EXHIBIT "E"

MITIGATION MONITORING PROGRAM

Sonoma County Permit and Resource Management Department
2550 Ventura Ave, Santa Rosa, CA 95403
(707) 565-1900 Fax (707) 565-1103

Pursuant to Section 21081.6 of the Public Resources Code, the mitigation measures listed in this program are to be implemented as part of the project. This program identifies the time at which each mitigation measure is to be implemented and the person(s) responsible. The signature of each responsible person will indicate completion of their portion of the mitigation measure.

Project: Bohemian Highway Bridge over Russian River Replacement Project
Project Applicant: Sonoma County Department of Transportation and Public Works
Location: Community of Monte Rio, California
Lead Agency: Sonoma County **Decision Making Body:** Board of Supervisors
P.P.R # **Date Approved:** August 30, 2022
SCH # 2021030538 **Contact Person(s):** Jackson Ford

Time of Implementation

•*Design*: The mitigation measure will be incorporated into the project design and/or included in the plans and contract special provisions prior to awarding a construction contract.

•*Pre-Construction*: The mitigation measure will be implemented before construction begins.

•*Construction*: The mitigation measure will be implemented during construction.

•*Post-Construction*: The mitigation measure will be implemented after project construction.

Responsible Persons

The Permit and Resource Management Department will designate an Environmental Specialist. The Department of Transportation and Public Works will designate a Design Engineer and a Construction Engineer.

The Environmental Specialist will certify that a review of the project and plans and specifications was made with the Design Engineer prior to advertising for construction bids or otherwise initiating project construction. The Design Engineer will identify how each mitigation measure has been incorporated into the project. The Construction Engineer (or other person identified in the program) will certify that the mitigation measure has been implemented.

Environmental Record

Before the construction contract is awarded, the Design Engineer will forward the mitigation monitoring program to the Construction Engineer, with a copy to the Environmental Specialist.

At completion of construction the Construction Engineer will return the original signed mitigation monitoring program to the Environmental Specialist for filing.

RECORD OF COMPLIANCE

The Environmental Specialist has reviewed the project design, and plans and specifications with the Design Engineer to assure that the responsibility for completion of the mitigation measures has been assigned and plans and specifications incorporate the appropriate mitigation measures.

Environmental Specialist _____ date_____

	Mitigation Measure AES-1 Construction Requirements for Visual Impacts. The following measures to avoid, minimize, and mitigate for visual impacts would be incorporated into the Project: • Staging areas would be fenced to reduce visibility and would be kept clean and orderly. Soil and debris piles would be covered when not in active use. • Vegetation removal would be minimized to the extent feasible. Vegetated areas temporarily disturbed by the Project would be restored following project construction using a context sensitive design that is visually compatible with the surrounding landscape and consistent with existing policy regarding wetlands protection and buffers. • Trees that require removal during project construction would be replaced in the Project area at a minimum of a 1:1 ratio.

Time of Implementation: Design, Construction, Post- Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

County forces

Other (specify)

Design/ Construction Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

Mitigation Measure AQ-1 Basic Construction Mitigation Measures

The Project shall be required to reduce construction emissions of reactive organic gases, nitrogen oxides, and particulate matter (PM10 and PM2.5) by implementing the BAAQMD's Basic Construction Mitigation Measures (described below) or equivalent, expanded, or modified measures based on project and site specific conditions.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day, with priority given to the use of recycled water for this activity when feasible.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph and Contractor must install and maintain appropriate speed limit signage where appropriate.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times for all construction-related diesel and gasoline powered engines when not in operation including worker vehicles shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes. Clear signage regarding idling shall be provided for construction workers at all times.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic or certified visible emissions evaluator and determined to be running in proper condition prior to operation. The Lead Agency shall post a publicly visible sign with the telephone number and person to contact regarding dust complaints. Any complaint received must be responded to immediately and corrective action must be taken within 48 hours.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

County forces

Other (specify)

Design/ Construction Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO- 1 General Mitigation Measures

The following general mitigation measures shall be implemented:

- A worker environmental awareness training (WEAT) conducted by a qualified biologist will be conducted to educate any onsite personnel expected to be onsite for 30 minutes or more about special-status wildlife species and their habitat within the Project area. The WEAT shall instruct workers on how to recognize potentially occurring special-status plant/wildlife species and their preferred habitat potentially present in the project site, applicable laws and regulations regarding each species, actions to take if a special-status species is observed during construction activities including the name/contact information of the monitoring biologist, and the nature and purpose of protective measures including best management practices (BMPs) and other required mitigation measures. The WEAT shall including information about sensitive resource areas (including wetlands and waters of the U.S/state), to avoid within the Project site other than where impacts have been authorized, and relevant laws and regulations for each resource.

- Preconstruction surveys will be conducted by a qualified biologist for any sensitive species and those individuals will be relocated to nearby habitat (if deemed appropriate by the biologist). The biologist shall be on-site during all construction events to ensure that sensitive species are avoided to the maximum extent practicable to minimize potential harmful effects.

- To protect the riparian plant community, the limits of work areas will be designated with ESA fencing or flagging materials and will be reduced to the extent feasible.

- Vegetation removed would be limited to the extent possible and would follow Caltrans Standard Specifications for Clearing and Grubbing and Roadside Clearing.

- All project-related vehicle traffic would be restricted to established roads and construction areas, which include equipment staging, storage, parking, and stockpile areas.

- All project-related vehicle traffic would be restricted to 5 miles per hour within all work areas.

- No pets would be allowed in the construction area, to avoid and minimize the potential for harassment, injury, and death of wildlife.

- Nighttime construction would only be authorized by the County for select activities on a case-by-case basis, such as a bridge pour, in coordination with a qualified biologist.

Time of Implementation: Design, Pre- Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-2 Erosion And Sediment Control Mitigation Measures

Erosion control measures and Best Management Practices (BMPs) shall conform to the provisions in the Caltrans Standard Specifications and the special provisions included in the contract for the Project. Such provisions include the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which describes and illustrates the of best management practices (BMPs) in the Project site. Erosion control measures to be included in the SWPPP or to be implemented by the County include the following:

- BMPs, such as silt fencing, fiber rolls, and straw bales, shall be implemented prior to ground disturbance and during construction of the proposed Project to minimize dust, dirt, and construction debris from entering the waterways and/or leaving the construction area

- Activities that increase the erosion potential in the Project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features. In channel waterway construction will be conducted from June 15-October 15, or until the start of the wet season as stipulated by the regulatory permitting agencies. Upland construction will likely occur throughout the year as long as work activities comply with the BMPs and mitigation measures identified herein for the protection of sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.

- At completion of each construction season and in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall 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 shall be applied to all exposed areas upon completion of the day's activities. Soils shall not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction

- All dewatering activities will be conducted in compliance with the Caltrans Field Guide for Construction Site Dewatering and Section 13- 4.03G of the Caltrans Standard Specifications. Water removed from the excavated area for pier and abutment footings or construction shall be pumped to a temporary sediment retention basin outside of the channel, through a mechanized water filtration system, into baker tanks or similar storage system or trucked offsite to an authorized disposal site. If a temporary basin is constructed, it shall be located outside of the active channel and include sediment sock or similar sediment control on the discharge.

