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Memo

To:	Darrell Cardiff Senior Environmental Planner Caltrans District 1 Local Assistance 1656 Union Street Eureka, CA 95501	From:	Connie MacGregor 376 Hartnell Avenue, Suite B Redding, CA 96002
Project/File:	2272010200	Date:	May 31, 2023

Dear Mr. Cardiff:

Reference: Section 4(f) Documentation for a De Minimis Finding for the Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project (BRLO 5910 (106)

Mendocino County Department of Transportation (County) is proposing to rehabilitate and widen the Navarro River Bridge (No. 10C-0032) on Philo-Greenwood Road over the Navarro River. The County has nominated this bridge for rehabilitation under the federal-aid Highway Bridge Program administered by the Federal Highway Administration through California Department of Transportation (Caltrans) Division of Local Assistance. In 2010, Caltrans determined that the bridge was structurally deficient and functionally obsolete due to a variety of factors, including a narrow deck (i.e., one-lane bridge) and rotting timbers. The rehabilitated bridge will meet current design standards of Mendocino County, American Association of State Highway and Transportation Officials (AASHTO), and Caltrans.

General Background

The proposed project will widen and rehabilitate/retrofit the existing arch span and replace the timber approach spans with a new concrete approach structure. The project is located approximately 16 miles west of Ukiah, Mendocino County, California, where Philo-Greenwood Road crosses the Navarro River (Figure 1). Hendy Woods State Park boundary is adjacent to County's right of way (ROW). Philo-Greenwood Road is used to access Hendy Woods State Park; the entrance intersection is approximately 300 feet southwest of the existing bridge. The County maintains an existing 40-foot ROW along Philo-Greenwood Road project site corresponds to a Mendocino County ROW easement through portions of the following Assessor Parcel Numbers (APN) (Figure 2): 026-530-10 (Mendocino Redwood Company LLC), 026-530-03 (Corby), 026-360-01 (Corby), 026-530-04 (Bates/Ttees), 026-360-55 (Bates/Ttees), 026-530-05 (State of California), and 026-530-09 (Mendocino Redwood Company LLC). There is only one parcel affected by the project that meets the criterial of a Section 4(f) resources—Hendy Woods State Park bounds the Mendocino County ROW upstream (south/southwest) of the Philo-Greenwood Road bridge.

Section 4(f) Regulatory Background

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law in 49 USC 303, declares that "it is the policy of the United States Government that special effort should be made to

preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the federal Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use; or
- It is determined that use of the property will have a de minimis impact.

For publicly owned public parks, recreation areas, and wildlife and waterfowl refuges, a de minimis impact is one that will not adversely affect the activities, features, or attributes of the Section 4(f) property. Section 4(f) also considers project effects on historic sites. Relative to historic sites, a de minimis impact means that the Federal Highway Administration has determined (in accordance with 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act) that either no historic site is affected by the project or that the project will have "no adverse effect" on the historic site. A de minimis impact determination does not require analysis of feasible and prudent avoidance alternatives. However, if a historic site is involved, then coordination with the State Historic Preservation Officer is also needed.

[This] document discusses de minimis impact determinations under Section 4(f). Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This amendment provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required; and the Section 4(f) evaluation process is complete. FHWA's final rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including de minimis impact determinations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

Project Description

Purpose and Need

This project purpose is to improve traffic operations and public safety by completing a widening of the existing roadway approaches at either side of the improved bridge facility and a widening (through rehabilitation) of the bridge itself. Widening the existing arch span with approach span replacement would preserve the contextual history of the arch at this highly visible park site and modernize this important crossing for future generations. The project need comes from the bridge's classification as "Functionally Obsolete" and substandard rating.

Reference: Section 4(f) De Minimis Finding for the Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project

Existing Conditions

The existing 350-foot-long bridge on Philo-Greenwood Road was built in 1951 and crosses the Navarro River northwest of Philo, adjacent to Hendy Woods State Park. The existing bridge is composed of 15 spans—three open spandrel concrete spans and 12 timber approach spans. The timber approach spans are on the northern end of the existing bridge. The existing deck over the arch spans is bare concrete while the timber approach spans subfloor is covered with an asphalt concrete overlay. The bridge has a total deck width of 19 feet. The bridge rails consist of all timber elements and do not meet current design standards. The approach spans are supported by trestle bent caps on timber columns founded on reinforced concrete strip footings. The bridge abutments consist of reinforced concrete and appear to be founded on rock with spread footings.

Several timber elements within the approach trestle have significant rotting, and some approach spans have noticeable sag. Timber stringers and posts have been repaired with steel banding to arrest member splitting. Some timber stringers have been supplemented with additional stringers. There are large cracks in the trestle bent concrete footings. Deck supports outside the arch ribs appear to have been re-used from an earlier generation of structure. The concrete from these end supports does not match the rest of the arch bridge and is of poor, deteriorating quality. Large portions of this concrete can be removed by hand (Quincy Engineering, no date).

