Draft

Central House Road Bridge (12C-0111) over Wyman Ravine Replacement Project

Initial Study/Mitigated Negative Declaration

Butte County

BRLO 5912(092)

December 2023

Draft

Central House Road Bridge over Wyman Ravine Replacement Project

Initial Study/Mitigated Negative Declaration

Butte County, California
Honcut 7.5-Minute Quadrangle
Township 17N, Range 03E, Section 02

Submitted to:
Butte County Department of Public Works
7 County Center Drive
Oroville, CA 95965

Prepared by:
Dewberry Engineers Inc.
11060 White Rock Road, Suite 200
Rancho Cordova, CA 95670

December 2023

EXECUTIVE SUMMARY

The Butte County Department of Public Works (County) is proposing to replace the existing Central House Road Bridge (No. 12C-0111) over Wyman Ravine. The Central House Road Bridge over Wyman Ravine Replacement Project (proposed project), is located on Central House Road in Butte County, California, approximately 0.2 miles east of State Route (SR) 70, approximately 5 miles east of the City of Gridley, and approximately 11 miles south of the City of Oroville. The Butte County General Plan Land Use Map identifies Central House Road as a major roadway; however, the General Plan Circulation Element identifies Central House Road as a minor roadway. The land surrounding the proposed project has a land use designation of Agriculture (20-ac to 160-ac minimum) and has a zoning classification of AG-40. Currently the existing roadway at the bridge is classified as a "Rural Local Road" and accommodates average daily traffic (ADT) of approximately 100 vehicles per day.

The existing Central House Road Bridge over Wyman Ravine was built in 1910 and widened in 1970. In 2021 the Caltrans Bridge Report gave the existing bridge a sufficiency rating (SR) of 39.9 and the National Bridge Inspection (NBI) scour code is U for unknown foundation. The existing bridge is scour critical and is posted for less than the State's maximum legal loads. Maximum legal loads correspond to the maximum standard vehicle weights allowed by the vehicle code without attaining a special permit. Additionally, the structure is narrow and only accommodates one lane of traffic. At 96 years old, this structure has reached the end of its useful service life and requires replacement. The proposed project involves removing the existing structure and replacing it with a bridge that would provide adequate and safe public access that is consistent with County, Federal Highway Administration (FHWA), American Association of State Highway and Transportation Officials (AASHTO), and the California Department of Transportation (Caltrans) design criteria and standards.

The Draft Initial Study/Mitigated Negative Declaration (IS/MND) was submitted to the State Clearinghouse on December 8, 2023 for a 30-day public review period that will end on January 9, 2023 at 4:00 PM. During the public review period, the Draft IS/MND will be available for review on the County's webpage: https://www.buttecounty.net/807/Public-Works or at 7 County Center Drive, Oroville, CA 95965 during business hours. Written comments will be accepted via mail or email at:

Raymond Cooper, P.E.
Butte County Department of Public Works
7 County Center Drive
Oroville, CA 95965
RCooper@buttecounty.net

The Draft IS/MND prepared for the proposed project assesses the potential effects on the environment and the significance of those effects. Based on the results of the Initial Study, the proposed project would not have significant impacts on the environment with the implementation of mitigation measures. This conclusion is supported by the following findings:

- The proposed project would not impact land use and planning, mineral resources, population and housing, and recreation.
- The proposed project would have a less-than-significant impact on aesthetics, agriculture and forestry resources, air quality, energy, greenhouse gas emissions, noise, and utilities and service systems.
- The proposed project would have a less-than-significant impact with the implementation of mitigation measures on biological resources, cultural resources, geology and soils, hazards and

hazardous materials, hydrology and water quality, public services, transportation, tribal cultural resources, and wildfire.

- No substantial evidence exists that the proposed project would have a significant negative or adverse effect on the environment.

The proposed project would incorporate standard construction best management practices and standard construction measures required by the Caltrans Standard Specifications and other applicable laws, regulations, and policies. The proposed project would implement mitigation measures, as described in Section 4 of this IS/MND. **Table ES-1**, below, provides the resource impact statements, level of significance, mitigation measures (if required), and level of significance after the implementation of mitigation measures.

Table ES-1. Summary of Impact Statements, Mitigation Measures, and Level of Significance

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Aesthetics			
Have a substantial adverse effect on a scenic vista?	No Impact	No mitigation measures are required.	No Impact
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	No mitigation measures are required.	No Impact
In non-urbanized, areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Potentially Significant	Implement Mitigation Measures BIO-9 through BIO-11.	Less than significant
Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	No Impact	No mitigation measures are required.	No Impact
Agriculture and Forestry Resources			
Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Less than Significant	No mitigation measures are required.	Less than Significant
Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Less than Significant	No mitigation measures are required.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact	No mitigation measures are required.	No Impact
Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact	No mitigation measures are required.	No Impact
Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	No Impact	No mitigation measures are required.	No Impact
Air Quality			
Conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant	No mitigation measures are required.	Less than Significant
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant	No mitigation measures are required.	Less than Significant
Expose sensitive receptors to substantial pollutant concentrations?	Less than Significant	No mitigation measures are required.	Less than Significant
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than Significant	No mitigation measures are required.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Biological Resources			
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially Significant	**BIO-1**: A qualified biologist shall conduct a preconstruction survey for special-status plant species within 30 days prior to construction. If special-status plant species are not found, then no further measures are necessary. If special-status plant species are found in the Project site, CDFW will be notified at least 10 days prior to dewatering or construction impacts in the vicinity of any special-status plant species in accordance with the California Native Plant Protection Act of 1977 (California Fish and Game Code § 1900-1913) to allow sufficient time to transplant the individuals to a suitable location. **BIO-2:** The following efforts shall be implemented regarding western pond turtle: • If dewatering is necessary, the construction area shall be dewatered prior to construction activities. CDFW shall be notified prior to dewatering activities. • No more than two weeks prior to the commencement of ground-disturbing activities, the County shall retain a qualified biologist to perform surveys for western pond turtle within suitable aquatic and upland habitat within the Project site. Surveys will include western pond turtle nests as well as individuals. If western pond turtles are found, the biologist (with the appropriate agency permits) will temporarily move any identified western pond turtles upstream of the construction area, and temporary barriers will be placed around the construction area to prevent ingress. Construction will not proceed until the work area is determined to be free of turtles. The results of these surveys will be documented in a technical memorandum that will be submitted to CDFW (if turtles are documented). Standard construction BMPs shall be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the biological study area (BSA). **BIO-3:** The following efforts shall be implemented regarding giant garter snake: • In-water and bank-side construction activities shall be conducted between May 1st and October 1st as necessary to ensure that construction occurs during the active period of the GGS. Any work occurring after October 1st shall be restricted to bridge surface work with water quality controls in place. • Between April 15th and September 30th, any dewatered habitat shall remain dry, with no puddle water, for at least 15 consecutive days before workers excavate or fill dewatered habitat. Efforts shall be made to ensure that the dewatered habitat does not continue to support GGS prey (e.g., fish, tadpoles,	Less than significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		and aquatic insects), which could detain or attract snakes into the area. This measure would encourage GGS to leave the site. • Temporary fencing (or similar devices which lack openings which might cause the GGS to become stranded or otherwise become entangled) shall be installed at the upstream and downstream limits of the construction area, to deter GGS from entering the BSA and being harmed by construction activities. The fencing shall be installed regardless of whether or not there is aquatic habitat present during the time of construction to ensure that GGS do not enter the construction zone. • Construction personnel shall participate in a USFWS-approved worker environmental awareness program prior to the onset of construction activities. A qualified biologist shall inform all construction personnel about the life history of GGS, how to identify species and their habitats, what to do if a GGS is encountered during construction activities, and explain the state and federal laws pertaining to GGS. • A qualified biologist shall conduct a pre-construction survey for GGS, no more than 24 hours prior to the start of construction activities (site preparation and grading). If construction activities stop for a period of two or more weeks, a new GGS survey shall be completed no more than 24 hours prior to the reinitiating of construction activities. The biologist shall monitor the site during dewatering activities; if a GGS is encountered during the construction period after the completion of these dewatering activities, the monitoring biologist shall be notified and shall have the authority to stop localized construction activities until corrective measures have been taken to avoid harm to GGS. • Any vegetation or ground clearing shall be confined to the minimal area necessary within 200 feet of aquatic habitat to facilitate construction activities. To ensure that construction equipment and personnel do not affect upland and aquatic habitat for GGS outside of the PIA, exclusionary fencing shall be erected to clearly define the GGS habitat to be avoided. This shall delineate the environmentally sensitive areas within the PIA. The installation techniques and location of the exclusionary fencing shall be coordinated with a qualified wildlife biologist, who shall inspect and approve the fencing prior to commencement of construction. • Upon completion of construction, disturbed sections of Wyman Ravine shall be hydro seeded to stabilize disturbed areas.	

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• If a live GGS is encountered during construction activities, the project biological monitor and the USFWS shall be immediately notified. The biological monitor shall do the following: o Stop all construction activity in the vicinity of the GGS. Monitor the GGS and allow the GGS to leave on its own. The qualified biological monitor shall remain in the area for the remainder of the workday to make sure the GGS is not harmed or it leaves the site and does not return. Escape routes for GGS shall be determined in advance of construction. If the GGS does not leave on its own within one working day, further consultation with USFWS shall be conducted. o Only personnel with a USFWS recovery permit pursuant to Section 10(a) (1) (A) of ESA shall have the authority to capture and/or relocate GGS encountered in the PIA. o Upon locating dead, injured, or sick GGS, Caltrans shall notify the USFWS Division of Law Enforcement or the Sacramento Fish and Wildlife Office within one working day. Written notification to both offices shall be made within three calendar days and shall include the date, time, and location of the finding of a specimen and any other pertinent information. • No plastic, monofilament, jute, or similar erosion control matting that can entangle GGS shall be employed. Possible substitutions include coconut coir matting, tactified hydro seeding compounds, or other material approved by the USFWS. Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects to the water quality within the BSA. These BMPs shall be inspected daily to ensure their effectiveness. They shall be installed per the BMP installation specifications. BMPs deemed to be ineffective shall be maintained or replaced as necessary.	
		BIO-4: To compensate for permanent impacts to giant garter snake aquatic foraging habitat and upland dispersal habitat, the County shall purchase credits from a USFWS- and/or CDFW-approved mitigation bank at a minimum 3:1 ratio. To compensate for temporary impacts to aquatic foraging habitat and upland dispersal habitat, the County shall restore all disturbed areas and purchase credits from a USFWS- and/or CDFW-approved mitigation bank at a minimum 2:1 ratio. Preservation and restoration may also occur onsite through a conservation agreement.	
		BIO-5: Prior to construction, surveys shall be conducted by a qualified biologist to determine presence/absence of nesting Swainson's hawk in and within 0.5 miles of	

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		the BSA according to the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). If no Swainson's hawks are found during any of the surveys, no further mitigation shall be necessary. If Swainson's hawk nests are found, CDFW shall be consulted regarding measures to reduce the likelihood of forced fledging of young or nest abandonment by adult birds. These measures shall likely include, but are not limited to, the establishment of a no-work zone around the nest until the young have fledged as determined by a qualified biologist.	
		BIO-6: The following measures shall be used when work occurs on, or in the vicinity of, structures that may be subject to nesting by migratory birds. • *Avoid Active Nesting Season*. To avoid and minimize impacts to tree and shrub nesting species, the following measures will be implemented: o Conduct all tree and shrub removal and grading activities during the nonbreeding season (generally September 1 through January 31). o If grading and tree removal activities are scheduled to occur during the breeding and nesting season (February 1 through August 31), preconstruction surveys will be performed by a qualified biologist prior to the start of Project activities. • *Conduct Preconstruction Nesting Bird Surveys*. If construction, grading, or other project-related activities are schedule during the nesting season (February 1 to August 31), preconstruction surveys for other migratory bird species will take place no less than 14 days and no more than 30 days prior to the beginning of construction within 250 feet of suitable nesting habitat. o If the preconstruction surveys do not identify any nesting migratory bird species within areas potentially affected by construction activities, no further mitigation will be required. If the preconstruction surveys do identify nesting bird species within areas that may be affected by site construction, the following measures will be implemented. o If the pre-construction surveys do identify nesting bird species within areas that are within 250 feet of construction activities, the following measures shall be implemented: Project-related construction impacts shall be avoided by establishment of appropriate no-work buffers to limit Project-related construction activities near the nest site. The size of the no-work buffer zone shall be determined in consultation with CDFW. The no-work buffer zone shall be delineated by highly visible temporary construction fencing. In consultation with CDFW, monitoring of nest activity by a	

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		qualified biologist shall be required if the Project-related construction activity has potential to adversely affect the nest or nesting behavior of the bird. No Project-related construction activity shall commence within the no-work buffer area until a qualified biologist and CDFW confirms that the nest is no longer active.	
		BIO-7: A qualified biologist shall survey trees within the project work limits and identify any snags, hollow trees, or other trees with cavities that provide suitable roosting habitat for pallid bat and other bat species. These surveys shall occur prior to construction, or prior to re-starting construction if a lapse of 14 days or more in construction activity occurs. The following shall be implemented based on survey results: • If no suitable roosting trees are found, construction shall proceed. If snags, hollow trees, or other trees with suitable cavities are found, the qualified biologist shall examine the areas for roosting bats. • If bats are not found and there is no evidence of use by pallid bats, construction shall proceed. If pallid bats are found or evidence of use by bats is present, CDFW shall be consulted for guidance on measures to avoid or minimize disturbance to the colony. These measures include, but are not limited to, excluding bats from the tree before their hibernation period (mid-October to mid-March) and before construction begins.	
		BIO-8: The following measures shall be incorporated for bridge-nesting birds if bridge demolition or construction of the new bridge occurs during the nesting season (February 1 to August 31). Exclusionary netting shall be installed around the undersides of the existing bridge before February 1 of the construction year to prevent new nests from being formed and/or prevent the reoccupation of existing nests. Exclusionary netting may also be required during construction of the new bridge if it is completed during the breeding season. The construction contractor will do the following: • Remove all existing unoccupied nests on the bridge during the non-nesting season (September 1 through January 31). • Keep the bridge free of nests, using exclusionary netting or other approved methods, until completion of construction activities. • Inspect all listed structures for nesting activity a minimum of three days per week; no two days of inspection will be consecutive. A weekly log will be submitted to the Project biologist. The contractor will continue inspections until bridge removal and completion of construction on new bridge. If an exclusion device were found to be ineffective or defective, the contractor will	

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		complete repairs to the device within 24 hours. If birds were found trapped in an exclusion device, the contractor will immediately remove the birds in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines. • Submit for approval working drawings or written proposals of any exclusion devices, procedures, or methods to the project biologist before installing them. The method of installing exclusion devices will not damage permanent features of the new bridge structure. Approval by the project biologist of the working drawings or inspection performed by the authorized project biologist will in no way relieve the contractor of full responsibility for deterring nesting.	
Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially Significant	**BIO-9:** The following practices will be implemented prior to and during construction for valley oak woodland riparian habitat. • Prior to removal of any trees, an International Society of Arboriculture-certified arborist shall conduct a tree survey in areas that may be impacted by construction activities. This survey shall document tree resources that may be adversely impacted by implementation of the project. The survey will follow standard professional practices. • A tree protection zone shall be established around any tree or group of trees to be retained. The tree protection zone will be delineated by an International Society of Arboriculture-certified arborist. The tree protection zone shall be defined by the radius of the dripline of the tree(s) plus one foot. The tree protection zone of any protected trees shall be demarcated using fencing that will remain in place for the duration of construction activities. • Construction-related activities shall be limited within the tree protection zone to those activities that can be done by hand. No heavy equipment or machinery shall be operated within the tree protection zone. Grading shall be prohibited within the tree protection zone. No construction materials, equipment, or heavy machinery shall be stored within the tree protection zone. • A planting plan will be implemented as detailed in a Restoration Plan approved by CDFW. The Restoration Plan will include performance standards for revegetation that will ensure successful restoration of the on-site riparian areas. • Protective fencing shall be installed along the edge of construction areas including temporary and permanent access roads where construction will occur within 200 feet of the edge of riparian woodland habitat (as determined by a qualified biologist). The location of fencing shall be marked in the field	Less than significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, trenching, grading, or other surface-disturbing activities outside of the designated construction area. Signs shall be erected along the protective fencing at a maximum spacing of one sign per 50 feet of fencing. The signs shall state: "This area is environmentally sensitive; no construction or other operations may occur beyond this fencing. Violators may be subject to prosecution, fines, and imprisonment." The signs shall be clearly readable at a distance of 20 feet and shall be maintained for the duration of construction activities in the area. Where riparian vegetation occurs along the edge of the construction easement, the County shall minimize the potential for long-term loss of riparian vegetation by trimming vegetation rather than removing the entire plant. Trimming will be conducted per the direction of a biologist and/or Certified Arborist. **BIO-10:** The County shall restore any temporarily impacted valley oak riparian habitat at a 1:1 ratio. The permanent degradation of valley oak riparian woodland habitat shall be compensated for at a 3:1 ratio through the purchase of similar habitat value from a Corps- and CDFW-approved mitigation bank. Preservation and restoration shall be allowed to occur onsite with a CDFW and RWQCB approved mitigation monitoring plan.	
Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially Significant	**BIO-11**: To compensate for the permanent impacts on jurisdictional wetlands and waters, the County shall purchase credits from a Corps- and/or CDFW-approved mitigation bank at a minimum 1:1 ratio (one acre of habitat replaced for every one acre filled). Preservation and restoration shall be allowed to occur onsite with a Corps, CDFW, and RWQCB approved mitigation monitoring plan.	Less than significant
Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less than Significant	No mitigation measures are required.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Conflict with any local policies or ordinances protecting biological resources, sch as a tree preservation policy or ordinance?	Potentially Significant	Implement Mitigation Measures BIO-1 through BIO-11.	Less than Significant
Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact	No mitigation measures are required.	No Impact
Cultural Resources			
Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	Less than Significant	No mitigation measures are required.	Less than Significant
Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant	**CUL-1:** If an unexpected discovery of cultural materials (e.g., unusual amounts of shell, animal bone, flaked stone, bottle glass, ceramics, structure/building remains) is encountered during project-related construction activities, the following procedures shall be followed: • If unexpected cultural materials are unearthed, ground disturbances in the area of the find shall be halted immediately and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist shall determine whether the resource is potentially significant and develop the appropriate plan for handling the resource, including, but not limited to: no action; avoidance of the resource; or data recovery. • If unexpected prehistoric materials (i.e., chipped, ground or pecked stone, bone, shell, ash and charcoal, or similar evidence of human occupation) are unearthed, ground disturbances in the area of the find shall be halted immediately and a qualified professional archaeologist and Native American monitor shall be notified regarding the discovery. The archaeologist and Native American monitor shall develop the appropriate plan for handling the resource, including, but not limited to: no action; avoidance of the resource; or data recovery.	Less than significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Disturb any human remains, including those interred outside of formal cemeteries?	Potentially Significant	**CUL-2:** If buried human remains human remains or associated funerary objects are encountered during construction, all work shall halt within the vicinity of the discovery. In accordance with CEQA and the California Health and Human Safety Code (14 CCR § 15064; 7 HSC § 7050.5), the County coroner will be contacted immediately. If the human remains are determined to be Native American, the coroner will notify the Native American Heritage Commission within 24 hours of such identification. The NAHC will notify and appoint a Most Likely Descendant (MLD). The MLD will work with a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects.	Less than significant
Energy			
Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less than Significant	No mitigation measures are required.	Less than Significant
Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact	No mitigation measures are required.	No Impact
Geology and Soils			
Directly or indirectly cause potential substantial adverse effect, including the risk of loss, injury, or death involving: i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	Less than Significant	No mitigation measures are required.	Less than Significant
ii. Strong seismic ground shaking?	Less than Significant	No mitigation measures are required.	Less than Significant
iii. Seismic-related ground failure, including liquefaction?	Less than Significant	No mitigation measures are required.	Less than Significant
iv. Landslides?	Less than Significant	No mitigation measures are required.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Result in substantial soil erosion or the loss of topsoil?	Less than Significant	No mitigation measures are required.	Less than Significant
Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Less than Significant	No mitigation measures are required.	Less than Significant
Be located on expansive soil, as defined in Table 18-1-Bof the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less than Significant	No mitigation measures are required.	Less than Significant
Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact	No mitigation measures are required.	No Impact
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	**GEO-1:** *Immediately Halt Construction Activities if Any Paleontological Materials Are Discovered*. If paleontological resources are encountered during project-related construction activities, ground disturbances in the area of the find shall be halted immediately and a qualified paleontologist shall be notified regarding the discovery. The paleontologist shall determine whether the resource is potentially significant and develop the appropriate plan for handling the resource in accordance with the Society of Vertebrate Paleontology guidelines. The plan would include, but is not limited to: a field survey; construction monitoring; sampling and data recovery procedures; museum storage coordination for any specimen recovered; and/or a report of findings. The plan shall be implemented by the qualified paleontologist before construction activities can resume in the vicinity of the find.	Less than significant
Greenhouse Gas Emissions			
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant	No mitigation measures are required.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less than Significant	No mitigation measures are required.	Less than Significant
Hazards and Hazardous Materials			
Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant	No mitigation measures are required.	Less than Significant
Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant	**HAZ-1:** *Asbestos and Lead Containing Materials.* Prior to construction activities the contractor shall submit a National Emission Standard for Hazardous Air Pollutants (NESHAP) notification. Per the NESHAP regulations for asbestos, all "demolition activity" requires written notification even if there is no asbestos present. This notification shall be typewritten and postmarked or delivered no later than ten (10) days prior to the beginning of the demolition or removal activity. If asbestos and/or lead containing materials are found, the following will be required: • Removal, disposal, storage, and transportation of materials from the bridge structure that contain asbestos shall be performed in compliance with current Caltrans Standard Specifications, including 14-11.16, and other federal and state regulations for hazardous waste. • A Lead Compliance Plan shall be prepared by the contractor for the disposal of lead-based paint. Materials associated with paint or bridge structures, paint on utilities, or remnant roadway paint striping shall be removed and disposed of by a California licensed abatement contractor, in compliance with current Caltrans Standard Specifications, including 14-11.13, and other federal and state regulations for hazardous waste. • Should additional ACMs be uncovered during bridge demolition, the following is recommended: o the materials should be assumed hazardous and handled as such until testing is completed. o samples of suspect materials should be collected for laboratory analysis, and all activities that may impact the materials should cease until results are reviewed.	Less than Significant
Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within	No Impact	No mitigation measures are required.	No Impact

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
one-quarter mile of an existing or proposed school?			
Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant	Implement Mitigation Measures HAZ-1.	Less than Significant
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	No mitigation measures are required.	No Impact
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Potentially Significant	Implement Mitigation Measure PUB-1.	Less than Significant
Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Potentially Significant	Implement Mitigation Measure PUB-1.	Less than Significant
Hydrology and Water Quality			
Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less than Significant	No mitigation measures are required.	Less than Significant
Substantially decrease ground water supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less than Significant	No mitigation measures are required.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i. Result in substantial erosion or siltation on- or off-site?	Potentially Significant	Implement Mitigation Measures BIO-10 and BIO-11.	Less than Significant
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than Significant	No mitigation measures are required.	Less than Significant
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Less than Significant	No mitigation measures are required.	Less than Significant
iv. Impede or redirect flood flows?	Less than Significant	No mitigation measures are required.	Less than Significant
In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less than Significant	No mitigation measures are required.	Less than Significant
Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact	No mitigation measures are required.	No Impact
Land Use and Planning			
Physically divide an established community?	No Impact	No mitigation measures are required.	No Impact
Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted	No Impact	No mitigation measures are required.	No Impact

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
for the purpose of avoiding or mitigating an environmental effect?			
Mineral Resources			
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact	No mitigation measures are required.	No Impact
Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact	No mitigation measures are required.	No Impact
Noise			
Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than Significant	No mitigation measures are required.	Less than Significant
Generate excessive groundborne vibration or groundborne noise levels?	Less than Significant	No mitigation measures are required.	Less than Significant
For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	No Impact	No mitigation measures are required.	No Impact
Population and Housing			
Induce substantial unplanned population growth in an area, either directly (for example, by proposing new	No Impact	No mitigation measures are required.	No Impact

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			
Displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing elsewhere?	No Impact	No mitigation measures are required.	No Impact
Public Services			
Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: i. Fire protection?	Potentially Significant	**PUB-1:** *Develop a Construction Period Emergency and School Bussing Access Plan.* Prior to the start of construction, the contractor shall coordinate with the local public and private ambulance and paramedic providers, Butte County Fire Department, CalFire, Butte County Sheriff's Office, and Gridley Unified School District to prepare a Construction Period Emergency and School Bussing Access Plan. The Construction Period Emergency and School Bussing Access Plan shall identify phases of the proposed project and construction scheduling and shall identify if alternative emergency and bussing access routes are appropriate.	Less than Significant
ii. Police protection?	Potentially Significant	Implement Mitigation Measure PUB-1.	Less than Significant
iii. Schools?	Potentially Significant	Implement Mitigation Measure PUB-1.	Less than Significant
iv. Parks?	No Impact	No mitigation measures are required.	No Impact
v. Other public facilities?	No Impact	No mitigation measures are required.	No Impact
Recreation			
Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	No Impact	No mitigation measures are required.	No Impact

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	No Impact	No mitigation measures are required.	No Impact
Transportation			
Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less than Significant	No mitigation measures are required.	Less than Significant
Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Less than Significant	No mitigation measures are required.	Less than Significant
Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant	No mitigation measures are required.	Less than Significant
Result in inadequate emergency access?	Potentially Significant	Implement Mitigation Measure PUB-1.	Less than significant
Tribal Cultural Resources Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Less than Significant	No mitigation measures are required.	Less than Significant
A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in	Potentially Significant	**TCR-1:** Prior to the start of construction, develop, in coordination with interested Native American tribes, a consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in Project implementation. Distribute this brochure and conduct training, in	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
subdivision C, of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.		coordination with qualified cultural resources specialists and Native American representatives from culturally affiliated Native American tribes, before construction commencement. The worker awareness program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, confidentiality requirements, requirements for the culturally-appropriate treatment of any discovered resources, protocols for avoidance, and consequences of violating state laws and regulations; describe the protocol to avoid and minimize impacts to resources that have the potential to be located on the project site; and will outline the protocol to follow if any potential resources or artifacts are encountered. **TCR-2:** If potential tribal cultural resources (TCRs), archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other project personnel during construction activities, work will cease within 100 feet of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from a traditionally and culturally affiliated Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from traditionally and culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary (pursuant to Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370). Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless requested by the Tribe. Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. These recommendations will be documented by the qualified cultural resources specialist and provided to the County for inclusion in the project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, the qualified cultural resources specialist shall provide written justification for why the recommendation was not followed. This written justification shall be provided to the County for inclusion in the project record.	

