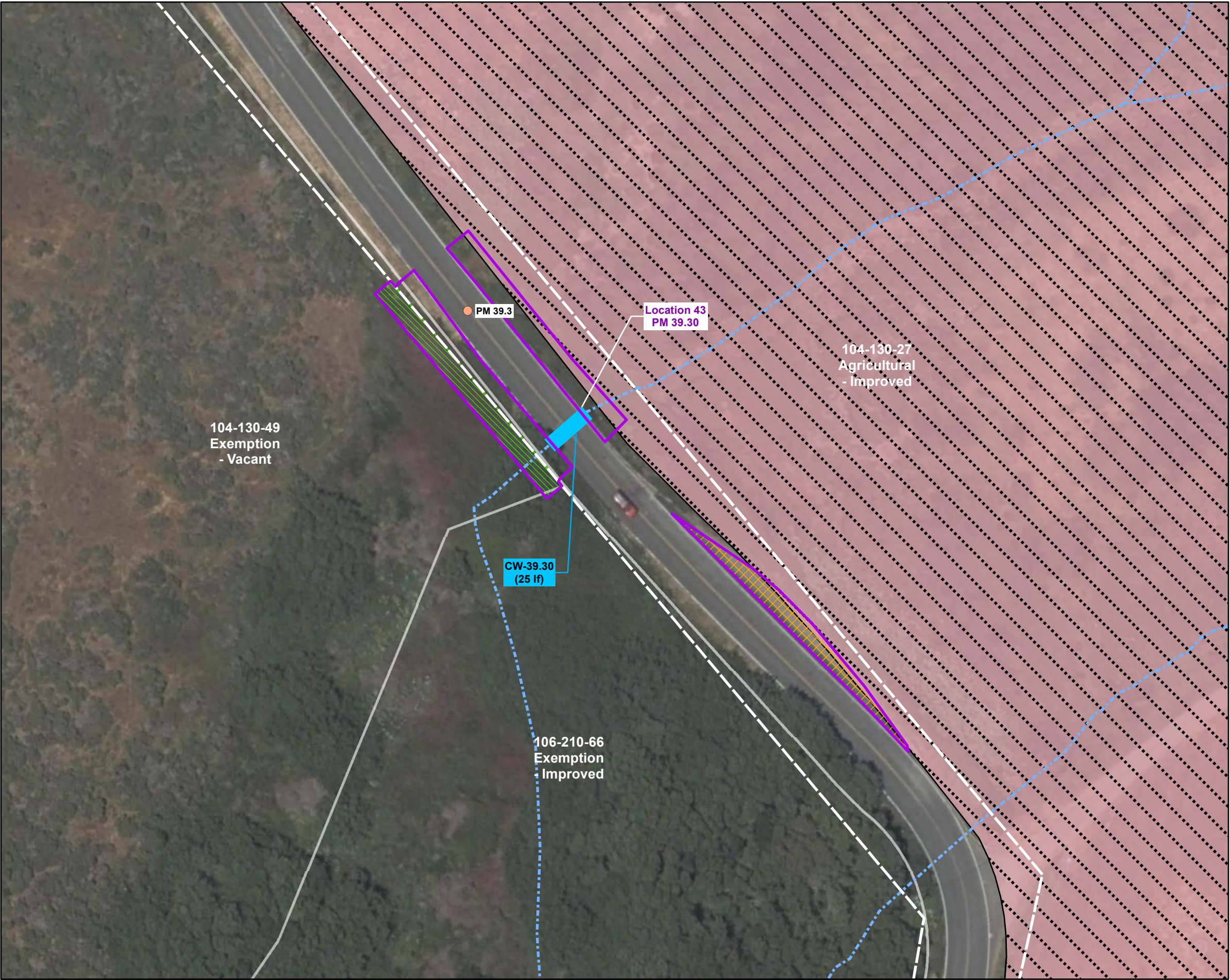


**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 1 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





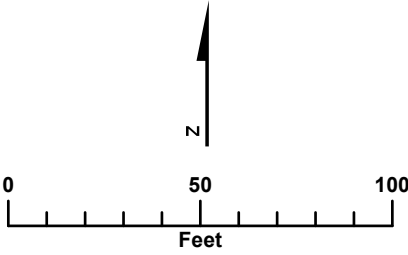
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Temporary Construction Easement (Total = 0.63 acre)
- Staging Area
- Williamson Act Parcel

**Landuse Code**

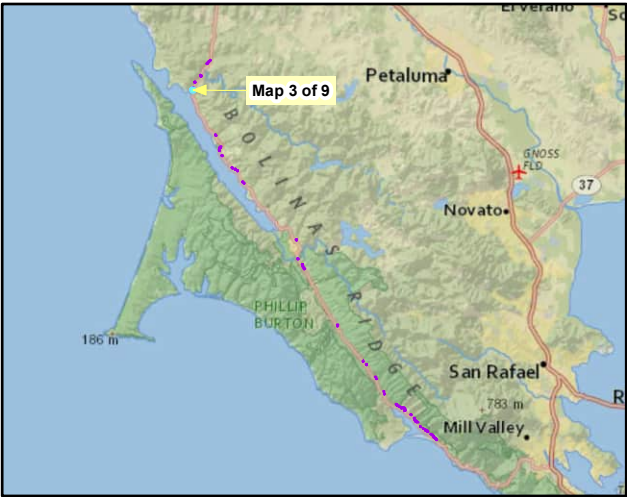
- Agricultural - Improved
- Other Parcels

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 2 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





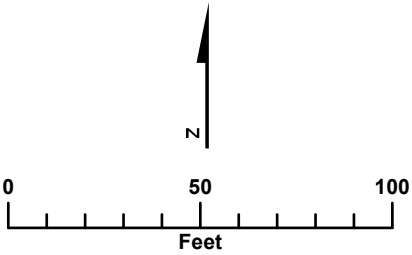
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Caltrans Right of Way
- Stream or River
- Culvert
- Temporary Construction Easement (Total = 0.63 acre)
- Staging Area
- Williamson Act Parcel

**Landuse Code**

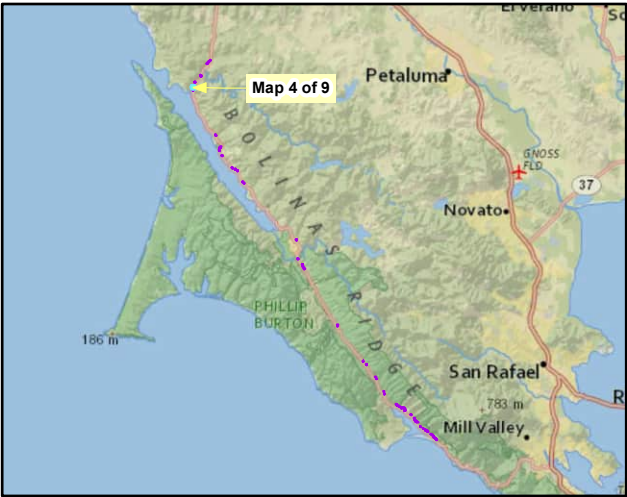
- Agricultural - Improved
- Other Parcels

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 3 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





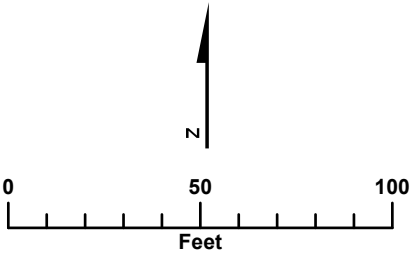
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Staging Area
- Williamson Act Parcel

**Landuse Code**

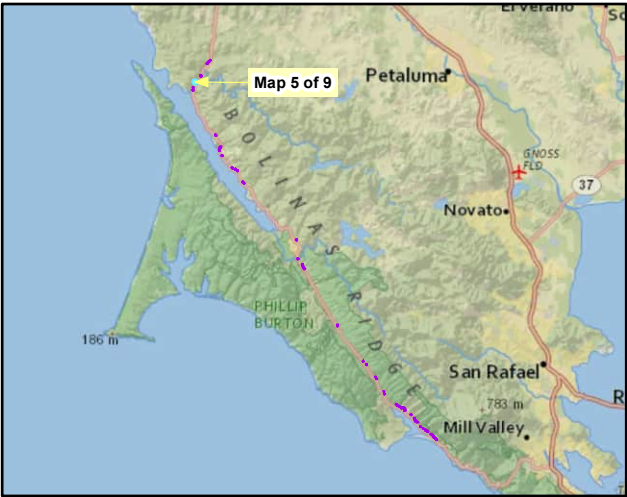
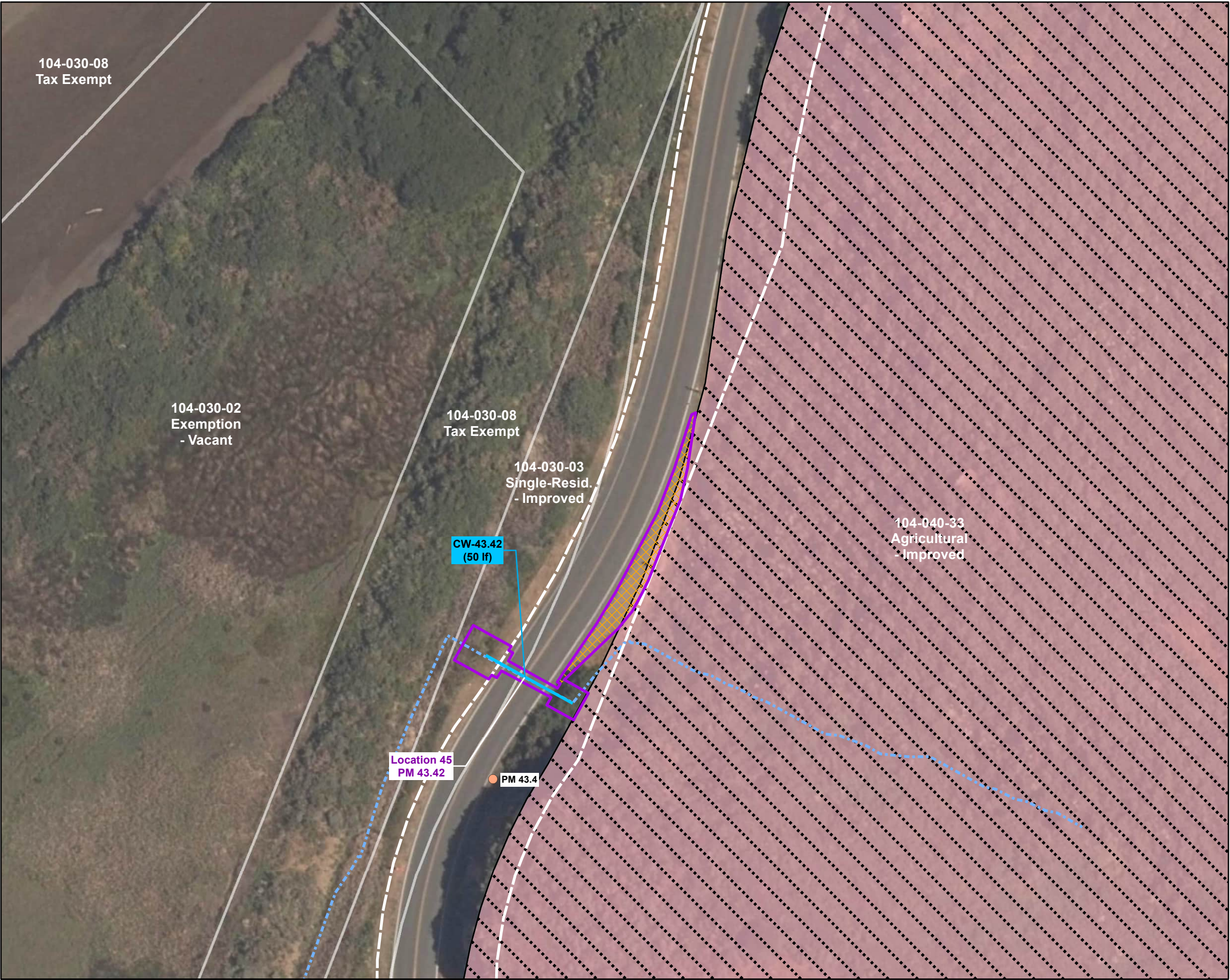
- Agricultural - Improved
- Other Parcels

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 4 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California

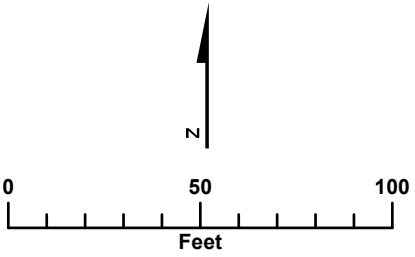




**LEGEND**

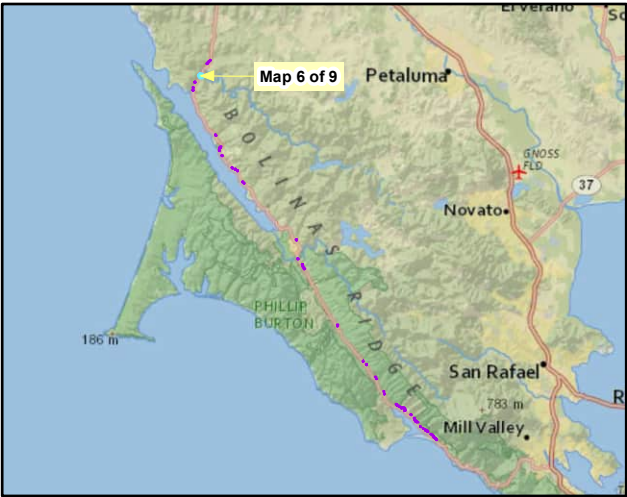
- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Staging Area
- Williamson Act Parcel
- Landuse Code**
  - Agricultural - Improved
  - Other Parcels

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 5 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





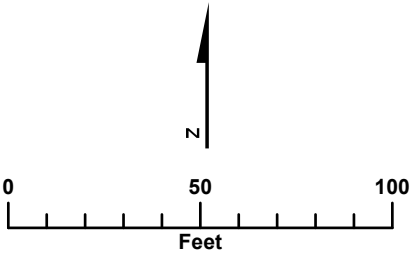
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culvert
- Staging Area
- Williamson Act Parcel

**Landuse Code**

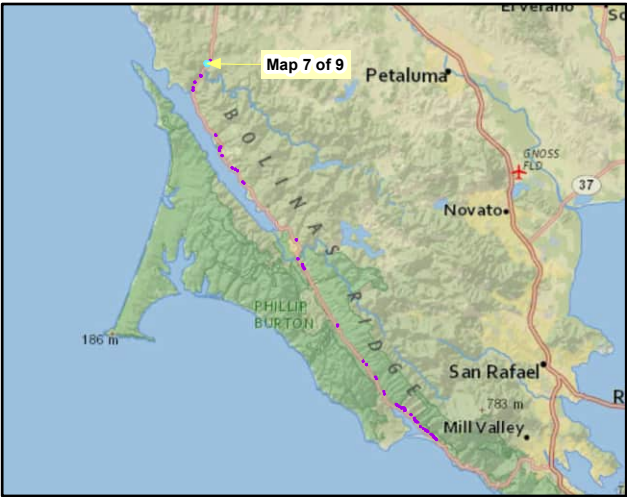
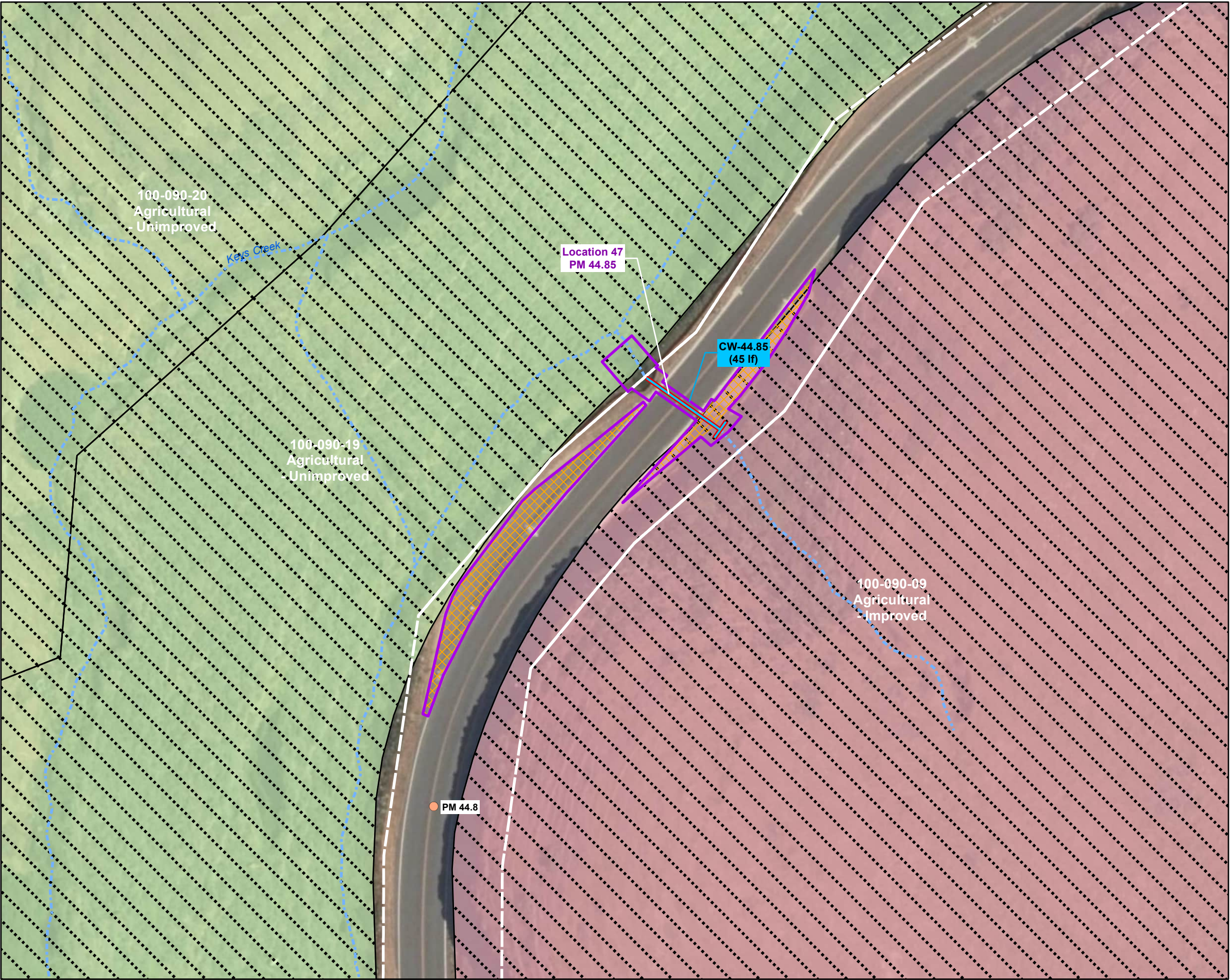
- Agricultural - Improved
- Other Parcels

Source:  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 6 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





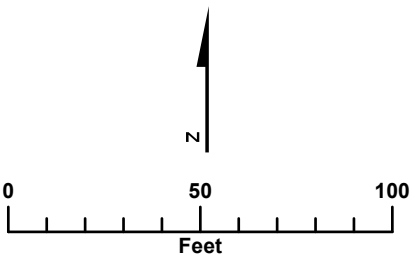
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Staging Area
- Culvert Expansion
- Williamson Act Parcel

**Landuse Code**

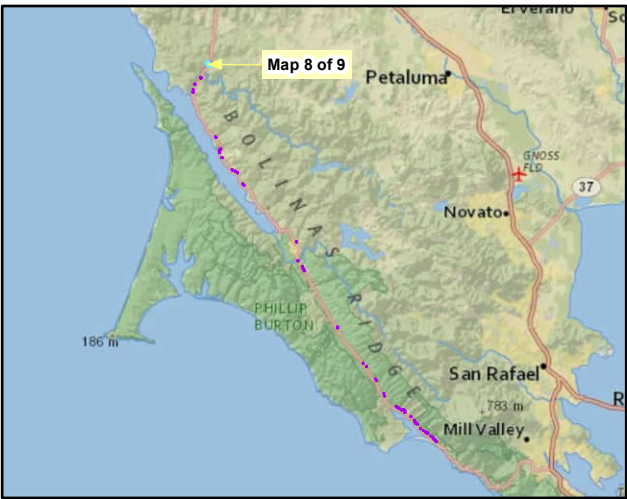
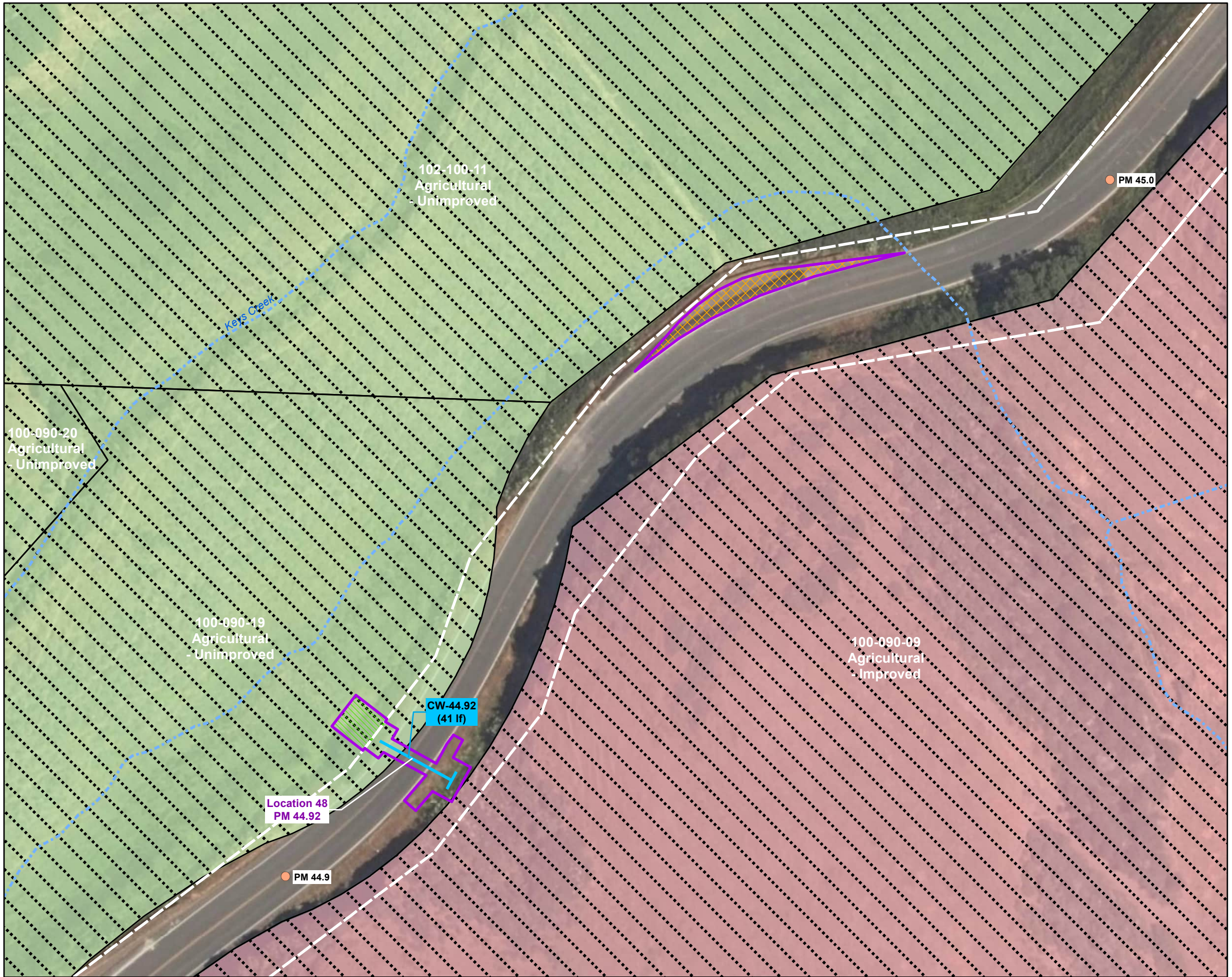
- Agricultural - Improved
- Agricultural - Unimproved

Source:  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 7 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





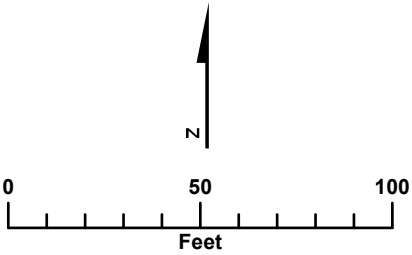
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Temporary Construction Easement (Total = 0.63 acre)
- Staging Area
- Williamson Act Parcel

**Landuse Code**

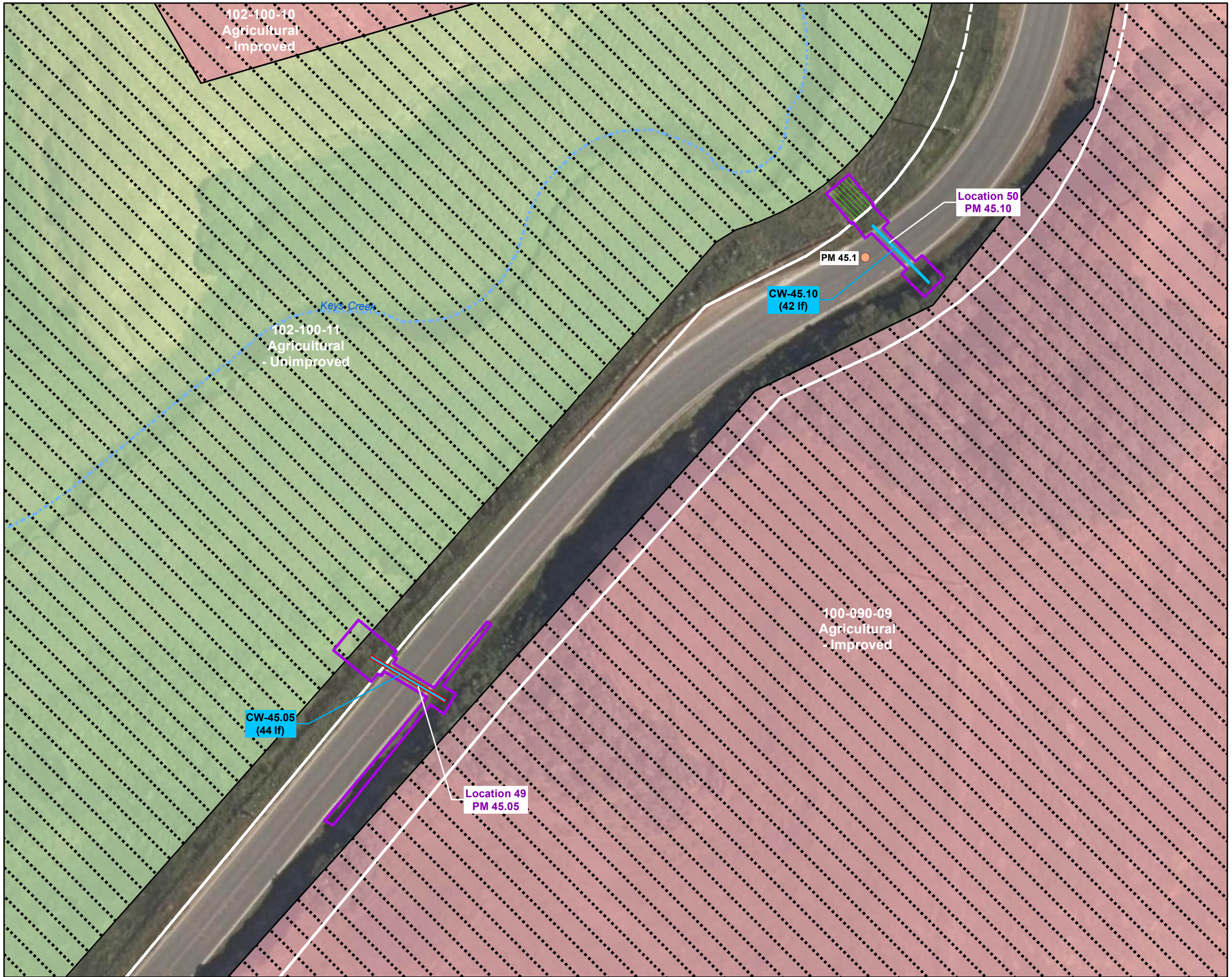
- Agricultural - Improved
- Agricultural - Unimproved

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 8 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





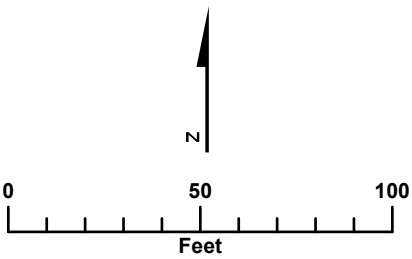
**LEGEND**

- Project Footprint (Total = 3.46 acres)
- Post Mile
- Caltrans Right of Way
- Stream or River
- Culverted Waters
- Temporary Construction Easement (Total = 0.63 acre)
- Culvert Expansion
- Williamson Act Parcel

**Landuse Code**

- Agricultural - Improved
- Agricultural - Unimproved

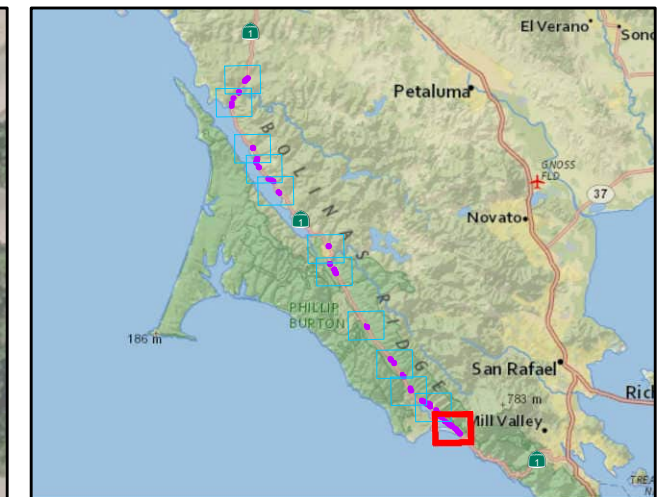
**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.2-1**  
**Map 9 of 9**  
**Farmlands and Williamson Act Lands**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California







**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Bolinis Lagoon

Bolinis-Stinson School (Stinson)