The existing approach roadway is a rural local road in rolling terrain with a 40 miles per hour design speed. The current average daily trips (ADT) at the project site is 400 vehicles per day, and the future forecasted ADT is 1,200 vehicles per day (Crawford and Associates 2021). This stretch of Philo-Greenwood Road is relatively flat and becomes steep and curvy just southwest of the bridge.

Per Caltrans records, this concrete arch bridge is not considered historic. Many similar looking arch bridges were constructed in the early part of the 20th century and are formally considered historically significant. This arch bridge was constructed relatively recently (1951) and is currently not considered historically significant by Caltrans. The structure is, however, considered significant locally.

Philo-Greenwood Road is used to access both Hendy Woods State Park and the Philo Apple Farm. The Hendy Woods State Park entrance intersection is located approximately 300 feet southeast of the existing bridge, and the entrance to the Philo Apple Farm is approximately 70 feet east of the existing bridge. Conforming the new roadway to the exiting roadway prior to the Hendy Woods State Park intersection will not be an issue. The Philo Apple Farm entrance will remain in its existing location but will be modified to accommodate the new bridge. A bridge barrier protection system may be required on the southeast corner to reduce impacts to the driveway.

The existing bridge carries only one lane of traffic and is classified as Functionally Obsolete. A 2010 Caltrans sufficiency rating of 46.9 makes this bridge eligible for rehabilitation and widening. The Caltrans appraisal report rates the deck geometry as poor with all traffic safety features rated as substandard.

Proposed Project

(The following project design elements for bridge rehabilitation and widening are depicted on Figure 2.)

The project would widen and rehabilitate/retrofit the existing arch span and replace the timber approach spans with a new 3-span concrete approach structure. This would require a slight shift of the roadway alignment to the northwest of the existing bridge centerline to facilitate bridge widening. This alignment

would allow a lane of traffic to remain open during two-stage bridge construction. The existing arch span would be widened to meet the capacity requirements of the roadway facility and rehabilitated/retrofitted to meet current design code requirements.

The project would increase the traffic width on the bridge and replace all traffic safety features to meet current standards. The approach and the one-lane bridge would be widened to carry two lanes of traffic to meet Caltrans and AASHTO standards. Based on criteria from the AASHTO "A Policy on Geometric Design of Highways and Street 2011" (Green Book), the required traffic passage for this bridge would consist of two 11-foot lanes with two 5-foot shoulders for a total clear width of 32 feet, not including bridge railings.

Since there is no practical alternative detour route, Philo-Greenwood Road would need to remain open for the duration of construction. The project would not involve permanent modification or alteration of the Navarro River; however, construction access would require a temporary stream crossing and temporary access road.

Two drainage basins would be constructed, one on each side of the river. On the east side of the river, Construction Access Alternative 1 would be constructed to access the east side drainage basin and associated contour grading.

Construction Access Alternative 2 (from staging area to temporary crossing) would be constructed on the west side of the river, downstream of the bridge to allow construction equipment to gain access into the streambed. A temporary trestle system is anticipated for temporary crossings, both for access of construction materials and equipment and to support falsework and forms for concrete placement. The temporary trestle may be supported on precast elements, timber mats, or clean gravel confined within metal forms/elements. In general, the length of the trestle system required may be up to 150 feet long and up to approximately 40 feet wide. The reach of Navarro River in and immediately adjacent to the bridge is a popular informal public river access known as Philo Beach. Residents and visitors to Hendy Woods State Park commonly visit the site during the prime summer recreation season. Public access to the beach and reach of river in the project vicinity would be temporarily closed during construction to ensure public safety. However, the river would remain publicly accessible upstream of the project area, and accessible from Hendy Woods State Park trails on the west side of the river.

To accommodate traffic handling during stage construction, project construction would require an additional 5 feet of bridge width to accommodate a raised sidewalk in the final bridge configuration (two 11-foot lanes, two 5-foot shoulders, and a 5-foot sidewalk). This would require a slight shift of the roadway alignment to the northwest of the existing bridge centerline to facilitate bridge widening. A new concrete deck would be constructed across the entire widened structure to allow for improvements in the roadway vertical profile, including conforms to the approach roadway. The timber approach spans would be fully replaced by a new post-tensioned cast-in-place concrete bridge approach structure. A single lane of traffic and pedestrian access would remain open throughout construction through staging and traffic handling. The rehabilitated bridge and approaches would be shifted slightly downstream of the existing bridge centerline to facilitate the bridge widening.