	• If spoil sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a spoil site drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Spoil sites shall be graded and vegetated with native species, or covered by other means to reduce the potential for erosion. • Sediment control measures shall be in place prior to the onset of the rainy season typically October 15th and will be monitored and maintained in good working condition until disturbed areas have been stabilized with mulch, or other erosion control materials.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement) **or**

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-3 Accidental Spill and Pollution Prevention Mitigation Measures

Appropriate hazardous material BMPs would be implemented to reduce the potential for chemical spills or contaminant releases into the waterways, including any non-storm water discharge. Construction specifications shall include the following measures to reduce potential impacts to vegetation and aquatic habitat resource in the Project area associated with accidental spills of pollutants (e.g., fuel, oil, asphalt and grease):

- A site-specific spill prevention plan shall be prepared, approved by the County and implemented for potentially hazardous materials. The plan shall 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 shall be constructed to prevent spilled materials from reaching surface water features

- Equipment and hazardous materials shall be stored at least 50 ft. away from water features

- All equipment refueling and maintenance would be conducted in the upland staging area a minimum of 50 feet from the top of bank Russian River and Dutch Bill Creek. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans of absorbent material would be placed under all equipment within 50 feet of the flowing water of the Russian River and Dutch Bill Creek that is parked and not in operation. Leaking vehicles or equipment would not be operated until repaired. All workers would be informed of the importance of preventing spills and the appropriate measures to take should a spill happen.

- Equipment operating below the top of bank shall use non-toxic vegetable oil or similar non-toxic alternative for operating hydraulic equipment opposed to traditional hydraulic fluids that can contain a wide range of chemical compounds.

- Place plastic materials (or similar) under asphaltic concrete (AC) paving equipment while not in use, to catch and/or contain drips and leaks.

- During demolition of the existing road and bridge, all grindings and asphaltic-concrete (AC) waste would be immediately moved offsite or be temporally stored onsite, above top of bank. If the waste is stored onsite, the waste would be placed on construction grade plastic sheeting, geotextile fabric, or similar impervious material, and would be stored a minimum of 50 feet from the top of bank of the Russian River or Dutch Bill Creek. AC 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. On or before the date of Project completion, the waste would be transported to an approved disposal site.

- Collect and remove all broken asphalt and recycle when practical, or as required by regulations; otherwise, dispose in accordance with Standard Specifications and to an appropriately permitted site. Surplus concrete rubble

	or pavement shall either be disposed of at an acceptable and legally permitted disposal site or taken to a permitted concrete and/or asphalt recycling facility. • Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment. • Do not allow Portland Concrete Cement (PCC) or slurry to enter storm drains or watercourses. • No equipment, including concrete trucks, will be washed in a location where wash water could drain into surface waters. • Any construction equipment operating upon work pads or adjacent to the Russian River or Dutch Bill Creek shall be inspected daily for leaks. External oil, grease, and mud shall be removed from equipment and disposed of properly. Spill containment booms shall be maintained onsite at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks shall maintain adequate spill containment materials at all times. Any contaminated gravels on the work pad shall be removed from the site and disposed of in a permitted manner. • The contractor shall develop and implement site-specific BMPs, a Storm Water Pollution Prevention Plan (SWPPP), and emergency spill control plan. The contractor shall be responsible for immediate containment and removal of any toxins released.

Time of Implementation: Design, Pre-Construction, Construction

Method: X Incorporated into the project design

X Included in the project plans and specifications (contractor will implement) **or**

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-4 Riparian Habitat Replacement

The following measures shall be implemented to reduce potential impacts to riparian habitat in the action area:

- When feasible, riparian vegetation will be trimmed rather than removed outright and/or be cut at grade to allow for stump re-sprouting.

- Prior to construction, high visibility Environmentally Sensitive Area (ESA) protective fencing would be installed per the plans, at the limits of construction to prevent construction staff or equipment from further encroaching on Russian River, Dutch Bill Creek, and the adjacent riparian habitat and ensure that impacts to riparian vegetation outside of the construction area are minimized. The exclusionary fencing shall be inspected and maintained on a regular basis throughout Project construction.

- Riparian habitat areas temporarily disturbed shall be replanted using riparian species that have been recorded along the Russian River and Dutch Bill Creek areas, including species such as willow (Salix exigua, or S. laevigata), white alder, California bay, big leaf maple, and Oregon ash.

- All nursery plants used in restoration will be inspected for sudden oak death prior to planting. Vegetation debris shall be disposed of properly and vehicles and equipment shall be free of soil and vegetation debris before entering natural habitats. Pruning tools shall be sanitized before use.

- Mitigation for permanent impacts to riparian habitat, will be accomplished through one or more of the following: (1) on-site mitigation; (2) the purchase of in-lieu fees; (3) off-site mitigation; and/or (4) purchase of mitigation bank credits. In any case, replacement mitigation will be at a minimum ratio of 3:1 for permanent impacts and 1:1 for temporary impacts and may include exotic plant removal and riparian species revegetation, depending on the selected scenario and location.

- Restoration monitoring will occur following establishment of revegetation following construction. Monitoring would be conducted for approximately 5 years, or as stipulated by regulatory agencies during the permitting process. At a minimum, the monitoring surveys will consist of evaluation survival and health of plantings, evaluation for signs of drought and/or disease stress, weed or herbivory problems, and presence or trash or other debris. The monitoring plans would require a minimum of 80% survival.

Time of Implementation: Design, Pre-Construction, Construction, Post-Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement) **or**

X County forces

X Other (specify) County to hire a revegetation specialist (Post-Construction)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-5 Special-Status Plant Mitigation

Rare plant surveys were conducted within the entire BSA in 2021 and no special-status plants were observed. Rare plant surveys are generally accepted by the regulatory agencies for approximately three years. To insure that no special-status plants are impacted by the Project, the following mitigation measures shall be implemented:

- A qualified botanist will conduct rare plant surveys within the construction area, as needed. Surveys would be conducted during the appropriate blooming period in the year prior to construction for species with potential to be in the construction area. If any special-status plant species, is found during pre-construction surveys, high visibility ESA protective fencing would be installed around the special-status plants to prevent construction staff or equipment from entering this area. The ESA protective fencing buffer would be species specific, with a minimum buffer radius based on the guidance from a qualified biologist. The biological monitor would be responsible for directing the implementation of additional avoidance measures, as needed.

- If it is determined that special-status plants will be directly impacted by the Project, a species- specific mitigation plan will be prepared by a qualified biologist. The plan may include one or more of the following: plant relocation, seed collection and dispersal, on or off-site restoration, or payment into an agency- approved mitigation bank. The plan will be implemented prior to the completion of the Project.

Time of Implementation: Design, Pre-construction, Construction

Method: X Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

__ Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-6 Prevention of Invasive Species Spread Mitigation

The following measures shall be implemented to prevent the spread of invasive species in the action area:

- All equipment used for off-road construction activities will be weed-free prior to entering the construction area.
- If Project implementation calls for mulches or fill, they will be weed free.
- New revegetation materials, would be composed of non-invasive species and would be clear of weeds, and all erosion control and landscape planting would be conducted in a manner that would not result in the spread of invasive species.
- Any seed mixes or other vegetative material used for re-vegetation of disturbed sites will consist of locally adapted native plant materials.
- Any personal equipment (including boots/waders), construction materials (falsework members, sand bags, etc.) and construction equipment would be properly disinfected or cleaned according to the most current guidance provided by the State of California Aquatic Invasive Species Management Plan prior to in-channel work to prevent the spread of aquatic invasive species.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-7 Salmonids and Special-Status Fish Species Mitigation

The following measures shall be implemented to prevent the impacts to fish:

- A NMFS /CDFW approved biologist would be onsite during construction activities that could impact the federally and/or state listed fish species. The biologist would provide on-site guidance to limit disturbance to the species and its habitat.