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Utilities and Service Systems			
Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less than Significant	No mitigation measures are required.	Less than Significant
Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact	No mitigation measures are required.	No Impact
Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact	No mitigation measures are required.	No Impact
Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than Significant	No mitigation measures are required.	Less than Significant
Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less than Significant	No mitigation measures are required.	Less than Significant
Wildfire			
Substantially impair an adopted emergency response plan or emergency evacuation plan?	Potentially Significant	Implement Mitigation Measure PUB-1.	Less than significant
Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to,	Potentially Significant	**FIRE-1:** Prior to the start of construction, the contractor shall coordinate with the Butte County Fire Department/CalFire to prepare a Fire Safety Plan for use during	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?		construction. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to, the following: • All internal combustion engines, stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order. • Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. Said vehicle types shall maintain their factory-installed (type) muffler in good condition. • Equipment parking areas (staging areas) shall be cleared of all extraneous flammable materials. • Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. Smoking shall be prohibited in wildland areas and shall be limited to paved areas or areas cleared of all vegetation.	
Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Potentially Significant	Implement Mitigation Measure FIRE-1.	Less than significant
Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of run-off, post0fire slope instability, or drainage changes?	Less than Significant	No mitigation measures are required.	Less than Significant
Mandatory Findings of Significance			
Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce	Potentially Significant	Implement Mitigation Measures BIO-1 through BIO-11, CUL-1, CUL-2, TCR-1, and TCR-2.	Less than Significant

Potential impact	Level or Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			
Have impacts that are individually limited, but cumulatively considerable?	Less than Significant	No mitigation measures are required.	Less than Significant
Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	Potentially Significant	Implement Mitigation Measures BIO-1 through BIO-11, CUL-1, CUL-2, GEO-1, HAZ-1, PUB-1, TCR-1, TCR-2, and FIRE-1.	Less than Significant

ACRONYMS AND ABBREVIATIONS

The following is a list of acronyms and abbreviations used within this document. Each term is defined in full once per chapter within the document before the abbreviation is used.

$\mu g/m^3$	Microgram per cubic meter
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ACM	Asbestos containing material
ADL	Aerially deposited lead
ADT	Average daily vehicular traffic trips
AFB	Air Force Base
ALUCP	Airport Land Use Compatibility Plan
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ASR	Archaeological Survey Report
ASTM	American Society for Testing and Materials
BA	Biological Assessment
BCAG	Butte County Association of Governments
BCAQMD	Butte County Air Quality Management District
BMP	Best Management Practices
BRCP	Butte Regional Conservation Plant
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalFire	California Department of Forestry and Fire Protection
California Register	California Register of Historical Resources
CalOSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CH_4	Methane
CHRIS	California Historical Resources Information System

CIDH	Cast-in-Drilled Hole
CIP/PS	Cast-in-Place Prestressed
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2e	Carbon dioxide equivalent
Corps	U.S. Army Corps of Engineers
COS	Conservation and Open Space Element
County	Butte County
dB	Decibel
dBA	A-weighted decibel
EDR	Environmental Database Resources, Inc.
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
General Plan	Butte County General Plan
GGS	Giant Garter Snake
GHG	Greenhouse Gas
HASP	Health and Safety Plan
HBP	Highway Bridge Program
HCP	Habitat Conservation Plan
HPSR	Historic Properties Survey Report
HUC	Hydrologic Unit Code
In/sec	Inches per second
ISA	Initial Site Assessment
LBP	Lead-based paint
Leq	Equivalent A-weighted sound level
MBTA	Migratory Bird Treaty Act
mg/l	Milligrams per liter
MIA	Military Influence Area
MLD	Most Likely Descendant

mph	Miles per Hour
MRZ	Mineral Resource Zone
$MTCO_2e$	Metric tons of carbon dioxide equivalent
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NCCP	Natural Community Conservation Plan
NEIC	Northeast Information Center
NES	Natural Environment Study
NHPA	National Historic Preservation Act of 1966
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O_3	Ozone
OSHA	Occupational Safety and Health Administration
PAR	PAR Environmental Services, Inc.
Pb	Lead
PG&E	Pacific Gas and Electric Company
PIA	Project Impact Area
PM	Particulate Matter
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppb	Parts per Billion
ppm	Parts per Million
PPV	Peak particle velocity
PRC	Public Resources Code
RECs	Recognized Environmental Conditions
ROG	Reactive Organic Gas
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SMARA	Surface Mining and Reclamation Act
SR	State Route

SSP	Standard Special Provisions
SVAQEEP	Sacramento Valley Air Quality Engineering and Enforcement Professionals
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
TDS	Total dissolved solids
TRC	Tribal Cultural Resource
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled

TABLE OF CONTENTS

Appendices

List of Figures

List of Tables

INITIAL STUDY

1. Project Title:	Central House Road Bridge (No. 12C-0111) over Wyman Ravine Replacement Project
2. Lead Agency:	Butte County Department of Public Works 7 County Center Drive Oroville, CA 95965 Telephone: (530) 538-7681 Attention: Raymond Cooper
3. Project Location:	Central House Road, Butte County, California Honcut U.S. Geological Survey (USGS) 7.5-minute quadrangle, Township 17 North (T17N), Range 3 East (R3E), Section 2
4. Project Sponsor:	County of Butte
5. Adjacent General Plan Designation(s):	Agriculture (20-ac to 160-ac minimum)
6. Adjacent Zoning:	AG-40

1 INTRODUCTION

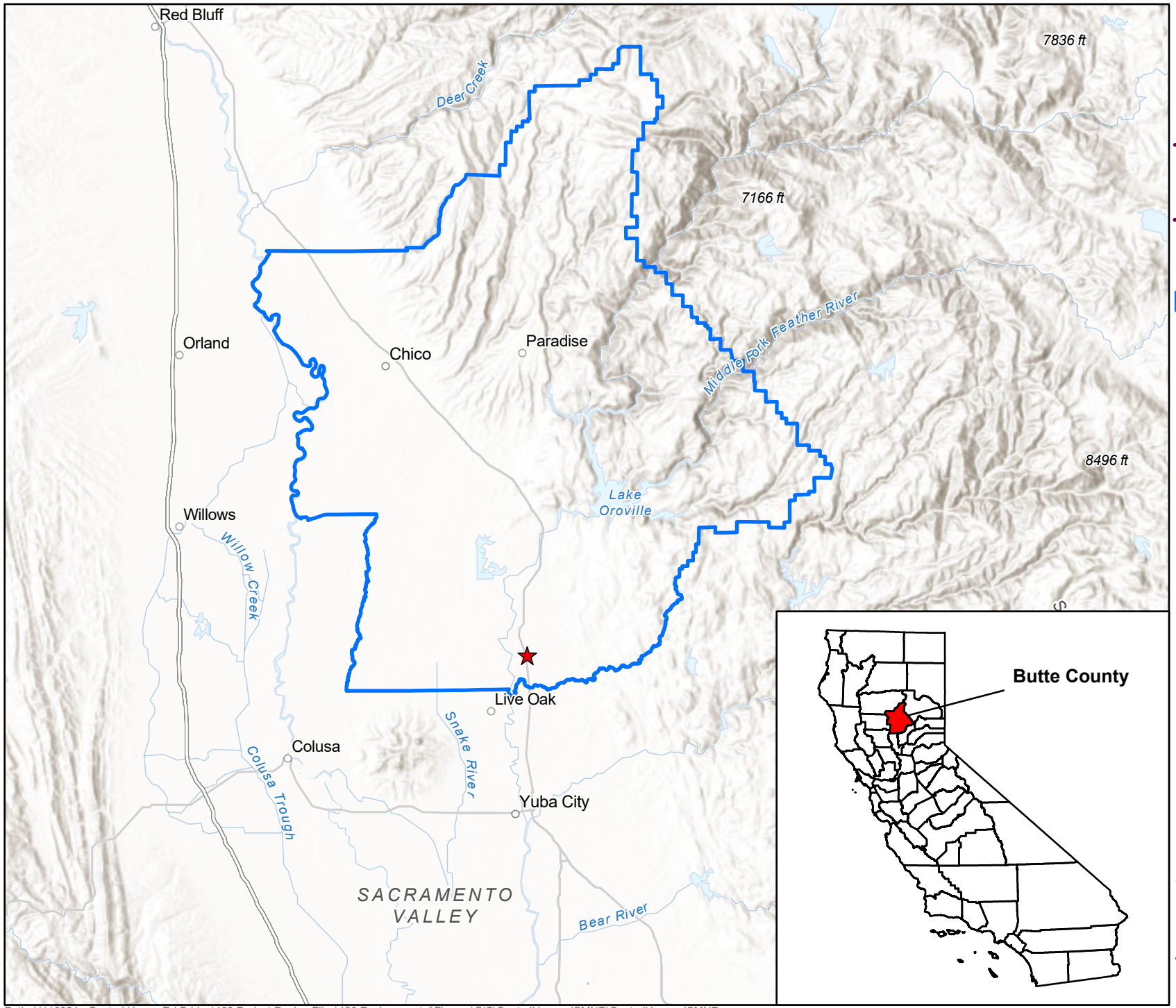
The Butte County Department of Public Works (County) is proposing to replace the existing Central House Road Bridge (No. 12C-0111) over Wyman Ravine. The Central House Road Bridge over Wyman Ravine Replacement Project (proposed project) is located on Central House Road in Butte County, California, approximately 0.2 miles east of State Route (SR) 70, approximately 5 miles east of the City of Gridley and approximately 11 miles south of the City of Oroville (**Figures 1 and 2**). The Butte County General Plan Land Use Map identifies Central House Road as a major roadway; however, the General Plan Circulation Element identifies Central House Road as a minor roadway. The land surrounding the proposed project has a land use designation of Agriculture (20-ac to 160-ac minimum) and has a zoning classification of AG-40. Currently the existing roadway at the bridge is classified as a "Rural Local Road" and accommodates average daily traffic (ADT) of approximately 100 vehicles per day.

The proposed project is federally funded and administered by the California Department of Transportation (Caltrans) through the Highway Bridge Program (HBP). The proposed project would utilize Toll Credits for the local match, making the entire proposed project fully funded.

The new replacement bridge is proposed to be a two-span concrete structure and would be longer and wider than the existing bridge. The proposed project would improve the bridge crossing of Wyman Ravine and the roadway approaches to meet current standards. The replacement bridge would meet current applicable Butte County, American Association of State Highway and Transportation Officials (AASHTO), Federal Highway Administration (FHWA), and Caltrans design criteria and standards.

This page is intentionally blank.

Regional Location



Central House Road over Wyman Ravine Bridge (12C-0111) Replacement Project Butte County, CA

Figure 1

Legend

- Butte County
- Project Location

0 14 Miles

N

Author: I. Ciraulo
Last updated on Wednesday, November 15, 2023

Dewberry

Path: U:\16024 - Central House Rd Bridge\400 Project Design Files\460 Environmental\Figures\GIS\CentralHouse_ISMND\CentralHouse_ISMND.aprx

This page is intentionally blank.

Project Location

Central House Road over Wyman Ravine Bridge (12C-0111) Replacement Project Butte County, CA

Figure 2

Legend

★ Project Location

N

0 400 Feet

Author: I. Ciraulo
Last updated on Wednesday, August 30, 2023

Dewberry

Path: U:\16024 - Central House Rd Bridge\400 Project Design Files\460 Environmental\Figures\GIS\CentralHouse_ISMND\CentralHouse_ISMND.aprx

This page is intentionally blank.

2 PROJECT DESCRIPTION

2.1 Purpose and Need

The existing structure was built in 1910 and widened in 1970. In 2021 the Caltrans Bridge Report gave the existing bridge a sufficiency rating (SR) of 39.9 and the National Bridge Inspection (NBI) scour code is U for unknown foundation. The existing bridge is scour critical and is posted for less than the State's maximum legal loads. Maximum legal loads correspond to the maximum standard vehicle weights allowed by the vehicle code without attaining a special permit. Additionally, the structure is narrow and only accommodates one lane of traffic. At 96 years old, this structure has reached the end of its useful service life and requires replacement. The proposed project involves removing the existing structure and replacing it with a bridge that would provide adequate and safe public access that is consistent with County, FHWA, AASHTO, and Caltrans design criteria and standards.

2.2 Existing Conditions

The existing structure, built in 1910 and widened in 1970, consists of a two-span structure composed of steel girders and an Armco bridge plank deck. The bridge is founded on concrete columns with steel cap beams and unknown footings. It currently has a length of approximately 45 feet and a width of approximately 18 feet.

The existing bridge has vertical cracking in the wingwalls which have separated from the abutments. There is transverse deck cracking and rust at contact points between the soffit planks and steel stringers. Additionally, the exterior stringers are bent and rotated due to barrier rail impacts. The bridge railings are metal beam guard rails attached to the side of the bridge. The abutment and column concrete are showing signs of cracking, spalls, delamination, and abrasion. The paint system on the steel elements has failed and the existing structure is currently posted for legal loads.

Additionally, the existing structure is situated within a curved horizontal alignment, minimizing sight distance for approaching traffic and reducing the advised speed limit to 10 miles per hour (mph) at the bridge. Although this structure currently is scour critical, the contributing hydraulics to this structure are influenced by heavy weather events and seasonal agricultural needs, which typically do not place heavy hydraulic demands on the structure.

2.3 Proposed Conditions

The new proposed structure would be a two-span bridge approximately 200 feet long (two spans at approximately 100 feet each) with an approximate 28-foot-wide roadway clear width between bridge railings. The proposed width would help accommodate farm equipment crossing the structure. The superstructure would be a cast-in-place prestressed (CIP/PS) concrete box girder bridge founded on either cast-in-drilled hole (CIDH) or driven pile supports at the bent and abutments. The intermediate bent would be placed near the footprint of the island downstream of the existing structure and along the western edge of Wyman Ravine. In order to straighten the roadway and remove the horizontal curve at the bridge, there would be approximately 400-700 linear feet of roadway approach work at each end of the bridge. The roadway approach work would include an option to install culverts to the east of the new bridge to further reduce flood flow velocity, dependent on the demands during final design. The length of approach roadway work is being governed by the necessary rise in the roadway profile at the bridge to meet hydraulic requirements. Straightening the road would improve safety at the bridge by improving site distance and eliminating the tight reduced speed curve on an otherwise straight roadway. The proposed project footprint is depicted in **Figure 3**.

This page is intentionally blank.

Project Footprint

Central House Road over Wyman Ravine Bridge (12C-0111) Replacement Project Butte County, CA

Figure 3

Legend

- Project Study Area
- Existing Bridge
- Parcels
- Proposed Bridge
- Proposed Detour
- Proposed Roadwork
- Proposed Mitigation Area
- Staging Areas

N

0 200 Feet

Author: I. Ciraulo
Last updated on Wednesday, August 30, 2023

Dewberry

Path: \\dewberry.dewberryroot.local\Offices\RanchoCordova\Projects\16024 - Central House Rd Bridge\400 Project Design Files\460 Environmental\Figures\GIS\CentralHouse_ISMND\CentralHouse_ISMND.aprx

This page is intentionally blank.

2.4 Utility Relocation

There are existing overhead electrical and communication utility lines located at the project site. These utility lines are located along the south side of the existing bridge and would likely conflict with the proposed roadway and new bridge alignment. Although accommodations would be made to provide utility openings within the new bridge structure, it is anticipated that the utilities would remain overhead and be relocated to the other side of the bridge prior to roadway and bridge construction.

2.5 Right-of-Way Acquisitions

There is an existing 60-foot -wide corridor of County right-of-way along the proposed roadway. Small slivers of permanent right-of-way acquisition parallel to the newly straightened roadway alignment are anticipated on this proposed project. The needs for the anticipated slivers of permanent right-of-way acquisition are from embankment fill, drainage ditches, and other items needed to reconstruct the bridge and approach roadway segments. Additionally, temporary construction easements and/or permits to enter and construct are anticipated for construction staging, driveway improvements, and/or contractor access routes. The Assessor Parcel Numbers (APNs) 024-230-036 and 024-240-055 have been identified as potential staging areas as shown in **Figure 3**.

2.6 Detour Route

During construction, it is anticipated that Central House Road would be detoured north of the existing bridge onto a temporary creek crossing on APN 024-230-036 to maintain through traffic from SR 70 to Palermo-Honcut Highway. Local property owners expressed concern that closing the bridge on Central House Road would cause significant hardships due to the farming activities on the surrounding parcels. Due to the very low volume of average daily traffic (approximately 100 vehicles per day) and available land immediately north of the existing bridge on APN 024-230-036 for a detour structure, temporarily detouring traffic while the new bridge is constructed was determined feasible and optimal (refer to **Figure 3**). County staff would provide Public Outreach prior to construction to keep residents informed of the proposed project's status and schedule throughout construction.

2.7 Staged Construction

Since closing Central House Road has been determined not feasible, staged construction would be used to construct the new bridge and approach roadways. First, a temporary detour across Wyman Ravine would be constructed immediately north of the existing bridge on APN 024-230-036. Next, the existing bridge and portions of the approach roadway segments near the existing bridge would be demolished. The new bridge and portions of the approach roadway segments near the new bridge would then be constructed south of the existing bridge on an alignment that straightens Central House Road near Wyman Ravine. Lastly, traffic would be transferred to the new bridge and roadway and the temporary detour would be removed.

2.8 Demolition

Demolition of the existing bridge would be performed in accordance with the 2018 Caltrans Specifications, supplemented by the Butte County standards, modified to meet environmental permit requirements. Prior to demolition, the contractor would be required to prepare and submit for approval, a bridge demolition plan, including creek diversions and bypass details that are in conformance with the environmental permits.

All concrete and other debris resulting from the demolition of the existing bridge and roadway would be removed from the project site and properly disposed of by the contractor. All demolition and diversion plans would be reviewed and approved by the Resident Engineer prior to demolition activities.

2.9 Construction Activities

Construction would consist of the following activities in this general order:

2.9.1 Clearing, Grubbing, and Tree Removals

Portions of hardscape and landscaping in conflict with construction and demolition activities would be removed. Areas along the alignment of the existing and proposed bridge would be cleared of vegetation and fencing. Approximately 30 oak trees would be removed to accommodate the proposed structure and detour.

2.9.2 Stream Diversion

Dewatering may be necessary during construction depending on weather and agricultural demands at the time of construction, and/or elevated ground water. Typically, Wyman Ravine is dry during the proposed construction season; however, there is an existing check dam approximately 300 feet downstream of the existing structure and water levels can vary.

Should water be present, stream flow in Wyman Ravine would be diverted into pipes through the active construction zone. The diversion would be established in conformance with County specifications as well as regulatory agency requirements, including but not limited to California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and U.S. Fish and Wildlife Service (USFWS). The stream diversion would be constructed within the existing channel to protect water flowing in Wyman Ravine from demolition and construction activities. Materials to construct the diversion would consist of pipes as needed to convey flow rates anticipated during construction, and exclusionary devices to construct diversion dams in the channel upstream and downstream of the site. Exclusionary devices may consist of sheet piles, gravel bags, water filled bladder dams, or another agency approved method. All stream diversion work would be contained within the approved project footprint.

2.9.3 New Bridge Foundations

Excavation for the abutments and bent would occur prior to pile installation and would be no more than 10 to 15 feet deep. The replacement bridge abutments and bent foundations would be supported by piles, either CIDH or driven steel piles. The piles are anticipated to be more than 30 feet deep.

CIDH piles would be installed with full length temporary casings but may still require high density drilling slurry during concrete placement. To install the piles, the temporary casings would first be rotated or oscillated into place and then drilled out with assistance from a large crane. Prior to construction, a drilling plan would be prepared by the contractor for approval by the County in conformance with applicable permits and environmental measures and conditions. If required, drilling slurry from the CIDH pile construction would be contained and properly disposed of offsite. The contractor would be required to have a contingency plan in place before drilling operations begin, in the event there is a drilling fluid spill and drilling fluid enters the creek.

Alternatively, driven steel piles may be used. While driven piles do not require drilling slurry, they do require driving operations which can cause significant noise and vibration impacts to the surrounding community and environment. For driven piles, a crane with pile hammer attachment would be needed to drive the steel piles to the design tip elevation. Prior to construction, a pile driving/installation plan would

be prepared by the contractor for approval by the County in conformance with applicable permits and environmental measures and conditions.

After the pile installation, the foundations would be formed, followed by rebar placement and then concrete pouring.

2.9.4 New Bridge Construction

A CIP/PS concrete bridge option would require falsework to be erected on temporary steel and timber supports in Wyman Ravine. Forms would be constructed on the falsework and then the concrete and reinforcement placed for the new bridge. Falsework would be removed from the channel and concrete surfaces would be finished. If stream flow in Wyman Ravine is diverted, the creek diversion would be removed after the concrete has been sufficiently cured and finished and the falsework has been removed.

The bridge barriers and roadway approaches would then be completed. Backfill behind abutments and roadway base materials would be placed. The roadway would then be prepared for final surfacing.

Table 1 provides a description of the type of equipment anticipated to be used during the construction of the proposed project.

Table 1
Construction Equipment

Equipment	Construction Purpose
Hydraulic Hammer	Demolition
Hoe ram	Demolition
Jack Hammer	Demolition
Water Truck	Earthwork construction + dust control
Bulldozer / Loader	Earthwork construction + clearing and grubbing
Haul Truck	Earthwork construction + clearing and grubbing
Front-End Loader	Dirt or gravel manipulation
Grader	Ground grading and leveling
Dump Truck	Fill material delivery
Bobcat	Fill distribution
Excavator	Soil manipulation and placement of rock slope protection
Compaction Equipment	Earthwork
Roller / Compactor	Earthwork and asphalt concrete construction
Backhoe	Soil manipulation + drainage work
Drill Rig/Pile Driver	Construction of drilled or driven pile foundations
Holding tanks	Slurry storage and suspended solid water settling
Crane	Placement of false work beams
Concrete Truck and Pump	Placing concrete
Paver	Asphalt concrete construction
Truck with seed sprayer	Erosion control landscaping
Generators	Power Hand Tools

2.9.5 Construction Schedule

Construction is currently scheduled to start in 2025 and be completed in a single construction season.

2.10 Permits and Approvals Needed

The following permits, reviews, and approvals are required for proposed project construction.

Table 2
Permits and Approvals Needed

Agency	Permit/Approval	Status
Caltrans/FHWA	Categorical Exclusion	Received the Categorical Exclusion in 2019 following the approval of the technical studies and receipt of the Biological Opinion
U.S. Army Corps of Engineers	Section 404 Permit	Application to follow approval of IS/MND
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification	Application to follow approval of IS/MND
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	Application to follow approval of IS/MND
U.S. Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species	Received the Biological Opinion in 2019 following the approval of the Biological Assessment
Natural Resources Conservation Service	NRCS CPA-106 (Farmland Conversion Impact Rating for Corridor Type Project)	Received approval in 2018 following the approval of the Farmland Impact Memorandum

3 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The proposed project could potentially affect the environmental factor(s) checked below.

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

3.1 Determination: (To be completed by Lead Agency)

On the basis of this initial study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

_____ _____

Signature Date

_____ _____

Printed Name For

4 ENVIRONMENTAL CHECKLIST

4.1 Aesthetics

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Aesthetics – Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☒

4.1.1 Setting

The Butte County General Plan (General Plan) Conservation and Open Space Element identifies scenic and visual resources within Butte County (County) as water features, unique geologic features, wildlife habitat areas, ridgelines, scenic byways, and natural vistas (Butte County, 2012). The General Plan provides a list of scenic resources; however, this list does not constitute all scenic resources in the County. These include the Feather River Canyon, Chico Canyon, Butte Creek Canyon, Table Mountain, Bald Rock Dome, the Sacramento River and its riparian corridor, Lake Oroville, and Philbrook Lake, as well as seasonal scenic resources such as the blossoming orchards in the valley area. The Sutter Buttes can be seen from Butte County and are a regional scenic resource. The project site is approximately 1.5 miles east of the Feather River and 10 miles northeast of the base of the Sutter Buttes.