Golden Gate National Recreational Area

Mt. Tamalpais State Park

Stinson Beach Facility

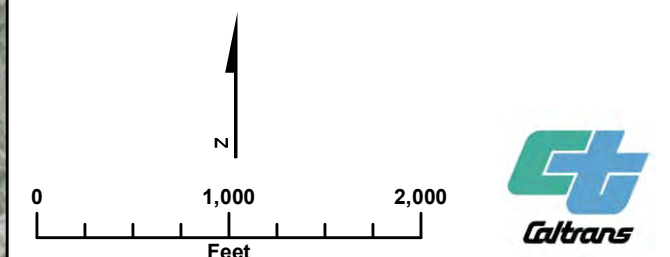
Upton Beach

Village Green

**Trails**

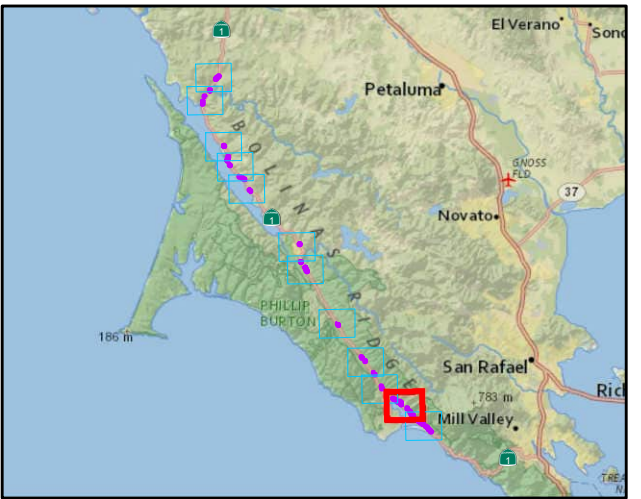
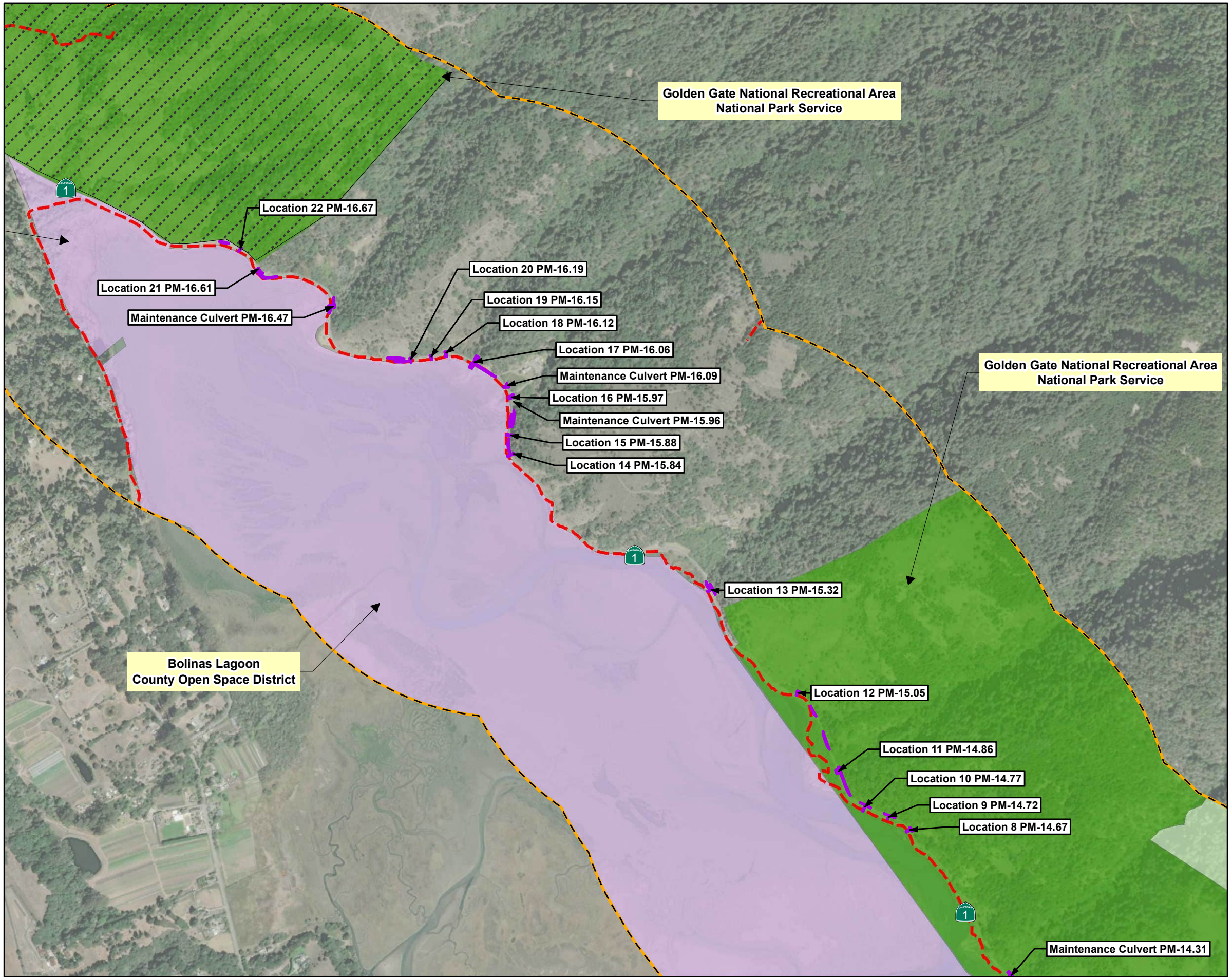
Existing Trail

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 01 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





#### LEGEND

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

#### Section 4(f) Resource

##### Parks

Bolinas Lagoon

Golden Gate National Recreational Area

Mt. Tamalpais State Park

##### Trails

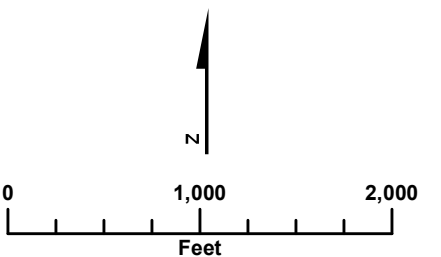
Existing Trail

##### Historic Resource

Olema Historic District

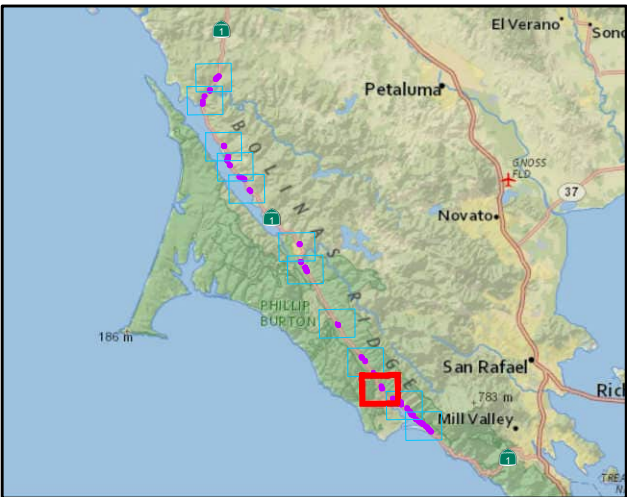
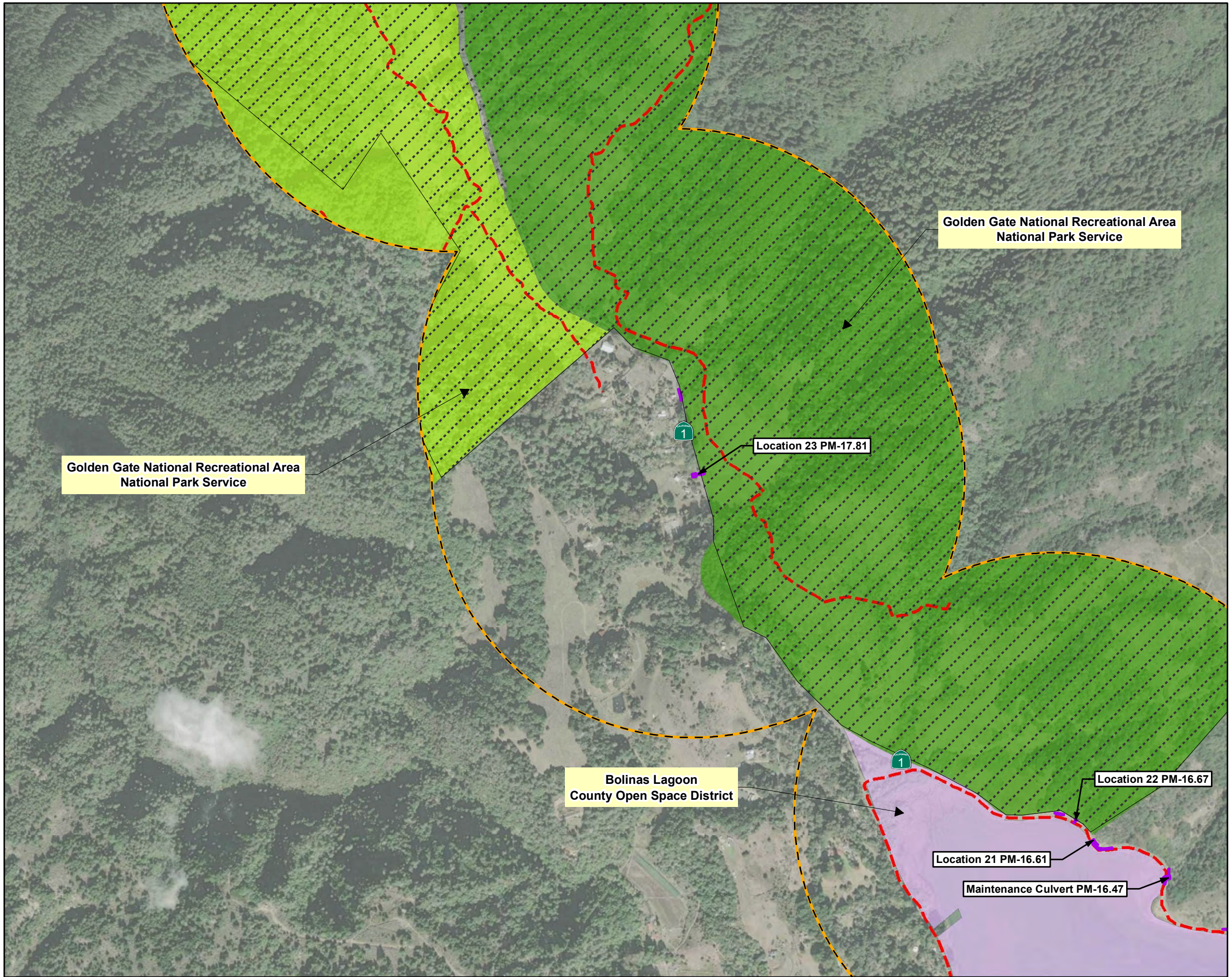
#### Source:

1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 02 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Bolinas Lagoon

Golden Gate National Recreational Area

Point Reyes National Seashore

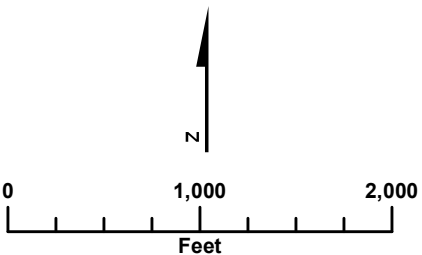
**Trails**

Existing Trail

**Historic Resource**

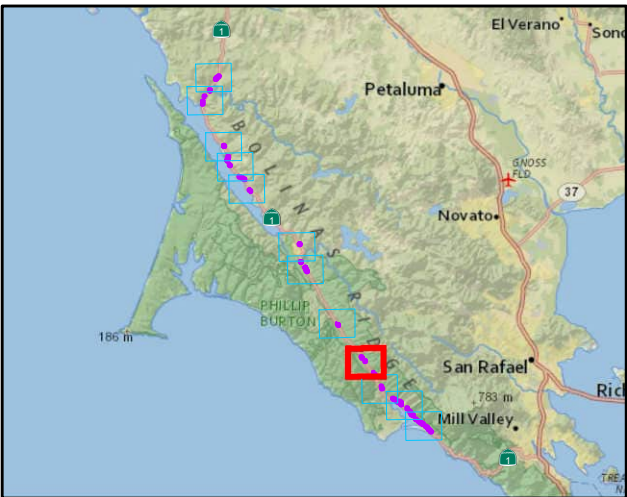
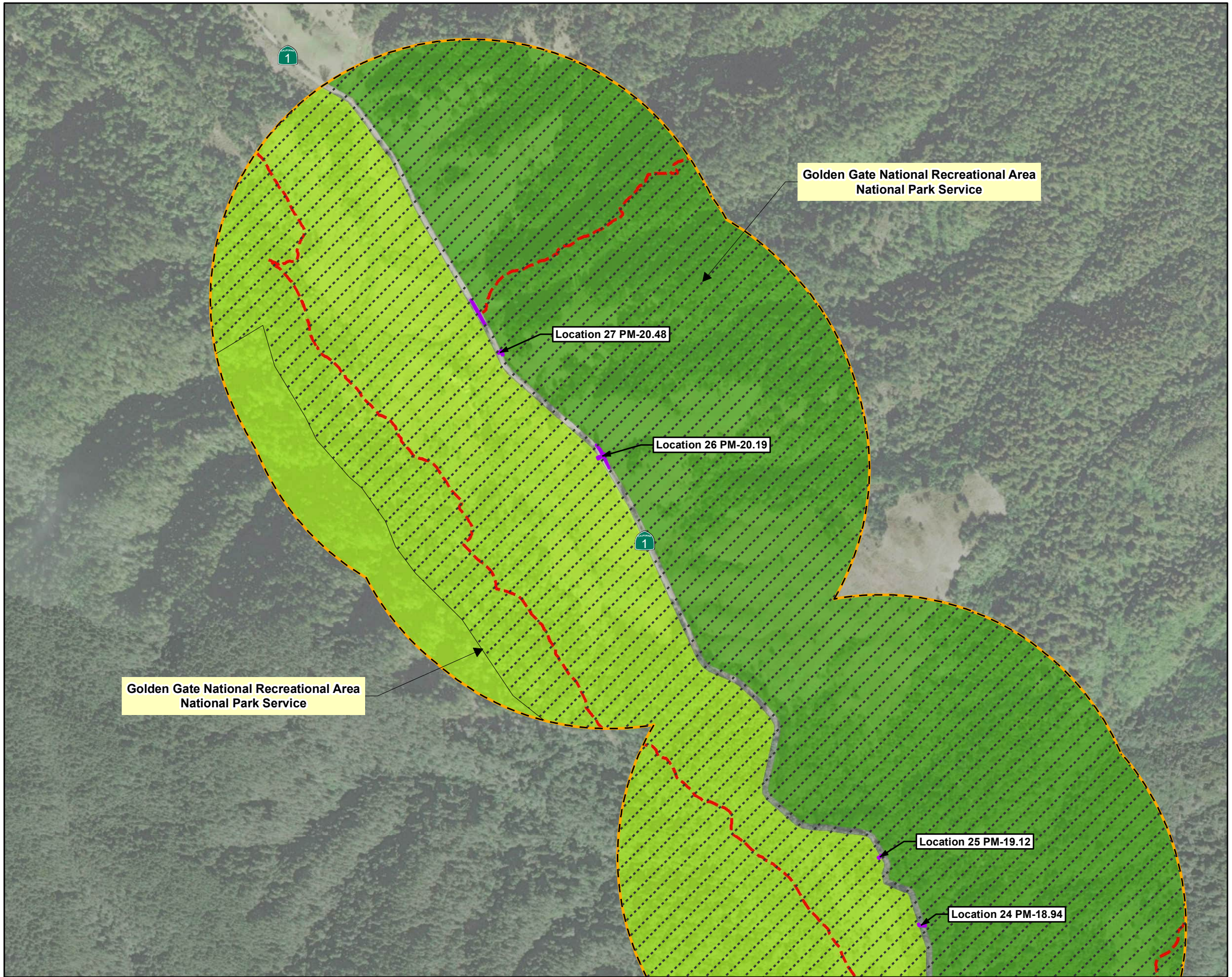
Olema Historic District

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 03 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Golden Gate National Recreational Area

Point Reyes National Seashore

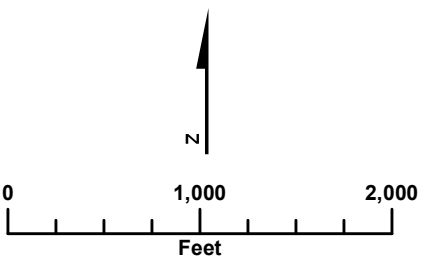
**Trails**

Existing Trail

**Historic Resource**

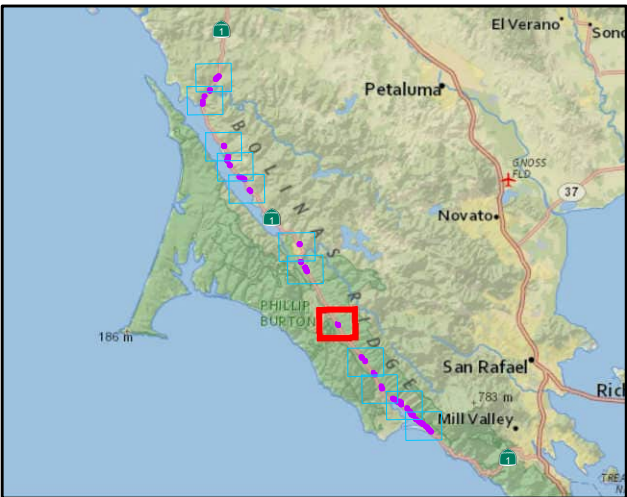
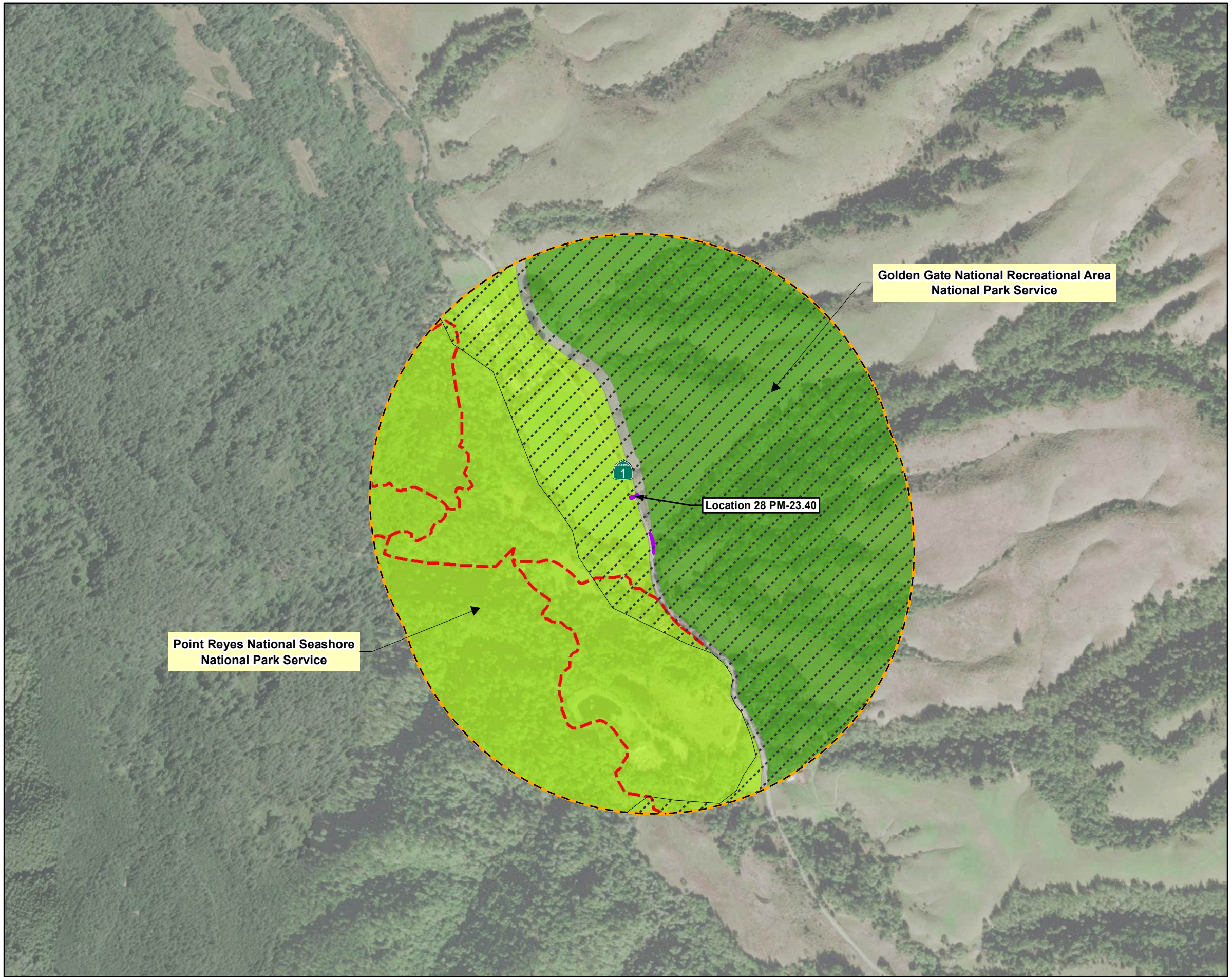
Olema Historic District

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 04 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Golden Gate National Recreational Area

Point Reyes National Seashore

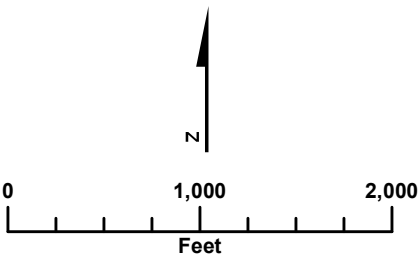
**Trails**

Existing Trail

**Historic Resource**

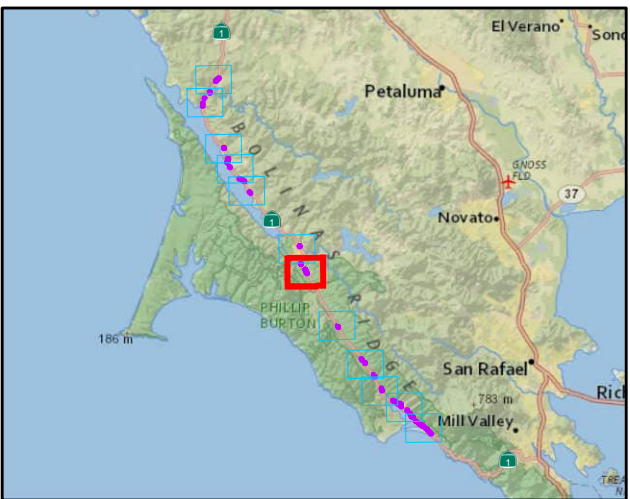
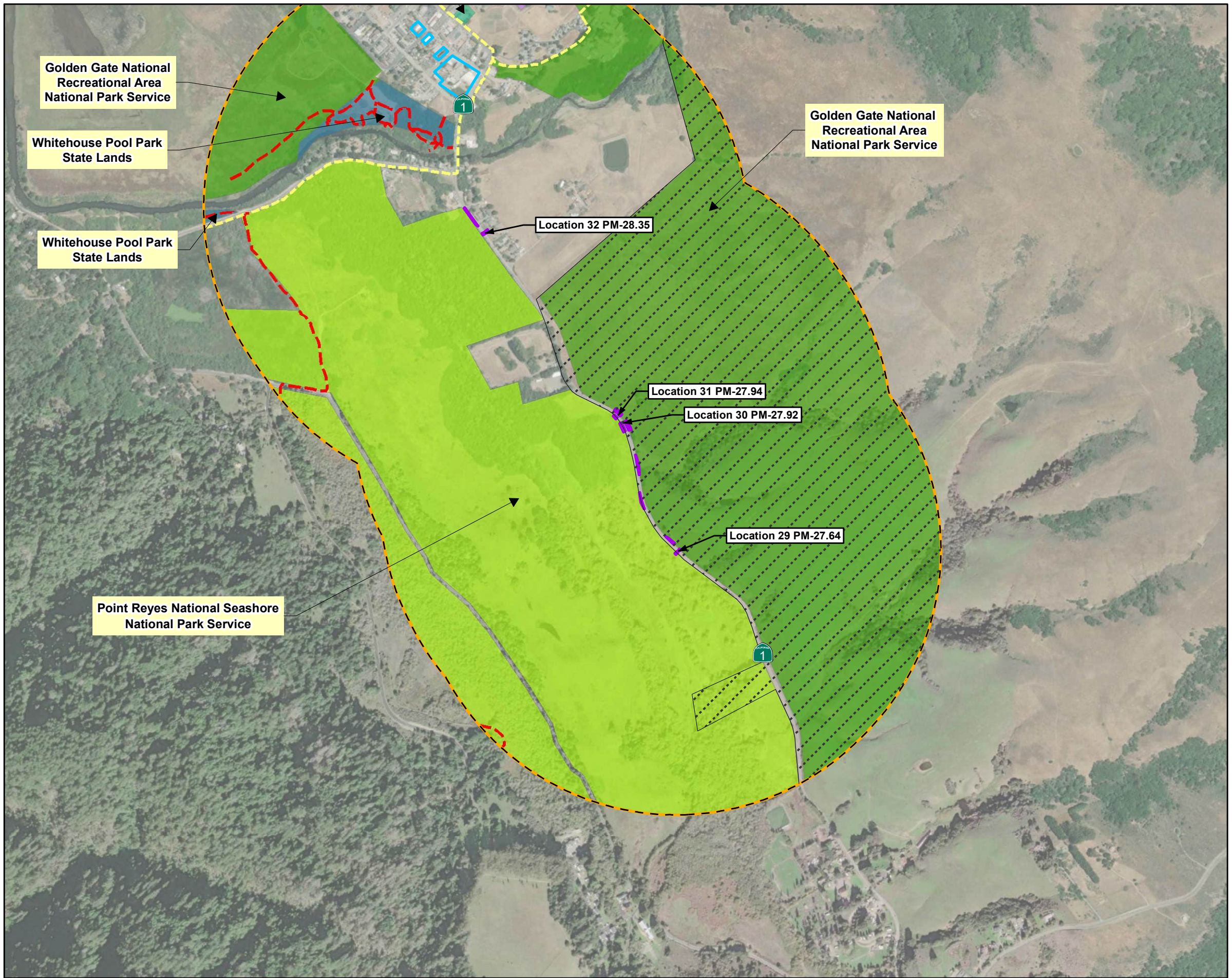
Olema Historic District

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 05 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Golden Gate National Recreational Area

Point Reyes National Seashore

Pt. Reyes Park

West Marin Elementary School

Whitehouse Pool Park

**Trails**

Existing Trail

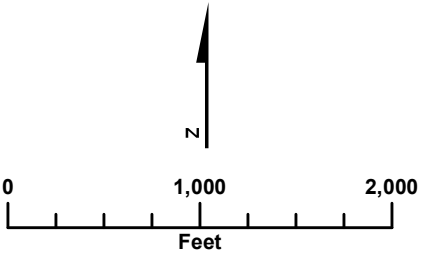
Future or Proposed Trail

**Historic Resource**

Olema Historic District

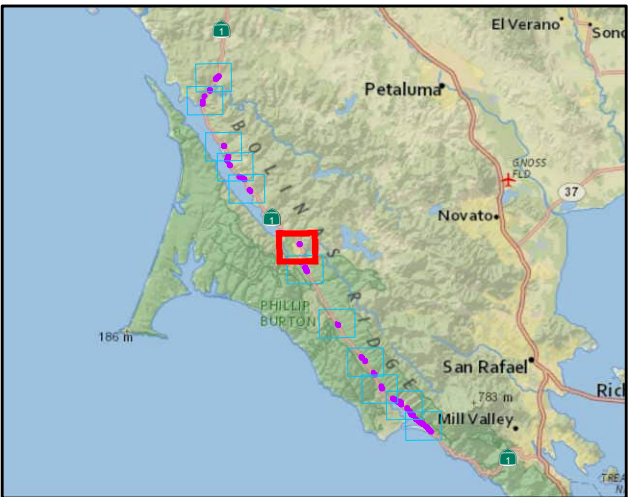
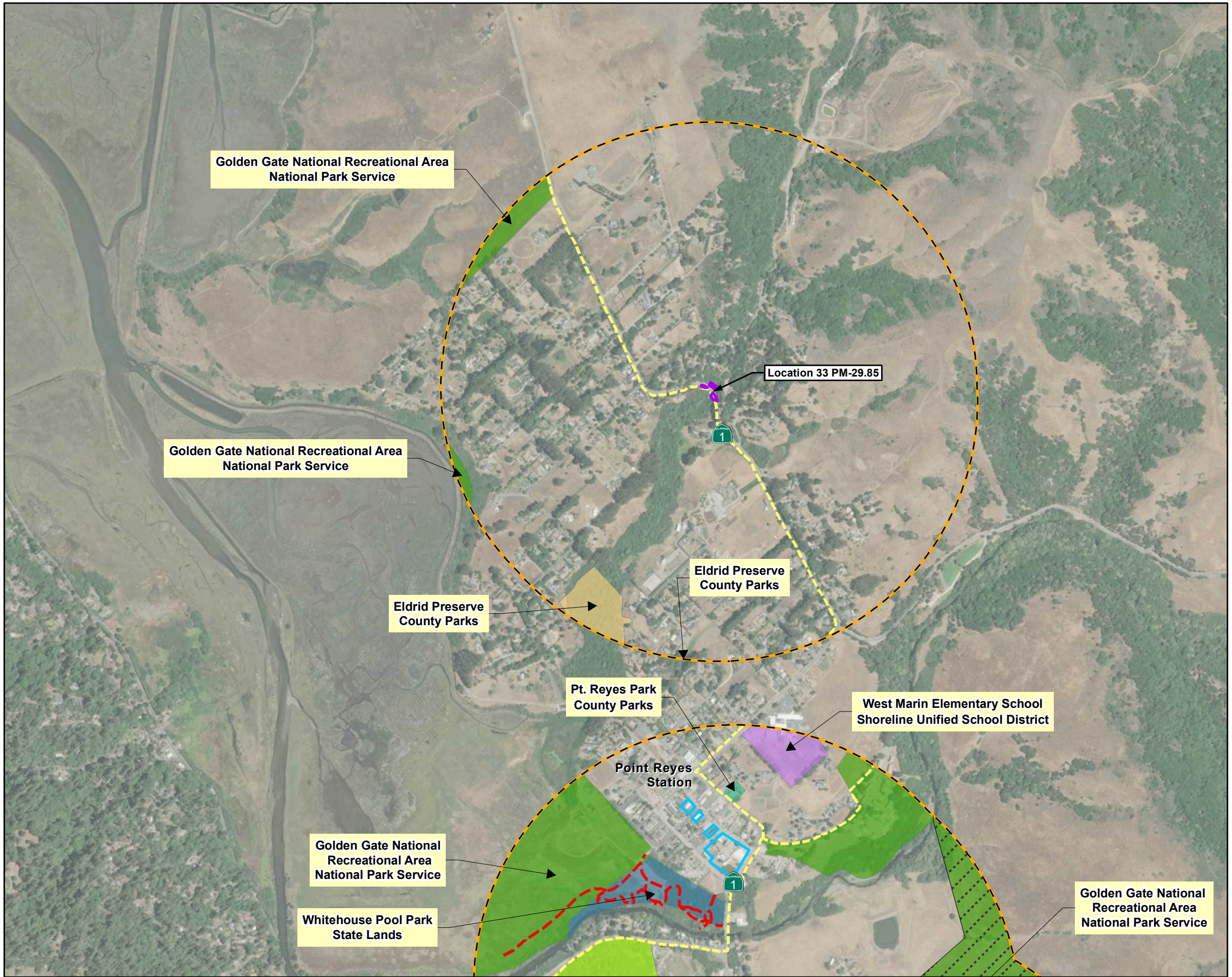
Historic Building