The bridge is expected to be founded on spread footings bearing on exposed rock and shallow bearing layers in the river terrace. Construction of these foundations would require earthwork excavation and backfill and temporary shoring systems such as braced sheet piling and tieback walls to allow placement of reinforced concrete foundation elements. Placement of the new arch foundations in rock along the river would require water diversion systems, dewatering, temporary trestle, rock excavation machinery, and rock anchors. The dewatering activities would be required to construct the bridge foundations, specifically the

foundation elements supporting the arch portion on either side of the main river channel. The complete width of the arch would be built in two phases (partial widths) to accommodate traffic during construction over two construction seasons. Construction activities for the arch foundations would occur at the start of each arch construction phase, near the start of each construction season. It may be possible to complete all arch foundation construction at the start of the first construction season.

Water would need to be excluded from areas where the new and existing arch ribs terminate at existing grades and rock outcropping straddling the riverbanks. It is anticipated that the area to be dewatered would be approximately 60 feet by 30 feet on both sides of the river. The dewatered area would be used for partial demolition of the existing bridge and construction of foundations for the new/widened bridge. It is anticipated that these activities could take up to 10 weeks in the dewatered areas. Dewatering may be accomplished using means such as water bladders, precast concrete elements covered in plastic sheeting, or placed metal elements weighted with clean washed gravel fill. The contractor will be required to remove water exclusion materials at the completion of construction activities.

Construction of the superstructure for both the new arch and the new approach bridge would require a temporary system (i.e., falsework) made of timber and steel beams and posts to support concrete formwork and wet concrete until it hardens to become the permanent bridge structure. Long spans of concrete formwork over the river would require a temporary construction trestle beneath the existing bridge. The temporary trestle may be supported on precast elements, timber mats, or clean gravel confined within metal forms/elements. All temporary construction systems and fill materials within the floodplain will be removed upon completion of bridge construction at the end of each construction season.

Removal of the exiting timber approach structure and portions of existing concrete arch would occur throughout both seasons as needed to make room for the new bridge elements. Reinforcement and shoring of portions of the existing bridge would also be required to stabilize them for traffic during construction of the adjacent new bridge elements.

It is anticipated that excavators, dozers, cranes, pavers, dump trucks, concrete trucks, concrete pumps, excavation shoring systems, concrete formwork systems, and drilling equipment would be required to construct the new bridge. Construction is anticipated to be completed in two construction seasons. The first season would construct approximately half of the width of the final structure including part of the new approach structure and a widening on the existing arch structure. The second season would construct the other half of the approach structure and complete rehabilitation of the existing arch structure. A concrete closure pour at the end of the second season would tie the two stages together into one final structure.

Findings

Assessment of Potential Section 4(f) Resources

Philo-Greenwood Road over Navarro River Bridge is currently classified by Caltrans as a Category 5 bridge. Replacement of the bridge structure itself would have no impact on a Section 4(f) resource. Section 4(f) does not apply to privately owned lands having no Section 4(f) triggers (e.g., historic sites). The bridge (10C-0032) is listed as a Category 5 bridge by Caltrans and as such does not meet the criteria for listing on the National Register of Historic Places. No historic properties are located within the project limits (Alta 2022). The provisions of Section 4(f) relative to historic resources would not be triggered by the proposed project.

Project construction would encroach slightly onto Hendy Woods State Park upstream of the Philo-Greenwood bridge. The park is a Section 4(f) resource.

Hendy Woods State Park

The adjacent Hendy Woods State Park is managed by California State Parks and is thus a Section 4(f) property. Hendy Woods State Park is a year-around camping and day use offering approximately 5 miles of trails throughout the park, and public access to the Navarro River for swimming, wading, and kayaking. Immediately downstream of the state park is Philo Beach, an unmaintained, publicly accessible swimming area beneath the Philo-Greenwood Road bridge. This locally popular swimming hole is downstream of the bridge on private property owned by the Mendocino Redwood Company. From Hendy Woods State Park, it can be accessed by walking downstream (west) from the park along informal trails adjacent to the Hendy Woods State Park roadway. Many visitors to Philo Beach park informally along the Philo-Greenwood Road right of way. There are no formal public facilities (e.g., restrooms, enhanced parking, designated trails, etc.) associated with Philo Beach.

Philo-Greenwood Road would remain open during project activities along with the Hendy Woods State Park entrance. The proposed project at this location is anticipated to temporarily impact vehicular access to the State Park due to traffic control on Philo-Greenwood Road. Occasional short term traffic delays would occur on Philo-Greenwood Road during bridge rehabilitation and widening activities. The existing one-lane bridge deck is narrow, and vehicles must yield for one way traffic to allow for safe crossing. The project would utilize traffic control plans on Philo-Greenwood Road and allow access to the entrance of Hendy Wood State Park, which would remain open during project construction. Staging would be in County right-of-way on the west side of Philo-Greenwood Road as identified on Figure 2. During construction, a temporary work trestle could temporarily impact visual aesthetics from some Hendy Woods vantage points. However, bridge construction would not be visible from the vast majority of Hendy Woods State Park. Once construction is complete, the work trestle will be removed, restoring temporary impacts to pre-construction conditions. Additionally, the project will not directly impact public access to Navarro River from Hendy Woods State Park located upstream of the project.

Construction activities related to noise, the appearance of equipment on the landscape (visual resources), and the movement of equipment throughout the project area (accessibility) would have a de minimis effect on the indirect recreational use of public lands. Although the potential exists for water-based recreationists to encroach into the project area from the state park, Philo Beach and the area affected by construction would be temporarily closed for public safety during construction and would have no effect on the public's use of the state park. The effects of this temporary closure on state park visitors would be de minimis since river access outside of the project area would remain publicly accessible during construction.

Section 4(f) would be triggered by the minor encroachment of the project construction area onto the Hendy Woods State Park parcel (APN #026-530-05) immediately upstream of the bridge. It is anticipated that a temporary encroachment permit will be needed from California State Parks. Based on the minor level of temporary impacts associated with the project, it would not have a substantial adverse effect on the existing use, features, or attributes of the Section 4(f) resources adjacent to the project. Rather, the proposed bridge rehabilitation and widening activities associated with the project would directly improve public safety and maintain public recreational access to Hendy Wood State Park served by Philo-Greenwood Road by creating a safer, wider, and more durable stream crossing.

Specifications, Avoidance and Minimization, and Mitigation Measures

Construction activities will be limited to daylight hours (7 am to 7 pm) in conformance with County noise related zoning ordinances and other applicable regulations. It is expected that the Contractor will perform the majority, if not all, construction operations during weekdays. It is possible that the Contractor may elect to perform limited operations on weekends due to specific schedule or logistical constraints. However, it is not anticipated that weekend work activities will be a routine occurrence as there is adequate time for weekday only activities within the allowable construction schedule and there is an economic disincentive for the Contractor to work on weekends due to greater labor costs.

Additionally, the project will employ Caltrans Standard Specifications (2018), avoidance and minimization measures, and mitigation measures during construction to further reduce construction-related impacts on Hendy Woods State Park and its visitors.

CALTRANS STANDARD SPECIFICATIONS

Caltrans Standard Specifications (2018) will be used during construction to moderate noise and vibration in the project area and vicinity.

14-8.02 Noise Control

- Control and monitor noise resulting from work activities**.**
- Do not exceed 86 decibels (dBA) maximum sound level (Lmax) at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

AVOIDANCE AND MINIMIZATION MEASURES

AMM1 Internal combustion engines will be equipped with a manufacturer-recommended muffler and will not be allowed to operate onsite without the appropriate muffler.

Mitigation Measure #1 – Air Quality/Dust Control

The following measures will be implemented to avoid or minimize the potential for adverse impacts on air quality:

MM1 In the construction bid documents, the County will include provisions that the contractor will implement a dust control program to limit fugitive dust emissions. The dust control program will include but not be limited to the following elements, as appropriate:

- Water inactive construction sites and exposed stockpiles at least twice daily (including non-workdays) or until soils are stable. Water will not be withdrawn or diverted from streams with anadromous fish or from non-fish bearing streams that help to maintain aquatic habitat.
- Pursuant to California Vehicle Code, Section 23114(c)(4), all trucks hauling soil and other loose material to and from the construction site will be covered or will maintain at least 6

inches of freeboard (i.e., minimum vertical distance between the top of the load and the trailer).

- Any topsoil removed during construction will be stored on-site in piles no higher than 4 feet to preserve the seed bank and allow development of microorganisms prior to replacing the soil in the construction area. The topsoil piles will be clearly marked and flagged. Topsoil piles that will not immediately be used in the construction area will be revegetated with a non-persistent erosion and sediment control mixture.

- Soil piles for backfill will be marked and flagged separately from native topsoil stockpiles. These soil piles will also be surrounded by silt fencing, straw wattles, or other sediment barriers or covered unless they are to be used immediately.

- All stockpiles, dirt and gravel roads, and exposed or disturbed soil surfaces will be watered by hand or with watering equipment, as necessary to reduce airborne dust.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and/or its contractor

Mitigation Measure #6 – Erosion and Sedimentation Control

MM6-1 Erosion and sediment control measures will be implemented during construction of the project. These measures will conform to the provisions in Section 21 of the Caltrans Standard Specifications (2018) and any special provisions included in the contract for the project. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which will describe and illustrate the types and locations of best management practices (BMPs) in the project site to be implemented based on local conditions and would require regular inspections and a Rain Event Action Plan.

Erosion and sediment control measures to be included in the SWPPP or to be implemented by the County will include the following:

- To the extent practicable, activities that increase the erosion potential will be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall to transport sediment to surface water features. If these activities must take place during the late fall, winter, or spring, temporary erosion and sediment control structures will be in place and operational at the end of each construction day and will be maintained until permanent erosion and sediment control structures are in place.

- Areas where vegetation needs to be removed will be identified in advance of ground disturbance and limited to only those areas that have been approved by the Mendocino

County Department of Transportation. Exclusionary fencing will be installed around areas that are not to be disturbed.