- Any structure/culvert placed within a waterway where fish do/may occur shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life or cause an avoidance reaction by fish that impedes their upstream or downstream movement. This includes, but is not limited to, the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream fish migration. For this Project, this equates to designing the culverts to meet guidelines outlined in NMFS (2001).

- Impacts to herbaceous cover will be offset by reseeding any unvegetated and impacted areas with a suitable seed mixture post construction.

- The interstitial spaces of the RSP will be buried below grade to allow for revegetation.

- A NMFS /CDFW approved biologist would walk in and/or adjacent to the Russian River alongside equipment to minimize/avoid fish entrapment during gravel work pad installation. The biologist would have the authority to pause work to allow fish to navigate away from the site, or to investigate the gravel work pad for potential entrapment. The biologist would implement safe monitoring practices by remaining visible to the operator at all times, maintaining a safe distance from equipment (to be established using standard safety protocols and in coordination with the operator), and remain in constant communication with the operator during work.

- A capture and relocation plan for special-status aquatic species would be developed by a qualified biologist prior to construction.

- By October 15, the temporary culverts, pipe, and in-stream work pads shall be removed from the channel. The gravel work pad shall be excavated down to the point at which there is a thin veneer remaining on the existing channel bed. Upon removal of the culverts and clean gravel, hand crews may redistribute the remaining gravel such that it does not become a barrier to the free passage of water or the movement of fish and aquatic animals. It shall not impede, or tend to impede, the passage of fish at any time, pursuant to Fish and Game Code Section 5901.

- Take or suspected take of special-status fish and wildlife species would be reported immediately to a qualified biologist. The NMFS /CDFW approved

	biologist would report the incident, or suspected incident, to the wildlife agencies within 24 hours.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-8 Mitigation for Amphibians and Reptiles

The following measures shall be implemented to prevent the impacts to Amphibians and Reptiles:

- A pre-construction survey for California giant salamander, foothill yellow-legged frogs, red- bellied newts and western pond turtles will be implemented prior to the onset of Project construction. A qualified biologist shall conduct a minimum of one survey of the BSA for these species. The survey shall be conducted a maximum of one week prior to construction. If individuals of any of these species are found within a construction impact zone, the individual(s) shall be allowed to move away on its own. If the individual does not move away on its own, the biologist shall move it to a safe location with suitable habitat up or downstream of the construction area. Relocation sites shall be based upon the qualified biologist's experience working with the species, and coordination with regulatory agencies, as necessary.

- If a pond turtle nest is found, the biologist shall flag the site and determine if construction activities can avoid affecting the nest. If the nest cannot be avoided, it will be excavated and re- buried at a suitable location outside of the construction impact zone by a qualified biologist. Any trapped, injured, or killed special- status amphibians or reptiles will be reported to CDFW.

- If a California giant salamander, foothill yellow- legged frog, red bellied newt or western pond turtle is encountered during construction, activities in the vicinity shall cease until appropriate corrective measures have been implemented or it has been determined that the individual will not be harmed. Any frogs encountered during construction shall be allowed to move away on their own. Any trapped, injured, or killed special-status frogs shall be reported immediately to CDFW.

- Materials stored below the top of bank could provide shelter for special-status amphibians or reptiles, such as on-site storage of pipes, conduits, and other materials, would be elevated above ground, where possible.

- Trenches or pits one foot or deeper that are left unfilled for more than 48 hours would be securely covered with boards or other similar material to prevent entrapment of special- status amphibians, reptiles, or other wildlife.

- No construction activities would be allowed during rain events, greater than 0.25 inch within 24 hours, or within 24-hours following a rain event. Prior to construction activities resuming, a qualified biologist would inspect the construction area and all equipment/materials for the presence of special-status amphibians and reptiles.

- Plastic monofilament netting, or similar material in any form, would not be used at the construction area.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-9 Mitigation for sensitive Bat species

The following measures shall be implemented to prevent the impacts to bats:

- To the extent practicable, the removal of any large trees would be conducted outside of the breeding season of pallid bat and western red bat. For the purposes of implementation of this measure, the breeding season is considered to be from April 1 through August 15th.

- During the summer months (June 1 to August 15) prior to construction, visual surveys would be conducted at all identified roosting habitat to assess the presence of roosting bats. If presence of a roost is detected, an analysis would be completed to help assess the type of colony and usage.

- Prior to construction, and during the non- breeding and active season (typically October), bats would be safely evicted from roosts potentially directly impacted by the Project under the direction of a qualified biologist. Once bats have been safely evicted, exclusionary devices would be installed to prevent bats from returning and roosting in these areas. Roosts that would not be directly impacted by the Project would be left undisturbed.

- Trees designated for removal with potential day roosting habitat, would be removed using a two-step process. The tree removal would be conducted over two consecutive days under the supervision of a qualified biologist, as follows:

  Step One - all non-habitat trees adjacent to and/or surrounding potential habitat trees, as identified by the qualified biologist, would be removed (or trimmed, if full removal can be avoided) on the first of the two days. In addition, limited trimming of the potential bat roosting habitat trees (branches and small limbs with no potential roosting features) would be completed on the first day. During Step one, construction crews would only use hand tools (i.e. chainsaws or similar).

  Step two - on the calendar day immediately following step one, all of the potential habitat trees that were previously trimmed and/or avoided during step one would be removed

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-10 Mitigation for Special-Status and Migratory Birds

Implementation of Mitigation Measure BIO-4 (Riparian Habitat) and replacement of landscape trees and vegetation, as described in Section 2.6, will minimize and mitigate the loss of tree nesting sites. Tree removal during times of nesting could result in negative effects to the young of nesting birds. The following avoidance and minimization measure will reduce any potential impact to breeding birds:

- Trimming and removal of vegetation and trees would be minimized and performed outside of the nesting season, after August 31 and before February 15 when bird nesting is most likely avoided unless a qualified biologist has inspected the site and determined that the tree removal or trimming will not affect nesting birds.

- In the event construction work, including trimming or removal of vegetation and trees, must be conducted during the nesting season (February 15 to August 31), nesting bird surveys would be completed by a qualified biologist no more than 72 hours prior to trimming or clearing activities to determine if nesting birds are within the vegetation that would be trimmed or removed. Nesting bird surveys would be repeated if trimming or removal activities are suspended for five days or more.

- If nesting birds are found within 500 feet of the construction area, appropriate buffers consisting of orange flagging/fencing or similar (typically 300 feet for birds and 500 feet for raptors) would be installed and maintained until nesting activity has ended, as determined in coordination with the Project biologist and regulatory agencies, as appropriate.

