



Midpeninsula Regional  
Open Space District

R-14-162  
Meeting 14-35  
December 17, 2014

## AGENDA ITEM 4

### AGENDA ITEM

Adoption of a Mitigated Negative Declaration and Mitigation Monitoring Program for the Proposed Harkins Bridge Replacement Project in Purisima Creek Redwoods Open Space Preserve

### GENERAL MANAGER'S RECOMMENDATION

A handwritten signature in black ink, appearing to be "S.M.", written over the printed text of the recommendation header.

Adopt the Mitigated Negative Declaration and Mitigation Monitoring Program for the Harkins Bridge Replacement Project, in accordance with the California Environmental Quality Act, as set out in the draft Resolution.

### SUMMARY

The proposed Harkins Bridge Replacement Project (Project) would replace an existing deteriorated railcar vehicle bridge with a new prefabricated truss vehicle bridge 100' upstream. The Project entails demolition of an existing 60' of access road to the old bridge location, site restoration of the area of the old bridge location, construction of a temporary culvert crossing with associated water diversion plan, construction of a new access roadway and trail to the proposed bridge, and temporary fencing along Purisima Creek Trail to exclude the public from the construction zone. Staff has concluded, based on the environmental review, that the proposed project would have no significant effect on the environment as mitigated.

This project is funded by Measure AA. This project is part of portfolio 3, Purisima Creek Redwoods: Purisima-to-Sea Trail, Watershed Protection and Conservation Grazing. The Harkins Bridge Replacement Project is part of the Public Access theme.

### DISCUSSION

This Project was presented to the Board on April 23<sup>rd</sup>, at which time the Board heard a staff presentation about the project and approved a prefabricated truss bridge as the preferred alternative (R-14-76). Staff subsequently entered into contract with Questa Engineering to begin the site investigations, design and permitting process. Hydrologic analysis of the existing bridge crossing indicated it will be subject to localized flooding. Relocation of the bridge 100' upstream avoids flooding potential and involves minimal modifications to the existing road and trail system. The project has progressed from the conceptual phase to the 50% design stage. Staff and Questa met with the Army Corps of Engineers, California Department of Fish and Wildlife, and the Regional Water Quality Control Board in the field to begin informal consultation in advance of the permits. Staff met with the San Mateo County Planning Department to consult on the Coastal Development Permit process. Staff and Questa have submitted a permit application to the Army Corps and aim to initiate Section 7 consultation with USFWS.

The particular nature of the project's construction activities and a biological assessment for the project area suggested an Initial Study (IS) and subsequent Mitigated Negative Declaration (MND) be circulated for public comment. No comments were received.

Mitigations to avoid potential impacts to California red-legged frog (on site monitoring and contractor training), San Francisco Dusky Footed Woodrats (preconstruction surveys and fencing) and marbled murrelets (no construction during dawn and dusk hours) are incorporated into this project. Standard mitigations to avoid impacts to cultural resources and hazards (wildfire) are also incorporated into this project. The Operations Department is the party responsible for monitoring. A complete list can be seen in Attachment 3.

### **FISCAL IMPACT**

Adoption of the IS/MND and Mitigation Monitoring Program (MMP) commits the District to biological monitoring during construction. The duration and cost of that monitoring, however, is dependent on the permit conditions of the Section 7 consultation with USFWS. Estimates for biological monitoring range from \$10,000 to \$30,000.

\$110,000 is budgeted for FY2014-15 for this project for design, permitting, and engineering and staff anticipates budgeting \$500,000 for FY2015-16, the majority of which will be for construction costs.

### **BOARD COMMITTEE REVIEW**

This Project was presented to the Planning and Natural Resources Committee on April 15<sup>th</sup> at which time the Committee heard a staff presentation about the project and recommended a prefabricated truss bridge as the preferred alternative to the Board.

### **PUBLIC NOTICE**

A Notice of Intent to Adopt a Mitigated Negative Declaration was submitted to the State Clearinghouse of the Governor's Office of Planning and Research on October 17<sup>th</sup>, 2014, stating that the public review period would start on October 17<sup>th</sup>, 2014, and end on November 17<sup>th</sup>, 2014. On October 17<sup>th</sup>, 2014, the Notice of Intent was also submitted to the San Mateo County Clerk for posting and mailed to interested parties, and property owners of land located adjacent to or within 300 feet of the Preserve boundary closest to the project. The Notice of Intent, Mitigated Negative Declaration, and Initial Study were made available for public review at the District's Administrative Office and on the District's website. Notices were also posted at the proposed project site, located near a major trail of the Preserve. All legal notice requirements of CEQA have been met.

Public notice of this Agenda Item was provided per the Brown Act. Also, adjoining property owners have been mailed a copy of the agenda for this public meeting.

### **CEQA COMPLIANCE**

An Initial Study and Mitigated Negative Declaration (IS/MND) were prepared for the Project (Attachment 2). The public comment period began on October 17, 2014, and ended on November 17, 2014.

Determination

Mitigation measures incorporated into the proposed project reduce potential negative effects to biological resources, cultural resources, and hazards (wildfire) to less-than-significant levels. The proposed project will therefore not have a significant effect on the environment.

Comments Received

The District did not receive any comments on the environmental effects of the proposed project.

Mitigation Monitoring Program

In accordance with CEQA, the District has prepared a Mitigation Monitoring Program, which describes project-specific mitigation measures and monitoring process (Attachment 3). The Mitigation Monitoring Program ensures that all adopted measures intended to mitigate potentially significant environmental impacts will be implemented during construction and monitored afterwards (erosion control and replanting specifically). The proposed project incorporates all of these mitigation measures.

CEQA Findings

The Board Findings required by CEQA to adopt the MND and the Mitigation Monitoring Program are set out in the attached Resolution (Attachment 4). Staff recommends that the Board find that the environmental review for the Harkins Bridge Replacement Project is adequate.

**NEXT STEPS**

Next steps include Coastal Development Permit application to San Mateo County, finalizing bridge specifications and railing design, building permit applications (75% design), bidding, and the Board considering approval of the construction contract.

The driving factor in the project schedule is the Army Corps permit and the Section 7 consultation with USFWS. This process can range from 6-18 months. The General Manager will be recommending funding for construction in the FY2015-16 budget in the event the permits are received in time. If bidding, Board approval, and construction are not possible before the winter work window closes, then construction would occur in FY2016-17.

## Attachments:

1. Project Map
2. Initial Study/Mitigated Negative Declaration
3. Mitigation Monitoring and Reporting Program
4. Resolution Adopting the Mitigated Negative Declaration, the Mitigation Monitoring Program, and the Findings in Connection with the Proposed Harkins Bridge Replacement Project (Purisima Creek Open Space Preserve)

Responsible Department Manager:  
Michael Newburn, Operations Manager

Prepared by:  
Aaron Hébert, Contingent Project Manager



Path: G:\Projects\Purisima\_Creek\_Redwoods\Purisima\_Creek\_Bridges\ProjectLocationV2.mxd  
Created By: ahebert

### Harkins Project Location Map

- |  |   |   |   |
|--|---|---|---|
|  MROSD Preserves                          |  Management Agreement                            |  Private Property | Midpeninsula Regional<br>Open Space District<br>(MROSD) |
|  Other Protected Open Space or Park Lands |  Non MROSD Conservation or Agricultural Easement |  Developed Land   |   |
|  Watershed Land                           |  MROSD Conservation or Agricultural Easement     |   |   |



July, 2014



While the District strives to use the best available digital data, this data does not represent a legal survey and is merely a graphic illustration of geographic features.



Midpeninsula Regional Open Space District

**INITIAL STUDY/  
MITIGATED NEGATIVE DECLARATION**

**Harkins Bridge Replacement Project  
Purisima Creek Open Space Preserve  
San Mateo County, CA**

October 17th 2014

Midpeninsula Regional Open Space District  
330 Distel Circle  
Los Altos, CA 94022  
650-691-1200

# Table of Contents

<b><u>PROPOSED MITIGATED NEGATIVE DECLARATION</u></b> .....	<b>1</b>
<u>PROJECT DESCRIPTION</u> .....	1
<u>FINDINGS AND BASIS FOR MITIGATED NEGATIVE DECLARATION</u> .....	3
<u>MITIGATION MEASURES INCORPORATED INTO THE PROJECT</u> .....	3
<u>RESPONSIBLE AGENCY CONSULTATION</u> .....	6
<u>INITIAL STUDY</u> .....	6
<u>REVIEW PERIOD</u> .....	6
<u>CONTACT PERSON</u> .....	6
<b><u>INITIAL STUDY</u></b> .....	<b>7</b>
<u>SECTION 1. INTRODUCTION</u>	
1.1 Purpose of Initial Study	
1.2 Decision to prepare a Mitigated Negative Declaration	
1.3 Regulatory Review and Permitting	
1.4 Public Review Process	
1.5 Organization of the Document	
<u>SECTION 2: PROJECT DESCRIPTION</u> .....	7
<u>2.1 LOCATION</u>	
<u>2.2 GOALS AND OBJECTIVES</u>	
<u>2.3 SUBSEQUENT ACTIONS</u> .....	9
<u>2.4 SURROUNDING LAND USES</u> .....	9
<u>SECTION 3: ENVIRONMENTAL SETTING</u>	
<u>ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:</u> .....	15
<u>DETERMINATION:</u> .....	
<u>INSTRUCTIONS FOR EVALUATION OF ENVIRONMENTAL IMPACTS:</u> .....	16
<u>SECTION 4: ENVIRONMENTAL CHECKLIST AND DISCUSSION OF IMPACTS</u> .....	17
<u>I. AESTHETICS</u> .....	17
<u>II. AGRICULTURAL AND FORESTRY RESOURCES</u> .....	25
<u>III. AIR QUALITY</u> .....	26
<u>IV. BIOLOGICAL RESOURCES</u> .....	32
1. <u>Special Status Plant Species</u> .....	32
2. <u>Special Status Animal Species</u> .....	33
<u>V. CULTURAL, HISTORIC AND ARCHAEOLOGICAL RESOURCES</u> .....	40
<u>VI. GEOLOGY AND SOILS</u>	
<u>VII. GREENHOUSE GAS EMISSIONS</u> .....	44
<u>VIII. HAZARDS AND HAZARDOUS MATERIALS</u> .....	48
<u>IX. HYDROLOGY AND WATER QUALITY</u> .....	53
<u>X. LAND USE AND PLANNING</u> .....	57
<u>XI. MINERAL RESOURCES</u> .....	60
<u>XII. NOISE</u> .....	61
<u>XIII. POPULATION AND HOUSING</u> .....	64
<u>XIV. PUBLIC SERVICES</u> .....	65
<u>XV. RECREATION</u> .....	66



<u>XVI. TRANSPORTATION/TRAFFIC</u> .....	68
<u>XVII. UTILITIES AND SERVICE SYSTEMS</u> .....	72
<u>XVIII. MANDATORY FINDINGS OF SIGNIFICANCE</u> .....	74

### Figures

Figure 1: Regional Location Map

Figure 2: Existing Conditions

Figure 3: Proposed Bridge

Figure 4: Proposed Bridge Profile

Figure 5: Proposed Restoration Area Where Existing Bridge Removed

Figure 6: Photo of Existing Bridge Looking Upstream

Figure 7. Photo of Riparian Vegetation at the Southern Approach of the Proposed Bridge

Figure 8: Photo from Higgins-Purisima Centerline Looking Towards Project Site

Figure 9. Photo of Trees at the North Approach of the Proposed Bridge (Alders visible right)

Figure 10: Photo of Existing Staging Area and Vault Toilet

### Appendices

Appendix A: Biotic Assessment and Riparian Delineation

Appendix B: Harkins Bridge Geotechnical Investigation Report.

Appendix C: Harkins Bridge Relocation Study

Appendix D: Marbeled Murrelet Habitat Assessment and Management Recommendations

Appendix E: Archaeological Review

## Midpeninsula Regional Open Space District PROPOSED INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.) that the District proposes to determine that the Harkins Bridge Replacement Project, when implemented, will not have a significant impact on the environment.

### PROJECT DESCRIPTION

#### Project Location and Surrounding Land Uses

The Harkin Bridge Replacement Project site is located approximately 100 yards east of the intersection of Higgins Canyon Road and Purisima Creek Road, on the Whittemore Gulch Trail, in the Purisima Creek Open Space Preserve. **Figure 1, Area Map**, shows the regional context of the project site. Purisima Creek Redwoods Open Space Preserve is an 4,711-acre preserve that includes a 24-mile trail system for hikers, bikers, and equestrians. Purisima Creek, a large perennial stream, flows from the top of the Preserve at Skyline Blvd (Highway 35) down to the coastal terraces south of Half Moon Bay. The project site is located at the very western extent of the Preserve, adjacent to the only public parking from the coastside of the Preserve.

#### Project Goals and Objectives

The Project involves the removal and replacement of a deteriorated railroad car bridge crossing over Purisima Creek, which would entail demolition of an existing access road to the old bridge location, site restoration of the area of the old bridge location; construction of a temporary culvert crossing with associated water diversion plan; installation of a new bridge, construction of a new access roadway and trail to the proposed bridge, and temporary fencing along Purisima Creek Trail to exclude the public from construction activities.

The project goals and objectives are as follows:

- Remove the existing deteriorated bridge over Purisima Creek and restore the bridge approaches and bridge area to reduce soil erosion.
- Construct a new bridge and associated new access roadway approximately 100 feet upstream of the existing bridge that will improve public safety for the District with safe vehicular access for patrol, fire and other emergency vehicles.

#### Project Characteristics

Project implementation would involve removing the existing 60-foot long, steel bridge and replacing it with a 60-foot-long, prefabricated steel bridge upstream of the current location. The project is shown in **Figures 2 to 6**. The existing bridge is deteriorating and can no longer safely carry significant vehicle loads. The current bridge serves as a crossing for patrol, fire, and other emergency vehicles. These vehicles can be quite heavy, so the bridge has to be able to carry those loads safely. The new bridge will entail the construction of structural concrete abutments (drilled piers), and maintaining adequate turning radius and grades on the new approaches to the bridge. Approximately 15 feet of the Whitmore Gulch Trail will be realigned to approach the proposed bridge from the north and approximately 60 feet of the Purisima Creek Trail will be realigned to approach the proposed bridge from the south.



The bridge replacement project involves working in an approximately 180-foot reach of Purisima Creek that is approximately 20 to 50 feet wide. The project construction footprint for the old and new bridge location is approximately 3,500 square feet (0.08 acres). Approximately 0.01 acres of riparian vegetation removal will be required around the proposed bridge approaches primarily on the southern end and around the northern end, as seen as Figure 7 and 9. Two alder trees (12" and 20" dbh) are proposed for removal adjacent to the proposed northern bridge approach, as seen in Figure 3 and 8.

In this river reach the river banks are 8 to 10 feet high; however the channel bottom is significantly wider downstream of the proposed new bridge. The slope along the reach is approximately 2.2%. The large downed redwood tree immediately downstream of existing bridge restricts high storm flows. This restriction causes storm flows to back up and flood the adjacent approach to the existing bridge.

The existing bridge will be replaced with a new bridge approximately 100 feet upstream of the existing bridge. The southern concrete abutment and wingwall will be constructed entirely outside the stream channel and above the 100-year flood event elevation. The northern abutment and wing wall are to be built just below the break in slope of the stream channel, but above the elevation of an 100-year flood event, as seen in Figure 4. Grading for this project is limited to both bridge approaches and minor recontouring for slope stabilization and restoration purposes around the existing bridge. The quantities of excavation and fill are detailed below, under Project Implementation, f. New Construction, and seen in Figures 3 and 4. Almost all of the grading will occur within soils that were previously disturbed by the construction of the log landing built in approximately the 1850s.

In addition to the removal and replacement of the bridge, the design includes the restoration of the old bridge location with native vegetation, and new bio-technically stabilized slopes. More detailed information regarding the various phases of the proposed project is provided below.

### **Project Implementation**

- a. Construction Timeline.** Construction activities would occur over a 16 to 24 week period, beginning and ending between April 1 to December 31<sup>st</sup>. Construction hours would be limited to one and half hours after sunrise to one and a half hours before sunset on weekdays and weekends during marbled murrelet nesting season (April 1<sup>st</sup> to September 15<sup>th</sup>), after which construction would be limited to 7:00 am to 6:00 pm during weekdays and 9:00 am to 5:00pm on Saturday, as described in mitigation measure BIO-5.
- b. Construction Access.** The site would be accessed from Purisima Canyon Road, directly off Highway 1. Construction vehicles would utilize Purisima Creek Road in order to access the site and haul materials from the site. A temporary culvert crossing and road would be constructed at the existing bridge crossing to allow vehicular access to the other side of Purisima Creek for construction activities.
- c. Construction Equipment.** The project would require the use of heavy equipment, such as cranes, excavators, loaders, backhoes, water trucks, dump trucks and fuel tanks.
- d. Grading and Erosion Control.** Grading and other earth-disturbing activities proposed project would be limited to the dry season (generally between April 15 and October 15). Construction will be supervised by experienced District staff and engineering consultants and would incorporate erosion control techniques from the District's Details and Specifications Guidelines. In addition, Best Management Practices (BMPs) approved by the California Department of Fish and Wildlife

and Regional Water Quality Control Board and in use by the District for proper design and use of silt fencing, would be implemented during project construction to avoid impacts such as erosion at the project site.

Channel erosion potential would change over time as the planted vegetation matures. Typically, the erosion potential of the channel and banks decreases as the project ages, and mature, stable vegetation is established. Approaches that integrate vegetation and biodegradable products such as fiber blankets, bio-blocks, and coir products will be used. The biodegradable products are used to provide temporary erosion protection and allow for the vegetation to mature and provide the primary erosion control within 3 to 5 years, giving re-vegetation plantings time to establish. The channel banks along the riffles and grade control structures will be planted with willow and alder stakes to ensure that vegetation cover becomes part of the overall channel structure. Additional riparian planting will be completed on the floodplain and channel banks to ensure long term stability of the channel.

- e. **Demolition.** As part of the proposed project, the existing bridge and access road (approximately 0.03 acres) would be demolished and the rubble would be hauled off site to an appropriate refuse and recycling facility. Demolition of the affected portion of the road would generate approximately 200 cubic yards of waste. The existing bridge is a 60-foot long, 12-foot wide old railroad car steel bridge that would be demolished and hauled offsite. Tarps would be placed underneath the bridge during demolition to prevent debris from entering the creek. Dirt from the bridge fill would be temporarily stored on an adjacent staging area, and suitable soil would later be used as backfill fill for the restoration of the old bridge site. Generally, significant trees on the site are being avoided; however the project will entail the removal of two alder trees.
- f. **Staging.** Once the bridge, fill, and road are removed from the site, a temporary dirt access road to the channel bed will be constructed to allow access to the other side of the creek. Two (2) 18 inch pipes will be installed across the active creek and a temporary crossing will be constructed to allow for construction traffic to the north abutment. Clean gravel and soil fill will be used to construct the temporary crossing. A staging area will be established on the southern side of the construction area where materials and equipment will be stored. The temporary dirt access road and staging area are shown in Figure 3.
- g. **Project Site Water Diversion and Fish Exclusion Plan.** A creek flow bypass will be required during the majority of construction activities. The proposed flow bypass system will collect all of the creek flow and provide a temporary crossing via two 18" culverts for construction equipment at the original bridge location. Only resident trout use Purisma Creek. There are no steelheads present. A qualified fish biologist will install a fish exclusion net prior to in-channel work at the upper boundary of the in-stream construction area. Any fish below the exclusion will be flushed downstream and a net will be installed at the southern boundary of the construction area. Once the temporary stream crossing is constructed, the fish exclusion netting will be removed. The same fish exclusion process will be repeated during the temporary crossing removal. A series of silt fence and water barriers will be installed at the base of the banks of each new bridge abutment. These fences will direct the flowing water away from the work area so a dry working environment can be preserved. The anticipated length of channel flow control is approximately 180 linear feet. The Contractor will develop a diversion plan and ensure that all materials and equipment will be available for the water diversion prior to the commencement of work. The water diversion system should include the following components:

- Confinement Structure
- Bypass Piping/Pipeline
- Point of Discharge Protection (as needed)

Upon completion of the construction all diversion and temporary crossing material will be removed from the streambed.

- e. Temporary Trail Access .** The Contractor will fence off the southern side of the construction area to preserve a 10 feet wide road and trail width for visitors using Purisima Creek trail. Visitors using the Whittemore Gulch and Harkins Ridge trail that desire to access the parking lot or Purisima Creek trail will have to use the temporary culvert crossing. A brief period between the demolition of the existing bridge and construction of the temporary culvert crossing will close access over Purisima Creek. Appropriate signs would be posted at trailheads and along the temporary trail to provide warning to the public of the temporary closure, construction vehicles and information on the project status and advise cyclists to walk their bikes.
- f. New Bridge Construction.** Once removal of the bridge and temporary road crossing is complete, construction on the bridge will begin.

Vertical and denuded banks downstream of the bridge will be stabilized and replanted using locally harvested willow and alder stakes in combination with biodegradable erosion control products. The new bridge will be built upon two new lateral foundations from either side of the creek at the top of bank. The bridge structure itself will be a prefabricated metal bridge 60 feet long and 15 feet wide. The foundations will be installed first, and then the bridge will be assembled on-site and dropped into place with a crane. New approach roadway, approximately 0.03 acres, will be graded and compacted. Backfill will be placed and compacted; road base and will then be installed in the last 18 inches of depth. All disturbed areas will be seeded and/or revegetated to prevent soil erosion. Disturbed bank slopes will be seeded and covered with erosion control blankets.

### Construction Material

Description= Unit, Quantity

1. Remove Bridge = 200 Cubic Yards (CY)
2. Structural Excavation= 53 CY
3. Structural Backfill = 185 CY
4. Class 2 Aggregate Base= 20 CY
5. Structural Concrete= 40 CY
6. Reconstructed channel (soil/rock) = 42 CY

**Construction Sequence.** The following sequence of construction task will take place.

1. Project site mobilization
2. Biologic surveys, education, monitoring
3. Signage, grading and establishment of temporary access ways
4. Construction of dewatering/diversion system
5. Project site water diversion and biological monitoring and fish relocation
6. Bridge, roadway demolition, and fill excavation

7. Temporary access road and crossing installation
8. Bridge foundation construction
9. Place backfill and headwalls
10. Construct roadway
11. Assemble and install bridge
13. Remove detour; decommission temporary access road; complete erosion control
14. Final site planting and punchlist
15. Site cleanup and demobilization

### **FINDINGS AND BASIS FOR MITIGATED NEGATIVE DECLARATION**

The Midpeninsula Regional Open Space District, based upon substantial evidence in the record, finds that:

1. The mitigation measures, as listed below and incorporated into the project, are adequate to mitigate the environmental effects to a less than significant level.
2. The project will not adversely affect agricultural resources, mineral resources, population and housing, and public services in that such impacts simply do not apply to the proposed project, given the rural, vegetated environment of the project, the low-intensity recreational uses that are associated with the project, and the minor construction disturbance expected by the project.
3. The project will not adversely affect land use or public services, based on project-specific factors that allow the project to avoid potentially significant impacts.
4. The project will not adversely affect air quality, aesthetics, geology & soils, hydrology and water quality, noise, recreation, or utilities and service systems based on project-specific factors that reduce impacts to a less than significant level.
5. The project will not adversely affect biological resources, cultural resources, hazards and hazardous materials, or traffic and transportation because the incorporation of mitigation measures into the project has reduced the impacts to a less than significant level.
6. In addition, the project will not:
  - Create impacts that 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, 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, due to the project's fundamentally small scale, localized nature.
  - Create impacts that are individually limited, but cumulatively considerable, based on project-specific factors that reduce these impacts to a less than significant level.
  - Create environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, based on project-specific factors that reduce these impacts to a less than significant level.

Therefore, the District has determined that the project will have no significant effect on the environment.

## MITIGATION MEASURES incorporated into the project

### *Mitigation incorporated into project for impacts to special-status plants species:*

Mitigation Measure BIO-1. Focused plant surveys for each species listed in the Biological Assessment shall be conducted in the spring prior to initial ground breaking to determine the species' presence or absence in areas that would be disturbed by construction and earth movement activities. If any special-status plant species are found, areas supporting the species shall be avoided, where feasible. Work shall not start if a special-status plant specimen and its required habitat conditions are found within the impact area while a plan detailing on-site mitigation is developed based on consultation with CDFW. Construction work may start once such plan has been approved by CDFW.

**Implementation:** Qualified District Natural Resources Staff or Qualified Consulting Biologist.

**Timing:** In the spring prior to construction of the project.

**Monitoring:** District staff

### Mitigation incorporated into project for impacts to San Francisco dusky-footed woodrat:

Mitigation Measure BIO-2. The following avoidance measures for San Francisco dusky-footed woodrat will be implemented:

1. Preconstruction Surveys. A qualified biologist shall conduct San Francisco dusky-footed woodrat nest surveys prior in the February prior to initial ground breaking and just prior to groundbreaking to determine the presence or absence of nests in areas that would be disturbed by construction and earth movement activities. If feasible, disturbance of woodrat nests shall be avoided by staging construction-related equipment and materials away from known nest sites.

If during the survey, a woodrat nest is detected, the District will complete one of the following avoidance minimization measures. These measures are listed in order of priority, where the first measure is the preferred measure to be implemented as it provides the least amount of impact to the woodrat. If the first measure cannot be implemented due to extenuating site conditions, the second shall be implemented and so forth down the list.