There are no National Scenic Byways or All-American Roads within Butte County (Federal Highway Administration [FHWA], 2019). There are no Officially Designated State Scenic Highways within the County; however, State Route (SR) 70 is listed as an Eligible State Scenic Highway between SR 149 and the Butte County boundary, which is located approximately 16 miles north of the project site (California Department of Transportation [Caltrans], 2011). There are two County Scenic Highways, SR 70 through the Feather River Canyon and a portion of SR 32 north of Forest Ranch, both of which are located more than 16 miles north of the project site. In addition, the County has a Scenic Highway Overlay Zone which

is applied to areas extending 350 linear feet from the centerline of scenic routes; however, the proposed project is not located within or adjacent to any of these areas; the closest overlay is located approximately 14 miles northeast of the project site on portions of Forbestown Road.

Visual character is a description (not evaluation) of a site, and includes attributes such as form, line, color, and texture. Visual quality is the intrinsic appeal of a landscape or scene due to the combination of natural and built features in the landscape. The existing visual character of the project site can be described as agricultural land (rural). Wyman Ravine would be considered a water feature, which the General Plan identifies as a potential scenic resource.

4.1.2 Discussion

a) **No Impact.** Within the project site Wyman Ravine adds scenic value; however, it is not designated as a scenic vista. Views of surrounding agricultural lands and, on clear days, the mountain ranges surrounding the valley are afforded from the project site. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The replacement bridge would be constructed in a similar location to the existing bridge and would not substantially alter views of the project area by roadway users or adjacent residents. The proposed project would not obstruct views of the surrounding agricultural lands, nor of the mountains surrounding the valley that can be visible in the distance. The proposed project would have no impact and no mitigation measures are required.

b) **No Impact.** As mentioned above, there are no officially designated State Scenic Highways, National Scenic Byways, or All-American Roads located within Butte County. SR 70 is listed as an Eligible State Scenic Highway between SR 149 and the Butte County boundary; however, it is located approximately 16 miles north of the project site and does not have views of the project site. There are two County Scenic Highways, both of which are located more than 16 miles north of the project site; there are no views of the project site from these County Scenic Highways. The proposed project would have no impact and no mitigation measures are required.

c) **Less than Significant with Mitigation**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project is in a non-urbanized area and is publicly visible. The visual character of the project site would be compatible with the existing visual character of the corridor. The proposed project would not substantially affect the pattern elements (buildings, landscaping trees and vegetation) of the project area, nor add new land uses.

   Viewer groups include motorists using Central House Road and SR 70 and adjacent residents. Viewer sensitivity to the proposed roadway changes is considered low because the bridge would have low visual dominance. The proposed project is a replacement of an existing bridge along a similar alignment; therefore, minor changes to existing views would occur. The most noticeable change in views would be a result of the removal of approximately 30 oak trees along Wyman Ravine. However, onsite replanting of removed trees, as required by **Mitigation Measures BIO-9**

and **BIO-11**, refer to Section 4.4, would reduce the impacts resulting from tree removal. Therefore, impacts would be less than significant with the implementation of mitigation measures.

Construction of the proposed project would result in temporary changes to local visual conditions, through tree removal, clearing, and grading activities. Any new cuts and fills would be contoured to smoothly transition into existing grades and to mimic adjacent landforms. Any area disturbed during construction would be revegetated with native vegetation, or other appropriate vegetation, to minimize erosion. This revegetation would also minimize the visual impacts associated with removal of existing vegetation as required in **Mitigation Measures BIO-9** through **BIO-11**. Direct views of the temporary bridge and construction equipment would be temporary in nature and any obstruction within resident views would cease upon construction completion. Therefore, temporary impacts to the visual character and quality of the project site would be less than significant with implementation of mitigation measures.

d) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. Roadway traffic and lighting from private properties are the sole sources of nighttime light at the project site. The proposed project would not increase capacity along Central House Road; therefore, the proposed project would not increase light from vehicular traffic. The proposed project would not result in changes that would introduce new sources of light and glare (i.e., billboards, street lamps, security lighting, or other structures) to the vicinity of the project site. Construction activities would occur during daylight hours and would not increase light and glare. The proposed project would have no impact and no mitigation measures are required.

4.1.3 Mitigation Measures

Implement **Mitigation Measure BIO-9** through **BIO-11**, refer to Section 4.4, Biological Resources.

4.2 Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Agricultural and Forest Resources – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the project:**				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

4.2.1 Setting

A Farmland Impact Memorandum was prepared for the proposed project and is available for review at the County (California Department of Transportation [Caltrans], 2018). The California Land Conservation Act (Williamson Act) was established after World War II when valuable farmland was rapidly converted to urban use due to pressure from continuous population growth. The Williamson Act provides tax relief to landowners who participate in the program with the condition that their land will not be developed. The

Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to assess the location and quantity of agricultural lands, and the conversion of these lands over time. This information is used to assist with decision making and planning regarding California's agricultural lands.

Butte County is a major producer of a wide variety of farm products. Agriculture is important not only to Butte County's economy, but also to its way of life. There were 637,603 acres of land identified as farmland or grazing land in Butte County in 2016 (Caltrans, 2018). The agricultural land in Butte County in 2016 was as follows: 30.2 percent prime farmland, 3.4 percent farmland of statewide importance, 3.6 percent unique farmland, and 62.8 percent grazing farmland (Caltrans, 2018). There are three farmland types mapped in the vicinity of the project site: prime farmland, farmland of statewide importance, and other lands.

Both parcels that are impacted by the proposed project are enrolled under the Williamson Act as prime agricultural land. There are approximately 55.77 acres of prime farmland and 96.73 acres of farmland of statewide importance located on the parcel north of Central House Road (APN 024-230-036). There are approximately 19.43 acres of prime farmland and 10.44 acres of farmland of statewide importance on the parcel south of Central House Road (APN 024-240-055). The western portion of these parcels is not actively used for farming and has a FMMP designation of "other land," while the portions of the parcels that occur east of Wyman Ravine are actively used for farming and are designated by the FMMP as farmland of statewide importance and prime farmland.

4.2.2 Discussion

a) **Less than Significant**. The proposed project would permanently convert approximately 0.62 acres of prime farmland and 0.66 acres of farmland of statewide importance to non-agricultural use on APNs 024-230-036 and 024-240-055 (**Figure 4**). The permanent impacts to prime farmland and farmland of statewide importance would primarily result from the implementation of the proposed mitigation area along Wyman Ravine. This area is not actively used for agricultural production, as it is primarily located within the banks of Wyman Ravine, within the seasonally flooded waterway; however, this area is designated as farmland of local importance, prime farmland, and other land by the FMMP.

Smaller permanent impacts to prime farmland and farmland of statewide importance would also result from the grading activities and minor realignments of farm road accesses. These activities would have minor impacts to active farming operations occurring on the adjacent parcels as the proposed grading is primarily restricted to marginal farmland along Central House Road that is not actively used for agriculture, and the realignments of farm road accesses would be minor and limited to where the farm roads connect to Central House Road. All real property transactions would comply with the property acquisition and relocation standards of the State of California, the Caltrans Relocation Assistance Program and the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and property owners would be compensated in accordance with fair market values based on appraisals.

Farmland Impacts

Central House Road over Wyman Ravine Bridge (12C-0111) Replacement Project Butte County, CA

Figure 4

Legend

- Project Study Area
- Parcels

Important Farmland

Permanent Impacts

- Prime Farmland (P)
- Farmland of Statewide Importance (S)
- Other Land (X)

Temporary Impacts

- Prime Farmland (P)
- Farmland of Statewide Importance (S)
- Other Lands (X)

0 200 Feet

N

Author: I. Ciraulo
Last updated on Wednesday, August 30, 2023

Dewberry

Path: \\dewberry.dewberryroot.local\Offices\RanchoCordova\Projects\16024 - Central House Rd Bridge\400 Project Design Files\460 Environmental\Figures\GIS\CentralHouse_ISMND\CentralHouse_ISMND.aprx

This page is intentionally blank.

Approximately 1.62 acres of prime farmland and 0.45 acres of farmland of statewide importance would be temporarily impacted on APN 024-230-036 and 024-240-055, due to the proposed project (refer to **Figure 4**). Temporary impacts of the proposed project on farmland would result from implementation of the staging areas and proposed detour, reestablishment of driveways, farm roads, and roadway drainages on APN 024-230-036 and 024-240-055, and through general construction activities. Temporary impacts associated with the proposed project would temporarily prohibit the use of these areas for farming activities for the duration of construction. Upon completion of construction, temporarily impacted areas would be restored to conditions similar to existing conditions and would be available for farming activities.

Impacts to prime farmland, unique farmland, or farmland of statewide importance are considered less than significant. No mitigation measures are required.

b) **Less than Significant**. The two parcels adjacent to the proposed project, APNs 024-230-036 and 024-240-055, are enrolled under the Williamson Act as prime agriculture land. Permanent impacts would occur to a total of approximately 2.05 acres of enrolled Williamson Act - Prime Agricultural Land, primarily resulting from the implementation of the proposed habitat mitigation. The permanent impacts would occur in areas not actively used for agricultural purposes. These areas are within the seasonally flooded waterway and marginal farmland along Central House Road. The proposed project impacts would not inhibit future farming activities on parcels adjacent to the project site.

According to the Butte County Administrative Procedures and Uniform Rules for Implementing the California Land Conservation (Williamson) Act (2007), the proposed conversion of farmland enrolled under the Williamson Act to a wildlife and biotic habitat area is a qualifying use of Williamson Act land subject to conditional approval by the Butte County Board of Supervisors. This proposed project is a qualifying use of Williamson Act land and would not impair the ability to farm the enrolled agricultural land adjoining the project area. Impacts resulting from the proposed project to the Williamson Act enrolled properties would be less than significant. No mitigation measures are required.

c) **No Impac**t. There are no land uses within, or adjacent to, the project site that are zoned as forest land or timberland. Therefore, the proposed project would not result in a conflict with existing zoning regarding forest land or timberland. No impact would occur in this regard.

d) **No Impact**. There are no land uses within, or adjacent to, the project site that are zoned as forest land or timberland. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur in this regard.

e) **No Impact**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not change surrounding land uses beyond the permanent impacts discussed in questions a and b and shown in **Figure 4**. The proposed project would not increase capacity along

Central House Road, and thus would not result in indirect land development. Therefore, the proposed project would not involve other changes in the existing environment which could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

4.2.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to agriculture and forestry resources.

4.3 Air Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Air Quality – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

4.3.1 Setting

The project site is located in Butte County within the Sacramento Valley Air Basin and is under the jurisdiction of the Butte County Air Quality Management District (BCAQMD). The BCAQMD is one of 35 regional air quality districts in California and has jurisdiction over all of Butte County. Air quality districts are public health agencies whose mission is to improve the health and quality of life for all residents through effective air quality management strategies. Butte County is also a member of the Butte County Association of Governments (BCAG), a regional planning association that also includes the cities of Biggs, Gridley, and Oroville, and the Town of Paradise. BCAG is responsible for regional transportation planning within its jurisdiction (the County) and preparing air quality conformity analyses, documents that are used to bring regional emissions into compliance with federal and state air quality standards pursuant to the Clean Air Act. As such, the proposed project is included in the 2015 BCAG Federal Transportation Improvement Program (FTIP).

The Clean Air Act requires that the U.S. Environmental Protection Agency (USEPA) set National Ambient Air Quality Standards (NAAQS) for major pollutants that could be detrimental to the environment and human health. The California Ambient Air Quality Standards (CAAQS) are the state equivalent of the NAAQS set by the California Air Resources Board (CARB). An air basin is in "attainment" (compliance) when the levels of the pollutant in that air basin are at or below NAAQS and CAAQS thresholds. **Table 3** provides information on the NAAQS and CAAQS thresholds.

Table 3
NAAQS and CAAQS

Pollutant		NAAQS		CAAQS	
		Averaging time	**Concentration Threshold**	**Averaging time**	**Concentration Threshold**
Carbon monoxide (CO)		8 hours	9 ppm	8 hours	0.09 ppm
		1 hour	35 ppm	1 hour	0.070 ppm
Lead (Pb)		Rolling 3-month average	0.15 µg/m^3	1.5 hour	0.15 µg/m^3
Nitrogen dioxide (NO_2)		1 hour	100 ppb	1 hour	0.18 ppm
		1 year	53 ppb	Annual mean	0.030 ppm
Ozone (O_3)		8 hours	0.070 ppm	8 hours	0.09 ppm
				1 hour	0.070 ppm
Particulate matter (PM)	$PM_{2.5}$	1 year	12.0 µg/m^3	Annual mean	12.0 µg/m^3
		24 hours	35 µg/m^3	n/a	n/a
	PM_{10}	24 hours	150 µg/m^3	24 hours	50 µg/m^3
				Annual mean	20 µg/m^3
Sulfur dioxide (SO_2)		1 hour	75 ppb	1 hour	0.25 ppm
		3 hours	0.5 ppm	24 hours	0.04 ppm
Visibility reducing particles		n/a	n/a	9 hours	Extinction of 0.23 per kilometer
Sulfates		n/a	n/a	24 hours	25 µg/m^3
Hydrogen sulfide		n/a	n/a	1 hour	0.03 ppm
Vinyl chloride		n/a	n/a	24 hours	0.01 ppm

Sources: USEPA, 2019; CARB, 2017
ppm = parts per million, ppb = parts per billion, µg/m^3 = micrograms per cubic meter, n/a = not applicable

The project site is located in an area that is currently in federal non-attainment for ozone and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) and in state non-attainment for ozone, $PM_{2.5}$, and particulate matter 10 microns or less in diameter (PM_{10}) (CARB, 2018a).

4.3.2 Discussion

a) **Less than Significant.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not increase roadway capacity or service capacities that would induce unplanned growth or remove an existing obstacle to growth. The proposed project is consistent with the goals and policies of the County's General Plan (Butte County, 2012), the Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan (Sacramento Valley Air Quality Engineering and Enforcement Professionals [SVAQEEP], 2015), Butte County Climate Action Plan (Butte County, 2014), and the FTIPO (BCAG, 2015). These documents have been determined to be consistent with applicable federal and state air quality statutes, regulations, and plans. This ensures that the proposed project is consistent with applicable federal and state air quality statutes, regulations, and plans. The proposed project would not increase long-term traffic levels and there would be no operational impacts to air quality. This impact would be less than significant, and no mitigation measures are required.

b) **Less than Significant.** For projects within Butte County, the BCAQMD establishes separate air quality thresholds for construction and operational emissions (BCAQMD, 2014). As the proposed project is a

bridge replacement project that would not increase the number of through lanes, capacity, vehicle trips, vehicle miles traveled, or long-term traffic levels along Central House Road, it would not result in operational air quality emissions.

Construction phase emissions would be generated by the proposed project. The primary impact to local air quality during construction would be emissions from dust-generating activities (PM_{10} and $PM_{2.5}$). Air quality impacts from construction emissions are considered less than significant if the emissions do not exceed BCAQMD thresholds.

The Caltrans Roadway Construction Emissions Modeling tool was used to estimate construction emissions produced by the proposed project (**Appendix A**). The assumptions that were made during modeling include: 1) the types and quantities of construction equipment typical of bridge projects would be used; 2) all on-road equipment used for the proposed project would be year 2010 or newer models; and 3) all construction equipment would meet CARB Tier 4 requirements. As shown in **Table 4**, the proposed project results in air pollutant emissions less than the established thresholds.

Table 4
Air Quality Emissions and Thresholds

Pollutant	BCAQMD Thresholds (pounds/day)	Maximum Project Emissions (Pounds/day)
ROG	137	6.39
NOx	137	13.37
PM_{10}	80	50.60
$PM_{2.5}$	80	10.89

Source: BCAQMD, 2014; Huss and Grant, 2016

BCAQMD does not otherwise specify significance thresholds for when air quality emissions from construction become cumulatively considerable (BCAQMD, 2014). The proposed project would only affect local air pollutants during construction (approximately six months) and would not affect long-term air pollutant emissions. The proposed project would generate emissions below the BCAQMD thresholds and would not increase emissions to the criteria pollutants currently at nonattainment for BCAQMD (ozone, PM_{10}, and $PM_{2.5}$). Therefore, the proposed project would not result in a cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment. Impacts would be less than significant.

While mitigation measures are not required, construction best management practices (BMPs) would be implemented to minimize construction emissions. These BMPs include, but are not limited to, the following:

- Implement a Fugitive Dust Control Plan.
- Application of water and/or approved chemicals to control emissions in the demolition of existing buildings or structures, construction operations, solid waste disposal operations, the grading of roads and/or the clearing of land.
- Application of asphalt, water and/or approved chemicals to road surfaces.

- Application of water and/or suitable chemicals to material stockpiles and other surfaces that may generate fugitive dust emissions.
- Paving and/or re-paving roads.
- Maintenance of roadways in a clean condition by washing with water or sweeping promptly.
- Covering or wetting material stockpiles and open-bodied trucks, trailers, or other vehicles transporting materials that may generate fugitive dust emissions when in motion.
- Installation and use of paved entry aprons or other effective cleaning techniques to remove dirt accumulating on a vehicle's wheels on haul or access roads to prevent tracking onto paved roadways.
- For process equipment, the installation and use of hoods, fans, and filters to enclose, collect, and clean the emissions prior to venting.
- Ceasing operations until fugitive emissions can be reduced and controlled.
- Using vegetation and other barriers to contain and to reduce fugitive emissions.
- Using vegetation for windbreaks.
- Instituting good housekeeping practices by regularly removing piles of material that have accumulated in work areas and/or are generated from equipment overflow.
- Maintaining reasonable vehicle speeds while driving on unpaved roads in order to minimize fugitive dust emissions.

c) **Less than Significant.** Construction activities would occur for a duration of approximately six months. Residents located within close proximity of the project site would be exposed to air pollutant emissions only for the duration of construction. As discussed above, under question b, the proposed project results in construction air pollutant emissions less than the established thresholds (refer to **Table 4**). The sensitive receptors in the vicinity of the project site would experience a brief exposure period, approximately six months. This exposure period is limited and is less than the two-year exposure period typically assumed for health risk analysis for small construction projects and the three-year exposure period assumed for PM_{10} and CO hotspot analysis (Caltrans, 2018). With implementation of the BMPs discussed above, under impact b, construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant, and no mitigation measures are required.

d) **Less than Significant.** Construction activities at the project site could include other emissions, including objectionable odors, from tailpipe diesel emission and from new asphalt. Other emissions, including odors, would be temporary and limited to the area adjacent to the construction operations; however, because the project site is located in a low-density area of the County, odors and other emissions would not affect a substantial number of people for an extended period of time. This impact would be less than significant, and no mitigation measures are required.

4.3.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to air quality.

4.4 Biological Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Biological Resources – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

4.4.1 Setting

A Natural Environment Study (NES; Caltrans, 2018) and a Biological Assessment (BA; Caltrans, 2019) were prepared for the proposed project and is available for review at the County. An evaluation of biological resources was conducted to determine whether any special-status species or associated sensitive habitat occurs within the proposed project site (Caltrans, 2019). Data for the area was obtained from state and federal agencies. Maps and aerial photographs of the proposed project site and surrounding areas were reviewed. Field surveys were conducted to determine the habitats present.

Habitat

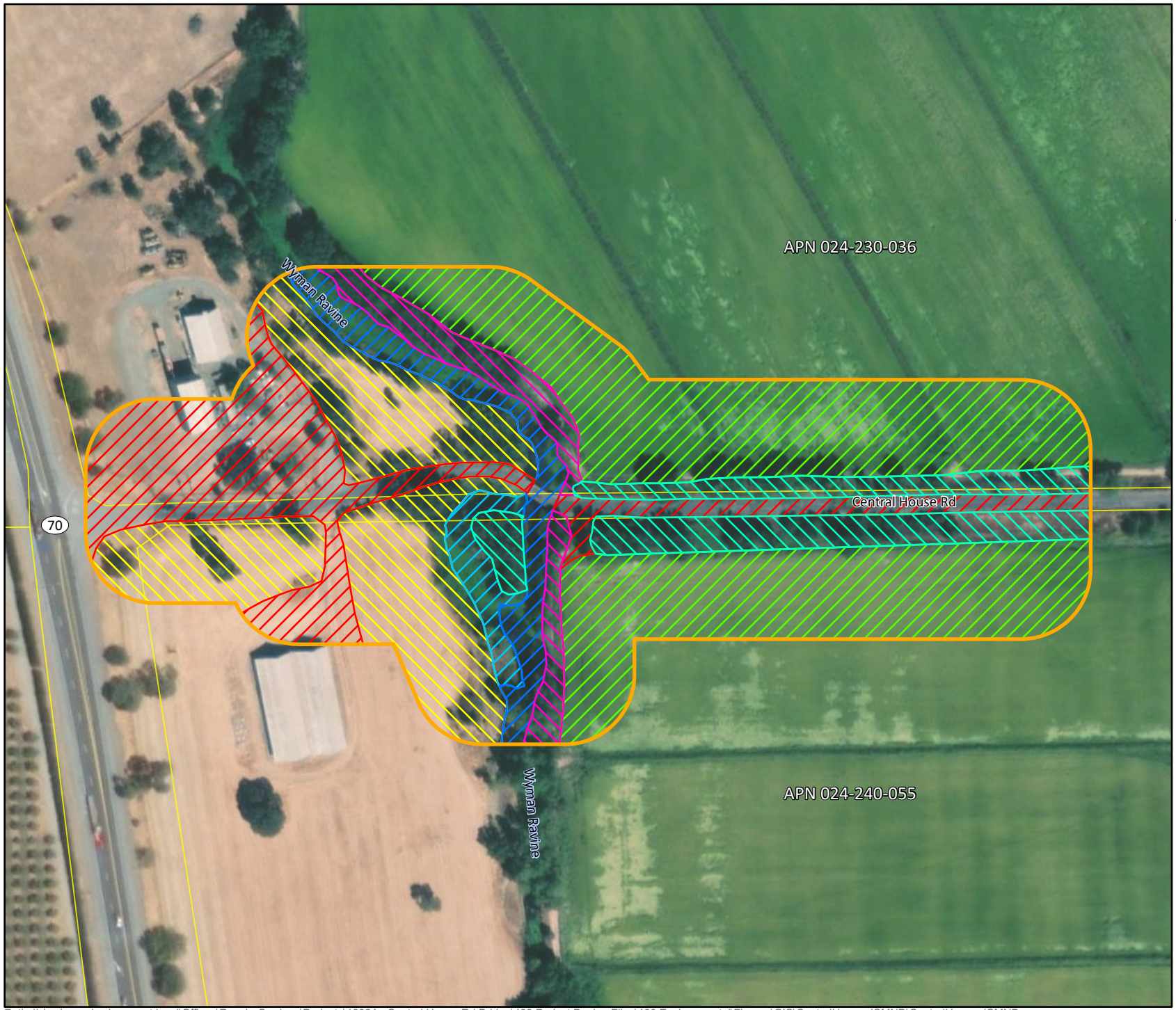
The biological study area (BSA), including the project impact area (PIA), is within an area dominated by agriculture. Valley oak riparian habitat occurs in a narrow band along both banks of Wyman Ravine, which is a perennial water course. Habitat types and vegetation communities in the PIA and surrounding BSA include riverine (one perennial channel – Wyman Ravine), freshwater wetland, valley oak riparian wetland, valley oak riparian woodland, annual grassland, agriculture, and urban (developed) land. **Figure 5** provides a habitat map of the BSA while **Table 5** summarizes the habitat types within the BSA.

Table 5
Habitat Types within the BSA

Habitat Type	Acres within BSA	Percent (%) Composition of BSA
Upland Communities		
Agriculture	6.12	39
Annual Grassland	3.42	22
Urban (Developed)	2.80	18
Valley Oak Riparian Woodland	0.76	5
Aquatic Communities		
Freshwater Emergent Wetland	0.33	2
Riverine – Lower Perennial	0.84	5
Valley Oak Riparian Wetland	1.54	10
Total	**15.82**	**100**

Source: Caltrans, 2018.

Habitat Types



Central House Road over Wyman Ravine Bridge (12C-0111) Replacement Project Butte County, CA

Figure 5

Legend

- Biological Study Area
- Parcels

Habitat Type

- Agriculture
- Annual Grassland
- Freshwater Emergent Wetland
- Riverine - Lower Perennial
- Urban (Developed)
- Valley Oak Riparian Wetland
- Valley Oak Riparian Woodland

N

0 200 Feet

Author: I. Ciraulo
Last updated on Wednesday, August 30, 2023

Dewberry

Path: \\dewberry.dewberryroot.local\Offices\RanchoCordova\Projects\16024 - Central House Rd Bridge\400 Project Design Files\460 Environmental\Figures\GIS\CentralHouse_ISMND\CentralHouse_ISMND.aprx

This page is intentionally blank.

Valley oak riparian habitat is a sensitive natural community because it is regulated by the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code for the purpose of protecting fish and wildlife resources. Within the BSA, riparian woodland habitat occurs on the eastern side of Wyman Ravine along the tops of the banks. Tree species, consisting of valley oak and walnut, overhang Wyman Ravine, providing shade to keep water temperatures down and providing detritus and food for aquatic species in the river. The understory of riparian woodland habitat consists of annual grassland species.

Special-Status Plant Species

The NES identified 13 special-status plant species that have the potential to occur in the proposed project area. Of the 13 plant species, suitable habitat was found to be present within the BSA for 1 special-status plant species, Sanford's arrowhead. Sanford's arrowhead is listed by California Native Plant Society (CNPS) as being fairly endangered in California, meaning that 20 to 80 percent of the known occurrences are threatened. There are no recorded occurrences of Sanford's arrowhead within a 5-mile radius of the PIA (Caltrans, 2018). Due to the private ownership of the surrounding lands, there is the potential for a lack of recorded observations and does not necessarily preclude the presence of this species. Wyman Ravine provides potentially suitable habitat for Sanford's arrowhead. Sanford's arrowhead was not observed in the PIA or surrounding BSA during the survey conducted for the NES and BA.

Special-Status Wildlife Species

The NES identified 27 special-status wildlife species and 3 critical habitats and 1 essential fish habitat that have the potential to occur within the proposed project area. There is no critical habitat or essential fish habitat designated within the BSA (Caltrans, 2018; Caltrans, 2019). Of these 27 special-status wildlife species, 6 special-status wildlife species have the potential to occur within the BSA. These six species include: western pond turtle (*Emys marmorata*); giant garter snake (*Thamnophis gigas*, GGS); Swainson's hawk (*Buteo swainsonii*); northern harrier (*Circus cyaneus*); song sparrow ("Modesto" population) (*Melospiza melodia*); and pallid bat (*Antrozous pallidus*).

Western pond turtles, including both the northwestern (ssp. *marmorata*) and southwestern (ssp. *pallida*) subspecies, are California species of concern. The western pond turtle range is throughout California, from southern coastal California and the Central Valley, east to the Cascade Range and the Sierra Nevada. There are no recorded occurrences of western pond turtle within 5 miles of the BSA. However, due to the private ownership of the surrounding lands, there is the potential for a lack of recorded observations and does not necessarily preclude the presence of this species. Wyman Ravine provides potentially suitable habitat for this species. The relatively gentle slope of the banks and the island within the creek channel provides suitable basking habitat for this species. When water is flowing, Wyman Ravine would provide suitable foraging and dispersal habitat. No western pond turtles were observed during the site visit completed for the NES and BA.

There are no recorded occurrences of GGS within 5 miles of the BSA; however, due to the private ownership of the surrounding lands there is the potential for a lack of recorded observations and does not necessarily preclude the presence of this species. Wyman Ravine provides potentially suitable aquatic foraging habitat for this species as well as a movement corridor to more suitable upland refugia habitat outside of the BSA. The upland areas within the BSA do not provide suitable refugia habitat as the fields are used for agriculture production and are routinely disked, the annual grassland areas are actively disturbed by the occupants of the residences, and the island is typically submerged during the snake's

aestivation period (November to April). No GGS were observed during the site visit completed for the NES and BA.

There are two recorded occurrences of Swainson's hawk within 5 miles of the BSA. The first occurrence was recorded from 2007 through 2009 approximately 3 miles northeast of the BSA, approximately 1.5 miles northeast of Cox Lane at SR 70, and consists of two observations. The second observation was recorded in 2010, east of the first observation, along North Honcut Creek, 0.5 miles southeast of Lower Honcut Road at the railroad crossing, approximately 3.1 miles southwest of the BSA. Potential Swainson's hawk nesting habitat is present within the large valley oak and walnut trees within the BSA and within 0.25 miles from the BSA. In addition, the BSA is located within a predominately agricultural setting which supports grassland habitat and agricultural fields that provide suitable foraging areas for Swainson's hawk. No Swainson's hawks were observed in or near the BSA, during site visit for the NES and BA.

There are no recorded occurrences of northern harrier within 5 miles of the BSA. However, due to the private ownership of the surrounding lands there is the potential for a lack of recorded observations and does not necessarily preclude the presence of this species. The surrounding agricultural fields provide suitable nesting and foraging habitat for this species. No northern harriers were observed during the site visit for the NES and BA.

There are no recorded occurrences of song sparrow within 5 miles of the BSA. The riparian habitat could provide suitable nesting habitat for this species. No song sparrows were observed during the site visit for the NES and BA.

There are no known occurrences of pallid bat within 5 miles of the BSA. Suitable roosting and overwintering habitat were observed within the BSA within the large oak and walnut trees as well as within the barns located on the properties adjacent to the BSA. The existing bridge structure has widely spaced girders creating large open spaces under the bridge which is not conducive to bats roosting. Studies have shown that bats prefer concrete crevices that were sealed at the top, at least 6 to 12 inches deep, 0.5 to 1.25 inches wide, and 10 feet or more above ground (Caltrans, 2018; Caltrans, 2019). No bats were observed during the site visit for the NES and BA.

The riparian habitat along Wyman Ravine within the BSA, as well as the Central House Road Bridge, provides potential nesting and foraging habitat for birds listed by the Migratory Bird Treaty Act (MBTA). No nests or nesting activity were observed within the BSA during the site visit for the NES and BA.

Jurisdictional Waters

There are three types of jurisdictional waters within the BSA: freshwater emergent wetland; valley oak riparian wetland; and riverine. The freshwater emergent wetland habitat consists of portions of Wyman Ravine where no open water is present. This area is located along the western side of the island, south of Central House Road. Water was present within the wetland at the time of the survey. The valley oak riparian wetland habitat consists of an island within the channel of Wyman Ravine, south of Central House Road, as well as two drainage ditches. During the rainy season (typically November to April), portions of this island are submerged. The riverine habitat is distinguished by intermittent or continually running water and occur in association with a variety of terrestrial habitats. Within the BSA, Wyman Ravine and two drainage ditches comprise the riverine habitat.

Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that may otherwise be separated by rugged terrain, changes in vegetation, and/or areas of human disturbance or urban development. Wyman Ravine provides a movement corridor for areas between North Honcut Creek in the south and the Sierra Nevada foothills to the northeast. Wyman Ravine allows aquatic and terrestrial wildlife species to safely disperse back and forth between suitable habitats to the north and south of the BSA. Highways and roadways can present an impassable barrier to many wildlife species and are hazardous for wildlife to cross. Relatively unimpeded waterways such as Wyman Ravine provide important movement corridors, which allow dispersal and subsequent gene flow between wildlife populations separated by roads and populated areas.

4.4.2 Discussion

a) **Less than Significant with Mitigation.** The following analyzes potential impacts to special-status species. Impacts specific to riparian habitat and sensitive natural communities are discussed in detail below, under question b, while impacts to wetlands are discussed in detail below, under question c.

Special-Status Plant Species

Impacts to special-status plant species could include loss of the plant species through trampling or excavation if present within the construction zone or damage to sensitive root systems, through compaction, could occur outside of the construction zone.

As discussed above, there is the potential for one special-status plant species to occur within the BSA, Sanford's arrowhead. There are no recorded occurrences of Sanford's arrowhead within a 5-mile radius of the PIA; however, due to the private ownership of the surrounding lands, there is the potential for a lack of recorded observations and does not necessarily preclude the presence of this species. Wyman Ravine provides potentially suitable habitat for Sanford's arrowhead. Sanford's arrowhead was not observed in the PIA or surrounding BSA during the survey conducted for the NES and BA.

Although Sanford's arrowhead has not previously been observed in the PIA or BSA, it could disperse into the BSA prior to construction from unrecorded populations in Wyman Ravine or within the vicinity of the BSA. Implementation of **Mitigation Measure BIO-1** would reduce potential impacts to special-status plants to a less-than-significant level.

Special-Status Wildlife Species

Impacts to special-status wildlife species could include direct harm if they were to become trapped in the construction area, come into contact with construction personnel and/or equipment, or be inhibited from movement through the construction area. The following provides a discussion regarding impacts to the six special-status wildlife species that have the potential to occur within the BSA.

Western Pond Turtle. Potential aquatic and upland habitat for western pond turtle is present within the BSA. If western pond turtles are present within the work area during construction, the movement of equipment within uplands and construction of bridge structures could crush pond turtles or nests

containing eggs or young. Additionally, the removal of riparian vegetation could also negatively contribute to loss of stream channel shading (i.e., increased ambient water temperature) or increased erosion, resulting in a change in habitat and the movement of western pond turtles to other areas due to habitat degradation. With implementation of the **Mitigation Measure BIO-2**, the proposed project would have less than significant impacts on western pond turtle.

Giant Garter Snake. The proposed project has the potential to directly impact GGS by causing physical harm to individuals if they are present in the PIA during construction. The proposed project would result in approximately 0.26 acres of permanent and temporary impacts to potential aquatic foraging habitat. This could result in a change in habitat and the movement of western pond turtles to other areas due to habitat degradation

Potential impacts include direct harm to GGS that could potentially come into contact with construction personnel and/or equipment, temporarily inhibiting movement of GGS through the PIA, and increased chance of predation or physical harm if they were to become trapped in the construction area as well as within the dewatered portion of Wyman Ravine.

Replacement of the bridge would result in permanent impacts, through the loss of aquatic foraging habitat, due to the placement of the bridge piles and rock slope protection (RSP). Project-related construction activities would result in the permanent loss of 0.04 acres of aquatic foraging habitat and temporary disturbance to 0.22 acres of aquatic foraging habitat. In addition, 0.14 acres of upland dispersal habitat would be permanently impacted, and 0.77 acres of upland dispersal habitat would be temporarily impacted. With implementation of the **Mitigation Measures BIO-3** and **BIO-4**, the proposed project would have less than significant impacts on GGS.

Swainson's Hawk. Noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between February 1 and August 31) could disturb nesting Swainson's hawk if an active nest is located near these activities. If tree removal begins during the breeding season, the proposed project could result in mortality of young through forced fledging or nest abandonment by adult birds. Exclusion of nesting adult birds from suitable habitat could potentially result in disruption of nesting activities and the loss of nesting productivity for the season for some birds that do not move to other nesting sites outside of the PIA. With implementation of the **Mitigation Measure BIO-5**, the proposed project would have less than significant impacts on Swainson's hawk.

Northern Harrier and Song Sparrow ("Modesto" Population). Noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between February 1 and August 31) could disturb nesting northern harrier or song sparrow if an active nest is located near these activities. In addition, if clearing and grubbing activities begin during the breeding season (February 1 to August 31), the proposed project could result in mortality of young through forced fledging or nest abandonment by adult birds. Exclusion of nesting adult birds from suitable habitat could potentially result in disruption of nesting activities and the loss of nesting

productivity for the season for some birds that do not move to other nesting sites outside of the PIA. With implementation of the **Mitigation Measure BIO-6**, the proposed project would have less than significant impacts on northern harrier and song sparrow.

Pallid Bat. Tree removal could result in the removal of suitable bat roosting habitat. If bats are roosting within trees at the time of tree removal and grubbing and clearing activities, there is the potential to result in mortality to individual bats. In addition, the bats would have to relocate to another suitable roost site, potentially exposing them to increased stress and chance of predation. With implementation of the **Mitigation Measure BIO-7**, the proposed project would have less than significant impacts on northern harrier and song sparrow.

Other Migratory Birds and Raptors. If demolition of the bridge begins during the breeding season (February 1 to August 31), the proposed project could result in mortality of young through forced fledging or nest abandonment by adult birds. Exclusion of nesting adult birds from the underside of the bridge could potentially result in disruption of nesting activities and the loss of nesting productivity for the season for some birds that do not move to other nesting sites outside of the BSA. However, widening of the bridge could ultimately result in a net increase of potential nesting habitat for swallows, black phoebes, and other bridge nesting birds.

If it is necessary to remove the trees within the riparian corridor prior to construction or construction activities begin during the breeding season, the proposed project could result in mortality of young through forced fledging or nest abandonment by adult birds, as well as destruction of nests. With implementation of the **Mitigation Measure BIO-8**, the proposed project would have less than significant impacts on northern harrier and song sparrow.

Conclusion

The proposed project could impact, either directly, or through habitat modification, special-status species. The implementation of **Mitigation Measures BIO-1** through **BIO-8** would ensure that impacts to special-status plant and wildlife species would be less than significant.

b) **Less than Significant with Mitigation.** The BSA contains valley oak riparian woodland and valley oak riparian wetland. Valley oak riparian habitat is a sensitive natural community because it is regulated by CDFW under Section 1602 of the California Fish and Game Code for the purpose of protecting fish and wildlife resources. The following analyzes potential impacts to valley oak riparian habitat. Impacts specific to specific special-status species are discussed in detail above, under question a, while impacts to wetlands are discussed in detail below, under question c.

The construction of the new bridge and approaches would result in permanent direct impacts to riparian habitat. **Table 6** provides a summary of temporary and permanent effects by habitat type.

Table 6
Summary of Temporary and Permanent Effects by Habitat Type

Habitat Community	Permanent (acres)	Temporary (acres)	Totals (acres)
Agriculture	0.09	0.06	0.15
Annual Grassland	0.14	0.77	0.91
Freshwater Emergent Wetland	0.001	0.07	0.07
Riverine	0.04	0.15	0.19
Urban (Developed)	0.66	0.07	0.73
Valley Oak Riparian Wetland	0.41	0.09	0.50
Valley Oak Riparian Woodland	0.07	0.02	0.09
Total	**1.41**	**1.23**	**2.64**

Source: Caltrans, 2018

The proposed project would have 0.41 acre of permanent impact and 0.09 acre of temporary impact on valley oak riparian wetland habitat. The proposed project would have 0.07 acre of permanent impact and 0.02 acre of temporary impact on valley oak riparian woodland habitat. Temporary impacts to valley oak riparian woodland habitat would occur as a result of any vegetation clearing, grubbing, or trimming of tree canopy that would be required to provide construction crews and equipment access to Wyman Ravine. Following completion of construction activities, the temporarily disturbed riparian areas would be revegetated.

The permanent impacts to riparian woodland habitat would include the removal of approximately 30 trees that are currently within the PIA, as well as any understory shrubs and herbaceous species. The loss of riparian vegetation could have a substantial adverse effect on aquatic habitat in Wyman Ravine.

The proposed project would require the necessary permits from the U.S. Army Corps of Engineers (Corps), CDFW, and the Regional Water Quality Control Board (RWQCB). Impacts would be mitigated in accordance with agency requirements. In addition, implementation of **Mitigation Measures BIO-9** and **BIO-10** would ensure that impacts to riparian habitat, a sensitive natural community, would be less than significant.

c) **Less than Significant with Mitigation.** Approximately 2.71 acres of potentially jurisdictional wetlands and waters of the U.S. were identified within the proposed project site. Wyman Ravine is considered to be waters of the U.S.

Construction of the new bridge and roadway alignment would permanently impact approximately 0.45 acres of wetland and other waters of the U.S., refer to **Table 6**, above under question b. The proposed project would temporarily impact 0.31 acres of wetlands and other waters of the U.S., refer to **Table 6**, above under question b. Temporary impacts would result from the removal of the existing bridge, temporary detour crossing, and from dewatering, if necessary.

The proposed project construction BMPs would be implemented to minimize impacts to wetlands and other waters of the U.S. These BMPs include, but are not limited to, the following:

- The contractor shall develop and implement a toxic materials control and spill response plan to regulate the use of hazardous materials, such as the petroleum-based products used as fuel and lubricants for equipment and other potentially toxic materials associated with proposed project construction. This includes, but is not limited to:
    - fueling and maintaining vehicles in a specified area that is designed to capture spills. All fueling and maintenance of vehicles and other equipment (including staging areas) will be located at least 66 feet (20 meters) from Bear Creek and any other drainages on site.
    - Properly disposing of oil or other liquids.
    - Inspecting and maintaining vehicles and equipment to prevent the dripping of oil or other fluids onto areas that could result in runoff.
- Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects to the water quality within the Project site. Appropriate erosion control measures shall be used (e.g., straw wattles, filter fences, vegetative buffer strips, or other accepted equivalents) to reduce siltation and contaminated runoff from project sites. The specific BMPs to be implemented shall be described in full in the Project's Stormwater Pollution Prevention Plan (SWPPP). All erosion control materials, including straw wattles and erosion control blanket material, used on-site shall be biodegradable. Use of erosion control containing plastic monofilament shall not be allowed as wildlife may become entrapped in this material. Wattles shall be wrapped with 100 percent biodegradable materials like burlap, jute, or coir.
- Measures including, but not limited to mulches, soil binders/erosion control blankets, silt fencing, fiber rolls, and temporary berms, would be implemented during ground-disturbing activities to reduce erosion and sedimentation. These measures would be inspected before, during, and after a rain event.
- Existing vegetation shall be protected using temporary fencing, or other protection devices, to reduce erosion and sedimentation.
- Exposed soils shall be covered by loose bulk materials or other materials such as visqueen to reduce erosion and runoff during rainfall events.
- Exposed soils shall be stabilized, through watering or other measures such as covering with visqueen, to prevent the movement of dust at the Project site caused by winds and construction activities such as traffic and grading activities.
- Temporary berms shall be constructed along the tops of slopes to prevent water from running uncontrolled from slopes during construction activities. Water shall be collected in these berms and taken down the slopes in an erosion-proof drainage system. Sediment that is collected within these berms shall be allowed to "settle out" and then removed from the site.
- All erosion control measures and storm water control measures shall be properly maintained until the site has returned to a pre-construction state.
- All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native or approved non-invasive exotic species.
- All construction materials would be hauled off-site after completion of construction activities.

In addition to the BMPs listed above, the proposed project would also require permits from the Corps, CDFW, and RWQCB. Impacts would be mitigated in accordance with agency requirements. Finally,

implementation of **Mitigation Measure BIO-11** would ensure that impacts to wetlands would be less than significant.

d) **Less than Significant.** Wyman Ravine provides a movement corridor for areas between North Honcut Creek in the south and the Sierra Nevada foothills to the northeast. The proposed project would not remove, degrade, or otherwise interfere substantially with the structure or function of these wildlife movement corridors. Temporary disruption of wildlife movement would occur during the construction period; however, this temporary disruption would cease upon construction completion, which is anticipated to be a single construction season. Proposed project impacts to movement of native resident or migratory fish or wildlife species would be less than significant, and no mitigation measures are required.

e) **Less than Significant with Mitigation.** The General Plan contains policies that guide the location, design, and quality of development to protect biological resources such as wildlife habitat, open space corridors, and ecosystems within the County. The General Plan addresses biological resources the goals and policies mainly in the Conservation and Open Space Element. The Butte County Municipal Code, specifically the Zoning Ordinance, also provides design standards and regulations.

The proposed project would be consistent with County, FHWA, AASHTO, and Caltrans design criteria and standards. The implementation of **Mitigation Measures BIO-1** through **BIO-11** would ensure that the proposed project is consistent with local policies and ordinances protecting biological resources.

The County is in the process of adopting Chapter 53, Development Mitigation, Article I - Oak Woodland Mitigation Ordinance, which would set impact thresholds and mitigations for removal of oak trees. To date, this ordinance has not been adopted, thus does not pertain to the proposed project. However, the proposed project complies with this ordinance with the implementation of **Mitigation Measure BIO-10**, which requires that the permanent degradation of valley oak riparian woodland habitat shall be compensated for at a 3:1 ratio through the purchase of similar habitat value from a Corps- and CDFW-approved mitigation bank.

f) **No Impact.** The proposed project is not currently located within the boundaries of any adopted federal Habitat Conservation Plan (HCP) or state Natural Community Conservation Plan (NCCP). The proposed project is located within the plan area for the Butte Regional Conservation Plan (BRCP), which is an HCP/NCCP; however, as of the publishing of this report, the BRCP has not been adopted. Therefore, the proposed project is not within the boundaries of an adopted HCP and/or NCCP and no impacts would occur in this regard.

4.4.3 Mitigation Measures

BIO-1: A qualified biologist shall conduct a preconstruction survey for special-status plant species within 30 days prior to construction. If special-status plant species are not found, then no further measures are necessary. If special-status plant species are found in the Project site, CDFW will be notified at least 10 days prior to dewatering or construction impacts in the vicinity of any special-status plant species in accordance with the California Native Plant Protection Act of 1977 (California Fish and Game Code § 1900-1913) to allow sufficient time to transplant the individuals to a suitable location.

BIO-2: The following efforts shall be implemented regarding western pond turtle:

- If dewatering is necessary, the construction area shall be dewatered prior to construction activities. CDFW shall be notified prior to dewatering activities.
- No more than two weeks prior to the commencement of ground-disturbing activities, the County shall retain a qualified biologist to perform surveys for western pond turtle within suitable aquatic and upland habitat within the Project site. Surveys will include western pond turtle nests as well as individuals. If western pond turtles are found, the biologist (with the appropriate agency permits) will temporarily move any identified western pond turtles upstream of the construction area, and temporary barriers will be placed around the construction area to prevent ingress. Construction will not proceed until the work area is determined to be free of turtles. The results of these surveys will be documented in a technical memorandum that will be submitted to CDFW (if turtles are documented).
- Standard construction BMPs shall be implemented throughout construction, in order to avoid and minimize adverse effects to the water quality within the biological study area (BSA).

BIO-3: The following efforts shall be implemented regarding giant garter snake:

- In-water and bank-side construction activities shall be conducted between May 1st and October 1st as necessary to ensure that construction occurs during the active period of the GGS. Any work occurring after October 1st shall be restricted to bridge surface work with water quality controls in place.
- Between April 15th and September 30th, any dewatered habitat shall remain dry, with no puddle water, for at least 15 consecutive days before workers excavate or fill dewatered habitat. Efforts shall be made to ensure that the dewatered habitat does not continue to support GGS prey (e.g., fish, tadpoles, and aquatic insects), which could detain or attract snakes into the area. This measure would encourage GGS to leave the site.
- Temporary fencing (or similar devices which lack openings which might cause the GGS to become stranded or otherwise become entangled) shall be installed at the upstream and downstream limits of the construction area, to deter GGS from entering the BSA and being harmed by construction activities. The fencing shall be installed regardless of whether or not there is aquatic habitat present during the time of construction to ensure that GGS do not enter the construction zone.
- Construction personnel shall participate in a USFWS-approved worker environmental awareness program prior to the onset of construction activities. A qualified biologist shall inform all construction personnel about the life history of GGS, how to identify species and their habitats, what to do if a GGS is encountered during construction activities, and explain the state and federal laws pertaining to GGS.
- A qualified biologist shall conduct a pre-construction survey for GGS, no more than 24 hours prior to the start of construction activities (site preparation and grading). If construction activities stop for a period of two or more weeks, a new GGS survey shall be completed no more than 24 hours prior to the reinitiating of construction activities. The biologist shall monitor the site during dewatering activities; if a GGS is encountered during the construction period after the completion of these dewatering activities, the monitoring biologist shall be notified and shall have the authority to stop localized construction activities until corrective measures have been taken to avoid harm to GGS.

- Any vegetation or ground clearing shall be confined to the minimal area necessary within 200 feet of aquatic habitat to facilitate construction activities. To ensure that construction equipment and personnel do not affect upland and aquatic habitat for GGS outside of the PIA, exclusionary fencing shall be erected to clearly define the GGS habitat to be avoided. This shall delineate the environmentally sensitive areas within the PIA. The installation techniques and location of the exclusionary fencing shall be coordinated with a qualified wildlife biologist, who shall inspect and approve the fencing prior to commencement of construction.
- Upon completion of construction, disturbed sections of Wyman Ravine shall be hydro seeded to stabilize disturbed areas.
- If a live GGS is encountered during construction activities, the project biological monitor and the USFWS shall be immediately notified. The biological monitor shall do the following:
    - Stop all construction activity in the vicinity of the GGS. Monitor the GGS and allow the GGS to leave on its own. The qualified biological monitor shall remain in the area for the remainder of the workday to make sure the GGS is not harmed or it leaves the site and does not return. Escape routes for GGS shall be determined in advance of construction. If the GGS does not leave on its own within one working day, further consultation with USFWS shall be conducted.
    - Only personnel with a USFWS recovery permit pursuant to Section 10(a) (1) (A) of ESA shall have the authority to capture and/or relocate GGS encountered in the PIA.
    - Upon locating dead, injured, or sick GGS, Caltrans shall notify the USFWS Division of Law Enforcement or the Sacramento Fish and Wildlife Office within one working day. Written notification to both offices shall be made within three calendar days and shall include the date, time, and location of the finding of a specimen and any other pertinent information.
- No plastic, monofilament, jute, or similar erosion control matting that can entangle GGS shall be employed. Possible substitutions include coconut coir matting, tactified hydro seeding compounds, or other material approved by the USFWS.
- Standard construction BMPs shall be implemented throughout construction to avoid and minimize adverse effects to the water quality within the BSA. These BMPs shall be inspected daily to ensure their effectiveness. They shall be installed per the BMP installation specifications. BMPs deemed to be ineffective shall be maintained or replaced as necessary.