- Within 10 days of completion of construction in areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch will be applied to disturbed areas to reduce the potential for short-term erosion. Prior to a rain event or when there is a greater than 50 percent possibility of rain within the next 24 hours, as forecasted by the National Weather Service, weed-free mulch will be applied to all exposed areas upon completion of the day's activities. Soils will not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, will be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures will be installed prior to any clearing or grading activities. Sediment accumulation at the base of BMPs will be removed before BMP removal to avoid sediment mobilization. Erosion and sediment control measures that employ monofilament netting will be prohibited within the work area.

- If spoil sites are used, they will be placed where they do not drain directly into a surface water feature, if possible. If a spoil site would drain into a surface water feature, catch basins will be constructed to intercept sediment before it reaches the feature. After construction, spoil sites will be graded and vegetated to reduce the potential for erosion.

- Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition until disturbed areas have been revegetated.

- Any new or previously excavated gravel material placed in the channel will meet Caltrans' cleanness test indicating the relative proportions of clay-sized material clinging to coarse aggregate and screenings (California Test No. 227) with a value of 85 or higher (excluding such materials as soil in the RSP to allow for riparian planting.

- Water removed from the coffer dammed area for east arch foundation removal and abutment footings will be pumped to a temporary sediment retention basin outside of the active channel on the floodplain to allow sediment of settle out and water to percolate through the alluvial floodplain to return to the river channel.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #7 – Prevention of Accidental Spills

MM7-1 Construction specifications will include the following measures to minimize the potential for adverse effects resulting from accidental spills of pollutants (e.g., fuel, oil, grease):

- A site-specific Spill Prevention Plan will be implemented if potentially hazardous materials are used or stored at the construction site. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching surface water features.
- Equipment and hazardous materials will be stored a minimum of 50 feet away from surface water features.
- Vehicles and equipment used during construction will receive proper and timely maintenance to reduce the potential for mechanical breakdowns leading to a spill of potentially hazardous materials. Maintenance and fueling will be conducted in an area at least 50 feet away from surface water features or within an adequate fueling containment area.
- Equipment operating within the ordinary high-water mark will use non-toxic vegetable oil for operating hydraulic equipment instead of traditional hydraulic fluids.
- Place plastic materials under asphaltic concrete paving equipment while not in use, to catch and/or contain drips and leaks.
- Minimize sand and gravel from new asphalt getting into storm drains, streets, and creeks by sweeping. Old or spilled asphalt must be recycled or disposed as approved by the Resident Engineer.
- Asphaltic concrete grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drain or watercourses. Install silt fence until structure is stabilized or permanent controls are in place.
- Collect and remove all broken asphalt and recycle when practical; otherwise, dispose in accordance with Standard Specification 7-1.13.
- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Use silt fence until installation is complete.
- Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.

- Drainage inlet structures and manholes will be covered with filter fabric during application of seal coat, tack coat, slurry seal, and/or fog seal.
- Seal coat, tack coat, slurry seal, or fog seal will not be applied if rainfall is predicted to occur during the application or curing period.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #8 – Replacement of Lost Riparian Habitat

The following measures will be implemented to reduce potential impacts on riparian habitat in the project area:

MM8-1 The width of the construction disturbance zone within the riparian habitat will be minimized through careful pre-construction planning.

MM8-2 Exclusionary fencing will be installed along the boundaries of all riparian areas to be avoided to minimize impacts on riparian vegetation outside of the construction area.

MM8-3 Riparian habitat areas temporarily disturbed will be replanted using riparian species that have been recorded along Navarro River near the project area, including white alder (*Alnus rhombifolia*), red alder (*Alnus rubra*), willow (*Salix* spp.), and Oregon ash (*Fraxinus latifolia*).

MM8-4 On-site creation/restoration will occur in areas disturbed during project construction and the amount of habitat created/restored will be at a 3:1 ratio of new plantings for each large woody plant removed that is greater or equal to 6 inches in diameter at breast height. These replanting ratios will help promote successful establishment of at least one vigorous plant for each large woody plant removed to accommodate the project.

MM8-5 Plant spacing intervals will be determined as appropriate based on-site conditions following construction.

MM8-6 Non-native tree species removed during project construction will be replaced with native riparian species.

MM8-7 Revegetation monitoring will be implemented in compliance with regulatory permit conditions and be initiated immediately following completion of the planting; and will be described within a Riparian Wetland Mitigation and Monitoring Plan to be reviewed and approved by the U.S. Army Corps of Engineers, North Coast Regional Water Quality Control Board, and CDFW. It is anticipated that this plan will provide for a five-year monitoring and contingency program to provide for successful restoration of riparian vegetation. The monitoring surveys will consist of a general site walkthrough evaluating the survival and health of riparian plantings, signs of

drought stress, weed or herbivory problems, and the presence of trash or other debris. In the revegetation area, 85 percent or greater survival of planted species (including container stock and hardwood cuttings) will be considered a success when measured at the end of a five-year monitoring period. However, greater than 50 percent mortality of planted species will be considered acceptable if "volunteer" native species provide complete vegetation coverage in the mitigation area. If monitoring results indicate that revegetation efforts are not meeting established success criteria, corrective measures will be implemented.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #9 – Prevention of Spread of Invasive Species

The following measures will be implemented to prevent the spread of invasive species:

MM9-1 All equipment used for off-road construction activities will be weed-free prior to entering the project area.

MM9-2 Any mulches or fill used will be weed-free.

MM9-3 Any seed mixes or other vegetative material used for revegetation of disturbed sites will consist of locally adapted native plant materials to the extent practicable.

MM9-4 Any gravels or materials used for the temporary stream diversions will be new, from a local source, or properly disinfected or cleaned prior to installation.

MM9-5 Any equipment (including boots/waders) and construction equipment will be properly disinfected or cleaned according to guidance provided by the State of California Aquatic Invasive Species Management Plan (California Department of Fish and Game 2008) prior to in-stream work to prevent the spread of aquatic invasive species.

Timing/Implementation:	Prior to and during construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #15 – Wetlands and Other Waters of the U.S./Waters of the State

The following measures will be implemented to avoid or minimize the potential for adverse impacts on wetlands and other waters of the U.S./waters of the state to a less-than-significant level:

MM15-1 Prior to any discharge of dredged or fill material into waters of the U.S./waters of the state, the required permits and authorizations will be obtained from the U.S. Army Corps of Engineers and the Regional Water Quality Control Board. All terms and conditions of the required permits/authorizations will be implemented.

MM15-2 Prior to any activities that would obstruct the flow of, or alter the bed, channel, or bank of any stream or river, a Notification of Streambed Alteration will be submitted to the California Department of Fish and Wildlife (CDFW). If required, a Streambed Alteration Agreement will be obtained from CDFW, and all conditions of the agreement will be implemented.

MM15-3 All wetlands and other waters of the U.S./waters of the state that are temporarily affected by project construction will be restored as close as practicable to their original contour and conditions within 10 days of the completion of construction activities.

MM15-4 Riparian vegetation removal within riparian wetlands will be minimized to the greatest extent practicable. Where practicable, vegetation will be cut with hand tools at ground level to enable regrowth from roots when construction is complete.

Timing/Implementation:	Prior to, during, and after construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #16 – Cultural Resources

The following measure will be implemented to minimize or avoid project-related impacts on cultural resources:

MM16-1 **Inadvertent Discovery of Cultural Resources.** If cultural resources, such as chipped or ground stone, historic debris, building foundations, or bone are discovered during ground disturbance activities, work will be stopped within 20 meters (66 feet) of the discovery, per the requirements of CEQA (Title 14 California Code of Regulations [CCR] 15064.5 (f)) and Section 106 (36 CFR 800.13). Work near the archaeological finds will not resume until a professional archaeologist who meets the Secretary of the Interior's Standards and Guidelines has evaluated the materials and offered recommendations for further action.

MM16-2 **Inadvertent Discovery of Human Remains.** If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Health and Safety Code, Section 7050.5). The Mendocino County coroner will be contacted to determine whether the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (PRC, Section 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in PRC, Section 5097.98. Work may resume if NAHC is unable to identify a descendant or the descendant failed to make a recommendation.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #17 – Greenhouse Gas Emissions

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

MM17-1 The project will comply with Caltrans Standard Specifications Section 14-8 regarding air quality.

- In accordance with Caltrans Standard Specifications, the contractor will comply with all of the Air District rules, ordinances, and regulations regarding air quality restrictions.
- The project will comply with Title 13 CCR 2485 which restricts construction vehicles idling to no longer than five consecutive minutes.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #18 – Lead-Based Paint

The following measure will be implemented to reduce potential impacts from lead-based paint to a less-than-significant level:

MM18-1 The County will include provisions in the construction bid documents to provide for the proper removal and disposal of lead-based paint coated surfaces found on the existing bridge. The following measures will be implemented to reduce construction-related environmental impacts that could result from lead-based paint removal:

- LBP will be abated before planned construction/demolition by a licensed contractor in accordance with 17 CCR 3500.
- LBP must be transported under a Uniform Hazardous Waste Manifest (Title 22 CCR, Section 6626.23). It must be disposed of either at a Class I landfill or at other landfills that have specific permits to accept these wastes.
- Demolition and construction work will be subject to the applicable work practices for LBP and lead hazards including:
  - California Construction Order 1532.1(a)
  - Lead-in-Construction Standard
  - Title 17, CCR (CCR), Division 1, Chapter 8
  - Work Practices for Lead-Based Paint and Lead Hazards

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and/or its contractor

Mitigation Measure #19 – Treated Wood Waste

The following measure will be implemented to reduce potential impacts from treated wood waste to a less-than-significant level:

MM19-1 The County will include provisions in the construction bid documents to provide for the proper removal and disposal of treated wood waste material found on the existing bridge. The following measure will be implemented to reduce construction-related environmental impacts that could result from treated wood waste removal:

- The contractor will remove treated wood waste following the alternative management standards specific under Caltrans Special Standard Provision 14-11.14 for treated wood waste, as well as California Code of Regulations Title 22, Division 4.5, Chapter 34, Sections 67386.1 through 67386.12 for labeling, accumulation, off-site shipment tracking, notification, treatment, and disposal. All personnel that may come into contact with treated wood waste will receive, at a minimum, training on safe handling, sorting and segregating, storage, labeling (including date), and proper disposal methods.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Mitigation Measure #20 – Wildfire Prevention

The following measure will be implemented to reduce potential impacts from wildfire to a less-than-significant level:

MM20-1 The County will include provisions in the construction bid documents to require measures by the project Contractor to minimize project-related potential for wildfire ignition during construction. Per the 2022 Caltrans Standard Specifications section 7-1.02M(2) – Fire Protection, the construction contract will require the Contractor to:.

- Submit the names and emergency telephone numbers of the nearest fire suppression agencies before the start of job site activities as an informational submittal. Post the names and phone numbers at a prominent place at the job site. This will help establish communication lines in the event of a wildfire emergency.
- Submit a fire prevention plan required by Cal/OSHA before the start of job site activities.
- Cooperate with fire prevention authorities in performance of the work.

- Immediately report fires occurring within and near the project limits by dialing 911 and to the nearest fire suppression agency by using the emergency phone numbers retained at the job site.
- Prevent project personnel from setting open fires that are not part of the work. None of the planned construction activities requires the ignition or use of open fires.
- Prevent the escape of and extinguish fires caused directly or indirectly by job site activities.

MM20-2 Per the requirements of PRC Section 4442, the County will include a note on all construction plans that internal combustion engines will be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

Timing/Implementation:	During construction
Enforcement:	County
Monitoring:	County and its contractor

Conclusions

Regarding Section 4(f) resources that may be affected by the project, the following determinations were made in accordance with 23 USC 101(a) de minimis impact:

- The project would have no adverse effect on a historic property in accordance with 36 CFR part 800.
- The project would not adversely affect a publicly owned park, recreation area, or wildlife and waterfowl refuge, including the features, attributes, or activities qualifying the property for protection under Section 4(f). Project-related impacts on Section 4(f) resources would be temporary and de minimis.

Please contact me if you have any questions. Thank you.

Regards,

STANTEC CONSULTING SERVICES INC.

Connie MacGregor
Project Manager
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Mobile: 530 254-4786
connie.macgregor@stantec.com

Reference: Section 4(f) De Minimis Finding for the Philo-Greenwood Road over Navarro River Bridge (10C-0032) Rehabilitation and Widening Project

stantec.com

Attachments: Figure 1. Project Location
Figure 2. Project Design

References:

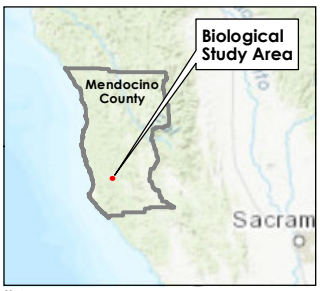
Alta (Alta Archaeological Consulting). 2022. Historic property survey report for the Philo-Greenwood Road Over Navarro River Bridge Number 10C-0032 Mendocino County, California.

Caltrans (California Department of Transportation). 2010. Bridge inspection report. Navarro River, bridge no. 10C0032.

Caltrans (California Department of Transportation. 2018. Standard specification. State of California Department of Transportation. Sacramento, California.

Crawford and Associates, Inc. 2021. Draft updated initial site assessment. Philo-Greenwood Road at Navarro River bridge widening. Prepared for Quincy Engineering by Crawford and Associates, Inc. Sacramento, California.

Quincy Engineering. No date. Philo-Greenwood bridge rehabilitation project at Navarro River project description (BRLO-5910(082)).



Notes

1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

2. Background: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Biological Study Area (9.24 acres)

USGS 7.5-minute Quad: Philo CA (1997)

0 600 1,200 2,400 Feet

1:24,000

(At original document size of 8.5x11)