- a. Any trail alignment, access road or staging area will be relocated to avoid the woodrat nest by at least 5 feet. Safety and/or silt fencing (for nests downslope) will be erected around all nests within 25 feet of the trail alignment, road or staging area to avoid impacts during construction.
- b. For all woodrat nests that cannot be avoided by project activities (i.e. will require relocation), the CDFW should be consulted with one of the two following options:
  - i. If the nest appears inactive (e.g. no scat or fresh leaves and twigs), approval will be sought from CDFW to dismantle the nest and replace the lost resource by building an artificial nest. One artificial nest should be built for every one existing inactive nest that is dismantled.
  - ii. If the nest appears active, approval will be sought from CDFW to (1) trap the occupant(s) of the nest, (2) dismantle the nest, (3) construct a new artificial nest with the materials from the dismantled nest, and (4) release the occupant into the new artificial nest. The new nest should be placed no more than 20 feet from its original location and as far from the project footprints as necessary to be protected from construction activities. Nests should only be moved in early morning during the non-breeding season (October through February). If trapping has occurred for three

consecutive nights and no woodrats have been captured, the nest should be dismantled and a new nest constructed.

A CNDDDB form shall be filled out and submitted to CDFW for any San Francisco dusky-footed woodrats that are trapped. Once trapped, nests shall be torn down and rebuilt surrounding an inverted wooden planter (or similar structure) having at least one entrance and exit hole that is slightly buried into the ground to anchor. Any nest material encountered shall be placed within the nest structure during rebuilding. A small handful of seeds shall be placed within the relocated structure. Relocated nests are intended to provide a release site and opportunity for the woodrats to relocate to another nest (most woodrats average more than one nest and often do not remain with a relocated nest). Once nests are moved, any trapped woodrats should be released into the reconstructed nest during daylight hours so that they seek refuge in the reconstructed nests. In most instances it is expected that the animal will remain in the reconstructed nest until it has an opportunity to relocate to another nest site at night. Relocated nests are expected to eventually be re-colonized and should be monitored one year post construction using visual surveys to determine if a relocated nest has returned to use. A monitoring report should be submitted to CDFW to document use or non/use of relocated nests.

2. **Employee and Contractor Education Program.** The District will conduct an employee education program prior to the initiation of project activities. The program will consist of a brief presentation by persons knowledgeable in special status species biology and legislative protection to explain concerns to contractors and their employees. The program would include the following: a description of woodrat and their habitat needs; an explanation of the status of the woodrat and their protection under state law; and a list of measures being taken to reduce impacts to woodrat during project activities. If a woodrat nest is found on the project footprint, it is to be left alone and all operations should stop. Notify Project site lead and District Staff (if the site lead is a contractor) or notify District Natural Resources Program Manager if Project Lead is District Staff.
3. **Daily Monitoring.** During the construction phase of the project, a qualified biologist, District Natural Resources staff or a trained, on-site monitor will check the site in the morning every day before construction activities begin for the presence of woodrat or other wildlife present within the work area. If a woodrat is found, the monitor shall have the authority to stop construction in the immediate area and immediately notify appropriate District Staff (Natural Resources Program Manager or designated staff). If the monitor is the District's Natural Resources Staff, or qualified biologist, they will have the authority to notify the CDFW for guidance on procedure. Subsequent recommendations made by the CDFW shall be followed. The monitor would not handle or try to relocate any special-status species.
4. **Speed Limit.** Vehicles shall not drive more than 5 miles per hour within the construction area if these species have been determined to be present. If any woodrat is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly checked underneath before they are moved to ensure that no woodrat is on the ground below the vehicle.

**Implementation:** Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.

**Timing:** The February prior, just prior to construction and during construction as specified

**Monitoring:** District staff

Mitigations Incorporated into project for impacts to California red-legged frog:

Mitigation Measure BIO-3: The following avoidance measures for California red-legged frogs will be implemented:

1. Pre-Construction Surveys for Special-Status Amphibians including California Red-Legged Frog (CRLF). Surveys for CRLF and other special-status amphibians shall be conducted before construction begins. In the unlikely event CRLF eggs or tadpoles are found, a 100-foot buffer shall be established around the location until juveniles disperse from the breeding site, as determined by a qualified biologist. If adults are present in the construction area, work shall be stopped until individuals are allowed to disperse on their own volition or the species is relocated by a qualified biologist with permission to handle CRLF. With these measures in place, the impact for CRLF would be reduced to a less than significant level.
2. Employee and Contractor Education Program. An employee and contractor education program shall be implemented to educate all construction personnel on CRLF identification and procedures should CRLF be observed in the project area. If a CRLF is found on the project footprint, it is to be left alone and all operations should stop. Notify Project site lead and District Staff (if the site lead is a contractor) or notify District Natural Resources Program Manager if Project Lead is District Staff.
3. Daily Monitoring. During the construction phase of the project, a qualified biologist, District Natural Resources staff or a trained, on-site monitor will check the site in the morning every day before construction activities begin for the presence of CRLF or other wildlife present within the work area. If a CRLF is found, the monitor shall have the authority to stop construction in the immediate area and immediately notify appropriate District Staff (Natural Resources Program Manager or designated staff). The monitor would not handle or try to relocate any special-status species.
4. Speed Limit. Vehicles shall not drive more than 5 miles per hour within the construction area if these species have been determined to be present. If any CRLF is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly checked underneath before they are moved to ensure that no CRLF is on the ground below the vehicle.

Mitigation Measure BIO-4: Project Compliance with All State and Federal Permits. The project may potentially affect a number of species that fall under the jurisdiction of CDFW, USFWS, and NMFS. Each of these permits would be reviewed by agency personal experts in conservation of these sensitive species. The federal permits granted under Section 404 of the Clean Water Act would be required for the construction of the project. The State of California would also have to issue a streambed alteration and agreement for the project. The project shall attain and comply with all state and federal permits for the project. Implementation of this mitigation would reduce the impacts on candidate, sensitive, or special-status species to less than significant level.



**Implementation:** Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.

**Timing:** Prior to construction and during construction as specified

**Monitoring:** District staff

Mitigations Incorporated into project for impacts to Marbled murrelet:

Mitigation Measure BIO-5. If noise generating construction activity takes place during the breeding season (April 1 to September 15), construction activity shall be restricted between 1.5 hours after sunrise to 1.5 hours before sunset to minimize disturbance of potential nesting murrelets using forest habitat as a travel corridor between inland nesting and coastal habitat.

**Implementation:** Contractor and District Staff

**Timing:** During construction

**Monitoring:** District Staff

Mitigation incorporated into project for raptors and other nesting species:

Mitigation Measure BIO-6. A qualified biologist will conduct pre-construction nesting bird surveys within 30 days of the onset of all trees and snags greater than 6 inches DBH and all shrubs taller than 8 feet proposed for removal. If bird nests are observed, an appropriate buffer zone will be established around all active nests to protect nesting adults and their young from construction disturbance. Removal of trees, snags, or woody shrubs with identified avian nests shall be postponed until all young are fledged and tree

**Implementation:** Qualified Consulting Biologist

**Timing:** Prior to construction

**Monitoring:** District staff

Mitigation Incorporated into the project for impacts to pallid bats:

Mitigation Measure BIO-7: If mature trees or snags will be removed during the bat breeding season (April 1 through August 31), a qualified bat biologist shall inspect trees and the bridge for potential roost sites. If no potential roost sites are found, no additional mitigation is necessary. Surveys will consist of a daytime pedestrian survey looking for evidence of bat use (e.g., guano) and/or an evening emergency survey to note the presence or absence of bats. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts, but are not required.

If roosts of pallid bats are determined to be present and must be removed, the bats will be excluded from the roosting site before the bridge is removed. A program addressing compensation, exclusion methods, and roost removal procedures will be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) will be replaced in consultation with CDFW and may include construction and installation of bat boxes suitable to the bat species and

colony size that was excluded from the original roosting site. Roost replacement will be implemented before bats are excluded from the original roost sites. The District has successfully constructed bat boxes elsewhere that have subsequently been occupied by bats. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the bridge may be removed.

**Implementation:** Qualified Consulting Biologist

**Timing:** Prior to construction

**Monitoring:** District staff

Mitigation incorporated into project for riparian habitat:

Mitigation Measure BIO-8:

Replant appropriate vegetation at a 2:1 ratio in the project area, as seen in Figure 5. This would include planting within the rock slope protection placed on the channel banks. Planting within the site shall occur in four general planting zones: active channel, lower shaded riparian, upper riparian/upland, and direct seeding (upland). Active channel is the zone nearest to the channel flow and represents the planting that shall be completed around the pools, habitat structures, and riffle edges. This zone is comprised of willows. The second zone, lower shade riparian, is comprised of riparian shrub like dogwood, coffeeberry, and current. The third zone is upper riparian/upland that is largely composed of trees, such as red alders and redwoods, and woody shrubs. The highest elevation zone shall consist of a native erosion control mix.

**Implementation:** Contractor and District Staff

**Timing:** During construction

**Monitoring:** District Staff

Mitigation Incorporated into project for impacts to federally protected wetlands:

Mitigation Measure BIO-9:

To mitigate for impacts on federally protected wetlands, Mitigation Measure BIO-4 shall be implemented. This mitigation measure would reduce impacts to wetland habitats to less than significant by requiring the area to be revegetated with native grasses and other herbaceous perennial wetland species.

**Implementation:** Contractor and District Staff

**Timing:** During construction

**Monitoring:** District Staff

Mitigations incorporated into project for impacts to cultural resources:

Mitigation Measure CULT-1:

Prior to the initiation of construction or ground disturbing activities, District staff or archaeological monitor shall conduct a meeting to train all construction personnel of the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources.

**Implementation:** District staff

**Timing:** During a pre-construction field meeting with Contractors and Sub-Contractors  
**Monitoring:** District Staff shall require contractor and subcontractors to have each employee attend training session and sign training materials indicating attendance at education program.

**Mitigation Measure CULT-2:**

If there is an unanticipated discovery of archaeological deposits or remains during project implementation, construction crews shall stop all work within 100 feet of the discovery and notify District staff. A qualified archaeologist will assess the discovery, complete an archaeological evaluation and provide recommendations.

**Implementation:** District staff  
**Timing:** During construction  
**Monitoring:** Construction contractor and District staff

With the application of the mitigations above, this impact would be less than significant with mitigations incorporated

Mitigation incorporated into project for disturbance of human remains:

Mitigation Measure CULT-4. In the event human remains, including skeletal remains, graves, or Native American burial sites or graves, are discovered, such as during the course of any ground disturbing activities (grading, excavating, trenching, digging), construction or maintenance activities, the following procedures shall be followed:

- All work shall immediately cease and there shall be no further excavation or disturbance of the site or the area in the vicinity of the discovery.
- Notify District staff immediately.
- District staff shall immediately notify the San Mateo County Coroner to evaluate the remains, and follow the procedures and protocols set forth in §15064.5(e) of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387).
- Secure the area and no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has made a determination of origin and disposition, which shall be made within two working days from the time the Coroner is notified of the discovery, pursuant to State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.
- If the Coroner determines that the remains are or may be of a Native American, the Coroner shall notify the California Native American Heritage Commission (NAHC) pursuant to subdivision (c) of the State Health and Safety Code within 24 hours, which will determine and notify the Most Likely Descendant (MLD). The MLD may recommend within 48 hours of their notification by the NAHC the means of treating or disposing of, with appropriate dignity, the human remains and grave goods. In the event of difficulty locating a MLD or failure of the MLD to make a timely recommendation, the human remains and grave goods shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.
- If the Coroner determines that the remains are not those of a Native American, the Coroner would make recommendations for the treatment and disposition of the remains.

Construction work shall not begin again until the County Coroner has examined the remains, assessed their significance, and offered recommendations for any additional exploratory measures deemed necessary for the further evaluation of, and/or mitigation of adverse impacts.

Mitigation measure CULT-3 under section V(b) calls for stopping work and evaluating significance if an artifact find is made, which will also reduce the potential for disturbance of human remains.

**Implementation:** District staff  
**Timing:** During construction  
**Monitoring:** Construction contractor and District staff

Mitigation incorporated into project for wildland fire:

HAZ-1. All equipment to be used during construction must have an approved spark arrestor.

HAZ-2. Cut grass and reduce fuels around construction sites where vehicles are allowed to park.

HAZ-3. Minimize use of mechanical construction equipment during hot, dry, windy weather.

HAZ-4. Hired contractors shall be required to:

- i) Provide water to suppress potential fires caused by the work performed.
- ii) Remind workers that smoking is prohibited at the work site and on any District land per contract conditions and District Ordinance.
- iii) Maintain working ABC fire extinguishers on all vehicles in the work area.

Contact both Mountain View Dispatch at (650) 968-4411 and the California Department of Forestry, Skylonda, at (650) 851-1860 for emergency response in the event of a fire (these numbers are to report emergencies only).

**Implementation:** Contractors  
**Timing:** During construction  
**Monitoring:** District Staff

## **RESPONSIBLE AGENCY CONSULTATION**

California Department of Fish and Wildlife (also a Trustee Agency)  
 San Francisco Bay Regional Water Quality Control Board  
 County of San Mateo  
 U.S. Army Corps of Engineers

## **INITIAL STUDY**

A copy of the initial study is attached.

## **REVIEW PERIOD**

The Review Period is October 17th, 2014 through November 17th, 2014. If you have any comments about the proposed Mitigated Negative Declaration or Initial Study, have information that should be included, and/or disagree with the findings of our study as set forth in the proposed Mitigated Negative

Declaration, please submit your comments in writing no later than 5 p.m. on November 17th, 2014 to Midpeninsula Regional Open Space District, 330 Distel Circle, Los Altos, CA 94022.

**CONTACT PERSON**

Aaron Hébert, Project Manager, 650-691-1200

[Ahebert@openspace.org](mailto:Ahebert@openspace.org)



---

Jane F. Mark, AICP, Planning Manager  
Midpeninsula Regional Open Space District

## Midpeninsula Regional Open Space District INITIAL STUDY

<b>Project title:</b>	<u>Harkins Bridge Replacement Project</u>		
<b>Lead agency name and address:</b>	<u>Midpeninsula Regional Open Space District (District) 330 Distel Circle, Los Altos, CA 94022</u>		
<b>Contact person and phone number:</b>	<u>Aaron Hebert, (650) 691-1200</u>		
<b>Project location:</b>	<u>The project is situated in Purisima Creek Redwoods Open Space Preserve (Preserve), a 4,711-acre public preserve located in unincorporated San Mateo County, outside of the City of Half Moon Bay, generally located west of Skyline Boulevard (Highway 35) and inland of Highway 1. The project is located approximately 100 yards east of the public access parking lot at the intersection of Purisima Creek Road and Higgins Canyon Road. The project area encompasses an existing railroad car vehicle bridge, a new bridge location approximately 100' upstream, and a construction staging area on the southern side of the construction area.</u>		
<b>Project APN:</b>	<u>067-320-220</u>		
<b>Project sponsor's name and address:</b>	<u>Midpeninsula Regional Open Space District 330 Distel Circle, Los Altos, CA 94022</u>		
<b>General plan designation:</b>	<u>Public Recreation</u>	<b>Zoning:</b>	<u>Timberland Preserve-Coastal Zone District (TPZ-CZ)</u>
<b>Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)</b>			

### PROJECT DESCRIPTION

#### Project Location and Surrounding Land Uses

The Harkin Bridge Replacement Project site is located approximately 100 yards east of the intersection of Higgins Canyon Road and Purisima Creek Road, on the Whittemore Gulch Trail, in the Purisima Creek Open Space Preserve. **Figure 1, Area Map**, shows the regional context of the project site. Purisima Creek Redwoods Open Space Preserve is an 4,711-acre preserve that includes a 24-mile trail system for hikers, bikers, and equestrians. Purisima Creek, a large perennial stream, flows from the top of the Preserve at Skyline Blvd (Highway 35) down to the coastal terraces south of Half Moon Bay. The project site is located at the very western extent of the Preserve, adjacent to the only public parking from the coastside of the Preserve.

#### Project Goals and Objectives

The Project involves the removal and replacement of a deteriorated railroad car bridge crossing over Purisima Creek, which would entail demolition of an existing access road to the old bridge location, site restoration of the area of the old bridge location; construction of a temporary

culvert crossing with associated water diversion plan; installation of a new bridge, construction of a new access roadway and trail to the proposed bridge, and temporary fencing along Purisima Creek Trail to exclude the public from construction activities.

The project goals and objectives are as follows:

- Remove the existing deteriorated bridge over Purisima Creek and restore the bridge approaches and bridge area to reduce soil erosion.
- Construct a new bridge and associated new access roadway approximately 100 feet upstream of the existing bridge that will improve public safety for the District with safe vehicular access for patrol, fire and other emergency vehicles.

### **Project Characteristics**

Project implementation would involve removing the existing 60-foot long, steel bridge and replacing it with a 60-foot-long, prefabricated steel bridge upstream of the current location. The project is shown in **Figures 2 to 6**. The existing bridge is deteriorating and can no longer safely carry significant vehicle loads. The current bridge serves as a crossing for patrol, fire, and other emergency vehicles. These vehicles can be quite heavy, so the bridge has to be able to carry those loads safely. The new bridge will entail the construction of structural concrete abutments (drilled piers), and maintaining adequate turning radius and grades on the new approaches to the bridge. Approximately 15 feet of the Whitmore Gulch Trail will be realigned to approach the proposed bridge from the north and approximately 60 feet of the Purisima Creek Trail will be realigned to approach the proposed bridge from the south.

The bridge replacement project involves working in an approximately 180-foot reach of Purisima Creek that is approximately 20 to 50 feet wide. The project construction footprint for the old and new bridge location is approximately 3,500 square feet (0.08 acres). Approximately 0.01 acres of riparian vegetation removal will be required around the proposed bridge approaches primarily on the southern end and around the northern end, as seen as Figure 7 and 9. Two alder trees (12" and 20" dbh) are proposed for removal adjacent to the proposed northern bridge approach, as seen in Figure 3 and 8.

In this river reach the river banks are 8 to 10 feet high; however the channel bottom is significantly wider downstream of the proposed new bridge. The slope along the reach is approximately 2.2%. The large downed redwood tree immediately downstream of existing bridge restricts high storm flows. This restriction causes storm flows to back up and flood the adjacent approach to the existing bridge.

The existing bridge will be replaced with a new bridge approximately 100 feet upstream of the existing bridge. The southern concrete abutment and wingwall will be constructed entirely outside the stream channel and above the 100-year flood event elevation. The northern abutment and wing wall are to be built just below the break in slope of the stream channel, but above the elevation of an 100-year flood event, as seen in Figure 4. Grading for this project is limited to both bridge approaches and minor recontouring for slope stabilization and restoration purposes around the existing bridge. The quantities of excavation and fill are detailed below, under Project



Implementation, f. New Construction, and seen in Figures 3 and 4. Almost all of the grading will occur within soils that were previously disturbed by the construction of the log landing built in the approximately in the 1850s.

In addition to the removal and replacement of the bridge, the design includes the restoration of the old bridge location with native vegetation, and new bio-technically stabilized slopes. More detailed information regarding the various phases of the proposed project is provided below.

### **Project Implementation**

- e. Construction Timeline.** Construction activities would occur over a 16 to 24 week period, beginning and ending between April 1 to December 31<sup>st</sup>. Construction hours would be limited to one and half hours after sunrise to one and a half hours before sunset on weekdays and weekends during marbeled murrelet nesting season (April 1<sup>st</sup> to September 15<sup>th</sup>), after which construction would be limited to 7:00 am to 6:00 pm during weekdays and 9:00 am to 5:00pm on Saturday, as described in mitigation measure BIO-5.
- f. Construction Access.** The site would be accessed from Purisima Canyon Road, directly off Highway 1. Construction vehicles would utilize Purisima Creek Road in order to access the site and haul materials from the site. A temporary culvert crossing and road would be constructed at the existing bridge crossing to allow vehicular access to the other side of Purisima Creek for construction activities.
- g. Construction Equipment.** The project would require the use of heavy equipment, such as cranes, excavators, loaders, backhoes, water trucks, dump trucks and fuel tanks.
- h. Grading and Erosion Control.** Grading and other earth-disturbing activities proposed project would be limited to the dry season (generally between April 15 and October 15). Construction will be supervised by experienced District staff and engineering consultants and would incorporate erosion control techniques from the District's Details and Specifications Guidelines. In addition, Best Management Practices (BMPs) approved by the California Department of Fish and Wildlife and Regional Water Quality Control Board and in use by the District for proper design and use of silt fencing, would be implemented during project construction to avoid impacts such as erosion at the project site.

Channel erosion potential would change over time as the planted vegetation matures. Typically, the erosion potential of the channel and banks decreases as the project ages, and mature, stable vegetation is established. Approaches that integrate vegetation and biodegradable products such as fiber blankets, bio-blocks, and coir products will be used. The biodegradable products are used to provide temporary erosion protection and allow for the vegetation to mature and provide the primary erosion control within 3 to 5 years, giving re-vegetation plantings time to establish. The channel banks along the riffles and grade control structures will be planted with willow and alder stakes to ensure that vegetation cover becomes part of the overall channel structure. Additional riparian planting will be completed on the floodplain and channel banks to ensure long term stability of the channel.

- e. **Demolition.** As part of the proposed project, the existing bridge and access road (approximately 0.03 acres) would be demolished and the rubble would be hauled off site to an appropriate refuse and recycling facility. Demolition of the affected portion of the road would generate approximately 200 cubic yards of waste. The existing bridge is a 60-foot long, 12-foot wide old railroad car steel bridge that would be demolished and hauled offsite. Tarps would be placed underneath the bridge during demolition to prevent debris from entering the creek. Dirt from the bridge fill would be temporarily stored on an adjacent staging area, and suitable soil would later be used as backfill fill for the restoration of the old bridge site. Generally, significant trees on the site are being avoided; however the project will entail the removal of two alder trees.
- f. **Staging.** Once the bridge, fill, and road are removed from the site, a temporary dirt access road to the channel bed will be constructed to allow access to the other side of the creek. Two (2) 18 inch pipes will be installed across the active creek and a temporary crossing will be constructed to allow for construction traffic to the north abutment. Clean gravel and soil fill will be used to construct the temporary crossing. A staging area will be established on the southern side of the construction area where materials and equipment will be stored. The temporary dirt access road and staging area are shown in Figure 3.
- g. **Project Site Water Diversion and Fish Exclusion Plan.** A creek flow bypass will be required during the majority of construction activities. The proposed flow bypass system will collect all of the creek flow and provide a temporary crossing via two 18" culverts for construction equipment at the original bridge location. Only resident trout use Purisma Creek. There are no steelheads present. A qualified fish biologist will install a fish exclusion net prior to in-channel work at the upper boundary of the in-stream construction area. Any fish below the exclusion will be flushed downstream and a net will be installed at the southern boundary of the construction area. Once the temporary stream crossing is constructed, the fish exclusion netting will be removed. The same fish exclusion process will be repeated during the temporary crossing removal. A series of silt fence and water barriers will be installed at the base of the banks of each new bridge abutment. These fences will direct the flowing water away from the work area so a dry working environment can be preserved. The anticipated length of channel flow control is approximately 180 linear feet. The Contractor will develop a diversion plan and ensure that all materials and equipment will be available for the water diversion prior to the commencement of work. The water diversion system should include the following components:
- Confinement Structure
  - Bypass Piping/Pipeline
  - Point of Discharge Protection (as needed)

Upon completion of the construction all diversion and temporary crossing material will be removed from the streambed.

- e. **Temporary Trail Access .** The Contractor will fence off the southern side of the construction area to preserve a 10 feet wide road and trail width for visitors using Purisma Creek trail. Visitors using the Whittemore Gulch and Harkins Ridge trail that desire to access the parking lot or Purisma Creek trail will have to use the temporary culvert crossing. A

brief period between the demolition of the existing bridge and construction of the temporary culvert crossing will close access over Purisima Creek. Appropriate signs would be posted at trailheads and along the temporary trail to provide warning to the public of the temporary closure, construction vehicles and information on the project status and advise cyclists to walk their bikes.

- f. New Bridge Construction.** Once removal of the bridge and temporary road crossing is complete, construction on the bridge will begin.

Vertical and denuded banks downstream of the bridge will be stabilized and replanted using locally harvested willow and alder stakes in combination with biodegradable erosion control products. The new bridge will be built upon two new lateral foundations from either side of the creek at the top of bank. The bridge structure itself will be a prefabricated metal bridge 60 feet long and 15 feet wide. The foundations will be installed first, and then the bridge will be assembled on-site and dropped into place with a crane. New approach roadway, approximately 0.03 acres, will be graded and compacted. Backfill will be placed and compacted; road base and will then be installed in the last 18 inches of depth. All disturbed areas will be seeded and/or revegetated to prevent soil erosion. Disturbed bank slopes will be seeded and covered with erosion control blankets.

### Construction Material

Description= Unit, Quantity

1. Remove Bridge = 200 Cubic Yards (CY)
2. Structural Excavation= 53 CY
3. Structural Backfill = 185 CY
4. Class 2 Aggregate Base= 20 CY
5. Structural Concrete= 40 CY
6. Reconstructed channel (soil/rock) = 42 CY

**Construction Sequence.** The following sequence of construction task will take place.

1. Project site mobilization
2. Biologic surveys, education, monitoring
3. Signage, grading and establishment of temporary access ways
4. Construction of dewatering/diversion system
5. Project site water diversion and biological monitoring and fish relocation
6. Bridge, roadway demolition, and fill excavation
7. Temporary access road and crossing installation
8. Bridge foundation construction
9. Place backfill and headwalls
10. Construct roadway
11. Assemble and install bridge
13. Remove detour; decommission temporary access road; complete erosion control
14. Final site planting and punchlist

## 15. Site cleanup and demobilization

---

### **SUBSEQUENT ACTIONS**

Upon District Board certification of this negative declaration, the following actions will occur:

1. Application for San Mateo County Coastal Development Permit
  2. Application for Clean Water Act Section 404 Nationwide permit from the U.S. Army Corps of Engineers (USACE)
  3. Application for Clean Water Act Section 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board
  4. Application for California Department of Fish and Wildlife (CDFW) Streambed Alteration Permits.
  5. Release of bid package, bid opening, Board of Directors authorization for award of bid
  6. Construction of the project
- 

### **Surrounding land uses and setting: Briefly describe the project's surroundings:**

The project is located within and Purisima Creek Redwoods Open Space Preserve, a 4,711-acre preserve owned and managed by Midpeninsula Regional Open Space District, containing more than 24 miles of predominantly multiple-use (hiking, mountain biking, and equestrian use) trails. The Preserve is located in unincorporated San Mateo County, approximately 5.3 miles outside of the City of Half Moon Bay, and west of Skyline Boulevard (Highway 35).