- During construction, the qualified biologist shall conduct regular monitoring (at CDFW approved intervals) to evaluate the nest(s) for potential disturbances associated with construction activities. Construction within the buffer shall be prohibited until the qualified biologist determines the nest is no longer active. If an active nest is found after the completion of the pre-construction surveys and after construction begins, all construction activities shall stop until a qualified biologist has evaluated the nest and erected the appropriate buffer around the nest. If establishment of the buffer is not feasible, CDFW and/or USFWS shall be contacted for further avoidance and minimization guidelines.

- Beginning February 1 of the season that the existing bridge will be demolished and removed, a bird barrier would be installed on the underside of the entire existing bridge structure sufficient to prevent birds from nesting. Wherever feasible, the barrier will consist of hard surface exclusionary materials (such as plywood or plexiglass) to prevent cliff swallows from nesting on areas of the bridges under construction. Where hard surface exclusionary materials cannot be effectively applied, netting can be used as an exclusionary material as a last resort. The bird barrier would be inspected, and repairs made as needed from installation until September 1 or until no longer needed. The barrier would be removed as needed to construct the Project. If the Project is not completed during the construction

		season following installation of the barrier, the barrier would be installed again beginning February 15 of the next year. The contractor will removing all unoccupied nests from previous years and any new starts from construction areas before swallows have completed nests. The biological monitor ensuring that there are no birds or eggs in nests that are removed. If netting is used, it will be installed and maintained in such a way as to avoid adverse impacts on birds.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

BIO-11- Mitigation Measure for Waters of the United States/ Waters of the State

Mitigation for “waters of the U.S/state and CDFW jurisdictional areas include:

- To the maximum extent practicable, activities that increase the erosion potential in the Project area shall be restricted to the relatively dry summer and early fall period to minimize the potential for rainfall events to transport sediment to surface water features.

- Construction within the low flow channel of the Russian River and Dutch Bill Creek would be limited to between June 15 and October 15. Work within the top of bank and outside of the low flow channel could begin on April 15, with

- implementation of BMPS and as approved by regulatory agencies during permitting. Upland construction will likely occur throughout the year as long as work activities comply with the conservation and avoidance and minimization measures identified herein and by regulatory permitting agencies for the protection of sensitive or special-status plant or animal species. For upland construction activities that must take place during the late fall, winter, or spring, then temporary erosion and sediment control structures shall be in place and operational at the end of each construction day and maintained until permanent erosion control structures are in place.

- Areas where any potential wetland or upland vegetation need to be removed shall be identified in advance of ground disturbance and limited to only those areas that have been approved by the County and regulatory agencies.

- Within 10 days of completion of construction in those areas where subsequent ground disturbance will not occur for 10 calendar days or more, weed-free mulch shall 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 shall be applied to all exposed areas upon completion of the day’s activities. Soils shall not be left exposed during the rainy season.

- Suitable BMPs, such as silt fences, straw wattles, or catch basins, shall be placed below all construction activities at the edge of surface water features to intercept sediment before it reaches the waterway. These structures shall be installed prior to any clearing or grading activities. These structures shall be installed prior to any clearing or grading activities. Further, sediment built up at the base of BMPs will be removed before BMP removal to avoid any accumulated sediments from being mobilized post-construction

- If temporary stockpile sites are used, they shall be located such that they do not drain directly into a surface water feature, if possible. If a stockpiles drains into a surface water feature, catch basins shall be constructed to intercept sediment before it reaches the feature. Stockpile sites shall be graded and vegetated to reduce the potential for erosion.

	• Sediment control measures shall 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 gravel material placed in the Russian River or Dutch Bill Creek would be washed at least once and have a cleanliness value of 85 or higher based on Caltrans Test No. 227.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

__ Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	BIO-12 Sensitive Natural Communities Sensitive Natural Communities Sensitive natural communities potentially impacted within the BSA include Oregon Ash Groves. Temporary impacts to Oregon Ash Groves will be mitigated with implementation of BIO-4 (Riparian Habitat). No jurisdictional wetlands meeting the USACE's three-parameter definition were observed during biological surveys, however should any wetlands or any other sensitive natural communities develop or be delineated on site prior to construction, they would be replaced in-kind, on-site a minimum ratio of 1:1 or if off- sit to ensure no net loss, as coordinated with regulatory agencies during permitting, per Executive Order 11990, Protection of Wetlands (1977). Other options may include off-site mitigation, in-lieu fees, mitigation bank, or purchase of lands or conservation easement as coordinated with the regulatory agencies during permitting. Areas restored on- or off-site will be monitored to ensure restoration success criteria put forth by regulatory agencies are met. All temporary impacts to sensitive natural communities shall be fully restored to natural conditions.

Time of Implementation: Design, Construction, Post-Construction

Method:
- X Incorporated into the project design
- X Included in the project plans and specifications (contractor will implement)
- X County forces
- __ Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	BIO-13 Mitigation for Designated Critical Habitat and Essential Fish Habitat The Project site is within designated critical habitat for steelhead, Coho and Chinook salmon and within Essential Fish Habitat (EFH) for chinook and Coho salmon. Impacts to designated critical habitat and EFH salmonids will be mitigated with implementation of BIO-1 (General Mitigation Measures); BIO-2 Erosion and Sediment Control; BIO-3 Accidental Spill and Pollution Prevention; BIO-4 Riparian Habitat; BIO-7 (Salmonids and Special Status Fish Mitigation); and BIO-11 Waters of the U.S./Waters of the State and CDFW Jurisdictional Areas; and BIO-12 Sensitive Natural Communities.

Time of Implementation: Design, Pre-Construction, Construction

Method:
- X Incorporated into the project design
- X Included in the project plans and specifications (contractor will implement)
- County forces
- __ Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

BIO-14 Jurisdictional Delineation Verification

The County will summit the GPA preliminary delineation of the waters of the U.S. and waters of the state, including USACE, RWQCB, and CDFW jurisdictional areas to each regulatory agency for review and approval and verification of the extent of the jurisdiction for USACE, RWQCB, and CDFW. While the preliminary delineation did not identify any areas meeting all three wetland criteria parameters, should any be wetland areas be identified and/or expected to be impacted, the following mitigation measures would be implemented:

- Avoidance and protection of any wetlands and use of construction fencing to identify potential wetland areas as "environmental sensitive areas" to be excluded from construction activities
- If any wetlands jurisdictional areas are expected to be impacted, then the appropriate regulatory agencies permits would be obtained prior to construction, including a USACE CWA Section 404 permit; a RWQCB Section 401 Water Quality Certification; and/or a CDFW Lake or Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC.
- Mitigation for permanent impacts on wetland habitat, would be accomplished through one or more of the following: (1) on-site mitigation; (2) the purchase of in-lieu fees; (3) off-site mitigation; and/or (4) purchase of mitigation bank credits. Mitigation will be at a minimum ratio of 2:1 for permanent impacts and 1:1 for temporary impacts; however, the final ratio will be established through consultation and coordination with regulatory agencies during the permitting process.
- General Avoidance and minimization measures, including those in BIO-1 through BIO 3, as well as:
- Any material/spoils generated from Project activities shall be located away from jurisdictional areas or special status habitat and protected from storm water run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls (non- monofilament), covers, sand/gravel bags, and straw bale barriers, as appropriate.
- Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from the top of bank.