BIO-4: To compensate for permanent impacts to giant garter snake aquatic foraging habitat and upland dispersal habitat, the County shall purchase credits from a USFWS- and/or CDFW-approved mitigation bank at a minimum 3:1 ratio. To compensate for temporary impacts to aquatic foraging habitat and upland dispersal habitat, the County shall restore all disturbed areas and purchase credits from a USFWS- and/or CDFW-approved mitigation bank at a minimum 2:1 ratio. Preservation and restoration may also occur onsite through a conservation agreement.

BIO-5: Prior to construction, surveys shall be conducted by a qualified biologist to determine presence/absence of nesting Swainson's hawk in and within 0.5 miles of the BSA according to the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). If no Swainson's hawks are found during any of the surveys, no further mitigation shall be necessary. If Swainson's hawk nests are found, CDFW shall be consulted regarding measures to reduce the likelihood of forced fledging of young or nest

abandonment by adult birds. These measures shall likely include, but are not limited to, the establishment of a no-work zone around the nest until the young have fledged as determined by a qualified biologist.

BIO-6: The following measures shall be used when work occurs on, or in the vicinity of, structures that may be subject to nesting by migratory birds.

- **Avoid Active Nesting Season.** To avoid and minimize impacts to tree and shrub nesting species, the following measures will be implemented:
    - Conduct all tree and shrub removal and grading activities during the nonbreeding season (generally September 1 through January 31).
    - If grading and tree removal activities are scheduled to occur during the breeding and nesting season (February 1 through August 31), preconstruction surveys will be performed by a qualified biologist prior to the start of Project activities.
- **Conduct Preconstruction Nesting Bird Surveys.** If construction, grading, or other project-related activities are scheduled during the nesting season (February 1 to August 31), preconstruction surveys for other migratory bird species will take place no less than 14 days and no more than 30 days prior to the beginning of construction within 250 feet of suitable nesting habitat.
    - If the preconstruction surveys do not identify any nesting migratory bird species within areas potentially affected by construction activities, no further mitigation will be required. If the preconstruction surveys do identify nesting bird species within areas that may be affected by site construction, the following measures will be implemented.
    - If the pre-construction surveys do identify nesting bird species within areas that are within 250 feet of construction activities, the following measures shall be implemented:
        - Project-related construction impacts shall be avoided by establishment of appropriate no-work buffers to limit Project-related construction activities near the nest site. The size of the no-work buffer zone shall be determined in consultation with CDFW. The no-work buffer zone shall be delineated by highly visible temporary construction fencing. In consultation with CDFW, monitoring of nest activity by a qualified biologist shall be required if the Project-related construction activity has potential to adversely affect the nest or nesting behavior of the bird. No Project-related construction activity shall commence within the no-work buffer area until a qualified biologist and CDFW confirms that the nest is no longer active.

BIO-7: A qualified biologist shall survey trees within the project work limits and identify any snags, hollow trees, or other trees with cavities that provide suitable roosting habitat for pallid bat and other bat species. These surveys shall occur prior to construction, or prior to re-starting construction if a lapse of construction activities occurs for a period of 14 days or more. The following shall be implemented based on survey results:

- If no suitable roosting trees are found, construction shall proceed. If snags, hollow trees, or other trees with suitable cavities are found, the qualified biologist shall examine the areas for roosting bats.
- If bats are not found and there is no evidence of use by pallid bats, construction shall proceed.
- If pallid bats are found or evidence of use by bats is present, CDFW shall be consulted for guidance on measures to avoid or minimize disturbance to the colony. These measures include, but are not

limited to, excluding bats from the tree before their hibernation period (mid-October to mid-March) and before construction begins.

BIO-8: The following measures shall be incorporated for bridge-nesting birds if bridge demolition or construction of the new bridge occurs during the nesting season (February 1 to August 31). Exclusionary netting shall be installed around the undersides of the existing bridge before February 1 of the construction year to prevent new nests from being formed and/or prevent the reoccupation of existing nests. Exclusionary netting may also be required during construction of the new bridge if it is completed during the breeding season. The construction contractor will do the following:

- Remove all existing unoccupied nests on the bridge during the non-nesting season (September 1 through January 31).
- Keep the bridge free of nests, using exclusionary netting or other approved methods, until completion of construction activities.
- Inspect all listed structures for nesting activity a minimum of three days per week; no two days of inspection will be consecutive. A weekly log will be submitted to the Project biologist. The contractor will continue inspections until bridge removal and completion of construction on new bridge. If an exclusion device were found to be ineffective or defective, the contractor will complete repairs to the device within 24 hours. If birds were found trapped in an exclusion device, the contractor will immediately remove the birds in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines.
- Submit for approval working drawings or written proposals of any exclusion devices, procedures, or methods to the project biologist before installing them.
- The method of installing exclusion devices will not damage permanent features of the new bridge structure. Approval by the project biologist of the working drawings or inspection performed by the authorized project biologist will in no way relieve the contractor of full responsibility for deterring nesting.

BIO-9: The following practices will be implemented prior to and during construction for valley oak woodland riparian habitat.

- Prior to removal of any trees, an International Society of Arboriculture-certified arborist shall conduct a tree survey in areas that may be impacted by construction activities. This survey shall document tree resources that may be adversely impacted by implementation of the project. The survey will follow standard professional practices.
- A tree protection zone shall be established around any tree or group of trees to be retained. The tree protection zone will be delineated by an International Society of Arboriculture-certified arborist. The tree protection zone shall be defined by the radius of the dripline of the tree(s) plus one foot. The tree protection zone of any protected trees shall be demarcated using fencing that will remain in place for the duration of construction activities.
- Construction-related activities shall be limited within the tree protection zone to those activities that can be done by hand. No heavy equipment or machinery shall be operated within the tree protection zone. Grading shall be prohibited within the tree protection zone. No construction materials, equipment, or heavy machinery shall be stored within the tree protection zone.

- A planting plan will be implemented as detailed in a Restoration Plan approved by CDFW. The Restoration Plan will include performance standards for revegetation that will ensure successful restoration of the on-site riparian areas.
- Protective fencing shall be installed along the edge of construction areas including temporary and permanent access roads where construction will occur within 200 feet of the edge of riparian woodland habitat (as determined by a qualified biologist). The location of fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, trenching, grading, or other surface-disturbing activities outside of the designated construction area. Signs shall be erected along the protective fencing at a maximum spacing of one sign per 50 feet of fencing. The signs shall state: "This area is environmentally sensitive; no construction or other operations may occur beyond this fencing. Violators may be subject to prosecution, fines, and imprisonment." The signs shall be clearly readable at a distance of 20 feet and shall be maintained for the duration of construction activities in the area.
- Where riparian vegetation occurs along the edge of the construction easement, the County shall minimize the potential for long-term loss of riparian vegetation by trimming vegetation rather than removing the entire plant. Trimming will be conducted per the direction of a biologist and/or Certified Arborist.

BIO-10: The County shall restore any temporarily impacted valley oak riparian habitat at a 1:1 ratio. The permanent degradation of valley oak riparian woodland habitat shall be compensated for at a 3:1 ratio through the purchase of similar habitat value from a Corps- and CDFW-approved mitigation bank. Preservation and restoration shall be allowed to occur onsite with a CDFW and RWQCB approved mitigation monitoring plan.

BIO-11: To compensate for the permanent impacts on jurisdictional wetlands and waters, the County shall purchase credits from a Corps- and/or CDFW-approved mitigation bank at a minimum 1:1 ratio (one acre of habitat replaced for every one acre filled). Preservation and restoration shall be allowed to occur onsite with a Corps, CDFW, and RWQCB approved mitigation monitoring plan.

4.5 Cultural Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Cultural Resources – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

4.5.1 Setting

A cultural resource is a broad term that includes prehistoric, historic, and traditional cultural properties that reflect the physical evidence of past human activity across the landscape. Cultural resources, along with prehistoric and historic human remains and associated grave goods, must be considered under various federal, state, and local regulations, including CEQA and the National Historic Preservation Act of 1966 (NHPA). Cultural resources that are listed on or eligible for inclusion in the National Register of Historic Places (National Register) are also considered eligible for listing in the California Register of Historical Resources (California Register).

PAR Environmental Services, Inc. (PAR) prepared a Historic Properties Survey Report (HPSR) and Archaeological Survey Report (ASR). The ASR and HPSR are available for review at the County. Some information from the ASR and HPSR is considered confidential under the California Public Resources Code (PRC) and CFRs in compliance to the Freedom of Information Act and the California Public Records Act in order to protect the integrity of tribal cultural resources, and, thus, would not be available to the public (7 PRC 21082.3 and 36 CFR 800.11).

PAR conducted a cultural resources investigation for the proposed project which included a record search at the California Historical Resources Information System (CHRIS) Northeast Information Center (NEIC), background research, Native American consultation, and pedestrian survey. No prehistoric or historic archaeological resources were recorded during the pedestrian survey conducted by PAR. The HPSR and ASR concluded that the Area of Potential Effects (APE) is located within an area that has very low potential for buried archaeological resources. Record searches conducted at CHRIS NEIC did not identify any resources within the APE. Search of the Sacred Lands File by the Native American Heritage Commission (NAHC) was negative and none of the eight tribal members consulted for the proposed project indicated that they were aware of resources within the APE.

No historic resources were identified during the survey. The existing Central House Road Bridge over Wyman Ravine was constructed in 1910 and widened in 1970; it consists of a two-span structure composed of steel girders and an Armco bridge plank deck. The existing bridge is coded as a Category 5 “not eligible” by Caltrans for listing on the National Register.

4.5.2 Discussion

a) **Less than Significant.** The HPSR and ASR were completed in order to identify potentially significant historical resources in the APE. The investigation included a records search of the CHRIS NEIC, field survey, background research, and Native American consultation. The existing bridge No. 12C-0111 over Wyman Creek is considered not eligible by Caltrans for listing on the National Register. The County, as the CEQA lead agency, has concurred that the structure has no historical significance and does not qualify for special historical considerations. Therefore, the proposed project would have a less than significant impact on historical resources pursuant to CEQA Section 15064.5 and no mitigation measures are required.

b) **Less than Significant with Mitigation.** No archaeological resources were identified within the APE (PAR, 2018). Soils in the proposed project area date to the early Pleistocene and have been evaluated as having very low potential for buried archaeological resources. The proposed project area has undergone extensive disturbance from agricultural and irrigation use and frequent flooding. In addition, members of the Estom Yumeka Maidu Tribe of the Enterprise Rancheria are the most likely descendants (MLDs) for the APE and have indicated that the area is sensitive for cultural resources; however, they were not aware of any resources within the APE.

   Undiscovered subsurface cultural deposits may be present in the area and could be disturbed by the proposed project. In light of the potential to uncover unknown or undocumented subsurface archaeological remains, this impact would be potentially significant. Implementation of **Mitigation Measures CUL-1** would reduce impacts to unknown archaeological resources to a less than significant level.

c) **Less than Significant with Mitigation**. No formal cemeteries or human remains were identified during the field investigation and no burial sites are likely to be encountered during construction activities (PAR, 2018). However, in the event of an unanticipated discovery of human remains, **Mitigation Measures CUL-2** would reduce potential impacts to less than significant.

4.5.3 Mitigation Measures

CUL-1: If an unexpected discovery of cultural materials (e.g., unusual amounts of shell, animal bone, flaked stone, bottle glass, ceramics, structure/building remains) is encountered during project-related construction activities, the following procedures shall be followed:

- If unexpected cultural materials are unearthed, ground disturbances in the area of the find shall be halted immediately and a qualified professional archaeologist shall be notified regarding the discovery. The archaeologist shall determine whether the resource is potentially significant and develop the appropriate plan for handling the resource, including, but not limited to: no action; avoidance of the resource; or data recovery.
- If unexpected prehistoric materials (i.e., chipped, ground or pecked stone, bone, shell, ash and charcoal, or similar evidence of human occupation) are unearthed, ground disturbances in the area of the find shall be halted immediately and a qualified professional archaeologist and Native American monitor shall be notified regarding the discovery. The archaeologist and Native American monitor shall develop the appropriate

plan for handling the resource, including, but not limited to: no action; avoidance of the resource; or data recovery.

CUL-2: If buried human remains human remains or associated funerary objects are encountered during construction, all work shall halt within the vicinity of the discovery. In accordance with CEQA and the California Health and Human Safety Code (14 CCR § 15064; 7 HSC § 7050.5), the County coroner will be contacted immediately. If the human remains are determined to be Native American, the coroner will notify the Native American Heritage Commission within 24 hours of such identification. The NAHC will notify and appoint a Most Likely Descendant (MLD). The MLD will work with a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects.

4.6 Energy

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Energy – Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

4.6.1 Setting

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendices F and G require a description of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, the California State Legislature adopted Assembly Bill (AB) 1575 in response to the oil crisis of the 1970s. CEQA Guidelines Appendix F provides guidance for assessing potential impacts, within an Environmental Impact Report (EIR), that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently. CEQA Guidelines Appendix G provides the questions related to energy resources within the context of the Initial Study (IS). The goal identified in the County's General Plan Conservation and Open Space Element that pertains to the proposed project is COS-4, conserve energy and fuel resources by increasing energy efficiency. Butte County enforces this goal, as related to bridge replacement projects, by complying with construction standards.

Energy resources include electricity, natural gas, fossil fuels, and other fuels. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. Energy production and energy use both result in the depletion of nonrenewable resource, such as oil, natural gas, coal, and emission of pollutants. The project site does not currently produce energy. The project site's use of energy is currently caused by vehicles traveling along Central House Road or maintenance vehicles and crews conducting upkeep activities such as pavement overlay, restriping, bridge painting, and other such maintenance.

4.6.2 Discussion

a) Less than Significant. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. The proposed project, upon completion, would not increase energy use at the project site. The proposed project would not result in a change in traffic patterns, increase in average daily trips (ADT) per vehicle, or increase in vehicle miles traveled (VMT). Maintenance activities for the road and the bridge would be similar to pre-project conditions. Therefore, once completed, the proposed project would have no impact on energy use.

The main energy use would occur from the operation of heavy equipment during construction activities, which is detailed in Chapter 2, Project Description. Resources consumed during construction would include electricity and fossil fuels. Construction would also require the demolition of the existing bridge and erecting the new bridge; thus, construction would require the manufacture of new materials, some of which would not be recyclable, that require energy use for the production of these materials. Energy consumption during construction would be temporary and would cease upon the completion of the proposed project. In addition, as discussed in Section 4.3, Air Quality, and 4.8, Greenhouse Gas Emissions, construction equipment would operate using BMPs that limit idling times and require equipment to meet current standards. This allows the equipment to be more fuel efficient as well as not waster fuel while idling. Therefore, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction. Impacts are considered less than significant in this regard and no mitigation measures are required.

b) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. The proposed project would be constructed per County, FHWA, AASHTO, and Caltrans design criteria and standards. Therefore, the proposed project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency. No impact would occur as a result of the proposed project.

4.6.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to energy consumption.

4.7 Geology and Soils

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

4.7.1 Setting

Geology and Soils

The project site is located on the eastern edge of the Great Valley geomorphic province of California in an area of relatively flat topography with an elevation of approximately 89 feet above mean sea level. The project site is underlain by two Quaternary-aged alluvium geologic formations: (1) Modesto Formation, a late Pleistocene-age alluvium, comprised of gravelly sand, silt, and clay; and (2) Riverbank Formation, a middle Pleistocene-age alluvium, comprised of granitic sand, sandy clay, fine silt, and volcanic and metamorphic gravel (WRECO, 2019). This geomorphic province is generally seismically inactive, with most active faults to the west in the Coast Range or to the east in the Sierra Nevada Mountain Range. The nearest earthquake hazard fault zones are the Foothills Fault System – northern reach section (Swain Ravine fault zone), approximately seven miles northeast of the project site and the Cleveland Hill Fault Zone, approximately ten miles northeast of the project site (WRECO, 2019).

The Soil Survey of Butte County identified three soil types within the project site, including Kimball loam, Wilsoncreek-Trainer loam, and Eastbriggs-Galt complex (**Figure 6**) (Caltrans, 2018). The Kimball loam and Wilsoncreek-Trainer loam soil types underlay the majority of the project site, with the Eastbriggs-Galt Complex underlying only the southeast limits of the project area. Characteristics of the soil types present at the project site are included in **Table 7**.

Table 7.
Characteristics of Soils at the Project Site

Soil Series Name	Shrink-swell Potential	Drainage	Runoff Potential	T Erosion Factor	Percent (%) Clay
Kimball loam	Low	Well drained	Very low	3	27
Wilsoncreek-trainer loam	Low	Moderately well drained	Low	5	18.5
Eastbriggs-Galt Complex	High	Somewhat poorly drained	Very High	2.5	35

Source: Caltrans, 2018

The project site contains relatively flat topography with an elevation of approximately 89 feet above mean sea level and is identified in the General Plan as being in a region of “low to none” landslide potential and slight erosion hazard potential. The project site is in an area that has very low, moderate, and high expansive soil potential; with very low potential being along Wyman Ravine. The Eastbriggs-Galt Complex that underlies the southeastern portion of the project site has a high expansive soil potential (NRCS, 2019). The project site does not include zones designated by the California Department of Conservation (CDC) as being potentially susceptible to liquefaction.

Soil Types

Central House Road over Wyman Ravine Bridge (12C-0111) Replacement Project Butte County, CA

Figure 6

Legend

- Project Study Area
- Parcels

Soil Map Unit

- 133: Eastbiggs-Galt, 0 to 3 percent slopes
- 310: Kimball loam, 1 to 3 percent slopes
- 330: Wilsoncreek-trainer loams, 0 to 2 percent slopes, occasionally flooded

0 200 Feet

N

Author: I. Ciraulo
Last updated on Wednesday, August 30, 2023

Dewberry

Path: \\dewberry.dewberryroot.local\Offices\RanchoCordova\Projects\16024 - Central House Rd Bridge\400 Project Design Files\460 Environmental\Figures\GIS\CentralHouse_ISMND\CentralHouse_ISMND.aprx

This page is intentionally blank.

Paleontological Resources

Paleontological resources are the fossilized evidence of organisms preserved in the geologic (rock) record. Fossils are considered nonrenewable resources that are protected by federal, state, and local environmental laws and regulations. A search of the University of California Museum of Paleontology (UCMP) shows 136 catalogued vertebrates, invertebrates, microfossils, and paleobotany that are known within the County. **Table 8** provides the period, class and count of paleontological specimens collected in Butte County.

Table 8.
Paleontological Database Search Results for Butte County

Geologic Period	Class	Count
Permian	Anthozoa	10
	Total	**10**
Jurassic	Cycadopsida	3
	Filicopsida	1
	Gymnospermopsida	2
	Total	**6**
Cretaceous	Anthozoa	1
	Asteroidea	1
	Aves	4
	Bivalvia	34
	Cephalopoda	9
	Chondrichthyes	1
	Echinoidea	1
	Gastropoda	24
	Malacostraca	1
	Osteichthyes	5
	Reptilia	9
	Total	**90**
Paleogene	Bivalvia	3
	Gastropoda	24
	Total	**27**
Tertiary	Mammalia	2
	Total	**2**
Quaternary	Aves	1
	Total	**1**

Source: UCMP, 2019

The potential paleontological importance of the project site can be assessed by identifying if the rock units are 10,000 years old or older sedimentary deposits within the underlying landform. Sedimentary rock units with a high potential for containing significant nonrenewable paleontological resources are those within which vertebrate or significant invertebrate fossils have been previously determined to be present or likely to be present (Society of Vertebrate Paleontology [SVP], 2010). An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets at least one of the following criteria:

- A type specimen (i.e., the individual from which a species or subspecies has been described);
- A member of a rare species;
- A species that is part of a diverse assemblage;

- A skeletal element different from, or a specimen more complete than, those now available for its species;
- A complete specimen; or
- At least 10,000 years of age or older.

As shown in **Table 8**, above, the fossils identified within the County are primarily bivalves and gastropods from the Cretaceous period found in the Chico Formation along Big Chico Creek, located in northeastern Butte County. The project site is underlain by Quaternary aged alluvium known as the Modesto Formation. There is one locality identified within the County that occurs within geologic formations from the Quaternary period and Pleistocene epoch; however, this locality is not located within the project site (UCMP, 2019).

4.7.2 Discussion

ai-aiv, c) **Less than Significant**. The nearest fault systems to the proposed project are the Foothills Fault System – northern reach section (Swain Ravine fault zone), approximately 7 miles northeast of the project site and the Cleveland Hill Fault Zone, located approximately 10 miles northeast of the project site. The proposed project would remove the existing structurally deficient bridge and replace it with a new bridge designed to current structural and geometric standards, including the current Caltrans Seismic Design Criteria. Therefore, the risk of the proposed project causing loss, injury or death involving rupture of a known earthquake fault or seismic ground shaking would be similar to existing conditions. Impacts would be less than significant in this regard and no mitigation measures are required.

Liquefaction of granular soils can be caused by strong vibratory motion due to earthquakes. Soils that are highly susceptible to liquefaction are medium- to fine-grained, loose, granular, and saturated at depths of less than 50 feet below the ground surface. Liquefaction of soils causes surface distress, loss of bearing capacity, and settlement of structures that are founded on the soils. According to the United States Department of Agriculture (USDA) Soil Conservation Service, there are three soil types in the project area. **Table 7** summarizes the characteristics of each soil type present. These soil types are not known for their susceptibility to liquefaction and according to the CDC the project site is not located within a zone designated for having a high potential for liquefaction. Therefore, the probability of soil liquefaction taking place on the project site is considered to be low. The proposed project would remove the existing structurally deficient bridge and replace it with a new bridge designed to current structural and geometric standards, including the current Caltrans Seismic Design Criteria. Therefore, the risk of the proposed project causing loss, injury or death involving seismic-related ground failure, including liquefaction, would be similar to existing conditions. Impacts would be less than significant in this regard and no mitigation measures are required.

The project site contains relatively flat topography with an elevation of approximately 89 feet above mean sea level. According to the CDC and the General Plan, the project site has a “low to none” landslide potential. The proposed project would remove the existing structurally deficient bridge and replace it with a new bridge designed to current structural and geometric standards, including the current Caltrans Seismic Design Criteria. Therefore, the risk of the proposed project causing loss, injury or death involving landslides, including liquefaction, would be similar to existing conditions. Impacts would be less than significant in this regard and no mitigation measures are required.

b) **Less than Significant**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Construction activities involving soil disturbance, excavation, cutting/filling, demolition, paving, and grading activities have the potential for to result in erosion or loss of topsoil. Proposed project operations would not result in a significant increase in the potential for soil erosion as compared to existing conditions. With adherence to construction BMPs, as well as County, FHWA, AASHTO, and Caltrans design criteria and standards, the potential erosion impacts from construction activities would be less than significant.

d) **Less than Significant.** The project site is in an area that has very low, moderate, and high expansive soil potential; with very low potential being along Wyman Ravine (Butte County, 2012). The Eastbriggs-Galt Complex that underlies the southeastern portion of the project site has a high expansive soil potential (NRCS, 2019). According to Table 18-I-B of the Uniform Building Code (UBC, 1994), expansive soils with an index of 0-20 are considered as having a very low potential for expansion. The Soil Survey for Butte County indicates that both the Wilsoncreek-trainer loam and Kimball loam soil types that make up the majority of the project site have a low shrink-swell potential (NRCS, 2019). The Eastbriggs-Galt Complex that underlies the southeastern portion of the project site is listed as having a high shrink-swell potential.

The proposed project would remove the existing structurally deficient bridge and replace it with a new bridge designed to current structural and geometric standard. The risk to life or property related to expansive soil would be similar to existing conditions. Therefore, the proposed project's impact related to expansive soils is less that significant and no mitigation measures are required.

e) **No Impact.** The proposed project would replace the old bridge with a new bridge and does not involve construction of septic tanks or alternative wastewater disposal systems, or connection to sewer systems. There would be no impact as a result of the proposed project.

f) **Less than Significant with Mitigation**. The project site is underlain by geologic formations that are not considered unique geological features. Therefore, the proposed project would have no impact in this regard.

The proposed project area has undergone extensive disturbance from agricultural and irrigation use and frequent flooding. As mentioned above, the project site is underlain by Quaternary aged alluvium known as the Modesto Formation. There is one locality identified within the County that occurs within geologic formations from the Quaternary period and Pleistocene epoch; however, this locality is not located within the project site (UCMP, 2019). The proposed project is not anticipated to encounter unique paleontological resources. However, construction activities could disturb unknown paleontological resources that may occur within the Modesto and Riverbank Formations. **Mitigation Measure GEO-1** would be implemented to minimize potential impacts on unknown unique paleontological resources to a less than significant level.

4.7.3 Mitigation Measures

GEO-1: *Immediately Halt Construction Activities if Any Paleontological Materials Are Discovered*. If paleontological resources are encountered during project-related construction activities, ground disturbances in the area of the find shall be halted immediately and a qualified paleontologist shall be notified regarding the discovery. The paleontologist shall determine whether the resource is potentially significant and develop the appropriate plan for handling the resource in accordance with the Society of Vertebrate Paleontology guidelines. The plan would include, but is not limited to: a field survey; construction monitoring; sampling and data recovery procedures; museum storage coordination for any specimen recovered; and/or a report of findings. The plan shall be implemented by the qualified paleontologist before construction activities can resume in the vicinity of the find.