The project site is near the western boundary of Purisima Creek Redwoods Open Space Preserve. Rural residential homes, agricultural operations, and Burleigh Murray Ranch State Park lie to the west of the Preserve and project site. East of the project site is the main portion of the Preserve, which includes recreational uses by the public and natural resource management by the District.

---

### **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**

- California Department of Fish and Wildlife Streambed Alteration Permit
  - Clean Water Act Section 404 Nationwide permit from the U.S. Army Corps of Engineers
  - Clean Water Act Section 401 Water Quality Certification from the San Francisco Bay Regional Water Quality Control Board
  - San Mateo County Coastal Development Permit
- 

### **Document availability:**

All documents referenced in the Initial Study are available for review from 8:30 a.m. to 5:00 p.m. Monday through Friday at the Midpeninsula Regional Open Space District administrative office at the address listed above. It will also be available at the District's website: [http://www.openspace.org/news/public\\_notices.asp](http://www.openspace.org/news/public_notices.asp)

---

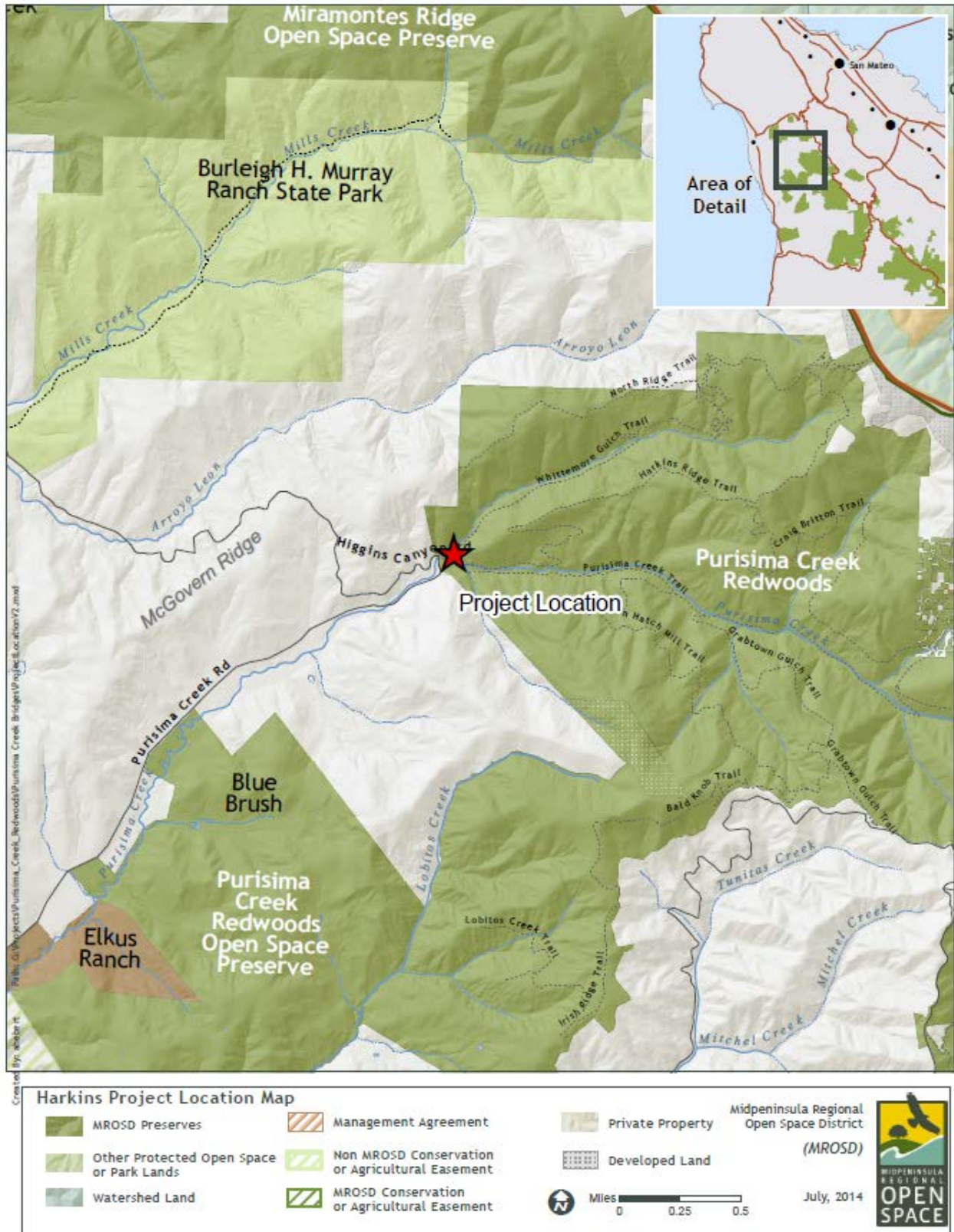


Figure 1: Regional Location Map

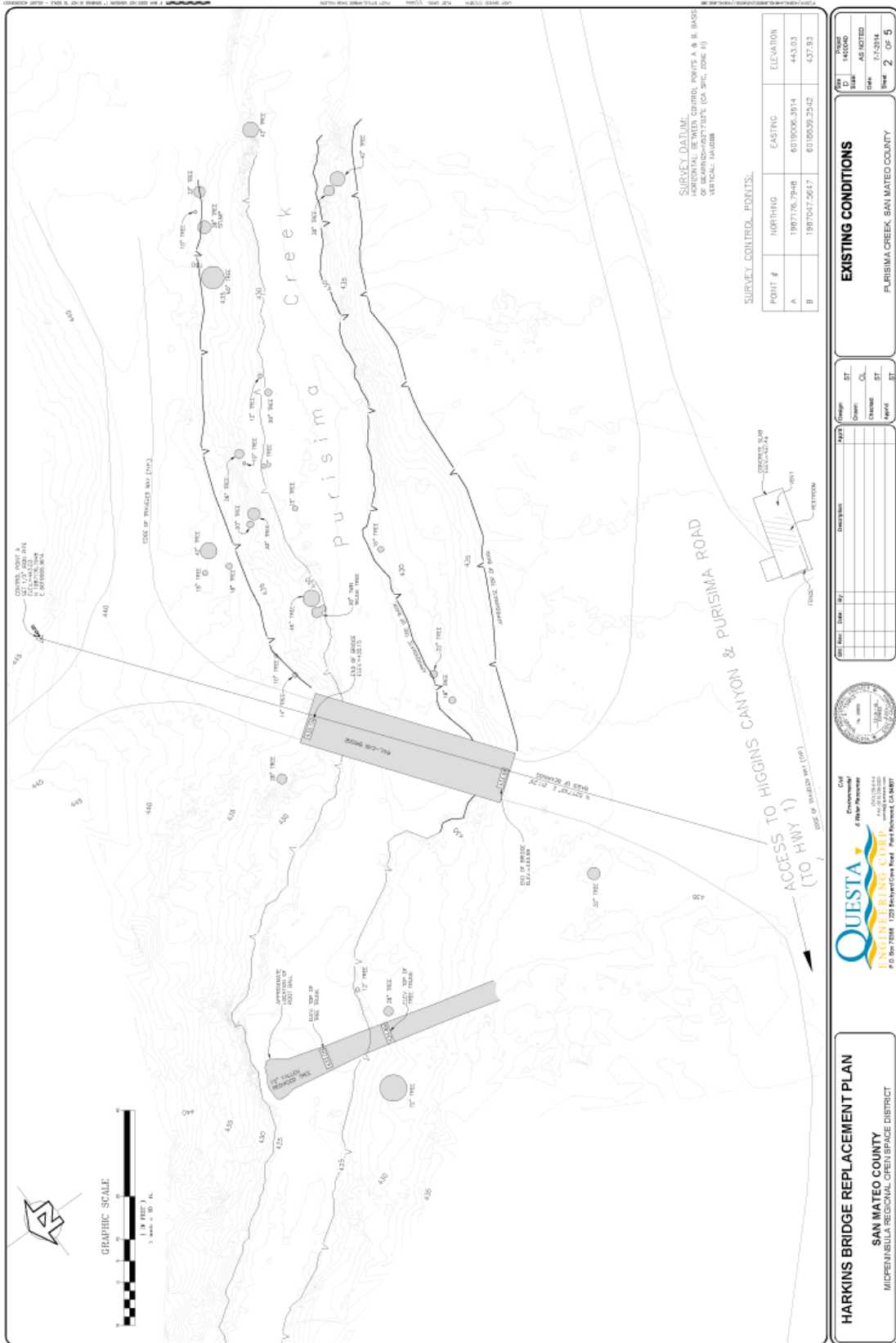


Figure 2: Existing Conditions



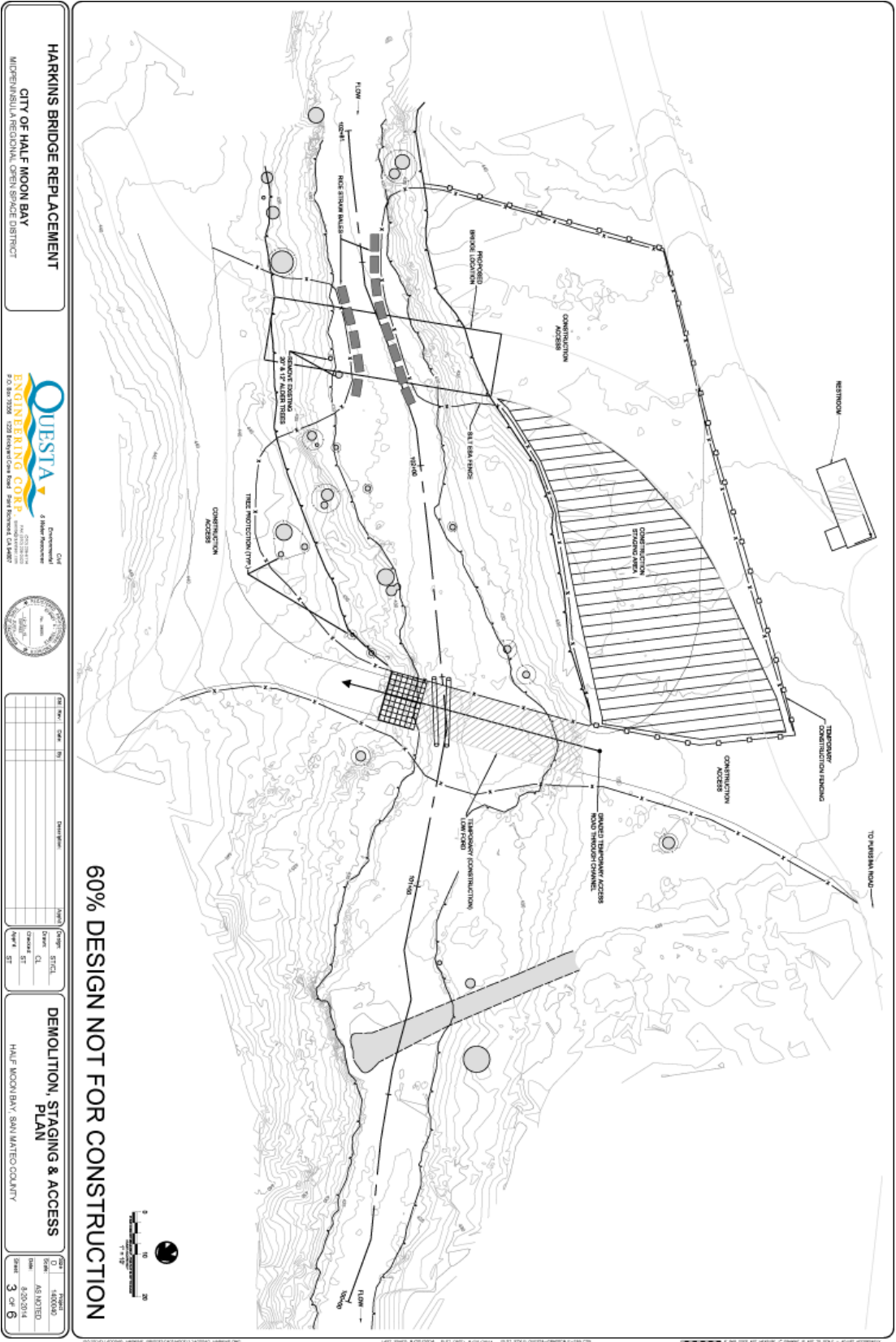
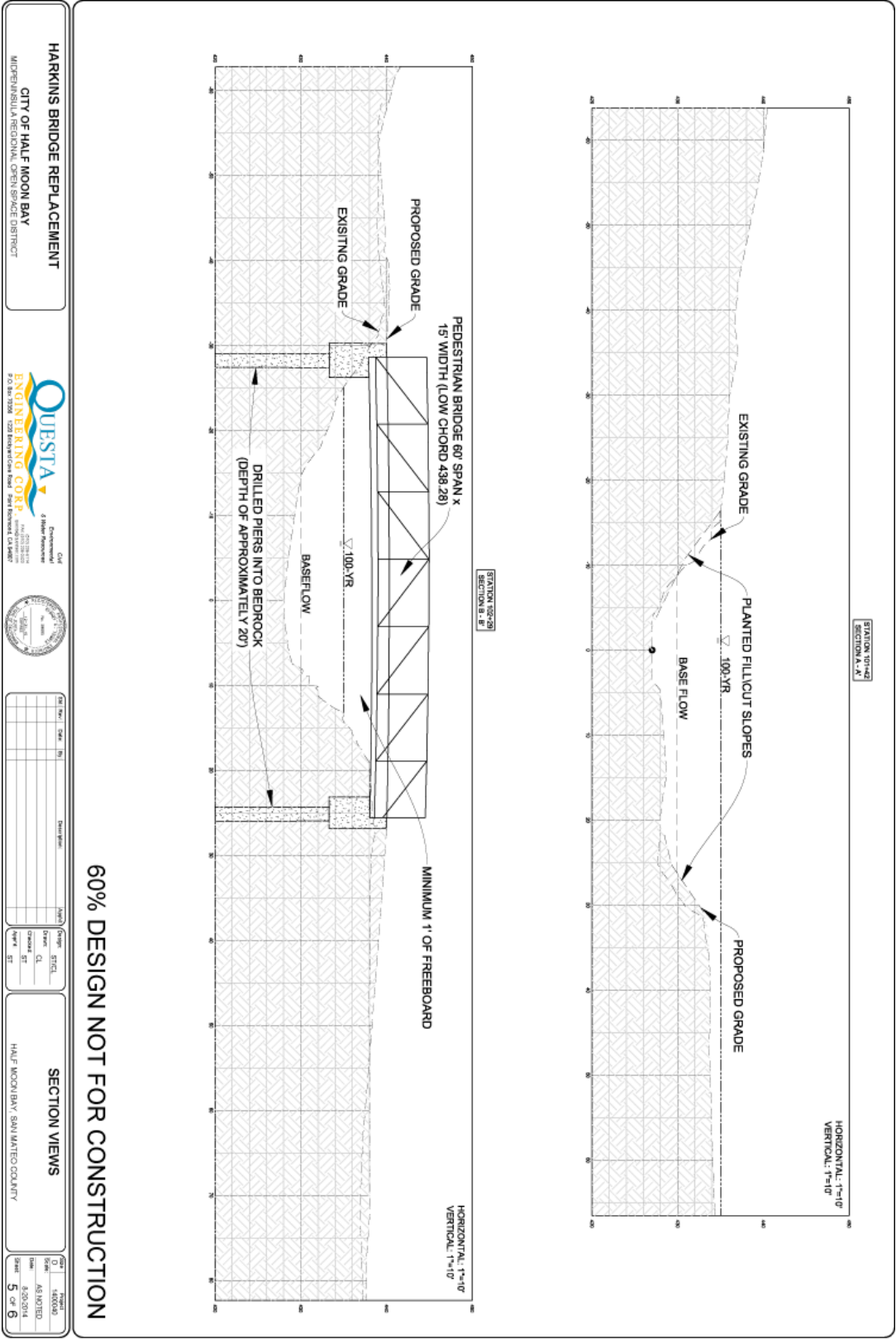


Figure 3: Proposed Bridge





**HARKINS BRIDGE REPLACEMENT**  
 CITY OF HALF MOON BAY  
 METROPOLITAN REGIONAL CENTER SERVICE DISTRICT



NO.	REV.	DATE	BY	DESCRIPTION

DESIGNER	DATE	SCALE
CHECKED		
IN CHARGE		

**SECTION VIEWS**  
 HALF MOON BAY, SAN MATEO COUNTY

DATE	SCALE

Figure 4: Proposed Bridge Profile





**Figure 6: Photo of Existing Bridge Looking Upstream**



**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture and Forestry Resources                    | <input type="checkbox"/> Air Quality                        |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural/Historic/Archaeological Resources | <input type="checkbox"/> Geology/Soils                      |
| <input type="checkbox"/> Greenhouse Gas Emissions        | <input checked="" type="checkbox"/> Hazards & Hazardous Materials              | <input type="checkbox"/> Hydrology/Water Quality            |
| <input type="checkbox"/> Land Use/Planning               | <input type="checkbox"/> Mineral Resources                                     | <input type="checkbox"/> Noise                              |
| <input type="checkbox"/> Population/Housing              | <input type="checkbox"/> Public Services                                       | <input type="checkbox"/> Recreation                         |
| <input type="checkbox"/> Transportation/Traffic          | <input type="checkbox"/> Utilities/Service Systems                             | <input type="checkbox"/> Mandatory Findings of Significance |

**DETERMINATION:**

(To be completed by the Lead Agency)

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

  
 \_\_\_\_\_  
 Signature

Jane F. Mark, AICP, Planning Manager

10/16/14  
 \_\_\_\_\_  
 Date

Midpeninsula Regional Open Space District

## **INSTRUCTIONS FOR EVALUATION OF ENVIRONMENTAL IMPACTS:**

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

## ENVIRONMENTAL CHECKLIST and DISCUSSION OF IMPACTS

**Issues:**

**I. AESTHETICS**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

**Would the project:**

**I(a) Have a substantial adverse effect on a scenic vista?**

**Explanation:** (Sources: 1, 2, and 6). The project is located in the 4,711-acre Purisima Creek Redwood Open Space Preserve (Preserve) approximately 430 feet above mean sea level at the crest of the Santa Cruz Mountains, and about 5.3 miles southeast of Half Moon Bay, San Mateo County, California.

Higgins Canyon Road and Purisima Creek Road are designated as a scenic corridor by San Mateo County. The corridor is defined as the visual boundary of the landscape. The project is within San Mateo County’s map of visual corridors depicting the extent of the corridor around the scenic roads. Development within the corridor is required to be set back 100’ from the center line of the roadway, greater when possible and as little as 50’ when vegetation can shield the structure from public view. The project is located 100 yards from the centerline of Higgins-Purisima Road. The project is not visible from Higgins Canyon Road and Purisima Creek Road primarily due to vegetation, existing development (a public parking lot), and topography.

Redwood forest surrounds the project site and the visual corridor as the public approaches the site. The tall trees limit visibility to the local area; no vistas are present within the visual corridor of the project or the scenic roads as the public approaches the site. As the public drives away from the Preserve parking lot and the creek itself, grasslands and chaparral provide open views. These vistas are located outside the visual boundary the project site. This project will therefore have a less than significant impact on views within or into the Preserve.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

**I(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

**Explanation:** (Sources: 1, 2, and 8). Potential scenic impacts of the proposed project are limited to the removal of riparian vegetation around the southern approach of the proposed bridge and two alder trees, 12” and 20” dbh, removed around the northern abutment of the proposed bridge, which are not considered a ‘heritage tree’ in San Mateo County.

Construction vehicles and equipment will access the project site by way of the scenic corridor described

in I.A. These temporary activities will not have a significant impact on the scenic corridor.

As discussed in I(a), the project is within a scenic corridor and may therefore contain scenic resources. The project, however, is obscured from the scenic roads primarily due to vegetation, existing development (a public parking lot), and topography.

The demolished road approach to the existing railcar bridge will be replanted in a 2:1 ratio with riparian vegetation and alders, as described in IV(e) and mitigation measure BIO-8.



**Figure 7. Photo of Riparian Vegetation at the Southern Approach of the Proposed Bridge**





**Figure 8: Photo from Higgins-Purisima Centerline Looking Towards Project Site**



**Figure 9. Photo of Trees at the North Approach of the Proposed Bridge (Alders visible right)**





**Figure 10: Photo of Existing Staging Area and Vault Toilet**

**I(c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Sources: 3). The project occurs in areas that are largely disturbed by previous use, with the exception of the southern side of the replacement bridge. Riparian vegetation, redwood forests, the railcar bridge, the access gate, vault toilet, preserve signage, and the adjacent trails define the visual character of the site. The railcar bridge sits at a low elevation with respect to the creek and is adjacent to the floodplain of the creek. The railcar site is relatively open in the winter months and obscured by annual spring vegetation until late summer. The replacement bridge will be partially obscured by mature riparian and redwood trees. The existing railcar bridge has 40” tall wooden railings, wooden decking, and a steel substructure. The replacement bridge will have a steel substructure, steel truss, and the style of railings and decking will be determined. The new railings and the truss structure will have a larger vertical profile, while the substructure will be thinner in profile compared to the railcar bridge. The modernization of the bridge will not degrade the existing visual character of the site. Replanting the railcar site with native vegetation will restore a more natural visual character (see mitigation BIO-8). The replacement bridge is of a similar size and scale to the existing railcar bridge and will be less visible. It is therefore expected that the project will have a less than significant impact on the visual character of the site.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**I(d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?**

**Explanation:** (Sources: 5). The project does not include exterior lighting fixtures or reflective surfaces that might cause glare during the day. District Ordinance 93-1, Section 805.2 prohibits the use of the Preserve by the public between one-half hour after sunset and sunrise. The project will therefore not create a new source of substantial light or glare.

**Aesthetics Section Sources:**

1. San Mateo County General Plan, 1986.  
[http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/GP\\_Scenic\\_Corridor.pdf](http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/GP_Scenic_Corridor.pdf)
2. *Harkins Bridge Relocation Study*, Questa Engineering, July 2014.
3. *Sawmills in the Redwoods: Logging on the San Francisco Peninsula from 1849-1967*, Frank Stanger, 1967.
4. Minutes of the Board of Directors Meeting on April 23<sup>rd</sup>, 2014.
5. Midpeninsula Regional Open Space District. *Regulations for Use of Midpeninsula Regional Open Space District Lands*. Adopted by Ordinance No. 93-1, July 28, 1993. Last Revised and Adopted by Ordinance No. 04-01, August 25, 2004.
6. San Mateo County Local Coastal Program Policies, June 2013, Component 8.28-8.34 “Scenic Roads and Corridors”.
7. San Mateo County. *Zoning Regulations. Chapter 37: Timberland Preserve Zone-Coastal Zone (TPZ-CZ) District, Section 6950* December 2012. [https://planning.smcgov.org/sites/planning.smcgov.org/files/2012\\_ZoneRegs%5BFINAL%5D.pdf](https://planning.smcgov.org/sites/planning.smcgov.org/files/2012_ZoneRegs%5BFINAL%5D.pdf)
8. San Mateo County. *San Mateo County Ordinance Code. Section 12000. The Significant Tree Ordinance of San Mateo County*. May 15, 1990.
9. San Mateo County. *Zoning Maps*. Access August 2014.  
[http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/smc\\_zoning.pdf](http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/smc_zoning.pdf)

**II. AGRICULTURAL AND FORESTRY RESOURCES**

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

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>II(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>II(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>II(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>II(d) Result in the loss of forest land or conversion of forest land to non-forest use?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>II(e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanations for a, b, c, d, and e:** (Sources: 1, 2, 3). The subject parcel (067-320-220) that would be affected by the project are part of a larger collection of land holdings totaling 4,711 acres that together create the Purisima Creek Redwoods Open Space Preserve. This Preserve is managed for resource protection and ecologically sensitive public recreational use, in keeping with the District's mission. No change in land management or use of the Preserve is proposed as part of this project.

The California Department of Conservation Farmland Mapping and Monitoring Program maps for the project vicinity indicate that no prime farmland, unique farmland, or farmland of statewide importance would be disturbed by the project. The closest farmlands are grazing areas west and north of the

project site, outside of the Preserve boundaries. This project will have no impact on nearby grazing lands.

The property is not under Williamson Act contracts. The project area is zoned Timberland Preserve Zone-Coastal Zone (TPZ-CZ). Allowable uses for TPZ-CZ Districts in San Mateo County include outdoor public recreation and development to support recreation. The project does not conflict with the permitted land uses per the San Mateo Zoning Ordinance and will not involve or create changes in the existing environment that could result in conversion of Farmland or Timberland.