Time of Implementation: Design, Pre-Construction, Construction

Method: X Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

County forces

__ Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	CUL-1 Architectural History Mitigation Cultural Resource Mitigation Measure CUL-1 Architectural History: Prior to implementing the proposed project, the DTPW shall provide an evaluation of the Bohemian Highway Bridge that includes a final historical documentation and a photographic archive of the bridge. The evaluation shall address the bridge in the context of the structure including photo-documentation and additional historical research necessary to complete the State of California's Department of Parks and Recreation 523 forms, which constitute official documentation of historical resources for the State Office of Historic Preservation. Copies of documentation shall be provided to the Northwest Information Center (NWIC) of the California Historical Resources Information System, including the History Annex of the Sonoma County Library.

Time of Implementation: Design, Pre-Construction

Method: Incorporated into the project design

Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	CUL-2 Extended Phase I Testing The project APE has been identified as sensitive by the Phase I Archaeological Survey Report (ASR). Sonoma County DTPW shall retain a qualified archaeologist to conduct an Extended Phase I (XPI) study to determine the presence/absence and extent of archaeological resources on the project site. The XPI proposal will be submitted to the Federal Funding agency (Caltrans Local Assistance) for review and approval as part of Section 106 of the NHPA. The proposal and subsequent testing should comprise a series of shovel test pits and/or augured units and/or mechanical trenching to establish the presence or absence, as well as the potential boundaries of archaeological site(s) on the project site. The qualified archaeologist and the Lead Agency (County) shall confer with local California Native American tribe(s) and any XPI work plans may be combined with a tribal cultural resources plan prepared under Mitigation Measure TCR-3, as indicated in section 4.17 of this EIR. A Tribe appointed Native American monitor may be present during the XPI study in accordance with Mitigation Measure TCR-4. TCR measures are discussed in detail within Section 4.17- Tribal Cultural Resources. All archaeological excavation shall be conducted by a qualified archaeologist(s) under the direction of a principal investigator meeting the SOI's PQS for archaeology (National Park Service 1983). If an XPI report is prepared, it shall be submitted to Sonoma County for review and approval prior to the start of any construction activities. Interested tribes shall be consulted for comments on the final XPI report as part of AB52 and Section 106 of the NHPA consultations. Recommendations contained therein shall be implemented for all ground disturbance activities.

Time of Implementation: Design, Pre-Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	CUL-3 Archaeological Site Avoidance Any identified archaeological sites (determined after implementing Mitigation Measures CUL-2) shall be avoided by project-related construction activities, where feasible. A barrier (temporary fencing) and flagging should be placed between the work location and any resources within 50 feet of a work location to minimize the potential for inadvertent impacts.

Time of Implementation: Design, Pre-Construction, Construction
Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

	CUL-4 Phase II Site Evaluation If the results of the XPI (Mitigation Measures CUL-2) indicate the presence of archaeological resources that cannot be avoided by the project (Mitigation Measure CUL-3), then the qualified archaeologist will conduct a Phase II investigation to determine if intact deposits remain and if they may be eligible for listing under the CRHR and/or NRHP or qualify as unique archaeological resources. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with local California Native American tribe(s) regarding the Phase II work. If applicable, a Native American monitor shall be present during the Phase II investigation in accordance with Mitigation Measure TCR-4. A Phase II evaluation shall occur in conformance with the Caltrans Standard Environmental Reference and per the Local Assistance Program Guidelines. The Evaluation shall include any necessary archival research to identify significant historical associations and mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of a sample of the cultural deposit. The sample excavation will characterize the nature of the sites, define the artifact and feature contents, determine horizontal and vertical boundaries, and retrieve representative samples of artifacts and other remains. If the archeologist and, if applicable, a Native American monitor (see Mitigation Measure TCR-4) or other interested tribal representative determine it is appropriate, cultural materials collected from the site shall be processed and analyzed in a laboratory according to standard archaeological procedures. The age of the materials shall be determined using radiocarbon dating and/or other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards. The significance of the sites shall be evaluated according to the criteria of the CRHR and NHRP. The results of the investigations shall be presented in a technical report following the standards of the California Office of Historic Preservation publication “Archaeological Resource Management Reports: Recommended Content and Format (1990 or latest edition).” If determined necessary, recommendations in the Phase II report shall be implemented for all ground disturbance activities.

Time of Implementation: Design

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	CUL-5 Phase III Data Recovery Should the results of the Phase II site evaluation (Mitigation Measure CUL-4) yield resources that meet CRHR/ NRHP significance standards and if the resource cannot be avoided by project construction in accordance with Mitigation Measure CUL-4, the Sonoma County DTPW shall ensure that all feasible recommendations (as defined in CEQA Guidelines Section 15364) for mitigation of archaeological impacts are incorporated into the final design prior to construction. Any necessary Phase III data recovery excavation, conducted to exhaust the data potential of significant archaeological sites, shall be carried out by a qualified archaeologist meeting the SOI standards for archaeology according to a research design approved by the County, in consultation with the Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria, and Caltrans Local Assistance prepared in advance of fieldwork and using appropriate archaeological field and laboratory methods consistent with the California Office of Historic Preservation Planning Bulletin 5 (1991), Guidelines for Archaeological Research Design, or the latest edition thereof. If the archaeological resource(s) of concern are Native American in origin, the qualified archaeologist shall confer with the Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria, and any Phase III work plans may be combined with a tribal cultural resources plan prepared under Mitigation Measure TCR-3. If determined applicable by the Tribe(s), a Native American monitor shall be present in accordance with Mitigation Measure TCR-4. As applicable, the final Phase III Data Recovery reports shall be submitted to Sonoma County prior to starting project construction. Recommendations contained therein shall be implemented throughout all ground disturbance activities.

Time of Implementation: Design, Construction
Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	CUL-6 Cultural Resources Monitoring If recommended by XPI, Phase II, or Phase III studies (Mitigation Measures CUL-2, CUL-3, CUL-4, and/or CUL-5), the project applicant shall retain a qualified archaeologist to monitor project-related, ground-disturbing activities. If archaeological resources are encountered during ground-disturbing activities, Mitigation Measures CUL-2 through CUL-5 shall be implemented, as appropriate. The archaeological monitor shall coordinate with any Native American monitor as required by Mitigation Measure TCR-4.

Time of Implementation: Design, Construction
Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

	CUL-7 Unanticipated Discovery of Archaeological Resources If archaeological resources are encountered during ground-disturbing activities, work within 50 feet shall be halted and the project applicant shall retain an archaeologist meeting the SOI's PQS for archaeology (National Park Service 1983) immediately to evaluate the find. Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria shall be notified and work with the archaeologist to determine significance. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR and NRHP eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work may be warranted, such as data recovery excavation, to mitigate any significant impacts to historical resources. If the resource is of Native American origin, implementation of Mitigation Measures TCR-1 through TCR-4 shall be required. Any reports required to document and/or evaluate unanticipated discoveries shall be submitted to the County, Caltrans Local Assistance, and the Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria for review and approval. If determined necessary, recommendations contained therein shall be implemented throughout the remainder of ground disturbance activities.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

GEO-1 Paleontological Review of Project Plans

For projects with proposed ground-disturbing activity, the project applicant shall retain a Qualified Professional Paleontologist to review proposed ground disturbance associated with development to:

1. Assess if the project will require paleontological monitoring;
2. If monitoring is required, to develop a project- specific Paleontological Resource Mitigation and Monitoring Program (PRMMP) as outlined in Mitigation Measure GEO-2;
3. Draft the Paleontological Worker Environmental Awareness Program as outlined in Mitigation Measure GEO-3; and
4. Define within a project specific PRMMP under what specific ground disturbing activity paleontological monitoring will be required and the procedures for collection and curation of recovered fossils, as described in Mitigation Measures GEO-4, GEO-5, and GEO-6.