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 06 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Eldrid Preserve

Golden Gate National Recreational Area

Point Reyes National Seashore

Pt. Reyes Park

West Marin Elementary School

Whitehouse Pool Park

**Trails**

Existing Trail

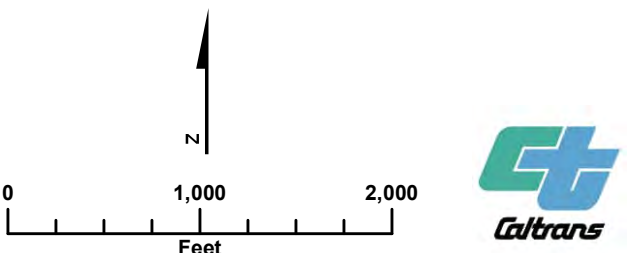
Future or Proposed Trail

**Historic Resource**

Olema Historic District

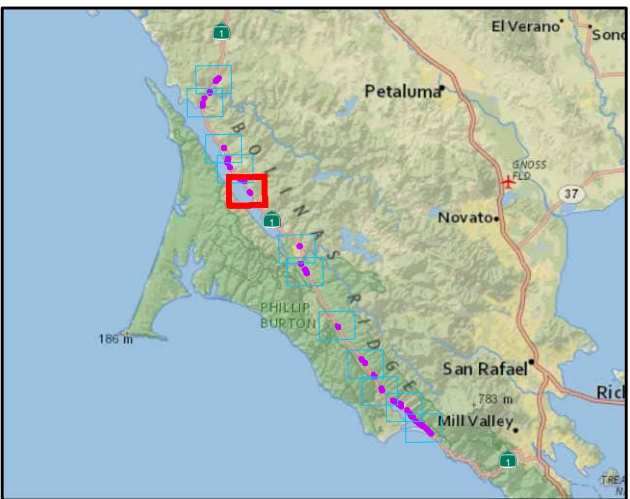
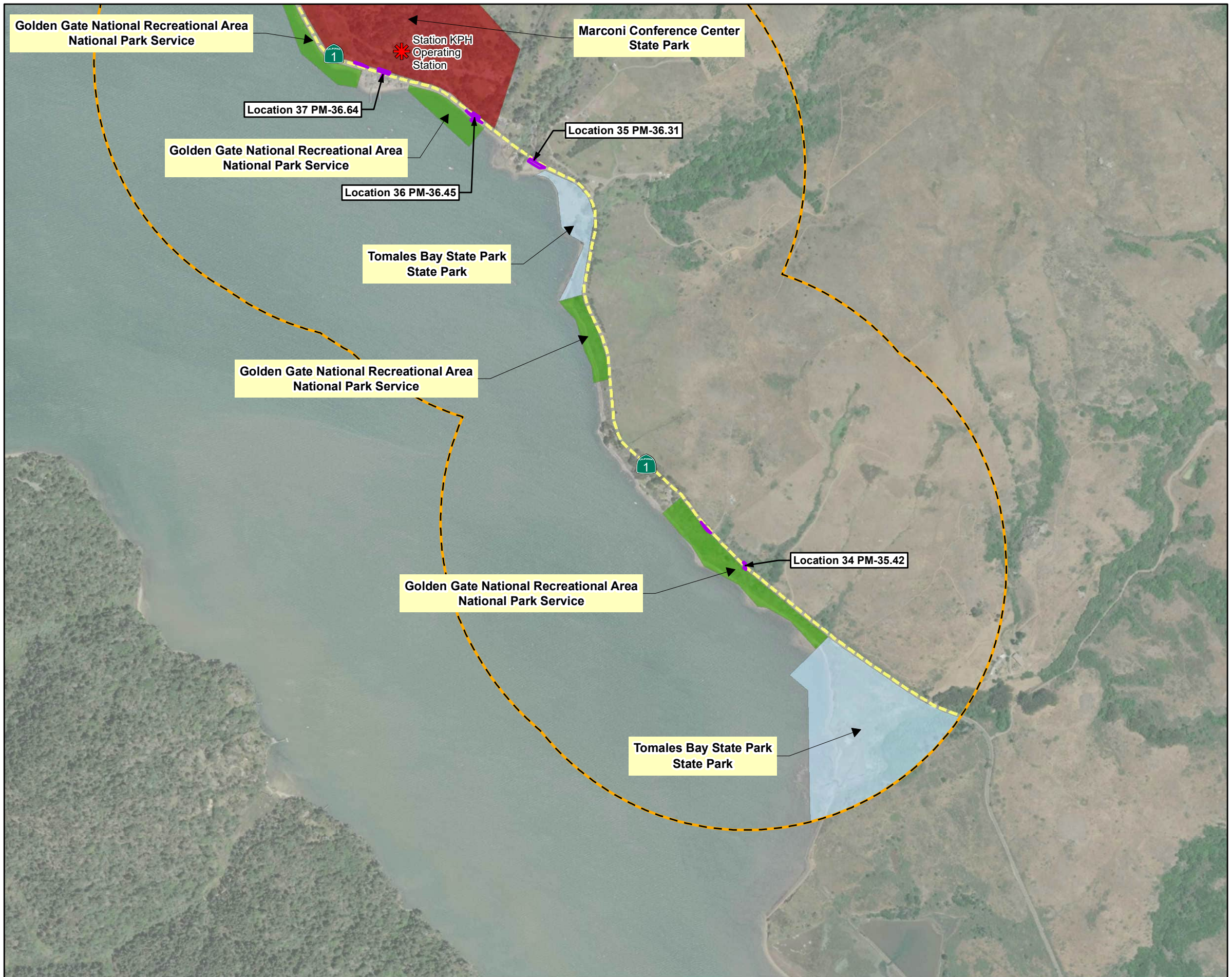
Historic Building

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 07 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Golden Gate National Recreational Area

Marconi Conference Center

Tomales Bay State Park

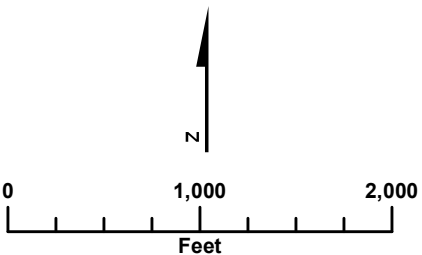
**Trails**

Future or Proposed Trail

**National Register of Historic Places**

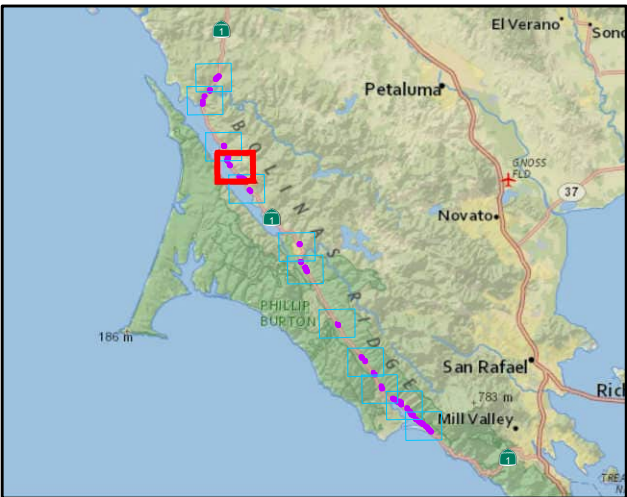
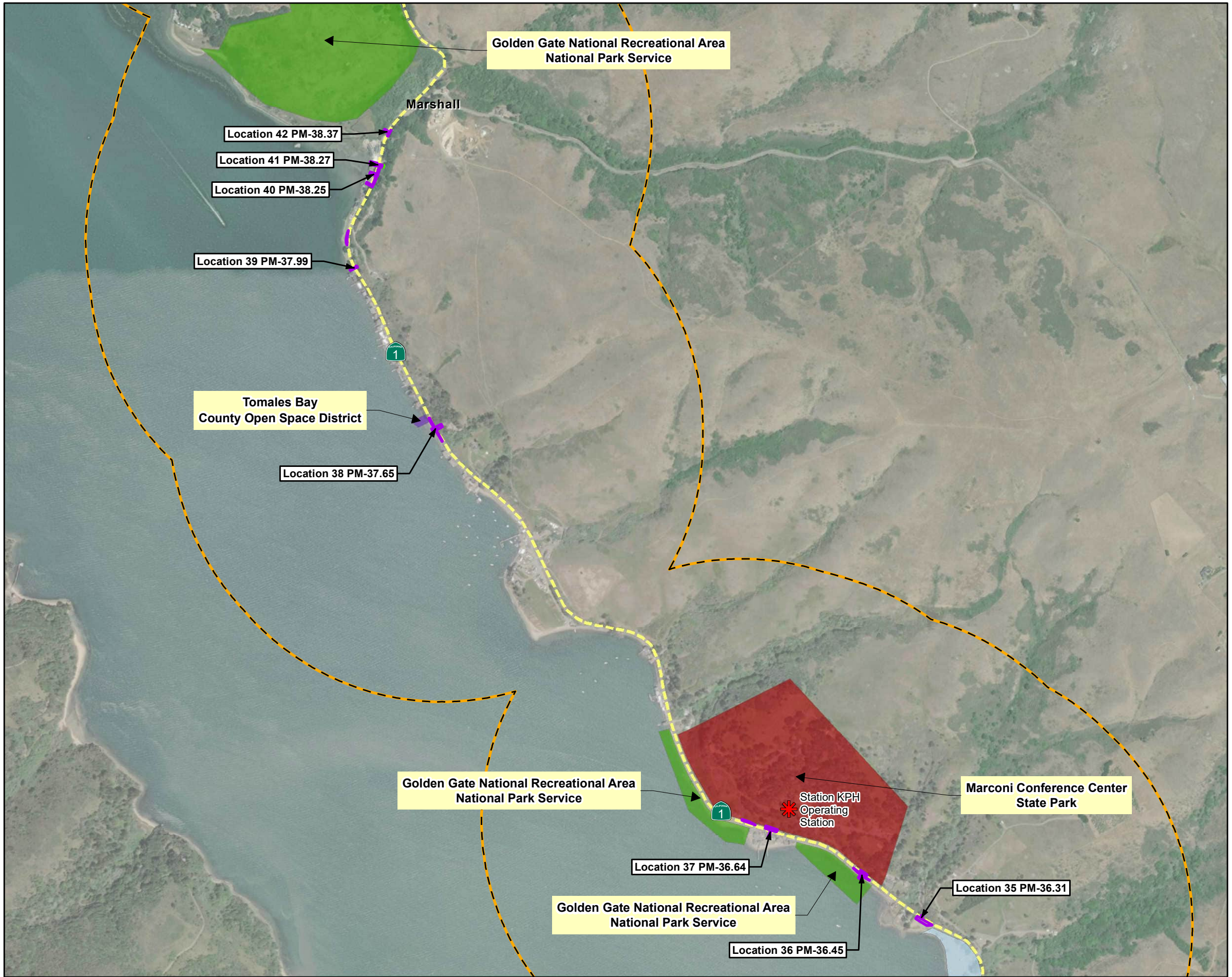
Cultural Resource Building

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 08 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

Golden Gate National Recreational Area

Marconi Conference Center

Tomales Bay

Tomales Bay State Park

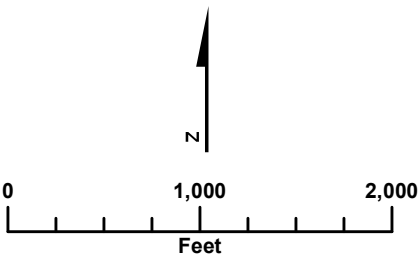
**Trails**

Future or Proposed Trail

**National Register of Historic Places**

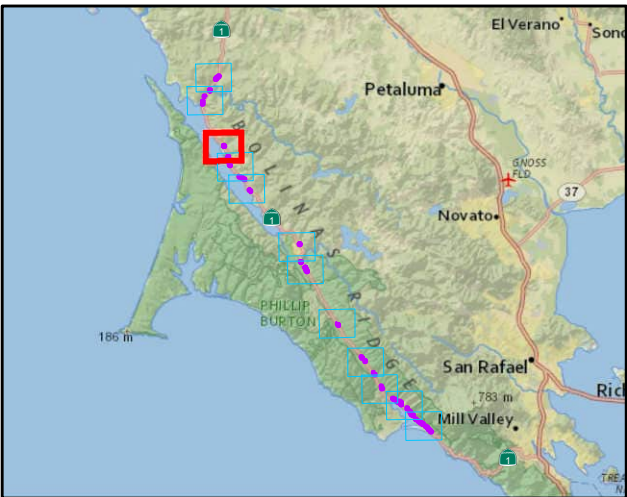
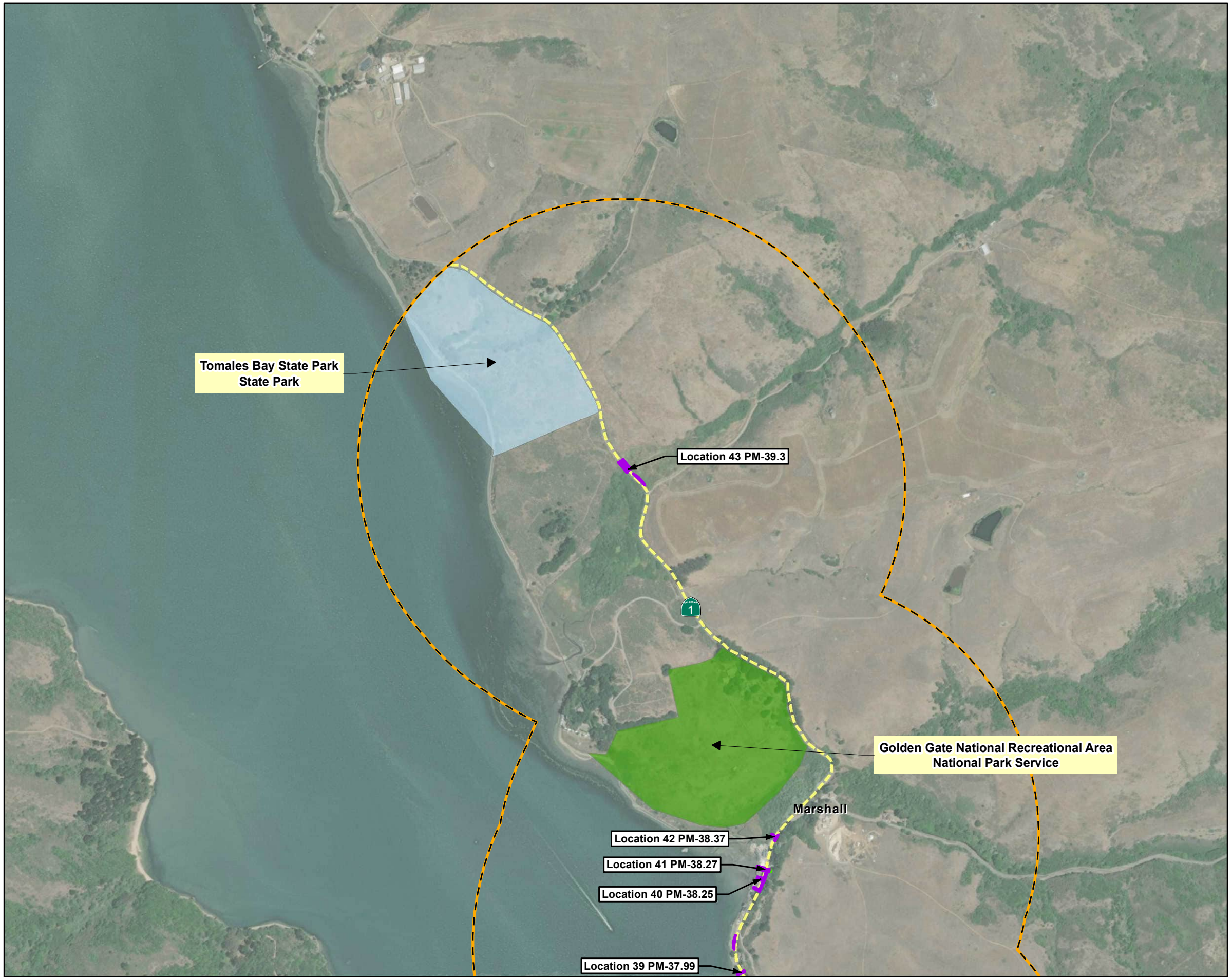
Cultural Resource Building

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 09 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

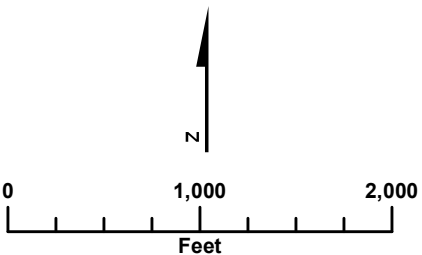
Golden Gate National Recreational Area

Tomales Bay State Park

**Trails**

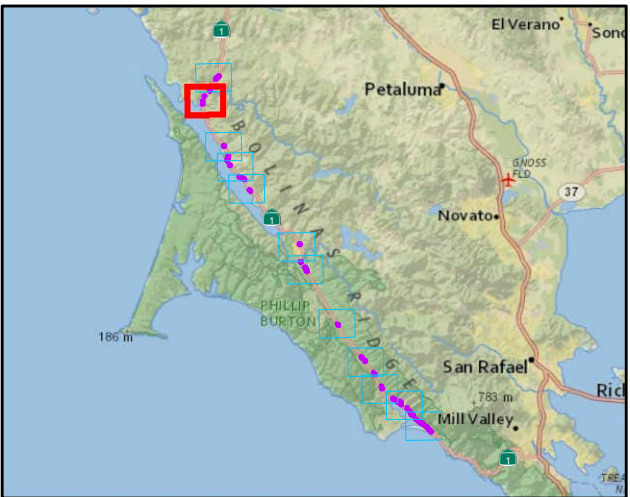
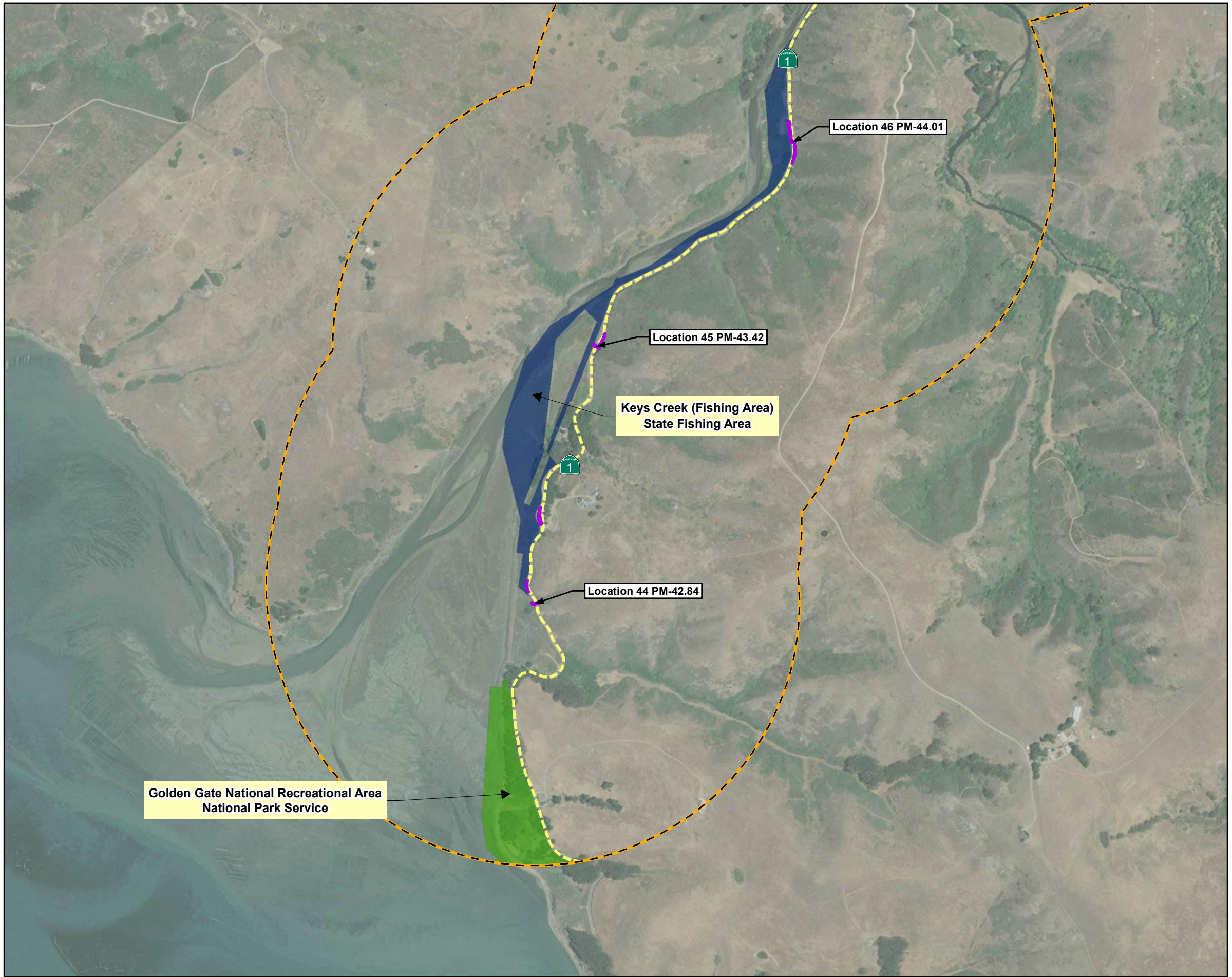
Future or Proposed Trail

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 10 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

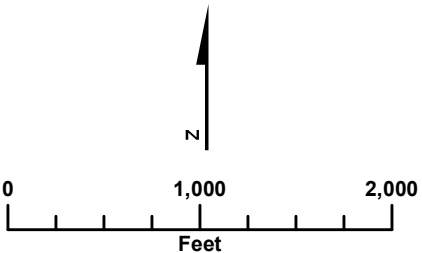
Golden Gate National Recreational Area

Keys Creek (Fishing Area)

**Trails**

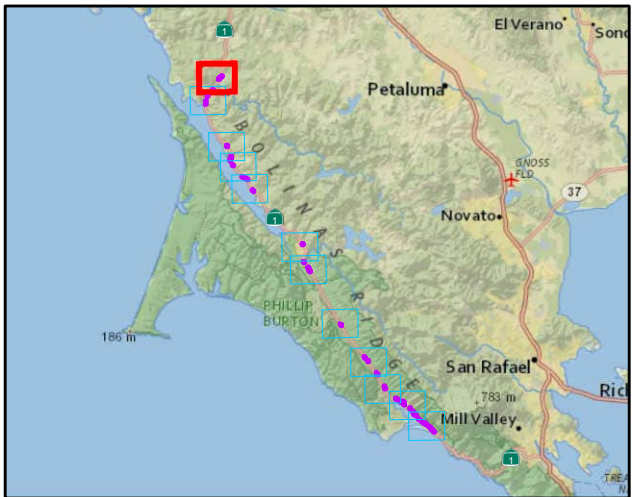
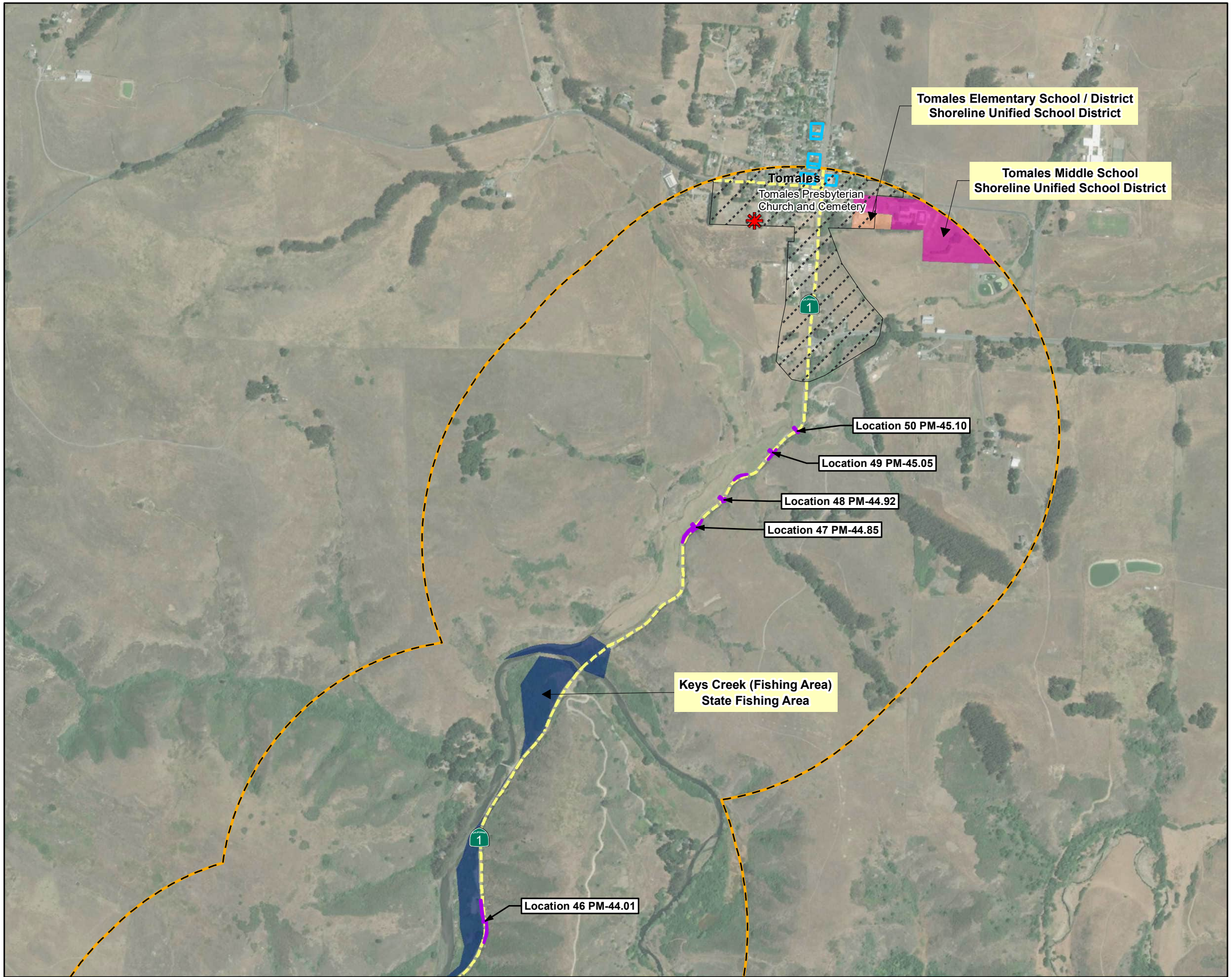
Future or Proposed Trail

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 11 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

- Project Footprint (3.46 acres)
- 0.5-Mile Radius from Project

**Section 4(f) Resource**

**Parks**

- Keys Creek (Fishing Area)
- Tomales Elementary School / District
- Tomales Middle School

**Trails**

- Future or Proposed Trail

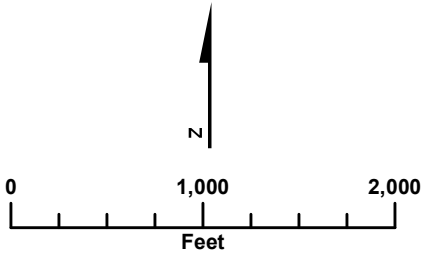
**Historic Resource**

- Tomales Historic District

**National Register of Historic Places**

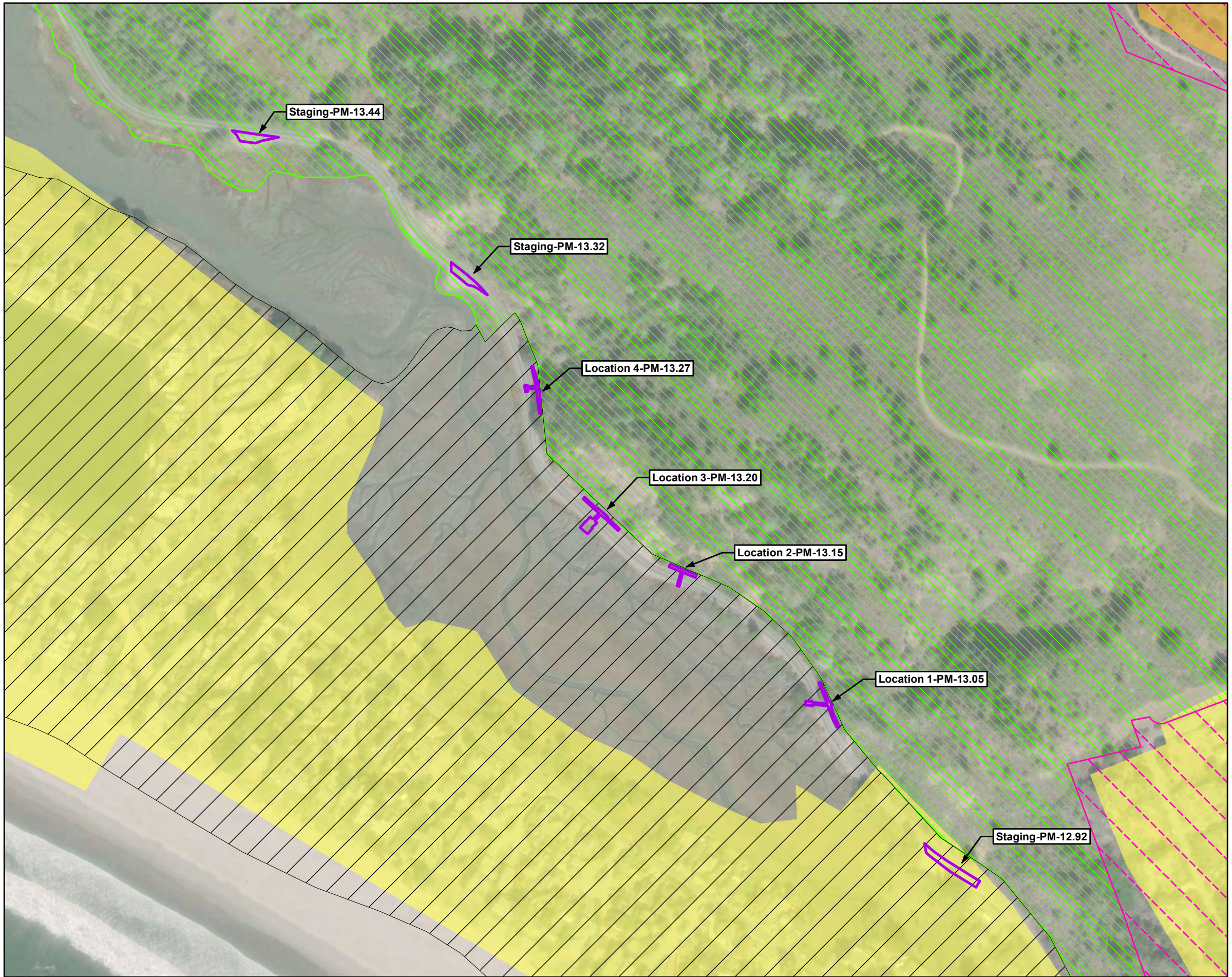
- ✱ Cultural Resource Building
- Historic Building