**Agricultural Resources Section Sources:**

1. California Department of Conservation. *Farmland Mapping and Monitoring Program maps for San Mateo County*. 2012. <http://www.consrv.ca.gov/dlrp/fmmp>.
2. San Mateo County. *Zoning Regulations. Chapter 34: Timberland Preserve Zone*. July 1999. [http://www.co.sanmateo.ca.us/vgn/images/portal/cit\\_609/9441580Zregs-wp.pdf](http://www.co.sanmateo.ca.us/vgn/images/portal/cit_609/9441580Zregs-wp.pdf)
3. San Mateo County Zoning Maps  
[http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/smc\\_zoning.pdf](http://planning.smcgov.org/sites/planning.smcgov.org/files/documents/files/smc_zoning.pdf)

**III. AIR QUALITY**

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

**Would the project:**

**III(a) Conflict with or obstruct implementation of the applicable air quality plan?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**III(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**III(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 1 through 7). Ambient air quality standards for criteria pollutants have been established by both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB). The EPA sets national standards for six criteria pollutants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. The EPA also oversees state air quality programs to meet these standards. The ARB makes state area designations for ten criteria pollutants: ozone, suspended particulate matter (PM10), fine suspended particulate matter (PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles. These standards represent levels of air quality considered to be safe with an adequate margin of safety to protect public health and safety. They are designed to protect “sensitive receptors,” those people who are most susceptible to further respiratory stress, such as asthmatics, the elderly, very young children, people already weakened by disease or illness, and people who are engaged in strenuous work or exercise. At a local and regional level, the Bay Area Air Quality Management District (BAAQMD) regulates and monitors levels of air pollutants in the San Francisco Bay Area Basin (Bay Area) and the Bay Area’s attainment status.

Project

The project is located in a 4,711-acre preserve approximately 435 feet above mean sea level, and about 5.3 miles east of Half Moon Bay, San Mateo County, California. The prevailing winds are from the west and average from 5 to 25 mph.

Due to the anticipated short construction period of four months, the proposed control measures to be implemented, the projected low emissions generated by the bridge replacement, and the low amount of dust generated by the new bridge, the project’s construction and operations emissions are not anticipated to conflict with or obstruct implementation of the applicable air quality plan or produce levels of emissions that violate any air quality standard or contribute substantially to an existing or projected air quality violation. The project is not expected to result in a cumulatively considerable net increase of any

criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

### Construction

The nature of particulates is that larger, coarser material settles out quickly and closer to the emission source whereas smaller particulates are in suspension for a longer period of time and are able to travel further. Due to the dense vegetative buffer and the discrete, small-scale area of the approximately 0.08 acre bridge construction zone, any potential dust emissions created by the project's construction activities would tend to remain more localized and limited to the short-term, four to five month construction period for each project component.

Construction-related earthmoving activities that will occur primarily during the summer and fall, when increased use of wood burning stoves and fireplaces begin to occur, cool temperatures, low wind speeds, low inversion layers, and high humidity favor the buildup of PM levels. The control measures listed below from the BAAQMD CEQA Guidelines will be implemented during construction to minimize PM emissions. Mobile source control measures related to ozone precursor emissions will include limiting idling time for diesel powered construction equipment and limiting hours of operation for construction equipment.

#### *Measures Based on Basic and Enhanced Control Measures for Construction Emissions of PM10 from BAAQMD 1999 CEQA Guidelines:*

- Water all active construction areas at least twice daily where needed, based on site and ambient conditions, to reduce dust emissions.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites where needed, based on site and ambient conditions, to reduce dust emissions.
- Sweep daily all paved access roads, parking areas and staging areas at construction sites if visible soil material is accumulating on surfaces.
- Sweep streets daily if visible soil material is carried onto adjacent public streets.
- Enclose, cover, water daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.

### Modeling

Estimates for the bridge construction and operational emissions (pounds per day) were prepared using the Sacramento Metropolitan Air Quality Management District (SMAQMD)'s Roadway Construction Emissions Model, Version 5.2, prepared by Jones & Stokes under the financial support and direction of SMAQMD.

The estimated emissions for grading are below BAAQMD's thresholds of significance for ROG, NO<sub>x</sub>, and PM<sub>10</sub>. Under the model, construction emissions from for ROG, NO<sub>x</sub>, and PM<sub>10</sub> were each found to be in the range of 10 to 30 pounds per day, well below 54, 54, and 82 pounds per day respectively, BAAQMD's recommended thresholds of significance for these pollutants. Levels of CO emissions were

estimated to be below BAAQMD’s threshold of significance, and generation of SO<sub>2</sub> and lead emissions is not anticipated.

Operations

The existing bridge is currently suitable for public recreation, as visitors are not permitted to drive into the Preserve (see District Ordinance 96-1) and will continue serving the existing uses of the visitors at the project site, which are primarily hikers, bikers, and equestrians. Ranger patrol and resource management vehicles also use the Preserve. Replacement of the existing bridge with a new bridge will have no affect on visitor use of the Preserve. The Preserve is currently accessed by vehicle for District patrol, natural resource management, and emergency response for medical, fire, and law enforcement activities. The proposed bridge will open areas of the preserve that were previously accessed by District vehicles. Access to these areas will not, however, increase the frequency or duration of District patrol (the most common vehicle trip), but rather provide greater circulation for Patrol and points of contract for patrol staff. Vehicles will be less likely to turn around part way through the Preserve and doubleback, but will instead have the option of circulating through the Preserve.

Due to the minimal footprint of the new bridge, it is not anticipated to conflict with applicable air quality plans, regulations, or programs. In addition, the project’s operations are not expected to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**III(d) Expose sensitive receptors to substantial pollutant concentrations?**

**Explanation:** (Sources: 3, 5, 8). According to the BAAQMD, sensitive receptor groups include people who are most susceptible to further respiratory stress, such as asthmatics, the elderly, very young children, people already weakened by disease or illness, and people who are engaged in strenuous work or exercise. Such receptor groups are particularly vulnerable to the harmful effects of air pollutants. The ARB has indicated that a correlation has been found between the proximity of sensitive land uses (residences, schools, day care centers, playgrounds, or medical facilities) to specific air pollution sources (freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).

Due to the projected short construction period of four to five months and the limited vehicle trips generated by the project, it is expected that the project will not expose sensitive receptors or sensitive land uses to substantial pollutant concentrations.

Individuals who are visiting the Preserve for recreation and exercise may be considered at a higher risk of suffering adverse health effects from the inhalation of minute dust particles classified as particulate matter, which are small enough to be inhaled into the deepest part of the lungs.

The project area will include a 10’ wide bypass trail for Preserve users along the southern edge of the project area. The majority of users access the Preserve during the late afternoon on weekdays and all day on weekends and will therefore largely avoid the localized effects of construction activities. The adjacent parking lot has six parking spaces and another six roadside parking pullouts are often utilized by the



public during busy periods. For this reason, carpooling to the site is frequent. Assuming all spots are occupied and all cars contain two people, a likely maximum of twenty-four users may walk around the construction site twice in a given outing.

The construction requires a minor amount of grading. Because the new bridge location makes use of existing roads and minimizes the amount of vegetation disturbance, localized levels of dust are anticipated to be minimal. A 60’ stretch of ‘road’ needs to be constructed between Purisima Creek Trail and the proposed southern bridge abutment and 10’ of road from the north abutment to the adjacent road. 50’ of the new road will be constructed over previously disturbed soils. The revegetation and replanting of the existing bridge location will exceed the area disturbed by the new construction footprint.

Dust emissions from construction activities can also affect properties adjacent to project sites. The nature of particulates is that larger, coarser material settles out quickly and closer to the emission source whereas smaller particulates are in suspension for a longer period of time and are able to travel further. However, due to the vegetative buffer surrounding the construction zones, any potential dust emissions created by the project’s construction activities would tend to remain more localized and limited to the short-term, four to five month construction period.

The closest building to the project site is ~700 feet to the west at 3600 Higgins Canyon Road and is at a lower elevation than the project site, is well screened by vegetation on the project site and on their property. Purisima Creek takes a sharp turn from its east-west flow in the project area to a southern direction between the project site and the closest building. The variations in topography and landform that guide the creek also obscure the closest building to the project site. The second closet building is located over 1/4 mile away from the project and with the dense, vegetated buffer and varied topography should not be significantly impacted by the construction activities.

To address emissions from construction activities, control measures as listed above under III(a-c) from the BAAQMD CEQA Guidelines will be implemented during construction to minimize PM emissions the construction. Examples of control measures include watering active construction areas, limiting traffic speeds on unpaved roads, and limiting grading and excavating activity during periods of high wind gusts. In addition, mobile source control measures related to ozone precursor emissions will include limiting idling time for diesel powered construction equipment and limiting hours of operation for construction equipment. Thus, the project is not expected to have a significant construction impact on the exposure of sensitive receptors to substantial pollutant concentrations.

The project’s operational impact to sensitive receptors is expected to be insignificant as well due to the projected low emissions generated by the replacement bridge and the low amount of dust generated by the roads as they approach the new bridge location. The project is not expected to have a significant operational impact on the exposure of sensitive receptors to substantial pollutant concentrations.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**III(e) Create objectionable odors affecting a substantial number of people?**

**Explanation:** The bridge primarily provides for low-intensity, non-motorized recreational uses of the Preserve by the public. These uses do not emit objectionable odors, and would not contribute to a



significant impact. In addition, as described above in III(a-c), due to the small-scale nature of the project area and projected low emissions generated, the bridge itself is also not expected to create any objectionable odors affecting a substantial number of people.

In addition, construction activities for demolishing the existing bridge and constructing a new bridge will be localized and limited to a short-term, four month construction period. As described in III(d), public access to the construction site largely occurs outside of the weekday construction hours. No picnic tables or other recreational facilities that encourage prolonged visitation in the project area exist.

#### **Air Quality Section Sources:**

1. Midpeninsula Regional Open Space District. *Regulations for Use of Midpeninsula Regional Open Space District Lands*. Adopted by Ordinance No. 93-1, July 28, 1993. Last Revised and Adopted by Ordinance No. 04-01, August 25, 2004
2. U.S. EPA. *National Ambient Air Quality Standards (NAAQS)*. Posted on <http://www.epa.gov/air/criteria.html>. Last updated March 28, 2008.
3. California Environmental Protection Agency and California Air Resource Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005
4. Bay Area Air Quality Management District. *BAAQMD CEQA Guidelines*. May 2012
5. Bay Area Air Quality Management District. *Bay Area 2005 Ozone Strategy*. Final adopted January 4, 2006.
6. Bay Area Air Quality Management District. *Particulate Matter Implementation Schedule*. November 9, 2005.
7. Bay Area Air Quality Management District. *Ambient Air Quality Standards & Bay Area Attainment Status*. [http://hank.baaqmd.gov/pln/air\\_quality/ambient\\_air\\_quality.htm](http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm). Accessed September, 2014.

#### **IV. BIOLOGICAL RESOURCES**

**Would the project:**

**IV(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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Sources: 1 through 17). A number of special-status species surveys and resource inventory projects have been completed within the Preserve. In 2011, Coast Range Biological conducted a thorough Biological Assessment of the project site in order to identify special status species and other sensitive biological resources such as riparian resources and wetlands, and to identify mitigation measures to avoid potential impacts, if warranted. District staff revisited the project site in 2013 and 2014 to evaluate any changes. There were no changes observed from the 2011 Biological Assessment.

The project is located in the following habitats: riparian woodland, coastal redwood, red alder forest, and Developed/Ruderal. The project will not have a significant impact on special status species through significant habitat removal, landscape alteration, or food chain modification. Potential adverse impacts to sensitive species, as well as sensitive habitats, would be generally limited to temporary construction impacts. All potential adverse impacts can be either avoided or reduced to insignificant levels through incorporation of the mitigation measures listed in this section.

##### **1. SPECIAL STATUS PLANT SPECIES**

A search of U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS) special status plant species lists indicated no known special status plant occurrences in the project area. The nearest recorded special status plant species are: Choris' popcorn-flower (*Plagiobothrys chorisianus* var. *chorisianus*) two miles north of the project site; Santa Cruz Manzanita (*Arctostaphylos andersonii*) 1.8 miles northeast; and Kings Mountain Manzanita 1.8 northeast. No individuals of Choris' popcorn-flower (*Plagiobothrys chorisianus* var. *chorisianus*) or Kings Mountain Manzanita (*Arctostaphylos regis-montana*) shrubs were observed at the site.

Twenty-four (24) special-status plant species have the potential to occur in the project area. None were found at the project site. The presence of Dudley's lousewort (*Pedicularis dudleyi*) could not be determined due to the timing of the surveys and has a moderate potential to occur in the project area.

**Impact BIO-1:**

Ground disturbance associated with the project could potentially result in adverse impacts to the above special-status species, if they occur within the project area.

**Mitigation incorporated into project for impacts to special-status plants species:**

**Mitigation Measure BIO-1.** Focused plant surveys for each species listed in the Biological Assessment shall be conducted in the spring prior to initial ground breaking to determine the species' presence or absence in areas that would be disturbed by construction and earth movement activities. If any special-status plant species are found, areas supporting the species shall be avoided, where feasible. Work shall not start if a special-status plant specimen and its required habitat conditions are found within the impact area while a plan detailing on-site mitigation is developed based on consultation with CDFW. Construction work may start once such plan has been approved by CDFW.

**Implementation:** Qualified District Natural Resources Staff or Qualified Consulting Biologist.

**Timing:** In the spring prior to construction of the project.

**Monitoring:** District staff

**2. SPECIAL STATUS ANIMAL SPECIES**

Special status animal species that have the potential to occur within the project area include California red-legged frog (*Rana draytonii*), olive-sided flycatcher (*Contopus cooperi*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), white-tailed kite (*Elanus leucurus*), yellow warbler (*Dendroica petechia brewsteri*), marbled murrelet (*Brachyramphus marmoratus*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus borealis*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), hoary bat (*Lasiurus cinereus*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), and monarch butterfly (*Danaus plexippus*). Other sensitive animal species that could occur within the project area include a variety of migratory bird species protected under the Migratory Bird Treaty Act.

**Central California Coast Steelhead**

Anadromous steelhead (*Oncorhynchus mykiss irideus*) does not occur in the project area; a 30 foot waterfall at the river mouth is a complete barrier to passage. The nearest occurrence is approximately 1.8 miles north in Mills Creek. Purisima Creek is home to resident rainbow trout, however. Impacts to resident trout include potential increases in sediment, turbidity, and water temperatures through a change in canopy cover. The two alder trees proposed for removal cover a small area with their canopies and rise above the understory but below the overstory and therefore will create a less than significant impact to the stream temperatures. Replanting of the disturbed areas, as described in BIO-9, will restore canopy cover along with adjacent trees releasing into the remove mid-canopy area.

Prior to any in-stream construction activities, the Contractor under the supervision of a qualified expert will install a fish exclusion net at the upper extent of the project area, flush any resident trout

downstream, and install an exclusion net on the downstream end of the project area. No pools are present in the stream reach; the site is unlikely to contain any resident trout. The netting will be removed after the temporary crossing construction, installed during the temporary crossing removal, and removed upon completion.

Best practices to address the potential impacts related to sediment and turbidity are incorporated into the project design, will follow the recommendations of the geotechnical report, and will be reduced through the guidelines described in IX, Hydrology and Water Quality. **Less than significant impact.**

### **San Francisco dusky-footed woodrat**

The San Francisco dusky-footed woodrat is a State species of concern. Woodrats are small mammals that build nests made of sticks typically at the base of trees and shrubs. The species prefers forested habitat with a moderate canopy and brushy understory, particularly on the upper banks of riparian forests. The dusky-footed woodrat is known to feed on a variety of woody plants, fungi, flowers and seeds. Suitable habitat exists in the project site. Five woodrat nests were discovered in 2011, but have not been resurveyed since. The surveys need to be repeated immediately prior to construction to ensure validity after the passage of time.

#### **Impact BIO-2:**

Habitat for San Francisco dusky-footed woodrats in the project area could be disturbed by project activities or by vehicle or human access from temporary equipment and material staging, that may potentially result in the removal and loss of woodrat nests. The riparian vegetation along the southern approach of the proposed bridge will be removed during the construction and is suitable nesting and foraging habitat for the woodrat.

#### **Mitigation incorporated into project for impacts to San Francisco dusky-footed woodrat:**

**Mitigation Measure BIO-2.** The following avoidance measures for San Francisco dusky-footed woodrat will be implemented:

1. **Preconstruction Surveys.** A qualified biologist shall conduct San Francisco dusky-footed woodrat nest surveys prior in the February prior to initial ground breaking and just prior to groundbreaking to determine the presence or absence of nests in areas that would be disturbed by construction and earth movement activities. If feasible, disturbance of woodrat nests shall be avoided by staging construction-related equipment and materials away from known nest sites.

If during the survey, a woodrat nest is detected, the District will complete one of the following avoidance minimization measures. These measures are listed in order of priority, where the first measure is the preferred measure to be implemented as it provides the least amount of impact to the woodrat. If the first measure cannot be implemented due to extenuating site conditions, the second shall be implemented and so forth down the list.

- a. Any trail alignment, access road or staging area will be relocated to avoid the woodrat nest by at least 5 feet. Safety and/or silt fencing (for nests downslope) will be erected around all nests within 25 feet of the trail alignment, road or staging area to avoid impacts during

construction.

- b. For all woodrat nests that cannot be avoided by project activities (i.e. will require relocation), the CDFW should be consulted with one of the two following options:
  - i. If the nest appears inactive (e.g. no scat or fresh leaves and twigs), approval will be sought from CDFW to dismantle the nest and replace the lost resource by building an artificial nest. One artificial nest should be built for every one existing inactive nest that is dismantled.
  - ii. If the nest appears active, approval will be sought from CDFW to (1) trap the occupant(s) of the nest, (2) dismantle the nest, (3) construct a new artificial nest with the materials from the dismantled nest, and (4) release the occupant into the new artificial nest. The new nest should be placed no more than 20 feet from its original location and as far from the project footprints as necessary to be protected from construction activities.. Nests should only be moved in early morning during the non-breeding season (October through February). If trapping has occurred for three consecutive nights and no woodrats have been captured, the nest should be dismantled and a new nest constructed.

A CNDDDB form shall be filled out and submitted to CDFW for any San Francisco dusky-footed woodrats that are trapped. Once trapped, nests shall be torn down and rebuilt surrounding an inverted wooden planter (or similar structure) having at least one entrance and exit hole that is slightly buried into the ground to anchor. Any nest material encountered shall be placed within the nest structure during rebuilding. A small handful of seeds shall be placed within the relocated structure. Relocated nests are intended to provide a release site and opportunity for the woodrats to relocate to another nest (most woodrats average more than one nest and often do not remain with a relocated nest). Once nests are moved, any trapped woodrats should be released into the reconstructed nest during daylight hours so that they seek refuge in the reconstructed nests. In most instances it is expected that the animal will remain in the reconstructed nest until it has an opportunity to relocate to another nest site at night. Relocated nests are expected to eventually be re-colonized and should be monitored one year post construction using visual surveys to determine if a relocated nest has returned to use. A monitoring report should be submitted to CDFW to document use or non/use of relocated nests.

2. Employee and Contractor Education Program. The District will conduct an employee education program prior to the initiation of project activities. The program will consist of a brief presentation by persons knowledgeable in special status species biology and legislative protection to explain concerns to contractors and their employees. The program would include the following: a description of woodrat and their habitat needs; an explanation of the status of the woodrat and their protection under state law; and a list of measures being taken to reduce impacts to woodrat during project activities. If a woodrat nest is found on the project footprint, it is to be left alone and all operations should stop. Notify Project site lead and District Staff (if the site lead is a contractor) or notify District Natural Resources Program Manager if Project Lead is District Staff.
3. Daily Monitoring. During the construction phase of the project, a qualified biologist, District Natural Resources staff or a trained, on-site monitor will check the site in the morning every day before construction activities begin for the presence of woodrat or other wildlife present within

the work area. If a woodrat is found, the monitor shall have the authority to stop construction in the immediate area and immediately notify appropriate District Staff (Natural Resources Manager or designated staff). If the monitor is the District's Natural Resources Staff, or qualified biologist, they will have the authority to notify the CDFW for guidance on procedure. Subsequent recommendations made by the CDFW shall be followed. The monitor would not handle or try to relocate any special-status species.

4. **Speed Limit.** Vehicles shall not drive more than 5 miles per hour within the construction area if these species have been determined to be present. If any woodrat is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly checked underneath before they are moved to ensure that no woodrat is on the ground below the vehicle.

**Implementation:** Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.

**Timing:** The February prior, immediately prior to construction and during construction as specified

**Monitoring:** District staff

### **California red-legged frog**

California red-legged frog (CRLF) is a federally listed threatened species and California species of special concern that is known to occur in western San Mateo County. CRLFs are generally found along marshes, streams, ponds, and other permanent sources of water where dense scrubby vegetation such as willows, cattails, and bulrushes dominate, and water quality is good. Breeding sites occur along watercourses with pools that remain long enough for breeding (usually between late November and April depending on winter rains) and the development of larvae. Appropriate refugia for CRLF include small mammal burrows, downed logs or vegetation, or dense forest litter.

There are three documented occurrence of California red-legged frog (*Rana aurora draytonii*, CRLF) within three miles of the project area: 1.4-miles southwest of the project site, 1.5-miles south southwest, and 2.4-miles southeast, along Tunitas Creek Road in the Purisima Creek watershed (as seen in **Figure 9**). There are no other documented CRLF occurrences within the watershed, but there are numerous other documented CRLF occurrences within 5-miles of the project area. No suitable breeding habitat is present in the project area for CRLF, but Purisima Creek and associated Riparian Woodland provides suitable summer habitat for foraging and sheltering. At least one potential breeding pond is located 0.7 miles to the southwest. Though unlikely to be present at the project site, construction activities such as vegetation removal, grading, and dewatering could result in adverse impacts on this species.

Potential indirect impacts to CRLF, if present in this area, could include temporary increase in turbidity and downstream sedimentation during construction activities. However, the project includes water quality protection measures that reduce the potential for such impacts to a less than significant level. During the breeding season, upland migration from breeding habitat, though none is located near the project, through the construction area could result in adverse impacts to CRLF. Erosion control and water quality considerations are discussed further in Sections IX. Therefore, the project would avoid

direct and indirect impacts to California red-legged frogs.

Impacts BIO-3 and BIO-4:

CRLF utilize streams, riparian vegetation, and upland areas (during the winter). Given their potential presence in the project area, construction equipment could disturb or harm CRLF.

Mitigation Incorporated into project for impacts to California red-legged frog:

Mitigation Measure BIO-3: The following avoidance measures for California red-legged frogs will be implemented:

1. Pre-Construction Surveys for Special-Status Amphibians including California Red-Legged Frog (CRLF). Surveys for CRLF and other special-status amphibians shall be conducted before construction begins. In the unlikely event CRLF eggs or tadpoles are found, a 100-foot buffer shall be established around the location until juveniles disperse from the breeding site, as determined by a qualified biologist. If adults are present in the construction area, work shall be stopped until individuals are allowed to disperse on their own volition or the species is relocated by a qualified biologist with permission to handle CRLF. With these measures in place, the impact for CRLF would be reduced to a less than significant level.
2. Employee and Contractor Education Program. An employee and contractor education program shall be implemented to educate all construction personnel on CRLF identification and procedures should CRLF be observed in the project area. If a CRLF is found on the project footprint, it is to be left alone and all operations should stop. Notify Project site lead and District Staff (if the site lead is a contractor) or notify District Natural Resources Manager if Project Lead is District Staff.
3. Daily Monitoring. During the construction phase of the project, a qualified biologist, District Natural Resources staff or a trained, on-site monitor will check the site in the morning every day before construction activities begin for the presence of CRLF or other wildlife present within the work area. If a CRLF is found, the monitor shall have the authority to stop construction in the immediate area and immediately notify appropriate District Staff (Natural Resources Manager or designated staff). The monitor would not handle or try to relocate any special-status species.
4. Speed Limit. Vehicles shall not drive more than 5 miles per hour within the construction area if these species have been determined to be present. If any CRLF is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly checked underneath before they are moved to ensure that no CRLF is on the ground below the vehicle.