The Qualified Paleontologist shall base the assessment of monitoring requirements on the location and depth of ground disturbing activity in the context of the paleontological potential and potential impacts outlined in this section. A qualified professional paleontologist is defined by the SVP standards as an individual preferably with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for a least two years (SVP 2010). The County shall review and approve the assessment before grading permits are issued.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

GEO-2- Paleontological Resources Mitigation and Monitoring Program

For those projects deemed to require a PRMMP under Mitigation Measure GEO-1 above, the Qualified Paleontologist shall prepare a PRMMP for submission to the County prior to the issuance of grading permits. The PRMMP shall include a pre-construction paleontological site assessment and develop procedures and protocol for paleontological monitoring and recordation. Monitoring shall be conducted by a qualified paleontological monitor who meets the minimum qualifications per standards set forth by the SVP.

The PRMMP procedures and protocols for paleontological monitoring and recordation shall include:

5. Location and type of ground disturbance requiring paleontological monitoring.
6. Timing and duration of paleontological monitoring.
7. Procedures for work stoppage and fossil collection
8. The type and extent of data that should be collected with recovered fossils.
9. Identify an appropriate curatorial institution.
10. Identify the minimum qualifications for qualified paleontologists and paleontological monitors.
11. Identify the conditions under which modifications to the monitoring schedule can be implemented.
12. Details to be included in the final monitoring report.

Prior to starting construction, copies of the PRMMP shall be submitted to the County for review and approval as to adequacy.

Time of Implementation: Design, Pre-Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

	GEO-3 Paleontological Worker Environmental Awareness Program (WEAP) Prior to any ground disturbance within Potential Sites underlain by geologic units with high paleontological resource potential, the applicant shall incorporate information on paleontological resources into the Project's Worker Environmental Awareness Training (WEAP) materials, or a stand-alone Paleontological Resources WEAP shall be submitted to the County for review and approval. The Qualified Paleontologist or his or her designee shall conduct training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. The Paleontological WEAP training shall be fulfilled simultaneously with the overall WEAP training, or at the first preconstruction meeting at which a Qualified Paleontologist attends prior to ground disturbance. Printed literature (handouts) shall accompany the initial training. Following the initial WEAP training, all new workers and contractors must be trained prior to conducting ground disturbance work. A sign-in sheet for workers who have completed the training shall be submitted to the County upon completion of WEAP administration.

Time of Implementation: Design, Pre0Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

GEO-4 Paleontological Monitoring

Paleontological monitoring shall only be required for those ground-disturbing activities identified under Mitigation Measure GEO-1, where construction activities (i.e., grading, trenching, foundation work) are proposed in previously undisturbed (i.e., intact) sediments with high paleontological sensitivities. Monitoring shall be conducted by a qualified professional paleontologist (as defined above) or by a qualified paleontological monitor (as defined below) under the supervision of the qualified professional paleontologist. Monitoring may be discontinued on the recommendation of the qualified

professional paleontologist if they determine that sediments are likely too young, or conditions are such that fossil preservation would have been unlikely, or that fossils present have little potential scientific value.

The following outlines minimum monitor qualifications and procedures for fossil discovery and treatment:

13. Monitoring. Paleontological monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources and meets the minimum standards of the SVP (2010) for a Paleontological Resources Monitor. The Qualified Paleontologist will determine the duration and timing of the monitoring based on the location and extent of proposed ground disturbance. If the Qualified Paleontologist determines that full- time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, they may recommend that monitoring be reduced to periodic spot-checking or cease entirely. Refer to Table 4.7-1 for a paleontological resource potential summary and recommendations for the Project Sites.
14. Fossil Discoveries. In the event of a fossil discovery by the paleontological monitor or construction personnel, all work in the immediate vicinity of the find shall cease. A Qualified Paleontologist shall evaluate the find before restarting construction activity in the area. If the Qualified Paleontologist determines that the fossil(s) is (are) scientifically significant; including identifiable specimens of vertebrate fossils, uncommon invertebrate, plant, and trace fossils; the Qualified Paleontologist (or paleontological monitor) shall recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the project.
15. Salvage of Fossils. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the Qualified Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. If fossils are discovered, the Qualified Paleontologist (or Paleontological Monitor) shall recover them as specified in the project's PRMMP.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

	GEO-5 Preparation and Curation of Recovered Fossils Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection (such as the University of California Museum of Paleontology), along with all pertinent field notes, photos, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the Qualified Paleontologist.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

	GEO-6 Final Paleontological Mitigation Report Upon completion of ground disturbing activity (and curation of fossils if necessary) the Qualified Paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated. The report shall be submitted to the County prior to occupancy permits. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

Time of Implementation: Construction, Post-Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

HAZ-1 Conduct Phase II Site Assessment Prior to Construction

The Project ISA determined that for areas identified as high or medium risk for REC's, potential REC's, and environmental areas of concern, a Phase II screening of the subsurface soils or groundwater will be completed within the identified Project boundaries. The Phase II screening will investigate the Project area where construction is anticipated to disturb the

subsurface soil, encounter groundwater, or disturb or remove existing structures. Should the preliminary screening indicate the presence of soil or groundwater contamination within the Project area, a Phase II assessment will be conducted to investigate the depth and lateral extent of contamination within the Project area.

The Phase II assessment will include sampling and laboratory analysis to confirm the presence or absence of hazardous materials and may include the following:

- Surficial soil and water samples
- Testing of underground storage tanks
- Subsurface soil borings
- Groundwater monitoring well installation, sampling, and analysis (may be appropriate on neighboring properties as well to determine the presence of contamination)

The County shall ensure proper implementation the recommendations with the Project ISA by incorporating the following task as part of the Project design and construction specifications. These tasks will be completed prior to construction activities and include the following measures:

- It is highly likely that the surface soils along the Project area are affected by ADL. Therefore, it is recommended that surface samples of soil be collected and analyzed for total lead.
- Four concrete occurrences were identified within the Project site that have potential for ACM and should be analyzed if they are to be disturbed or interfered with. This work should be performed by an inspector certified by AHERA under TSCA Title II and certified by Cal OSHA under State of California rules and regulations (California Code of Regulations, Section 1529).
- Lead based paint and ACM should be abated by using a contractor certified to perform such work. Further ACM testing should be performed during the design phase.
- On-site dumping and burning of household items was identified under the southern section of the current bridge and Dutch Bill Creek Bridge directly next to the southern part of the site. This material contains potentially

	hazardous material and should be disposed of by appropriately qualified personnel and soils tested. • Site address 9908 Main St (APN 095-160-006) located underneath the southern section of the • proposed bridge appears to have stored vehicles in various states of repair for some time. Petroleum products from these vehicles could represent a potential REC and testing of these soils should be undertaken by suitably licensed personnel to determine the type and concentration of any hazardous substances. • Site address 9906 Main St (APN 095-160-005) possibly contained a LUST. Two USTs were removed from the site in 1986 without permitting and environmental samples to determine the presence and/or extent of soil and groundwater contamination. It is recommended that an environmental investigation be undertaken to determine the presence and/or extent of soil and groundwater contamination at the site if soil is to be disturbed and/or if ownership is to be transferred as part of the Project process. • Part of the Project site was occupied by historic railroads and located hydraulically up-gradient (groundwater) from the Project. Potential toxic substances from the historic railways and engines could include heavy metals, creosote, and polycyclic aromatic hydrocarbons (PAHs). Suitable testing methods should be employed to determine the existence and concentrations of toxic substances.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