**Source:**  
1. Imagery: ESRI, Maxar March 2021



**Figure 3.3.16-1**  
**Map 12 of 12**  
**Recreation Resources within a**  
**0.5-Mile Radius of Project Footprint**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





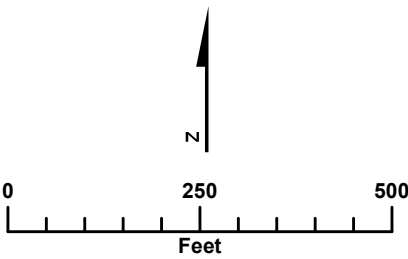
**LEGEND**

- Project Footprint (3.46 acres)
- Local Responsibility Area (LRA)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

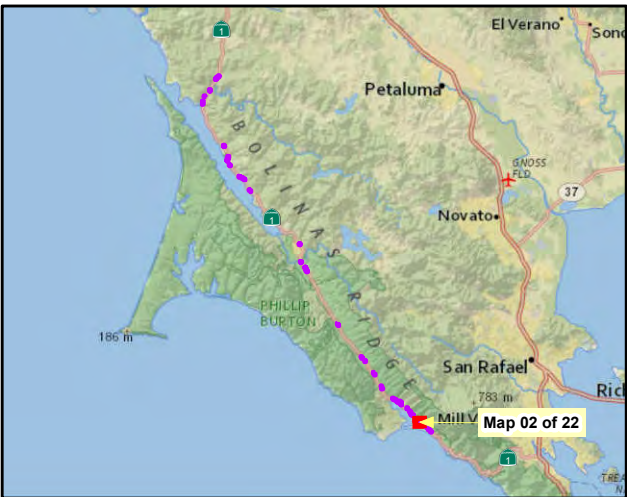
- Moderate
- High

**Sources:**  
 1. Imagery: ESRI, Maxar March 2021  
 2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 01 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





**LEGEND**

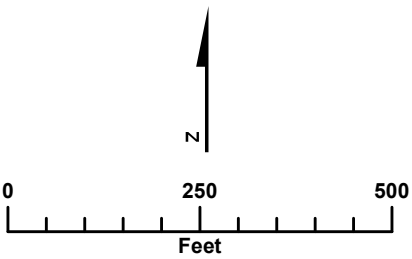
- Project Footprint (3.46 acres)
- Local Responsibility Area (LRA)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

- Moderate
- High
- Very High

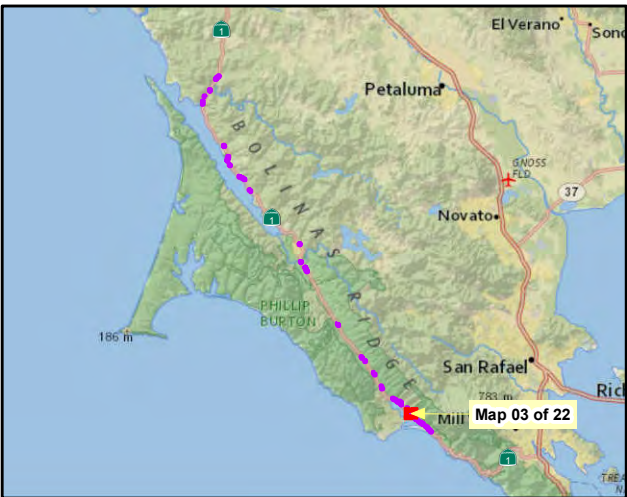
**Sources:**

1. Imagery: ESRI, Maxar March 2021
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP






**Figure 3.3.20-1**  
**Map 02 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California



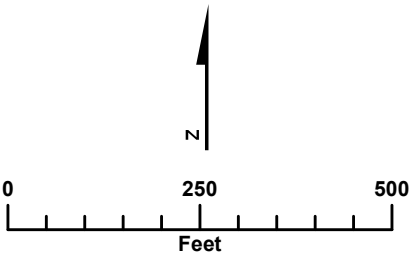


**LEGEND**

-  Project Footprint (3.46 acres)
-  State Responsibility Area (SRA)
-  Federal Responsibility Area (FRA)

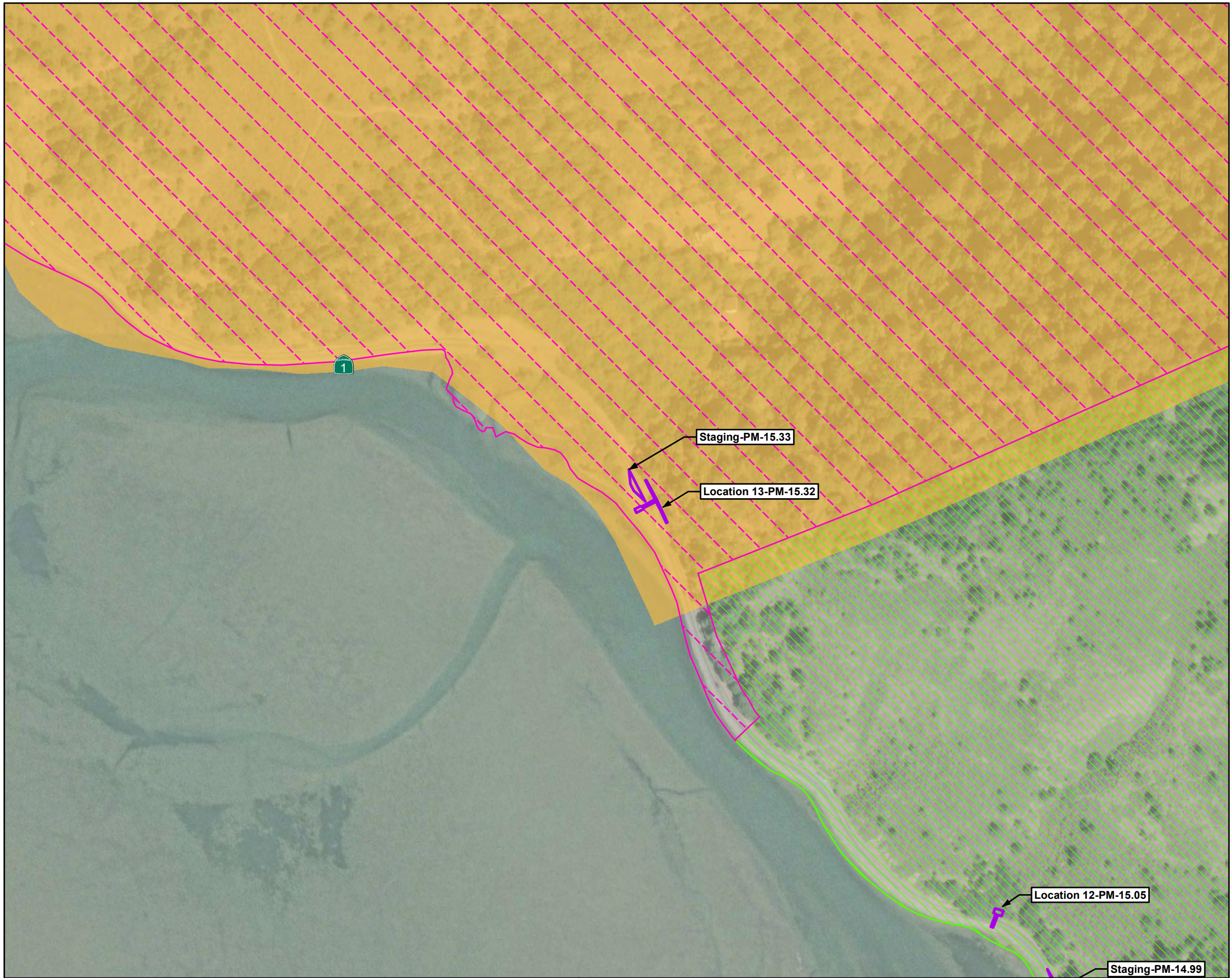
**Sources:**

1. Imagery: ESRI, Maxar March 2021
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 03 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





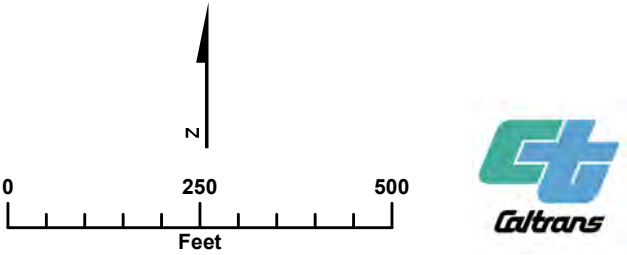
**LEGEND**

- Project Footprint (3.46 acres)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

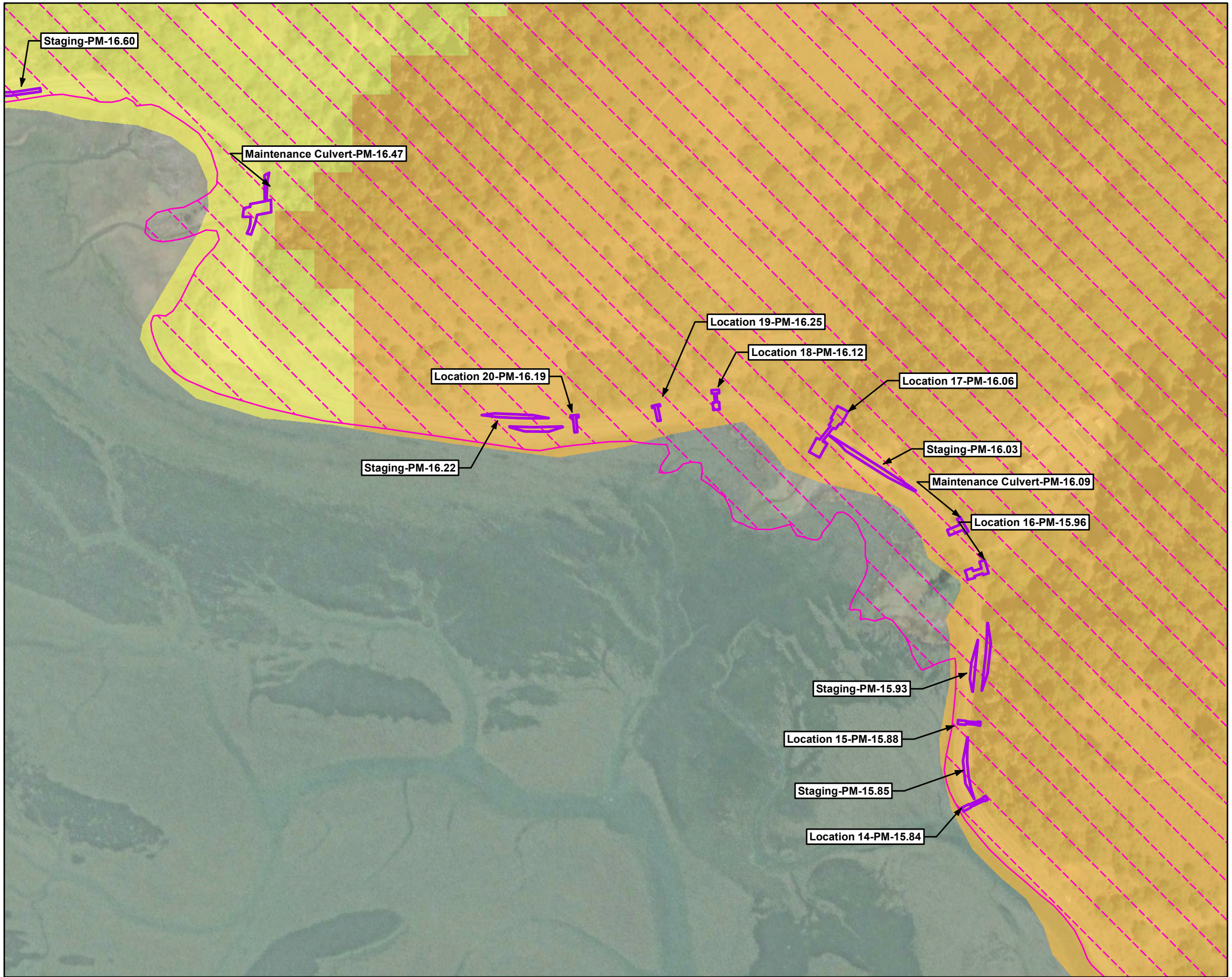
- High

**Sources:**  
 1. Imagery: ESRI, Maxar March 2021  
 2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 04 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





**LEGEND**

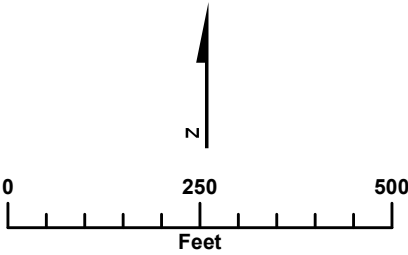
- Project Footprint (3.46 acres)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

- Moderate
- High

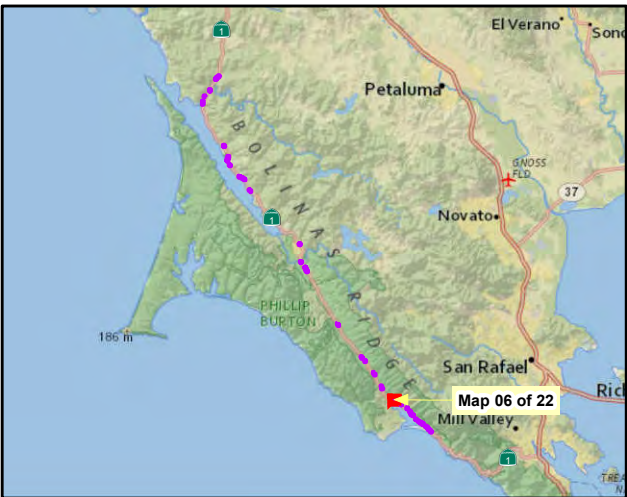
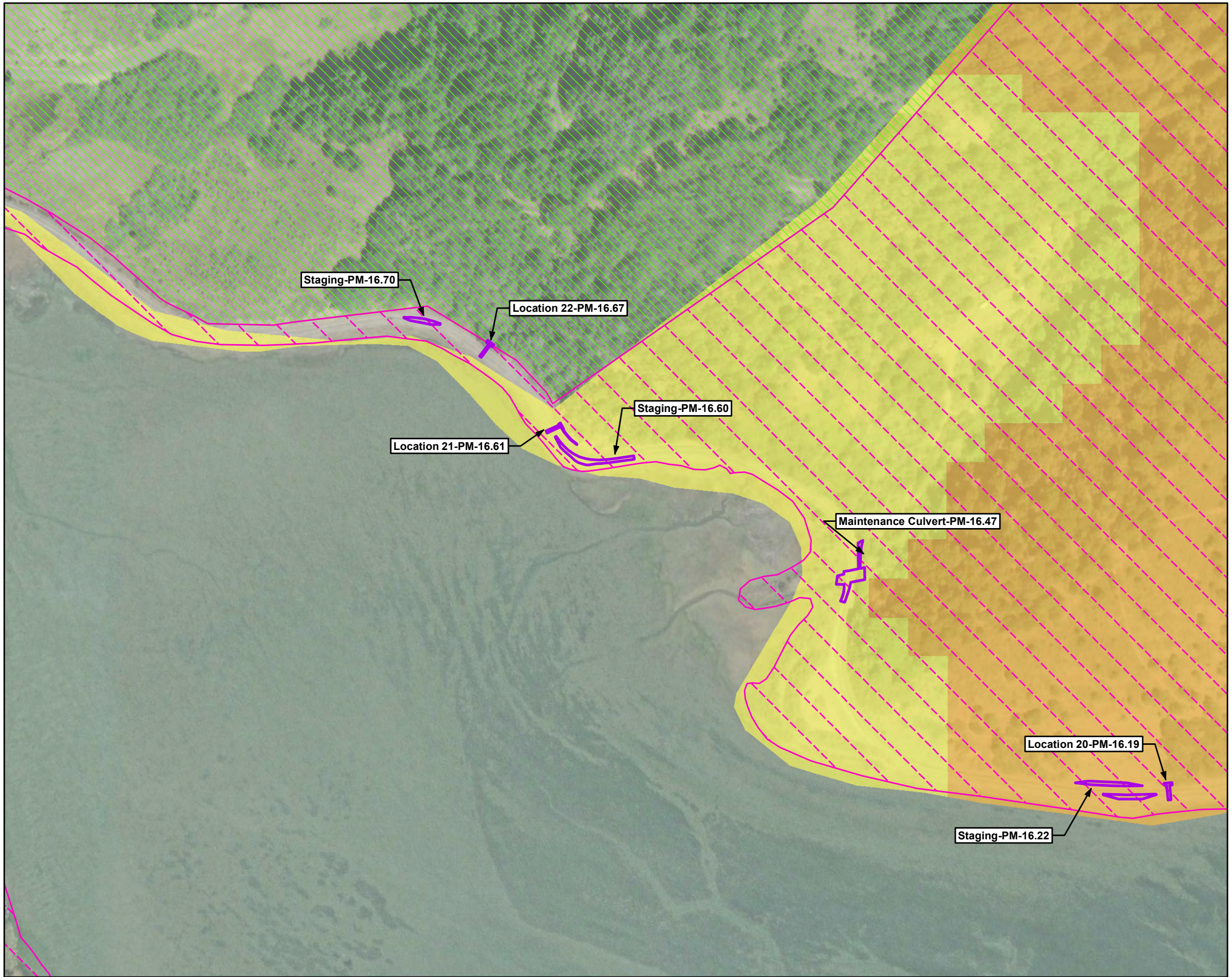
**Sources:**

1. Imagery: ESRI, Maxar March 2021
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 05 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





**LEGEND**

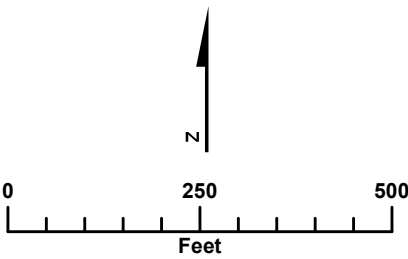
- Project Footprint (3.46 acres)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

- Moderate
- High

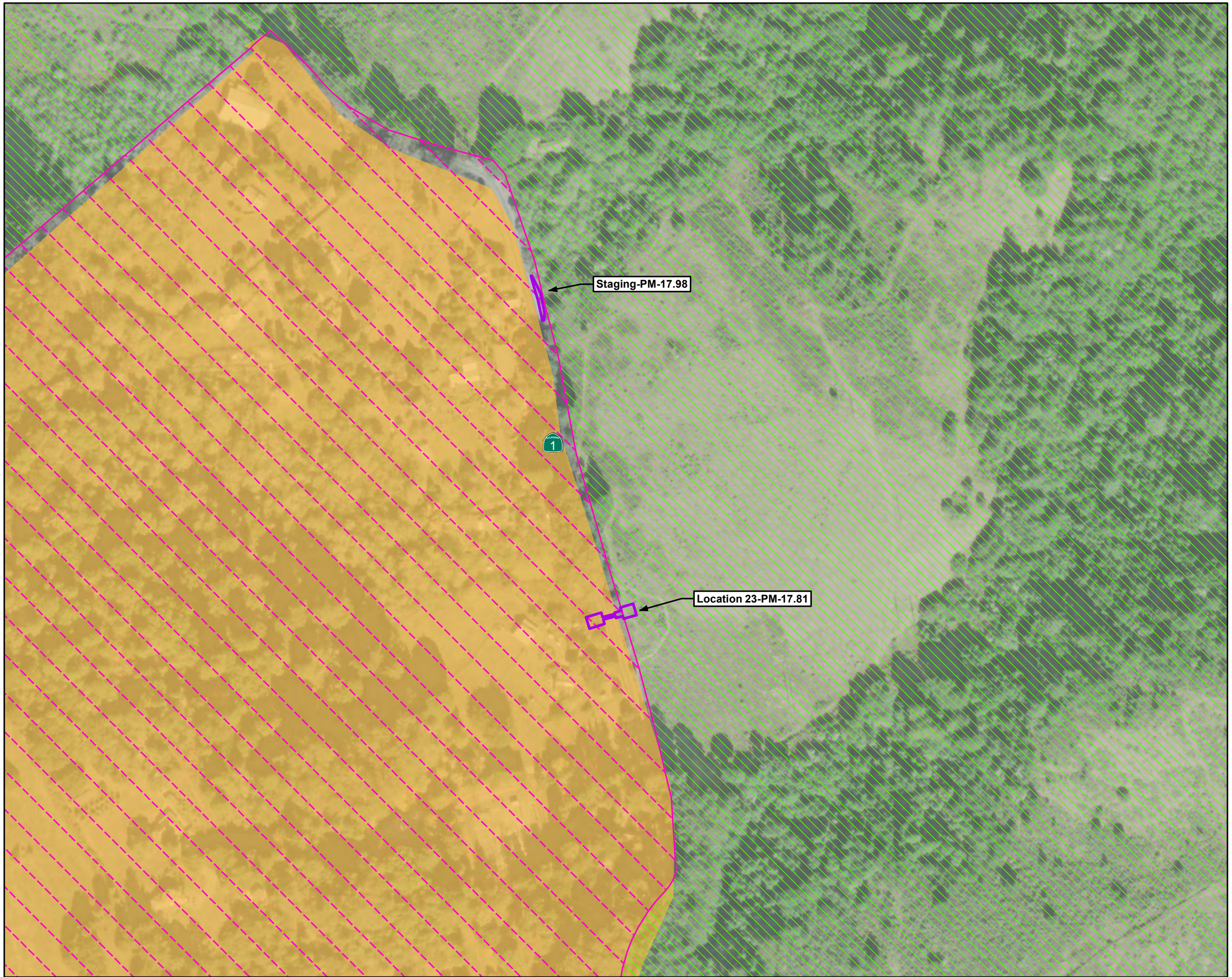
**Sources:**

- Imagery: ESRI, Maxar March 2021
- CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 06 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





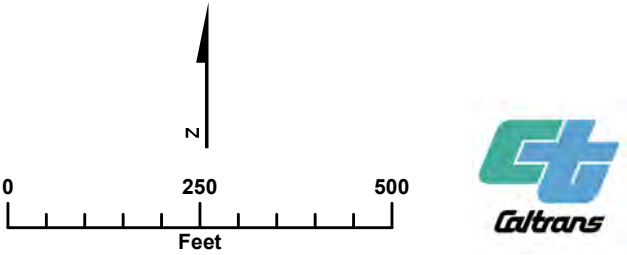
**LEGEND**

- Project Footprint (3.46 acres)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

- High

**Sources:**  
1. Imagery: ESRI, Maxar March 2021  
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP





**Figure 3.3.20-1**  
**Map 07 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





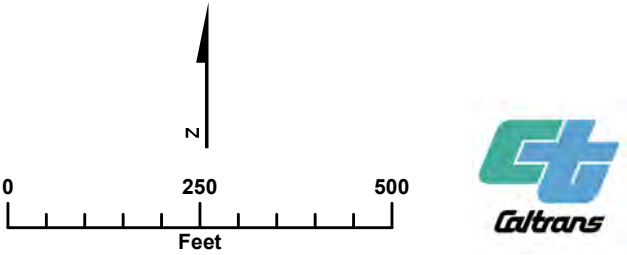
**LEGEND**

 Project Footprint (3.46 acres)

 Federal Responsibility Area (FRA)

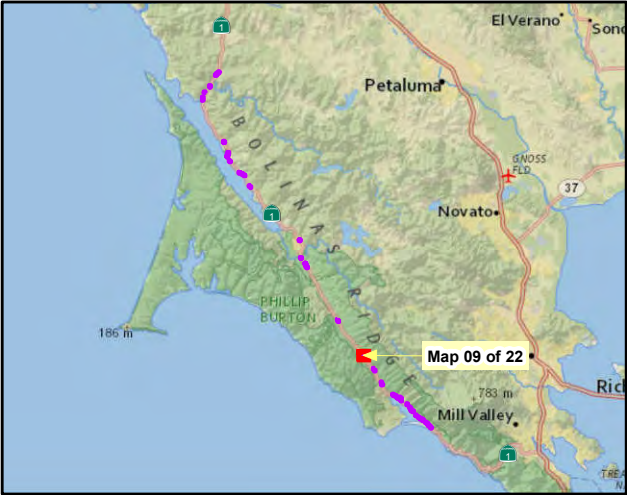
**Sources:**

1. Imagery: ESRI, Maxar March 2021
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP





**Figure 3.3.20-1**  
**Map 08 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



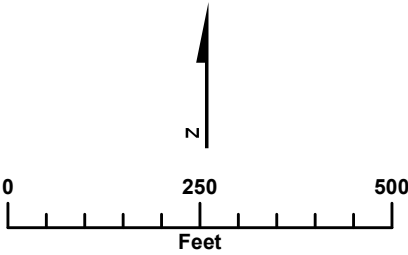


**LEGEND**

 Project Footprint (3.46 acres)

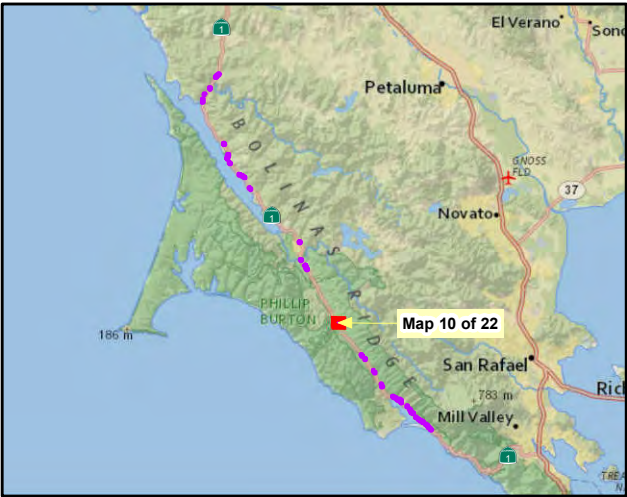
 Federal Responsibility Area (FRA)

**Sources:**  
1. Imagery: ESRI, Maxar March 2021  
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP





**Figure 3.3.20-1**  
**Map 09 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

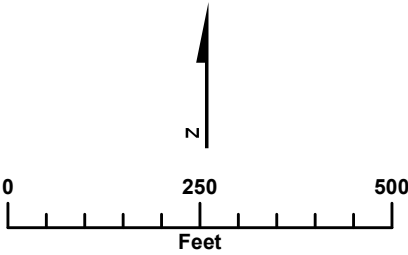
 Project Footprint (3.46 acres)

 Federal Responsibility Area (FRA)

**Sources:**

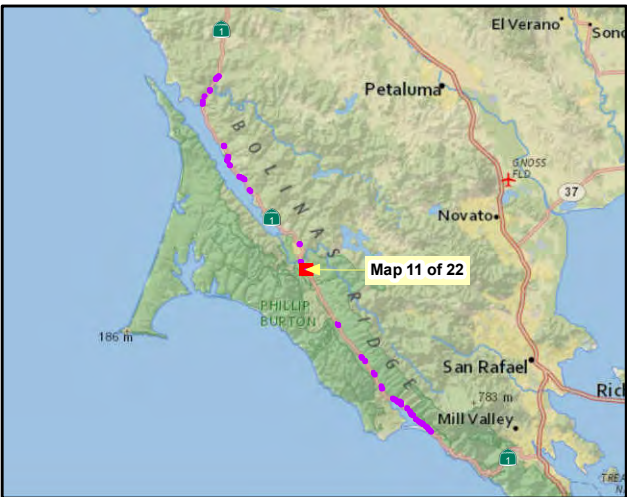
1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 10 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





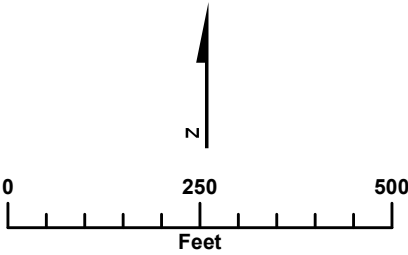
**LEGEND**

- Project Footprint (3.46 acres)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

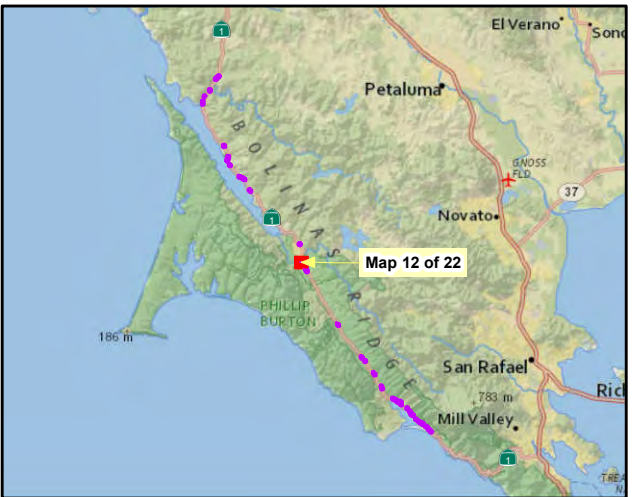
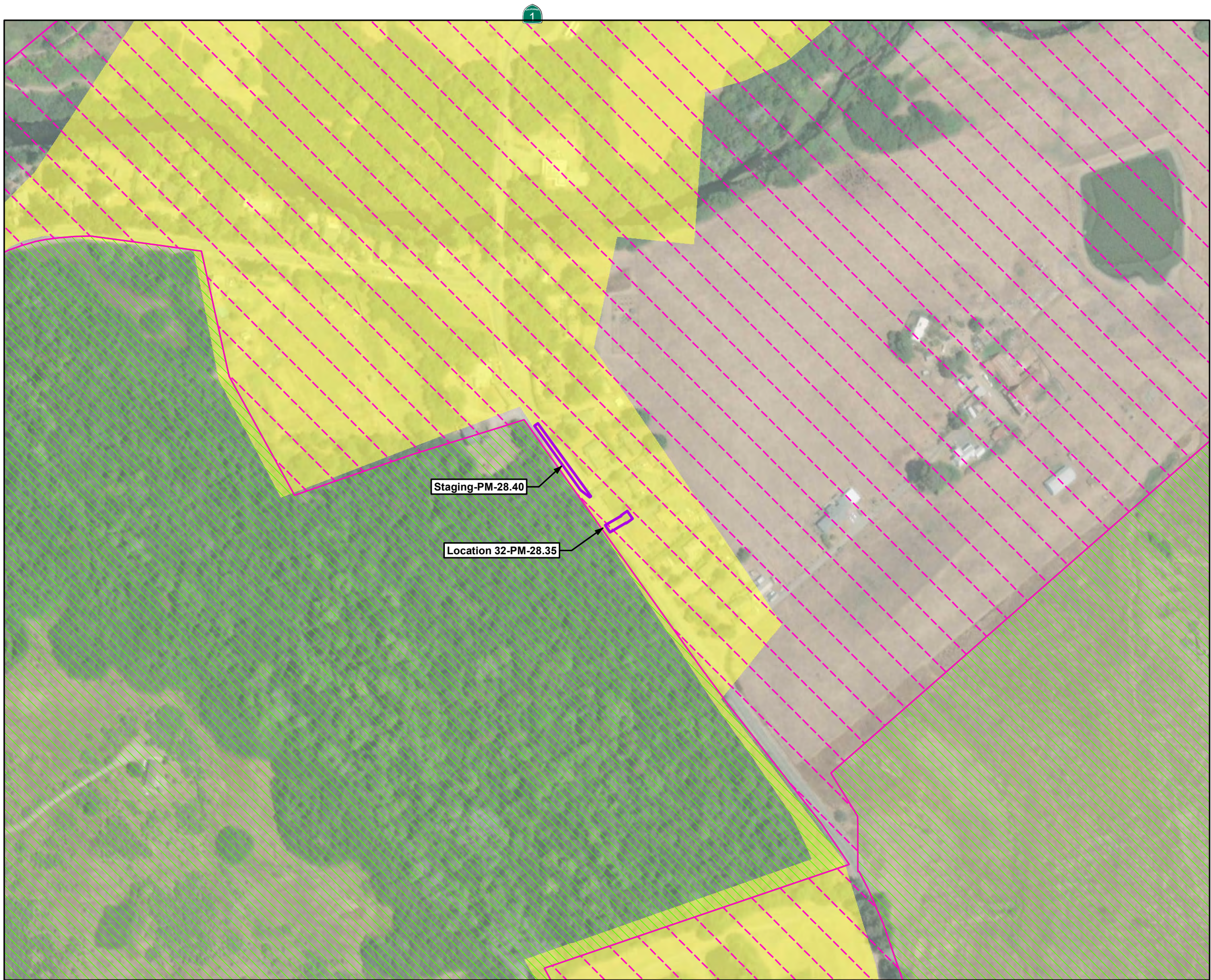
- Moderate