N

Stantec

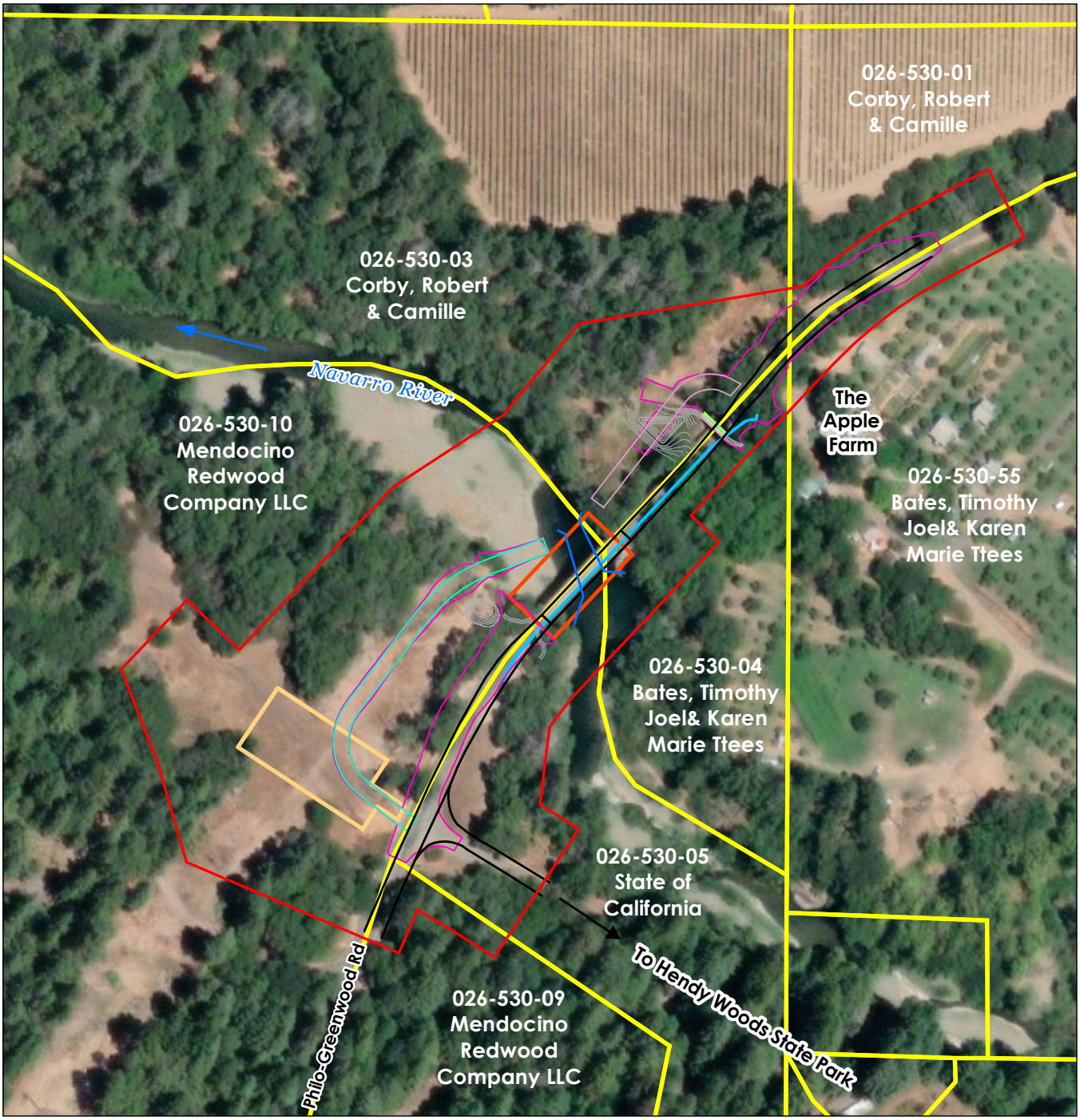
Project Location
T14N, R15W, S11
Mendocino County CA

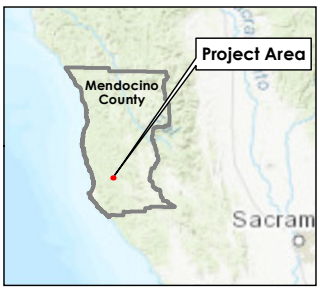
Prepared by TM on 2020-08-04
TR by CF on 2020-08-07

Client/Project
Quincy Engineering, Inc.
Philo-Greenwood Road over Navarro River Bridge Rehabilitation and Widening Project

Figure No.
1

Title
Project Location





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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Project Area (9.24 acres)

Project Components

- Pavement Edges
- Proposed Drainage Basin/Contour Grading
- River Diversion
- Construction Access Alternative 1
- Construction Access Alternative 2
- Cut and FIll
- Existing Concrete Arch Bridge to be Widened and Retrofitted (or Replaced)
- Rock Slope Protection
- Staging
- Temporary Trestle
- Parcel Boundary

0 50 100 200 Feet

1:2,400
(At original document size of 8.5x11)

N

Stantec

Project Location
T14N, R15W, S11
Mendocino County CA

Prepared by TM on 2023-03-27
TR by CF on 2023-03-27

Client/Project
Quincy Engineering, Inc.
Philo-Greenwood Road over Navarro River Bridge Rehabilitation and Widening Project

Figure No.
2

Title
Project Design