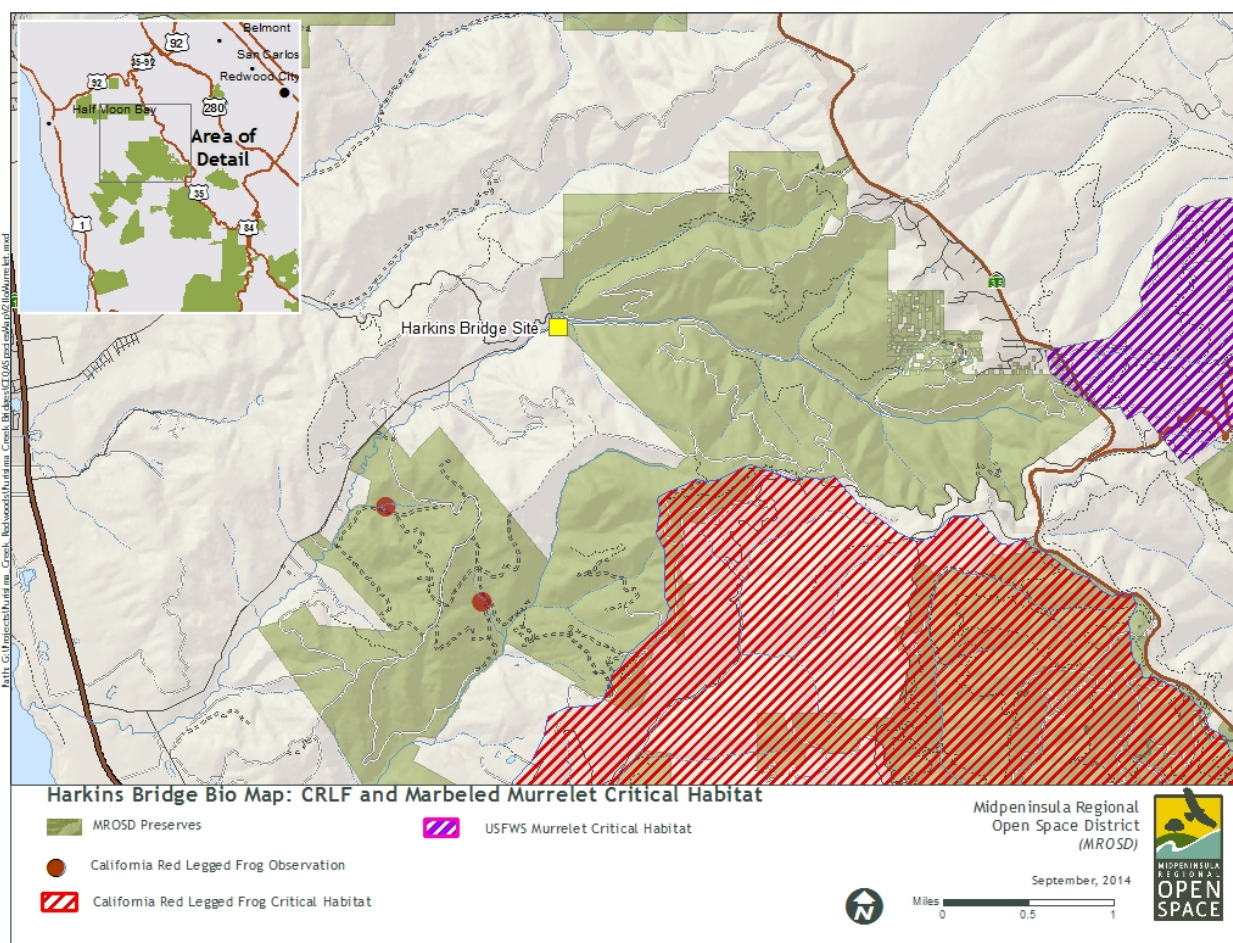
Mitigation Measure BIO-4: Project Compliance with All State and Federal Permits. The project may potentially affect a number of species that fall under the jurisdiction of CDFW, USFWS, and NMFS. Each of these permits would be reviewed by agency personal experts in conservation of these sensitive species. The federal permits granted under Section 404 of the Clean Water Act would be required for the construction of the project. The State of California would also have to issue a

streambed alteration and agreement for the project. The project shall attain and comply with all state and federal permits for the project. Implementation of this mitigation would reduce the impacts on candidate, sensitive, or special-status species to less than significant level.

**Implementation:** Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.

**Timing:** Prior to construction and during construction as specified

**Monitoring:** District staff



**Figure 9**

**Marbled Murrelet**

The marbled murrelet, a federally listed threatened species, is dependent on old growth coniferous forests for nesting and near-shore marine waters for foraging. In the Santa Cruz Mountains, and redwood forests in general, most murrelet nests occur in large branches, or structures associated with



large branches of old growth trees. USFWS describes individual marbled murrelet nest trees as large trees, generally more than 32 inches in diameter at breast height (dbh) with the presence of potential nest platforms or deformities sufficient in size to support adult murrelets. In California, murrelets begin nesting from early April to early July. Adults usually fly from ocean feeding areas to nest sites at dusk and dawn to feed their young.

For suitable habitat to occur, nest trees (platform trees) must be present and need to be surrounded by other large trees (a nest tree cannot be an isolated tree). The surrounding trees need not be platform trees, but serve more to provide shelter to the platform tree.

A marbled murrelet habitat assessment was prepared in March 2007, **Figure 10**. Several observations of marbled murrelet have been recorded in the Preserve. Radar surveys and protocol level surveys have detected murrelet 1/2 mile upstream (east) from the project site. The nearest potentially suitable habitat (older stands with structure) is 3/4 mile away and occupied habitat was documented 1-mile upstream. When the District acquired the property, few old growth trees are known to remain in the Preserve. It is likely, however, the murrelets fly over the project site. No suitable habitat exists within the project site for the marbled murrelet: the open canopy and small diameter redwood trees do not meet the nesting requirements of the marbled murrelet. Due to the short-term nature of the project, the distance to potential suitable habitat, the minimal equipment involved in project construction, and avoiding work during murrelet foraging hours, no indirect adverse noise-related impacts to nesting marbled murrelets would occur as a result of the project.

The project avoids tree removal to the extent practicable by constructing the bridge in a previously disturbed site. Nonetheless, the project will require the removal of two alder trees, approximately 12" and 20" inches diameter, neither of which is suitable for a nest.

**Impact BIO-5:**

Construction noise during the breeding season has the potential to impact murrelet overhead flight patterns and foraging behavior, though these potential impacts to murrelet flight patterns overhead are not well researched.

Mitigations Incorporated into project for impacts to Marbled murrelet:

**Mitigation Measure BIO-5.** If noise generating construction activity takes place during the breeding season (April 1 to September 15), construction activity shall be restricted between 1.5 hours after sunrise to 1.5 hours before sunset to minimize disturbance of potential nesting murrelets using forest habitat as a travel corridor between inland nesting and coastal habitat.

**Implementation:** Contractor and District Staff

**Timing:** During construction

**Monitoring:** District Staff

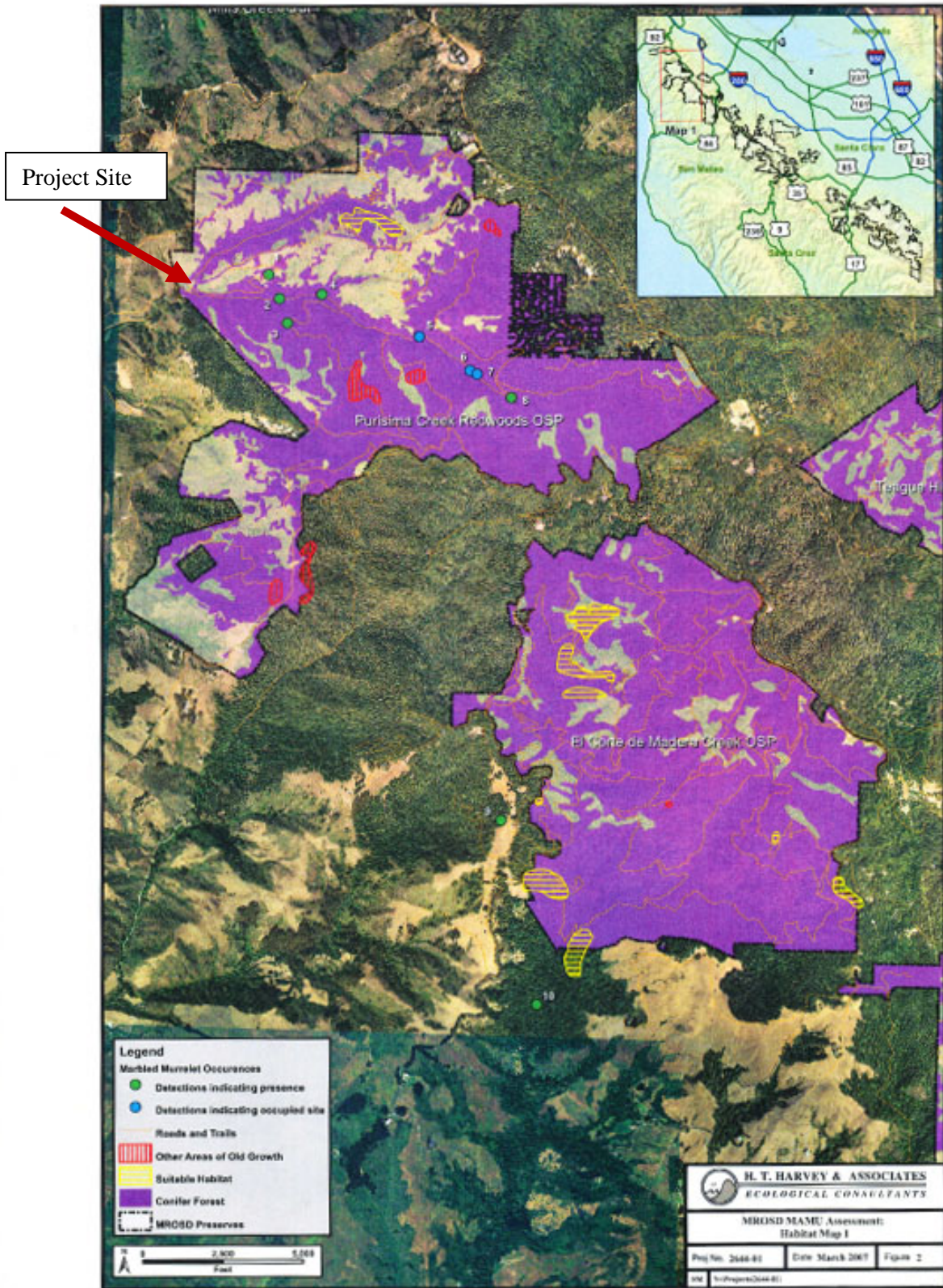


Figure 10

### **Cooper's hawk and sharp-shinned hawk**

The Cooper's hawk and sharp-shinned hawk are both State species of special concern that are considered rare breeders in the Santa Cruz Mountains. Cooper's hawks prefer forested habitats in mountainous regions, but also use lowland riparian woodlands and forage in both dense cover and open habitats. In California, nests are usually constructed in oak trees. The local breeding season spans from March through July. Sharp-shinned hawks prey mostly on small songbirds and breed from April through July. Potentially suitable breeding habitat for sharp-shinned hawks occurs over much of the forested mountainous terrain of the Santa Cruz Mountains. Nesting sharp-shinned hawks typically inhabit dense coniferous forests adjacent to foraging habitat. Densely foliated conifers that are surrounded by dense canopy cover are considered prime nesting trees.

### **Potential Impacts to Cooper's and sharp-shinned hawks**

The project area may offer potential nesting and migrating habitat for Cooper's and sharp-shinned hawks. Temporary construction noise may create a disturbance to nesting hawks and potentially result in nest abandonment and mortality of young. Removal of trees containing hawk nests may potentially result in the loss of an active nest and mortality of young.

The four to five month construction period for the project component would occur between the months of April and January and will partially overlap with raptor breeding season (April through August). See BIO-7 for Mitigations.

### **Migratory Bird Species and Nesting Species**

The Migratory Bird Treaty Act (MBTA), amended in 1992, includes all migratory bird species. MBTA generally prohibits the taking, killing, possession of, or harm to migratory birds species listed in Title 50 code of federal regulation (CFR) Section 10.13. Section 3513 of the California Fish and Wildlife Code supports the MTBA. Nesting habitat for different species may occur in the project area, including olive-sided flycatcher (*Contopus cooperi*), saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), white-tailed kite (*Elanus leucurus*), and yellow warbler (*Dendroica petechia brewsteri*). Cavity nesters such as acorn woodpeckers (*Melanerpes formicivorus*), pygmy nuthatches (*Sitta pygmaea*) and chestnut-backed chickadees (*Parus rufescens*) may occur in snags and debris left from past logging operations.

Impact BIO-6 Removal of trees, shrubs or snags suitable for avian nesting (trees and snags greater than 6 inches dbh or woody shrubs greater than 8 feet tall) within the project area during the breeding season (February 1 to August 1) could destroy active nest sites or stress nesting adults and result in nest abandonment or failure. Two alder trees, greater than 6 inches DBH, are required to be removed during the final phase of construction.

### **Mitigation incorporated into project for raptors and other nesting species:**

Mitigation Measure BIO-6. A qualified biologist will conduct pre-construction nesting bird surveys within 30 days of the onset construction and survey all trees and snags greater than 6 inches DBH and all shrubs taller than 8 feet proposed for removal. If bird nests are observed, an appropriate buffer zone will be established around all active nests to protect nesting adults and their young from construction disturbance. Removal of trees, snags, or woody shrubs with identified avian nests shall be postponed until all young are fledged and tree

**Implementation:** Qualified Consulting Biologist

**Timing:** Prior to construction  
**Monitoring:** District staff

### **Bats**

Pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus borealis*), fringed myotis (*Myotis thysanodes*), long-legged myotis (*Myotis volans*), and hoary bat (*Lasiurus cinereus*) have the potential to occur in the project area. Mature trees and redwood ‘goosepen’ hollows may provide roosting habitat. Bridges are also potential roosting sites for bats. The underside of the existing bridge has been inspected by District staff several times in the past two years and no bats were present. Bats forage in riparian vegetation for insects.

### **Impacts BIO-7:**

Removal of the two alder trees and riparian vegetation has the potential to remove roosting habitat and foraging habitat for pallid bats.

Mitigation Incorporated into the project for impacts to pallid bats:

**Mitigation Measure BIO-7:** If mature trees or snags will be removed during the bat breeding season (April 1 through August 31), a qualified bat biologist shall inspect trees and the bridge for potential roost sites. If no potential roost sites are found, no additional mitigation is necessary.

Surveys will consist of a daytime pedestrian survey looking for evidence of bat use (e.g., guano) and/or an evening emergency survey to note the presence or absence of bats. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts, but are not required.

If roosts of pallid bats are determined to be present and must be removed, the bats will be excluded from the roosting site before the bridge is removed. A program addressing compensation, exclusion methods, and roost removal procedures will be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) will be replaced in consultation with CDFW and may include construction and installation of bat boxes suitable to the bat species and colony size that was excluded from the original roosting site. Roost replacement will be implemented before bats are excluded from the original roost sites. The District has successfully constructed bat boxes elsewhere that have subsequently been occupied by bats. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the bridge may be removed.

**Implementation:** Qualified Consulting Biologist

**Timing:** Prior to construction

**Monitoring:** District staff

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

**IV(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 US Fish and Wildlife Service?**

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

**Explanation:** (Source: 1, 5, 21, 22). Special-status natural communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection, e.g. critical habitat designated by the USFWS under the Endangered Species Act, §404 of the Clean Water Act, and/or the CDFW §1600 *et seq.* of the California Fish and Wildlife Code. The California Natural Diversity Database has also designated a number of natural communities as rare. Riparian habitats are considered to be sensitive and declining resources by CDFW and the USFWS. The San Mateo County Local Coastal Plan also discusses sensitive habitat.

Purisima Creek and the associated vegetation community within the project site is considered riparian habitat under San Mateo County’s Local Coastal Plan. The project’s erosion control measures allow the project to avoid adverse erosion and water quality degradation impacts to riparian areas as a result of ground-disturbing construction activities. Refer to Sections VI(b) and VIII(c) for further discussion. No net loss of riparian habitat will occur as a result of this project; replanting the existing bridge site provides a 2:1 area to replant.

Impact BIO-8

Removal of riparian vegetation around the proposed bridge will have an adverse impact on riparian habitat.

Mitigation incorporated into project for riparian habitat:

Mitigation Measure BIO-8:

Replant appropriate vegetation at a 2:1 ratio in the project area, as seen in Figure 5. This would include planting within the rock slope protection placed on the channel banks. Planting within the site shall occur in three general planting zones: active channel, lower shaded riparian, upper riparian/upland, and direct seeding (upland). Active channel is the zone nearest to the channel flow and represents the planting that shall be completed around the pools, habitat structures, and riffle edges. This zone is comprised of willows. The second zone, lower shade riparian, is comprised of riparian shrubs like dogwood, coffeeberry, and currant. The third zone is upper riparian/upland that is largely composed of trees, such as red alders and redwoods, and woody shrubs. The highest elevation zone shall consist of a native erosion control mix.

**Implementation:** Contractor and District Staff

**Timing:** During construction

**Monitoring:** District Staff

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**IV(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**Explanation:** (Sources: 1, 10). The Clean Water Act is a broad statute with the goal of maintaining and restoring waters of the United States. Among many provisions for the control of water pollution, Section 404 of the Act requires permits for filling of or discharge of dredged materials into wetlands and waters of the United States.

Impact BIO-9:

The project includes removal of the existing railcar bridge, a temporary crossing at the existing bridge site, and construction of a new bridge 100’ upstream. Installation of these structures may result in minimal fill, less than .01 acres, entering jurisdictional waters. However, given the minor extent of disturbance and the abundance of wetlands within the larger project area, the project would not have a substantial adverse impact on the federally protected wetland resources of the Preserve. Consequently, the project is not expected to result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act.

Mitigation Incorporated into project for impacts to federally protected wetlands:

Mitigation Measure BIO-9:

To mitigate for impacts on federally protected wetlands, Mitigation Measure BIO-4 shall be implemented. This mitigation measure would reduce impacts to wetland habitats to less than significant by requiring the area to be revegetated with native grasses and other herbaceous perennial wetland species.

**Implementation:** Contractor and District Staff

**Timing:** During construction

**Monitoring:** District Staff



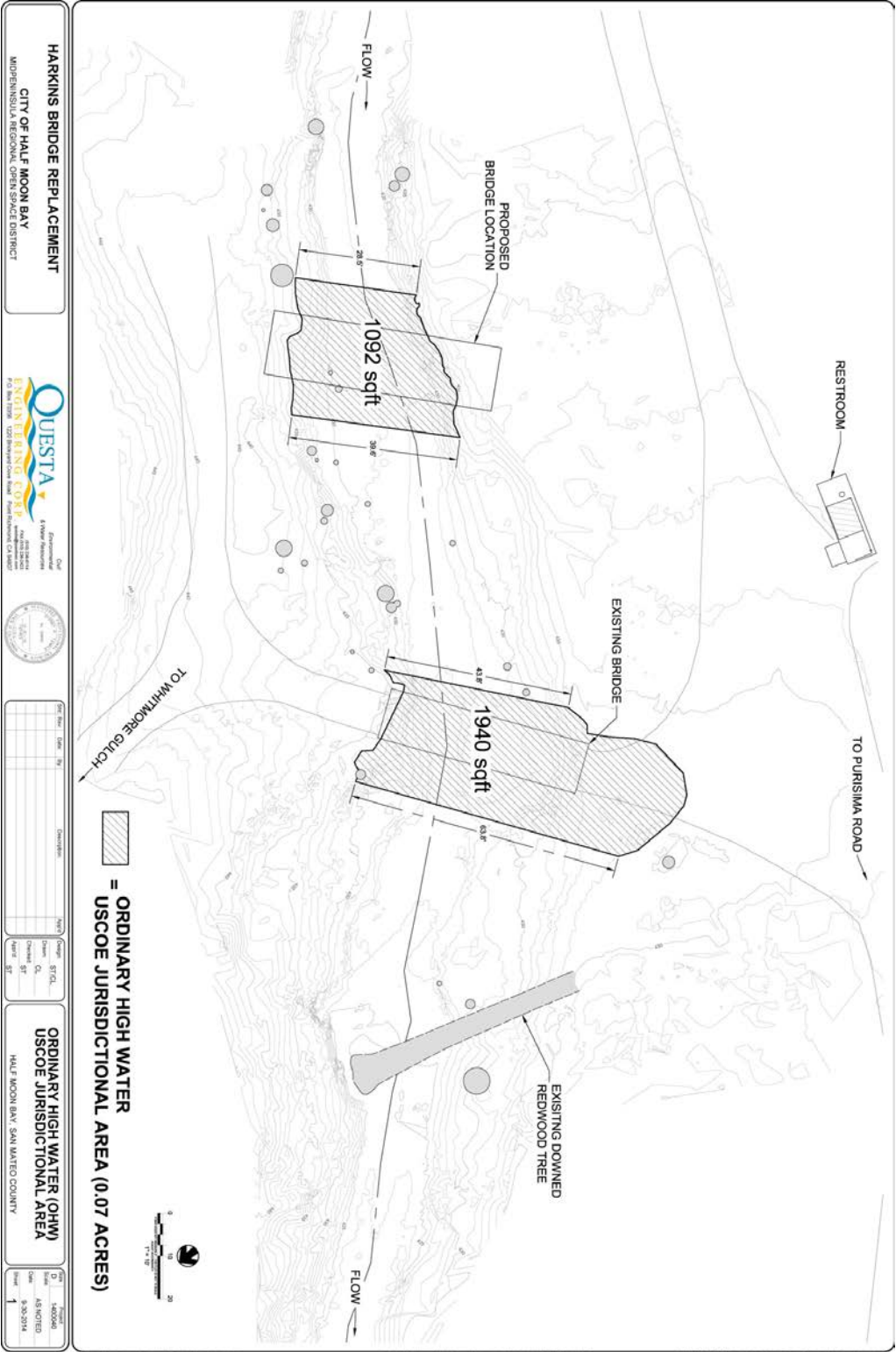


Figure 11

**IV(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?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 1). Resident trout will need to be excluded from the project area as the temporary culvert crossing is constructed and then deconstructed. There would be a temporary loss of fish movement. The duration of construction and deconstruction is estimated to be less than one week, making the interference a less than significant impact.

**IV(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 13, 14, 15) The project area is located in a densely forested setting within the Timberland Preserve-Coastal Zone (TPZ-CZ), which is exempt from permitting requirements for tree removal under San Mateo County’s Significant Tree Ordinance. Removal of non-significant trees within the Timberland Preserve Zone does not require a permit, unless the trees are located within 100 feet of a County or State scenic road or highway. The aesthetic impact of the project as it pertains to a County scenic highway is addressed in Section I. The project avoids tree removal to the extent practicable. The project will require the removal of two trees, 12” and 20” dbh red alders in the footprint of the proposed bridge, as seen in Figure 3. As discussed in section I(b), the two trees to be removed will be replaced per the County’s Zoning Ordinance. Therefore, tree removal will remain consistent with local tree ordinances. Since the project includes tree protection and revegetation of disturbed areas, the project would remain consistent with local ordinances protecting other biological resources and has a less than significant impact.

**IV(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?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** (Source: 16, 17). No Habitat Conservation Plan or Natural Community Conservation Plan applies to the project area.



**Biological Resources Section Sources:**

1. Coast Range Biological. *Biotic Assessment and Riparian Delineation*. January , 2011.
2. Federal Emergency Management Agency, Region IX. Sandro Amaglio, Regional Environmental Officer. *Letter to Wayne White, Field Supervisor, U.S. Fish and Wildlife Service*. April 2001.
3. U.S. Fish and Wildlife Service. Jan Knight, Chief, Endangered Species Division. *Letter to Sandro Amaglio, Regional Environmental Officer, Federal Emergency Management Agency*. May 14, 2001.
4. Federal Emergency Management Agency, Region IX. *Supplemental Environmental Assessment: FEMA-1203-DR-CA, Virginia Mill Trail Project*. June 21, 2001.
5. Seymour, R. and M. Westphal. *Results of a one-year survey for amphibians on lands managed by the Mid-peninsula Regional Open Space District in the Santa Cruz Mountains, California*. Report submitted to Midpeninsula Regional Open Space District. 2000.
6. Calflora website. <http://www.calflora.org/>. November 26, 2002.
7. California Native Plant Society. *Inventory of Rare and Endangered Vascular Plants of California*. Special Publications Number 1, Fifth Edition. February 1994.
8. Sander, S. California Department of Fish and Game and California Interagency Wildlife Task Group. *California Wildlife Habitat Relationship System*. <http://www.dfg.ca.gov/whdab/B240.html>. November 26, 2002.
9. San Mateo County Ordinance Code. *Section 12000: Regulation of Removal of Significant Trees*. June 11, 1990.
10. San Mateo County Ordinance Code. *Section 11000: Regulation of Removal of Heritage Trees*. April 5, 1977.
11. San Mateo County Department of Public Works. *Endangered Species and Watershed Protection Program, Volume 1: Maintenance Standards*. February 20, 2001.
12. California Department of Fish and Game, Habitat Conservation Planning Branch. <http://www.dfg.ca.gov/hcpb/conproj/conproj.shtml>. November 4, 2002.
13. California Department of Fish and Game, Natural Community Conservation Planning Program. <http://www.dfg.ca.gov/nccp/>. November 4, 2002.
14. Keith L. Bildstein and Ken Meyer. *Sharp-shinned Hawk (Accipiter striatus)*. In *The Birds of North America, No. 482* (A. Poole and F. Gill, Eds.). 2000.
15. R.N. Rosenfield and J. Bielefeldt. *Cooper's Hawk (Accipiter cooperii)*. In *The Birds of North America, No. 75* (A. Poole and F. Gill, Eds.). 1993.
16. California Department of Forestry and Fire Protection. *California Forest Practice Rules*. January 2007.
17. H.T. Harvey and Associates, *California Bat Mitigation Techniques, Solutions, and Effectiveness*. December 2004.

**V. CULTURAL/HISTORIC/ARCHAEOLOGICAL RESOURCES**

**Would the project:**

**V(a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

**Explanation:** (Source: 1 through 4). No above-grade historic structures are present within the project area. The project area is a disturbed site and had been subject to past logging activities as early as 1850 and continuing through the 1970s and prior construction of the existing bridge, restrooms and other Preserve amenities in the early 1980s). A literature review and records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University conducted in September 2014 indicates that the project area contains no recorded Native American or historic cultural resources. A surface inventory of the project area found no surface indications of either significant prehistoric or historic cultural materials.

Subsurface excavation will be limited to removing the redwood crib logs that support the existing bridge, minor grading and replanting the area of the existing bridge, and drilling piers to support the new bridge. The existing bridge location was heavily disturbed during its construction in the mid 1970s.

**Impacts CULT-1 and CULT-2:**

Ground disturbance associated with construction in an area with the potential for unknown cultural and archaeological resources may potentially result in impacts to unknown historic, pre-historic or paleontological resources.