**Sources:**  
 1. Imagery: ESRI, Maxar March 2021  
 2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 11 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





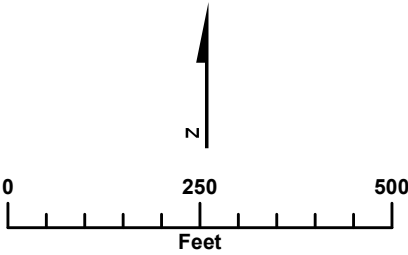
**LEGEND**

- Project Footprint (3.46 acres)
- State Responsibility Area (SRA)
- Federal Responsibility Area (FRA)

**CDF Fire Hazard Severity Zones**

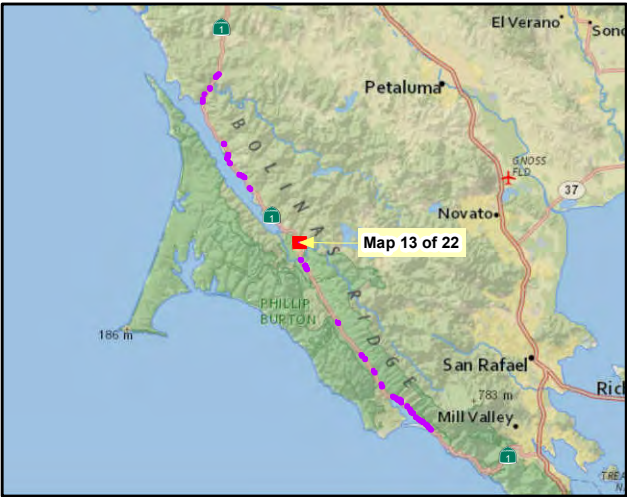
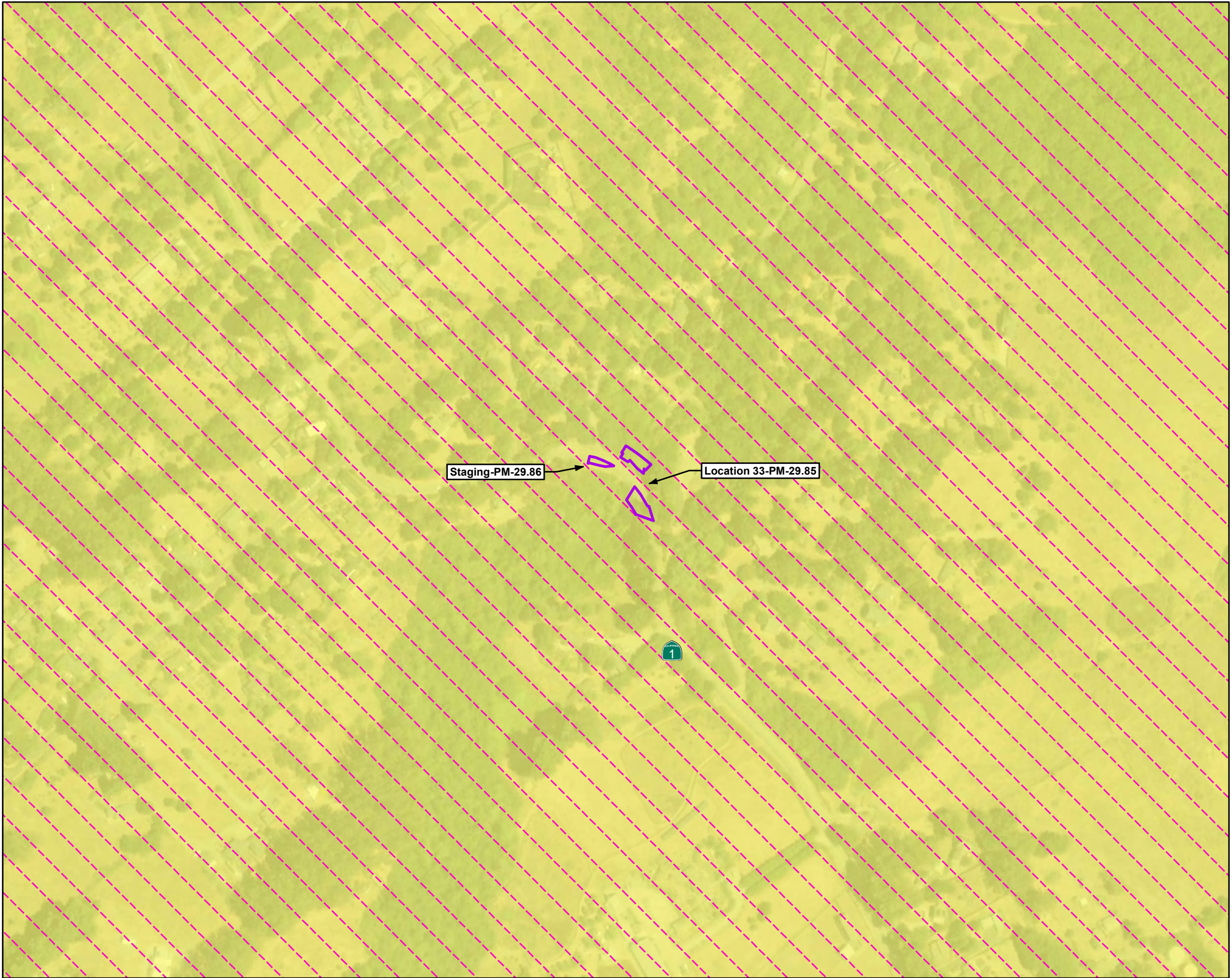
- Moderate

**Sources:**  
 1. Imagery: ESRI, Maxar March 2021  
 2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 12 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





**LEGEND**

 Project Footprint (3.46 acres)

 State Responsibility Area (SRA)

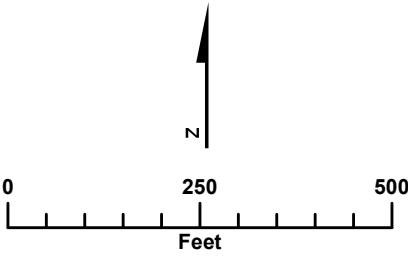
**CDF Fire Hazard Severity Zones**

 Moderate

**Sources:**

1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP




**Figure 3.3.20-1**  
**Map 13 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

 Project Footprint (3.46 acres)

 State Responsibility Area (SRA)

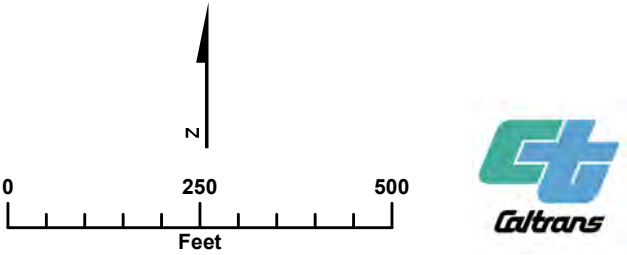
**CDF Fire Hazard Severity Zones**

 Moderate

**Sources:**

1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 14 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

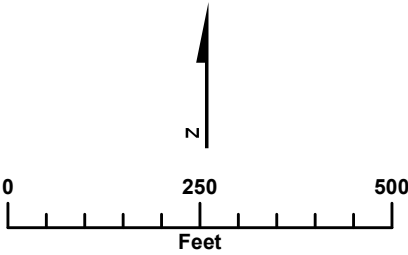
Moderate

Very High

**Sources:**

1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP




**Figure 3.3.20-1**  
**Map 15 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

 Project Footprint (3.46 acres)

 State Responsibility Area (SRA)

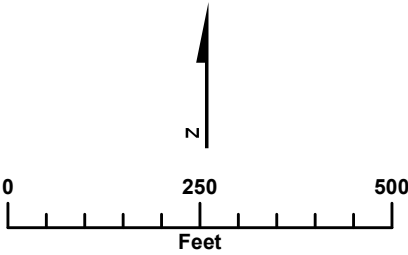
**CDF Fire Hazard Severity Zones**

 Moderate

**Sources:**

1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 16 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

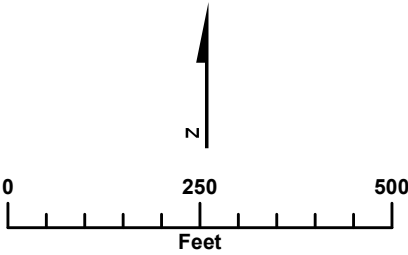
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Very High

**Sources:**

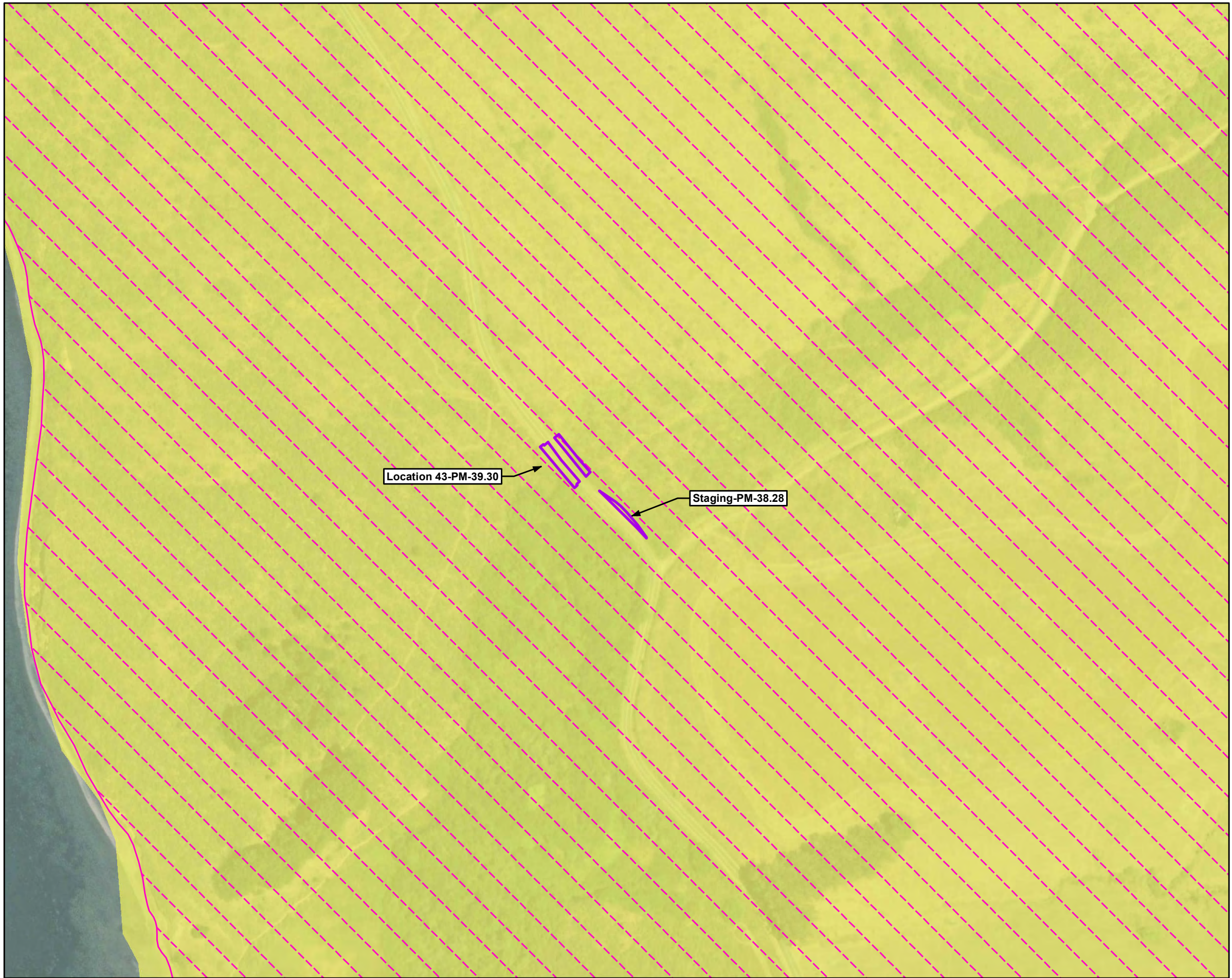
1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP





**Figure 3.3.20-1**  
**Map 17 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California






**LEGEND**

 Project Footprint (3.46 acres)

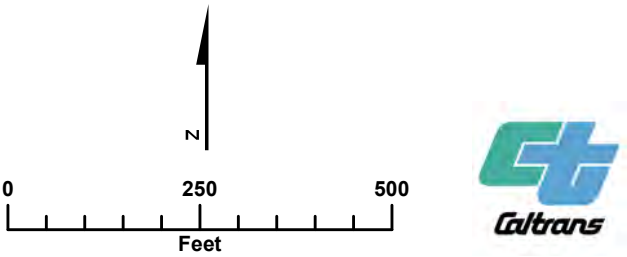
 State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

 Moderate

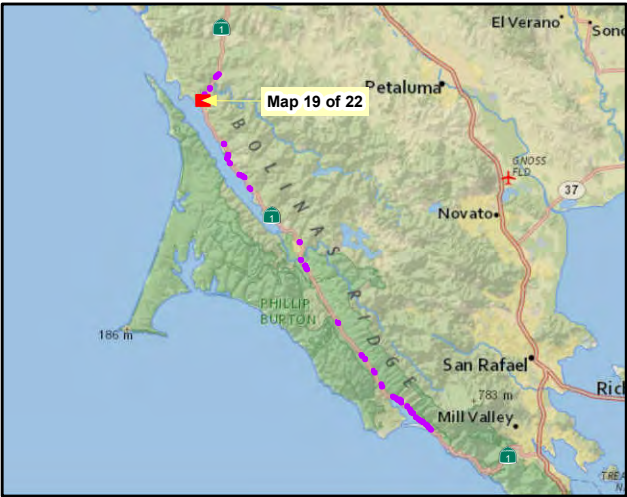
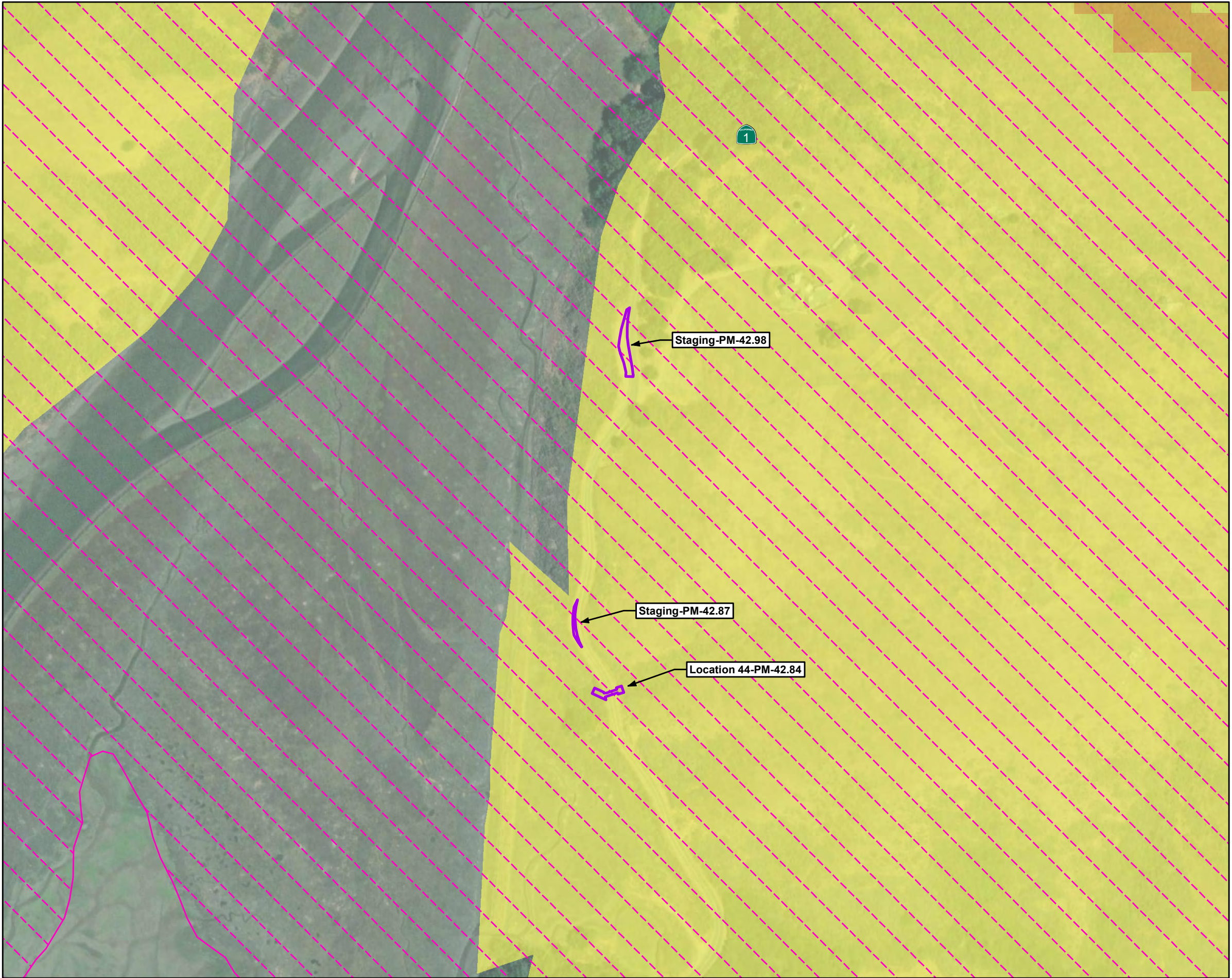
**Sources:**

1. Imagery: ESRI, Maxar March 2021
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 18 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

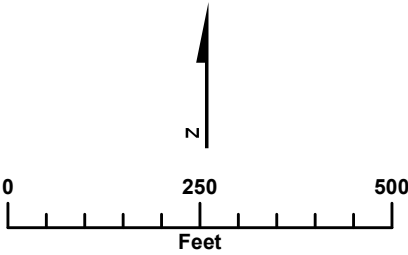
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High

**Sources:**

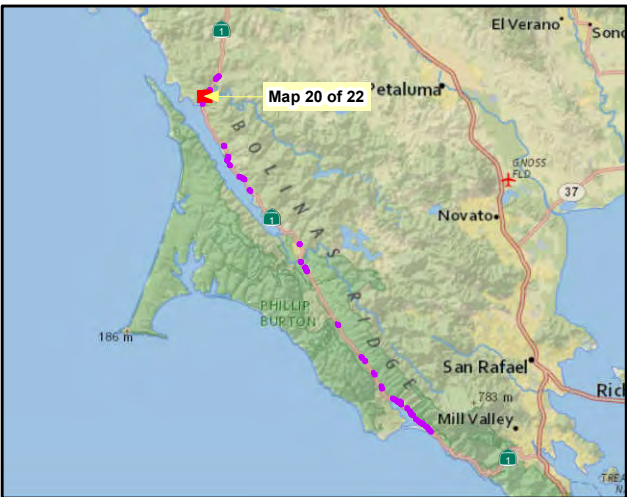
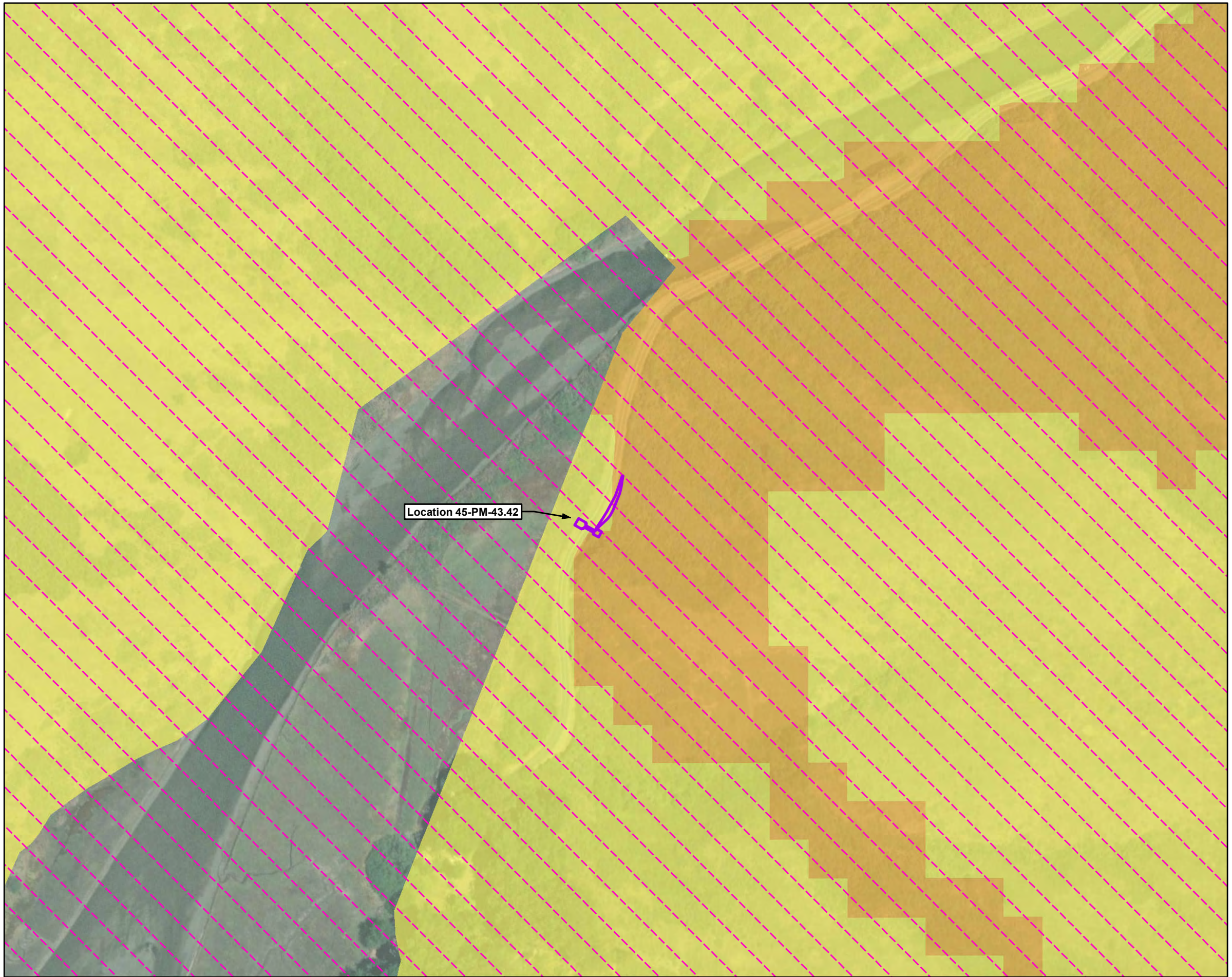
1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 19 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California





**LEGEND**

Project Footprint (3.46 acres)

State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

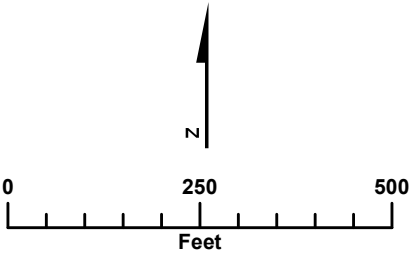
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High

**Sources:**

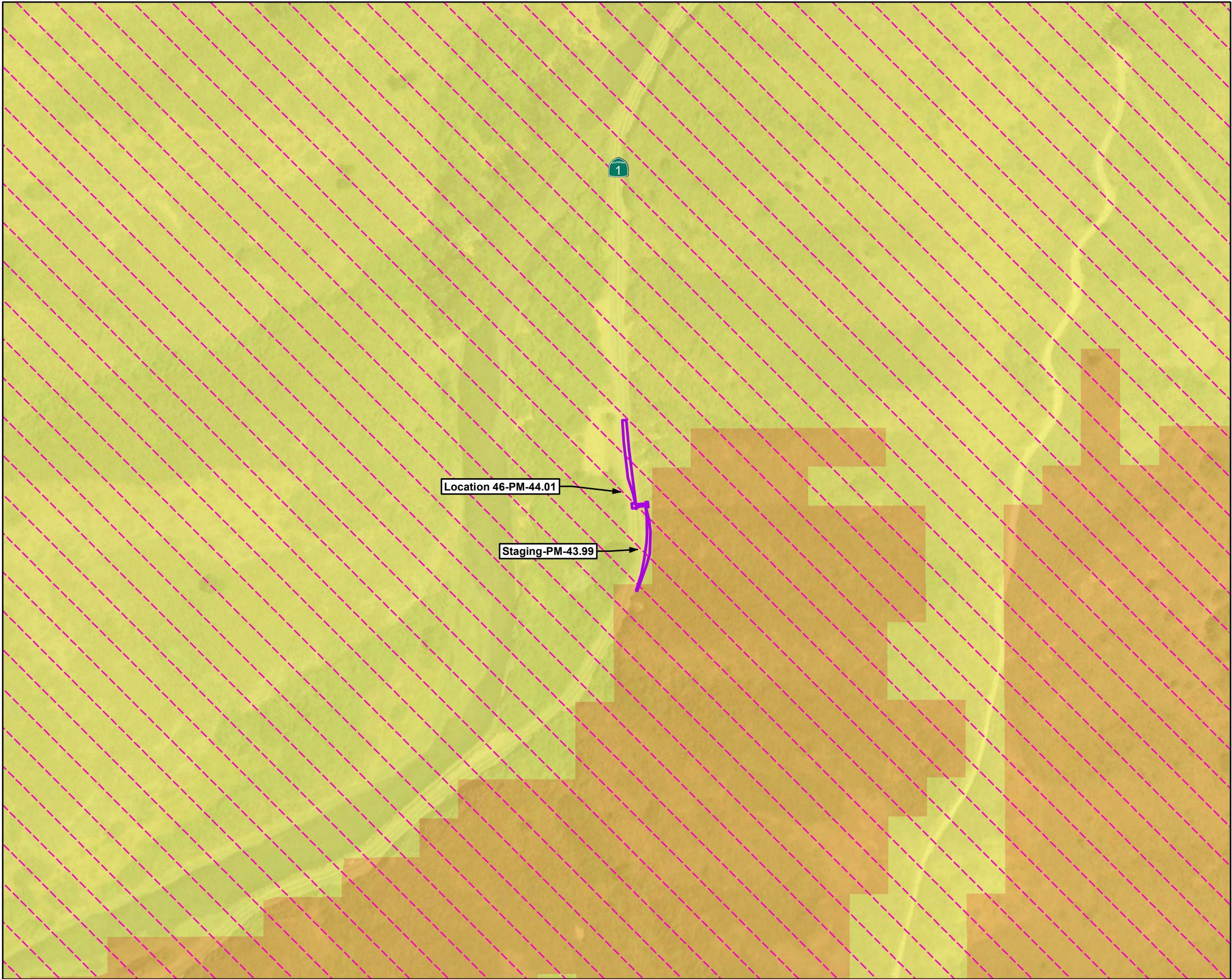
1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 20 of 22**  
**Fire Hazard Severity Zones**  
 Marin 1 Drainage System Restoration Project  
 04-2Q53U  
 MRN-1 Post Mile 13.05/45.10  
 Marin County, California





**LEGEND**

 Project Footprint (3.46 acres)

 State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

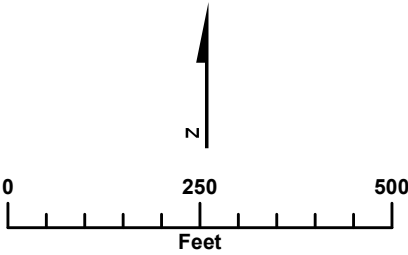
 Moderate

 High

**Sources:**

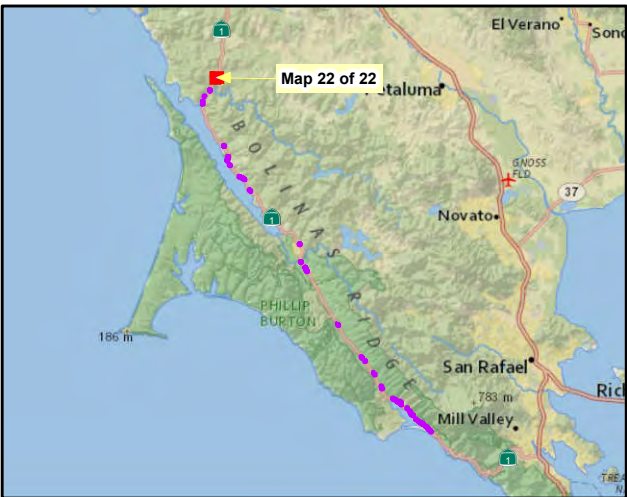
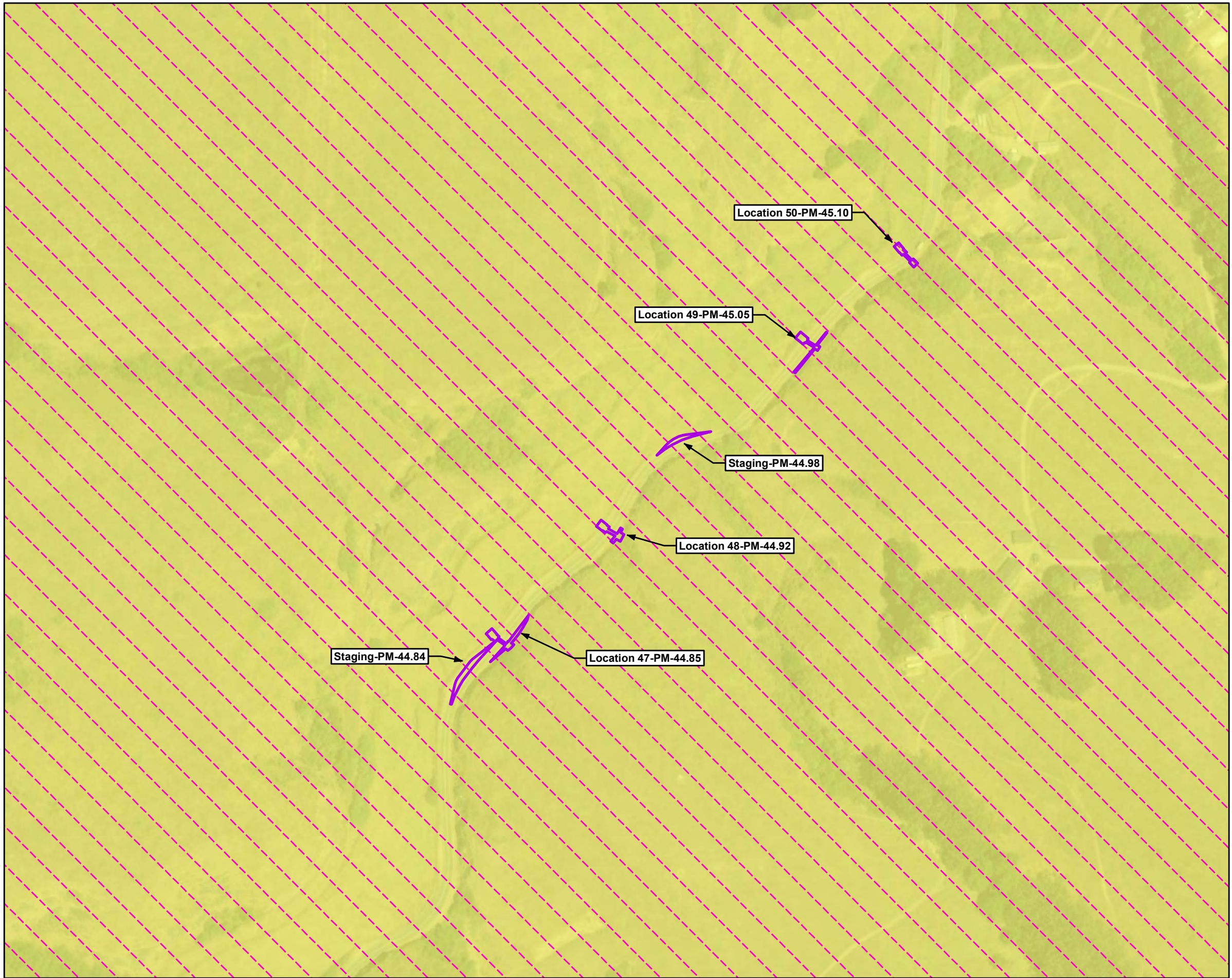
1. Imagery: ESRI, Maxar March 2021

2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP





**Figure 3.3.20-1**  
**Map 21 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California






**LEGEND**

 Project Footprint (3.46 acres)

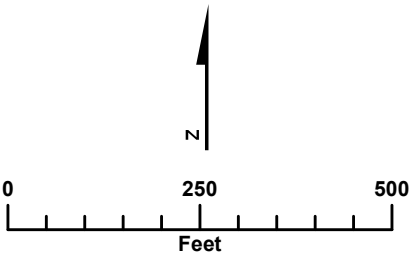
 State Responsibility Area (SRA)

**CDF Fire Hazard Severity Zones**

 Moderate

**Sources:**

1. Imagery: ESRI, Maxar March 2021
2. CDF Fire Hazard Severity Zones: CAL FIRE-FRAP



**Figure 3.3.20-1**  
**Map 22 of 22**  
**Fire Hazard Severity Zones**  
Marin 1 Drainage System Restoration Project  
04-2Q53U  
MRN-1 Post Mile 13.05/45.10  
Marin County, California



## **Appendix B** Title VI Policy Statement

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## 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](http://www.dot.ca.gov)



September 2022

### NON-DISCRIMINATION POLICY STATEMENT

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

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

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: <https://dot.ca.gov/programs/civil-rights/title-vi>.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at [Title.VI@dot.ca.gov](mailto:Title.VI@dot.ca.gov).

A handwritten signature in black ink, appearing to read 'Tony Tavares'.

TONY TAVARES  
Director







# **Appendix C** Summary of Project Features, Avoidance and Minimization Measures, and Mitigation Measures

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## **Project Features**

- **PF-AES-1, Minimize Vegetation Impacts.** Impacts on vegetation would be minimized to the greatest extent possible during construction. Vegetation to remain would be protected from construction activities through the installation of temporary fencing when it is close to construction work or staging areas.
- **PF-AES-2, Tree Trimming.** Where the pruning of trees is required to accommodate construction operations, pruning would be performed under the supervision of a certified licensed arborist.
- **PF-AES-3, Staging Areas Positioning.** Construction materials and equipment would be stored in a staging area beyond direct view of the motoring public and residential properties to the extent feasible.
- **PF-AES-4, RSP Treatment.** If it is determined that RSP would be visible to highway users, the Office of Landscape Architecture would determine if aesthetic treatment of the RSP is needed. This may include staining and/or other measures.
- **PF-AQ-1, Control Measures for Construction Emissions of Fugitive Dust.** Dust control measures would be implemented to minimize airborne dust and soil particles generated from graded areas. For disturbed soil areas, the use of an organic tackifier to control dust emissions would be included in the construction contract. Any material stockpiled during construction would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.
- **PF-AQ-2, Construction Vehicles and Equipment.** Construction vehicles and equipment would be maintained and tuned in accordance with manufacturer's specifications. In addition, solar-powered traffic control lights would be used if feasible.
- **PF-AQ-3, Minimize Idling.** Idling times would be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.



- **PF-AQ-4, Recycle Waste and Materials.** If practicable, nonhazardous waste and excess material would be recycled. If recycling is not practicable, dispose of material according to applicable regulations.
- **PF-BIO-1, Seasonal Avoidance.** Construction below top of bank would be constrained to occur during the dry season, during creek low flows (starting June 1 and ending October 31). Work in the creek would be limited to when the creek is dry or mostly dry, as much as practicable, or when the creek diversion has been installed. Caltrans would complete advanced tree removal activities outside bird nesting season (February 1 through September 30) at the culvert work locations.
- **PF-BIO-2, Environmentally Sensitive Area Fencing.** Before starting construction, 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 using high-visibility orange fencing. The ESA fencing will remain in place throughout the Project duration 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.
- **PF-BIO-3, Wildlife Exclusion Fencing.** Before the start of construction, wildlife exclusion fencing (WEF) will be installed along the Project footprint perimeter in areas where specific wildlife could enter the Project site. The final Project plans will depict the locations where WEF will be installed and how it will be assembled/constructed. The location of the WEF will be determined in coordination with USFWS. 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 throughout the Project duration while construction activities are ongoing and will be regularly inspected for stranded animals and fully maintained. The WEF will be removed following completion of construction activities.
- **PF-BIO-4, 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.
  - Servicing vehicles and construction equipment including fueling, cleaning, and maintenance at least 50 feet from aquatic habitat unless separated by topographic or 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.
  - Establishing permanent erosion control measures such as bio-filtration strips and swales to receive stormwater discharges from the highway or other impervious surfaces to the maximum extent practicable.
- **PF-BIO-5, Construction-site Management Practices.** The following site restrictions will be implemented to avoid or minimize potential impacts 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 ROW 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 non-toxic and weed free.



- Enclosing food and food-related trash items in sealed trash containers and removing them from the site at the end of each day.
- Prohibiting pets from entering the Project footprint during construction.
- Prohibiting firearms within the Project 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, solvents, and similar will be stored in sealable containers in a designated location that is at least 50 feet from aquatic habitats.
- **PF-BIO-6, Night Work.** Nighttime work will be avoided to the maximum extent practicable. Should nighttime work need to be conducted, all 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-7, 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 listed species, as well as the importance of compliance with Caltrans and various resource agency conditions.
- **PF-BIO-8, 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-9, 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 Project area overnight will be inspected before they are subsequently moved, capped, and/or buried.
- **PF-BIO-10, 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 passerines/migratory birds and 300 feet for raptors) before clearing activities begin. All nest avoidance requirements of the Migratory Bird Treaty Act 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 chipped and left onsite if appropriate or removed from the Project footprint if it could be used as nesting habitat.
- **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-CULT-1, Inadvertent Archaeological Discoveries.** If buried archaeological resources are discovered during ground-disturbing activities, work would cease until a Caltrans qualified archaeologist can assess the nature and significance of the resource and appropriate AMMs are implemented. The need for monitoring during the remainder of the Project would be reevaluated. The Caltrans qualified archaeologist would consult with appropriate Native American tribes in determining suitable treatment for inadvertent archaeological discoveries if the resource is Native American in nature.
- **PF-CULT-2, Discovery of Human Remains.** If human remains are discovered during ground-disturbing activities, construction-related activities within a 100-foot radius of the find would be halted immediately and the Caltrans qualified archaeologist would be notified within 24 hours. The Caltrans qualified archaeologist would immediately notify the Marin County coroner. The Marin County coroner is required to examine the find within 48 hours of receiving notification of such a discovery. If the Marin County coroner determines that the human remains are those of a Native American, the NAHC would be contacted by phone within 24 hours of making the determination (California Health and Safety



Code Section 7050.5[c]). The Caltrans qualified archaeologist would notify Native American tribes of discovered human remains. The NAHC would contact the Most Likely Descendent (MLD), as determined by the NAHC, regarding the discovered human remains. The MLD, in cooperation with the adjacent property owner and the Caltrans qualified archaeologist, would determine the ultimate disposition of the human remains.

- **PF-GHG-1, Control Measures for Greenhouse Gases.** Measures would be determined during later Project phases and implemented during construction to do the following:
  - Ensure regular maintenance of construction vehicle and equipment
  - Limit idling of vehicles and equipment onsite
  - Recycle nonhazardous waste and excess material if practicable
  - Use solar-powered signal boards, if feasible
- **PF-WQ-1, Temporary Soil Stabilization.**
  - Temporary Hydraulic Mulch: Fibrous materials mixed with water sprayed onto the soil surface in slurry form to provide layer of temporary protection from wind and water erosion.
  - Temporary Hydroseeding: Protection of disturbed soil from raindrop and wind impacts using a water-based mixture of wood/paper fiber, stabilizing emulsion, and seed from hydro-mulching equipment.
  - Temporary Cover: Plastic covers for stockpiles and rolled erosion control products including erosion control blankets, to stabilize disturbed soil areas and protect soils from erosion by wind or water.
- **PF-WQ-2, Temporary Sediment Control.**
  - Temporary Silt Fence: Linear, permeable fabric barriers to intercept sediment-laden sheet flow. Placed downslope of exposed soil areas, along channels and Project perimeter.
  - Temporary Fiber Rolls: Degradable fibers rolled tightly and placed on the toe and face of slopes to intercept runoff.
  - Temporary Check Dams: Sediment barriers placed within ditches to prevent scour and erosion by reducing flow velocity.



- Temporary Drainage Inlet Protection: Runoff detainment devices used at storm drain inlets that is subject to runoff from construction activities.
- **PF-WQ-3, Wind Erosion Control.**
  - Dust Control: Applying water or other dust palliatives as necessary to prevent or alleviate erosion by the forces of wind.
- **PF-WQ-4, Tracking Control.**
  - Temporary Construction Entrances/Exits: Points of entrance/exit to a construction site that are stabilized to reduce the tracking of mud and dirt onto public roads.
  - Street Sweeping: Self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving.
- **PF-WQ-5, Waste Management and Materials Pollution Control.**
  - Temporary Concrete Washout Facilities: Specified vehicle washing areas to contain concrete waste materials.
  - All other anticipated waste management and materials pollution control measures are covered under PF-WQ-6, Job Site Management.
- **PF-WQ-6, Job Site Management.**
  - General measures included under job site management include the following:
    - Spill prevention and control
    - Materials management
    - Stockpile management
    - Waste management
    - Hazardous waste management
    - Contaminated soil
    - Concrete waste
    - Sanitary and septic waste and liquid waste



- Non-stormwater management consists of the following:
  - Water control and conservation management
  - Illegal connection and discharge detection and reporting
  - Vehicle and equipment cleaning
  - Vehicle and equipment fueling and maintenance
  - Paving, sealing, sawcutting, and grinding operations
  - Thermoplastic striping and pavement markers
  - Concrete curing and concrete finishing
- **PF-WQ-7, Miscellaneous Job Site Management.**
  - Training of employees and subcontractors
  - Proper selection, deployment, and repair of construction-site BMPs.
- **PF-WQ-8, Stormwater Treatment BMPs.** Treatment BMPs would address the post-construction water quality impacts and remove pollutants from stormwater runoff before discharging to receiving waters. The Project currently proposes the use of bioretention swales or basins as the stormwater treatment BMPs to meet Project requirements. The locations for stormwater treatment BMPs would be determined during later Project phases.
- **PF-NOI-1, Public Outreach.** Public outreach would be required before Project construction and throughout the Project construction to update residents, businesses, and others of upcoming activities and the Project timeframe. Public outreach may entail sending notices to nearby residents, notifying the city, and posting a notice on the Project website.
- **PF-NOI-2, Construction Noise Levels.** The following measures would be implemented to reduce noise levels during construction where feasible:
  - Ensure all construction equipment conforms to Section 14-8.02, Noise Control, of the latest Caltrans Standard Specifications.
  - Equip an internal combustion engine with a manufacturer-recommended muffler that is in good condition. Do not operate an internal combustion engine within the Project footprint without the appropriate muffler.
  - Do not idle construction equipment unnecessarily.



- Maximize the distance between stationary noise-generating construction equipment, such as air compressors and portable power generators, and noise-sensitive receptors.
- Locate staging and storage areas away from residential areas.
- Use quieter alternative methods of equipment.
- If feasible, use solar or electricity as power source instead of diesel generators.

## Avoidance and Minimization Measures

- **AMM-AES-1, Staging Areas Impact Reduction.** Staging areas would not be located where they require the removal of vegetation or result in ground compaction impacting tree roots.
- **AMM-AES-2, Project Design Compliance.** As the design is advanced, any modifications would be required to ensure compliance with the July 2015 *Final Marin State Route 1 Repair Guidelines*, as confirmed by the Office of Landscape Architecture and the Office of Environmental Analysis.
- **AMM-AES-3, Avoid Tree Impacts.** Opportunities to avoid impacts to trees by revising the alignment of culverts would be examined as design advances.
- **AMM-AES-4, Reseeding.** Disturbed areas would be revegetated with a regionally appropriate native seed mix following construction.
- **AMM-AES-5, Materials Selection.** Materials and design site features would be selected as appropriate for the visual character of the location and to maintain corridor consistency, in conjunction with the Office of Landscape Architecture.
- **AMM-BIO-1, Restrict In-water Work.** Restrict in-water work and work within identified riparian corridors around jurisdictional waters to June 1 through October 31, when stream channels and drainages are expected to be dry. Work window restrictions will also avoid impacts to sensitive life stages of special-status aquatic species. Restrict construction staging areas to locations within the Project footprint outside any designated ESA.
- **AMM-BIO-2, Minimize Tree Removal.** Attempts to minimize tree removal will include trimming wherever possible. Each individual tree location will be assessed by the Project biologist in coordination with Caltrans construction



personnel to see if the work can be performed without impacting the trees. The trees that will be removed would be cut down to the stumps and removed between October 1 and January 31, the season prior to construction, to avoid nesting bird season. If trees are to be removed during bird nesting season, the biologist will survey for active nests, in accordance with permit conditions, prior to removal.

- **AMM-BIO-3. Vegetation Removal Window.** To the extent feasible, vegetation removal would only occur between October 1 and January 31 and would not occur outside of the construction areas to avoid disturbance of bird nesting season.
- **AMM-BIO-5, Pre-construction Surveys for California red-legged Frog.** Pre-construction surveys for CRLF will be conducted by a USFWS-approved biologist no more than 20 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 under Item 4. Fossorial mammal burrows will be inspected for signs of frog usage, to the extent practicable. If it is determined that a burrow may be occupied by CRLF, USFWS will be contacted and work within the vicinity of the burrow will stopped per agency permits.
- **AMM-BIO-6, Protocol for Species Relocation and Reporting.** If CRLF are encountered in the immediate work area the following procedures will be followed:
  - The resident engineer and USFWS-approved biologist will be immediately informed. If a frog gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves the construction zone. The capture and removal of CRLF may only be performed following consultation with USFWS and captured CRLF will be released within appropriate habitat outside of the construction area within the creek riparian corridor. The release habitat will be determined by USFWS.
  - The USFWS-approved biologist will have the authority to halt work through coordination with the resident engineer in the event that a CRLF is discovered



- within the Project footprint. The resident engineer will ensure construction activities remain suspended in any construction area where the qualified biologist has determined that a potential take of CRLF could occur. Work will resume once the animal leaves the site voluntarily or is removed following agency consultation, or it is determined that the CRLF is not being harassed by construction activities. If take occurs, the biologist(s) will notify the USFWS contact by telephone and electronic mail within one working day.
- The biological monitor(s) will take precautions to prevent introduction of amphibian diseases in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005).
  - **AMM-BIO-7, Focused NSO Surveys.** NSO-focused surveys should be conducted by a qualified biologist at all Project areas that are within 0.25 mile of NSO nesting habitat and activity centers (Locations 24 through 28). If surveys are not completed, work at these locations should be restricted to between August 1 and February 28, unless surveys determine the suitable habitat or site is unoccupied or the owls are not nesting. For Project work within 0.25 mile of a known nest site or nesting habitat that cannot be scheduled outside of the nesting season and where the 0.25-mile buffers cannot be maintained, reduced buffers should be implemented based on *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (USFWS 2006).
  - **AMM-BIO-8, Auditory or Visual Disturbance.** No proposed activity generating sound levels 20 or more A-weighted decibels (dBA) above ambient sound levels or with maximum sound levels (ambient sound level plus activity-generated sound level) above 90 dBA (excluding vehicle backup alarms) may occur within the suitable NSO nesting and roosting habitat between October 31 and August 1. In addition, no human activities will occur within a visual line-of-sight of 40 meters (131 feet) or less from any known nest locations within the action area. These above-ambient sound level restrictions will be lifted after July 31, after which the above-ambient sound levels are considered as having “no effect” on nesting NSO and dependent young.
  - **AMM-BIO-9, Focused Pre-construction Surveys for Golden Larkspur.** Prior to the start of construction, focused pre-construction surveys for golden larkspur will be performed within work Locations 43 through 50. These surveys will be



appropriately timed to capture the blooming period for this species (March through May), following appropriate CDFW and CNPS survey protocols.

- **AMM-BIO-10, Designation of Special-status Plant Populations.** In conjunction with pre-construction survey AMMs, mapping of any observed populations of special-status plants (including golden larkspur, coat rock cress, and Raiche's red-ribbons) within the BSA will be performed the season prior to construction. These areas will be denoted as ESA and avoided as feasible. If avoidance of special-status plants within the Project footprint is not possible, Caltrans will consult with CDFW for use of appropriate relocation or harvesting protocols.
- **AMM-BIO-11, Pre-construction Surveys.** Prior to the start of tree removal activities, a pre-construction bat survey will be performed by an approved biologist. In the event that any commonly occurring non-listed tree roosting bat species are present, the approved biologist will determine if two-phase tree removal methods or other bat tree roost avoidance measures are appropriate. Surveys will be conducted at work locations determined to have moderately to highly suitable tree roost habitat. The biologist will use visual confirmation to determine the presence of any bat roosts and acoustic recognition equipment to identify species to the greatest extent possible. If detected, all appropriate avoidance and minimization measures will be put in place. Because of the cryptic nature of day-roosting by bats, any trees that may provide roosting habitat (such as large snags or trees with cavities) should be removed using the two-phase method of removing limbs from the tree on the afternoon of the first day and stumping the tree on the following day. This technique allows any bats that may be using the trees to leave of their own volition; they are then unlikely to day-roost in or near any trees from which the limbs were removed. It is also recommended, to the maximum extent practicable, that no work occur at dawn or dusk, when bats and small mammals are most active. No bats will be handled as part of this Project.
- **AMM-BIO-12, Inspect Pipes and Culverts.** All construction-related pipes, culverts or similar structures within the Project area should be thoroughly inspected for the presence of wildlife, including roosting bats, prior to being moved or buried.



- **AMM-BIO-13, Work Window at Locations 2, 3, 6 to 8, 10, 12 to 15, 18 to 20, and 22.** At work locations within TWG critical habitat, work within aquatic areas will be restricted to September 1 and October 31 to comply with the species' work windows.
- **AMM-BIO-14, Block Net Installation.** Block-off nets will be installed and closed during low tide to the extent feasible to prevent fish from entering the work area. Net locations include areas where the Project footprint occurs below the mean-high tide line or with other waters with immediate connectivity to intertidal waters (Locations 1, 7 to 10, 13 to 17, 20, 36, 38, 39, and 41 and maintenance culverts at PM 16.09 and PM 16.47).
- **AMM-BIO-18, Conduct Pre-construction Survey for *Viola adunca*.** A pre-construction surveys for *Viola adunca* would be conducted by a USFWS-approved biological monitor. Visual surveys would be conducted in the early spring, prior to construction, referencing phenology trends observed at nearby reference populations. If *Viola adunca* are found in the work area, they would be flagged for avoidance. Negative findings for *Viola adunca* within the BSA would indicate that the footprint does not contain suitable breeding habitat for MSB.
- **AMM-BIO-19, In-water Activities at Maintenance Culvert at PM 16.47 and Location 33.** When working in the channel at maintenance culvert at PM 16.47 and Location 33, the duration of in-water activities will be limited to the minimum amount of time necessary to conduct maintenance activities.
- **AMM-CULT-1, Establish and Enforce Environmentally Sensitive Area Action Plan.** Prepare an ESA Action Plan, which would establish ESAs to delineate the archaeological site for protection. Specific measures, such as protective fencing, access restrictions, and monitoring of the ESA boundaries by a qualified archaeologist, would be enforced by the responsible parties identified in the ESA Action Plan. Reference Caltrans Standard Specification 14-1.02.
- **AMM-CULT-2. Establish and Enforce Archaeological Monitoring Areas.** Prepare an Archaeological Monitoring Plan to be implemented during construction. This would include establishing Archaeological Monitoring Areas (AMAs) and having an archaeologist and tribal representative monitor job site activities within the archaeological monitoring areas to reduce the Project's impacts to the resources within the Project limits. No work can be conducted



within the AMAs unless the archaeological monitor is present. Reference Caltrans Standard Specification 14-2.03.

- **AMM-TRANS-1, Traffic Management Plan.** A TMP would be prepared 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 SR 1 within the Project corridor during construction. The TMP would identify traffic delays/detours for, and provide priority to, emergency and medical vehicles associated with essential (that is, public) services during full closure of SR 1 or one-way alternating traffic control, 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.
- **AMM-UT-1, Utility Notifications.** Caltrans would notify all affected utility companies of the construction schedule for the Project so that relocations can be conducted by each utility company as necessary prior to the start of construction.

## **Mitigation Measures**

- **MM-BIO-1, Impacts to Vegetation.** Vegetation removed for the Project would be restored to pre-existing conditions using native species. Trees removed within CDFW jurisdiction will be replanted following construction. Appropriate tree replacement ratios and locations would be determined during the permitting process and in consultation with the appropriate agencies.
- **MM-BIO-2, Impacts to ESHAs.** Restoration of temporary disturbance areas, including ESHAs, will be accomplished through onsite revegetation. Restoration of temporary impact areas will occur within the same season they are disturbed so that the duration of disturbance at each location will not exceed 12 months. Restoration of temporarily disturbed areas will be performed at a 1:1 ratio. At the end of each construction season, exposed slopes and bare ground will be reseeded with native grasses and shrubs to stabilize and prevent erosion.
- **MM-BIO-3, Impacts to Jurisdictional Waters.** Caltrans will determine the need for mitigation for impacts to jurisdictional waters during the design phase in consultation with agencies including USACE, CCC, and the RWQCB. Caltrans will be obtaining a National CWA Section 401 certification from the RWQCB. Any final mitigation requirements will be determined in coordination with applicable agencies during the permitting process.







## **Appendix D**   Species Lists

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# Selected Elements by Scientific Name

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**Query Criteria:** Quad< IS </span>(Bolinas (3712286)<span style="color:Red"> OR </span>Inverness (3812217)<span style="color:Red"> OR </span>Point Reyes NE (3812227)<span style="color:Red"> OR </span>Tomaes (3812228)<span style="color:Red"> OR </span>San Geronimo (3812216)<span style="color:Red"> OR </span>Double Point (3712287))

| Species   | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Abronia umbellata</i> var. <i>breviflora</i></b><br>pink sand-verbena                     | PDNYC010N4   | None           | None         | G4G5T2      | S2         | 1B.1                           |
| <b><i>Adela oplerella</i></b><br>Opler's longhorn moth  | IILEE0G040   | None           | None         | G2          | S2         |                                |
| <b><i>Agelaius tricolor</i></b><br>tricolored blackbird   | ABPBXB0020   | None           | Threatened   | G1G2        | S1S2       | SSC                            |
| <b><i>Agrostis blasdalei</i></b><br>Blasdale's bent grass                                       | PMPOA04060   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Alopecurus aequalis</i> var. <i>sonomensis</i></b><br>Sonoma alopecurus                   | PMPOA07012   | Endangered     | None         | G5T1        | S1         | 1B.1                           |
| <b><i>Ambystoma californiense</i> pop. 3</b><br>California tiger salamander - Sonoma County DPS | AAAAA01183   | Endangered     | Threatened   | G2G3T2      | S2         | WL                             |
| <b><i>Amorpha californica</i> var. <i>napensis</i></b><br>Napa false indigo                     | PDFAB08012   | None           | None         | G4T2        | S2         | 1B.2                           |
| <b><i>Amsinckia lunaris</i></b><br>bent-flowered fiddleneck                                     | PDBOR01070   | None           | None         | G3          | S3         | 1B.2                           |
| <b><i>Antrozous pallidus</i></b><br>pallid bat  | AMACC10010   | None           | None         | G4          | S3         | SSC                            |
| <b><i>Aplodontia rufa phaea</i></b><br>Point Reyes mountain beaver                              | AMAF01012    | None           | None         | G5T2        | S2         | SSC                            |
| <b><i>Arctostaphylos montana</i> ssp. <i>montana</i></b><br>Mt. Tamalpais manzanita             | PDERI040J5   | None           | None         | G3T3        | S3         | 1B.3                           |
| <b><i>Arctostaphylos virgata</i></b><br>Marin manzanita   | PDERI041K0   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Ardea alba</i></b><br>great egret   | ABNGA04040   | None           | None         | G5          | S4         |                                |
| <b><i>Ardea herodias</i></b><br>great blue heron  | ABNGA04010   | None           | None         | G5          | S4         |                                |
| <b><i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i></b><br>coastal marsh milk-vetch    | PDFAB0F7B2   | None           | None         | G2T2        | S2         | 1B.2                           |
| <b><i>Athene cunicularia</i></b><br>burrowing owl   | ABNSB10010   | None           | None         | G4          | S3         | SSC                            |
| <b><i>Blennosperma nanum</i> var. <i>robustum</i></b><br>Point Reyes blennosperma               | PDAST1A022   | None           | Rare         | G4T2        | S2         | 1B.2                           |
| <b><i>Bombus caliginosus</i></b><br>obscure bumble bee  | IIHYM24380   | None           | None         | G2G3        | S1S2       |                                |
| <b><i>Bombus occidentalis</i></b><br>western bumble bee   | IIHYM24250   | None           | None         | G2G3        | S1         |                                |





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|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Caecidotea tomalensis</i></b><br>Tomales isopod                               | ICMAL01220   | None           | None         | G2          | S2S3       |                                |
| <b><i>Callophrys mossii marinensis</i></b><br>Marin elfin butterfly                 | IILEPE2207   | None           | None         | G4T1        | S1         |                                |
| <b><i>Calystegia purpurata ssp. saxicola</i></b><br>coastal bluff morning-glory     | PDCON040D2   | None           | None         | G4T2T3      | S2S3       | 1B.2                           |
| <b><i>Campanula californica</i></b><br>swamp harebell                               | PDCAM02060   | None           | None         | G3          | S3         | 1B.2                           |
| <b><i>Cardamine angulata</i></b><br>seaside bittercress                             | PDBRA0K010   | None           | None         | G4G5        | S3         | 2B.1                           |
| <b><i>Carex lyngbyei</i></b><br>Lyngbye's sedge                                     | PMCYP037Y0   | None           | None         | G5          | S3         | 2B.2                           |
| <b><i>Castilleja affinis var. neglecta</i></b><br>Tiburon paintbrush                | PDSCR0D013   | Endangered     | Threatened   | G4G5T1T2    | S1S2       | 1B.2                           |
| <b><i>Castilleja ambigua var. humboldtiensis</i></b><br>Humboldt Bay owl's-clover   | PDSCR0D402   | None           | None         | G4T2        | S2         | 1B.2                           |
| <b><i>Castilleja leschkeana</i></b><br>Point Reyes paintbrush                       | PDSCR0D1R0   | None           | None         | GX          | SX         | 1A                             |
| <b><i>Ceanothus decornutus</i></b><br>Nicasio ceanothus                             | PDRHA04440   | None           | None         | G1          | S1         | 1B.2                           |
| <b><i>Ceanothus gloriosus var. porrectus</i></b><br>Mt. Vision ceanothus            | PDRHA040F7   | None           | None         | G4T2        | S2         | 1B.3                           |
| <b><i>Ceanothus masonii</i></b><br>Mason's ceanothus                                | PDRHA04200   | None           | Rare         | G1          | S1         | 1B.2                           |
| <b><i>Central Dune Scrub</i></b><br>Central Dune Scrub                              | CTT21320CA   | None           | None         | G2          | S2.2       |                                |
| <b><i>Charadrius nivosus nivosus</i></b><br>western snowy plover                    | ABNNB03031   | Threatened     | None         | G3T3        | S2         | SSC                            |
| <b><i>Chloropyron maritimum ssp. palustre</i></b><br>Point Reyes salty bird's-beak  | PDSCR0J0C3   | None           | None         | G4?T2       | S2         | 1B.2                           |
| <b><i>Chorizanthe cuspidata var. cuspidata</i></b><br>San Francisco Bay spineflower | PDPGN04081   | None           | None         | G2T1        | S1         | 1B.2                           |
| <b><i>Chorizanthe cuspidata var. villosa</i></b><br>woolly-headed spineflower       | PDPGN04082   | None           | None         | G2T2        | S2         | 1B.2                           |
| <b><i>Cicindela hirticollis gravida</i></b><br>sandy beach tiger beetle             | IICOL02101   | None           | None         | G5T2        | S2         |                                |
| <b><i>Cicuta maculata var. bolanderi</i></b><br>Bolander's water-hemlock            | PDAP10M051   | None           | None         | G5T4T5      | S2?        | 2B.1                           |
| <b><i>Cirsium andrewsii</i></b><br>Franciscan thistle                               | PDAST2E050   | None           | None         | G3          | S3         | 1B.2                           |
| <b><i>Cirsium hydrophilum var. vaseyi</i></b><br>Mt. Tamalpais thistle              | PDAST2E1G2   | None           | None         | G2T1        | S1         | 1B.2                           |





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|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Clarkia concinna ssp. raichei</i></b><br>Raiche's red ribbons                    | PDONA050A2   | None           | None         | G5?T1       | S1         | 1B.1                           |
| <b><i>Coastal Terrace Prairie</i></b><br>Coastal Terrace Prairie                       | CTT41100CA   | None           | None         | G2          | S2.1       |                                |
| <b><i>Coelus globosus</i></b><br>globose dune beetle                                   | IICOL4A010   | None           | None         | G1G2        | S1S2       |                                |
| <b><i>Collinsia corymbosa</i></b><br>round-headed Chinese-houses                       | PDSCR0H060   | None           | None         | G1          | S1         | 1B.2                           |
| <b><i>Corynorhinus townsendii</i></b><br>Townsend's big-eared bat                      | AMACC08010   | None           | None         | G4          | S2         | SSC                            |
| <b><i>Coturnicops noveboracensis</i></b><br>yellow rail                                | ABNME01010   | None           | None         | G4          | S1S2       | SSC                            |
| <b><i>Cypseloides niger</i></b><br>black swift   | ABNUA01010   | None           | None         | G4          | S2         | SSC                            |
| <b><i>Danaus plexippus pop. 1</i></b><br>monarch - California overwintering population | IILEPP2012   | Candidate      | None         | G4T2T3      | S2S3       |                                |
| <b><i>Delphinium bakeri</i></b><br>Baker's larkspur                                    | PDRAN0B050   | Endangered     | Endangered   | G1          | S1         | 1B.1                           |
| <b><i>Delphinium luteum</i></b><br>golden larkspur                                     | PDRAN0B0Z0   | Endangered     | Rare         | G1          | S1         | 1B.1                           |
| <b><i>Dicamptodon ensatus</i></b><br>California giant salamander                       | AAAAH01020   | None           | None         | G2G3        | S2S3       | SSC                            |
| <b><i>Dirca occidentalis</i></b><br>western leatherwood                                | PDTHY03010   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Emys marmorata</i></b><br>western pond turtle                                    | ARAAD02030   | None           | None         | G3G4        | S3         | SSC                            |
| <b><i>Entosthodon kochii</i></b><br>Koch's cord moss                                   | NBMUS2P050   | None           | None         | G1          | S1         | 1B.3                           |
| <b><i>Erethizon dorsatum</i></b><br>North American porcupine                           | AMAFJ01010   | None           | None         | G5          | S3         |                                |
| <b><i>Eriogonum luteolum var. caninum</i></b><br>Tiburon buckwheat                     | PDPGN083S1   | None           | None         | G5T2        | S2         | 1B.2                           |
| <b><i>Erysimum concinnum</i></b><br>bluff wallflower                                   | PDBRA160E3   | None           | None         | G3          | S2         | 1B.2                           |
| <b><i>Eucyclogobius newberryi</i></b><br>tidewater goby                                | AFCQN04010   | Endangered     | None         | G3          | S3         |                                |
| <b><i>Falco peregrinus anatum</i></b><br>American peregrine falcon                     | ABNKD06071   | Delisted       | Delisted     | G4T4        | S3S4       | FP                             |
| <b><i>Fritillaria lanceolata var. tristulis</i></b><br>Marin checker lily              | PMLIL0V0P1   | None           | None         | G5T2        | S2         | 1B.1                           |
| <b><i>Fritillaria liliacea</i></b><br>fragrant fritillary                              | PMLIL0V0C0   | None           | None         | G2          | S2         | 1B.2                           |





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|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Geothlypis trichas sinuosa</i></b><br>saltmarsh common yellowthroat            | ABPBX1201A   | None           | None         | G5T3        | S3         | SSC                            |
| <b><i>Gilia capitata ssp. chamissonis</i></b><br>blue coast gilia                    | PDPLM040B3   | None           | None         | G5T2        | S2         | 1B.1                           |
| <b><i>Gilia capitata ssp. tomentosa</i></b><br>woolly-headed gilia                   | PDPLM040B9   | None           | None         | G5T2        | S2         | 1B.1                           |
| <b><i>Gilia millefoliata</i></b><br>dark-eyed gilia                                  | PDPLM04130   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Helminthoglypta stiversiana williamsi</i></b><br>Williams' bronze shoulderband | IMGASC2034   | None           | None         | G1G2T1      | S1         |                                |
| <b><i>Hemizonia congesta ssp. congesta</i></b><br>congested-headed hayfield tarplant | PDAST4R065   | None           | None         | G5T2        | S2         | 1B.2                           |
| <b><i>Hesperervax sparsiflora var. brevifolia</i></b><br>short-leaved evax           | PDASTE5011   | None           | None         | G4T3        | S3         | 1B.2                           |
| <b><i>Hesperoleucus venustus subditus</i></b><br>southern coastal roach              | AFCJB19032   | None           | None         | GNRT2       | S2         | SSC                            |
| <b><i>Hesperolinon congestum</i></b><br>Marin western flax                           | PDLIN01060   | Threatened     | Threatened   | G1          | S1         | 1B.1                           |
| <b><i>Heteranthera dubia</i></b><br>water star-grass                                 | PMPON03010   | None           | None         | G5          | S2         | 2B.2                           |
| <b><i>Horkelia cuneata var. sericea</i></b><br>Kellogg's horkelia                    | PDROS0W043   | None           | None         | G4T1?       | S1?        | 1B.1                           |
| <b><i>Horkelia marinensis</i></b><br>Point Reyes horkelia                            | PDROS0W0B0   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Horkelia tenuiloba</i></b><br>thin-lobed horkelia                              | PDROS0W0E0   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Hydrobates homochroa</i></b><br>ashy storm-petrel                              | ABNDC04030   | None           | None         | G2          | S2         | SSC                            |
| <b><i>Hydrochara rickseckeri</i></b><br>Ricksecker's water scavenger beetle          | IICOL5V010   | None           | None         | G2?         | S2?        |                                |
| <b><i>Hypogymnia schizidiata</i></b><br>island tube lichen                           | NLT0032640   | None           | None         | G2G3        | S2         | 1B.3                           |
| <b><i>Icaricia icarioides parapheres</i></b><br>Point Reyes blue butterfly           | IILEPG801D   | None           | None         | G5T1T2      | S1S2       |                                |
| <b><i>Ischnura gemina</i></b><br>San Francisco forktail damselfly                    | IIOD072010   | None           | None         | G2          | S2         |                                |
| <b><i>Lasionycteris noctivagans</i></b><br>silver-haired bat                         | AMACC02010   | None           | None         | G3G4        | S3S4       |                                |
| <b><i>Lasiurus blossevillii</i></b><br>western red bat                               | AMACC05060   | None           | None         | G4          | S3         | SSC                            |
| <b><i>Lasiurus cinereus</i></b><br>hoary bat   | AMACC05030   | None           | None         | G3G4        | S4         |                                |





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| Species  | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Lasthenia californica ssp. bakeri</i></b><br>Baker's goldfields                        | PDAST5L0C4   | None           | None         | G3T1        | S1         | 1B.2                           |
| <b><i>Lasthenia californica ssp. macrantha</i></b><br>perennial goldfields                   | PDAST5L0C5   | None           | None         | G3T2        | S2         | 1B.2                           |
| <b><i>Laterallus jamaicensis coturniculus</i></b><br>California black rail                   | ABNME03041   | None           | Threatened   | G3T1        | S1         | FP                             |
| <b><i>Layia carnosa</i></b><br>beach layia   | PDAST5N010   | Threatened     | Endangered   | G2          | S2         | 1B.1                           |
| <b><i>Leptosiphon rosaceus</i></b><br>rose leptosiphon                                       | PDPLM09180   | None           | None         | G1          | S1         | 1B.1                           |
| <b><i>Lessingia micradenia var. micradenia</i></b><br>Tamalpais lessingia                    | PDAST5S063   | None           | None         | G2T2        | S2         | 1B.2                           |
| <b><i>Lichnanthe ursina</i></b><br>bumblebee scarab beetle                                   | IICOL67020   | None           | None         | G2          | S2         |                                |
| <b><i>Lilaeopsis masonii</i></b><br>Mason's lilaeopsis                                       | PDAP119030   | None           | Rare         | G2          | S2         | 1B.1                           |
| <b><i>Lilium maritimum</i></b><br>coast lily   | PMLIL1A0C0   | None           | None         | G2          | S2         | 1B.1                           |
| <b><i>Lindieriella occidentalis</i></b><br>California lindieriella                           | ICBRA06010   | None           | None         | G2G3        | S2S3       |                                |
| <b><i>Lupinus tidestromii</i></b><br>Tidestrom's lupine                                      | PDFAB2B3Y0   | Endangered     | Endangered   | G1          | S1         | 1B.1                           |
| <b><i>Melospiza melodia samuelis</i></b><br>San Pablo song sparrow                           | ABPBXA301W   | None           | None         | G5T2        | S2         | SSC                            |
| <b><i>Microseris paludosa</i></b><br>marsh microseris  | PDAST6E0D0   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Mielichhoferia elongata</i></b><br>elongate copper moss                                | NBMUS4Q022   | None           | None         | G5          | S3S4       | 4.3                            |
| <b><i>Monardella sinuata ssp. nigrescens</i></b><br>northern curly-leaved monardella         | PDLAM18162   | None           | None         | G3T2        | S2         | 1B.2                           |
| <b><i>Navarretia rosulata</i></b><br>Marin County navarretia                                 | PDPLM0C0Z0   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Northern Coastal Salt Marsh</i></b><br>Northern Coastal Salt Marsh                     | CTT52110CA   | None           | None         | G3          | S3.2       |                                |
| <b><i>Northern Maritime Chaparral</i></b><br>Northern Maritime Chaparral                     | CTT37C10CA   | None           | None         | G1          | S1.2       |                                |
| <b><i>Northern Vernal Pool</i></b><br>Northern Vernal Pool                                   | CTT44100CA   | None           | None         | G2          | S2.1       |                                |
| <b><i>Oncorhynchus kisutch pop. 4</i></b><br>coho salmon - central California coast ESU      | AFCHA02034   | Endangered     | Endangered   | G5T2Q       | S2         |                                |
| <b><i>Oncorhynchus mykiss irideus pop. 8</i></b><br>steelhead - central California coast DPS | AFCHA0209G   | Threatened     | None         | G5T2T3Q     | S2S3       |                                |





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|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Pandion haliaetus</i></b><br>osprey   | ABNKC01010   | None           | None         | G5          | S4         | WL                             |
| <b><i>Phacelia insularis</i> var. <i>continentis</i></b><br>North Coast phacelia      | PDHYD0C2B1   | None           | None         | G2T2        | S2         | 1B.2                           |
| <b><i>Pleuropogon hooverianus</i></b><br>North Coast semaphore grass                  | PMPOA4Y070   | None           | Threatened   | G2          | S2         | 1B.1                           |
| <b><i>Polygonum marinense</i></b><br>Marin knotweed                                   | PDPGN0L1C0   | None           | None         | G2Q         | S2         | 3.1                            |
| <b><i>Pomatiopsis binneyi</i></b><br>robust walker                                    | IMGASJ9010   | None           | None         | G1          | S1         |                                |
| <b><i>Pomatiopsis californica</i></b><br>Pacific walker                               | IMGASJ9020   | None           | None         | G1          | S1         |                                |
| <b><i>Quercus parvula</i> var. <i>tamalpaisensis</i></b><br>Tamalpais oak             | PDFAG051Q3   | None           | None         | G4T2        | S2         | 1B.3                           |
| <b><i>Rallus obsoletus obsoletus</i></b><br>California Ridgway's rail                 | ABNME05011   | Endangered     | Endangered   | G3T1        | S1         | FP                             |
| <b><i>Rana boylei</i></b><br>foothill yellow-legged frog                              | AAABH01050   | None           | Endangered   | G3          | S3         | SSC                            |
| <b><i>Rana draytonii</i></b><br>California red-legged frog                            | AAABH01022   | Threatened     | None         | G2G3        | S2S3       | SSC                            |
| <b><i>Sagittaria sanfordii</i></b><br>Sanford's arrowhead                             | PMALI040Q0   | None           | None         | G3          | S3         | 1B.2                           |
| <b><i>Serpentine Bunchgrass</i></b><br>Serpentine Bunchgrass                          | CTT42130CA   | None           | None         | G2          | S2.2       |                                |
| <b><i>Setophaga petechia</i></b><br>yellow warbler                                    | ABPBX03010   | None           | None         | G5          | S3S4       | SSC                            |
| <b><i>Sidalcea calycosa</i> ssp. <i>rhizomata</i></b><br>Point Reyes checkerbloom     | PDMAL11012   | None           | None         | G5T2        | S2         | 1B.2                           |
| <b><i>Sidalcea hickmanii</i> ssp. <i>viridis</i></b><br>Marin checkerbloom            | PDMAL110A4   | None           | None         | G3TH        | SH         | 1B.1                           |
| <b><i>Sidalcea malviflora</i> ssp. <i>purpurea</i></b><br>purple-stemmed checkerbloom | PDMAL110FL   | None           | None         | G5T1        | S1         | 1B.2                           |
| <b><i>Silene scouleri</i> ssp. <i>scouleri</i></b><br>Scouler's catchfly              | PDCAR0U1MC   | None           | None         | G5T4T5      | S2S3       | 2B.2                           |
| <b><i>Speyeria zerene myrtilae</i></b><br>Myrtle's silverspot butterfly               | IILEPJ608C   | Endangered     | None         | G5T1        | S1         |                                |
| <b><i>Spirinchus thaleichthys</i></b><br>longfin smelt                                | AFCHB03010   | Candidate      | Threatened   | G5          | S1         |                                |
| <b><i>Stebbinsoseris decipiens</i></b><br>Santa Cruz microseris                       | PDAST6E050   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Streptanthus batrachopus</i></b><br>Tamalpais jewelflower                       | PDBRA2G050   | None           | None         | G2          | S2         | 1B.3                           |





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|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b><i>Streptanthus glandulosus ssp. pulchellus</i></b><br>Mt. Tamalpais bristly jewelflower | PDBRA2G0J2   | None           | None         | G4T2        | S2         | 1B.2                           |
| <b><i>Stygobromus hyporheicus</i></b><br>Hypoheic amphipod                                  | ICMAL05D80   | None           | None         | G1          | S1         |                                |
| <b><i>Syncaris pacifica</i></b><br>California freshwater shrimp                             | ICMAL27010   | Endangered     | Endangered   | G2          | S2         |                                |
| <b><i>Taxidea taxus</i></b><br>American badger  | AMAJF04010   | None           | None         | G5          | S3         | SSC                            |
| <b><i>Thamnomia vermicularis</i></b><br>whiteworm lichen                                    | NLTES43860   | None           | None         | G5          | S1         | 2B.1                           |
| <b><i>Trachusa gummifera</i></b><br>San Francisco Bay Area leaf-cutter bee                  | IIHYM80010   | None           | None         | G1          | S1         |                                |
| <b><i>Trifolium amoenum</i></b><br>two-fork clover  | PDFAB40040   | Endangered     | None         | G1          | S1         | 1B.1                           |
| <b><i>Triphysaria floribunda</i></b><br>San Francisco owl's-clover                          | PDSCR2T010   | None           | None         | G2?         | S2?        | 1B.2                           |
| <b><i>Triquetrella californica</i></b><br>coastal triquetrella                              | NBMUS7S010   | None           | None         | G2          | S2         | 1B.2                           |
| <b><i>Vespericola marinensis</i></b><br>Marin hesperian                                     | IMGASA4140   | None           | None         | G2          | S2         |                                |
| <b><i>Zapus trinotatus orarius</i></b><br>Point Reyes jumping mouse                         | AMAFH01031   | None           | None         | G5T1T3Q     | S1S3       | SSC                            |

Record Count: 135
















## Search Results

98 matches found. Click on scientific name for details




Search Criteria: CRPR is one of [1A:1B:2A:2B:3:4] , Quad is one of [3712286:3712287:3812217:3812216:3812227:3812228]

| ▲ SCIENTIFIC NAME   | COMMON NAME              | FAMILY        | LIFEFORM                   | BLOOMING PERIOD | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK | PHOTO  |
|---|--------------------------|---------------|----------------------------|-----------------|----------|------------|-------------|------------|--------------------|--|
| <a href="#"><i>Abronia umbellata</i> var. <i>breviflora</i></a>   | pink sand-verbena        | Nyctaginaceae | annual herb                | Jun-Oct         | None     | None       | G4G5T2      | S2         | 1B.1               | <br>©2021<br>Scot Loring      |
| <a href="#"><i>Agrostis blasdalei</i></a>                         | Blasdale's bent grass    | Poaceae       | perennial rhizomatous herb | May-Jul         | None     | None       | G2          | S2         | 1B.2               | <br>© 2001<br>Doreen L. Smith |
| <a href="#"><i>Alopecurus aequalis</i> var. <i>sonomensis</i></a> | Sonoma alopecurus        | Poaceae       | perennial herb             | May-Jul         | FE       | None       | G5T1        | S1         | 1B.1               | <br>© 2010<br>Robert Steers   |
| <a href="#"><i>Amorpha californica</i> var. <i>napensis</i></a>   | Napa false indigo        | Fabaceae      | perennial deciduous shrub  | Apr-Jul         | None     | None       | G4T2        | S2         | 1B.2               | <br>© 2016<br>John Doyen    |
| <a href="#"><i>Amsinckia lunaris</i></a>                          | bent-flowered fiddleneck | Boraginaceae  | annual herb                | Mar-Jun         | None     | None       | G3          | S3         | 1B.2               | <br>© 2011<br>Neal Kramer   |
| <a href="#"><i>Arabis blepharophylla</i></a>                      | coast rockcress          | Brassicaceae  | perennial herb             | Feb-May         | None     | None       | G4          | S4         | 4.3                | <br>© 2011<br>Neal Kramer   |
| <a href="#"><i>Arctostaphylos montana</i> ssp. <i>montana</i></a> | Mt. Tamalpais manzanita  | Ericaceae     | perennial evergreen shrub  | Feb-Apr         | None     | None       | G3T3        | S3         | 1B.3               | <br>© 2018<br>John Doyen    |
| <a href="#"><i>Arctostaphylos virgata</i></a>                     | Marin manzanita          | Ericaceae     | perennial evergreen shrub  | Jan-Mar         | None     | None       | G2          | S2         | 1B.2               | No Photo   |



|  |                             |                |                                |              |      |      |          |      |      |   |
|--|-----------------------------|----------------|--------------------------------|--------------|------|------|----------|------|------|---|
| <u><i>Aspidotis carlotta-halliae</i></u>                         | Carlotta Hall's lace fern   | Pteridaceae    | perennial rhizomatous herb     | Jan-Dec      | None | None | G3       | S3   | 4.2  | No Photo Available  |
| <u><i>Astragalus breweri</i></u>                                 | Brewer's milk-vetch         | Fabaceae       | annual herb                    | Apr-Jun      | None | None | G3       | S3   | 4.2  | No Photo Available  |
| <u><i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i></u> | coastal marsh milk-vetch    | Fabaceae       | perennial herb                 | (Apr)Jun-Oct | None | None | G2T2     | S2   | 1B.2 | <br>©2009 Neal Kramer    |
| <u><i>Blennosperma nanum</i> var. <i>robustum</i></u>            | Point Reyes blennosperma    | Asteraceae     | annual herb                    | Feb-Apr      | None | CR   | G4T2     | S2   | 1B.2 | No Photo Available  |
| <u><i>Calamagrostis ophitidis</i></u>                            | serpentine reed grass       | Poaceae        | perennial herb                 | Apr-Jul      | None | None | G3       | S3   | 4.3  | No Photo Available  |
| <u><i>Calandrinia breweri</i></u>                                | Brewer's calandrinia        | Montiaceae     | annual herb                    | (Jan)Mar-Jun | None | None | G4       | S4   | 4.2  | No Photo Available  |
| <u><i>Calochortus umbellatus</i></u>                             | Oakland star-tulip          | Liliaceae      | perennial bulbiferous herb     | Mar-May      | None | None | G3?      | S3?  | 4.2  | No Photo Available  |
| <u><i>Calystegia purpurata</i> ssp. <i>saxicola</i></u>          | coastal bluff morning-glory | Convolvulaceae | perennial herb                 | (Mar)Apr-Sep | None | None | G4T2T3   | S2S3 | 1B.2 | No Photo Available  |
| <u><i>Campanula californica</i></u>                              | swamp harebell              | Campanulaceae  | perennial rhizomatous herb     | Jun-Oct      | None | None | G3       | S3   | 1B.2 | No Photo Available  |
| <u><i>Cardamine angulata</i></u>                                 | seaside bittercress         | Brassicaceae   | perennial herb                 | (Jan)Mar-Jul | None | None | G4G5     | S3   | 2B.2 | <br>© 2021 Scot Loring |
| <u><i>Carex lyngbyei</i></u>                                     | Lyngbye's sedge             | Cyperaceae     | perennial rhizomatous herb     | Apr-Aug      | None | None | G5       | S3   | 2B.2 | <br>©2017 Steve Matson |
| <u><i>Castilleja affinis</i> var. <i>neglecta</i></u>            | Tiburon paintbrush          | Orobanchaceae  | perennial herb (hemiparasitic) | Apr-Jun      | FE   | CT   | G4G5T1T2 | S1S2 | 1B.2 | No Photo Available  |
| <u><i>Castilleja ambigua</i> var. <i>ambigua</i></u>             | johnny-nip                  | Orobanchaceae  | annual herb (hemiparasitic)    | Mar-Aug      | None | None | G4T4     | S3S4 | 4.2  | <br>©2011 Dylan        |












|  |                               |               |                                |              |      |      |        |     |      |   |
|--|-------------------------------|---------------|--------------------------------|--------------|------|------|--------|-----|------|---|
| <u><i>Castilleja ambigua</i></u> var. <u><i>humboldtiensis</i></u> | Humboldt Bay owl's-clover     | Orobanchaceae | annual herb (hemiparasitic)    | Apr-Aug      | None | None | G4T2   | S2  | 1B.2 | <br>©2017<br>Steve<br>Matson |
| <u><i>Castilleja lescheana</i></u>                                 | Point Reyes paintbrush        | Orobanchaceae | perennial herb (hemiparasitic) | Jun          | None | None | GX     | SX  | 1A   | No Photo Available  |
| <u><i>Ceanothus decornutus</i></u>                                 | Nicasio ceanothus             | Rhamnaceae    | perennial shrub                | Mar-May      | None | None | G1     | S1  | 1B.2 | No Photo Available  |
| <u><i>Ceanothus gloriosus</i></u> var. <u><i>exaltatus</i></u>     | glory brush                   | Rhamnaceae    | perennial evergreen shrub      | Mar-Jun(Aug) | None | None | G4T4   | S4  | 4.3  | <br>©2018<br>John<br>Doyen   |
| <u><i>Ceanothus gloriosus</i></u> var. <u><i>gloriosus</i></u>     | Point Reyes ceanothus         | Rhamnaceae    | perennial evergreen shrub      | Mar-May      | None | None | G4T4   | S4  | 4.3  | No Photo Available  |
| <u><i>Ceanothus gloriosus</i></u> var. <u><i>porrectus</i></u>     | Mt. Vision ceanothus          | Rhamnaceae    | perennial evergreen shrub      | Feb-May      | None | None | G4T2   | S2  | 1B.3 | No Photo Available  |
| <u><i>Ceanothus masonii</i></u>                                    | Mason's ceanothus             | Rhamnaceae    | perennial evergreen shrub      | Mar-Apr      | None | CR   | G1     | S1  | 1B.2 | No Photo Available  |
| <u><i>Chloropyron maritimum</i></u> ssp. <u><i>palustre</i></u>    | Point Reyes salty bird's-beak | Orobanchaceae | annual herb (hemiparasitic)    | Jun-Oct      | None | None | G4?T2  | S2  | 1B.2 | <br>©2017<br>John<br>Doyen |
| <u><i>Chorizanthe cuspidata</i></u> var. <u><i>cuspidata</i></u>   | San Francisco Bay spineflower | Polygonaceae  | annual herb                    | Apr-Jul(Aug) | None | None | G2T1   | S1  | 1B.2 | No Photo Available  |
| <u><i>Chorizanthe cuspidata</i></u> var. <u><i>villosa</i></u>     | woolly-headed spineflower     | Polygonaceae  | annual herb                    | May-Jul(Aug) | None | None | G2T2   | S2  | 1B.2 | No Photo Available  |
| <u><i>Cicuta maculata</i></u> var. <u><i>bolanderi</i></u>         | Bolander's water-hemlock      | Apiaceae      | perennial herb                 | Jul-Sep      | None | None | G5T4T5 | S2? | 2B.1 | No Photo Available  |
| <u><i>Cirsium andrewsii</i></u>                                    | Franciscan thistle            | Asteraceae    | perennial herb                 | Mar-Jul      | None | None | G3     | S3  | 1B.2 | No Photo Available  |
| <u><i>Cirsium hydrophilum</i></u> var. <u><i>vaseyi</i></u>        | Mt. Tamalpais thistle         | Asteraceae    | perennial herb                 | May-Aug      | None | None | G2T1   | S1  | 1B.2 | No Photo Available  |












|   |                                     |                |                               |                  |      |      |       |      |      |   |
|---|-------------------------------------|----------------|-------------------------------|------------------|------|------|-------|------|------|---|
| <u><i>Clarkia concinna</i></u><br><u>ssp. <i>raichei</i></u>                    | Raiche's red<br>ribbons             | Onagraceae     | annual herb                   | Apr-May          | None | None | G5?T1 | S1   | 1B.1 | <br>© 2015<br>Aaron<br>Schusteff |
| <u><i>Collinsia</i></u><br><u><i>corymbosa</i></u>                              | round-headed<br>Chinese-houses      | Plantaginaceae | annual herb                   | Apr-Jun          | None | None | G1    | S1   | 1B.2 | <br>©2007<br>Steve<br>Matson     |
| <u><i>Delphinium</i></u><br><u><i>bakeri</i></u>                                | Baker's larkspur                    | Ranunculaceae  | perennial herb                | Mar-May          | FE   | CE   | G1    | S1   | 1B.1 | No Photo<br>Available   |
| <u><i>Delphinium</i></u><br><u><i>luteum</i></u>                                | golden larkspur                     | Ranunculaceae  | perennial herb                | Mar-May          | FE   | CR   | G1    | S1   | 1B.1 | No Photo<br>Available   |
| <u><i>Dichondra</i></u><br><u><i>occidentalis</i></u>                           | western<br>dichondra                | Convolvulaceae | perennial<br>rhizomatous herb | (Jan)Mar-<br>Jul | None | None | G3G4  | S3S4 | 4.2  | No Photo<br>Available   |
| <u><i>Dirca</i></u><br><u><i>occidentalis</i></u>                               | western<br>leatherwood              | Thymelaeaceae  | perennial<br>deciduous shrub  | Jan-<br>Mar(Apr) | None | None | G2    | S2   | 1B.2 | <br>© 2017<br>Steve<br>Matson   |
| <u><i>Elymus</i></u><br><u><i>californicus</i></u>                              | California<br>bottle-brush<br>grass | Poaceae        | perennial herb                | May-<br>Aug(Nov) | None | None | G4    | S4   | 4.3  | No Photo<br>Available   |
| <u><i>Entosthodon</i></u><br><u><i>kochii</i></u>                               | Koch's cord<br>moss                 | Funariaceae    | moss                          |                  | None | None | G1    | S1   | 1B.3 | No Photo<br>Available   |
| <u><i>Erigeron biolettii</i></u>  | streamside<br>daisy                 | Asteraceae     | perennial herb                | Jun-Oct          | None | None | G3?   | S3?  | 3    | <br>©2015<br>Doug<br>Wirtz     |
| <u><i>Eriogonum</i></u><br><u><i>luteolum</i></u> var.<br><u><i>caninum</i></u> | Tiburon<br>buckwheat                | Polygonaceae   | annual herb                   | May-Sep          | None | None | G5T2  | S2   | 1B.2 | No Photo<br>Available   |
| <u><i>Erysimum</i></u><br><u><i>concinnum</i></u>                               | bluff wallflower                    | Brassicaceae   | annual/perennial<br>herb      | Feb-Jul          | None | None | G3    | S2   | 1B.2 | <br>©2020<br>John<br>Doyen     |
| <u><i>Erysimum</i></u><br><u><i>franciscanum</i></u>                            | San Francisco<br>wallflower         | Brassicaceae   | perennial herb                | Mar-Jun          | None | None | G3    | S3   | 4.2  | No Photo<br>Available   |
| <u><i>Fritillaria</i></u><br><u><i>lanceolata</i></u> var.                      | Marin checker<br>lily               | Liliaceae      | perennial<br>bulbiferous herb | Feb-May          | None | None | G5T2  | S2   | 1B.1 | <br>© 2020                     |



|  |   |                |                               |         |      |      |       |    |      |  |
|--|---|----------------|-------------------------------|---------|------|------|-------|----|------|--|
| <u><i>Fritillaria liliacea</i></u>   | fragrant fritillary                       | Liliaceae      | perennial<br>bulbiferous herb | Feb-Apr | None | None | G2    | S2 | 1B.2 | <br>© 2004<br>Carol W.<br>Witham  |
| <u><i>Gilia capitata</i></u><br><u><i>ssp. chamissonis</i></u>                         | blue coast gilia                          | Polemoniaceae  | annual herb                   | Apr-Jul | None | None | G5T2  | S2 | 1B.1 | <br>© 2017<br>John<br>Doyen   |
| <u><i>Gilia capitata</i></u><br><u><i>ssp. tomentosa</i></u>                           | woolly-headed<br>gilia                    | Polemoniaceae  | annual herb                   | May-Jul | None | None | G5T2  | S2 | 1B.1 | <br>© 2008<br>Vernon<br>Smith   |
| <u><i>Gilia millefoliata</i></u>   | dark-eyed gilia                           | Polemoniaceae  | annual herb                   | Apr-Jul | None | None | G2    | S2 | 1B.2 | <br>© 2017<br>John<br>Doyen   |
| <u><i>Grindelia</i></u><br><u><i>hirsutula</i> var.</u><br><u><i>maritima</i></u>      | San Francisco<br>gumplant                 | Asteraceae     | perennial herb                | Jun-Sep | None | None | G5T1Q | S1 | 3.2  | <br>Robert<br>Potts ©<br>2001<br>California<br>Academy<br>of Sciences |
| <u><i>Hemizonia</i></u><br><u><i>congesta</i> ssp.</u><br><u><i>congesta</i></u>       | congested-<br>headed hayfield<br>tarplant | Asteraceae     | annual herb                   | Apr-Nov | None | None | G5T2  | S2 | 1B.2 | <br>© 2015<br>Vernon<br>Smith   |
| <u><i>Hesperevax</i></u><br><u><i>sparsiflora</i> var.</u><br><u><i>brevifolia</i></u> | short-leaved<br>evax                      | Asteraceae     | annual herb                   | Mar-Jun | None | None | G4T3  | S3 | 1B.2 | <br>© 2006<br>Doreen L.<br>Smith                                      |
| <u><i>Hesperolinon</i></u><br><u><i>congestum</i></u>                                  | Marin western<br>flax                     | Linaceae       | annual herb                   | Apr-Jul | FT   | CT   | G1    | S1 | 1B.1 | <br>© 2009<br>Neal<br>Kramer  |
| <u><i>Heteranthera</i></u><br><u><i>dubia</i></u>                                      | water star-grass                          | Pontederiaceae | perennial herb<br>(aquatic)   | Jul-Oct | None | None | G5    | S2 | 2B.2 |   |






|  |                         |               |                               |                  |      |      |       |     |      |   |
|--|-------------------------|---------------|-------------------------------|------------------|------|------|-------|-----|------|---|
| <u><i>Horkelia cuneata</i></u><br><u>var. <i>sericea</i></u> | Kellogg's<br>horkelia   | Rosaceae      | perennial herb                | Apr-Sep          | None | None | G4T1? | S1? | 1B.1 | <br>© 2018<br>Neal<br>Kramer       |
| <u><i>Horkelia marinensis</i></u>                            | Point Reyes<br>horkelia | Rosaceae      | perennial herb                | May-Sep          | None | None | G2    | S2  | 1B.2 | <br>© 2017<br>John<br>Doyen        |
| <u><i>Horkelia tenuiloba</i></u>                             | thin-lobed<br>horkelia  | Rosaceae      | perennial herb                | May-<br>Jul(Aug) | None | None | G2    | S2  | 1B.2 | <br>© 1994<br>Doreen L.<br>Smith   |
| <u><i>Hosackia gracilis</i></u>                              | harlequin lotus         | Fabaceae      | perennial<br>rhizomatous herb | Mar-Jul          | None | None | G3G4  | S3  | 4.2  | <br>© 2015<br>John<br>Doyen        |
| <u><i>Hypogymnia schizidiata</i></u>                         | island tube<br>lichen   | Parmeliaceae  | foliose lichen                |                  | None | None | G2G3  | S2  | 1B.3 | No Photo<br>Available   |
| <u><i>Iris longipetala</i></u>                               | coast iris              | Iridaceae     | perennial<br>rhizomatous herb | Mar-<br>May(Jun) | None | None | G3    | S3  | 4.2  | <br>© 2014<br>Aaron<br>Schusteff |
| <u><i>Lasthenia californica</i> ssp. <i>bakeri</i></u>       | Baker's<br>goldfields   | Asteraceae    | perennial herb                | Apr-Oct          | None | None | G3T1  | S1  | 1B.2 | <br>©2015<br>Asa Spade           |
| <u><i>Lasthenia californica</i> ssp. <i>macrantha</i></u>    | perennial<br>goldfields | Asteraceae    | perennial herb                | Jan-Nov          | None | None | G3T2  | S2  | 1B.2 | <br>© 2013<br>John<br>Doyen      |
| <u><i>Layia carnosa</i></u>                                  | beach layia             | Asteraceae    | annual herb                   | Mar-Jul          | FT   | CE   | G2    | S2  | 1B.1 | <br>© 2007<br>Aaron<br>Schusteff |
| <u><i>Leptosiphon acicularis</i></u>                         | bristly<br>leptosiphon  | Polemoniaceae | annual herb                   | Apr-Jul          | None | None | G4?   | S4? | 4.2  | <br>© 2007<br>Len Blumin         |



|   |                                  |                    |                            |                       |      |      |      |      |      |  |
|---|----------------------------------|--------------------|----------------------------|-----------------------|------|------|------|------|------|--|
| <u><i>Leptosiphon grandiflorus</i></u>                    | large-flowered leptosiphon       | Polemoniaceae      | annual herb                | Apr-Aug               | None | None | G3G4 | S3S4 | 4.2  | <br>© 2003<br>Doreen L. Smith   |
| <u><i>Leptosiphon rosaceus</i></u>                        | rose leptosiphon                 | Polemoniaceae      | annual herb                | Apr-Jul               | None | None | G1   | S1   | 1B.1 | <br>© 2013<br>Aaron Schusteff   |
| <u><i>Lessingia hololeuca</i></u>                         | woolly-headed lessingia          | Asteraceae         | annual herb                | Jun-Oct               | None | None | G2G3 | S2S3 | 3    | <br>© 2015<br>Aaron Schusteff   |
| <u><i>Lessingia micradenia</i> var. <i>micradenia</i></u> | Tamalpais lessingia              | Asteraceae         | annual herb                | (Jun)Jul-Oct          | None | None | G2T2 | S2   | 1B.2 | <br>© 2015<br>Vernon Smith      |
| <u><i>Lilaeopsis masonii</i></u>                          | Mason's lilaeopsis               | Apiaceae           | perennial rhizomatous herb | Apr-Nov               | None | CR   | G2   | S2   | 1B.1 | No Photo Available   |
| <u><i>Lilium maritimum</i></u>                            | coast lily                       | Liliaceae          | perennial bulbiferous herb | May-Aug               | None | None | G2   | S2   | 1B.1 | <br>© 2020<br>Aaron Schusteff |
| <u><i>Lupinus tidestromii</i></u>                         | Tidestrom's lupine               | Fabaceae           | perennial rhizomatous herb | Apr-Jun               | FE   | CE   | G1   | S1   | 1B.1 | No Photo Available   |
| <u><i>Microseris paludosa</i></u>                         | marsh microseris                 | Asteraceae         | perennial herb             | Apr-Jun(Jul)          | None | None | G2   | S2   | 1B.2 | No Photo Available   |
| <u><i>Mielichhoferia elongata</i></u>                     | elongate copper moss             | Mielichhoferiaceae | moss                       |                       | None | None | G5   | S3S4 | 4.3  | <br>© 2012<br>John Game       |
| <u><i>Monardella sinuata</i> ssp. <i>nigrescens</i></u>   | northern curly-leaved monardella | Lamiaceae          | annual herb                | (Apr)May-Jul(Aug-Sep) | None | None | G3T2 | S2   | 1B.2 | <br>© 2014<br>John Doyen      |
| <u><i>Navarretia rosulata</i></u>                         | Marin County navarretia          | Polemoniaceae      | annual herb                | May-Jul               | None | None | G2   | S2   | 1B.2 | No Photo   |



|   |                             |                 |                                       |                   |      |      |        |      |      |  |
|---|-----------------------------|-----------------|---------------------------------------|-------------------|------|------|--------|------|------|--|
| <u><i>Perideridia gairdneri</i> ssp. <i>gairdneri</i></u> | Gairdner's yampah           | Apiaceae        | perennial herb                        | Jun-Oct           | None | None | G5T3T4 | S3S4 | 4.2  | <br>©2007<br>Neal<br>Kramer     |
| <u><i>Phacelia insularis</i> var. <i>continentis</i></u>  | North Coast phacelia        | Hydrophyllaceae | annual herb                           | Mar-May           | None | None | G2T2   | S2   | 1B.2 | No Photo<br>Available  |
| <u><i>Piperia michaelii</i></u>                           | Michael's rein orchid       | Orchidaceae     | perennial herb                        | Apr-Aug           | None | None | G3     | S3   | 4.2  | No Photo<br>Available  |
| <u><i>Pleuropogon hooverianus</i></u>                     | North Coast semaphore grass | Poaceae         | perennial rhizomatous herb            | Apr-Jun           | None | CT   | G2     | S2   | 1B.1 | No Photo<br>Available  |
| <u><i>Pleuropogon refractus</i></u>                       | nodding semaphore grass     | Poaceae         | perennial rhizomatous herb            | (Mar)Apr-Aug      | None | None | G4     | S4   | 4.2  | <br>©2004<br>Dean Wm.<br>Taylor |
| <u><i>Polygonum marinense</i></u>                         | Marin knotweed              | Polygonaceae    | annual herb                           | (Apr)May-Aug(Oct) | None | None | G2Q    | S2   | 3.1  | No Photo<br>Available  |
| <u><i>Quercus parvula</i> var. <i>tamalpaisensis</i></u>  | Tamalpais oak               | Fagaceae        | perennial evergreen shrub             | Mar-Apr           | None | None | G4T2   | S2   | 1B.3 | No Photo<br>Available  |
| <u><i>Ranunculus lobbii</i></u>                           | Lobb's aquatic buttercup    | Ranunculaceae   | annual herb (aquatic)                 | Feb-May           | None | None | G4     | S3   | 4.2  | No Photo<br>Available  |
| <u><i>Sagittaria sanfordii</i></u>                        | Sanford's arrowhead         | Alismataceae    | perennial rhizomatous herb (emergent) | May-Oct(Nov)      | None | None | G3     | S3   | 1B.2 | <br>©2013<br>Debra L.<br>Cook |
| <u><i>Sidalcea calycosa</i> ssp. <i>rhizomata</i></u>     | Point Reyes checkerbloom    | Malvaceae       | perennial rhizomatous herb            | Apr-Sep           | None | None | G5T2   | S2   | 1B.2 | No Photo<br>Available  |
| <u><i>Sidalcea hickmanii</i> ssp. <i>viridis</i></u>      | Marin checkerbloom          | Malvaceae       | perennial herb                        | May-Jun           | None | None | G3TH   | SH   | 1B.1 | No Photo<br>Available  |
| <u><i>Sidalcea malviflora</i> ssp. <i>purpurea</i></u>    | purple-stemmed checkerbloom | Malvaceae       | perennial rhizomatous herb            | May-Jun           | None | None | G5T1   | S1   | 1B.2 | No Photo<br>Available  |



|  |   |                 |                                   |                               |      |      |        |      |      |   |
|--|---|-----------------|-----------------------------------|-------------------------------|------|------|--------|------|------|---|
| <a href="#"><i>Silene scouleri</i></a><br><a href="#"><i>ssp. scouleri</i></a>                                   | Scouler's<br>catchfly                   | Caryophyllaceae | perennial herb                    | (Mar-<br>May)Jun-<br>Aug(Sep) | None | None | G5T4T5 | S2S3 | 2B.2 | <br>©2015<br>Vernon<br>Smith     |
| <a href="#"><i>Stebbinsoseris</i></a><br><a href="#"><i>decipiens</i></a>  | Santa Cruz<br>microseris                | Asteraceae      | annual herb                       | Apr-May                       | None | None | G2     | S2   | 1B.2 | No Photo<br>Available   |
| <a href="#"><i>Streptanthus</i></a><br><a href="#"><i>batrachopus</i></a>  | Tamalpais<br>jewelflower                | Brassicaceae    | annual herb                       | Apr-Jul                       | None | None | G2     | S2   | 1B.3 | <br>© 2012<br>Aaron<br>Schusteff |
| <a href="#"><i>Streptanthus</i></a><br><a href="#"><i>glandulosus</i></a> <a href="#"><i>ssp. pulchellus</i></a> | Mt. Tamalpais<br>bristly<br>jewelflower | Brassicaceae    | annual herb                       | May-<br>Jul(Aug)              | None | None | G4T2   | S2   | 1B.2 | No Photo<br>Available   |
| <a href="#"><i>Thamnia</i></a><br><a href="#"><i>vermicularis</i></a>  | whiteworm<br>lichen                     | Lecanodermaceae | fruticose lichen<br>(terricolous) |                               | None | None | G5     | S1   | 2B.1 | <br>© 2021<br>Scot<br>Loring     |
| <a href="#"><i>Toxicoscordion</i></a><br><a href="#"><i>fontanum</i></a>   | marsh<br>zigadenus                      | Melanthiaceae   | perennial<br>bulbiferous herb     | Apr-Jul                       | None | None | G3     | S3   | 4.2  | No Photo<br>Available   |
| <a href="#"><i>Trifolium</i></a><br><a href="#"><i>amoenum</i></a>   | two-fork clover                         | Fabaceae        | annual herb                       | Apr-Jun                       | FE   | None | G1     | S1   | 1B.1 | No Photo<br>Available   |
| <a href="#"><i>Triphysaria</i></a><br><a href="#"><i>floribunda</i></a>  | San Francisco<br>owl's-clover           | Orobanchaceae   | annual herb                       | Apr-Jun                       | None | None | G2?    | S2?  | 1B.2 | No Photo<br>Available   |
| <a href="#"><i>Triquetrella</i></a><br><a href="#"><i>californica</i></a>  | coastal<br>triquetrella                 | Pottiaceae      | moss                              |                               | None | None | G2     | S2   | 1B.2 | No Photo<br>Available   |

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#### CONTACT US

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## Wentworth, Samuel

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**From:** NMFS SpeciesList - NOAA Service Account <nmfs.wcrca.specieslist@noaa.gov>  
**Sent:** Tuesday, June 14, 2022 4:58 PM  
**To:** prvs=816454055f=samuel.wentworth@jacobs.com  
**Subject:** [EXTERNAL] Federal ESA - - NOAA Fisheries Species List Re: NMFS species list 2Q530/3A250 MRN1 Project

Please retain a copy of each email request that you send to NOAA at [nmfs.wcrca.specieslist@noaa.gov](mailto:nmfs.wcrca.specieslist@noaa.gov) as proof of your official Endangered Species Act SPECIES LIST. The email you send to NOAA should include the following information: your first and last name; email address; phone number; federal agency name (or delegated state agency such as Caltrans); mailing address; project title; brief description of the project; and a copy of a list of threatened or endangered species identified within specified geographic areas derived from the NOAA Fisheries, West Coast Region, California Species List Tool. You may only receive this instruction once per week. If you have questions, contact your local NOAA Fisheries liaison.







## Wentworth, Samuel

---

**From:** Wentworth, Samuel  
**Sent:** Tuesday, June 14, 2022 4:57 PM  
**To:** 'nmfs.wcrca.specieslist@noaa.gov'  
**Subject:** NMFS species list 2Q530/3A250 MRN1 Project

Hi,

I'm requesting concurrence with the official species list pasted below for the Caltrans 2Q530/3A250, MRN1 Project which will involve culvert replacements and rehabilitation along Highway 1 from PM 13.05 to PM 45.10. The project is located within the Bolinas, Inverness, Point Reyes NE, Double Point, San Geronimo, and Tomales USGS 7.5 Quadrangles.

**Federal Agency: DOT**

**Non-federal Agency: Caltrans, 111 Grand Ave, Oakland CA**

**Point-of-Contact:**

Sam Wentworth | [Jacobs](#) | Biologist  
O: +1.510.251.2426 | M: +1.408.710.5364  
[samuel.wentworth@jacobs.com](mailto:samuel.wentworth@jacobs.com)

Quad Name **Bolinas**  
Quad Number **37122-H6**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) -  
CCC Coho ESU (E) - **X**  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) - **X**  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat - **X**  
CC Chinook Salmon Critical Habitat -



CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat - **X**  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

## **ESA Marine Invertebrates**

Range Black Abalone (E) - **X**  
Range White Abalone (E) -

## **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat - **X**

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - **X**  
Olive Ridley Sea Turtle (T/E) - **X**  
Leatherback Sea Turtle (E) - **X**  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) - **X**  
Fin Whale (E) - **X**  
Humpback Whale (E) - **X**  
Southern Resident Killer Whale (E) - **X**  
North Pacific Right Whale (E) - **X**  
Sei Whale (E) - **X**  
Sperm Whale (E) - **X**

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) - **X**  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - X  
Chinook Salmon EFH - X  
Groundfish EFH - X  
Coastal Pelagics EFH - X  
Highly Migratory Species EFH -

### **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - X  
MMPA Pinnipeds - X

Quad Name **Double Point**

Quad Number **37122-H7**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) -  
CCC Coho ESU (E) - X  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) - X  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) - X

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat - X  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat - X  
SCCC Steelhead Critical Habitat -



SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

## **ESA Marine Invertebrates**

Range Black Abalone (E) - **X**  
Range White Abalone (E) -

## **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat - **X**

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - **X**  
Olive Ridley Sea Turtle (T/E) - **X**  
Leatherback Sea Turtle (E) - **X**  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) - **X**  
Fin Whale (E) - **X**  
Humpback Whale (E) - **X**  
Southern Resident Killer Whale (E) - **X**  
North Pacific Right Whale (E) - **X**  
Sei Whale (E) - **X**  
Sperm Whale (E) - **X**

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) - **X**  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - **X**  
Chinook Salmon EFH - **X**  
Groundfish EFH - **X**  
Coastal Pelagics EFH - **X**

## **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**

Quad Name **Inverness**

Quad Number **38122-A7**

### **ESA Anadromous Fish**

SONCC Coho ESU (T) -

CCC Coho ESU (E) - **X**

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) - **X**

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) - **X**

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat - **X**

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat - **X**

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - **X**



## **ESA Marine Invertebrates**

Range Black Abalone (E) - **X**

Range White Abalone (E) -

## **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat - **X**

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - **X**

Olive Ridley Sea Turtle (T/E) - **X**

Leatherback Sea Turtle (E) - **X**

North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) - **X**

Fin Whale (E) - **X**

Humpback Whale (E) - **X**

Southern Resident Killer Whale (E) - **X**

North Pacific Right Whale (E) - **X**

Sei Whale (E) - **X**

Sperm Whale (E) - **X**

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) - **X**

Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - **X**

Chinook Salmon EFH - **X**

Groundfish EFH - **X**

Coastal Pelagics EFH - **X**

Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

## **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**

Quad Name **San Geronimo**

Quad Number **38122-A6**

## **ESA Anadromous Fish**

SONCC Coho ESU (T) -

CCC Coho ESU (E) - **X**

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) - **X**

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

## **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat - **X**

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat - **X**

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

## **ESA Marine Invertebrates**

Range Black Abalone (E) -

Range White Abalone (E) -



## **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) -  
Olive Ridley Sea Turtle (T/E) -  
Leatherback Sea Turtle (E) -  
North Pacific Loggerhead Sea Turtle (E) -

## **ESA Whales**

Blue Whale (E) -  
Fin Whale (E) -  
Humpback Whale (E) -  
Southern Resident Killer Whale (E) -  
North Pacific Right Whale (E) -  
Sei Whale (E) -  
Sperm Whale (E) -

## **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

## **Essential Fish Habitat**

Coho EFH - **X**  
Chinook Salmon EFH - **X**  
Groundfish EFH -  
Coastal Pelagics EFH -  
Highly Migratory Species EFH -

## **MMPA Species (See list at left)**

## **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans -  
MMPA Pinnipeds -

Quad Name **Tomales**

Quad Number **38122-B8**

## **ESA Anadromous Fish**

SONCC Coho ESU (T) -  
CCC Coho ESU (E) - **X**  
CC Chinook Salmon ESU (T) -  
CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) - **X**  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) - **X**

## **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat - **X**  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat - **X**  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat - **X**

## **ESA Marine Invertebrates**

Range Black Abalone (E) - **X**  
Range White Abalone (E) -

## **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat - **X**

## **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - **X**  
Olive Ridley Sea Turtle (T/E) - **X**  
Leatherback Sea Turtle (E) - **X**



North Pacific Loggerhead Sea Turtle (E) -

### **ESA Whales**

|                                      |   |
|--------------------------------------|---|
| Blue Whale (E) -                     | X |
| Fin Whale (E) -                      | X |
| Humpback Whale (E) -                 | X |
| Southern Resident Killer Whale (E) - | X |
| North Pacific Right Whale (E) -      | X |
| Sei Whale (E) -                      | X |
| Sperm Whale (E) -                    | X |

### **ESA Pinnipeds**

Guadalupe Fur Seal (T) - X  
Steller Sea Lion Critical Habitat -

### **Essential Fish Habitat**

|                                |   |
|--------------------------------|---|
| Coho EFH -                     | X |
| Chinook Salmon EFH -           | X |
| Groundfish EFH -               | X |
| Coastal Pelagics EFH -         | X |
| Highly Migratory Species EFH - |   |

### **MMPA Species (See list at left)**

### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans - X  
MMPA Pinnipeds - X

Quad Name **Point Reyes NE**  
Quad Number **38122-B7**

### **ESA Anadromous Fish**

|                             |   |
|-----------------------------|---|
| SONCC Coho ESU (T) -        |   |
| CCC Coho ESU (E) -          | X |
| CC Chinook Salmon ESU (T) - |   |

CVSR Chinook Salmon ESU (T) -  
SRWR Chinook Salmon ESU (E) -  
NC Steelhead DPS (T) -  
CCC Steelhead DPS (T) - **X**  
SCCC Steelhead DPS (T) -  
SC Steelhead DPS (E) -  
CCV Steelhead DPS (T) -  
Eulachon (T) -  
sDPS Green Sturgeon (T) -

### **ESA Anadromous Fish Critical Habitat**

SONCC Coho Critical Habitat -  
CCC Coho Critical Habitat - **X**  
CC Chinook Salmon Critical Habitat -  
CVSR Chinook Salmon Critical Habitat -  
SRWR Chinook Salmon Critical Habitat -  
NC Steelhead Critical Habitat -  
CCC Steelhead Critical Habitat - **X**  
SCCC Steelhead Critical Habitat -  
SC Steelhead Critical Habitat -  
CCV Steelhead Critical Habitat -  
Eulachon Critical Habitat -  
sDPS Green Sturgeon Critical Habitat -

### **ESA Marine Invertebrates**

Range Black Abalone (E) - **X**  
Range White Abalone (E) -

### **ESA Marine Invertebrates Critical Habitat**

Black Abalone Critical Habitat -

### **ESA Sea Turtles**

East Pacific Green Sea Turtle (T) - **X**  
Olive Ridley Sea Turtle (T/E) -  
Leatherback Sea Turtle (E) -  
North Pacific Loggerhead Sea Turtle (E) -

### **ESA Whales**

Blue Whale (E) -  
Fin Whale (E) -



Humpback Whale (E) -  
Southern Resident Killer Whale (E) -  
North Pacific Right Whale (E) -  
Sei Whale (E) -  
Sperm Whale (E) -

### **ESA Pinnipeds**

Guadalupe Fur Seal (T) -  
Steller Sea Lion Critical Habitat -

### **Essential Fish Habitat**

|                                |          |
|--------------------------------|----------|
| Coho EFH -                     | <b>X</b> |
| Chinook Salmon EFH -           | <b>X</b> |
| Groundfish EFH -               | <b>X</b> |
| Coastal Pelagics EFH -         | <b>X</b> |
| Highly Migratory Species EFH - |          |

### **MMPA Species (See list at left)**

#### **ESA and MMPA Cetaceans/Pinnipeds**

**See list at left and consult the NMFS Long Beach office  
562-980-4000**

MMPA Cetaceans -  
MMPA Pinnipeds - **X**

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

September 01, 2022

Project Code: 2022-0051482

Project Name: MRN 1 2Q530/ 3A250

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))



(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List



## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Sacramento Fish And Wildlife Office**

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

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## Project Summary

Project Code: 2022-0051482

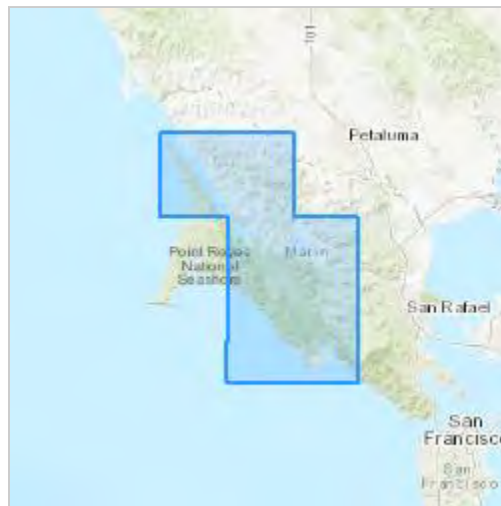
Project Name: MRN 1 2Q530/ 3A250

Project Type: Drainage Project

Project Description: The proposed project plans to rehabilitate or replace 50 culvert locations between Post Mile 13.05 and 45.1 on State Route 1 in Marin County.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.06299085,-122.74948415891112,14z>



Counties: Marin and Sonoma counties, California



## Endangered Species Act Species

There is a total of 34 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME   | STATUS     |
|--|------------|
| Salt Marsh Harvest Mouse <i>Reithrodontomys raviventris</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/613">https://ecos.fws.gov/ecp/species/613</a> | Endangered |

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## Birds

| NAME   | STATUS     |
|--|------------|
| California Clapper Rail <i>Rallus longirostris obsoletus</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/4240">https://ecos.fws.gov/ecp/species/4240</a>  | Endangered |
| California Least Tern <i>Sterna antillarum browni</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/8104">https://ecos.fws.gov/ecp/species/8104</a>   | Endangered |
| Hawaiian Petrel <i>Pterodroma sandwichensis</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/6746">https://ecos.fws.gov/ecp/species/6746</a>   | Endangered |
| Marbled Murrelet <i>Brachyramphus marmoratus</i><br>Population: U.S.A. (CA, OR, WA)<br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>   | Threatened |
| Northern Spotted Owl <i>Strix occidentalis caurina</i><br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>  | Threatened |
| Short-tailed Albatross <i>Phoebastria (=Diomedea) albatrus</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/433">https://ecos.fws.gov/ecp/species/433</a>  | Endangered |
| Western Snowy Plover <i>Charadrius nivosus nivosus</i><br>Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast)<br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a> | Threatened |
| Yellow-billed Cuckoo <i>Coccyzus americanus</i><br>Population: Western U.S. DPS<br>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>   | Threatened |

## Reptiles

| NAME  | STATUS     |
|---|------------|
| Green Sea Turtle <i>Chelonia mydas</i><br>Population: East Pacific DPS<br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/6199">https://ecos.fws.gov/ecp/species/6199</a> | Threatened |



## Amphibians

| NAME   | STATUS     |
|--|------------|
| California Red-legged Frog <i>Rana draytonii</i><br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>  | Threatened |
| California Tiger Salamander <i>Ambystoma californiense</i><br>Population: U.S.A. (CA - Sonoma County)<br>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a> | Endangered |

## Fishes

| NAME   | STATUS     |
|--|------------|
| Delta Smelt <i>Hypomesus transpacificus</i><br>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a> | Threatened |
| Tidewater Goby <i>Eucyclogobius newberryi</i><br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/57">https://ecos.fws.gov/ecp/species/57</a>           | Endangered |

## Insects

| NAME   | STATUS     |
|--|------------|
| Monarch Butterfly <i>Danaus plexippus</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>                     | Candidate  |
| Myrtle's Silverspot Butterfly <i>Speyeria zerene myrtleae</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/6929">https://ecos.fws.gov/ecp/species/6929</a> | Endangered |

## Crustaceans

| NAME   | STATUS     |
|--|------------|
| California Freshwater Shrimp <i>Syncaris pacifica</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/7903">https://ecos.fws.gov/ecp/species/7903</a> | Endangered |

## Flowering Plants

| NAME  | STATUS     |
|---|------------|
| Baker's Larkspur <i>Delphinium bakeri</i><br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/5031">https://ecos.fws.gov/ecp/species/5031</a>                            | Endangered |
| Beach Layia <i>Layia carnosa</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/6728">https://ecos.fws.gov/ecp/species/6728</a>   | Threatened |
| Burke's Goldfields <i>Lasthenia burkei</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/4338">https://ecos.fws.gov/ecp/species/4338</a>   | Endangered |
| Clover (tidestrom's) Lupine <i>Lupinus tidestromii</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/4459">https://ecos.fws.gov/ecp/species/4459</a>   | Endangered |
| Contra Costa Goldfields <i>Lasthenia conjugens</i><br>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/7058">https://ecos.fws.gov/ecp/species/7058</a>         | Endangered |
| Marin Dwarf-flax <i>Hesperolinon congestum</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/5363">https://ecos.fws.gov/ecp/species/5363</a>   | Threatened |
| Pitkin Marsh Lily <i>Lilium pardalinum ssp. pitkinense</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/570">https://ecos.fws.gov/ecp/species/570</a>   | Endangered |
| Robust Spineflower <i>Chorizanthe robusta var. robusta</i><br>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/9287">https://ecos.fws.gov/ecp/species/9287</a> | Endangered |
| Santa Cruz Tarplant <i>Holocarpha macradenia</i><br>There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/6832">https://ecos.fws.gov/ecp/species/6832</a>           | Threatened |
| Sebastopol Meadowfoam <i>Limnanthes vincularis</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/404">https://ecos.fws.gov/ecp/species/404</a>   | Endangered |
| Showy Indian Clover <i>Trifolium amoenum</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/6459">https://ecos.fws.gov/ecp/species/6459</a>   | Endangered |
| Sonoma Alopecurus <i>Alopecurus aequalis var. sonomensis</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/557">https://ecos.fws.gov/ecp/species/557</a>   | Endangered |
| Sonoma Spineflower <i>Chorizanthe valida</i><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/7698">https://ecos.fws.gov/ecp/species/7698</a>   | Endangered |



| NAME   | STATUS     |
|--|------------|
| <b>Sonoma Sunshine <i>Blennosperma bakeri</i></b><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/1260">https://ecos.fws.gov/ecp/species/1260</a>   | Endangered |
| <b>Tiburon Paintbrush <i>Castilleja affinis</i> ssp. <i>neglecta</i></b><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/2687">https://ecos.fws.gov/ecp/species/2687</a>                    | Endangered |
| <b>White-rayed Pentachaeta <i>Pentachaeta bellidiflora</i></b><br>No critical habitat has been designated for this species.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/7782">https://ecos.fws.gov/ecp/species/7782</a>                              | Endangered |
| <b>Yellow Larkspur <i>Delphinium luteum</i></b><br>There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat.<br>Species profile: <a href="https://ecos.fws.gov/ecp/species/3578">https://ecos.fws.gov/ecp/species/3578</a> | Endangered |

## Critical habitats

There are 7 critical habitats wholly or partially within your project area under this office's jurisdiction.

| NAME   | STATUS |
|--|--------|
| <b>Baker's Larkspur <i>Delphinium bakeri</i></b><br><a href="https://ecos.fws.gov/ecp/species/5031#crithab">https://ecos.fws.gov/ecp/species/5031#crithab</a>              | Final  |
| <b>California Red-legged Frog <i>Rana draytonii</i></b><br><a href="https://ecos.fws.gov/ecp/species/2891#crithab">https://ecos.fws.gov/ecp/species/2891#crithab</a>       | Final  |
| <b>Marbled Murrelet <i>Brachyramphus marmoratus</i></b><br><a href="https://ecos.fws.gov/ecp/species/4467#crithab">https://ecos.fws.gov/ecp/species/4467#crithab</a>       | Final  |
| <b>Northern Spotted Owl <i>Strix occidentalis caurina</i></b><br><a href="https://ecos.fws.gov/ecp/species/1123#crithab">https://ecos.fws.gov/ecp/species/1123#crithab</a> | Final  |
| <b>Tidewater Goby <i>Eucyclogobius newberryi</i></b><br><a href="https://ecos.fws.gov/ecp/species/57#crithab">https://ecos.fws.gov/ecp/species/57#crithab</a>              | Final  |
| <b>Western Snowy Plover <i>Charadrius nivosus nivosus</i></b><br><a href="https://ecos.fws.gov/ecp/species/8035#crithab">https://ecos.fws.gov/ecp/species/8035#crithab</a> | Final  |
| <b>Yellow Larkspur <i>Delphinium luteum</i></b><br><a href="https://ecos.fws.gov/ecp/species/3578#crithab">https://ecos.fws.gov/ecp/species/3578#crithab</a>               | Final  |

## **IPaC User Contact Information**

Agency: Jacobs  
Name: Sam Wentworth  
Address: 155 Grand Avenue #800  
City: Oakland  
State: CA  
Zip: 94612  
Email: samuel.wentworth@jacobs.com  
Phone: 5102512426

## **Lead Agency Contact Information**

Lead Agency: Department of Transportation

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## Appendix E List of Technical Studies and References

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