4.8 Greenhouse Gas Emissions

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Greenhouse Gas Emissions –Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

4.8.1 Setting

The earth's atmosphere naturally contains a number of gases, including CO_2, methane (CH_4), and nitrous oxide (N_2O), which are collectively referred to as greenhouse gases (GHGs). GHG emissions are generally numerically depicted, when applicable, as carbon dioxide equivalents (CO_2e). CO_2e represents CO_2 plus the additional warming potential from CH_4 and N_2O. The common unit of measurement for CO_2e is metric tons ($MTCO_2e$).

These gases trap solar radiation and the earth's own radiation, preventing it from passing through the earth's atmosphere and into space. GHGs are vital to life on earth; however, increasing GHG concentrations are warming the planet. In general, CH_4 has 21 times the warming potential of CO_2 and N_2O has 310 times the warming potential of CO_2. As the average temperature of the earth increases, weather may be affected, including changes in precipitation patterns, accumulation of snowpack, and intensity and duration of spring snowmelt, as well as increased in intensity in low precipitation and droughts. Human-made GHG emissions occur primarily through the combustion of fuels, mainly associated with transportation, residential energy, and agriculture.

California's primary legislation for reducing GHG emissions is the California Global Warming Solutions Act (AB 32). Butte County adopted a Climate Action Plan in February 2014 (Butte County, 2014). The Climate Action Plan provides a framework for the County to reduce GHG emissions while simplifying the review process for new development. Measures and actions identified in the Climate Action Plan lay the groundwork to achieve the adopted plan of achieving 15 percent reduction below 2006 emissions levels by 2020. BCAQMD recommends the use of existing standard methodologies to evaluate GHG emissions, specifically citing the California Air Pollution Control Officers Association (CAPCOA), the California Air Resources Board's (CARB's) AB 32 Climate Change Scoping Plan, and Executive Order S-3-05. The County and the BCAQMD have not set significance thresholds for GHG emissions.

4.8.2 Discussion

a,b) **Less than Significant.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. The proposed project would not result in land use changes within the project area. The proposed project would not include additional through lanes; thus, it would not increase capacity, nor

would it change long-term traffic use. Therefore, the proposed project would not change operational GHG emissions as compared to existing conditions and there would be no operational impacts associated with GHG emissions.

Construction GHG emissions are anticipated to occur with the proposed project. Roadway Construction Emissions Modeling (Huss and Grant, 2016) of the proposed project projected that a maximum of 15,543 pounds of CO_2e would be emitted per day, totaling 372.28 $MTCO_2e$ over the six-month length of the construction period. Therefore, GHG emissions would not exceed the 25,000 $MTCO_2e$ per year threshold typically assumed when significant thresholds have not been set by a municipality or an air quality district (Sacramento Metropolitan Air Quality Management District, 2016). The assumptions made during modeling include: 1) the types and quantities of construction equipment typical of bridge projects would be used; 2) all on-road equipment used for the proposed project would be year 2010 or newer models; and 3) all construction equipment would meet the California Air Resources Board Tier 4 requirements. Roadway Construction Emissions Model results for the proposed project are available in **Appendix A**.

The proposed project construction is considered small, short-term in nature, and would not generate substantial air quality pollutant concentrations, including GHG emissions, as discussed under Section 4.3, Air Quality. In addition, the construction GHG emissions associated with the proposed project would not exceed the 25,000 $MTCO_2e$ threshold. Impacts from the proposed project would be less than significant and no mitigation measures are required.

Even though impacts would be less than significant, construction activities would be subject to the implementation of BMPs, as well as requirements from the County Code and the BCAQMD. Therefore, equipment efficiency would be maximized during proposed project construction. Given the levels of emissions during construction, and the implementation of BMPs, along with compliance with federal, state, and local regulations and policies, the proposed project would be consistent with the Butte County Climate Action Plan. The proposed project would not conflict with any identified plans adopted for the reduction of GHG emissions. Impacts are less than significant, and no mitigation measures are required.

4.8.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to GHG emissions.

4.9 Hazards and Hazardous Materials

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

4.9.1 Setting

An Initial Site Assessment (ISA) (Caltrans, 2017) was prepared for the proposed project and is available for review at the County. The ISA was performed in general conformance with the scope and limitations of

American Society for Testing and Materials (ASTM) Practice E 1527-13. The ISA identifies recognized environmental conditions (RECs) that may affect roadway and/or bridge construction or right-of-way acquisition. RECs are defined by the ASTM Practice E 1527-13 as: "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment". A database report was obtained from Environmental Database Resources, Inc. consisting of information compiled from various government records, such as Geotracker, National Priorities List, and EnviroStor, for information regarding the project area. Based on the results of the records review, no potential RECs have been found in the project site.

An ISA does not test for asbestos or lead-based paint (LBP) within the project site. The Occupational Safety and Health Administration (OSHA) requires that all thermal systems insulation, surfacing materials, and resilient flooring materials installed prior to 1981 be considered Presumed Asbestos Containing Materials (ACM) and treated accordingly. Potential ACMs were not observed at the project site. Bridges built prior to 1981 are presumed to have ACMs within their rail shim sheet packing, bearing pads, support piers, and/or expansion joint materials, unless proven otherwise. Structures constructed prior to 1978 are presumed to contain LBP unless proven otherwise, although structures constructed after 1978 may also contain LBPs. Lead was used as a gasoline additive prior to 1987. Therefore, aerially deposited lead (ADL) is commonly present adjacent to heavily traveled roadways in service prior to 1987. The existing Central House Road Bridge over Wyman Ravine was constructed in 1910 and widened in 1970; it consists of a two-span structure composed of steel girders and an Armco bridge plank deck. An Aerially Deposited Lead, Lead-Based Paint, and Asbestos-Containing Materials Screening Investigation Report (Investigation Report) was conducted on April 12, 2003 by ENGEO. Based on this report, ADL from historical vehicle exhaust has not resulted in significant impacts to soil along the shoulder of the Central House Road project site. Only low levels of lead were detected is samples collected from the roadway striping and lettering, and no asbestos was detected in materials samples collected from the bridge structure. LBP was detected in samples collected from the bridge. It should be noted that Wyman Ravine was near flood stage at the time of our investigation, and additional, potential ACM may be present in the bridge sub-structure that was not accessible at that time of this report. If additional, potential ACM are encountered during bridge demolition, it should be treated as if it were ACM unless tested to show otherwise.

4.9.2 Discussion

a) **Less than Significant.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would not involve the routine storage or use of hazardous materials. There would be no increased likelihood of the "routine" transport, use, or disposal of hazardous materials once the proposed project is complete. The proposed project would not be a facility that generates or emits hazardous materials.

Construction of the proposed project would potentially require the use of various types and quantities of hazardous materials. Hazardous materials that are typically used during construction include, but are not limited to, hydraulic oil, diesel fuel, grease, lubricants, solvents, and adhesives. Although equipment used during construction activities could contain various hazardous materials, these materials would be used in accordance with the manufacturer's specifications and all applicable regulations. Minor fuel or oil spills could occur during construction activities. The release, even if accidental, of hazardous materials into the environment is regulated through existing federal, state, and local laws. These regulations require emergency response from local

agencies to contain hazardous materials in the event of an accidental release. The use of handling of hazardous materials during construction activities would occur in accordance with applicable federal, state, and local laws, including the California OSHA (CalOSHA) requirements. Implementation of construction BMPs, compliance with vehicle manufacturer's specifications, and compliance with applicable regulations would result in impacts that are less than significant. No mitigation measures are required.

b) **Less than Significant with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. The proposed project would not change the use of Central House Road, nor would it increase the number of vehicles using the roadway. The potential for release of hazardous materials into the environment would be similar to existing conditions and impacts would be less than significant.

The proposed project has the potential to use a variety of hazardous materials during construction activities. These materials would be stored, handled, and transported per federal, state, and local regulatory requirements. Implementation of construction BMPs, compliance with vehicle manufacturer's specifications, and compliance with applicable regulations would result in impacts that are less than significant. No mitigation measures are required in this regard.

Asbestos: New uses of ACMs were banned by the USEPA in 1989. The Caltrans Historic Bridge Inventory indicates that the Central House Road Bridge over Wyman Ravine was built in 1910 and widened in 1970. Based on the results of the records review and reconnaissance and the Investigation Report, potential ACMs were not observed or detected in materials samples collected from the bridge structure. Since Wyman Ravine was near flood stage at the time of the investigation, potential ACM may be present in the bridge sub-structure that was not accessible at the time of the Investigation Report. Demolition and bridge removal could expose the contractor and nearby residents to inhalable asbestos. Implementation of **Mitigation Measures HAZ-1** would reduce impacts to less than significant levels in this regard. New uses of ACMs were banned by the USEPA in 1989, thus new ACMs would not be used in construction of the replacement bridge.

Lead: Lead has been used in commercial, residential, roadway, and ceramic paint; in electric batteries and other devises; as a gasoline additive; for weighting; in gunshot; and other purposes. It is recognized as toxic to human health and the environment and is widely regulated in the United States. Structures constructed prior to 1978 are presumed to contain LBP unless proven otherwise, although structures constructed after 1978 may also contain LBP. Implementation of **Mitigation Measures HAZ-1** would reduce impacts to less than significant levels in this regard.

Based on a review of aerial photos and topographical maps (Caltrans, 2017), Central House Road was historically, and is currently, a local rural road. Based on the Investigation Report, ADL from historical vehicle exhaust has not resulted in significant impacts to soil along the shoulder of the Central House Road within the project site. Only low levels of lead were detected in samples

collected from the roadway striping and lettering. Standard Specifications, 7-1.02K (6)(j)(iii) – Earth Material Containing Lead, would be included in the construction contract and would be addressed in the contractor's lead compliance plan. Impacts are considered less than significant in this regard with compliance to the Standard Specifications as well as the implementation of **Mitigation Measure HAZ-1**.

Treated Wood: Hazardous chemicals are known to exist in the wood posts associated with metal beam guardrails similar to those found on the existing bridge. Wood posts at the project site that are scheduled to be removed would be disposed of in accordance with Standard Specifications, 14-11.14 - Treated Wood Waste. Compliance with construction Standard Specifications as well as the implementation of **Mitigation Measure HAZ-1**, would result in less than significant impacts.

c) **No Impact.** The project site is not located within 0.25 miles of a school. The Feather River Adventist School is the nearest school to the project site and is located approximately 2.4 miles north of the proposed project. No impact would occur in this regard.

d) **Less than Significant with Mitigation.** The project is not included in the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Caltrans, 2017). Construction of the proposed project could result in the disturbance of ACMs, ADL, and LBP; however, compliance with Caltrans Standard Specifications and the implementation of **Mitigation Measures HAZ-1** would reduce impacts to less than significant.

e) **No Impact.** The proposed project is not located within an airport land use plan and is not located within two miles of a public airport. The nearest public airport is the Oroville Municipal Airport, located approximately 9.6 miles north of the project site. Given the distance from the airport, the proposed project is not located within the Oroville Municipal Airport Safety Zones as defined by the Oroville Municipal Airport Master Plan. There would be no impact in this regard.

f) **Less than Significant with Mitigation.** The proposed project would include the removal of the existing bridge along Central House Road over Wyman Ravine and the construction of a new bridge designed to meet local, state, and federal standards. Construction of the proposed project would take approximately six months to complete. Access along Central House Road would be maintained during construction through the implementation of a temporary water crossing to the north of the existing bridge; however, the proposed project may require temporary lane closures and one-way traffic control to complete construction. Construction traffic control is not anticipated to significantly interfere with emergency response times or emergency evacuation plans. Information regarding emergency response times is available in Section 4.15, Public Services, and Section 4.17, Transportation, below. The proposed project would be coordinated with the Butte County Fire Department/California Department of Forestry and Forest Protection (CalFire), as well as the County's Sheriff's Office and other law enforcement or emergency service providers within the area, through a standard Construction Period Emergency and School Access Plan, as required under **Mitigation Measure PUB-1**. The implementation of mitigation measures

would ensure that the proposed project would not significantly interfere with emergency response plans or emergency evaluation plans and impacts would be less than significant.

g) **Less than Significant with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. The proposed project would not result in new additional structures, nor would it increase the number of people within the project site once construction is complete. Therefore, project construction would not expose people or structures to a significant risk from wildland fires, beyond what is currently present. Impacts would be less than significant in this regard.

During construction, workers would be present on site; however, this increase in workers would be temporary in nature as it would last approximately six months. The Butte County Fire Department and CalFire maintain a cooperative fire protection agreement, allowing service to unincorporated Butte County. The proposed project will be coordinated with the Butte County Fire Department/CalFire, as well as the County's Sheriff's Office and other law enforcement or emergency service providers within the area, through a standard Construction Period Emergency and School Access Plan, as required under **Mitigation Measure PUB-1**. With the implementation of mitigation measures, impacts would remain less than significant regarding wildland fire threat.

4.9.3 Mitigation Measures

Implement **Mitigation Measure PUB-1**, as described in Section 4.15, Public Services, below.

HAZ-1: *Asbestos and Lead Containing Materials.* Prior to construction activities the contractor shall submit a National Emission Standard for Hazardous Air Pollutants (NESHAP) notification. Per the NESHAP regulations for asbestos, all "demolition activity" requires written notification even if there is no asbestos present. This notification shall be typewritten and postmarked or delivered no later than ten (10) days prior to the beginning of the demolition or removal activity. If asbestos and/or lead containing materials are found, the following will be required:

- Removal, disposal, storage, and transportation of materials from the bridge structure that contain asbestos shall be performed in compliance with current Caltrans Standard Specifications, including 14-11.16, and other federal and state regulations for hazardous waste.
- A Lead Compliance Plan shall be prepared by the contractor for the disposal of lead-based paint. Materials associated with paint or bridge structures, paint on utilities, or remnant roadway paint striping shall be removed and disposed of by a California licensed abatement contractor, in compliance with current Caltrans Standard Specifications, including 14-11.13, and other federal and state regulations for hazardous waste.
- Should additional ACMs be uncovered during bridge demolition, the following is recommended:
    - the materials should be assumed hazardous and handled as such until testing is completed.
    - samples of suspect materials should be collected for laboratory analysis, and all activities that may impact the materials should cease until results are reviewed.

4.10 Hydrology and Water Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Hydrology and Water Quality – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
i. result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☒	☐	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☒	☐	☐
iv. impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

4.10.1 Setting

A Bridge Design Hydraulic Study Report (WRECO, 2019), Floodplain Evaluation Report (WRECO, 2019), and a Water Quality Technical Memorandum (Caltrans, 2017) were prepared for the proposed project and are available for review at the County. These studies provide information regarding the hydraulic

characteristics at the project site, scour potential for the proposed bridge, design flow characteristics, hydrologic information, and water quality analysis for the proposed project.

Hydrology

At a regional level, the proposed project, which crosses Wyman Ravine, is located within the Sacramento River Basin Watershed, the largest watershed system in California. The Sacramento River Basin Watershed is divided into six subregions, with the project site located within the Feather River Subregion. Within Feather River Subregion, the proposed project is located within the Lower Feather River Watershed. Specifically, Wyman Ravine belongs to the Honcut Headwaters – Lower Feather Watershed (Hydrologic Unit Code [HUC] 18020159).

The Honcut Headwaters – Lower Feather watershed covers approximately 803 square miles and includes water bodies within Butte, Yuba, and Sutter Counties. Within the Honcut Headwaters – Lower Feather watershed, Wyman Ravine belongs to the Wyman Ravine sub-watershed (HUC 180201590105). The Wyman Ravine sub-watershed covers an area of approximately 38 square miles.

Wyman Ravine is an intermittent stream which flows in a southerly direction through the project site, under Central House Road, and drains into North Honcut Creek, approximately 3.4 miles south-southeast of the project site. North Honcut Creek is a tributary to the Feather River. Within the valley, Wyman Ravine and North Honcut Creek flow through a predominantly agricultural landscape dotted with rural communities. The proposed project site is located within Zone A of the Wyman Ravine floodplain, which represents areas subject to flooding by the 100-year flood event.

Groundwater

Wyman Ravine is located within the North Yuba groundwater sub-basin (eastern central portion of the Sacramento groundwater basin). It is bounded on the north and west by the Feather River, on the south by the Yuba River, and on the east by the Sierra Nevada.

Stream channel and floodplain deposits present along the Yuba River, Feather River, and Honcut Creek are highly permeable and provide for large amounts of groundwater recharge within the sub-basin. The potential for artificial recharge of groundwater in the basin is limited since areas that have available storage space typically have overlying soils with very low infiltration rates that would restrict recharge potential. The nearest groundwater recharge area is more than 10 miles north of the project site, north of the City of Oroville.

Water Quality

Surface Water: The USEPA approved California's 2014-2016 List of Impaired Waters in April 2018. Honcut Creek is 303(d) listed as water quality impaired from dissolved oxygen and indicator bacteria. The Lower Feather River is 303(d) listed as water quality impaired from mercury, polychlorinated biphenyls (PCBs), and agricultural chemicals (pesticides). Wyman Ravine is not on the current 303(d) list of impaired waters (Caltrans, 2017).

Groundwater: The generally good water quality characteristics are apparent in the overall salinity of groundwater in the study area. In general, total dissolved solids (TDS) concentrations are below 500 milligrams per liter (mg/l) throughout the entire study area basin (Caltrans, 2017). DWR maintains data for 35 water quality wells in the North Yuba Subbasin. Data collected from these wells indicate a TDS range of 149 to 655 mg/l and a median of 277 mg/l. The primary water chemistry in the area indicates calcium magnesium bicarbonate or magnesium calcium bicarbonate groundwater. Some magnesium bicarbonate

can be found in the northwest portion of the basin. In addition, there are no documented impairments to groundwater quality in the subbasin.

Beneficial Uses

Wyman Ravine does not have specific beneficial uses as identified in the Sacramento River and San Joaquin River Basin Plan (Basin Plan); however, Wyman Ravine is a tributary to the Feather River, which has established beneficial uses. The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. Therefore, beneficial uses applied to the Feather River would also apply to Wyman Ravine. Beneficial uses are set in the Basin Plan for the Feather River and include municipal, agricultural, recreational uses, freshwater habitat, migration and spawning, and wildlife habitat (Caltrans, 2017).

4.10.2 Discussion

a,d) **Less than Significant.** The project site is not within a tsunami or seiche zone; however, it is within flood hazard area Zone A. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. Therefore, upon completion, the proposed project would not result in an increase likelihood of the replacement bridge violating water quality standards or waste discharge requirements or otherwise substantially degrading water quality. Impacts would be less than significant in this regard.

Construction of the proposed project has the potential to expose bare soil and potentially generate other water quality pollutants that could be exposed to precipitation and subsequent entrainment in surface runoff to Wyman Ravine. Construction activities involving soil disturbance, excavation, cutting/filling, and grading activities could result in increased erosion and sedimentation to Wyman Ravine and waters downstream. Construction materials, such as asphalt and concrete, and equipment fluids could be exposed to precipitation and subsequent runoff. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution) and contribute to the degradation of water quality.

Proposed channel disturbance during construction, including installation of piles and RSP, if required, could result in a temporary increase in turbidity in and around the area of the in-channel construction. A temporary diversion system would be installed in order to isolate and dewater the work area so that the proposed construction activities can occur. Installation of the temporary diversion system could result in a temporary increase in turbidity. Dewatering discharge could degrade water quality if the effluent contains chemical pollutants or high levels of sediment.

The California Building Code (CBC) compliance is a condition of approval set forth in the County Code. Adherence to the building and grading standards of the County Code is indicative of adherence to the standards of the CBC. The proposed project would implement construction BMPs, as discussed in Section 4.4, Biological Resources, question c. These BMPs would minimize impacts to wetlands and other waters of the U.S. and would minimize impacts to water quality. In addition to the BMPs listed in Section 4.4, Biological Resources, above, the proposed project

would also be required to obtain and comply with the necessary permits from the Corps, CDFW, and RWQCB. Adherence to these permitting requirements and building/grading standards would include incorporation of appropriate, site-specific BMPs. Therefore, impacts to water quality would be less than significant.

b) **Less than Significant.** The proposed project site is not actively used for groundwater recharge. The proposed project is similar in size and scale as the existing bridge and roadway approaches. No wells would be constructed nor would new connections to existing water facilities be required. Construction activities would not intercept or alter groundwater recharge, discharge, or flow conditions, as the proposed project would replace the existing bridge. Any increase in impervious surface as a result of the proposed project would be negligible in association with groundwater recharge. Construction activities may require the use of water for dust control or other activities. Typically, water use during construction is trucked to the project site. Water use at the project site would cease upon completion of construction. Therefore, the proposed project would not substantially decrease water supply or reduce groundwater recharge and impacts would be less than significant.

c,i-iv) **Less than Significant with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. The proposed project would not alter the course of Wyman Ravine nor would it alter the existing drainage pattern of the site.

Construction activities involving soil disturbance, excavation, cutting/filling, and grading activities could result in increased erosion and sedimentation to Wyman Ravine and waters downstream. As discussed under questions a and d, the proposed project would comply with County, and thus CBC, standards, BMPs, and permitting requirements. Any temporary construction areas would be revegetated, as required through **Mitigation Measures BIO-10** and **BIO-11**. Therefore, adherence to, and implementation of, permitting requirements, building/grading standards, site-specific BMPs, and mitigation measures would result in less than significant impacts in this regard. Upon completion of the proposed project, drainage patterns would be similar in nature to the existing bridge.

The proposed project would construct a new bridge designed to current structural and geometric standards, thus, there would be an increase in impervious surface, as compared to existing conditions. However, this increase in impervious surfaces would cause a negligible increase in surface water runoff leaving the project site. This increase would not be substantial when compared to the size of the total watershed. In addition, the proposed project would improve the flows within Wyman Ravine and would ultimately decrease the water surface elevations, as compared to existing conditions, in the vicinity of the bridge for the 50-year and 100-year storm events (WRECO, 2019). During construction, BMPs would be implemented to reduce any runoff that could occur during a rain event. Therefore, the proposed project would not result in flooding

on- or off-site, nor would it contribute to exceeding the capacity of existing runoff in the area. Impacts would be less than significant in this regard.

Freeboard is the amount of space between the water surface during a 100-year storm event and the bottom of the bridge. The existing bridge does not meet the freeboard criteria of two feet of freeboard. The proposed project would meet the freeboard criteria (WRECO, 2019). In addition, the proposed project would result in a reduction of water surface elevation during 50-year and 100-year storm events. The proposed project site and surrounding areas are located within Zone A of the Wyman Ravine floodplain; existing flood patterns in the surround area would not change as a result of the proposed project. Therefore, the proposed project would not impede or redirect flood flows. Impacts are considered less than significant.

e) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. During construction, the proposed project would adhere to, and implement, permitting requirements, building/grading standards, site-specific BMPs. Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No impact would result from the implementation of the proposed project and no mitigation measures would be required.

4.10.3 Mitigation Measures

Implement **Mitigation Measures BIO-10** and **BIO-11**, as described in Section 4.4, Biological Resources, above.

4.11 Land Use and Planning

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Land Use and Planning – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

4.11.1 Setting

The proposed project is located within an unincorporated area of Butte County. The Butte County General Plan designates the land use at the project site as Agriculture-40 (40-acre minimum). This designation applies to lands that are suited and retained for orchard and field crop production and associated uses with minimum property size of 40 acres. The Butte County zoning classification surrounding the project site is Agriculture-40 (40-ac minimum), which allows for one single-family home and one second unit and accessory dwelling units on each legally established parcel within the zone. In addition, agricultural employees are permitted as an accessory use within the AG zone. The AG zone adjacent to the proposed project has a minimum property size of 40 acres.

The existing Central House Road provides access from the agricultural properties east of Wyman Ravine to SR 70 on the west. Central House Road generally traverses property boundaries.

4.11.2 Discussion

a,b) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operation of the proposed project would be similar to existing conditions. The proposed project would not physically divide an established community. It is likely to improve the safety conditions with the project area, by construction the new bridge to current standards, including the County and CBC standards. The proposed project would not conflict with the Butte County General Plan, Butte County General Plan land use designations, or the County Zoning Ordinance. Thus, the proposed project would have no impact and no mitigation measures are required.

4.11.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to Land Use and Planning.

4.12 Mineral Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Mineral Resources – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

4.12.1 Setting

Butte County's top mined mineral resources are sand and gravel, which are found in large deposits along the Sacramento River and within the County's central "gravel belt." Sand and gravel are mined primarily for construction use. The project site is not mapped for mineral resource and is not within the vicinity of current mining operations within the County. An area 4.5 miles north of the proposed project, was investigated by the CDC State Geologist per provisions of the Surface Mining and Reclamation Act of 1975 (SMARA), Public Resources Code § 2712 et seq. The intent of SMARA is to assure that:

a. Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses.
b. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.
c. Residual hazards to the public health and safety are eliminated (CDC, 2019).

Mineral Resource Zone (MRZ) categories are used to classify which land has potential significant mineral resources, based on geologic factors, regardless of current or existing land use. Currently, there is no mineral land classification study of Butte County and no MRZs are within the project site. The nearest MRZ is 4.5 miles north of the project site and is classified as MRZ-2— an area that is of prime importance because it contains known economic mineral deposits for construction aggregate. These deposits of fine to course-grained sand, metamorphic gravels, and small cobbles occur within the Modesto and Riverbank Formations at depths ranging from 13 to 36 feet below ground surface with an average depth of 24 feet (CDC, 2010). The upper limits of the clay-rich Laguna Formation were encountered beneath the sand and gravel layers.

4.12.2 Discussion

a) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. There are no mining operations within the project vicinity. The project site does not have regional or statewide significant mineral lands. Construction activities would be temporary in nature and would not conflict with or limit access to mineral resources. Operation of the proposed project would be similar to existing conditions. There would be no impact in this regard and no mitigation measures are required.

b) **No Impact.** The proposed project is not located near a mineral resource recovery site delineated by the Butte County General Plan or any other applicable land use plan. There would be no impact in this regard and no mitigation measures are required.

4.12.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to mineral resources.

4.13 Noise

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Noise – Would the project:				
a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☒

4.13.1 Setting

Noise

Noise is defined as unwanted sound; thus, it is a subjective reaction to characteristics of a physical phenomenon. A frequency weighting measure that simulates human perception is commonly used to describe noise environments and to assess impacts on noise-sensitive areas. It has been found that A-weighting of sound levels best reflects the human ear's reduced sensitivity to low frequencies, and correlates well with human perceptions of the annoying aspects of noise. The A-weighted decibel scale (dBA) is cited in most noise criteria. The decibel (dB) notation used for sound levels describes a logarithmic relationship of acoustical energy, for example, a doubling of acoustical energy results in an increase of three dB, which is considered barely perceptible. A 10-fold increase in acoustical energy equals a 10-dB change, which is subjectively like a doubling of loudness. **Table 9**, Typical Noise Levels, identifies decibel levels for common sounds heard in the environment.

Table 9.
Typical Noise Levels

Common Outdoor Activity	Noise level (dBA)	Common Indoor Activity
Jet flyover at 1,000 feet	110	Rock band
Gas lawnmower at three feet	100	
Diesel truck at 50 feet at 50 mph	90	Food blender at three feet
Noisy urban area, daytime	80	Garbage disposal at three feet
Gas lawnmower, 100 feet Commercial area	70	Vacuum cleaner at ten feet Normal speech at three feet
Heavy traffic at 300 feet	60	Large business office
Quiet urban daytime	50	Dishwasher next room
Quiet urban nighttime Quiet suburban nighttime	40	Theater, large conference room (background)
Quiet rural nighttime	30	Library Bedroom at night, concert hall (background)
	20	Broadcast/recording studio
	10	
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans, 2013

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are: equivalent A-weighted sound level over a given time period (Leq); average day-night 24-hour average sound level with a nighttime increase of 10 dBA to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL), a 24-hour average that includes both an evening and a nighttime weighting. Noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse levels of noise with respect to public health because of sleep interference.

State and local agencies that govern the project site have policies and standards regarding noise levels for land use types as well as construction operations. Caltrans Standard Specification, 14-8.02, Noise Control, states that projects: "Do not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 PM to 6:00 AM" Receptors that are located beyond 50 feet of a project area do not need to be considered unless there is a reasonable expectation that noise impacts would extend beyond that boundary."

The Butte County General Plan Health and Safety Element contains policies regarding construction noise. Policy HS-P1.7 requires noise generating construction activities that are located within 1,000 feet of residential uses be limited to daytime hours between 7 AM and 6 PM on weekdays and non-holidays. Policy HS-P1.9 requires standard construction noise control measures be implemented during construction.

Vibration

The most common descriptor used to quantify construction vibration amplitude in relation to impacts to structures is the peak particle velocity (PPV), defined as the maximum instantaneous peak velocity of the vibratory motion in inches per second (in/sec). According to the Caltrans Transportation and Construction

Vibration Guidance Manual (2013), PPV is generally accepted as the most appropriate descriptor for evaluating the potential for building damage. The Federal Transit Administration (FTA) recommends a PPV threshold of 0.5 in/sec for residential and commercial structures (FTA, 2018).

Project Setting

The Butte County General Plan designates the land use at the project site as Agriculture-40 (40-acre minimum). The Butte County zoning classification surrounding the project site is AG-40. Central House Road is classified as a "Rural Local Road" and accommodates an ADT of approximately 100 vehicles per day. The nearest residence, which is considered a sensitive receptor, is located approximately 500 feet northwest of the existing bridge and approximately 300 feet east of SR 70.

4.13.2 Discussion

a) **Less than Significant.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. The straightening of the roadway alignment would move the bridge to the south, further away from the existing residence. The proposed project would not increase the use of Central House Road nor would it increase vehicle capacity. Therefore, operation of the proposed project would be similar to existing conditions and noise levels upon completion of construction would be similar to existing conditions. Impacts would be less than significant in this regard.

Noise from construction activities is anticipated to temporarily increase ambient noise levels in the vicinity of the proposed project. Construction activity noise levels would fluctuate depending on the particular type, number, and duration of uses of construction equipment, as well as vary depending on the type of construction activity or phase. Noise from construction activities may intermittently dominate the noise environment with varying levels of intensity. Noise from construction activities generally attenuate at a rate of between 6 and 7.5 dBA per doubling distance. General construction equipment noise levels at a distance of 50 feet are provided in **Table 10**. General construction phase/activity typical noise levels are summarized in **Table 11**.

Table 10.
Construction Equipment Noise

Construction Equipment	Typical Noise Level (dBA at 50 feet)
Scrapers	85
Dozers	85
Trucks	84
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration, 2018

Table 11
Typical Construction Activity Noise

Construction Phase/Activity	Leq at 50 feet away from Project Centerline (dBA)
Pile Driving	100
Ground Clearing	84
Excavation	88/78
Foundation	88
Erection	79/78
Finishing	84

Source: USEPA, 1971.

The nearest sensitive receptor is located approximately 500 feet northwest of the existing bridge. The loudest activity that may occur during the construction of the proposed project is pile driving. Assuming an attenuation rate of 6 dBA per doubling distance, the residents would experience noise levels below 100 dBA. Construction activities, including the pile driving, would generally occur during weekday daytime hours, unless specifically authorized by the County to extend activities. No construction activities would occur on holidays.

The proposed project would comply with Caltrans Standard Specifications, 14-8.02, and Butte County General Plan Policy HS-P1.7 and HS-P1.9. The proposed project would implement construction noise BMPs, including, but not limited to, the following:

- Limit construction activities to daytime hours between 7 AM and 6 PM on weekdays and between 8 AM and 5 PM on Saturdays. No construction would occur on Sundays or holidays. If work is necessary outside of these conditions, the Contractor shall demonstrate the necessity of the work outside of these hours and obtain County approval prior to conducting the work.
- Use newer equipment with improved muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. Newer equipment will generally be quieter in operation than older equipment. Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. All construction equipment will be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding).
- Utilize construction methods or equipment that provides the lowest level of noise and ground vibration impact. Utilize quiet air compressors and other stationary noise-generating equipment where appropriate technology exists.
- Turn off idling equipment after a period of five minutes.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.

Implementation of BMPs and compliance with the County's and Caltrans' policies, regulations, and standards would minimize effects from construction noise to a less-than-significant level and no mitigation measures are required.

b) **Less than Significant.** Construction of the proposed project would likely use pile drivers, which could generate groundborne vibration levels of 0.644 in/sec (impact) or 0.170 in/sec (sonic) at 25 feet from the source. The majority of construction noise would be from clearing of the project site and the placement of the new bridge abutments and structure. Project equipment would be located approximately 500 feet from the nearest sensitive receptor and could cause annoyance to residents. The greatest groundborne noise and vibration levels would occur from the pile driving activities. As mentioned above, the FTA recommends a PPV threshold of 0.5 in/sec for residential and commercial structures. Given that PPV levels decrease over distance, and the nearest residence is located 500 feet northwest of the existing bridge, this threshold would not be exceeded as a result of the proposed project.

   The proposed project would be constructed in a single season, and any groundborne noise and vibrations levels would be temporary in nature, ceasing upon construction completion. With the implementation of BMPs and compliance with the County's and Caltrans' policies, regulations, and standards provided in questions a and d, the proposed project would have a less than significant impact with respect to groundborne vibration and noise levels and no mitigation measures are required.

c) **No Impact**. There are no private airstrips nor airports within two miles of the project site. The nearest airport to the proposed project site is Bowles Airport located approximately seven miles to the southwest. The proposed project is outside of the Beale Air Force Base (AFB) Land Use Compatibility Plan (ALUCP) and is outside, but within close proximity to, the Military Influence Area (MIA) Zone III for Beale Air Force Base. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Therefore, the proposed project would not expose people residing or working in the area to excessive noise levels. No impact would occur in this regard.

4.13.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to noise and groundborne vibration.

4.14 Population and Housing

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Population and Housing – Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

4.14.1 Setting

Butte County's Regional Housing Needs Plan is required by California State law (Government Code § 65584) and allocates housing "so that every community provides an opportunity for a mix of housing affordable to all economic segments" (BCAG, 2013). According to the 2010 Census, Butte County has an estimated population of 220,000 people with a total of 95,835 housing units as of 2010 (U.S. Census Bureau, 2010); According to the American Community Survey 5-year Estimates (2013-2017), Butte County had an estimated population of 225,207 people with a total of 98,119 housing units (U.S. Census Bureau, 2017). Between 2018 and 2019 there was a 3.7 percent decrease in population for unincorporated Butte County from 227,896 people to 226,466 people (BCAG, 2019a). As of January 1, 2019, unincorporated Butte County had approximately 85,447 housing units with an average of 2.87 individuals per household in unincorporated Butte County (BCAG, 2019b).

The project site is located in an unincorporated portion of the County. The nearest census designated community is the City of Gridley, located approximately 4.5 miles northwest of the project site, which has a population of approximately 6,608 people. One residence is located adjacent to the project site, approximately 500 feet northwest of the existing bridge and approximately 300 feet east of SR 70.

4.14.2 Discussion

a) **No Impact**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not increase capacity along Central House Road that may encourage population growth within the surrounding communities. The proposed project would not permanently increase the population in the area either directly or indirectly. No impact would occur in this regard.

   During construction, the proposed project would require employees. It is assumed that these employees would come from the nearby and surrounding areas, such as Gridley, Yuba City, Marysville,

and Oroville and would not relocate to the area for work. The proposed project would not temporarily increase the population in the surrounding area. No impact would occur in this regard.

b) **No impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The new bridge would not displace housing units or people within the project area and replacement housing would not be required. There would be no impact in this regard.

4.14.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to population and housing.

4.15 Public Services

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Public Services – Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i. Fire protection?	☐	☒	☐	☐
ii. Police protection?	☐	☒	☐	☐
iii. Schools?	☐	☒	☐	☐
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

4.15.1 Setting

The project site is served by the Butte County Fire Department/CalFire. The Butte County Fire Department and CalFire maintain a cooperative fire protection agreement, allowing service to unincorporated Butte County. The Butte County Fire Department/CalFire operates 23 staffed fire stations and 14 volunteer fire stations. Fire Station 74, Butte County Fire Station, and Fire Station 76, Butte County Volunteer Fire Station, are located approximately 5 miles northwest of the project site and are the closest stations to the proposed project (Butte County Fire Department, 2019).

The project site is served by the Butte County Sheriff's Office, which has three stations that serve unincorporated portions of the County. The nearest Butte County Sheriff's station is located at 5 Gillick Way in Oroville, approximately 12.5 miles north of the project site (Butte County Sheriff's Office, 2019).

The project site is within the Gridley Unified School District boundaries and is served by McKinley Primary School (Grades K-1), Woodrow Wilson School (Grades 2-5), Sycamore Middle School (Grades 6-8), and Gridley High School (Grades 9-12) (Gridley Unified School District, 2019).

The proposed project is located approximately 1.3 miles east of the Feather River, approximately 5 miles southeast of Manuel Vierra Park in the City of Gridley, and approximately 3.5 miles southeast of the Oroville Wildlife Area.

4.15.2 Discussion

i, ii, iii) **Less than Significant with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current

structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not increase capacity along Central House Road that could increase traffic and congestion. The proposed project would not increase the need for fire or police protection, as service needs would be similar to existing conditions. Therefore, the proposed project would have no impact to public services upon the completion of construction.

Access along Central House Road would be maintained during construction through the implementation of a temporary water crossing to the north of the existing bridge; however, the proposed project may require temporary lane closures and one-way traffic control to complete construction. Construction traffic control is not anticipated to significantly interfere with police and fire response times or school bus routes.

During construction, construction workers would be present on site, which could result in the need for public services. Construction of the proposed project could result in accident or emergency incidents that would require emergency response, such as fire, police, medical, or hazardous waste services; however, construction activities would be short in duration, lasting one construction season, approximately six months. Any increase in police or fire services due to construction activities would be temporary, ceasing upon completion of the proposed project.

The proposed project would be coordinated with the Butte County Fire Department/CalFire, Butte County Sheriff's Office, other law enforcement or emergency service providers within the area, and Gridley Unified School District, through a standard Construction Period Emergency and School Access Plan, as required under **Mitigation Measure PUB-1**. The implementation of **Mitigation Measure PUB-1** would ensure that the proposed project would not increase the need for police and fire protection services and impacts would be less than significant.

The proposed project would not increase the population, refer to Section 4.14, Population and Housing, and thus, would not result in an increase in school age children beyond what the Gridley Unified School District currently provides. Construction workers are anticipated to come from the surrounding areas, and thus would not relocate to the project vicinity. Therefore, temporary increase in school services would not occur. No impact would occur with respect to school service needs and no mitigation measures are required.

iv, v) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The demands on parks and other public services upon completion of construction would be similar to existing conditions. No impact would occur in this regard.

The proposed project would not directly impact parks, as there are no parks within one mile of the project site. While construction workers would be brought to the area during the construction season, they are anticipated to come from the surrounding area, and thus would not relocate. Construction workers would be on the project site during construction hours and would return home in the off hours. Therefore, and increased demand on parks or other public services resulting in the need for new or improved facilities would not occur. No impact would result during construction of the proposed project.

4.15.3 Mitigation Measures

PUB-1: *Develop a Construction Period Emergency and School Bussing Access Plan.* Prior to the start of construction, the contractor shall coordinate with the local public and private ambulance and paramedic providers, Butte County Fire Department, CalFire, Butte County Sheriff's Office, and Gridley Unified School District to prepare a Construction Period Emergency and School Bussing Access Plan. The Construction Period Emergency and School Bussing Access Plan shall identify phases of the proposed project and construction scheduling and shall identify if alternative emergency and bussing access routes are appropriate.

4.16 Recreation

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Recreation – Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

4.16.1 Setting

State and federally managed recreation lands make up approximately 18 percent of land in Butte County. Five special districts within the County maintain many of the parks and recreational facilities and include the Chico, Feather River, Paradise, Durham, and Richvale Recreation and Park Districts. These districts encompass the majority of Butte County and are funded by property taxes, rather than user fees. The project site is not included within any Recreation and Parks District within Butte County and is located approximately one mile west of the southwestern limit of the Feather River Recreation and Park District (Butte County, 2012).

The proposed project is located approximately 1.3 miles east of the Feather River, approximately 5 miles southeast of Manuel Vierra Park in the City of Gridley, and approximately 3.5 miles southeast of the Oroville Wildlife Area.

4.16.2 Discussion

a, b) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not directly impact parks, as there are no parks within one mile of the project site. The proposed project would not contribute to an increase in population, nor would it result in an increase in demand on existing neighborhood or regional parks. No additional neighborhood or regional parks would be required to be created as a result of the proposed project. The proposed project would have no impact on parks and recreation facilities.

While construction workers would be brought to the area during the construction season, they are anticipated to come from the surrounding area, and thus would not relocate. Construction workers would be on the project site during construction hours and would return home in the off hours. Therefore, and increased demand on parks resulting in the need for new or improved facilities would not occur. No impact would result during construction of the proposed project and no mitigation measures are required.

4.16.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to recreation.

4.17 Transportation

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Transportation – Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

4.17.1 Setting

Central House Road is classified as a rural local road that "primarily provide[s] access to adjacent land and travel over relatively short distances" (Butte County, 2012). It is currently a two-lane road extending from SR 70 east to Honcut Highway, located approximately three miles east of the project site. At Honcut Highway, the road continues east to serve agricultural properties. Central House Road accommodates an ADT of approximately 100 vehicles per day (Caltrans, 2015). Central House Road is not a designated bicycle route. The project site is also under the jurisdiction of the Butte County General Plan, Butte County Bicycle Master Plan, and the BCAG Regional Transportation Plan/Sustainable Communities Strategy.

4.17.2 Discussion

a) **Less than Significant**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Central House Road would continue to be a rural local road per the County General Plan. The proposed project would accommodate an approximately 28-foot-wide roadway between bridge railings, allowing the new bridge to accommodate farm equipment traveling on Central House Road. In addition, the roadway would be straightened in order to improve safety at the bridge by improving site distance and eliminating the tight reduced speed curve on an otherwise straight roadway. The proposed project would not create additional lanes; thus, the proposed project is not capacity increasing. Operations would be similar to existing conditions upon construction completion.

Minor short-term traffic-related impacts are anticipated due to the implementation of the proposed project. Access for through traffic, pedestrians, and bicyclists along Central House Road

would be maintained throughout the six-month proposed project construction period; however, minor delays and short-term road closures during the construction and removal of the on-site temporary water crossing would occur. All adjacent properties would maintain access throughout the construction period.

The proposed project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The proposed project would have a less than significant impacts and no mitigation measures are required.

b) **Less Than Significant Impact.** CEQA Guidelines Section 15064.3 (b) provides criteria for analyzing transportation impacts. As stated in Section 15064.3(b)(2), transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant impact. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project is a bridge replacement project that would not increase, or decrease future traffic capacity, or create any long-term impact to traffic circulation in the area. Roadway users would continue to be similar as those currently using Central House Road. No change in traffic patterns, ADT, or VMT would result from the proposed project.

During construction, Central House Road would remain open through the implementation of a temporary water crossing immediately north of the existing bridge. This slight shift in traffic would not result in a change in VMT, as it is adjacent to, and parallel with, the existing Central House Road alignment.

Therefore, pursuant to Section 15064.3(b), the proposed project would have a less than significant impacts on transportation and no mitigation measures are required.

c) **Less than Significant Impact**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to comply with County, FHWA, AASHTO, and Caltrans current design criteria and standards. The proposed project would accommodate an approximately 28-foot-wide roadway between bridge railings, allowing the new bridge to accommodate farm equipment traveling on Central House Road. In addition, the roadway would be straightened in order to improve safety at the bridge by improving site distance and eliminating the tight reduced speed curve on an otherwise straight roadway. The proposed project would improve roadway safety, and this would be a beneficial impact.

During construction, there could be conflict with construction equipment and adjacent land uses. However, as discussed above, Central House Road access through the project site, as well as to adjacent properties, would be maintained throughout the construction season. Construction equipment would be confined to the project site and staging area and would not conflict with agricultural vehicles moving through the project site. Movement of construction equipment and agricultural vehicles are similar in nature and any potential conflicts would cease upon

construction completion. Impacts are less than significant in this regard and no mitigation measures are required.

d) **Less than Significant Impact with Mitigation**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Access along Central House Road would be maintained during construction through the implementation of a temporary water crossing to the north of the existing bridge; however, the proposed project may require temporary lane closures and one-way traffic control to complete construction. Construction traffic control is not anticipated to significantly interfere with police and fire response times or school bus routes. The proposed project would be coordinated with the Butte County Fire Department/CalFire, Butte County Sheriff's Office, other law enforcement or emergency service providers within the area, and Gridley Unified School District, through a standard Construction Period Emergency and School Access Plan, as required under **Mitigation Measure PUB-1**. Therefore, with the implementation of mitigation, impacts would be less than significant.

4.17.3 Mitigation Measures

Implement **Mitigation Measure PUB-1**, as described in Section 4.15, Public Services, above.

4.18 Tribal Cultural Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Tribal Cultural Resources – Would the project:				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision C, of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.	☐	☒	☐	☐

4.18.1 Setting

A Tribal Cultural Resource (TCR) is defined as a site, feature, place, cultural landscape, or sacred place or object that has cultural value to "California Native American tribes" (Public Resource Code [PRC] §§ 21073, 21074). In order to be considered a TCR, the resource must be included in or determined eligible for inclusion in the California Register or is in included in a local register of historical resources. As stated in the Cultural Resources section, to be considered a historical resource, for the purposes of a TCR, the resource must meet the criteria for listing in the California Register.

AB 52 went into effect on July 1, 2015 and establishes a consultation process with all California Native American Tribes on the NAHC List for federal and non-federal tribes (PRC § 21080.3). Once the tribe is notified of the proposed project, the tribe has 30 days to request consultation. The consultation process ends when either the parties agree to mitigation measures or avoid a significant effect on tribal cultural resources or a party, acting in good faith and after reasonable effect, concludes that mutual agreement cannot be reached.

An ASR and HPSR were prepared by PAR for the proposed project. The ASR and HPSR are available for review at the County. Some information from the ASR and HPSR is considered confidential under the California Public Resources Code (PRC) and CFRs in compliance to the Freedom of Information Act and the California Public Records Act in order to protect the integrity of tribal cultural resources, and, thus, would not be available to the public (7 PRC 21082.3 and 36 CFR 800.11).

To support the ASR, PAR conducted a cultural resources investigation for the proposed project, which included a record search at the CHRIS NEIC, background research, and pedestrian survey. In addition, as part of the effort to identify any TCRs, a Sacred Lands File search was conducted by the Native American Heritage Commission (NAHC) in January 2017. The Sacred Lands File search found no known TCRs in or near the project site. Formal notification and invitation to consult letters were sent on behalf of the County to eight identified tribes. Native American consultation efforts are documented in the ASR.

The project site is within territory traditionally occupied by the Maidu, whose linguistic boundary encompassed portions of the Feather River, Butte and Chico Creek watersheds, and part of the northern Sacramento Valley. After the massive influx of non-natives into California during the 1848 Gold Rush, the United States Government refused to ratify the treaties it negotiated with California tribes, which would have helped to protect their ancestral lands. By 1910, the Rancheria System was in place, which provided small tracts of land in central and northern California for landless tribes and individuals. Today, there are eight federally and eight non-federally recognized Maidu Indian tribes in California that each have their own tribal leadership and government.

4.18.2 Discussion

a) **Less than Significant**. A letter was sent to the NAHC requesting a search of the Sacred Lands File and a list of contacts with individuals of Native American descent who might hold information concerning the proposed project and its vicinity on January 10, 2017. The NAHC responded, and the County provided their AB 52 contacts, resulting in a list of eight individuals and Native American organizations who were contacted via letter on January 25, 2017 and follow-up phone calls were conducted on February 6 and 17, 2017 and again March 2, 2017. A search of the NAHC's Sacred Lands File came back negative for potential tribal cultural resources within the project site.

   Of the eight Native American individuals contacted, only two responded: the Greenville Rancheria and the Estom Yumeka Maidu Tribe of the Enterprise Rancheria. The Greenville Rancheria stated that the APE was likely outside of their tribal territory. The Estom Yumeka Maidu Tribe of the Enterprise Rancheria stated that the proposed project is within their traditional tribal territory and that the area was sensitive, but they did not know of any resources at the project site.

   No known listed or eligible tribal cultural resources were identified, nor is the site located in a local register of historical resources as defined in Public Resources Code section 5020.1(k). This impact would be less than significant, and no mitigation measures are required.

b) **Less than Significant with Mitigation**. As discussed in question a, above, the Estom Yumeka Maidu Tribe of the Enterprise Rancheria stated that the proposed project is within their traditional tribal territory and that the area was sensitive; however, there are no resources at the project site. On July 16, 2018, the Estom Yumeka Maidu Tribe of the Enterprise Rancheria were provided with an updated project description and the results of the cultural resources survey. On August 2, 2018, Estom Yumeka Maidu Tribe of the Enterprise Rancheria stated that the tribe had no additional concerns and no new information on any tribal cultural resources within the proposed project site.

   Undiscovered subsurface tribal cultural deposits that may be present in the area could be disturbed by ground disturbing project activities. The potential to uncover unknown or undocumented subsurface tribal cultural deposits would be a potentially significant impact. Implementation of **Mitigation Measures CUL-1** and **CUL-2**, discussed in Section 4.5, Cultural Resources, and **Mitigation**

Measures TCR-1 and **TCR-2** would reduce impacts on tribal cultural resources to a less than significant level.

4.18.3 Mitigation Measures

Implement **Mitigation Measures CUL-1** and **CUL-2**, refer to Section 4.5, Cultural Resources, above.

TCR-1: Prior to the start of construction, develop, in coordination with interested Native American tribes, a consultant and construction worker tribal cultural resources awareness brochure and training program for all personnel involved in Project implementation. Distribute this brochure and conduct training, in coordination with qualified cultural resources specialists and Native American representatives from culturally affiliated Native American tribes, before construction commencement. The worker awareness program will include relevant information regarding sensitive tribal cultural resources, including applicable regulations, confidentiality requirements, requirements for the culturally-appropriate treatment of any discovered resources, protocols for avoidance, and consequences of violating state laws and regulations; describe the protocol to avoid and minimize impacts to resources that have the potential to be located on the project site; and will outline the protocol to follow if any potential resources or artifacts are encountered.