_____ _____

Comments:

	HAZ-2 Develop and Implement Plans to Address Worker Health and Safety If results of the Phase II testing results in positive identification of REC's, The County DTPW or construction contractor will develop and implement the necessary plans and measures required by Caltrans and federal and state regulations, including a health and safety plan, BMPs, and an injury and illness prevention plan. The plans will be prepared and implemented to address worker safety when working with potentially hazardous materials, including LBP, ACM, ADL, UST/ LUST sites and other materials within the right-of-way during any construction activity.

Time of Implementation: Design, Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	NOI-1- General Construction Activities Noise Reduction Measures Night work will be considered on an as needed basis, and only occur with prior County approvals. If construction activities occur between the hours of 10 p.m. to 7 a.m., within 0.5 mile of a noise-sensitive receiver (residences, schools, day care facilities, hospitals, nursing homes, long term medical or mental care facilities, places of worship, libraries and museums, transient lodging, and office building interiors), the following measures shall be implemented: 1. Nighttime construction noise shall not exceed the noise level standards shown in Table 4.13-4 when conducted between the hours of 10 p.m. to 7 a.m. 2. The Project applicant shall retain a qualified consultant to prepare a project-specific construction noise impact analysis. The results shall be submitted to Sonoma County for review and approval prior to the onset of any night construction work. 3. The analysis of nighttime construction activities shall be completed in accordance with the County's Guidelines for the Preparation of Noise Analysis. The analysis shall consider the type of construction equipment to be used and the potential noise levels at noise-sensitive receivers located within 0.5 mile of the Potential Site. 4. Provided the nighttime construction noise analysis determines that nighttime noise levels will not exceed 45 dBA L50, 50 dBA L25, 55 dBA L08, or 60 dBA L02 between the hours of 10 p.m. to 7 a.m., construction may proceed without additional measures. 5. Provided the nighttime construction noise analysis determines that nighttime noise levels would exceed the nighttime standards shown in Table 4.13-4, additional measures shall be implemented to reduce noise levels below the standard. These measures may include, but not be limited to, use of temporary noise barriers or performing activities at a further distance from the noise-sensitive land use.The County shall require the contractor to use a drilling mud and slurry seal that is non-toxic to aquatic life for all drilling activities related to the permanent or temporary bridges. All drilling muds and fluid within all drilled holes shall be contained on site in tanks, removed from the project area, and disposed of in a permitted manner. No equipment, including concrete trucks, shall be washed within the channel of the creek, or where wash water could flow into the channel. Prior to project construction, the contractor shall establish a concrete washout area for concrete trucks in a location where wash water will not enter Big Sulphur Creek. The washout area shall follow the practices outlined in the North Coast Regional Water Quality Control Board Erosion and Sediment Control Field Manual (page 107-108, July 1999) or equivalent guidelines. Substitution of the designated concrete washout area or methods shall require prior approval from PRMD and the DTPW.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

Mitigation Measure PS-1

Permanent Improvements to MRRPD River, Beach, Parking, and Future Facilities. In addition to a replacement bridge over MRRPD beach and river areas that would meet current seismic safety standards, reducing the safety risk to beach users, the Project includes a number of features that permanently improve MRRPD facilities, including:

- Replacement bridge will provide improved vehicular, pedestrian and cyclist access to MRRPD sites, including replacement with roadways and sidewalks that meet current American with Disabilities (ADA) design standards

- In addition to wider roadways and sidewalks that are ADA compliant, the proposed replacement bridge is designed to include Class I and Class II bike lanes. These bike lanes will provide improved access for cyclists to MRRPD beaches and other properties, and well as an improved riding experience for cyclists in the general vicinity

- The removal of the existing bridge and its piers will open up the low-flow river channel, improving conditions for flood hydraulics, water recreation, and fisheries habitat. The soil around the existing piers has washed away, creating deep scour pools that can present a safety hazard to water users, as well as to the overall bridge structure. The replacement bridge was designed to clear-span the low-flow river channel, improving water recreational opportunities and fisheries habitat.

- Similar to existing bridge pier removal, removal of the remnants of a pre-1934 pier footing from the river channel as a part of the Project would eliminate a potential safety hazard, and improve recreational water use conditions and aquatic habitat for salmonids.

- The replacement bridge was designed with significant input from the community to be an attractive asset that would enhance the community's unique character and serve as a focal point for the community and an attractive destination for visitors. During the course of three community meetings and a web-based survey, the County solicited input from the community on bridge type, design, themes, and architectural amenities, resulting in the selection of the steel-tied arch with view overlooks on each side of the bridge.

- Resurfacing of the currently unimproved path from Main Street to Dutch Bill Creek, and potential replacement of the existing bollards midway down the access, in coordination with MRRPD. The improvements would allow for better emergency vehicle access to Dutch Bill

- Creek and reduce erosion and sedimentation. The County would coordinate with MRRPD to determine if resurfacing and replacing the bollards along the path is desired and develop a mutually agreed upon plan for MRRPD's review and approval.

	• Following construction, the Monte Rio Fishing Access parking area would be reconfigured, repaved and restriped in coordination with MRRPD and CDFW. In addition, improvements to the Monte Rio Fishing Access parking area drainage system may be incorporated into the Project as part of the Project's Low-impact Development (LID) water treatment plans, as feasible. • Temporary Parking during Construction: To mitigate for temporary parking reductions during construction at the Monte Rio Fishing Access parking areas, the County will develop a temporary parking plan that would provide 100% of the existing parking for the duration of construction activities. This temporary parking plan will be subject to review and approval by MRRPD. For temporary reductions in parking at Big Rocky Beach, the County will delineate parking stalls to increase parking capacity. Proposed methods of delineating parking stalls may include concrete wheel stops, signage, concrete markers, fabric strips affixed to the ground or other methods to be mutually agreed upon and subject to review and approval by MRRPD. • Implementation of Safety Protection Measures for Recreational Beach and Water Users: To minimize and avoid harm to recreational beach and water users, a buffer area around construction, access and staging areas will be restricted from public use as "publically prohibited areas". Publically prohibited areas will be delineated with signage, fenced, or otherwise marked to limit access and protect the public from construction activities. In addition to a "publically prohibited area" buffer, the bypass culverts would also be fenced (or screened with trash racks) at their inlet and outlets to prevent people from entering. • Traffic Control during Construction: During all periods of construction, access across the river between the north and south areas of Monte Rio will remain open. Although traffic may be diverted through lane closures and re- routing, a traffic control plan, including notification prior to and during construction will be implemented. • Construction Noise Minimization Avoidance and Minimization: Short-term construction activities would require motorized construction equipment that would result in potential noise impacts to MRRPD beach and water users. Noise avoidance, minimization and mitigation measures include conformance to Section 14-8.02, "Noise Control," of the Caltrans Standard Specifications. Other minimization measures include: Use of a muffler for internal combustion engines. • Construction activities, excluding activities required to occur without interruption or activities that would pose a significant safety risk to workers or citizens, or in the event of an emergency, shall be limited to between the daytime hours of 7:00 a.m. and 7:00 p.m. No work would be allowed on holidays. Weekend work would only be authorized by the County for select activities on a case by-case basis and occur during the hours of 9:00 a.m. and 5:00 p.m. • Portable/stationary equipment (e.g., generators, compressors) and equipment staging areas will be located at the furthest distance from the nearest residential dwelling, and, where feasible, from the beach areas.