**Mitigations incorporated into project for impacts to cultural resources:**

**Mitigation Measure CULT-1:**

Prior to the initiation of construction or ground disturbing activities, District staff or archaeological monitor shall conduct a meeting to train all construction personnel of the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources.

**Implementation:** District staff

**Timing:** During a pre-construction field meeting with Contractors and Sub-Contractors

**Monitoring:** District Staff shall require contractor and subcontractors to have each employee attend training session and sign training materials indicating attendance at education program.

**Mitigation Measure CULT-2:**

If there is an unanticipated discovery of archaeological deposits or remains during project implementation, construction crews shall stop all work within 100 feet of the discovery and notify District staff. A qualified archaeologist will assess the discovery, complete an archaeological evaluation and provide recommendations.

**Implementation:** District staff

**Timing:** During construction

**Monitoring:** Construction contractor and District staff

With the application of the mitigations above, this impact would be less than significant with mitigations incorporated

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>V(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 1 through 4). The records search performed by NWIC of the California Historical Resources Information System at Sonoma State University did not identify any archaeological or historic resources in the project area. However, there is a possibility that Native Americans may have inhabited the project area prehistorically or at the time of Spanish entry into the Bay region. This region of the Santa Cruz mountains was also developed for timber harvesting and residential purposes during the 19<sup>th</sup> and 20<sup>th</sup> centuries, and it is possible that there are unknown archaeological remains from this historic period.

Basin Research Associates conducted field surveys to the construction area for investigations of potential cultural resources. No surface artifacts indicative of significant archaeological resources were observed. The site was used in the 1970s to stage heavy equipment for logging operations. A pit toilet was constructed in the project site in 1980s. Therefore, the potential for discovery of intact archaeological deposits during construction of the staging area location is low.

Impact CULT-3:

Since the construction involves ground disturbance in an area with the potential of unknown cultural resources, the project may potentially disturb or unearth archaeological resources. Archeological resources include buried features such as stone or adobe foundations or walls, wooden remains with square nails, other historic artifacts, chert or obsidian flakes, projectile points, mortars and pestles, dark friable soil containing shell and bone dietary debris, and heat-affected rock.

Mitigation incorporated into project for archaeological resources:

Mitigation Measure CULT-3 Implementation of the following measures will reduce potential impacts to cultural and historical resources, including buried and unknown archeological, paleontological, and human remains, to a less than significant level:

- If cultural and/or historical resources are encountered during construction, every reasonable effort shall be made to avoid the resources. Work shall stop within 50 feet of the find until a qualified cultural and/or historical resources expert can assess the significance of the find.
- A reasonable effort will be made by the District to avoid or minimize harm to the discovery until significance is determined and an appropriate treatment can be identified and implemented. Methods to protect finds include fencing and covering remains with protective material such as culturally sterile soil or plywood.
- If vandalism is a threat, 24-hour security shall be provided.
- Construction operations outside of the find location can continue during the significance evaluation period and while mitigation for cultural and/or historical resources is being carried out, preferably with a qualified cultural and/or historical resources expert monitoring any subsurface excavations.
- If a resource cannot be avoided, a qualified cultural and/or historical resources expert will develop an appropriate Action Plan for treatment to minimize or mitigate the adverse effects.

The District will not proceed with construction activities within 100 feet of the find until the Action Plan has been reviewed and approved.

- The treatment effort required to mitigate the inadvertent exposure of significant cultural and/or historical resources will be guided by a research design appropriate to the discovery and potential research data inherent in the resource in association with suitable field techniques and analytical strategies. The recovery effort will be detailed in a professional report in accordance with current professional standards. Any non-grave associated artifacts will be curated with an appropriate repository.

Project construction documents shall include a requirement that project personnel shall not collect cultural and/or historical resources encountered during construction. This measure is consistent with federal guideline 36 CFR 800.13(a) for invoking unanticipated discoveries.

**Implementation:** District staff  
**Timing:** During construction  
**Monitoring:** Construction contractor and District staff

With the application of the mitigation above, this impact would be less than significant with mitigations incorporated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>V(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** No unique paleontological resources are known to exist within the project area. Mitigation Measure CULT-3 under section V(b) calls for stopping work and evaluating significance if an artifact find is made, which will also reduce potential impacts and inadvertent damage to unknown paleontological resources to a less than significant level.

There are no known unique geologic features within the project area. The proposed project will not substantially change the overall landform and therefore the uniqueness of any geologic feature will not be significantly impacted by the project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>V(d) Disturb any human remains, including those interred outside of formal cemeteries?</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 1, 4, 5). No human remains are known to exist within the project area. However, given the possibility of prehistoric resources, as discussed under V(b) above, unknown human remains may be present in the project area and may be discovered during project construction.

Impact CULT-4:

Since the construction of the project involves ground disturbance in an area with a possibility of cultural and historical resources, the project may accidentally disturb unknown human remains.

Mitigation incorporated into project for disturbance of human remains:

Mitigation Measure CULT-4. In the event human remains, including skeletal remains, graves, or Native American burial sites or graves, are discovered, such as during the course of any ground disturbing activities (grading, excavating, trenching, digging), construction or maintenance activities, the following procedures shall be followed:

- All work shall immediately cease and there shall be no further excavation or disturbance of the site or the area in the vicinity of the discovery.
- Notify District staff immediately.
- District staff shall immediately notify the San Mateo County Coroner to evaluate the remains, and follow the procedures and protocols set forth in §15064.5(e) of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387).
- Secure the area and no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has made a determination of origin and disposition, which shall be made within two working days from the time the Coroner is notified of the discovery, pursuant to State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.
- If the Coroner determines that the remains are or may be of a Native American, the Coroner shall notify the California Native American Heritage Commission (NAHC) pursuant to subdivision (c) of the State Health and Safety Code within 24 hours, which will determine and notify the Most Likely Descendant (MLD). The MLD may recommend within 48 hours of their notification by the NAHC the means of treating or disposing of, with appropriate dignity, the human remains and grave goods. In the event of difficulty locating a MLD or failure of the MLD to make a timely recommendation, the human remains and grave goods shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.
- If the Coroner determines that the remains are not those of a Native American, the Coroner would make recommendations for the treatment and disposition of the remains.

Construction work shall not begin again until the County Coroner has examined the remains, assessed their significance, and offered recommendations for any additional exploratory measures deemed necessary for the further evaluation of, and/or mitigation of adverse impacts.

Mitigation measure CULT-3 under section V(b) calls for stopping work and evaluating significance

if an artifact find is made, which will also reduce the potential for disturbance of human remains.

**Implementation:** District staff  
**Timing:** During construction  
**Monitoring:** Construction contractor and District staff

With the application of the mitigation above, this impact would be less than significant with mitigations incorporated.

**Cultural Resources Section Sources:**

1. Stanger, Frank M. *Sawmills in the Redwoods: Logging in the San Francisco Peninsula, 1849-1967*. San Mateo County Historical Association. San Mateo, California. 1967.
2. Basin Research Associates, *Archaeological Review Four Bridges in Midpeninsula Regional Open Space District, Purisima Creek Redwoods Open Space Preserve*. September 2014.
3. CEQA Guidelines, Section 15064.5. <http://ceres.ca.gov/ceqa/guidelines/>. Accessed on September, 2014.
4. California Law. Official California Legislative Information website. California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387; State Health and Safety Code Section 7050.5; Public Resources Code Section 5097.98 <http://www.leginfo.ca.gov/calaw.html>. Accessed on September, 2014

**VI. GEOLOGY AND SOILS****Would the project:**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>VI(a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>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.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>ii) Strong seismic ground shaking?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>iii) Seismic-related ground failure, including liquefaction?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>iv) Landslides?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>VI(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation for a and c:** (Sources: 1-12). The proposed project is located within a near-wilderness rural mountain setting. No structures for human occupancy are proposed. A geotechnical investigation of the project and project area was conducted to identify engineering methods to design the safest bridge construction.

The Project site lies in the tectonically active Coast Ranges Geomorphic Province of Northern California. The geologic and geomorphic structure of the northwest trending ridges and valleys in the region, including the Santa Cruz Mountains, Marin Headlands, the Hamilton-Diablo Range, and San Francisco Bay, are controlled by active tectonism along the boundary between the North American and Pacific Tectonic Plates, defined by the San Andreas Fault System. Regional faults have predominantly right-lateral strike-slip (horizontal) movement, with lesser dip-slip (vertical) components of displacement. Horizontal and vertical movement is distributed on the various fault strands within a fault zone. Throughout geologic time the fault strands experiencing active deformation change in response to regional shifts in stress and strain from plate motions.

The nearest known active fault is the San Andreas fault, located approximately 4 miles to the northeast. Other nearby active faults include the San Gregorio fault located approximately 7 miles to the southwest, the Seal Cove fault located approximately 8 miles to the northwest, the Hayward fault approximately 24 miles east-northeast and the Calaveras fault located approximately 26 miles to the east-northeast (CDMG 1994)<sup>1</sup>. A listing of active earthquake faults located in the project vicinity is presented in **Table 1**.

Seismicity of the Project region has resulted in several major earthquakes during the historic period,

including the 1868 Hayward Earthquake, the 1906 San Francisco Earthquake, and most recently, the 1989 Loma Prieta Earthquake. Given this history, it is likely that major earthquakes will occur in the region in the future.

**Table 1. Active Earthquake Faults in Project Vicinity**

<b>Fault Name</b>	<b>Distance from Project Site (mi.)</b>	<b>Direction</b>	<b>Last Surface</b>	<b>Status</b>	<b>Maximum Characteristic Moment Magnitude</b>
San Andreas	4	NE	Historic	Active	7.
San Gregorio	7	SW	Holocene	Active	6.
Seal Cove	8	NW	Holocene	Active	6.
Hayward	24	E/N	Historic	Active	6.
Calaveras	26	E/N	Historic	Active	6.

## REGIONAL GEOLOGY

The regional geology of the area is characterized by northwest trending mountain ranges and valleys oriented sub-parallel to faults of the San Andreas Fault System. In the San Francisco Bay area west of the San Andreas fault, regional geology is dominated by the Salinian Block granitic basement and overlying sedimentary rocks of Mesozoic and Cenozoic age.

Bedrock outcrops in the hills surrounding the site consist of the Vaqueros Formation (lower Miocene and Oligocene), arkosic sandstones, mudstone and shale, the Mindego Basalt (Miocene and/or Oligocene), volcanic basalt and tuffs, and the Lambert Shale (Oligocene and lower Miocene), mudstone, siltstone and claystone with minor chert, sandstone, and dolomite. West of the site, the Purisima Formation (Pliocene and Upper Miocene), sandstone, siltstone and mudstone, is exposed in the hills and in road cuts. East of the site along the mountain ridge, the Whiskey Hill Formation (middle and lower Eocene), including arkosic sandstone, silty claystone, glauconitic sandstone, and tuffaceous siltstone is exposed<sup>3</sup>.

## SITE GEOLOGY

The geologic map of San Mateo County shows the site vicinity as underlain by bedrock of the Vaqueros Formation, the Mindego Basalt and the Lambert Shale. A portion of the map representing the project site and vicinity is presented as **Figure 10**. In our Field Investigation, as described below, we encountered alluvial soils associated with the Purisima Creek valley and bedrock consisting of arkosic sandstone, likely of the Vaqueros Formation. Gravels within the alluvial soils included sandstone, siltstone, shale, basalt and volcanic tuff.

## PRIMARY SEISMIC HAZARDS

### *Fault Rupture*



- (i) Fault rupture is a seismic hazard that affects structures situated above an active fault. The hazard from fault rupture is the movement of the ground surface along a fault. Typically, this movement takes place during the short time of an earthquake, but can also occur slowly over many years in a process known as fault creep. As shown on the Earthquake Fault Zone (EFZ) map of the Woodside Quadrangle<sup>5</sup>, the project site does not lie within an Alquist-Priolo Earthquake Fault Zone Boundary. The nearest Alquist-Priolo Earthquake Fault Zone Boundary to the site is for the San Andreas fault and is located approximately 5 miles northeast of the project site.

*The site is not located in an Alquist-Priolo Earthquake Fault Zone boundary. Surface fault rupture is not expected to occur at the site.*

### ***Ground Shaking***

- (ii) Strong ground, or seismic, shaking is a major hazard in the San Francisco Bay Region. The severity of ground shaking at any location depends on several variables such as earthquake magnitude, epicenter distance, local bedrock geology, thickness and seismic response of soil and sediment materials, ground water conditions, and topographic relief. The California Geological Survey has developed a Probabilistic Seismic Hazards Assessment Program where probabilities for estimated peak ground acceleration are given for any location within the State. The estimates of the peak ground acceleration at the project site are approximately 69% of the acceleration due to gravity, with a 10% chance of being exceeded in 50 years<sup>6</sup>. According to maps developed by the Association of Bay Area Governments (ABAG)<sup>7</sup>, violent ground shaking (Modified Mercalli Intensity- MMI- Level IX) is possible in response to a large earthquake along the San Andreas fault. A major earthquake on the San Gregorio fault is expected to produce very strong ground shaking, MMI VIII on the site.

The hazard of strong seismic ground shaking would be mitigated by designing structures in accordance with the California Building Code and using Seismic Design Criteria developed for the site. The hazard of strong seismic ground shaking is considered less than significant with incorporation of all applicable regulations for design and construction.

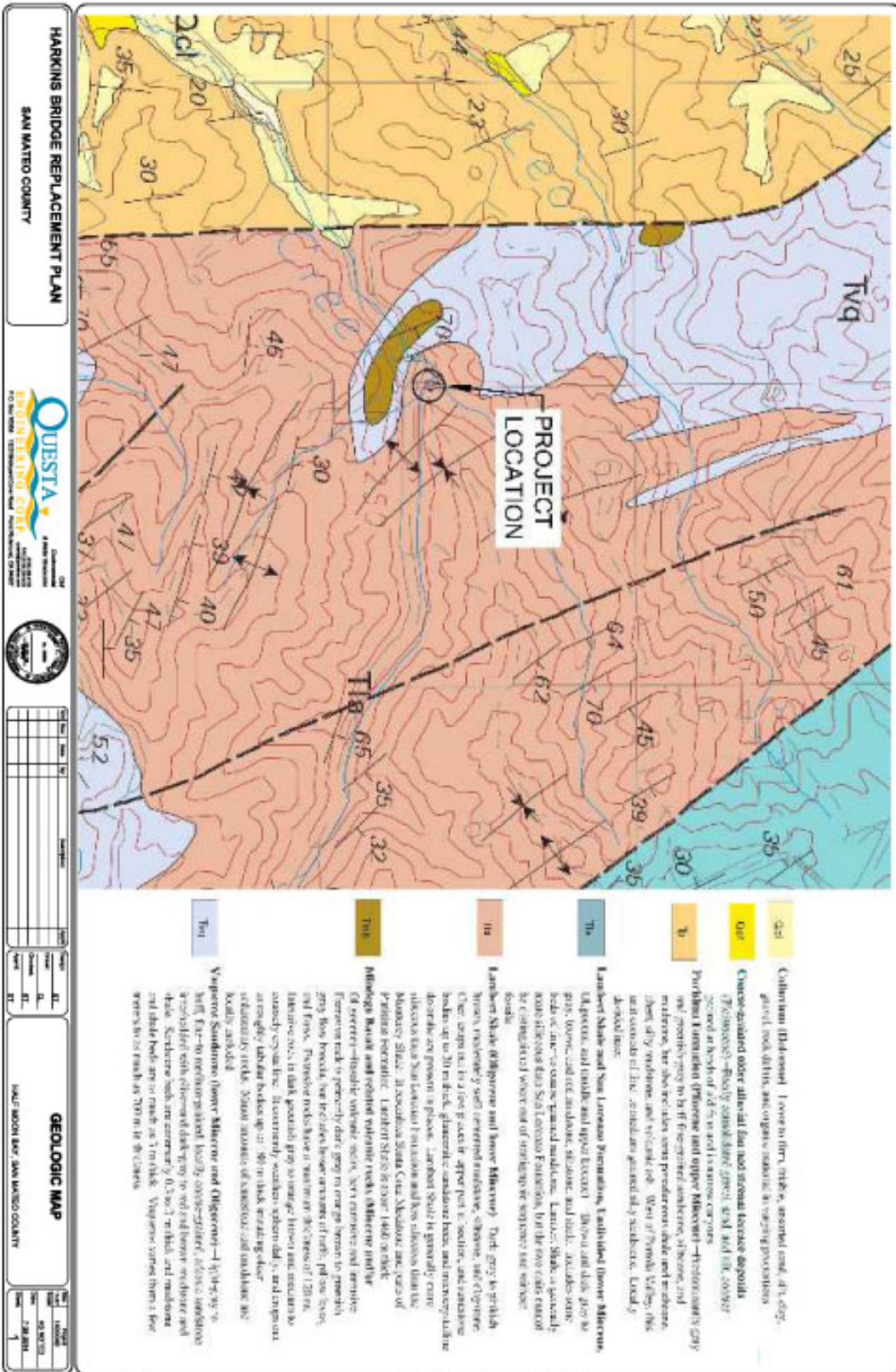


Figure 10

## SECONDARY SEISMIC HAZARDS

### *Seismically Induced Ground Failure*

- (iii) Seismically induced ground failure refers to a loss of ground strength and/or cohesion as a result of seismically induced ground shaking (generated by an earthquake). There are multiple types of ground failure hazards, including liquefaction, differential settlement, lurch cracking, lateral spreading and seismically induced landslides. Seismically induced ground failure could also result in landsliding on the adjacent steeply sloping areas resulting in landslide deposition in the creek valley. Large landslides could potentially cause changes to the drainage patterns within the creek.

The soils that are most susceptible to liquefaction consist of clean sands and silty sands, which were not found in the bore holes on the project site. Groundwater was present in each of the bore holes at depths of approximately commensurate with the channel bottom. However, there are clayey sand and silty sandy soils that are medium dense in the area have a low likelihood of liquefaction during earthquake-induced strong to violent ground motions.

**Explanation:** (Sources: 12).

### **SLOPE INSTABILITY AND LANDSLIDES**

- (iv) The project site is a creek valley located adjacent to moderately to steeply sloping areas. The slopes in the area vary from 30 to 60 percent. Creek banks vary from 30 to 90 percent in steepness, with local instabilities caused by erosional forces in the stream and by the falling of trees in wind storms. These banks are subject to erosional and scour forces during storm events. Bank stability could also be affected by earthquake induced ground shaking resulting in bank failures. Based on potential for bank instability along Purisima Creek, the abutments for the new bridge will be protected from scour and shallow bank instabilities. In addition, following removal of the existing Harkins Bridge, the disturbed stream banks will be protected to prevent scour and planted with appropriate native vegetation to provide long term stability and riparian habitat. In accordance with the design recommendations of a Certified Geotechnical Engineer and District BMPs related to road and trail work near watercourses, the bridge will be designed and constructed to minimize future erosion and geologic failures and is no considered to have a significant impact on slope instability and landslides.

The construction work would be completed in the area of the existing bridge and in the river channel. No new areas of topsoil are anticipated to be required for removal. If topsoil is removed during the project, it would be replaced during final stabilization activities. The impact of the loss of topsoil is considered less than significant.

**VI(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 2).  
**EXPANSIVE SOILS**

Expansive soils are those that shrink and swell in response to changes in moisture content. Native soils on the site consist predominantly of clayey sand and sandy lean clay soils with a low to moderate expansion potential. The site is generally susceptible to low to moderate soil expansion due to soil moisture fluctuations. However, within a redwood forest environment moisture fluctuations seasonally are not as extreme as in open, non-coastal areas. Facility improvements at the site will be designed to resist the effects of soil heave and settlement in response to seasonal moisture fluctuations in underlying soils, in areas where moisture fluctuations are expected. The potential effects of expansive clay soils would be mitigated by designing structures in accordance with the California Building Code. The hazard of expansive soils is considered less than significant with incorporation of all applicable regulations for design and construction.

**VI(b) Result in substantial soil erosion or the loss of topsoil?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

**VI(e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

**Explanation:** The self-contained, vault restroom that is installed adjacent in the project area does not use a septic system, but stores effluent waste in a contained, concrete vault. This waste is pumped out of the restroom vault at least two to three times per year and is properly disposed of. No effluent waste will be discharged as a result of this project. Effluent waste is transported via a service truck to an appropriate offsite wastewater receiving facility. The project will have no affect on the existing vault toilet.

**Geology and Soils Section Sources:**

1. California Division of Mines and Geology, 1994, Fault Activity Map of California and Adjacent Areas, CDMG Geologic Data Map No. 6.
2. 2007 Working Group on California Earthquake Probabilities (WGCEP). Uniform California Earthquake Rupture Forecast, Version 2. USGS Open File Report 2007-1437, CGS Special Report 20, 2008.
3. US Geological Survey, Geology of the Onshore Part of San Mateo County, California, Open-File Report 98-137
4. US Department of Agriculture, 2012, Soil Survey of San Mateo County, California
5. California Division of Mines and Geology, 2000, Digital Images of Alquist-Priolo Earthquake Fault Zone Map of the Richmond Quadrangle, California, 1982, 1:24,000.
6. California Geological Survey, 1996, Probabilistic Seismic Hazard Assessment for the State of California
7. Association of Bay Area Governments, 2007, Earthquake Ground Shaking Scenario Maps
8. San Mateo County Department of Public Works. *Endangered Species and Watershed Protection Program, Volume 1: Maintenance Standards*. April 14, 2004.
9. California Division of Mines and Geology CD-ROM 2000-004 (2000). *Official Map of Alquist-Priolo Earthquake Fault Zones, Woodside Quadrangle*. 1974, revised 2000.
10. Weaver, William, and Hagans, Danny. Pacific Watershed Associates. *Handbook for Forest and Ranch Roads*. June 1994.
11. Midpeninsula Regional Open Space District. *Details and Specifications Guidelines*. September 2009.
12. Questa Engineering, Harkins Bridge Geotechnical Investigation Report, July 2014.

**VII. GREENHOUSE GAS EMISSIONS****Would the project:**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>VII(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>C) Would the project increase greenhouse gas emissions that hinder or delay the State's ability to meet the reduction target (25% by 2020) contain in Global Warming Solutions Act of 2006 (AB 32)?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation for A and B.**

## Environmental Setting

Global temperatures are affected by naturally occurring and anthropogenic-generated (generated by humankind) atmospheric gases, such as water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (Intergovernmental Panel on Climate Change, 2007). Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). Solar radiation enters the earth's atmosphere from space, and a portion of the radiation is absorbed at the surface. The earth emits this radiation back toward space as infrared radiation. GHGs, which are mostly transparent to incoming solar radiation, are effective in absorbing infrared radiation and redirecting some of this back to the earth's surface. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This is known as the "greenhouse effect." The greenhouse effect helps maintain a habitable climate. Emissions of GHGs from human activities, such as electricity production, motor vehicle use, and agriculture, are elevating the concentration of GHGs in the atmosphere and are reported to have led to a trend of unnatural warming of the earth's natural climate, known as global warming or global climate change. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred because it implies that there are other consequences to the global climate in addition to rising temperatures. Other than water vapor, the primary GHGs contributing to global climate change include the following gases:

- CO<sub>2</sub>, primarily a byproduct of fuel combustion;



- Nitrous oxide (N<sub>2</sub>O), a byproduct of fuel combustion that is also associated with agricultural operations such as the fertilization of crops;
- CH<sub>4</sub>, commonly created by off-gassing from agricultural practices (e.g. livestock), wastewater treatment, and landfill operations;
- Chlorofluorocarbons (CFCs), which were used as refrigerants, propellants, and cleaning solvents, although their production has been mostly prohibited by international treaty;
- Hydrofluorocarbons (HFCs), which are now widely used as a substitute for chlorofluorocarbons in refrigeration and cooling; and
- Perfluorocarbons (PFCs) and sulfur hexafluoride (SF<sub>6</sub>), emissions of which are commonly created by industries such as aluminum production and semiconductor manufacturing.

These gases vary considerably in terms of Global Warming Potential (GWP), a term developed to compare the propensity of each GHG to trap heat in the atmosphere relative to another GHG. GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time of gas remains in the atmosphere. The GWP of each GHG is measured relative to CO<sub>2</sub>. Accordingly, GHG emissions are typically measured and reported in terms of CO<sub>2</sub> equivalent (CO<sub>2</sub>e). For instance, sulfur hexafluoride (SF<sub>6</sub>) is 22,800 times more intense in terms of global climate change contribution than CO<sub>2</sub>.

In 2011, BAAQMD published CEQA Air Quality Guidelines that included recommended thresholds for GHG emissions. BAAQMD developed these emission thresholds as a basis for meeting the overall goals adopted by California to reduce GHG emissions to 1990 levels by 2020 (per Assembly Bill 32 – Global Warming Solutions Act). A description of the justification for these thresholds was published by BAAQMD on June 2, 2010, titled BAAQMD California Environmental Quality Act Guidelines Update – Thresholds of Significance. In this document, BAAQMD recommended that land use projects with emissions exceeding 1,100 metric tons per year of equivalent carbon dioxide emissions (CO<sub>2</sub>e) should be considered significant if they have per capita emissions that exceed 4.6 metric tons of CO<sub>2</sub>e per capita. These are the only quantitative thresholds that we are aware of that are used in the Bay Area, including San Mateo County. These thresholds only apply to project operation. BAAQMD does not have GHG emission thresholds for construction activities. The temporary construction would result in short-term emissions that would certainly be below any threshold used for evaluating operational impacts.

*a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

The project would result in temporary GHG emissions as a result of construction activities. The Roadway Construction Emissions Model, Version 7.1.5.1, was used to predict these emissions. Assuming bridge/overpass construction of 0.05 miles (and 0.1 acres) for five months, the model predicts emissions of 71 tons throughout the entire project. These emissions are not anticipated to contribute considerably to significant GHG emissions that contribute to the adverse effects of climate change. Significance thresholds, in terms of emissions, have not been identified for construction emissions.

This project has no long-term operational GHG impacts since the site would return to Preserve lands with natural habitats once construction and restoration activities are complete. There would be ***no impact*** from GHG after construction and restoration activities are complete.

*b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

San Mateo County does not currently have an adopted Climate Action Plan. The project would be consistent with applicable local plans, policies, and regulations and would not conflict with the provisions of AB 32, the applicable air quality plan, or any other State or regional plan, policy or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions. Therefore, this impact would be less than significant.

**VIII. HAZARDS AND HAZARDOUS MATERIALS**

**Would the project:**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VIII(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Explanation:** (Source: 1). This project will not result in the routine transport, use, or disposal of hazardous materials. The District does not currently routinely transport, use, or dispose of hazardous materials at the Preserve, and District Ordinance 93-1, Section 409.2 prohibits persons from possessing or using harmful substances on District lands. Potential risks associated with releases during the construction process are discussed in section (b), below.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**VIII(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?**

**Explanation:** (Source: 1, 6, 7). Under District Ordinance 93-1, the operation of unauthorized motor vehicles within the interior of the Preserve is prohibited. General public use of the Preserve is limited to low-intensity, non-motorized, and non-emitting uses, including hiking, bicycling, and equestrian use. The possibility of the incidental release of motor vehicle oil, grease, or fuel is therefore limited to the infrequent use of the interior Preserve trails and roads by District patrol and maintenance vehicles and occasional emergency responders, the vehicles and machinery used during the construction process, and the vehicles that will park in the parking area.

The project will not result in a significant increase in maintenance, patrol, or emergency response use of the Preserve. Construction activities will include best management practices (BMPs), based on the Regional Water Quality Control Board’s *Erosion and Sediment Control Field Manual*, to reduce the potential for release of construction-related fuels and other hazardous materials into the environment, as follows:

BMP Category	BMP Description	Timing	Inspection and Maintenance
Solid Waste Management	Remove all trash and construction-related waste to a secured, covered location at the end of each working day to maintain a clean worksite. Dispose of hazardous materials according to all specified regulations.	Implement during construction.	Inspect for trash on a daily basis.
Materials Storage	Store chemicals in a non-reactive container. Store bagged, dry reactive materials in a secondary container. Protect all material storage areas from vandalism.	Implement during construction.	Inspect storage areas daily to ensure no leaks or spills have occurred.

Spill Prevention and Control	Good housekeeping practices shall be followed to minimize storm water contamination from any petroleum products or other chemicals. Maintain spill cleanup materials where readily accessible during use.	Implement during construction.	Clean up leaks and spills immediately using absorbent materials and as little water as possible.
Vehicle and Equipment Maintenance & Fueling	Conduct proper and timely maintenance of vehicles and equipment. Cleaning or equipment maintenance shall be prohibited except in designated areas located near the entrance to the Preserve. If fueling must occur on-site, use designated areas located away from drainage courses and use a drip pan to catch spills. Place drip pans under heavy equipment stored onsite overnight.	Implement during construction.	Inspect on-site vehicles and equipment for leaks on a routine basis; periodically check incoming vehicles for leaking oil and fluids while on paved roads near the entrance to the Preserve.
Training	All personnel shall be instructed regarding the correct procedure for spill prevention and control, waste disposal, use of chemicals, and storage of materials.	Implement during construction.	None.

The risk of accidental release of hazardous materials into the environment is therefore considered less than significant.

**VIII(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** (Source: 2). The project area is not located within one-quarter mile of an existing or proposed school. The nearest school, Alvin Hatch Elementary, is located approximately five miles northwest of the project area.

**VIII(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** (Source: 3). The project site is not located on the list of hazardous materials sites. No EPA regulated facilities are found in the project area or the Preserve.

**VIII(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VII(f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

**Explanation for e and f:** (Source: 4). The project is not within an airport land use plan, within two miles of an airport, or within the vicinity of a private airstrip. The closest airport is the Half Moon Bay Airport, some 10 miles away.

**VIII(g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** The project will not interfere with any adopted emergency response plans and evacuation plans, as there are none for the area. The project will not add residents or significantly increase the number of visitors to the area and therefore will not increase resources required for emergency response or evacuation. Because the project requires minimal import of construction materials, vehicle trips up and down public roads are limited. Emergency traffic along Purisima Creek Road is unlikely to be affected by equipment or vehicle trips to and from the site. The new bridge will support the weight of emergency vehicles and will therefore increase the ability of emergency responders to operate within the Preserve.

**VIII(h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Sources: 1, 5). The project area is located in a minimally developed portion of unincorporated San Mateo County in the Santa Cruz Mountains. The California Department of Forestry and Fire Protection (CAL FIRE) designates the project area as lying within a zone of Very high fire hazard severity, based on local vegetation type (fuel loading), slope and weather. However, the project will not change the degree of exposure to wildfires, because the Preserve is already open to public use. The Preserve has approximately 24 miles of trails and unpaved roads open to hiking, mountain bicycling, and equestrian use, including trails that are located within the project area.

District Ordinance 93-1 Section 404 prohibits fires and smoking on District lands. In addition, District Rangers, who are trained in fire-fighting techniques and carry fire suppression equipment, regularly patrol the Preserve. District staff generally serve as first responders to fire emergencies within the preserves, with the primary fire protection responsibility falling to CAL FIRE, County Fire Departments, and municipal fire protection agencies. The District's radio and repeater system combined with ranger patrols and staff on call 24 hours per day enable prompt and effective communication with emergency service providers in the event of a wildland fire or an emergency response call.

During project construction, the most likely source of ignition is by mechanical activities such as chain saw operations, re-fueling, or mowing. The chance for an ignition can be greatly reduced through equipment features, fuel treatment, and management of behavior.

Impacts HAZ-1, HAZ-2, HAZ-3 and HAZ-4:  
Construction activities increase the risk of wildland fire.

Mitigation incorporated into project for wildland fire:

HAZ-1. All equipment to be used during construction must have an approved spark arrestor.

HAZ-2. Cut grass and reduce fuels around construction sites where vehicles are allowed to park.

HAZ-3. Minimize use of mechanical construction equipment during hot, dry, windy weather.

HAZ-4. Hired contractors shall be required to:

- i) Provide water to suppress potential fires caused by the work performed.
- ii) Remind workers that smoking is prohibited at the work site and on any District land per contract conditions and District Ordinance.
- iii) Maintain working ABC fire extinguishers on all vehicles in the work area.
- iv) Contact both Mountain View Dispatch at (650) 968-4411 and the California Department of Forestry, SkyLonda, at (650) 851-1860 for emergency response in the event of a fire (these numbers are to report emergencies only).

**Implementation:** Contractors  
**Timing:** During construction  
**Monitoring:** District Staff

**Hazards and Hazardous Materials Section Sources:**

1. Midpeninsula Regional Open Space District. *Regulations for Use of Midpeninsula Regional Open Space District Lands*. Adopted by Ordinance No. 93-1, July 28, 1993. Last Revised and Adopted by Ordinance No. 04-01, August 25, 2004.
2. Google Maps. [www.google.com/maps](http://www.google.com/maps). Search of project site and school locations. Information accessed on August 15th, 2014.
3. United States Environmental Protection Agency. <http://www.epa.gov/myenvironment/>
4. United States Geological Survey. Woodside 7.5-minute series quadrangle map. 1991

5. CAL FIRE. *Maps of Fire Hazard Severity Zones in the State Responsibility Area of California, San Mateo County*. Adopted November 7, 2007.
6. Midpeninsula Regional Open Space District. *Details and Specifications Guidelines*. September 2009.
7. Regional Water Quality Control Board. *Erosion and Sediment Control Field Manual*. August 2002.



**IX. HYDROLOGY AND WATER QUALITY****Would the project:**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(a) Violate any water quality standards or waste discharge requirements?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>IX(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>IX(f) Otherwise substantially degrade water quality?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation for a, c, and f:** (Sources: 1 through 6). These three items are interrelated and therefore are being discussed together to avoid repetition. This project involves the demolition of an existing bridge, construction of a new bridge and footings, and minor vegetation removal to connect the existing roads to the new bridge.

The demolition of the existing bridge requires removing or modifying the redwood crib logs that currently serve as abutments to the bridge.

The construction of the new bridge, minor grading on the approach, and vegetation removal on the approach will cause minor changes in the drainage pattern of the road. No significant changes in the pattern or amount runoff is anticipated. The new bridge will be located above the 100-year flood plain, thus avoid direct interaction with the stream and the potential for altering the course of the stream.

The construction activities are designed with drainage and erosion prevention measures as shown in Figure 3 and detailed in the District's BMPs for road and trail construction and maintenance near watercourses. These BMPs for erosion and sediment control, previously approved by the California Department of Fish and Wildlife and Regional Water Board and in use by the District, would be implemented during project construction to avoid impacts such as erosion at the project site.

All exposed soil surfaces in the construction area will be seeded and mulched. These measures and the design of the new bridge will prevent the concentration of surface runoff that could result in erosion or siltation and allow the project to avoid substantial erosion on-site or siltation off-site, thus reducing the potential impact under item IX(c) to a less than significant level.

Sedimentation can also result from wind and water erosion. As discussed in Section III(b), the project's dust suppression measures and the dense vegetation and tree canopy buffering the construction zone from winds will minimize the potentially negative water quality effects of wind erosion. As discussed in Section VI(b), the project will be constructed during a mostly dry but potentially wet time of year (July-October), and erosion control measures will be installed prior to the onset of rains to avoid erosion due to surface runoff. Potential negative water quality impacts from construction involving the accidental release of hazardous materials are discussed in Section VII(b). Therefore, potential for the project to otherwise substantially degrade water quality or violate any water quality standard is reduced to a less than significant level.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** The project will not pump groundwater and therefore does not interfere with groundwater recharge and has no impact on groundwater supplies.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation for d, e, h, and i:** (Source: 5). These four checklist items are interrelated and therefore are being discussed together to avoid repetition. The Preserve is located in the Purisima Creek watershed approximately five miles east of Half Moon Bay, California. Precipitation in the watershed is highly seasonal, with 90% falling between October and April. The extensive open space lands surrounding the project provide a vegetated buffer for the project and allow rain to percolate into the ground rather than running off rapidly.

By following the recommendations outlined in the Geotechnical Report and through the measures outlined in the explanations for A, C, and F, these design features little to no storm water is anticipated to exit the site as a result of this project. The project would not substantially alter the site drainage patterns or increase the amount of runoff.

The new bridge has been designed to accommodate a 100-year flood flow. The proposed project will not place any structures within the 100-year floodplain that might impede flood flows.

Per standard District practice, District personnel regularly check drainage structures during and after storms, provide signage and barricades if needed, and perform maintenance as needed to ensure proper functioning of drainage structures and reduce the possibility that the project would expose people to significant flood risks. Therefore, potential for the project to result in flooding, expose people to flooding risks, exceed the capacity of drainage systems, or impede flood flows is reduced to a less than significant level.

**IX(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** The project does not involve housing.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**IX(j) Inundation by seiche, tsunami, or mudflow?**

**Explanation:** (Sources: 4, 5). The project is situated at approximately 435 feet above mean sea level, approximately 4 miles from the ocean. Seiche or tsunamis would have no impact on the site.

Landslides are common in the Santa Cruz Mountains and are one of the dominant geologic forces shaping the current landscape. Oversteepened slopes due to tectonic uplift and rapid downcutting of streams coupled with high intensity rainfall or intense seismic activity have resulted in a number of large and small-scale landslides.

Large, deep-seated bedrock landslides are also common in the Santa Cruz Mountains, and typically appear to be initiated or reactivated by strong ground motions during earthquakes. These failures are characterized by benched topography and are formed by translational movement of a relatively intact mass with a failure plane that extends below the colluvial layer into the underlying bedrock layer.

Natural slide movement is attributed to weak earth materials that underlie much of the slopes in conjunction with high groundwater conditions. The rate of deep-seated slide movement is considered to be slow and episodic and in response to long duration rainfall, undercutting of the slope by stream bank erosion, and/or seismic ground shaking from nearby faults. Future movement should be expected to be in response to intense, extended rainfall events or intense ground shaking during earthquakes, and most likely as small scale displacements similar to what has occurred in the past. Catastrophic failure of large slides is not expected.

Mudflows are a form of shallow-seated landsliding known as debris flows. Shallow-seated landsliding is common throughout the Santa Cruz Mountains and is characterized by rapid, shallow downslope movement of surficial soil, colluvium, and weathered bed rock. Generally located on steep to very steep hillsides, most shallow slides are a result of a loss of soil tension due to the over-saturation of the soil profile from extended or intense storm events, and travel down slope in existing drainages. Old failures along old logging roads and skid trails are attributed to thick fill that was loosely sidecasted onto steep slopes, poor drainage, or failure of oversteepened cuts. Few failures have occurred in recent years, in part due to current, improved management practices. Future shallow landslides will occur within the Preserve during adverse climatic or seismic conditions regardless of land use activities.

Debris or mudflows could expose District personnel and the public to a life-threatening event if a flow occurred while people were present. The proposed project will not increase or decrease the hazard level from such an event. However, the low probability of such an event and the limited likelihood of District personnel or the public to be in harm's way during an intense storm necessary to precipitate such an event reduce this potential impact to a less than significant level.

**Hydrology and Water Quality Section Sources:**

1. San Mateo County Department of Public Works. *Endangered Species and Watershed Protection Program, Volume 1: Maintenance Standards*. February 20, 2001.
2. Weaver, William, and Hagans, Danny. Pacific Watershed Associates. *Handbook for Forest and Ranch Roads*. June 1994.
3. Association of Bay Area Governments. *Manual of Standards for Erosion and Sediment Control*. May 1995.
4. United States Geological Survey. *Woodside 7.5-minute series quadrangle map*. 1991.
5. Best, Timothy. *Purisima Creek Road Inventory Report*. 1999.
6. Questa Engineering, Harkins Bridge Geotechnical Investigation Report, July 2014.
7. Midpeninsula Regional Open Space District, 2007. Best Management Practices and Standard Operating Procedures for Routine Maintenance Activities in Water Courses.

**IX. LAND USE AND PLANNING**

**Would the project:**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IX(a) Physically divide an established community?**

**Explanation:** The project is located in an existing 4,711-acre open space preserve in unincorporated San Mateo County near the city of Half Moon Bay, adjacent to Skyline Boulevard (also known as Highway 35). The project scope is contained within the Preserve. The project components will maintain public access to a popular Preserve, remove a safety hazard with the existing bridge, and support emergency response within and around the Preserve. The project will not physically divide an established community.

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IX(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**Explanation:** (Sources: 1 through 7).

San Mateo County Zoning

The project area is located within unincorporated San Mateo County and the land is zoned Timberland Preserve Zone District –Coastal Zone (TPZ-CZ). The TPZ-CZ was in part established to protect timberlands within the County and the ecological balance of such timberlands. Compatible land uses in a TPZ that would not inhibit the growing and harvesting of timber include “management of land for wildlife habitat” and “management for recreation,” including “outdoor recreation requiring some development.” Therefore, the replacement of a vehicle bridge for access to recreational trails and emergency responses consistent with San Mateo County’s zoning ordinance.

San Mateo County General Plan

The designated land use throughout most of the project site, per the San Mateo County General Plan, is “Public Recreation Rural.” The District will continue to manage the Preserve for public recreation and resource protection, which is compatible with the land use designation. This project supports public recreation.

Local Coastal Program Area

The entire project area and much of the Preserve are within the Local Coastal Program (LCP) Area. Public recreation is a permissible use in San Mateo County’s LCP. The project allows continued recreational use of the Preserve and is compatible with the LCP.

County Scenic Roadways and Caltrans Scenic Highway Guidelines

Refer to Section I(b) for discussion.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>IX(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** (Sources: 5 and 6). No Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) applies to the project area.

**Land Use and Planning Section Sources:**

1. San Mateo County. *General Plan. Section 6 Park and Recreation Resources Policies, Section 9 Rural Land Use Policies*. 1986.
2. San Mateo County. *Zoning Maps. Sheet 27*. May 1992 Edition.
3. San Mateo County. *Zoning Regulations. Chapter 34: Timberland Preserve Zone (TPZ) District*. July 1999.
4. San Mateo County Parks and Recreation Commission. MHA Environmental Consulting, Inc. *San Mateo County 2001 Trails Plan*. 2001.
5. California Department of Fish and Game, *Habitat Conservation Branch*, <http://www.dfg.ca.gov/habcon/nccp/status.html>, accessed on April 22, 2008.
6. United States Fish and Wildlife Service, *Conservation Plans and Agreements Database*, [http://ecos.fws.gov/conserv\\_plans/public.jsp](http://ecos.fws.gov/conserv_plans/public.jsp), accessed on April 22, 2008.
7. San Mateo County. *Local Coastal Program*. June 2012.

**XI. MINERAL RESOURCES**

**Would the project:**

**XI(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?**

**XI(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?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation for questions a and b:** (Sources: 1, 2). The project would not result in the loss of availability of a known or locally important mineral resource. The site has not been classified as a Mineral Resource Zone, nor is it included in a Resource Sector in the *Update of Mineral Land Classification* or the mineral resources section of the San Mateo County General Plan. Field observations by District staff have revealed no evidence of the presence of mineral resources in the project area.

**Mineral Resources Section Sources:**

1. San Mateo County. *General Plan. Chapter 3: Mineral Resources*. 1986.
2. California Division of Mines and Geology. *Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region*. Open File Report 96-03. 1996.



**XII. NOISE**

**Would the project result in:**

**XII(a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**XII(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 1, 4 through 8). Noise impacts are considered significant based on their levels and proximity to sensitive receptors, including schools, hospitals, religious facilities, and parks. Purisima Creek Redwoods Open Space Preserve is an undeveloped open space area with low levels of ambient noise. A developed neighborhood is located approximately .75 miles from the Preserve boundaries. The main area of the project site is located approximately 700 feet from the nearest residences and separated by Preserve lands. However the construction site is located within proximity to a parking lot, an existing trail and proposed trail detour.

The standard unit of measurement for sound is the decibel (dB). Sounds can range from 0 decibels (threshold of hearing) to 160 dB (instant perforation of eardrum). Normal conversation at three feet is roughly 60 dB, busy street traffic is 70 dB, and the threshold of pain is 130 dB. The Community Noise Equivalent Level (CNEL) is another unit of measure for noise that is used as a standard for San Mateo County. CNEL measurements represent an average of measured noise levels obtained over a 24-hour period of time. A time-weighted factor is applied to account for the increased sensitivity of humans to noise in the morning, evening, and nighttime hours. This factor adds 5 dB to sounds occurring in the evening (7 p.m. to 10 p.m.) and 10 dB to sounds occurring in the late evening and early morning hours (between 10 p.m. and 7 a.m.).

According to the County’s General Plan Noise Policies, noise impact areas are defined as areas with noise levels of 60 CNEL or greater. The General Plan does not specify where noise levels are measured nor for what land uses. Exterior noise exposure levels of 70 CNEL or greater are considered significant for residential developments according to the State of California. Measured in decibels, exterior noise levels in quiet residential areas are typically 40 dB or 45 to 50 CNEL. Within the Preserve and the project area, current ambient noise levels are expected to be less than 60 CNEL, similar to exterior noise levels in quiet residential areas. Conversations among users in the nearby parking lot, the non-motorized, low-intensity recreational uses and Purisima Creek are not expected to generate noise in excess of local agency standards or generate ground borne noise or vibration.

The County’s General Plan Noise Policies promote measures which incorporate noise abatement into the design of roadway projects. Such measures can include smooth road surfaces and noise barriers. Slow speeds over the roadway and bridge surface and the very low volume of traffic anticipated would not generate noise in excess of local agency standards or generate ground borne noise or vibration.

The construction phase of the project component is expected to last four months and would include demolition, earthmoving, and bridge construction activities. During construction, construction machinery may generate temporary increases in noise to levels as high as 95 dB. Short-term construction noise impacts would occur in discrete phases and would occur during the daylight hours of the summer and fall and buffered from adjacent properties by distance, elevation, and dense vegetation. The construction site is located approximately 300 feet from Higgins Canyon Road, far outside the line of site of the nearest house located approximately 700 feet away and is screened by topography and

vegetation. Trail users approach the site may experience increased noise during construction activities. Given the small size of the project area, potential impacts will be minor and ephemeral.

Since the project is small-scale in nature, any potential generation of noise levels in excess of 70 CNEL resulting from the project would be localized and limited to the short-term construction period. Any potential exposure to and generation of excessive vibration or noise resulting from the project would also be localized and limited to the short-term, three to four month construction period of the project.

**XII(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 2, 4 through 7). Within the Preserve and project area, current ambient noise levels are under 60 CNEL. The surrounding roads and trails have non-motorized low-intensity recreational uses, which would not generate substantial noise. In addition, under District Ordinance 96-1, operation of motor vehicles by the public within the Preserve itself is prohibited, thus limiting motor vehicle activity within the Preserve to ranger patrol and maintenance vehicles. No expansion of maintenance or patrol levels would be required by the project and therefore, potential vehicular noise generated by District patrol vehicles would be localized and intermittent. Because the project will not increase vehicular traffic or engine starts beyond existing levels, the project will not generate a permanent, substantial increase in ambient noise. Moreover, District Ordinance 93-1 prohibits after-hours use of the Preserve.

**XII(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation:** (Source: 6, 8, 7, and 9). Within the Preserve and project area, current ambient noise levels are under 60 CNEL. During the construction phase, which is expected to last three to four months, construction machinery may generate temporary increases in noise levels. However, short-term construction noise impacts would occur in discrete phases and would occur during the daylight hours of the summer and fall, located in an area that and buffered from adjacent properties by distance, elevation, and dense vegetation.

The following activities are exempt from Chapter 4.88 of the San Mateo County Ordinance Code:

- Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property, provided said activities do not take place between the hours of 6:00 P.M. and 7:00 A.M. weekdays, 5:00 P.M. and 9:00 A.M. on Saturdays or at any time on Sundays, Thanksgiving and Christmas.

The project construction activities will only occur during the hours in the above County ordinance. Therefore, the temporary increase in noise is not expected to be substantial.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>XII(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XII(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation for e and f:** (Source: 3). The project is neither located within an airport land use plan, within two miles of an airport, nor within the vicinity of a private airport.

**Noise Section Sources:**

1. San Mateo County. *General Plan. Chapter 16 Man-Made Hazards Policies, Noise Policies.* 1986.
2. Midpeninsula Regional Open Space District. *Regulations for Use of Midpeninsula Regional Open Space District Lands.* Adopted by Ordinance No. 93-1, July 28, 1993. Last Revised and Adopted by Ordinance No. 04-01, August 25, 2004.
3. United States Geological Survey. *Woodside 7.5-minute series quadrangle map.* 1991.
4. Roger L. Wayson, Ph.D., P.E. *National Cooperative Highway Research Program. NCHRP Synthesis 268. Relationship Between Pavement Surface Texture and Highway Traffic Noise.* 1998.
5. California Department of Transportation. *Pavement Advisory PSTPA-02: Designing Quieter Pavements.* September 6, 2005.
6. California Department of Transportation. *Typical Noise Levels, Intensity and the Decibel Scale Chart.* <http://www.dot.ca.gov/hq/esc/Translab/ope/NoiseLevels.html>. Accessed September 16, 2009.
7. California Department of Transportation. *Safety Manual. Chapter 13 Hearing Protection Program.* June 2008. [http://www.dot.ca.gov/hq/opo/safety/safetymanual\\_toc.htm](http://www.dot.ca.gov/hq/opo/safety/safetymanual_toc.htm)
8. CPWR (The Center to Protect Workers' Rights). *Construction Noise Hazard Alert.* December 29, 2003.
9. San Mateo County Ordinance Code, Title 4, Chapter 4.88 – Noise Control, Section 4.88.360.

**XIII. POPULATION AND HOUSING****Would the project:**

**XIII(a) Induce substantial 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)?**

**XIII(b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**XIII(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

	Potential y Significan t Impact	Less Than Significant with Mitigation Incorporation	Less Than Significan t Impact	No Impact
XIII(a)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII(b)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII(c)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation for questions a, b and c:** The project neither induces population growth nor displaces housing or people. The project also does not include the construction or removal of habitable structures. The project replaces an existing vehicular roadway and bridge, that is not accessible to the public and is used strictly by District staff and emergency responders. Therefore, the project will have no affect on population growth.

**XIV. PUBLIC SERVICES**

**XIV(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Fire protection? Police protection? Schools? Parks? Other public facilities?**

**Explanation:** The District’s Operations Department already provides ranger patrol in the Preserve and maintenance staff to care for trails, bridges and parking areas. The District coordinates with other local agencies via mutual aid arrangements in providing public services, including police and fire protection. District Staff is responsible for enforcing District regulations and certain selected sections of California code pertaining to vandalism, bicycle helmets, and parking. The San Mateo County Sheriff’s Office is involved in enforcement of all other code sections. District staff serves as a possible first responder for fire emergencies, with California Department of Forestry and Fire Protection (CAL FIRE) acting as the responsible agency for fire prevention, (i.e. within the State Responsibility Area) and suppression at Purisima Creek Redwoods Open Space Preserve. Nearby Preserves include Burleigh Murray Ranch State Park, Miramontes Ridge Open Space Preserve, and El Corte de Madera Creek Open Space Preserve. This project will have any direct or indirect affect on these other parks and preserves. Because the project will not substantially increase usage of the Preserve, no new or altered governmental facilities will be needed to provide public services to the Preserve as a result of the project.

**XV. RECREATION**

**XV(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

**XV(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?**

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

**Explanation for questions a and b:** (Source: 1 and 2). Replacing the existing bridge will not increase the recreational use of Purisima Creek Redwood Open Space Preserve to a level that would result in a substantial physical deterioration of the Preserve, the natural resources, or the existing trail systems.

The 4,711-acre Preserve is currently open to the public and offers approximately 24 miles of mostly multiple-use trail. Preserve visitors currently park at three locations: (a) a six vehicle parking lot just adjacent to the existing bridge along Higgins Canyon Road, (b) a 22-car parking lot at the top of the Preserve along Skyline Boulevard, and (c) along a informal parking lot pullout on Skyline Boulevard. This project would not affect the desirability of parking at the nearby Higgins Canyon parking lot, as it only replaces an existing bridge and allows continued existing uses. As observed by District Ranger staff, highest visitation occurs on weekends and holidays in the summer months. The nearby parking lot is almost always full during the weekend, weekdays after normal working hours, and holidays. Due to the trail system and the subsequent dispersal of users throughout the Preserve, this increase is not expected to result in substantial impacts to the trail system or to the natural resources in the Preserve. For a discussion on bridge design and construction and the potential impacts to water quality or loss of topsoil, please refer to Section VI and Section IX.

**Recreation Section Sources:**

1. Midpeninsula Regional Open Space District. *Visitor Estimate Survey Project Counts completed by the Public Affairs Department.* June 25, 2007 – July 8, 2007.
2. Midpeninsula Regional Open Space District. *Visitor Counts.* 1995 through 1997.

**XVI. TRANSPORTATION/TRAFFIC**

**Would the project:**

**XVI(a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?**

**XVI(b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

**XVI(f) Result in inadequate parking capacity?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation for a, b, and f:**

As explained in Section XV, replacing the bridge will not increase public visitation to the Preserve. The existing bridge is used by the public (hiking, biking, and equestrian use) and the public will be able to continue use of the new bridge. District patrol and maintenance currently use the Preserve by way of Purisima Creek Road, Higgins Canyon Road, and Highway 35. The bridge will not increase District traffic on public roads. These patrol and maintenance visits are infrequent (a maximum of seven visits per week can be assumed) and therefore the impact is considered less than significant. Additional trips during the construction period will occur as contractors, engineers, District staff, and construction equipment access the site. The surrounding area is sparsely populated and is a mix of rural resident and agricultural land uses. Vehicles are generally leaving homes along Purisima Creek, headed towards working areas. Construction related trips are headed in the opposite direction. Therefore, the impact is considered less than significant.

**XVI(c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**Explanation:** The project has no effect on air traffic patterns.

**XVI(d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**XVI(e) Result in inadequate emergency access?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



**Explanation for D and E:**

Within the Preserve and trail system, motorized vehicles by the public are not allowed per District ordinance. Motor vehicle access within the Preserve will be limited to ranger patrol and maintenance vehicles, and the number of patrol vehicles accessing the Preserve would not be increased as a result of the project. The new bridge will be designed with a 50' turn radius to accommodate emergency vehicles, such as fire trucks, and infrequent heavy equipment use by District maintenance. The current bridge is inadequate and hazardous with heavy vehicles and the project will improve the access roadway and bridge for safer emergency access.

**XVI(g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** This project supports existing alternative modes of transportation, principally walking, biking, and equestrian use. The Preserve and the bridge itself are not open to public transportation and will not have any impact on alternative transportation. The closest public transportation is SamTrans 17 along Highway 1, 3.5 miles away.

**XVII. UTILITIES AND SERVICE SYSTEMS**

**Would the project:**

**XVII(a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**XVII(b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation for a and b:** The project does not provide water services, would not consume water, and would not generate wastewater. The project thus does not include new or increased needs for wastewater treatment or wastewater treatment facilities.

**XVII(c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Explanation:** (Sources: 1). The proposed bridge is located on an existing, previously disturbed area on the Preserve, which would result in minimal impact on the surrounding environment. The design minimizes runoff through a number of erosion control measures, including BMPs for road and trail construction previously approved by the RWQCB and CDFW. There are no storm water drainage facilities on site and the project does not propose any expansion of existing facilities or new facilities.

**XVII(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**XVII(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation for d and e:** The project does not provide water services, would not consume water, and would not generate wastewater.

**XVII(f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**XVII(g) Comply with federal, state, and local statutes and regulations related to solid waste?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Explanation for questions f and g:** (Source: 1). The demolition debris consists of rusted steel girders, which will be recycled, untreated redwood decking, which will be recycled, and bolts and other fixtures. The debris generated by the project is minimal and will comply with all federal, state, and local statutes.

**Utilities and Service Systems Section Sources:**

1. Midpeninsula Regional Open Space District. *Regulations for Use of Midpeninsula Regional Open Space District Lands*. Adopted by Ordinance No. 93-1, July 28, 1993. Last Revised and Adopted by Ordinance No. 04-01, August 25, 2004.

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

**XVIII(a) Does the project have the potential to 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, 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?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------

**Explanation:** As previously discussed in other sections of this document, the project (including mitigation measures incorporated into the project) would not degrade 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, 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. The implementation of the mitigation measures set forth in this document (all of which have been incorporated into the project) would reduce any potential impacts to a less than significant level.

**XVIII(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)?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
--------------------------------	---	------------------------------	-----------

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	-------------------------------------	--------------------------

**Explanation:** As previously discussed in other sections of this document, the impact analysis identifies possible future open space management projects that may produce related impacts, and then examines how the proposed project and these possible future open space management actions may potentially result in cumulative impacts. In general, the inherently low intensity uses in the Preserve and dispersed nature of the open space management program minimizes the potential for cumulative impacts, since any less than significant impact would generally be site-specific, localized, and not expected to have the potential for considerable combined cumulative impacts throughout the region. The possibility of cumulatively considerable impacts is minimized by the overall lack of disturbance to the watershed as a whole associated with open space use.

Unlike residential and economic development projects in urban or suburban areas, the District only implements minimal improvements such as parking lots, bridges, unpaved roads, and natural surface trails within its open space lands. The proposed project, along with similar land management actions by the District or other open space and recreation agencies, would tend to support regional resource protection and enhance public recreational opportunities for local and regional residents and as such have

a beneficial combined cumulative impact.

**XVIII(c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?**

Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation:** The purpose of the project is to provide emergency vehicle and patrol access to portions of the Preserve. Both of these functions ensure the safety of the Preserve users are met and would provide a beneficial impact to people. There are many beneficial aspects for preserve users to open space recreation that are supported by this project. The project will not result in environmental effects that will cause substantial adverse effects on human beings.

**MITIGATION MONITORING AND REPORTING PROGRAM  
FOR THE HARKINS BRIDGE REPLACEMENT PROJECT**

This Mitigation Monitoring and Reporting Program (MMRP) was formulated based on the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the proposed Harkins Bridge Replacement Project (proposed project) prepared for the Midpeninsula Regional Open Space District (District). This MMRP is in compliance with Section 15097 of the *CEQA Guidelines*, which requires that the Lead Agency “adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects.” The MMRP has been prepared in tabular form (see Table 1). The MMRP lists mitigation measures recommended in the IS/MND and identifies mitigation monitoring requirements.

Table 1 presents the mitigation measures identified for the proposed project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, Mitigation Measure AIR-1 is the first mitigation measure identified in the IS/MND.

The first column of Table 1 identifies the mitigation measure. The second column, entitled “Party Responsible for Implementation,” names the party responsible for carrying out the required action. The third column, “Implementation Timing,” identifies the time the mitigation measure should be initiated. The fourth column, “Party Responsible for Monitoring,” names the party ultimately responsible for ensuring that the mitigation measure is implemented. “Action by Monitor” outlines the steps for monitoring the action identified in the mitigation measure. The last column, entitled “Monitoring Timing,” states the time the monitor must ensure that the mitigation measure has been implemented.

**Table 1: Mitigation Monitoring and Reporting Program**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<b>IV. Biological Resources</b>			
<p><b>BIO-1 Special-status Plants Species:</b>                      Focused plant surveys for each species listed in the Biological Assessment shall be conducted in the spring prior to initial ground breaking to determine the species' presence or absence in areas that would be disturbed by construction and earth movement activities. If any special-status plant species are found, areas supporting the species shall be avoided, where feasible. Work shall not start if a special-status plant specimen and its required habitat conditions are found within the impact area while a plan detailing on-site mitigation is developed based on consultation with CDFW. Construction work may start once such plan has been approved by CDFW.</p>	Qualified District Natural Resources Staff or Qualified Consulting Biologist.	In the spring prior to construction of the project.	Operations Project Manager
<p><b>BIO-2 San Francisco Dusky-footed Woodrat</b></p> <p>1. Preconstruction Surveys. A qualified biologist shall conduct San Francisco dusky-footed woodrat nest surveys prior in the February prior to initial ground breaking and just prior to groundbreaking to determine the presence or absence of nests in areas that would be disturbed by construction and earth movement activities. If feasible, disturbance of woodrat nests shall be avoided by staging construction-related equipment and materials away from known nest sites.</p> <p>If during the survey, a woodrat nest is detected, the District will complete one of the following avoidance minimization measures. These measures are listed in order of priority, where the first measure is the preferred measure to be implemented as it provides the least amount of impact to the woodrat. If the first measure cannot be implemented due to extenuating site conditions, the second shall be implemented and so forth down the list.</p> <ol style="list-style-type: none"> <li>a. Any trail alignment, access road or staging area will be relocated to avoid the woodrat nest by at least 5 feet. Safety and/or silt fencing (for nests downslope) will be erected around all nests within 25 feet of the trail alignment, road or staging area to avoid impacts during construction.</li> <li>b. For all woodrat nests that cannot be avoided by project activities (i.e. will require relocation), the CDFW should be consulted with one of the two following options:                         <ol style="list-style-type: none"> <li>i. If the nest appears inactive (e.g. no scat or fresh leaves and twigs), approval will be sought from CDFW to dismantle the nest and replace the lost resource by building an artificial nest. One artificial nest should be built for every one existing inactive nest that is dismantled.</li> </ol> </li> </ol>	Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.	The February prior to construction and just prior to construction	Operations Project Manager



**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><i>Bio-2 Continued...</i></p> <p>ii. If the nest appears active, approval will be sought from CDFW to (1) trap the occupant(s) of the nest, (2) dismantle the nest, (3) construct a new artificial nest with the materials from the dismantled nest, and (4) release the occupant into the new artificial nest. The new nest should be placed no more than 20 feet from its original location and as far from the project footprints as necessary to be protected from construction activities. Nests should only be moved in early morning during the non-breeding season (October through February). If trapping has occurred for three consecutive nights and no woodrats have been captured, the nest should be dismantled and a new nest constructed. A CNDDDB form shall be filled out and submitted to CDFW for any San Francisco dusky-footed woodrats that are trapped. Once trapped, nests shall be torn down and rebuilt surrounding an inverted wooden planter (or similar structure) having at least one entrance and exit hole that is slightly buried into the ground to anchor. Any nest material encountered shall be placed within the nest structure during rebuilding. A small handful of seeds shall be placed within the relocated structure. Relocated nests are intended to provide a release site and opportunity for the woodrats to relocate to another nest (most woodrats average more than one nest and often do not remain with a relocated nest). Once nests are moved, any trapped woodrats should be released into the reconstructed nest during daylight hours so that they seek refuge in the reconstructed nests. In most instances it is expected that the animal will remain in the reconstructed nest until it has an opportunity to relocate to another nest site at night. Relocated nests are expected to eventually be re-colonized and should be monitored one year post construction using visual surveys to determine if a relocated nest has returned to use. A monitoring report should be submitted to CDFW to document use or non/use of relocated nests.</p> <p>2. Employee and Contractor Education Program. The District will conduct an employee education program prior to the initiation of project activities. The program will consist of a brief presentation by persons knowledgeable in special status species biology and legislative protection to explain concerns to contractors and their employees. The program would include the following: a description of woodrat and their habitat needs; an explanation of the status of the woodrat and their protection under state law; and a list of measures being taken to reduce impacts to woodrat during project activities. If a woodrat nest is found on the project footprint, it is to be left alone and all operations should stop. Notify Project site lead and District Staff (if the site lead is a contractor) or notify District Natural Resources Program Manager if Project Lead is District Staff.</p>			

**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><i>Bio-2 Continued...</i></p> <p>3. Daily Monitoring. During the construction phase of the project, a qualified biologist, District Natural Resources staff or a trained, on-site monitor will check the site in the morning every day before construction activities begin for the presence of woodrat or other wildlife present within the work area. If a woodrat is found, the monitor shall have the authority to stop construction in the immediate area and immediately notify appropriate District Staff (Natural Resources Program Manager or designated staff). If the monitor is the District's Natural Resources Staff, or qualified biologist, they will have the authority to notify the CDFW for guidance on procedure. Subsequent recommendations made by the CDFW shall be followed. The monitor would not handle or try to relocate any special-status species.</p> <p>4. Speed Limit. Vehicles shall not drive more than 5 miles per hour within the construction area if these species have been determined to be present. If any woodrat is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly checked underneath before they are moved to ensure that no woodrat is on the ground below the vehicle.</p>			
<p><b>BIO-3 California Red Legged Frog:</b></p> <p>1. Pre-Construction Surveys for Special-Status Amphibians including California Red-Legged Frog (CRLF). Surveys for CRLF and other special-status amphibians shall be conducted before construction begins. In the unlikely event CRLF eggs or tadpoles are found, a 100-foot buffer shall be established around the location until juveniles disperse from the breeding site, as determined by a qualified biologist. If adults are present in the construction area, work shall be stopped until individuals are allowed to disperse on their own volition or the species is relocated by a qualified biologist with permission to handle CRLF. With these measures in place, the impact for CRLF would be reduced to a less than significant level.</p> <p>2. Employee and Contractor Education Program. An employee and contractor education program shall be implemented to educate all construction personnel on CRLF identification and procedures should CRLF be observed in the project area. If a CRLF is found on the project footprint, it is to be left alone and all operations should stop. Notify Project site lead and District Staff (if the site lead is a contractor) or notify District Natural Resources Program Manager if Project Lead is District Staff.</p>	<p>Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.</p>	<p>Prior to construction during construction as specified</p>	<p>Operations Project Manager</p>

**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><i>Bio 3 Continued....</i></p> <p>3. Daily Monitoring. During the construction phase of the project, a qualified biologist, District Natural Resources staff or a trained, on-site monitor will check the site in the morning every day before construction activities begin for the presence of CRLF or other wildlife present within the work area. If a CRLF is found, the monitor shall have the authority to stop construction in the immediate area and immediately notify appropriate District Staff (Natural Resources Program Manager or designated staff). The monitor would not handle or try to relocate any special-status species.</p> <p>4. Speed Limit. Vehicles shall not drive more than 5 miles per hour within the construction area if these species have been determined to be present. If any CRLF is seen in the path of a vehicle, the vehicle shall stop until the animal is out of the path. Parked vehicles shall be thoroughly checked underneath before they are moved to ensure that no CRLF is on the ground below the vehicle.</p>			
<p><b>BIO-4 Compliance with Other Permits:</b>            Project Compliance with All State and Federal Permits. The project may potentially affect a number of species that fall under the jurisdiction of CDFW, USFWS, and NMFS. Each of these permits would be reviewed by agency personal experts in conservation of these sensitive species. The federal permits granted under Section 404 of the Clean Water Act would be required for the construction of the project. The State of California would also have to issue a streambed alteration and agreement for the project. The project shall attain and comply with all state and federal permits for the project. Implementation of this mitigation would reduce the impacts on candidate, sensitive, or special-status species to less than significant level.</p>	Qualified District Natural Resources Staff or Qualified Consulting Biologist, project supervisor and project crew members.	Prior to construction during construction as specified	Operations Project Manager

**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><b>BIO-5 Marbled Murrelets:</b> If noise generating construction activity takes place during the breeding season (April 1 to September 15), construction activity shall be restricted between 1.5 hours after sunrise to 1.5 hours before sunset to minimize disturbance of potential nesting murrelets using forest habitat as a travel corridor between inland nesting and coastal habitat.</p>	Contractor and District staff	During construction from April 1 <sup>st</sup> to September 15th	Operations Project Manager
<p><b>BIO-6 Nesting Birds:</b> A qualified biologist will conduct pre-construction nesting bird surveys within 30 days of the onset of all trees and snags greater than 6 inches DBH and all shrubs taller than 8 feet proposed for removal. If bird nests are observed, an appropriate buffer zone will be established around all active nests to protect nesting adults and their young from construction disturbance. Removal of trees, snags, or woody shrubs with identified avian nests shall be postponed until all young are fledged and tree</p>	District Biologist	30 days prior to construction, February 15 to August 15	Operations Project Manager
<p><b>BIO-7 Pallid Bats</b> If mature trees or snags will be removed during the bat breeding season (April 1 through August 31), a qualified bat biologist shall inspect trees and the bridge for potential roost sites. If no potential roost sites are found, no additional mitigation is necessary. Surveys will consist of a daytime pedestrian survey looking for evidence of bat use (e.g., guano) and/or an evening emergency survey to note the presence or absence of bats. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts, but are not required.</p> <p>If roosts of pallid bats are determined to be present and must be removed, the bats will be excluded from the roosting site before the bridge is removed. A program addressing compensation, exclusion methods, and roost removal procedures will be developed in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) will be replaced in consultation with CDFW and may include construction and installation of bat boxes suitable to the bat species and colony size that was excluded from the original roosting site. Roost replacement will be implemented before bats are excluded from the original roost sites. The District has successfully constructed bat boxes elsewhere that have subsequently been occupied by bats. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the bridge may be removed.</p>	Qualified consulting biologist	Prior to tree removal and bridge demolition, April 1 <sup>st</sup> and August 31 <sup>st</sup> .	Operations Project Manager

**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><b>BIO-8 Riparian Habitat</b>                      Replant appropriate vegetation at a 2:1 ratio in the project area, as seen in Figure 5. This would include planting within the rock slope protection placed on the channel banks. Planting within the site shall occur in four general planting zones: active channel, lower shaded riparian, upper riparian/upland, and direct seeding (upland). Active channel is the zone nearest to the channel flow and represents the planting that shall be completed around the pools, habitat structures, and riffle edges. This zone is comprised of willows. The second zone, lower shade riparian, is comprised of riparian shrub like dogwood, coffeeberry, and current. The third zone is upper riparian/upland that is largely composed of trees, such as red alders and redwoods, and woody shrubs. The highest elevation zone shall consist of a native erosion control mix.</p>	Contractor and District Staff	During construction, the fall and winter following construction	Operations Project Manager
<p><b>BIO-9 Federally protected wetlands</b>                      To mitigate for impacts on federally protected wetlands, Mitigation Measure BIO-4 shall be implemented. This mitigation measure would reduce impacts to wetland habitats to less than significant by requiring the area to be revegetated with native grasses and other herbaceous perennial wetland species.</p>	Contractor and District Staff	During construction	Operations Project Manager
<b>V. Cultural Resources</b>			
<p><b>CULT-1 Subsurface Cultural Resources</b>                      Prior to the initiation of construction or ground disturbing activities, District staff or archaeological monitor shall conduct a meeting to train all construction personnel of the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources.</p>	District staff, archaeological monitor	During a pre-construction field meeting with Contractors and Sub-Contractors	Operations Project Manager
<p><b>CULT-2 Archaeological Deposits</b>                      If there is an unanticipated discovery of archaeological deposits or remains during project implementation, construction crews shall stop all work within 100 feet of the discovery and notify District staff. A qualified archaeologist will assess the discovery, complete an archaeological evaluation and provide recommendations.</p>	District archaeologist	Throughout the construction period	Construction contractor and Operations Project Manager

**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><b>CULT-3 Human Remains:</b>                      In the event human remains, including skeletal remains, graves, or Native American burial sites or graves, are discovered, such as during the course of any ground disturbing activities (grading, excavating, trenching, digging), construction or maintenance activities, the following procedures shall be followed:</p> <ul style="list-style-type: none"> <li>• All work shall immediately cease and there shall be no further excavation or disturbance of the site or the area in the vicinity of the discovery.</li> <li>• Notify District staff immediately.</li> <li>• District staff shall immediately notify the San Mateo County Coroner to evaluate the remains, and follow the procedures and protocols set forth in §15064.5(e) of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387).</li> <li>• Secure the area and no further disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has made a determination of origin and disposition, which shall be made within two working days from the time the Coroner is notified of the discovery, pursuant to State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.</li> </ul> <p>If the Coroner determines that the remains are or may be of a Native American, the Coroner shall notify the California Native American Heritage Commission (NAHC) pursuant to subdivision (c) of the State Health and Safety Code within 24 hours, which will determine and notify the Most Likely Descendant (MLD). The MLD may recommend within 48 hours of their notification by the NAHC the means of treating or disposing of, with appropriate dignity, the human remains and grave goods. In the event of difficulty locating a MLD or failure of the MLD to make a timely recommendation, the human remains and grave goods shall be reburied with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p>	District staff and Contractor	During construction	Construction contractor and Operations Project Manager

**Table 1 Continued**

Mitigation Measures	Party Responsible for Implementation	Implementation Timing	Party Responsible for Monitoring
<p><i>Cult 3 Continued...</i></p> <ul style="list-style-type: none"> <li>If the Coroner determines that the remains are not those of a Native American, the Coroner would make recommendations for the treatment and disposition of the remains.</li> </ul> <p>Construction work shall not begin again until the County Coroner has examined the remains, assessed their significance, and offered recommendations for any additional exploratory measures deemed necessary for the further evaluation of, and/or mitigation of adverse impacts.</p> <p>Mitigation measure CULT-2 under section V(b) calls for stopping work and evaluating significance if an artifact find is made, which will also reduce the potential for disturbance of human remains.</p>			
<p><b>VIII. Hazards and Hazardous Materials</b></p>			
<p><b><u>Haz-1 through 4 Wildland Fire</u></b></p> <p><u>HAZ-1.</u> All equipment to be used during construction must have an approved spark arrestor.</p> <p><u>HAZ-2.</u> Cut grass and reduce fuels around construction sites where vehicles are allowed to park.</p> <p><u>HAZ-3.</u> Minimize use of mechanical construction equipment during hot, dry, windy weather.</p> <p><u>HAZ-4.</u> Hired contractors shall be required to:</p> <ul style="list-style-type: none"> <li>i) Provide water to suppress potential fires caused by the work performed.</li> <li>ii) Remind workers that smoking is prohibited at the work site and on any District land per contract conditions and District Ordinance.</li> <li>iii) Maintain working ABC fire extinguishers on all vehicles in the work area.</li> </ul> <p>Contact both Mountain View Dispatch at (650) 968-4411 and the California Department of Forestry, Skylonda, at (650) 851-1860 for emergency response in the event of a fire (these numbers are to report emergencies only).</p>	Contractor	During Construction	Operations Project Manager

**RESOLUTION NO. 14-\_\_\_**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF  
THE MIDPENINSULA REGIONAL OPEN SPACE DISTRICT  
ADOPTING THE MITIGATED NEGATIVE DECLARATION, THE  
MITIGATION MONITORING PROGRAM, AND THE FINDINGS IN  
CONNECTION WITH THE PROPOSED HARKINS BRIDGE  
REPLACEMENT PROJECT (PURISIMA CREEK OPEN SPACE  
PRESERVE)**

---

**WHEREAS** The Board of Directors of the Midpeninsula Regional Open Space District (“District”) has reviewed the proposed Harkins Bridge Replacement Project and all associated actions (“the Project”) and has reviewed the Mitigated Negative Declaration (“MND”) analyzing the environmental effects of the Project;

**NOW, THEREFORE, BE IT RESOLVED** by the District Board of Directors that, based upon the Initial Study, Mitigated Negative Declaration, Mitigation Monitoring Program, all comments received, and all substantial evidence in light of the whole record presented, the Board of Directors find that:

1. Notice of the availability of the Initial Study and Mitigated Negative Declaration and all hearings on the MND were given as required by law and the actions were conducted pursuant to California Environmental Quality Act (CEQA) and the CEQA Guidelines.
2. All interested parties desiring to comment on the MND were given the opportunity to submit oral and written comments on the adequacy of the MND prior to this action by the Board of Directors.
3. Prior to approving the Project that is the subject of the MND, the Board has considered the MND, along with all comments received during the public review process.
4. The Board finds that, on the basis of the whole record before it, including the Initial Study and MND, that there is no substantial evidence that the Project will have a significant effect on the environment in that, although the proposed Project could have significant effects on the environment, there will not be a significant effect in this case since Mitigation Measures have been made a part of the Project to avoid such effects.
5. The Board adopts the MND and determines that the MND reflects the District’s independent judgment and analysis
6. The Board adopts the attached Mitigation Monitoring and Reporting Program and will require it to be implemented as part of the Project.
7. The location and custodian of the documents or other material, which constitute the record of proceedings upon which this decision is based are located at the offices of the General Manager of the Midpeninsula Regional Open Space District, 330 Distel Circle, Los Altos, California 94022.



\* \* \* \* \*

PASSED AND ADOPTED by the Board of Directors of the Midpeninsula Regional Open Space District on \_\_\_\_\_, 2014, at a Regular Meeting thereof, by the following vote:

- AYES:**
- NOES:**
- ABSTAIN:**
- ABSENT:**

**ATTEST:**

**APPROVED:**

---

Secretary  
Board of Directors

---

President  
Board of Directors

**APPROVED AS TO FORM:**

---

General Counsel

I, the District Clerk of the Midpeninsula Regional Open Space District, hereby certify that the above is a true and correct copy of a resolution duly adopted by the Board of Directors of the Midpeninsula Regional Open Space District by the above vote at a meeting thereof duly held and called on the above day.

---

District Clerk