TCR-2: If potential tribal cultural resources (TCRs), archaeological resources, other cultural resources, articulated, or disarticulated human remains are discovered by Native American Representatives or Monitors from interested Native American Tribes, qualified cultural resources specialists or other project personnel during construction activities, work will cease within 100 feet of the find (based on the apparent distribution of cultural resources), whether or not a Native American Monitor from a traditionally and culturally affiliated Native American Tribe is present. A qualified cultural resources specialist and Native American Representatives and Monitors from traditionally and culturally affiliated Native American Tribes will assess the significance of the find and make recommendations for further evaluation and treatment as necessary (pursuant to Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370). Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. The Tribe does not consider curation of TCR's to be appropriate or respectful and request that materials not be permanently curated, unless requested by the Tribe. Treatment that preserves or restores the cultural character and integrity of a Tribal Cultural Resource may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. These recommendations will be documented by the qualified cultural resources specialist and provided to the County for inclusion in the project record. For any recommendations made by traditionally and culturally affiliated Native American Tribes that are not implemented, the qualified cultural resources specialist shall provide written justification for why the recommendation was not followed. This written justification shall be provided to the County for inclusions in the project record.

4.19 Utilities and Service Systems

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Utilities and Service Systems – Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

4.19.1 Setting

The proposed project area is served by privately-owned septic systems for wastewater treatment; Butte County does not provide wastewater treatment to unincorporated areas of the County. Stormwater drainage at the project site and surrounding area is collected in roadside ditches and agricultural drains. Potable water service within the project site and surrounding area is served by privately-owned wells; Butte County does not provide potable water services to unincorporated areas of the County.

Solid waste services within the project vicinity are provided by Recology Butte-Colusa located at 2720 South Fifth Avenue, Oroville, CA 95965 (CalRecycle, 2019; Butte County, 2013). Pacific Gas & Electric (PG&E) provides electricity and natural gas to the County (PG&E, 2014a and 2014b). Telecommunications infrastructure is provided by AT&T and Comcast (Butte County, 2013).

4.19.2 Discussion

a) **Less than Significant.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Central House Road would continue to be a rural local road per the County General Plan. There are existing overhead electrical and communication utility lines located at the project site. These utility lines are located along the south side of the existing bridge and would likely conflict with the proposed roadway and new bridge alignment. Although accommodations would be made to provide utility openings within the new bridge structure, it is anticipated that the utilities would remain overhead and be relocated to the other side of the bridge prior to roadway and bridge construction. While relocation of utilities would be required, the proposed project would not require expansion or construction of electrical or other utility facilities. The impact would be less than significant, and no mitigation measures are required.

   The proposed project would not substantially increase the amount or rate of stormwater runoff such that new or expanded facilities would be needed. The proposed project would not generate wastewater and therefore would not require the construction of additional wastewater or water treatment facilities either. The impacts would be less than significant, and no mitigation measures are required.

b) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Central House Road would continue to be a rural local road per the County General Plan. The proposed project would not use water at the project site; therefore, no water supplies would be depleted as a result of the proposed project. No impact would occur in this regard.

   Non-potable water use would be required for fugitive dust control during the construction of the proposed project. See the Section 4.3, Air Quality, for more information regarding fugitive dust control BMPs. Water supplies during construction are typically trucked to the site from outside sources that supply water to construction activities. This use of water would occur during the construction period of the proposed project and would cease upon construction completion. No impact would occur to existing water supplies.

c) **No Impact.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Central House Road would continue to be a rural local road per the County General Plan. The proposed project would not generate wastewater; thus, it would not require wastewater treatment services. During construction, port-a-potties are typically used at construction sites; however, they are removed once construction is completed. These facilities are operated by private companies that provide cleaning services; thus, the proposed project would not increase wastewater service demand during construction. There would be no impact and no mitigation measures are required.

d,e) **Less than Significant.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. The proposed project would generate waste from construction activities and bridge demolition; however, the proposed project would not result in long-term demands for solid waste

disposal services. Solid waste associated from construction activities would be handled by the Recology Butte-Colusa Counties Transfer Station (2720 South Fifth Avenue, Oroville, CA 95965) before being brought to a landfill. The nearest landfill is the Neal Road Recycling and Waste Facility in the Town of Paradise. The facility has the capacity to accept waste generated by the proposed project; however, it is accepting hazardous waste from the Camp Fire, which may require that proposed project waste go to a different landfill, such as Recology Ostrom Road, located at 5900 Ostrom Road in Wheatland. Solid waste generation would cease upon completion of construction.

The proposed project would comply with all federal, state, and local statutes and regulations related to solid waste, including compliance with the 1989 California Integrated Waste Management Act (AB 939) requiring specific waste diversion goals for local agencies. All recyclables and organics collected from the project site by Recology Butte-Colusa would be taken to the appropriate facilities.

The proposed project's impact on solid waste generation would be less than significant and no mitigation measures are required. In addition, the proposed project would comply with all federal, state, and local statutes and regulations related to solid waste, therefore, impacts in this regard are less than significant and no mitigation measures are required.

4.19.3 Mitigation Measures

No mitigation measures are required for the proposed project as related to utilities and service systems.

4.20 Wildfire

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Wildfire – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of run-off, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

4.20.1 Setting

The project site is served by the Butte County Fire Department/CalFire. The Butte County Fire Department and CalFire maintain a cooperative fire protection agreement, allowing service to unincorporated Butte County. The Butte County Fire Department/CalFire operates 23 staffed fire stations and 14 volunteer fire stations. Fire Station 74, Butte County Fire Station, and Fire Station 76, Butte County Volunteer Fire Station, are located approximately 5 miles northwest of the project site and are the closest stations to the proposed project (Butte County Fire Department, 2019).

The proposed project is located within a Local Responsibility Area (LRA). The nearest State Responsibility Area (SRA) is approximately 3 miles east of the proposed project (CalFire, 2013 and 2018). The proposed project is located in an area that has a combination of non-fuel and moderate fire threat (CalFire, 2005).

4.20.2 Discussion

a) **Less Than Significant Impact with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not increase capacity along Central House Road

that could increase traffic and congestion. The proposed project would not impair an adopted emergency response plan or emergency evacuation plan, as Central House Road operations would be similar to existing conditions. Therefore, the proposed project would have no impact to emergency response plans or emergency evacuation plans upon the completion of construction.

Access along Central House Road would be maintained during construction through the implementation of a temporary water crossing to the north of the existing bridge; however, the proposed project may require temporary lane closures and one-way traffic control to complete construction. Construction traffic control is not anticipated to significantly interfere with an emergency response plan or emergency evacuation plan. The proposed project would be coordinated with the Butte County Fire Department/CalFire, Butte County Sheriff's Office, other law enforcement or emergency service providers within the area, and Gridley Unified School District, through a standard Construction Period Emergency and School Access Plan, as required under **Mitigation Measure PUB-1**. The implementation of **Mitigation Measure PUB-1** would ensure that the proposed project would not impair an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

b,c) **Less Than Significant Impact with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The project site slope, prevailing winds, and other factors that exacerbate wildfire risks and expose the project site and surrounding area to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire would be similar to existing conditions upon construction completion. Therefore, the proposed project would have no impact in this regard.

Construction activities involving vehicles, heavy machinery, and personnel smoking at the proposed project site could result in the ignition of a fire. During construction, heavy equipment and passenger vehicles driving on vegetated areas prior to clearing and grading could increase the risk of fire. Heated mufflers and improper disposal of cigarettes could potentially ignite surrounding vegetation. Implementation of **Mitigation Measure FIRE-1** would reduce the potential for construction activities to result in severe fires by requiring fire-safe construction and maintenance practices. Impacts would remain less than significant after implementation of mitigation measures.

d) **Less Than Significant Impact**. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not increase stormwater runoff, result in drainage pattern changes, or result in a population increase that would ultimately expose people or structures to significant risks. During construction, construction workers would be present on site; however, this increase in workers would be temporary in nature as it would last approximately six months. The risks associated with runoff, slope instability, and drainage changes within the project site during construction would be similar to existing conditions. Therefore, the proposed project would have a less than significant impact in this regard and no mitigation measures are required.

4.20.3 Mitigation Measures

Implement **Mitigation Measure PUB-1**, as described in Section 4.15, Public Services, above.

FIRE-1: Prior to the start of construction, the contractor shall coordinate with the Butte County Fire Department/CalFire to prepare a Fire Safety Plan for use during construction. The Fire Safety Plan shall contain notification procedures and emergency fire precautions including, but not limited to, the following:

1. All internal combustion engines, stationary and mobile, shall be equipped with spark arresters. Spark arresters shall be in good working order.
2. Light trucks and cars with factory-installed (type) mufflers shall be used only on roads where the roadway is cleared of vegetation. Said vehicle types shall maintain their factory-installed (type) muffler in good condition.
3. Equipment parking areas (staging areas) shall be cleared of all extraneous flammable materials.
4. Personnel shall be trained in the practices of the Fire Safety Plan relevant to their duties. Construction personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats.
5. Smoking shall be prohibited in wildland areas and shall be limited to paved areas or areas cleared of all vegetation.

4.21 Mandatory Findings of Significance

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Mandatory Findings of Significance – Would the project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

4.21.1 Setting

Per CEQA regulations and guidelines, the Lead Agency must summarize the finding of significance from earlier sections and must consider potential cumulatively considerable effects for environmental impact reports (EIRs) and in the discussion section below. Even though this environmental document is an IS/MND and not an EIR, the potential for cumulatively considerable effects is analyzed below.

4.21.2 Discussion

a) **Less Than Significant Impact with Mitigation**. Per the impact discussions in the Biological, Cultural Resources, and Tribal Cultural Resources sections, the potential of the proposed project to substantially degrade the environment or eliminate major periods of California history or prehistory would be less than significant with incorporated **Mitigation Measures BIO-1** through **BIO-11**, **CUL-1**, **CUL-2**, **TCR-1**, and **TCR-2**.

b) **Less Than Significant Impact.** The proposed project is located in Butte County. The purpose of the proposed project is to provide adequate and safe public access that is consistent with County, FHWA, AASHTO, and Caltrans design criteria and standards. The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The impacts of the proposed project would occur during construction and would cease upon completion, as discussed in Section 4.1 through 4.20, above. These impacts would be site specific and would be mitigated to less than significant levels. No other projects are proposed that would overlap or interact with the proposed project. Therefore, the proposed project would not be cumulatively considerable, and no mitigation measures are required for cumulative impacts.

c) **Less Than Significant Impact with Mitigation.** The proposed project would remove the existing bridge along Central House Road over Wyman Ravine and construct a new bridge designed to current structural and geometric standards. Operations would be similar to existing conditions upon construction completion. The proposed project would not cause substantial adverse effects on human beings. As discussed in the Public Services, Utilities and Service Systems, and Wildfire sections, the potential impacts to human beings during construction would be mitigated to a less than significant level. Effects related to biological resources, cultural resources, hazards and hazardous materials, noise, public services, transportation and traffic, and tribal cultural resources are discussed above, and would be temporary in nature and would incorporate mitigation measures. Impacts would be less than significant with the incorporation of mitigation measures.

4.21.3 Mitigation Measures

Implement **Mitigation Measures BIO-1** through **BIO-11**, **CUL-1**, **CUL-2**, **GEO-1**, **HAZ-1**, **PUB-1**, **TCR-1**, **TCR-2**, and **FIRE-1**, as described above.

5 LIST OF PREPARERS AND REVIEWERS

This Draft IS/MND was prepared by Dewberry Engineers Inc. in cooperation with the other members of the environmental study team. Dewberry Engineers, Inc. was responsible for project management and Draft IS/MND preparation. The Draft IS/MND technical team and other environmental study team members provided technical expertise, as presented below.

CEQA Lead Agency:

Project Engineer.....Raymond Costantino, P.E.

Dewberry Engineers Inc.

Principal in Charge .....John Hoole, P.E.
Project Manager .....Matt Burgard, P.E.
Environmental Project Manager.....Leslie Haglan
Senior Biologist/Environmental Planner.....Lindsay Tisch
Cultural Resources/Environmental Planner.....PAR Environmental Services, Inc.
Senior Environmental Planner .....Christa Redd
Environmental Planner/Graphis and GIS .....Isabella Ciraulo

6 REFERENCES

Bai, D. 2017. Center for Biological Diversity v. Department of Fish & Wildlife and the Uncertainties in Project-Level Greenhouse Gas Emissions Analysis. 44 Ecology L. Q. 521.

Busacca, A. J., M.J. Singer, and K. L. Verosub. 1989. Late Cenozoic Stratigraphy of the Feather and Yuba Rivers Area, California, with a Section on Soil Development in Mixed Alluvium at Honcut Creek. U.S. Geological Survey Bulletin 1590. Chapter G. Online: https://pubs.usgs.gov/bul/1590g/report.pdf. Accessed January 18, 2019.

Butte County Air Quality Management District (BCAQMD). 2014. CEQA Air Quality Handbook. October 23, 2014. Online: https://bcaqmd.org/wp-content/uploads/CEQA-Handbook-Appendices-2014.pdf. Accessed January 18,2019.

Butte County Association of Governments (BCAG). 2013. Regional Housing Needs Plan January 1, 2014 – June 15, 2022. Prepared by: Butte County Association of Governments Approved: December 13, 2012 Revised: February 19, 2013. Online: http://www.bcag.org/documents/planning/RHNP/2012_RHNP/RHNP%20FINAL%202012%20rev021913.pdf. Accessed July 2018.

Butte County Association of Governments (BCAG). 2019a. Butte County 2019 Population Estimates Updated May 2019. Online: http://www.bcag.org/Demographics/Population-Estimates---2019/index.html. Accessed July 3, 2019.

Butte County Association of Governments (BCAG). 2019b. Butte County 2019 Population and Housing Estimates. Online: http://www.bcag.org/documents/demographics/housing_estimates/DOF_housing_population_estimates2010-2019.pdf. Accessed July 3, 2019.

Butte County Fire Department. 2019. About CalFire Butte County Fire. Online: https://www.buttecounty.net/fire/#Locations-and-Hours-62. Accessed July 3, 2019.

Butte County Sheriff's Office. 2019. About Butte County Sheriff's Office. Online: http://www.buttecounty.net/sheriffcoroner/Sheriff#Locations-Hours-19. Accessed July 3, 2019.

Butte County, 2013. Getting Real with Rural. Online: http://www.buttecounty.net/dds/Planning/Rural. Accessed January 22, 2019.

Butte County. 2012. Butte County General Plan 2030. Adopted 2010, Amended 2012. Online: https://www.buttecounty.net/dds/Planning/General-Plan/Chapters. Accessed January 22, 2019.

Butte County. 2013a. Butte County School Districts. Online: http://www.buttecounty.net/economicdevelopment/Lifestyle/Education. Accessed January 22, 2019.

Butte County. 2014. Climate Action Plan. January 28, 2014. Prepared by PMC with support from Ascent Environmental, Inc. and Fehr & Peers Transportation Consultants.

California Air Resources Board (CARB). 2017. California Ambient Air Quality Standards (CAAQS). Online: https://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm. Accessed January 22, 2019.

California Air Resources Board (CARB). 2018a. Area Designations Maps/State and National. Online: https://www.arb.ca.gov/desig/adm/adm.htm. Accessed January 18, 2019.

California Air Resources Board (CARB). 2018b. Butte County Air Quality Management Plans. May 22, 2018. Online: https://www.arb.ca.gov/planning/sip/planarea/buttesip.htm. Accessed January 22, 2019.

California Department of Conservation (CDC). 2010. Fault Activity Map of California. Online: https://maps.conservation.ca.gov/cgs/fam/. Accessed January 21, 2019.

California Department of Conservation (CDC). 2010. Mineral Land Classification of the Power House Aggregate Project Site, Butte County, California – For Construction Aggregate. Special Report 218. Online: https://www.conservation.ca.gov/cgs/Documents/SR_218.pdf. Accessed July 25, 2018.

California Department of Conservation (CDC). 2018. California Statutes and Regulations for the Division of Mine Reclamation. January 2019. Online: https://www.conservation.ca.gov/index/Documents/DMR-SR-1%20Web%20Copy.pdf. Accessed July 2, 2019.

California Department of Forestry and Fire Protection (CalFire). 2005. Statewide Map of Wildland Fire Threat Dara. Online: https://frap.fire.ca.gov/mapping/maps/. Accessed July 10, 2019.

California Department of Forestry and Fire Protection (CalFire). 2013. State Responsibility Areas. Online: https://frap.fire.ca.gov/mapping/maps/. Accessed July 10, 2019.

California Department of Forestry and Fire Protection (CalFire). 2018. Fire Perimeters: Wildfires 1950-2018. Online: https://frap.fire.ca.gov/mapping/maps/. Accessed July 10, 2019.

California Department of Transportation (Caltrans), 2013. Transportation and Construction Vibration Guidance Manual.

California Department of Transportation (Caltrans). 2011. California Scenic Highway Mapping System. Online: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed January 18, 2019.

California Department of Transportation (Caltrans). 2015. Bridge Inspection Report 12C-0111. August 24, 2015.

California Department of Transportation (Caltrans). 2017. Central House Road Bridge (12C-0111) over Wyman Ravine Bridge Replacement Project Initial Site Assessment (ISA). July 2017.

California Department of Transportation (Caltrans). 2017. Water Quality Technical Memorandum for the Central House Road Bridge (12C-0111) over Wyman Ravine Bridge Replacement Project (BRLO 5912-092). May 2017.

California Department of Transportation (Caltrans). 2018. Central House Road Bridge Replacement Project Natural Environment Study. September 2018.

California Department of Transportation (Caltrans). 2018. Farmland Impact Memorandum for the Central House Road Bridge (12C-0111) Replacement Project. September 2018.

California Department of Transportation (Caltrans). 2018. SER Vol 1 Chapter 11 Air Quality. June 21, 2018. Online: http://www.dot.ca.gov/ser/vol1/sec3/physical/ch11air/chap11.htm. Accessed January 22, 2019.

California Department of Transportation (Caltrans). 2019. Central House Road Bridge Replacement Project Biological Assessment. January 2019.

CalRecycle, 2019. Solid Waste Information System (SWIS) Facility/Site Search. Online: https://www2.calrecycle.ca.gov/swfacilities/Directory. Accessed January 23, 2019.

Federal Highway Administration (FHWA). 2019. America's Byways. Online: https://www.fhwa.dot.gov/byways/. Accessed January 18, 2019.

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018. FTA Report No. 0123. Online: https://www.transit.dot.gov/research-innovation/transit-noise-and-vibration-impact-assessment-manual-report-0123. Accessed November 5, 2019.

Gridley Unified School District. 2019. About Our District. Online: http://www.gusd.org/About-Us/index.html. Accessed July 3, 2019.

Huss, K. and J. Grant. 2016. Road Construction Emissions Model, Version 8.1.0. Sacramento Metropolitan Air Quality Management District.

Marchand, D.E. and A. Allwardt, 1981. Late Cenozoic Stratigraphic Units, Northeastern San Joaquin Valley, California. U.S. Geological Survey Bulletin 1470. Online: https://pubs.usgs.gov/bul/1470/report.pdf. Accessed January 21, 2019.

Natural Resources Conservation Service (NRCS). 2006. Soil Survey of Butte Area, California, Parts of Butte and Plumas Counties. United States Department of Agriculture. Online: https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/CA612/0/Butte_CA.pdf. Accessed January 21, 2019.

Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey. Online: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed January 18, 2019.

Pacific Gas and Electric (PG&E). 2014a. PG&E's Electric Service Territory. Online: https://www.pge.com/tariffs/tm2/pdf/ELEC_MAPS_Service_Area_Map.pdf. November 2014. Accessed January 23, 2019.

Pacific Gas and Electric (PG&E). 2014b. PG&E's Gas Service Territory. Online: https://www.pge.com/tariffs/tm2/pdf/GAS_MAPS_Service_Area_Map.pdf. November 2014. Accessed January 23, 2019.

PAR Environmental Services, Inc. (PAR). 2018. Historic Property Survey Report for the Central House Road Bridge (12C-0111) over Wyman Ravine Replacement Project, including Appendix C: Negative Archaeological Survey Report. December 2018.

Sacramento Metropolitan Air Quality Management District. 2016. CEQA Guide – Chapter 6, Page 6-9. October 2016. Online: http://www.airquality.org/landusetransportation/documents/ch6ghgfinal10-2016.pdf. Accessed January 22, 2019.

Sacramento Valley Air Quality Engineering and Enforcement Professionals (SVAQEEP). 2015. Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan. Online: https://www.fraqmd.org/files/cc5597e19/2015+Triennial+AQAP.pdf. Accessed January 18, 2019.

Saucedo, G.J. and D.L. Wagner. 1992. Geologic Map of the Chico Quadrangle, California: in California Department of Conservation Division of Mines and Geology Regional Geologic Map Series Map No. 7A, scale 1:250,000. Online:

ftp://ftp.consrv.ca.gov/pub/dmg/pubs/rgm/RGM_007A/RGM_007a_Chico_1992_Sheet1of5.pdf. Accessed January 21, 2019.

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Online: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx. Accessed January 18, 2019.

U.S. Census Bureau. 2010. Profile of General Population and Housing Characteristics, Butte County. Online: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF. Accessed July 3, 2019.

U.S. Census Bureau. 2017. 2013-2017 American Community Survey 5-Year Estimates. Online: https://factfinder.census.gov/rest/dnldController/deliver?_ts=580231697549. Accessed July 3, 2019.

Uniform Building Code (UBC). 1994. Structural Engineering Design Provisions, Volume 2. May 1, 1994. Internal Conference of Building Officials. Online: http://digitalassets.lib.berkeley.edu/ubc/UBC_1994_v1.pdf. Accessed January 18, 2019.

United States Environmental Protection Agency (USEPA), 1973. Legal Compilation.

United States Environmental Protection Agency (USEPA). 2019. NAAQS Table. Online: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed January 22, 2019.

University of California Museum of Paleontology (UCMP). 2019. UCMP Specimen Search Database. Online: https://ucmpdb.berkeley.edu/. Accessed January 18, 2019.

WRECO. 2019. Central House Road Bridge at Wyman Ravine Bridge Design Bridge Design Hydraulic Study Report. June 2019.

WRECO. 2019. Central House Road Bridge at Wyman Ravine Bridge Design Floodplain Evaluation Report. June 2019.

WRECO. 2019. Central House Road Bridge Replacement Across Wyman Ravine Type Selection Memorandum. May 2019.

This page is intentionally blank.

Appendix A

Roadway Construction Emissions Model Results

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Central House Road Bridge Across Wyman Ravine Replacement Prc				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	0.63	13.27	1.77	50.11	0.11	50.00	10.49	0.09	10.40	0.02	2,131.45	0.58	0.02	2,153.01
Grading/Excavation	4.73	90.02	9.95	50.60	0.60	50.00	10.89	0.49	10.40	0.16	15,384.14	4.64	0.15	15,543.90
Drainage/Utilities/Sub-Grade	3.10	59.18	7.00	50.42	0.42	50.00	10.75	0.35	10.40	0.11	10,379.41	2.69	0.10	10,475.71
Paving	0.62	14.67	1.75	0.12	0.12	0.00	0.09	0.09	0.00	0.02	2,150.69	0.56	0.02	2,171.84
Maximum (pounds/day)	4.73	90.02	9.95	50.60	0.60	50.00	10.89	0.49	10.40	0.16	15,384.14	4.64	0.15	15,543.90
Total (tons/construction project)	0.21	3.98	0.45	2.83	0.03	2.81	0.61	0.02	0.58	0.01	681.27	0.19	0.01	688.06

Notes:

Project Start Year ->	2020
Project Length (months) ->	6
Total Project Area (acres) ->	7
Maximum Area Disturbed/Day (acres) ->	5
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	200	40
Grading/Excavation	0	0	0	0	1,120	40
Drainage/Utilities/Sub-Grade	0	0	0	0	720	40
Paving	0	0	0	0	320	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Central House Road Bridge Across Wyman Ravine Replacement Prc				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	**ROG (tons/phase)**	**CO (tons/phase)**	**NOx (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**SOx (tons/phase)**	**CO2 (tons/phase)**	**CH4 (tons/phase)**	**N2O (tons/phase)**	**CO2e (MT/phase)**
Grubbing/Land Clearing	0.00	0.09	0.01	0.33	0.00	0.33	0.07	0.00	0.07	0.00	14.07	0.00	0.00	12.89
Grading/Excavation	0.12	2.38	0.26	1.34	0.02	1.32	0.29	0.01	0.27	0.00	406.14	0.12	0.00	372.28
Drainage/Utilities/Sub-Grade	0.07	1.37	0.16	1.16	0.01	1.16	0.25	0.01	0.24	0.00	239.76	0.06	0.00	219.53
Paving	0.01	0.15	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.29	0.01	0.00	19.51
Maximum (tons/phase)	0.12	2.38	0.26	1.34	0.02	1.32	0.29	0.01	0.27	0.00	406.14	0.12	0.00	372.28
Total (tons/construction project)	0.21	3.98	0.45	2.83	0.03	2.81	0.61	0.02	0.58	0.01	681.27	0.19	0.01	624.20

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.