	• As directed by the County resident engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, the installation of temporary noise barriers, turning off idling equipment after no more than five minutes of inactivity, and rescheduling construction activity to avoid noise-sensitive days or times.

Time of Implementation: Design, Construction, Post-Construction

Method:
- X Incorporated into the project design
- X Included in the project plans and specifications (contractor will implement)
- X County forces
- Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	TRANS-1..Notification of Closure The County shall notify property owners at least 7 days in advance of the proposed temporary closure. Signage shall be placed notifying motorists of the planned closure. A working jobsite telephone number must be available and provided to Emergency Services during any bridge or approach roadway closures so they may call ahead to request re-opening. Any bridge or approach roadway closures must be re-opened within 10 minutes for emergency vehicles, or within 30 minutes for non-emergency vehicles.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	TRANS-2 - Emergency Access Emergency response organizations will be notified of the Project construction schedule and any temporary closure in advance. The County will require the contractor to provide passage of emergency vehicles through the Project site at all times. The Contractor shall make plans for emergency vehicle staging on the easterly approach if complete closure is determined necessary at any point in the construction schedule.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

Other (specify)

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	TCR-1 Tribal Cultural Resources Coordination and Consultation Archival research has identified the site to be sensitive with regard to possible presence of unknown TCR. Throughout the implementation of Mitigation Measures CUL-2 through CUL-7 (see pages 4.5- 19-20, Cultural Resources), the qualified archaeologist retained to implement the measures shall confer with local California Native American tribe(s) on the identification and treatment of tribal cultural resources and/or resources of Native American origin not yet determined to be tribal cultural resources through AB 52 consultation. If, during the implementation of Mitigation Measures CUL-2 through CUL-7, a resource of Native American origin is identified, the County shall be notified immediately in order to open consultation with the appropriate local California Native American tribe(s) to discuss whether the resource meets the definition of a tribal cultural resource as defined in AB 52. The local Native American Tribes to be consulted are Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria.

Time of Implementation: Pre-Construction,Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

TCR-2 Inadvertent Discovery of Historical or Archaeological Resources and Worker Awareness Training

The project specifications shall require the contractor to comply with the following measures regarding the discovery of cultural resources, including Native American Tribal Cultural Resources and items of historical and archaeological interest. The County's Construction Inspector and construction personnel will be notified of the possibility of encountering cultural resources during project construction.

The County shall notify the Tribal Historic Preservation Officers (THPOs) of the appropriate local Native American tribe(s) in writing at least two weeks prior to the start of the project's ground-disturbing activities that work will commence. The local Native American Tries to be notified and consulted are Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria.

Prior to initiation of ground-disturbing activities, the County shall arrange for construction personnel to receive training about the kinds of cultural materials that could be present at the project sites and protocols to be followed should any such materials be uncovered during construction. An archaeologist who meets the U.S. Secretary of Interior's professional standards (48 CFR Parts 44738-44739 and Appendix A to 36 CFR 61) shall provide appropriate archaeological training, including the purpose of the training to increase awareness and appropriate protocols in the event of an inadvertent discovery. Tribal Cultural Monitor(s), from the consulting tribe(s), may provide appropriate tribal cultural resources training as determined by the Native American Tribe(s). Training may be required during different phases of construction to educate new construction personnel.

The project specifications will provide that if discovery is made of items of historical, archaeological, or cultural interest, the contractor will immediately cease all work activities in the area of discovery. Historical, archaeological, and cultural indicators may include, but are not limited to, dwelling sites, locally darkened soils, stone implements or other artifacts, fragments of glass or ceramics, animal bones, and human bones. After cessation of excavation, the contractor will immediately contact the County's Construction Resident Engineer or construction inspector and the THPOs. The contractor will not resume work until authorization is received from the Project Resident Engineer.

In the event of unanticipated discovery of historical or archaeological materials occurs during construction, the County shall retain the services of a qualified professional archaeologist who meets the U.S. Secretary of Interior's professional standards (48 CFR Parts 44738-44739 and Appendix A to 36 CFR 61) to evaluate the significance of the items prior to resuming any activities that could impact the site. In the case of an inadvertent historical or archaeological discovery, if it is determined that the find is potentially eligible for listing in the California Register of Historical Resources and/or National Register of Historic Places, and the site cannot be avoided, additional mitigation measures shall be implemented. Mitigation measures may include (but are not limited to): avoidance; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for historical resources shall be developed in consultation with

	responsible agencies, and the Native American Tribes. If data recovery excavation is necessary, the County shall provide an Archaeological Resource Management and Data Recovery Plan, prepared by a qualified archaeologist, outlining recovery of the resource, analysis, and reporting of the find in consultation with the Native American Tribes. The local Native American Tribes to be consulted Federated Indians of Graton Rancheria and Kashia Band of Pomo Indians of Stewarts Point Rancheria. The Archaeological Resource Management and Data Recovery Plan shall be approved by the County and the Tribes. Implementation of the Archaeological Resource Management and Data Recovery Plan shall be conducted prior to work being resumed.

Time of Implementation: Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	TCR-3 Inadvertent Discovery of Human Remains The project specifications will require the contractor to comply with Public Resources Code section 5097.98 and Health and Safety Code section 7050.5, as they pertain to the discovery of human remains. If human remains are encountered, the contractor shall halt work within 50 feet of the find, and contact the County's construction inspector and the Sonoma County Coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner will contact the Native American Heritage Commission. As provided in Public Resources Code Section 5097.98, the Native American Heritage Commission will identify the person or persons believed to be most likely descended (MLD) from the deceased Native American. The MLD makes recommendations for means of treating the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. Work shall cease in the immediate area until the recommendations of the appropriate MLD are concluded.

Time of Implementation: Design, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments:

	TCR-4 Native American Monitoring For all ground disturbing activities Sonoma County DTPW, shall retain Native American monitor(s) representing tribes that are traditionally and culturally affiliated with the geographic area of the project site to observe ground disturbance, associated with the Project. The local Native American Tribes to be consulted and provide monitoring for the Project are the Kashia Band of Pomo Indians of Stewarts Point Rancheria and the Federated Indians of Graton Rancheria. In the event of a discovery of tribal cultural resources, mitigations TRC-2 and/or TRC-3 shall be adhered to.

Time of Implementation: Pre-Construction, Construction

Method: Incorporated into the project design

X Included in the project plans and specifications (contractor will implement)

X County forces

X Other (specify) County/ Contractor to hire a specialist to implement

Construction/ Design Engineer certifies that this mitigation measure was implemented and monitored during construction.

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Comments: