CA FLAP NEV 40(1)
DONNER PASS ROAD

SPECIAL CONTRACT REQUIREMENTS

The following Special Contract Requirements amend and supplement the *Standard Specifications for Construction of Roads and Bridges, on Federal Highway Projects (FP-14),* U.S. Department of Transportation, Federal Highway Administration.

LICENSED PROFESSIONAL ENGINEER
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9/11/2019

EXCLUDES SECTIONS
205, 252, 255, 260, 261
302, 304, 401, 403, 413,
502, 702, and 705

REGISTERED PROFESSIONAL ENGINEER
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for Sections 204, 205, 252, 255, 260, 261, 302, 304, 401, 403, 413, 502, 702, and 705

Section 101. – TERMS, FORMAT, AND DEFINITIONS

101.03 Abbreviations.

(a) Acronyms. Add the following:

EEBACS — Engineer's Estimating, Bidding, Award, and Construction System
GSA – General Services Administration

(b) US Customary abbreviations and symbols. Delete the text and add the following:

A	—	ampere	electric current
ac.	—	acre	area
BTU	—	British Thermal Unit	energy
cu. in. or **in^3**	—	cubic inches	volume
cu. ft., **cf**, **ft^3** or **CUFT**	—	cubic feet	volume
cu. yd., **cy**, **yd^3** or **CUYD**	—	cubic yards	volume
D	—	day	time
deg. or **º**	—	degree	plane angle
Fc	—	foot-candles	luminous intensity
fl. oz.	—	fluid ounces	volume
ft. or **'**	—	foot or feet	length
gal. or **GAL**	—	gallon	volume
H	—	Henry	inductance
hr. or **HR**	—	hour	time
Hz	—	hertz (s^{-1})	frequency
in. or **"**		inch or inches	length
K	—	kelvin	temperature
lb or **LB, lbs**	—	pound, pounds	mass
Lbf	—	pound-force	force
lnft or **LNFT**		linear foot	length
mi.	—	miles	length
min. or **m**	—	minute	time
min. or **'**	—	minute	plane angle
ºF	—	degrees Fahrenheit	temperature
oz.	—	ounces	mass
Psi	—	pounds/square inch	pressure
Q	—	cubic feet/second	flow rate
sec. or **s**	—	second	time
sec. or **"**	—	second	plane angle
sq. in. or **in^2**	—	square inches	area
sq. ft., **sf**, **ft^2** or **SQFT**	—	square feet	area
sq. yd., **sy**, **yd^2** or **SQYD**	—	square yards	area

T	—	short ton (2000 lbs)	mass
V	—	volt (W/A)	electric potential
W	—	watt (J/s)	power
YD	—	yard or yards	length
Ω	—	ohm V/A	electric resistance

(c) Metric unit abbreviations and symbols. Delete the text and add the following:

A	—	ampere	electric current
Cd	—	candella	luminous intensity
ºC	—	degree Celsius	temperature
D	—	day	time
deg. or **º**	—	degree	plane angle
g or **gram**	—	gram	mass
H	—	Henry	inductance
Ha	—	hectare	area
hr. or **HR**	—	hour	time
Hz	—	hertz (s^{-1})	frequency
J	—	Joule ($N \cdot m$)	energy
K	—	kelvin	temperature
Kg	—	kilogram	mass
L	—	liter	volume
Lx	—	lux	illuminance
M	—	meter	length
mm	—	millimeter	length
m^2	—	meter squared	area
m^3	—	cubic meter	volume
min. or **m**	—	minute	time
min. or **'**	—	minute	plane angle
N	—	Newton ($kg \cdot m/s^2$)	force
Pa	—	Pascal (N/m^2)	pressure
sec. or **s**	—	second	time
sec. or **"**	—	second	plane angle
Sta.	—	station	Length
T	—	metric ton	Mass
V	—	volt (W/A)	electric potential
W	—	watt (J/s)	Power
Ω	—	ohm V/A	electric resistance

101.04 Definitions.

Add the following:

EEBACS — Engineer's Estimating, Bidding, Award, and Construction System. A web-based system used by the Government, Construction Contractors, and Subcontractors on this Government contract to prepare "*Inspector's Daily Record of Construction Operations"* (*Contractors Daily Reports)* and measurement notes (pay notes and field measurement documentation).

Roadway Prism Delete the text and substitute the following:

Roadway Prism – The volume defined by the area between the original terrain cross-section and the final design cross-section multiplied by the horizontal distance between the centroids (geometric center) of the area.

Subcontractor Delete the text and substitute the following:

Subcontractor – An individual or legal entity with which the Contractor sublets part of the work. This includes subcontractors and material suppliers at any tier.

Section 104. — CONTROL OF WORK

104.03 Specifications and Drawings.

Add the following to **(a) General (2) Drawings**:

(h) Erosion and sediment control drawings for the SWPPP application.

Section 105. — CONTROL OF MATERIAL

105.01 Source of Supply and Quality Requirements. Add the following:

Materials containing petroleum-based solvents such as cutback asphalts and traffic paints may be restricted from use by local laws or ordinances in certain geographic areas. Upon presenting proof of such restrictions, alternate materials considered acceptable to the CO may be substituted for the materials specified in the contract.

Add the following:

Certify, according to Subsection 107.10 (d)(2), that sources of rock, sand, gravel, earth, subsoil, or other natural material imported into the project construction limits are noxious weed free.

105.04 Storing and Handling Material. Add the following after the third sentence of the second paragraph:

For Contractor-located, non-commercial staging, storing, and material handling areas, secure environmental clearances according to Subsection 107.10.

Add the following:

The Contractor may use existing pullouts for staging areas or storage of materials and stockpiles.

Use all products according to the manufacturer's recommendations for handling, storage, and disposal.

Store construction materials within the limits indicated on the contract drawings. Properly store materials according to the applicable permit and the requirements in Section 107, 157, 203, 204, 624, and 625. Check the storage areas weekly and according to the applicable permit.

Store construction, building and waste materials, and containers in designated areas indoors or protect with a suitable covering.

Submit a site map showing the material storage and stockpile locations at least 14 calendar days prior to the start of construction activities.

Keep the manufacturer's MSDS, an inventory of the material, and emergency numbers near the storage area. Take appropriate measures to ensure that incompatible chemicals are not stored next to each other.

Section 106. — ACCEPTANCE OF WORK

106.01 Conformity with Contract Requirements. Delete (a) and (b) and substitute the following:

(a) Disputing Government test results. If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

(1) Sampling method

(2) Number of samples

(3) Sample transport

(4) Test procedures

(5) Testing laboratories

(6) Reporting

(7) Estimated time and costs

(8) Validation process

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

(1) Have the work accepted at a reduced price; or

(2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

Add the following after (b):

The number of significant figures used in the calculations will be according to ASTM E 29, absolute method.

Where sample/testing procedures make reference to AASHTO, ASTM, or other standards (designated as FLH T), the procedure as modified in the Materials Manual shall govern. Where the specifications make reference to AASHTO Test T11, "Procedure B - Washing Using a Wetting Agent" shall be the procedure followed.

Where the specifications make reference to AASHTO Test T310, "Direct Transmission Method of In-Place Nuclear Density and Moisture Content" shall be the procedure followed.

106.02 Visual Inspection. Delete the Subsection and substitute the following:

106.02 Visual Inspection. Acceptance is based on visual inspection of the work for compliance with the contract requirements. In the absence of specific contract requirements or tolerances, use prevailing industry standards.

106.03 Certification. Add the following after the second paragraph:

See Table 106-3 for schedule for full or partial acceptance by material certification. Submit certification and sample of material for testing as required.

Delete the third paragraph and substitute the following:

Check certifications before incorporating the material into the work to ensure that the requirements of the contract have been met. Mark the certifications with the following information:

- Project number and name;
- Pay item number and description;

- Contractor signed certification stating "to the best of our knowledge the materials certified by the attached certification represent the materials incorporated into the work of this contract"; and
- Date.

Table 106-3 Schedule For Full or Partial Acceptance by Materials Certification. Add Table 106-3 following Table 106-2.

Table 106-3
Schedule For Full or Partial Acceptance by Materials Certification

Section	Description	Material	Material Property Or Specification	Frequency	
				Certification	Sample
302	Minor Crushed Aggregate	Crushed Aggregate	Source, Quality and Gradation	1 per source	1 per source
312	Dust Palliative	Calcium Chloride Magnesium Chloride, Lignosulfonate,	As specified	1 per shipment	First shipment
403	Asphalt Concrete	Aggregate Asphalt Mix	Source quality, Gradation, Stability, and Grade	1 per mix	1 per source
634 and 635	Permanent Pavement Markings, Temporary Traffic Control	634.02 as applicable, 635 as applicable	As specified	1 per source	-----
701	Hydraulic Cement	Portland Cement, Blended Hydraulic Cement, Masonry and Mortar Cement	AASHTO M 85, M 240, ASTM C 91 and ASTM C1392 as applicable	1 per shipment	1 per 100 tons
702.01	Asphalt Material	Asphalt Cement	AASHTO M 226 or M 320, as applicable	1 per shipment	1 per shipment
702.02	Asphalt Material	Emulsified Asphalt	AASHTO M 140 or M 208 as applicable	1 per shipment	1 per shipment
702.03	Asphalt Material	Asphalt Materials used for Damproofing and Waterproofing Concrete and Masonry Surfaces	As specified for each type of asphalt material	1 per shipment	-----
702.05	Antistrip	As specified	As applicable	1 per shipment	-----
706	Concrete and Plastic Pipe	As specified	As applicable	1 per shipment	-----
707	Metal Pipe	As specified	As applicable	1 per shipment	-----

Section	Description	Material	Material Property Or Specification	Frequency	
				Certification	Sample
708	Plastic Pipe	As specified	As applicable	1 per shipment	-----
709	Reinforcing and Prestressing Steel	As specified	As applicable	1 per shipment	For 709.01 submit 3, 1-yard (1-meter) bars of each size and grade of bar furnished. 709.02 submit 1 6-foot (2-meter) length for each size furnished
710	Fence and Guardrail	As specified	As applicable	1 per shipment	-----
711	Concrete Curing Material and Admixtures	As specified	As applicable	1 per material source per material type	-----
712	Joint Material (all)	As specified	As applicable	1 per shipment	-----
713	Roadside Improvement Materials (all)	As specified	As applicable	1 per shipment	-----
714	Geosynthetic Material (all)	As specified	As applicable	1 per shipment	1 per project per type
715	Piling	As specified	As applicable	1 per shipment	-----
716	Material for Timber Structures	Timber and Hardware	As applicable	1 per shipment	-----
717	Structural Metal	As specified	As applicable	1 per shipment	717.01(e) minimum 6 per shipment for each size used. 717.10 1 per project
718	Traffic Signing and Marking Material (all)	As specified	As applicable	1 per shipment	-----
719	Paint	As specified	As applicable	1 per batch\lot	1 sample for quantities > 25 gallons (100L)
720	Structural Wall and Stabilized Embankment Material (all)	As specified	As applicable	1 per shipment per material type	-----

Section	Description	Material	Material Property Or Specification	Frequency	
				Certification	Sample
721	Electrical and Illumination Material (all)	As specified	As applicable	1 per shipment per material type	-----
722	Anchor Material	As specified	As applicable	1 per shipment per material type	-----
725	Miscellaneous materials	As specified	As applicable	1 per shipment per material type	-----

Section 107. - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

107.01 Laws to be Observed. Add the following:

Section 401 and 404 of the Clean Water Act.

Comply with the terms and conditions of any permits that are issued for the performance of work within the jurisdictional waters of the U.S., including Section 404 permits and Section 401water quality certifications.

Section 402 of the Clean Water Act.

Comply with the terms and conditions of any permits that are issued for the performance of work, including Section 402 permits for Construction, Municipal Separate Storm Sewer Systems, Industrial, and Chemical applications in accordance with the National Pollutant Discharge Elimination System. Prepare a Stormwater Pollution Prevention Plan (SWPPP) according to Section 157.

107.02 Protection and Restoration of Property and Landscape

Delete paragraph six and replace with the following:

Before beginning work in an area, contact the local utility locating service to mark the utilities. Verify utility locations shown on plans and notify CO of any discrepancies and any impacts to facilities not shown in the plans. Protect utilities from construction operations. Cooperate with utility owners to expedite the relocation or adjustment of their utilities to minimize interruption of service and duplication of work.

Add the following at the end of this subsection :

The locations of the utilities shown in the plans have been certified to a Quality Level C according to the CFLHD Utility Data Quality Certification requirements:

http://flh.fhwa.dot.gov/resources/row/cfl/documents/UtilityDataQualityLevelCertification.doc

Table 107-1
Status of Utilities

	Company	Utility Type	Contact Name	Phone Number	Status 1, 2, 3, or 4
1	AT&T Communications	Fiber Optic	Bonnie Gonzales	530-736-7511	1
2	Century Link / Level 3 Communications	Fiber Optic	Mark Dykes	916-668-6139	4
3	Zayo	Fiber Optic	Manuel Valencia	925-413-0170	4
4	Donner Summit PUD	Water	Tom Skjelstad	530-426-3456	4
5	Donner Summit PUD	Sanitary	Tom Skjelstad	530-426-3456	4
6	PG & E	Overhead Electric	Lee Wells	530-320-3908	1
7	Truckee Donner PUD	Overhead Electric	Sanna Schlosser	530-582-3945	4

Status 1: The utilities are in conflict with the project and REQUIRE relocation by OTHERS DURING construction.

Status 2: The utilities are in conflict with the project and REQUIRE relocation by the Contractor DURING construction.

Status 3: The utilities are in conflict with the project and REQUIRE relocation BEFORE construction.

Status 4: The utilities are located within the project rights of way but require NO relocation.

Additional details and special requirements for each utility are as follows:

AT&T, Century Link, Zayo: These facilities run inside a joint trench near the north edge of the existing roadway. It is anticipated that fiber lines can be protected in place. Hand digging is required when working within two feet of fiber lines.

Fiber lines are in close proximity to inlets being removed and replaced. Hand digging will be required in these areas and that the fiber can be protected in place and moved to the back side of the new inlets.

East of Station 192+66, hand digging will be required for proposed culvert work in the proximity of the fiber lines. There is hard rock and boulders present in the area and the fiber is at variable depths. Fiber lines should be protected in place with minor elevation adjustments to work around the proposed culverts.

AT&T facilities are also located on PG&E poles in some locations. One pole location is required to accommodate a culvert replacement at STA 292+75 near Donner Ski Ranch. Nevada County submitted a Notice to Owner and relocation is required by AT&T prior to July 31, 2020. Do not commence work on this culvert until pole has been relocated.

AT&T requires a technician present when crews are excavating above or near their facilities. Cost for coordination with AT&T is subsidiary to 602 and 604 pay items.

Zayo requires an approved contractor to supervise work done on or near cables.

Donner Summit Public Utility District (DSPUD): Average Sewer line depth is 5-feet, but some areas are as shallow as 2-feet (Station 190+00 to Station 196+00). The line is asbestos concrete except between Station 260+00 and Station 290+00 where the line is high-density polyethylene (HDPE).

Average waterline depth is 3-feet but varies throughout the project corridor. The majority of the waterline is asbestos concrete, but some areas are PVE C-900. Service lines are galvanized, copper, or polyethylene. There are no known conflicts with the waterline because drainage upgrades will be at similar locations and elevations to existing infrastructure.

In the event conflict points are discovered during construction, field coordination with DSPUD staff is required during all waterline and sanitary line work except raising/lowering manholes, valve boxes and other surface appurtenances.

Pacific Gas and Electric (PG&E): One pole location is required to accommodate a culvert replacement at STA 292+75 near Donner Ski Ranch. Nevada County submitted a Notice to Owner and relocation by PG&E is required prior to July 31, 2020. Do not commence work on this culvert until pole has been relocated.

Truckee Donner PUD: Located adjacent to the project area in the Town of Truckee. No impacts anticipated.

Conduct a utility coordination meeting with impacted utility owners and CFL staff within two weeks of receiving Notice to Proceed.

Perform test holes to locate subsurface utilities where culverts or inlets are being installed within 2-feet of a utility line. Cost for test holes is subsidiary to 602 and 604 pay items.

107.05 Responsibility for Damage Claims. Delete the first sentence of the third paragraph and substitute the following:

Before work begins, submit "*certificates of insurance*" certifying that the policies will not be changed or canceled until 30 days written notice has been given to the Government.

107.10 Environmental Protection.

(a) Federal Water Pollution Control Act (Clean Water Act) 33 USC § 1251 et seq. Add the following:

(4) Do not ford running streams with construction equipment. Obtain approval from the CO to use temporary bridges or other structures whenever crossings are necessary.

(5) Immediately clear ephemeral drainages, intermittent and perennial streams, lakes and reservoirs of all work items, debris or other obstructions placed by or resulting from construction operations.

(6) Locate machinery servicing and refueling areas away from streambeds and washes to reduce the possibility and minimize the impacts of accidental spills or discharges.

(b) Oil and hazardous substances. Add the following to the end of the third paragraph:

Sand or soils are not approved absorbent materials.

Add the following to the end of the fourth paragraph:

Report the spill to the appropriate federal, state, and local authorities as required by the SPCC plan or hazardous spill plan.

(c) Dirt, plant, and foreign material. Add the following:
All vehicles and equipment entering the project area must be clean of noxious weeds and free from oil leaks and are subject to inspection. Wash all construction equipment to thoroughly remove all dirt, plant, and other foreign material prior to entering the project. Particular attention must be shown to the under carriage and any surface where soil containing exotic seeds may exist. Allow the CO to inspect each piece of equipment before entering the project. Provide the cleaning and inspection records to the CO. Equipment found operating on the project that has not been inspected, or has oil leaks will be shut down and subject to citation.

(d) Clearances for Contractor-selected, noncommercial areas. Add the following to the end of the first paragraph:

Do not import into the project limits rock, sand, gravel, earth, subsoil, or other natural materials from a Contractor-selected non-commercial materials source, that have not been certified free of noxious weeds. Materials imported into the project limits which do not include a noxious weed free certification may be rejected and ordered by the CO to be removed from the project limits. The CO has the discretion of requesting inspection of

certified materials by a third party, and rejecting the use of the source if noxious weeds or seeds thereof are found to be present.

Add the following:

(5) Any required Certifications.

Add the following after (d):

(e) Threatened, Endangered, and Sensitive Species

Prior to ground disturbance, environmental awareness training will be given to all construction personnel by the project biologist to brief them on how to recognize the Sierra Nevada Yellow-Legged Frog (SNYLF), and other sensitive species with potential to occur within the project area. Training will include what to do if a SNYLF or other sensitive species are encountered. Personnel will sign a form stating they attended environmental awareness training.

No more than 20 working days prior to any ground disturbance in an area with known or potential SNYLF habitat, preconstruction SNYLF surveys will be conducted by a Service-approved biologist in known or potential SNYLF habitat. The SNYLF critical habitat encompasses the project from approximately 104+50 to 436+00. (Refer to Figure 3 in the Biological Assessment for a map delineating the SNYLF critical habitat if additional information is desired.)

If SNYLF are found at any time during project work, construction will stop within known or potential SNYLF habitat in the vicinity, and the Service will be contacted immediately for further guidance.

Provide qualifications for biologist to CO for approval prior to beginning preconstruction surveys at least two weeks in advance. Preconstruction surveys will not be measured and paid for separately, but are included in the cost of 20101-0000 Clearing and Grubbing.

(f) Nesting Birds

If tree and vegetation removal is scheduled between February 1st and September 15th, a qualified biologist will conduct pre-construction surveys for active migratory bird nests. Breeding and nesting behaviors will be recorded, and nest locations will be documented using a GPS. Trees with cavities will be removed before April; however, if active roosting colonies are found, the trees will not be removed until after the maternal roosting season ends (typically in July). If tree and vegetation removal is scheduled between September 16th and January 31st, these measures are not required.

If active nests are identified during the nesting season, a no-disturbance buffer shall be established around the nests. The extent of the no-disturbance buffers shall be determined by a wildlife biologist and shall depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances,

and other topographic or artificial barriers. The purpose of the buffer is to avoid disturbance or destruction of the nest until after the breeding season, or until a wildlife biologist determines that the young have fledged (usually late-June to mid-July). Within this buffer, construction activities shall be avoided while the nest is considered active or sensitive to disturbance. However, construction activities can proceed if the biological monitor determines that the individual is not likely to abandon the nest during construction.

Provide qualifications for biologist to CO for approval prior to beginning preconstruction surveys at least two weeks in advance. Preconstruction surveys will not be measured and paid for separately, but are included in the cost of 20101-0000 Clearing and Grubbing.

107.11 Protection of Forests, Parks, and Public Lands. Add the following:

The Forest Service fire prevention plan involving emergency curtailment of operations is included in the Appendix and is in effect on this project. The CO will order the suspension of burning and other operations when directed to do so by the Forest Service. No adjustment in the contract completion date will be made for partial or total suspensions of burning operations.

Section 108. — PROSECUTION AND PROGRESS

108.01 Commencement, Prosecution, and Completion of Work. Add the following:

Limit operations as follows:

(a) Ground Disturbing Activities

No ground disturbing activities are permitted east of Station 302+00 between October 15th and May 1st.

(b) Rock Excavation, Scaling and Doweling

Hold on-site geotechnical pre-construction meeting prior to commencing any rock removal or stabilizing activities.

Schedule rock removal and stabilizing activities with CO at least one week in advance.

(c) Full Depth Reclamation

Donner Pass Road is frequently used by cyclists. The pulverizing paving operations will be limited as follows:

Full Depth Reclamation (pulverizing) may not commence until the CO has approved the asphalt mix design. **The contractor is encouraged to submit an asphalt concrete pavement mix design to the CO for approval immediately after contract award.**

(d) Staging Areas

Clear stockpiles, supplies, and equipment from staging areas prior to November 1st. Occupancy of staging areas can occur up to 30 days prior to commencing work for the next construction season.

(e) Construction Limits

Construction operations shall be limited to the construction limits shown on the plans. No disturbance is allowed outside of the construction limits.

Perform no work except to maintain traffic control devices, erosion control devices, the roadway driving surface, and to control dust during the listed Federal holidays and surrounding days as shown in Table 108-2.

Table 108-2
Federal Holidays and Surrounding Days

Federal Holiday	Time	Remarks
Memorial Day	12:00 Noon Friday to 6:00 am Tuesday	-
Independence Day	12:00 Noon July 3 to 6:00 am July 5	If July 4 falls on a weekend, Friday, or Monday, do not work the weekend.
Labor Day	12:00 Noon Friday to 6:00 am Tuesday	-
Thanksgiving	12:00 Noon Wednesday to 6:00 am Monday	-
Christmas / New Year's	12:00 Noon December 23 to 6:00 am January 2	If December 23 or January 1 falls on a Monday, do not work the adjacent weekend and do not work on December 23. If January 1 falls on a Friday, do not work the weekend.

Schedule at least 2 non-work days out of every 14 calendar days. The selected non-work days do not need to be consecutive, but they must be scheduled. Provide at least 2 weeks notice before changing the scheduled days off.

Exemptions to scheduled days off may be granted by written approval from the CO for specific project operations and/or for periods of limited duration.

Add the following:

A Notice to Proceed must be issued before commencement of any work. The contract completion date is October 15, 2021.

Add the following:

Use the Government's web-based system, *Engineer's Estimating, Bidding, Award, and Construction System (EEBACS)*, to prepare all "*Inspector's Daily Record of Construction Operations"* (*Contractors Daily Reports)* and measurement notes (pay notes and field measurement documentation).

Attend a training session on the use of EEBACS. The training session will require up to 4 hours. No more than 3 Contractor staff may attend the training unless approved by the CO. The Contractor shall be responsible for training additional staff.

Complete and electronically submit *"EEBACS User Account Form"* (Form EEBACS-001) for each individual requiring EEBACS access. Submit forms to the CO at the preconstruction conference or at least 10 days prior to the start of any contract work or EEBACS training. As needed, request additional system access using Form EEBACS-001 and allow 7 days for system access.

Maintain active EEBACS accounts for all contractor staff who use EEBACS and ensure that the CO is notified within 24 hours after an account holder is reassigned or no longer employed by the Contractor. Within 24 hours after an account holder is reassigned or no longer employed by the Contractor, submit an EEBACS-001 form requesting that the account be disabled.

The electronic version of EEBACS-001 is available at:

http://flh.fhwa.dot.gov/resources/pse/estimate/accounts.htm

108.02 Subcontracting. Delete the third paragraph and substitute the following:

Within 14 days of subcontract award, submit a completed SF 1413 and 1413S. Complete Part I for each Subcontractor, and include Part II when the Subcontractor performs on-site work. Complete other forms that may be required by the Government to show the work subcontracted and the total dollar amount of the subcontract. Submit the above required information for each Subcontractor at lower tiers.

108.04 Failure to Complete Work on Time. Add the following:

Contractor is required to provide a paved, winter weather driving surface by placing a lift of pavement for all areas that have been pulverized, crack and seated or where base has been exposed for other operations by November 1. If this work is not completed, Contractor will construct a temporary, sacrificial lift of asphalt pavement (1 1/2 inches thick) in accordance with Section 403. The sacrificial lift shall be removed during the subsequent construction season. The placement and removal of the sacrificial lift will be at no cost to the Government.

If clearing and other roadside-disturbing activities extend into a second construction season, Contractor will update required environmental surveys at no cost to the Government.

Section 109. — MEASUREMENT AND PAYMENT

109.01 Measurement of Work. Add the following after the sixth paragraph:

Prepare, sign, and submit electronic measurement notes (pay notes and supporting field documentation) using EEBACS. Measurement notes will be reviewed by the CO. Unacceptable measurement notes will be electronically rejected and returned. Correct rejected measurement notes and resubmit electronically.

109.02 Measurement Terms and Definitions.

(o) Square foot and Square yard (Square meter). Add the following: Do not measure overlaps.

109.06 Pricing of Adjustments Add the following:

ASPHALT BINDER PRICE ADJUSTMENT PROVISION

GENERAL The Asphalt Binder Price Adjustment Provision provides for a price adjustment in the form of payment to the Contractor or a rebate to the Government for fluctuations in the cost of asphalt binder used in the performance of applicable construction work for Donner Pass Road. Price adjustment provisions are applicable only to the asphalt binder, as defined in Section 702.01, and incorporated in the following contract pay items:

- 40101-5600 Asphalt concrete pavement, gyratory mix, ½ inch or ¾ inch nominal maximum size aggregate, 0.3 to <3 million ESAL
- 40303-0100 Asphalt concrete pavement, type 1, wedge and leveling course

The price adjustment provisions are also applicable to eligible pay items when the Government adds extra work to the Contract.

The provision will remain in effect throughout the duration of the contract. Enactment of the Asphalt Binder Price Adjustment Provision will only be considered when the **increase or decrease** in the price of asphalt binder exceeds 10 percent.

The Asphalt Binder Price Adjustment Provision is intended to reduce but not eliminate the cost effects of price uncertainty to the Contractor and the Government for asphalt binder used in the construction of this contract. It provides for sharing by the Government a portion of the Contractor's risk, which could result from unusual price fluctuations. The provision is not intended to compensate the Contractor for normal day-to-day fluctuations and seasonal changes or to serve as a guarantee of full compensation for asphalt binder price fluctuations.

PRICE INDEXES The Government will post a monthly performance price index at: https://flh.fhwa.dot.gov/business/construction/escalation/cfl/

Poten and Partners, Inc. (PPI), publishes a weekly report (Asphalt Weekly Monitor) on high and low selling prices for states in five regions throughout the United States including:

- East Coast/Northeast
- Mid-Continent/Midwest
- Gulf Coast/Mid South
- Rocky Mountains
- West Coast/Northwest

Weekly high and low selling price data reported for West Coast/Northwest region will be averaged and used to establish a base price index, BPI, for this project and a monthly performance price index, MPPI, for the duration of the contract. These indexes are defined as follows:

- **BASE PRICE INDEX** The base price index, BPI, is the price index posted by the Government as determined by arithmetic average, as specified above, shown in the four weekly publications immediately preceding the contract award. It is as follows:

  BASE PRICE INDEX (BPI) FOR ASPHALT BINDER
  PER SHORT TON (TON) = $See Note (1) below

  Note (1): BPI calculated by the Government and inserted here immediately before contract award.

- **MONTHLY PERFORMANCE PRICE INDEX** The monthly performance price index, MPPI, is the monthly price index at the time of performance of applicable work as determined by arithmetic average, as specified above, shown in the four weekly publications issued prior to the last Wednesday of the month (i.e. the monthly performance price index during which asphalt binder is used in the performance of applicable construction work).

PRICE ADJUSTMENTS Price adjustments calculated by the Government are not intended to reflect the Contractor's actual purchase price. The ratio of the monthly performance price index and the base price index (MPPI/BPI) is calculated and used to determine price adjustments as follows:

- **No Price Adjustment –** When the ratio MPPI/BPI falls within the range of 0.90 to 1.10, no price adjustment will be made for any asphalt binder used in construction work performed during the relevant month.

- **Government Rebate** – When the ratio MPPI/BPI is calculated to be less than 0.90, the Government is due a rebate determined in accordance with the following formula:

  Government Rebate = [0.90 – (MPPI/BPI)] (BPI) (Q)

- **Contractor Payment** - When the ratio MPPI/BPI is calculated to be greater than 1.10, the Contractor is due additional payment determined in accordance with the following formula:

$$\text{Contractor Payment} = [(\text{MPPI}/\text{BPI}) - 1.10] (\text{BPI}) (Q)$$

The following definitions are applicable to both the Government Rebate and the Contractor Payment formulas:

MPPI = Monthly Performance Price Index for the month during which asphalt binder is used in the performance of applicable construction work.

BPI = Base Price Index that is established immediately preceding the bid opening.

Q = Quantity in tons of asphalt binder for each pay item that was used on the project during the progress payment period. The quantity will be calculated using the asphalt content of the approved mix design and the following formula:

Q = Asphalt Concrete Pavement tons placed x (% Asphalt/100)

PRICE ADJUSTMENT COMPENSATION Monthly adjustments will be accrued. The final price adjustment will be paid, or rebated, after completion of all work for each eligible pay item. The Contractor may request in writing a partial price adjustment payment once every 12 months, or when the unpaid accrued increase exceeds $10,000. The Government will take a rebate when the deductive accrual exceeds $10,000.

No price adjustments will be made for work performed beyond the Government-approved Contract completion date.

The maximum allowable monthly and final price adjustment to the Contractor or rebate to the Government is limited to a (MPPI/BPI) ratio of 1.6 and 0.4, respectively.

109.06 Pricing of Adjustments Add the following

FUEL PRICE ADJUSTMENT PROVISION

GENERAL The Fuel Price Adjustment Provision contained herein provides for a price adjustment in the form of payment to the Contractor or a rebate to the Government for fluctuations in the cost of diesel fuel consumed in the performance of applicable construction work for Donner Pass Road. The price adjustment provisions are applicable only to contract items listed as eligible pay items in Table 1 below. The price adjustment provisions are also applicable to these eligible pay items when the Government adds extra work to the Contract.

The provision will remain in effect throughout the duration of the contract. Enactment of the Fuel Price Adjustment Provision will only be considered when the **increase or decrease** in the price of diesel fuel as defined herein exceeds 10 percent.

The Fuel Price Adjustment Provision is intended to reduce but not eliminate the cost effects of price uncertainty to the Contractor and the Government for diesel fuel used in the construction of this contract. It provides for sharing by the Government in a portion of the Contractor's risk, which could result from unusual price fluctuations. The provision is not intended to compensate the Contractor for normal day-to-day fluctuations and seasonal changes or to serve as a guarantee of full compensation for diesel fuel price fluctuations.

PRICE INDEXES The Government will post a monthly performance price index at: https://flh.fhwa.dot.gov/business/construction/escalation/cfl/

Gross CARB Ultra Low Sulfur, No. 2 Diesel Fuel using price data obtained from the Oil Price Information Service (OPIS), which publishes a weekly newsletter on the distillate wholsale rack prices for major cities throughout the United States. The OPIS 5-day newsletter average rack price reported for Sacremento will be averaged and used to establish a base price index, (BPI), for this project and a monthly performance price index, (MPPI), for the duration of the contract. These indexes are defined as follows:

- **BASE PRICE INDEX** The base price index, BPI, is the price index posted by the Government as determined by arithmetic average, as specified above, shown in the four weekly publications immediately preceding the contract award. It is as follows:

BASE PRICE INDEX (BPI) FOR GROSS CARB ULTRA LOW SULFUR, NO. 2 DIESEL FUEL

PER GALLON = $ See Note (1) below

Note (1): BPI calculated by the Government and inserted here immediately before contract award.

- **MONTHLY PERFORMANCE PRICE INDEX** The monthly performance price index, MPPI, is the monthly price index at the time of performance of applicable work as determined by arithmetic average, as specified above, shown in the four weekly publications issued prior to the last Wednesday of the month (i.e. the monthly performance price index during which diesel fuel is consumed in the performance of applicable construction work).

PRICE ADJUSTMENTS Price adjustments are calculated by the Government are not intended to reflect the Contractor's actual purchase price. The ratio of the monthly performance price index and the base price index (MPPI/BPI) is calculated and used to determine price adjustments for eligible pay items as follows:

- **No Price Adjustment –** When the ratio MPPI/BPI falls within the range of 0.90 to 1.10, no price adjustment will be made for any diesel fuel consumed in construction work performed during the relevant month.

- **Government Rebate** – When the ratio MPPI/BPI is calculated to be less than 0.90, the Government is due a rebate determined in accordance with the following formula:

  Government Rebate = [0.90 – (MPPI/BPI)] (BPI) (Q) (FUF)

- **Contractor Payment** - When the ratio MPPI/BPI is calculated to be greater than 1.10, the Contractor is due additional payment determined in accordance with the following formula:

  Contractor Payment = [(MPPI/BPI) – 1.10] (BPI) (Q) (FUF)

The following definitions are applicable to both the Government Rebate and the Contractor Payment formulas:

MPPI = Monthly Performance Price Index for the month during which motor diesel fuel is consumed in the performance of applicable construction work.

BPI = Base Price Index that is established immediately preceding the bid opening.

Q = Quantity of work on the project during the progress payment period for eligible pay items shown in Table 1 below. The Government, to agree with the units associated with the applicable Fuel Usage Factor, will convert work quantities, as necessary.

FUF = Fuel Usage Factor shown in Table 1 below applicable to No. 2 diesel fuel.

Table 1 – Eligible Pay Items For Price Adjustments and Associated Fuel Usage Factors

Eligible Pay Items	Fuel Usage Factor U.S. Customary Units	Fuel Usage Factor Metric Units
Earthwork:		
Section 204 – Excavation and Embankment 20401 Roadway excavation 20402 Subexcavation 20403 Unclassified borrow 20404 Unclassified borrow* 20410 Select borrow 20411 Select borrow* 20415 Select topping 20416 Select topping* 20419 Embankment construction* 20420 Embankment construction 20421 Rock excavation	0.30 gallons per cubic yard	0.39 gallons per cubic meter
Asphalt Pavements:		

Section 401 – Asphalt Concrete Pavement By Gyratory Mix Design Method 40101 Asphalt concrete pavement, gyratory mix 40102 Asphalt concrete pavement, gyratory mix, wedge and leveling course	2.40 gallons per ton	2.65 gallons per metric ton
* The Government, to agree with the units associated with the applicable Fuel Usage Factor, will convert work quantities, as necessary.		

PRICE ADJUSTMENT COMPENSATION Monthly adjustments will be accrued. The final price adjustment will be paid, or rebated, after completion of all work for eligible pay items. The Contractor may request in writing a partial price adjustment payment once every 12 months, or when the unpaid accrued increase exceed $10,000. The Government will take a rebate when the deductive accrual exceeds $10,000.

No price adjustments will be made for work performed beyond the Government-approved Contract completion date.

The maximum allowable monthly and final price adjustment to the Contractor or rebate to the Government is limited to a (MPPI/BPI) ratio of 1.6 and 0.4, respectively.

109.08 Progress Payments.

(b) Closing date and invoice submittal date. Delete the text and substitute the following:

Submit invoices to the designated billing office by the 7th day after the closing date. Invoices received by the designated billing office after the 16th day following the closing date will not be accepted for payment processing that month. Include late, unprocessed invoice submittals in the following months invoice.

(d) Government's receiving report. Delete the first sentence and substitute the following:

The Government's receiving report will be developed using the measurements and quantities from Pay Notes received by the CO in EEBACS and determined acceptable.

(e) Processing progress payment requests.

(1) Proper invoices. Delete the title and text and substitute the following:

(1) Invoices received by the 7th day following the closing date.

(a) Proper invoices. If the invoice meets the requirements of Subsection 109.08(c), and the quantities and unit prices shown on the Contractor's invoice agree with the corresponding quantities and unit prices shown on the Government's receiving report, the invoice will be paid.

(b) Defective invoices. If the invoice does not meet the requirements of Subsection 109.08(c), or if any of the quantities or unit prices shown on the Contractor's invoice exceed the corresponding quantities and unit prices shown on the Government's

receiving report, the invoice will be deemed defective and the Contractor so notified according to FAR Clause 52.232-27(a)(2). Defective invoices will not be corrected by the Government and will be returned to the Contractor within 7 days after the Government's designated billing office receives the invoice.

Revise and resubmit returned invoices by the 18th day following the closing date. The CO will evaluate the revised invoice. If the invoice still does not meet the requirements of Subsection 109.08(c), the Contractor will be so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the revised invoice meets the requirements of Subsection 109.08(c), but still had quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item or work will be used. The Contractor's invoice, as revised by the Government's receiving report, will be forwarded for processing by the 23rd day following the closing date. The Contractor will be notified by the 23rd day following the closing date of the reasons for any changes to the invoice.

(2) Defective invoices. Delete the title and text and substitute the following:

(2) Invoices received between the 8th and 16th day following the closing date.

(a) Proper invoices. If the invoice meets the requirements of Subsection 109.08(c), and the quantities and unit prices shown on the Contractor's invoice agree with the corresponding quantities and unit prices shown on the CO's receiving report, the invoice will be deemed proper and forwarded for processing within 7 days of receipt.

(b) Defective invoices. If the invoice does not meet the requirements of Subsection 109.08(c), the invoice will be deemed defective, the Contractor so notified according to FAR Clause 52.232-27(a)(2), and no progress payment will be made that month. Correct the deficiencies and resubmit the invoice the following month.

If the invoice meets the requirements of Subsection 109.08(c), but has quantities or unit prices exceeding the corresponding quantities and unit prices shown on the Government's receiving report, the Government's data for that item of work will be used. The Contractor's invoice, as revised by the Government's receiving report, will be forwarded for processing within 7 days of the Government's receipt of the invoice. The Contractor will be notified of the reasons for any changes to the invoice.

(f) Partial payments. Delete the subsection and substitute the following:

(f) Partial payments. Progress payments may include partial payment for material to be incorporated in the work according to FAR Clause 52.232-5(b)(2), provided the material meets the requirements of the contract and is delivered on, or in the vicinity of, the project site or stored in acceptable storage places.

Partial payments for stockpiled manufactured material (aggregates) will be based on Contractor process control test results. If test results show the material to be out-of-specification, or in "reject" where statistical evaluation procedures are used, no payment for stockpiled materials will be made.

Partial payment for material does not constitute acceptance of such material for use in completing items of work. Partial payments will not be made for living or perishable material until incorporated into the project.

Individual and cumulative partial payments for preparatory work and material will not exceed the lesser of:

(1) 80 percent of the contract bid price for the item; or

(2) 100 percent of amount supported by copies of invoices submitted.

The quantity paid will not exceed the corresponding quantity estimated in the contract. The CO may adjust partial payments as necessary to protect the Government.

Section 151. — MOBILIZATION

151.03 Delete the first paragraph and substitute the following:

The accepted quantities will be paid at the contract price per unit of measurement for the Section 151 pay items listed in the bid schedule. Payment will be full compensation for the work and associated fees prescribed in this Section. See Subsection 109.05

Section 152. — CONSTRUCTION SURVEY AND STAKING

Construction Requirements

152.04 General. Add the following to the second paragraph:

The Government will establish basic survey control points for vertical and horizontal control of the project.

The Government will furnish the following:

(1) 3D coordinates and offset distance from centerline for subgrade and surface course finishing stakes at 50-foot (20-meter) intervals and miscellaneous intermediate stations.

(2) Slope stake data containing centerline grade and slope staking information at 50-foot (20-meter) station intervals and miscellaneous intermediate stations.

(3) Computer listings containing: horizontal alignment, vertical alignment, earthwork quantities, and staking details showing superelevation template data and slope information.

152.04 General. Add the following to the second paragraph:

The Government will furnish the following:

(1) Horizontal and vertical alignment staking information.

(2) Digital terrain model of existing ground.

(3) Digital terrain model of proposed design

Delete the last sentence of the fourth paragraph from the bottom of the subsection and substitute the following:

Reestablish missing control points and stakes before slope staking begins.

152.05 Survey and Staking Requirements.

(d) Slope and reference stakes. Delete paragraph (1) AMG method.

(f) Grade-finishing stakes. Delete paragraph (1) AMG method.

(g) Culverts. Delete the text and substitute the following:

Verify and set culvert locations at the inlet, outlet, and inlet basin points according to the plans. Plot the centerline of the proposed culvert at a 1:20 scale. Show the natural ground, the flow line, the roadway section, and the culvert including end treatments and other appurtenances. Provide the elevations, grade, culvert length, degree of elbow, catch points, and hinge points on the plot.

Perform the following if the culvert design shown in the plans does not fit field conditions, when the CO requires adjustment to a culvert location, or when a culvert design isn't provided for a new culvert, culvert replacement, or culvert extension:

(1) Recommend a revised culvert location and alignment if needed.

(2) Survey and record the ground profile along the culvert centerline;

(3) Determine the slope catch points at the inlet and outlet;

(4) Set reference points and record information necessary to determine culvert length and end treatments;

(5) Plot to scale the profile along the culvert centerline. Show the natural ground, the flow line, the roadway section, and the culvert including end treatments and other appurtenances. Show elevations, grade, culvert length, and degree of elbow.

(a) For single skewed culverts, submit a plotted field-design cross-section normal to roadway centerline and at each end section. Plot the offset and elevation of natural ground at the end section and at proposed template break points between centerline and the end section. Ensure the template design embankment slope is not exceeded;

(b) For multiple skewed culverts, submit a plotted field design cross-section normal to roadway centerline and at the end sections (left and right) nearest to the shoulder. Plot the offset and elevation of natural ground at the end section and at proposed template break points between centerline and the end section. Ensure the template design embankment slope is not exceeded;

(c) Submit the plotted field-design cross-section for approval of final culvert length and alignment. Plot at a clear and readable scale;

(d) Set inlet, outlet, and reference stakes when the field design has been approved. Stake inlet and outlet ditches to make sure the culvert and end treatments (such as drop inlets) are functional; and

(e) Adjust slope, reference, and clearing stakes as necessary to provide for culvert inlet treatments in cut slopes. Readjust slope, reference, and clearing stakes as necessary when culvert inlets are moved from their plan locations. Review slope adjustments with the CO and obtain approval.

(i) Retaining walls and reinforced soil slopes. Delete the Subsection and substitute the following:

(i) Retaining walls and reinforced soil slopes.

(1) Rockery retaining walls. Survey and record profile measurements along the face of the proposed wall at 5 feet (1.5 meters), 10 feet (3 meters), and in front of the wall face. Take cross-sections every 25 feet (8 meters) along the length of the wall and at major breaks in terrain within the limits designated by the CO. Measure and record points every 25 feet (8 meters) and at major breaks in terrain for each cross-section. Set additional references and control points to perform the work.

(2) MSE retaining walls. Complete topographic survey and mapping to generate cross-section data at Retaining Wall and Reinforced Soil Slope locations to generate cross-section data at slope stake locations between edge of pavement and 10 feet beyond actual point of intersection of the design slope with the natural ground line at the following locations: Station 312+00 to 313+25, Station 368+25 to 369+75, Station 374+00 to

374+70, Station 382+25 to 382+75, Station 385+10 to 386+40, Station 386+65 to 387+75, Station 393+00 to 394+20, and Station 394+95 to 396+25.

Submit ground topographic verification data to CO 21 days prior to anticipated guardrail and retaining wall construction between Stations 309+00 and 413+00. Do not begin embankment construction or excavation operations between stations 305+00 and 413+00 until modified design data has been verified. Modified design data consists of revised earthwork quantities, revised retaining wall plan & profile sheets, cross-section sheets, and staking reports for modified locations, and an updated grading summary.

Submit one printed copy and one electronic file of the cross-sectional data in ASCII text format: station, offset, elevation, north coordinate, east coordinate, p-code text format. Include a file header that defines the data type of the column Include one observation per line in the submitted files showing the following data:

Station (nominal), offset from centerline, elevation, north coordinate, east coordinate, p-code (Feature code: RH for reference hub, CL for centerline).

Measurement

152.07 Delete the third paragraph and substitute the following:

Do not measure miscellaneous survey and staking.

152.07 Add the following to the fourth paragraph:

Reestablishing missing control points and stakes will be measured under Special labor, Hired survey services when it is paid by the hour.

Section 153. — CONTRACTOR QUALITY CONTROL

Description

153.01 Add the following:

This work also consists of using EEBACS to prepare electronic "*Inspector's Daily Record of Construction Operations"* (*Contractors Daily Reports)* and measurement notes (pay notes), including entering labor, equipment, subcontractors, and inspection records into the system.

Construction Requirements

153.02 Qualifications.

(a)(1) Full-time, on-site QCM. Delete subsections *(a)* and *(b)* and substitute the following:

(a) Four years of experience managing quality control on highway construction projects of similar type and scope, and

(b) National Institute for Certification in Engineering Technologies (NICET) Level III certification, or equivalent, in highway construction or highway material.

153.03 Quality Control Plan (QCP).

(b) Quality control procedures

(2) Add the following: List the material to be tested by pay item, tests to be conducted, the location of sampling, and the frequency of testing.

Add the following:

(d) Subcontractors and suppliers. Include the work of all subcontractors. If a subcontractor is to perform work under this Section, explain how the subcontractor's inspection plan will interface with the Prime Contractor first tier subcontractors and lower tier subcontractors and organizations, and the CO. Include the work of major suppliers and suppliers of structural and geotechnical services and materials.

Add the following:

Modifications or additions may be required to any part of the plan that is not adequately covered. Acceptance of the quality control plan will be based on the inclusion of the required information. Acceptance does not imply any warranty by the Government that the plan will result in consistent contract compliance. It remains the responsibility of the Contractor to demonstrate such compliance.

153.04 Prosecution of Work. Delete the sentence and substitute the following:

Address each of the subjects shown for each phase of construction:

(a) Preparatory phase.

(1) Delete the paragraph and substitute the following:

In a preparatory phase meeting, review the contract requirements for the work; the process for constructing the work; and the plan for inspecting, testing, measuring, and reporting the work. Include the project superintendent, the quality control supervisor (QCS), the foreman for the work to be performed, and the CO in the meeting. Schedule and conduct a preparatory meeting for each type of work to be performed at least one week prior to beginning the work.

(b) Start-up phase.

(1) Delete the paragraph and substitute the following:

(1) In a start-up phase meeting, review the contract requirements and the processes for

constructing the work with the personnel who will be performing the work. Invite the CO, project superintendent, QCS, testers, and inspectors of the work being performed, and the personnel directly supervising and performing the work. Review the planned testing, inspection, and reporting requirements with the quality control personnel responsible for the testing and inspection. Explain the reporting procedures to be used when defective work is identified. Conduct a start-up meeting for each type of work to be performed upon beginning the work.

(c) Production phase. Add the following:

(4) Provide feedback on processes and deficiencies. Identify root causes of deficiencies, and make timely and effective changes to work processes to prevent repeated deficiencies.

153.05 Sampling and Testing. Delete the text and substitute the following:

153.05 Sampling and Testing.

Perform sampling and testing required by the accepted QCP. As a minimum perform process control testing according to the Sampling, Testing and Acceptance Requirements tables at the end of each Section where applicable. Where no minimums are specified, submit proposed tests to be performed and the proposed sampling and testing frequencies.

(a) Sample Splitting. Schedules and times or locations for obtaining on-site split samples for Government use will be provided by the CO using a procedure for random sampling. Sample any material that appears defective or inconsistent with similar material being produced, unless such material is voluntarily removed and replaced or otherwise corrected according to Subsection 106.01

(b) Testing. If the Government-furnished field laboratory bid option is not exercised by the CO, furnish a laboratory equipped with all test equipment necessary to satisfy the requirements of the contract. Ensure test equipment has been checked, calibrated, standardized and/or otherwise verified in accordance with AASHTO and ASTM standards by an individual qualified to perform the work. Perform an equipment inspection after the laboratory has been moved to its permanent location on the project site, and anytime it is moved thereafter. Inspect equipment within 45 days of actual use for project testing, and at least once a year thereafter. Do not use equipment that has not been inspected or is found to be deficient. Mark deficient equipment and take it out-of-service until repaired or replaced and shown by subsequent inspection to perform as required. Maintain records documenting laboratory equipment inspections. Provide certification(s) stating the equipment conforms to testing requirements and provide evidence of current inspection. Keep laboratory facilities clean and maintain equipment in proper working condition. Allow the CO unrestricted access to the laboratory for inspection and review.

The CO may require a demonstration of proficiency in sampling and testing capabilities. One or more proficiency samples may be provided by the Government to verify basic qualifications. Provide the results of the proficiency samples to the CO within 48 hours of

receipt of the material.

153.06 Certifications. Delete the text and substitute the following:

For materials or work accepted by certification according to Subsection 106.03, review all certifications to insure compliance with the requirements of the contract prior to incorporating materials into the work and provide a signed copy of the reviewed certification(s) to the CO. According to FAR Subpart 46.407, materials or work without proper certification will be rejected in writing, and payment for such material or work will be withheld until proper certification has been provided to the CO.

153.07 Records and Control Charts. Delete the first sentence and substitute the following:

Maintain complete testing and inspection records by pay item number and make them accessible to the CO.

(a) Quality control and construction operations reports. Delete the text and substitute the following:

Document meetings, work locations, labor and equipment used including actual hours worked, testing and measurement activities, inspection results, deficiencies observed, For each day of the contract, prepare an "*Inspector's Daily Record of Construction Operations"* (*Contractors Daily Reports (CDR))* using EEBACS. Enter initial data for Labor/Equipment and Subcontractors prior beginning any work. Maintain and update the Labor/Equipment and Subcontractors data to reflect ongoing changes as they occur. Report operations or items of work separately, with manpower and equipment assigned to each operation separately. Detail inspection results, including deficiencies observed and corrective actions taken. Complete a CDR for each contractor and subcontractor working that day.

When submitting test results on material being incorporated into the work, report test results within the reporting times indicated in the sampling and testing requirements at the end of each section or as specified in the contract.

Enter the following data into EEBACS:

(1) Subcontractors data.

(2) Labor/Equipment.

(a) All manpower and equipment, including contractor and subcontractors. Complete all data fields.

(b) Labor: Type/classification, move-in date, move-out date, hourly rate, the contractor or subcontractor, and name.

(c) Equipment: Type/classification, move-in date, move-out date, make, model, and year of equipment manufacture.

Certify all CDR's using the following statement:

> *"I certify that the information contained in this record is accurate and that work documented herein complies with the contract. Exceptions to this certification are documented as a part of this record."*

Submit certified CDR's that have been signed by a person who has both responsibility for the inspection system and signature authority.

Submit the record and certification within 24 hours of the work being performed. If the CDR is incomplete, in error, or otherwise misleading, the CDR will be rejected and returned within EEBACS with corrections noted. Correct rejected CDRs and resubmit the revised CDR within 24 hours. When chronic errors or omissions occur, correct the procedures by which the records are produced.

153.08 Acceptance. Add the following:

Performance of the work may be stopped according to Subsection 108.05, either in whole or in part, for failure to comply with the requirements of this Section. The Government may charge to the Contractor the cost of any additional inspections required when the work being inspected is found not to comply with contract requirements during the initial inspection. Work stop orders, due to recurring deficiencies of work required by this Section, will be rescinded after the Contractor demonstrates to the CO that changes were made to the quality control plan and system which resulted in the correction of those deficiencies. There will be no adjustment in the contract time, or payments to the Contractor for any impacts, delays or other costs due to any periods of work stoppage resulting from failure to comply with the requirements of this Section.

EEBACS electronic documentation will be evaluated under Subsection 106.02.

153.09 Measurement and Payment. Delete the text and substitute the following:

Measurement

153.09 Measure contractor quality control according to Subsection 109.02.

Do not measure EEBACS electronic documentation for payment.

Payment

153.10 The accepted quantities will be paid at the contract price per unit of measurement for the Section 153 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for Contractor quality control will be paid as follows:

(1) 25 percent of the item amount, not to exceed 0.5 percent of the original contract amount, will be paid after the contractor quality control plan is accepted; all testing

facilities are in place; qualified quality control supervisor, inspection, and sampling and testing personnel are in position to provide quality control activities; and the work being inspected or tested has started.

(2) 65 percent of the total lump sum will be prorated for payment based on the completed portion of the total work not including the original 25 percent completed under **(1)** above.

(3) Payment of the remaining 10 percent of the lump sum will be paid when all inspections, test results, submittals, and reports are complete and accepted.

Section 154. — CONTRACTOR SAMPLING AND TESTING

Construction Requirements

154.03 Sampling. Add the following:

Perform the initial curing of all concrete test cylinders. Provide for transporting the government verification cylinders to the FHWA-Central Federal Lands Highway's Laboratory unless other testing facilities are authorized by the CO.

Label each concrete mold with the name and number of the Project, the cylinder number, date molded, location of the sample, and the test age (i.e. – 7, 14, or 28 days). Label the mold after casting and the cylinder after stripping to ensure the sample can be identified throughout the entire curing process.

Provide the required cylinder molds.

154.04 Testing Add the following:

- Where Process Control Sampling and Testing frequencies are identical to the Sampling, Testing, and Acceptance Tables at the end of each Section for all applicable work, the Process Control Samples may be used for acceptance.

154.04A Field Laboratory (Government-Furnished). Refer to the "Notice To Bidders**"** in the bid proposal for information regarding the option to use a Government-Furnished field laboratory.

If the bid option "Item 15401-0000, Contractor Testing, Using Government Furnished Field Laboratory" is **exercised,** the government will provide for the Contractor's use a mobile field laboratory, including testing equipment as follows:

- Pine AFG1A Gyratory Compactor
- NCAT Thermolyne Ignition Oven
- AASHTO T 209 Rice Vacuum Equipment

- AASHTO T 166 Bulk Specific Gravity of Compacted Mix Equipment
- Convection Oven
- Liquid Limit Machine and Grooving Tool
- 30,000 Gram Balance
- 12,000 Gram Balance
- 4,600 Gram Balance (readable to 0.01)
- Platform Scale
- Mechanical Compactor (Moisture Density) and Accessories
- 12-inch Sieve Shaker and Sieve Stack
- Drill Press with Muller
- Large Sample Splitter
- Small Sample Splitter

Provide any additional equipment or facilities necessary to fulfill the requirements of the Contract.

Transport the laboratory from 12300 West Dakota Avenue, Lakewood, CO to the point of use and return the laboratory to the same Lakewood address upon completion of the work. The trailer will be available upon issuance of Notice to Proceed and must be returned no later than 14 days following final acceptance of the contract. Contact the CFLHD Equipment Depot at (720) 963-3459 or (720) 963-3384 for specific directions to the laboratory storage location.

Assume responsibility for the replacement of any and all missing or damaged equipment and for the repair of any damage to the laboratory. Replacement cost for missing or damaged equipment or facilities will be deducted from any remaining monies owed the Contractor. If sufficient funds are not available under the Contract for such retention, the Contractor agrees to make payment directly to the Government for any damaged or missing equipment or facilities.

Specifics:

Furnished equipment will be inspected by the Government by checking, standardizing, calibrating and/or verifying, as appropriate, in accordance with applicable AASHTO and ASTM standards. The Government equipment inspection will be completed after the laboratory has been moved to its permanent location on the project site prior to actual use in project testing and at least once a year thereafter. Notify the CO at least 30 days in advance of intent to use the testing equipment on the project so that Government equipment inspection can be scheduled and performed. Assume responsibility for additional equipment inspections prior to the Government's yearly inspection if the mobile laboratory is moved. Maintain records documenting these inspections in the laboratory.

Maintain equipment in proper operating condition. Do not use equipment that is found to be deficient or defective. Mark deficient or defective equipment and take it out-of-service and immediately notify the CO. If Government-furnished testing components fail through no fault or negligence of the Contractor, the Government will replace or repair the equipment in the most expeditious manner practicable. Requests for time extension and/or delay damages will not be granted for delays of less than 48 hours for any one occurrence, or for cumulative

delays amounting to less than 5 (five) days in any one 365-day period. Requests for time extensions or damages due to equipment-related delays caused by equipment misuse or other Contractor fault will not be granted.

- Furnish water to the Government-provided field laboratory which is clear and free of oil, acid, rust, alkali, sugar, and vegetable substances. Furnish 120/240-volt, 60-cycle, single-phase current adequate to operate all of the Government field laboratory facilities at all times as required by the CO. Supply enough power to support a 200 amp service panel. Equip the power supply with a regulator that limits the voltage of the power furnished to the laboratory to not less than 220 volts and not more than 240 volts.

- All equipment provided by the Government and replaced by the Contractor will remain with the laboratory and will become the property of the Government.

- Use of the laboratory is limited to testing materials in connection with this contract.

154.04B Field Laboratory (Contractor-Furnished). If the Government-furnished field laboratory bid option is not exercised, furnish a laboratory equipped with all test equipment necessary to satisfy the requirements of the contract.

The sampling and testing services of a commercial laboratory meeting or exceeding the requirements described herein may be used if all contract sampling and testing requirements are satisfied by the use of the commercial facility.

Ensure test equipment has been checked, calibrated, standardized and/or otherwise verified in accordance with AASHTO and ASTM standards by an individual qualified to do this work. Ensure mobile laboratories receive an equipment inspection after the laboratory has been moved to its permanent location on the project site and anytime it is moved thereafter. Inspect equipment within 45 days of actual use in project testing and at least once a year thereafter. Do not use equipment that has not been inspected or is found to be deficient. Mark deficient equipment and it take out-of-service until it is repaired or replaced and shown by subsequent inspection to perform as required. Maintain records documenting these inspections in the laboratory. Provide certification(s) stating the equipment conforms to testing requirements and provide evidence of current inspection.

The CO may require the Contractor to perform testing to demonstrate acceptable equipment and an acceptable level of technician competence. The CO may also check equipment and inspection records to verify condition. Repair or replace equipment not meeting applicable requirements. Keep laboratory facilities clean and maintain equipment in proper working condition. Provide the CO unrestricted access to the laboratory for inspection and review.

Section 155. — SCHEDULES FOR CONSTRUCTION CONTRACTS

Construction Requirements

155.04 Preliminary Construction Schedule. Add the following:

(j) A list of the permits required for the contract. See Section 107.

155.05 Initial and Baseline Construction Schedule.

Delete (a) (1) *(c)* and substitute the following:

(c) Show activities in the order the work will be performed, including submittals, submittal reviews, permit applications, permit reviews, fabrication, and delivery.

Delete the second sentence of (b) (2) *(g)* and substitute the following:

Non-construction activities include mobilization, drawing and sample submittals by pay item number, permit applications, and the fabrication and delivery of key material.

Add the following to the end of (b) (2) *(g)*:

Refer to the permitting agencies to determine an appropriate duration for permit application review, permit approval, and distribution of permits.

(f) Submission and approval. Add the following to the end of the second paragraph:
No progress payments will be made until an initial construction schedule is approved by the CO.

155.06 Baseline Schedule Updates. Delete the second paragraph and substitute the following:

Unless previously approved by the CO, changes to the construction schedule for the work that is still to be completed, can only be changed with a Time Impact Analysis according to Subsection 108.03, and a Baseline Construction Schedule revision according to Subsection 155.07. Receipt of a baseline construction schedule update with negative float does not constitute agreement by the Government of the revised completion date.

Add the following:

(f) Working Schedule. At each construction progress meeting, provide the CO with a written summary detailing the work completed in the previous week and the proposed work activities for the following two weeks. Provide detail of proposed operations that will affect traffic flow, residents and businesses adjacent to the project. Provide the CO with a schedule revision if the written summary significantly differs from the baseline construction schedule or the latest construction schedule revision.

155.07 Baseline Schedule Revision. Delete the first paragraph and substitute the following:

Submit a time impact analysis when requesting approval of a baseline schedule revision. Submitting a proposed baseline schedule revision is not considered a notification of delay or of other basis for change. Continue to submit monthly schedule updates according to Subsection 155.06 until a baseline construction schedule revision is approved.

Section 156. — PUBLIC TRAFFIC

Construction Requirements

156.05 Maintaining Roadways During Work.

(a) Add the following:

Do not construct diversions outside of the clearing limits or use alternate route detours without the approval of the CO.

156.07 Limitations on Construction Operations.

(c) Delete the first sentence and substitute the following:

For alternating one-way traffic control with flaggers present, provide a minimum lane width of 11 feet. When traffic signals are used to operate alternating one-way traffic, provide a minimum lane width of 14 feet. For two-way traffic, provide a minimum roadway width of 22 feet unless otherwise approved by the CO.

(i) Delete the text and substitute the following:

Limit construction-caused delays to public traffic to a maximum of 20 minutes per passage through the project (when open to traffic).

Allow emergency vehicles to pass through the construction without delay at all times.

Add the following:

(k) For full road closures, notify the CO at least 14 days in advance of closure to allow adequate time for partners to notify and relay closure information to stakeholders.

(l) A two-week full closure from 7am Monday through 5pm Friday may be utilized between STA 311+50 and STA 314+00 for wall construction. No other full closures will be allowed west of STA 332+00. Single-lane closures providing alternating two-way traffic may be utilized west of STA 332+00.

(m) East of STA 332+00 (Rainbow Bridge overlook) shall be constructed utilizing full closures on weekdays from 7am Monday through 5pm Friday. On the weekends and during holidays (as specified in Table 108-2) open all lanes to traffic with a maximum of two locations of single-lane closures utilizing alternating two-way traffic.

(n) Limit the length of area subject to two-way alternating traffic east of STA 332+00 to 600 feet (excluding tapers). Up to two locations utilizing alternating traffic may be present but shall be separated by a minimum of 1,500 feet. See Subsection 108.01 for limitations on work.

(o) When present, flaggers shall have radio communication.

(p) Portable traffic signals used to control two-way alternating traffic that accommodates bicycles shall use a 5 mph uphill travel speed and a 10 mph downhill travel speed to calculate traffic signal timing.

(q) Provide a detailed plan for managing bicycles and vehicles for each weekend the roadway will be open to both modes of traffic. Bicycle use shall not be restricted during overnight hours. Submit planned restrictions for bicycle use for approval by the CO at least two weeks in advance.

156.08 Nighttime Operations. Delete the first sentence and replace with the following:

Perform construction operations during the hours of 7 am to 7 pm. Work outside of these hours may be allowed at the discretion of the CO if requested no less than 7 days in advance of the work beginning. Work outside these hours must comply with Nevada County noise standards. http://qcode.us/codes/nevadacounty/ Nighttime work will be completed at no additional cost to the Government.

Section 157. — SOIL EROSION AND SEDIMENT CONTROL

Delete the entire Section and substitute the following:

Description

157.01 This work consists of preparing and managing a Stormwater Pollution Prevention Plan (SWPPP) including non-stormwater pollution prevention. This work also consists of implementing the SWPPP including but not limited to furnishing, constructing, and maintaining soil erosion and sediment control devices to eliminate or minimize pollutants in stormwater discharges from the project.

Material

157.02 Conform to the following Subsections:

Backfill material	704.03
Concrete masonry unit	725.07(c)
Fertilizer	713.03
Fiber rolls and socks	713.12
Floating turbidity curtains	713.21
Gravel bags	713.13
Mulch	713.05
Plastic lining	725.12
Prefabricated filter insert	713.20
Riprap	705.02
Rock mulch	705.07
Sandbags	713.14
Sediment filter bags	713.19
Seed	713.04
Separation and stabilization geotextile and geotextile filter	714.01(a)
Silt fence	713.16
Tackifiers	713.11(a)
Temporary culvert pipe	713.15
Temporary plastic fence	710.11
Temporary rolled erosion control products	713.17
Turf reinforcement mats	713.18
Water	725.01(b)

Construction Requirements

157.03 General. Develop, submit, and manage a Stormwater Pollution Prevention Plan (SWPPP) according to the Construction General Permit requirements for project location. Contract permits amend the requirements of this Section. Submit SWPPP to the CO at least 7 days prior to the Pre-construction meeting. Allow 14 days for CO review prior to submission to regulatory agency(ies).

When soil erosion and sediment pollution control measures are not functioning as intended, take immediate corrective action to eliminate or minimize pollutants in stormwater discharges from the project.

Additional product limitations may be included within contract requirements.

1) Provide certified weed free devices.
2) Do not use plastic netted fiber rolls or plastic netted rolled erosion control products.

157.04 Stormwater Team. Submit the following names and qualifications for approval 7 days prior to preconstruction meeting with SWPPP submittal:

(a) *SWPPP Developer.*
(b) *Erosion Control Supervisor.*
(c) *On-Site Stormwater Lead.*

Minimum Qualifications. Provide documentation that personnel meet the qualifications set forth in the Construction General Permit of the state(s) that the project is located in, or the qualifications below, whichever is more stringent.

(a) SWPPP Developer with the following qualifications:

1) Have completed 40 hours of stormwater management training.
2) Have 5 years of highway or equivalent experience developing stormwater pollution prevention plans and designing site specific best management practices.
3) Be registered or certified in the state(s) in which the project is located for at least one of the following:
    a. Registered civil engineer with stormwater plan experience;
    b. Registered professional geologist or engineering geologist with stormwater plan experience;
    c. Licensed landscape architect with stormwater plan experience;
    d. Registered professional hydrologist with stormwater plan experience;
    e. Other state or nationally recognized certification program for erosion and sediment control professionals.

(b) Erosion Control Supervisor with the following qualifications:

1) Have completed 24 hours of stormwater management training.
2) Have 3 years of highway or equivalent construction experience that included oversight of erosion, sediment, and pollution control best management practices; or
3) One of the following:
    a. Meet requirements of SWPPP Developer above, or
    b. be registered or certified as a stormwater inspector from a state or nationally recognized certification program for stormwater inspectors.

(c) Stormwater Lead(s) with the following qualifications:

1) Have completed 8 hours of stormwater management training.
2) Have 1 years of highway construction experience including stormwater management duties.
   or
3) One of the following:
    a. Meet requirements of Erosion Control Supervisor, or

b. be registered or certified as a stormwater inspector from a state or nationally recognized certification program for stormwater inspectors, or
c. demonstrate equivalent training and experience if not certified.

Roles and Responsibilities. Furnish a Stormwater Team that is qualified to perform the following roles and responsibilities:

(a) SWPPP Developer. Develop and approve the Storm Water Pollution Prevention Plan (SWPPP) for the project based on requirements in the Construction General Permit, contract plans, and specifications. Show construction phasing of erosion, sediment, and pollution prevention best management practices for all construction activities on a site plan to meet water quality regulations. Review field changes to determine if a SWPPP amendment is required. Provide amendments to the SWPPP when substantial changes are needed.

(b) Erosion Control Supervisor. Implement the SWPPP, which includes but is not limited to scheduling installation and maintenance of all BMPs, job site inspections, and other activities for pollution prevention. Review all inspection reports and ensure that SWPPP and Site Plan are implemented and updated.

(c) Stormwater Lead. Install or lead crew to install and maintain BMPs, conduct site inspections, water quality monitoring, reporting, and performing all on-site activities required to comply with the Construction General Permit. Inform the Erosion Control Supervisor when changes are made. The Stormwater Lead is required to be on the project site during working hours, and available during non-work hours to do inspections before, during, and after qualifying rain events.

157.05 Controls and Limitations on Work. Prior to the start of a construction activity, implement appropriate pollution prevention measures for the activity. No soil disturbing construction activity may begin on the project until the SWPPP has been reviewed and the NOI has been accepted by the permitting agency and is active.

157.06 Stormwater Pollution Prevention Plan (SWPPP). Prepare, submit, and implement a Construction Stormwater Pollution and Prevention Plan (SWPPP) following the SWPPP template of the state in which the project is located. If the state does not provide a template, follow the SWPPP template provided by the Environmental Protection Agency (EPA) (https://www.epa.gov/npdes/construction-general-permit-resources-tools-and-templates#swppp).

Provide a SWPPP according to the Stormwater Construction General Permit (CGP) and the following manual: "The Stormwater Practitioners Guide by the Federal Highway Administration, Central Federal Lands Highway Division." Provisions in the SWPPP are incorporated by reference into the contract. Provide an electronic copy of the approved SWPPP to the CO prior to mobilization.

The Stormwater Practitioners Guide is available at:
https://flh.fhwa.dot.gov/resources/construction/documents/cfl-stormwater-guide.pdf
https://flh.fhwa.dot.gov/resources/construction/documents/cfl-stormwater-guide-appendix-a.pdf

Based on the approved SWPPP, provide the CO a list of the planned pollution prevention devices for each of the following: erosion controls, sediment controls, and non-stormwater controls.

Implement the SWPPP as required throughout the construction period. Modify the erosion, sediment, and non-stormwater pollution control details and SWPPP plans as necessary to accommodate project site conditions and proposed construction operations. Update the SWPPP when modifying erosion, sediment, and non-stormwater pollution controls. Provide a copy of the updated SWPPP monthly to the CO for review.

157.07 Soil Erosion Control. Apply erosion control measures to stabilize soils and to control temporary concentrated flows throughout the duration of the project. Construct and maintain measures according to manufacturer's recommendations, the project requirements, and according to the following manual: "The Stormwater Practitioners Guide by the Federal Highway Administration, Central Federal Lands Highway Division."

157.08 Sediment Control. Apply sediment control measures to intercept, slow and detain the flow of stormwater throughout the duration of the project. Construct and maintain measures according to manufacturer's recommendations, the project requirements, and according to the following manual: "The Stormwater Practitioners Guide by the Federal Highway Administration, Central Federal Lands Highway Division."

157.09 Non-Stormwater Controls. Apply non-stormwater measures as needed and as required in the SWPPP to control non-stormwater discharges, and to prevent or limit potential pollutants at their source from contact with stormwater throughout the duration of the project. Construct and maintain measures according to manufacturer's recommendations, the project requirements, and according to the following manual: "The Stormwater Practitioners Guide by the Federal Highway Administration, Central Federal Lands Highway Division."

157.10 Schedule of Values. Based on the approved SWPPP, prepare separate quantity take-offs for estimating each of the following lump sum pay items: erosion controls, sediment controls, and non-stormwater controls. Submit to the CO a proposed schedule of values for the each of the three lump sum items. Include in the proposed schedule of values the estimated quantities and cost of: furnishing and installing BMPs, inspection and reporting requirements, maintenance of BMPs, and the removal of BMPs if applicable. The CO and Contractor will agree on a payout schedule for these lump sum items based on the schedule of values and in some cases a cost-

loaded CPM schedule. If updates to the SWPPP affect the quantity or type of items in the schedule of values, submit to the CO proposed revisions to the schedule of values to reflect the changes and request approval of a revised payout schedule.

157.11 Acceptance. Material for erosion, sediment, and non-stormwater pollution control measures will be evaluated under Subsections 106.02 and 106.03.

Construction, maintenance, and removal of erosion control, sediment control, and non-stormwater controls will be evaluated under Subsections 106.02 and 106.04.

Separation and stabilization geotextile and geotextile filter will be evaluated under Section 207.

Measurement

157.12 Measure the Section 157 pay items listed in the bid schedule according to Subsection 109.02.

Do not measure replacement erosion, sediment, or non-stormwater pollution control measures.

Do no measure additional or changed erosion, sediment, or non-stormwater pollution control measures required when planned controls are not functioning as intended and corrective actions are taken, unless the CO has approved a revised schedule of values and payout schedule.

Payment

157.13 The accepted quantities will be paid at the contract price per unit of measurement for the Section 157 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Progress payments for SWPPP will be paid as follow:

1) 25 percent of the pay item amount will be paid on the approval of the SWPPP by the CO and upon receipt of authorization from the permitting agency that the project permit is active.
2) An additional 50 percent of the pay item amount will be prorated based on total work completed.
3) The remaining portion of the pay item amount will be paid when a copy of the final SWPPP and all accompanying documentation is submitted and accepted by the CO.

Progress payments for temporary erosion control will be paid as follows:

1) 25 percent of the pay item amount will be paid upon installation of planned temporary erosion controls based on the agreed upon schedule of values for erosion control.

2) An additional 50 percent of the pay item amount will be prorated based on total work complete.
3) The remaining portion of the pay item amount will be paid when temporary erosion controls are removed or at final acceptance.

Progress payments for temporary sediment control will be paid as follows:

1) 25 percent of the pay item amount will be paid upon installation of planned temporary sediment controls based on the on the agreed upon schedule of values for temporary sediment control.
2) An additional 50 percent of the pay item amount will be prorated based on total work complete.
3) The remaining portion of the pay item amount will be paid when temporary sediment controls are removed from the project or at final acceptance.

Progress payments for non-stormwater controls will be paid as follows:

1) 25 percent of the pay item amount will be paid upon installation of planned non-stormwater controls based on the agreed upon schedule of values for non-stormwater controls.
2) An additional 50 percent of the pay item amount will be prorated based on total work complete.
3) The remaining portion of the pay item amount will be paid when all temporary non-stormwater controls are removed from the project or at final acceptance.

Section 203. — REMOVAL OF STRUCTURES AND OBSTRUCTIONS

203.04 Removing Material. Add the following:

(e) Asphalt Removal. For segments N-2, P-3, and N-4, Station 111+10 to 304+00 (or as designated in the plans), remove the existing asphalt pavement by milling per Section 413 to a depth that exposes all of the surface of the Portland Cement Concrete Pavement (PCCP).

Process all asphalt pavement removed by milling for use as Section 302, Minor Crushed Aggregate. Process millings until 100 percent passes the 1½ -inch (38-millimeters) sieve. Reprocess or remove larger particles and dispose of them according to Subsection 203.05. All asphalt millings produced from the asphalt pavement removal to be used and placed as Minor Crushed Aggregate for the project in accordance to Section 302 prior to the import of crushed aggregate base. Asphalt millings and FDR material shall not be used as shouldering material

The work of milling, processing, hauling, stockpiling, placement, and compaction of asphalt millings as Minor Crushed Aggregate will not be paid for separately but is included in the cost of asphalt pavement removal.

203.06 Acceptance. Add the following:

Asphalt millings used as Minor Crushed Aggregate will be evaluated under Section 302.

Section 204. — EXCAVATION AND EMBANKMENT

Description

204.02 Definitions

(a) Excavation. Add the following:

(4) Fill voids in subgrade per Sinkhole Patching Detail on plan.

(a) Embankment Construction. Add the following:

(6) Fill voids in foundation per Sinkhole Patching Detail on plan to prepare for embankment.

Materials

204.03. Add the following:

Class 1 Rock	705.02
Rock Mulch	705.07
Crushed aggregate	703.06
Geotextile	714.01(a)
Asphalt concrete	403, Type II

Construction Requirements

204.05 Conserved Topsoil. Delete the first sentence and substitute the following:

Conserve topsoil from the roadway excavation and from embankment foundation areas to the extent and depth determined by the CO.

204.06 Roadway Excavation.

(a) Rock cuts. Add the following:

When blasting rock, use controlled blasting methods according to Subsection 205.08(b).

Rock excavation limits shown on the plans are for establishing a 5-foot-wide shoulder for drainage and bicycle traffic. Within the specified limits shown on the plans, use a series of sliver type cuts for rock excavation. Each cut section shown on the plans is carefully delineated and controlled by required widths for the bicycle lane, the rock structure at each location, and topography. The cut thickness is variable ranging from approximately 1 foot to 4 feet. Trim a section of rock to provide the desired road width and bicycle lane. Use controlled blasting and presplitting for rock excavation according to Section 205.

At several locations slope preparatory work is required prior to excavation. This work includes rock scaling and rock reinforcement with rock dowels and shear pins.

Section 204.06 Add the following:

(c) Scaling. Perform rock scaling to remove loose rock, boulders, and rock blocks shown on the plans and as directed by the CO. Rock scale by scalers using hand tools, pry bars and airbags. Rock scaling areas identified on the plans include a general area for scaling or an individual rock identified for removal.

(d) Sinkhole Patching. The road and pavement restoration will be constructed on existing rock fill. The rock fill is known to contain voids of various sizes, depths and shapes that may be exposed during grading at various times and locations. These voids shall be filled with rock conforming to Section 705.02, Class 1 riprap or rock mulch per Section 705.07, and covered with geotextile per Sinkhole Patching Detail on plans to prepare the roadway excavation for placement of the pavement structural section.

204.07 Subexcavation. Delete the subsection and substitute the following:

204.07 Subexcavation.

Use separation-stabilization geotextile, class 1, type E.

Notify the CO of type and source of backfill material anticipated for subexcavation work at the preparatory phase meeting according to Subsection 153.04(a). Excavate unsuitable materials to the limits designated in the plans, or as directed by the CO. Notify the CO of any additional locations requiring subexcavation, or which require a change in surface dimension or depth. Advise the CO of any adverse conditions such as active subsurface water or unstable soil conditions prior to backfilling. Dispose of unsuitable material according to Subsection 204.14. Do not subexcavate during periods of inclement weather.

Submit a neat line drawing of the excavated volume for each subexcavation prior to backfilling. Place geotextile according to Section 207 prior to placing soil or aggregate backfill materials in the subexcavation. Place and compact soil or aggregate backfill according to Section 204.11, or Section 403 for hot asphalt concrete backfill until the subgrade elevation is achieved. Prevent

backfill materials from becoming contaminated with unsuitable materials. Replace the excavated structural section with the structural section shown in the typical section of the plans. Adjust the subgrade elevation to accommodate the replacement structural section.

204.14 Disposal of Unsuitable or Excess Material. Add the following:

Secure environmental clearances according to Subsection 107.10(d).

204.15. Add the following:

Geotextile will be evaluated under Section 207.

Asphalt concrete will be evaluated under Section 403.

Measurement

204.16

(a) Roadway Excavation.

(1) Include the following volumes in roadway excavation:

(e) Delete the text and substitute the following:

Conserved topsoil stripped from cuts.

(h) Delete the text and substitute the following:

Conserved material taken from stockpiles and used in Section 204 work except topsoil measured under Section 624. Only materials required to be conserved by the CO are eligible for measurement under this item.

(2) Do not include the following in roadway excavation: Add the following:

(n) Conserved topsoil stripped from fills.

(g) Subexcavation. Delete the text and substitute the following:

When a subexcavation pay item is shown in the bid schedule:

(1) Measure subexcavation by the cubic yard of excavation measured in its original position

(2) Do not measure backfill material and geotextile for payment.

(h) Rock excavation. add the following:

Measure rock removed by Controlled Blasting by the cubic yard in the hauling vehicle.

Payment

204.17 Add the following:

Payment for Item 20401 is limited to ten percent of the plan quantity of excavation in the cut until the slope rounding in that cut is completed

A price adjustment will be made for fluctuations in the cost of diesel fuel consumed in the performance of applicable construction work according to Subsection 109.06 Pricing of Adjustments Fuel Price Adjustment Provision.

Section 205. — ROCK BLASTING

205.01 Description. Add the following:

This work includes removing rock and overburden from cut slope using controlled blasting and approved excavation methods to the limits and widths shown on the plans. Removal and trimming of additional rock after the initial blasting or cut to provide minimum widths for the road widening is incidental to this work.

At several locations slope preparatory work is required prior to excavation or blasting. This work includes rock scaling and rock reinforcement with rock dowels and shear pins.

205.05 Blasting Plans. Add the following:

Revise the Blasting Plan to a Rock Excavation Plan. Detail the methods for rock excavation, rock reinforcement and rock scaling in the plan. Identify the types of equipment, tools, and approach to making and controlling the excavation to the limits of Rock Excavation shown on the plans.

Section 205.08 Add the following:

Drill presplitting holes for the rock excavation at not more than 24 inches on-center along the top of cut lines shown on the plans and as directed by the CO. Test Blasts are not required. The starting points for each hole are highly variable and will be on flat ledges, rock fractures, and sloped surfaces from 10 degrees to 75 degrees. Chipping away a ledge to begin and control the start of presplit holes is included with this work.

Use rock excavation methods that are suitable for sliver cuts; these include controlled blasting, chemical expanders, hydraulic splitters, or methods approved by the CO. These methods must limit disturbance to the rock beyond the presplit lines and rock excavation limits shown on the plans.

Section 207. – EARTHWORK GEOSYNTHETICS

Measurement

207.09 Delete the second sentence.

Section 208. — STRUCTURE EXCAVATION AND BACKFILL

Description

208.01 add the following:

This work will consist of excavating material for construction of mechanically-stabilized earth retaining walls according to Sections 255 and 261 on the east side of Donner Pass in areas underlain by hard granitic bedrock and rock fill.

Construction Requirements

208.03 General. add the following:

Excavate benches for the wall construction per details shown on plans. Assume 50 percent of excavation for the walls will be in rock fill that will require controlled blasting methods, chemical expanders, hydraulic splitters, or methods approved by the CO per Section 205 to remove boulders and limit the excavation to within the limits shown on the plans.

Where the excavation encounters hard bedrock, stop excavation for the wall and proceed with construction or further excavation as directed by the CO. Reduce wall height and reinforcement lengths as-needed to conform to bedrock surface as directed by the CO.

Section 209. — STRUCTURE EXCAVATION AND BACKFILL

Description

209.01 add the following:

This work will consist of excavating material for construction of culverts on the east side of Donner Pass in areas underlain by hard granitic bedrock and rock fill.

Construction Requirements

209.03 General. add the following:

Excavate trenches to limits shown on the plans according to Subsection 208.03. Assume 50 percent of excavations for culverts will be in rock or boulders that will require rock blasting that will be removed using controlled blasting methods, chemical expanders, hydraulic splitters, or methods approved by the CO per Section 205.

Section 252. – ROCKERY, SPECIAL ROCK EMBANKMENT, AND ROCK BUTTRESS

Description

252.01 Delete the text and substitute the following:
This work consists of constructing rockeries. Rockeries are formed of interlocking, dry-stacked rocks without reinforcing steel, mortar, or concrete. Rockeries may be constructed as either single structures or in tiers.

This work also consists of constructing special rock embankment and rock buttresses. Special rock embankments and rock buttresses are designated as hand-placed or mechanically-placed. Rock embankment consists of furnishing and placing hand-placed or mechanically-placed rock in fill sections. Rock buttress work consists of furnishing and placing hand-placed or mechanically-placed rock in cut sections.

Material

252.02 Add the following:

Plastic pipe	708.04

Construction Requirements

252.03 Rockery. Add the following:
Prior to the start of rockery construction submit the experience of the primary equipment operator responsible for placement of base, facing, and cap rocks.

(b) Erection. Add the following after the third paragraph:
Avoid placing rocks which have shapes that create voids with a linear dimension greater than 12 inches.

Measurement

252.06 Delete the second paragraph and add the following to the second paragraph:
Structure excavation, granular rock backdrain, foundation fill, drainage pipes (perforated and non-perforated), geotextile, and grout for choking rocks will not be measured for payment and are considered incidental to the rockery.

Table 252-1. Delete table and substitute the following:

Table 252-1
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
Source									
Rock for buttresses (705.05)	Measured and tested for conformance (106.04 & 105)	Rock breadth and thickness	–	Subsection 705.05(a)(1)	1 per rock type	Source of material	No	Before using in work	–
		Apparent specific gravity	–	AASHTO T 85	"	"	Yes	"	Not required when using Government -provided source
		Absorption	–	"	"	"	"	"	"
Rock for rockeries (705.06)	"	Apparent specific gravity	–	"	1 per rock type	Source of material	Yes	Before using in work	Not required when using Government -provided source
		Absorption	–	"	"	"	"	"	"
		LA abrasion	–	AASHTO T 96	"	"	"	"	"
		Soundness using sodium sulfate	–	AASHTO T 104	"	"	"	"	"
Rock for special rock embankment (705.04)	Process control (153.03)	Size	–	See Note (1)	1 per 100 yd^3 (80 m^3)	In-place	No	24 hours	–
Rock for buttresses (705.05)	"	"	–	"	1 per 100 yd^3 (80 m^3)	"	"	"	–

(1) For mechanically placed embankments, verify rock size by confirming that the largest accessible rock has an intermediate dimension greater than the D50 size specified in Table 705-2. Also confirm that the smallest accessible rock has an intermediate dimension within the lower D50 size range specified in Table 705-2.

For hand placed embankments, verify rock size by confirming that the largest accessible rock has an intermediate dimension greater than the D75 size specified in Table 705-3. Also confirm that the smallest accessible rock has an intermediate dimension within the D25 size range specified in Table 705-3.

Section 255. — MECHANICALLY-STABILIZED EARTH WALLS

Material

255.01 Replace with the following paragraph:

This work consists of constructing geogrid reinforced mechanically-stabilized earth (MSE) walls with a steel reinforced shotcrete facing.

255.02 Add the following:

Backfill Material	704.03 (b)
Crushed Aggregate	703.06
Reinforced Soil Slopes	261

Construction Requirements

255.03 General. Add the following paragraphs:

Provide submittals for geogrid reinforcements, splices, wire forms, backfill and permanent facing per 261, Reinforced Soil Slopes and details shown on the plans. Do not disturb existing ground until limits of wall installation have been verified and the CO has approved materials submittal and installation methods.

Place reinforced backfill per 261 Reinforced Soil Slopes and amendments per these SCRs.

255.04 Wall Erection. Delete Table 255-1 and substitute the following:

Table 255-1
Construction Tolerance

Facing Type	Vertical Tolerance[(1)]	Horizontal Tolerance[(2)]	Horizontal Straight Edge Point Check[(3)]
Precast concrete panel, masonry block	0.5 inch (13 mm)	0.5 inch (13 mm)	0.75 inch (19 mm)
Welded wire, gabions	1 inch (25 mm)	1 inch (25 mm)	2 inch (51 mm)

(1) Wall vertical tolerance at top of wall for every 10 feet (3 meters) of wall height. For example, 65 feet (20 meter) wall height multiply 6.5×value.

(2) Wall horizontal tolerance at top of wall for every 10 feet (3 meters) of wall height.

(3) Maximum horizontal deviation at a point in the wall from a 10-foot (3-meter) straightedge placed horizontally or vertically on the theoretical plane of the design face.

255.04 Wall Erection. Add the following:

(e) Shotcrete Facing. Place textured reinforced shotcrete facing over the temporary wire facing per Section 566. The texture shall be a pattern that simulates the color and face of the local granitic bedrock. Construct test panels with texture and color and obtain approval from the CO prior to placing production shotcrete. Do not apply shotcrete until CO approves the texture and color. Do not apply shotcrete until CO approves the texture and color.

255.05 Backfilling. Delete the text and substitute the following:

Backfill the stabilized volume with crushed aggregate and reinforced soil backfill per details on plans. Consolidate crushed aggregate behind wall facing by rodding or other approved means to produce a uniform, tight facing fill. Place crushed aggregate in sequence with select granular backfill such that the top of the adjacent materials are within 6 inches (150 millimeters) of one another.

Place select backfill material from the back of crushed aggregate to a minimum of 12 inches (300 millimeters) past end of the reinforcement. Ensure that no voids exist below the reinforcement. Compact each layer according to Subsection 209.10, except use an acceptable lightweight mechanical or vibratory compactor within 36 inches (900 millimeters) of the wall face.

Where the stabilized volume supports spread footings for bridges or other structural loads, compact the top 5 feet (1.5 meters) to at least 100 percent of the maximum density.

Do not damage or disturb the facing or reinforcing elements. Do not operate equipment directly on top of the reinforcing mesh or strips. Correct damaged, misaligned, or distorted wall elements.

Backfill and compact behind the stabilized volume with backfill material according to Subsections 209.09 and 209.10. At the end of the day's operation, slope the last lift of backfill away from the wall face to direct surface runoff away from the wall. Do not allow surface runoff from adjacent areas to enter the wall construction area.

Measurement

255.07 Delete the fourth paragraph.

Section 260. — ROCK BOLTS AND DOWELS

260.01 Add the following:

Rock reinforcement of individual blocks using rock dowels or bolts is required to secure key blocks. Include furnishing and installing the approved reinforcements per details on the plans.

Install rock reinforcements prior to rock excavation to secure and stabilize rock beyond the rock excavation limits shown on the plans. Review proposed rock excavation limits and each rock reinforcement location in the field with CO prior to beginning rock excavation, scaling or reinforcement. Install rock dowels or rock bolts at locations shown on the plans and at locations directed by the CO based on review of field conditions. CO will determine whether the reinforcement is to be installed as a rock bolt or rock dowel.

Install shear pins at selected locations prior to rock excavation as determined by the CO based on review of field conditions. No locations have been identified for the shear pin detail shown on the plans. Install shear pin in a way that the bar is in direct contact with the block requiring stabilization.

Section 261. — REINFORCED SOIL SLOPES

261.03 Submittals. Add the following:

(b) Facing details. Provide installation methods and connection details for facing system. Include both the temporary wire forms used during placement of the reinforcement and backfill and details for the permanent reinforced shotcrete facing.

261.05 Soil Reinforcement and Facing. Add the following:

Construct facing to the lines and grades shown on the plans. Use temporary wire forms approved by the CO to support the face of the backfill during placement of the reinforcement and backfill. Compaction within 3 feet of the of the back of the facing shall be done with small, hand-operated vibratory tamper or roller. Place backfill and use forms with sufficient stiffness to prevent deflection, bulging, tilting or displacement of the forms during backfill placement. Remove and replace temporary forms that bulge or deflect more than ½-ich during placement or where the temporary facing leans or displaces past vertical.

Place textured reinforced shotcrete facing over the temporary wire facing per Section 566. The texture shall be a pattern that simulates the color and face of the local granitic bedrock. Construct test panels with texture and color and obtain approval from the CO prior to placing production shotcrete. Do not apply shotcrete until CO approves the texture and color.

Measurement

261.07 Delete the second paragraph and add the following:

Measure earthwork under Section 204.

Measure reinforcement under Section 207.

Section 302. — MINOR CRUSHED AGGREGATE

302.01. Add the following:

All asphalt millings produced from the asphalt pavement removal to be used and placed as Minor Crushed Aggregate for the project in accordance with Sections 203 and 302 prior to the import of crushed aggregate base. Asphalt milling and FDR shall not be used as shouldering material.

302.06 Acceptance. Add the following to the second paragraph:

Sample material from the windrow or roadbed after processing but prior to compaction at the frequency shown in Table 302-1. Submit samples to the CO for verification. Materials that do not meet the approved certification will be considered unacceptable.

Delete Table 302-1 and substitute the following:

Table 302-1
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
Production								
Crushed aggregate[1]	Measured and tested for conformance (106.04)	Moisture-Density	AASHTO T 180, Method D [3]	1 per aggregate supplied	Production output or stockpile	No	Before using in work	–
		Gradation[2]	AASHTO T11 and T27	1 per 500 cubic yards	From the windrow or roadbed after processing.		Before placing next layer	
		Density	AASHTO T310 or other approved procedures	1 per 500 cubic yards	In-place after compaction	"	Before placing next layer	For Method 2 compaction only
Crushed aggregate	Process control (153.03)	Moisture content (in-place)	"	"	"	"	"	–
Finished Product								
Crushed aggregate	Measured and tested for conformance (106.04)	Surface tolerance & grade	Subsection 301.06	Determined by the CO	Surface of final course	No	Before placement of next layer or as requested	–

(1) Sampling and testing required for roadway aggregate.
(2) Use only sieves indicated for the specified gradation.
(3) Minimum of 5 points per proctor.

302.08 Add the following:

The work of milling, processing, hauling, stockpiling, placement, and compaction of asphalt millings as Minor Crushed Aggregate will not be paid for separately but will be paid for at the contract price per unit of measurement for the Section 203 pay item for asphalt pavement removal in the bid schedule.

Section 304. – FULL DEPTH RECLAMATION, METHOD 2

304.03 General. Add the following:

The subgrade contains areas of shallow hard bedrock adjacent to existing rock cuts, hard boulders associated with existing rockfill that may be encountered within the specified depths of pulverization. Before pulverizing, rip the existing pavement and subgrade to identify areas of hard rock and flush out boulders or roots. Where hard rock is present within the anticipated depth of pulverization, remove the existing pavement, base and subgrade and windrow the material for pulverization.

Concrete beams are known to be buried below the existing pavement on the east side of Donner Pass. The beams serve as deadman and are connected to the existing guardrail. The beams may be present within the specified depths of pulverization. Locate and/or remove the concrete beams to avoid interference with the pulverization.

304.05 Pulverizing. Add the following:

Compact the pulverized material in lifts not to exceed 10 inches in accordance with Section 304.07 (b). For pulverization depths greater than 10 inches, FDR material to be windrowed and/or stockpiled to accommodate proper compaction. Pulverization may be done with multiple passes. Spread and remove material as needed for the grades and cross sections designated on the plans. Reuse excess pulverized material for the proposed road widening and as approved by the CO. The work of processing, spreading, hauling, stockpiling, placement, and compaction of FDR material will not be paid for separately, but is included in the contract price per unit of measurement for the Section 304 pay items listed in the bid schedule.

Section 401. — ASPHALT CONCRETE PAVEMENT BY GYRATORY MIX DESIGN METHOD

Description

401.01 Delete the second paragraph and substitute the following:

Asphalt concrete pavement nominal maximum size aggregate is designated according to Tables 401-1 and 703-4. Equivalent single axle loads (ESAL) or number of gyrations at design (N_{Design}) is designated according to Table 401-1.

Delete the fifth paragraph and substitute the following:

Antistrip additive type is designated according to Subsection 702.05. A minimum of one percent Type 3 (lime) is required in the asphalt concrete mixture.

Add the following:

Pavement roughness is type III-B, and IV as shown in Subsection 401.16.

Asphalt binder grade is PG 64-28 M. The Pressure Aging Vessel test temperature shall be 212°F (100°C).

Construction Requirements

401.03 Composition of Mix (Job-Mix Formula). Add the following after the first paragraph:

Compact specimens with the gyratory effort corresponding to the design ESAL level of 0.3 to <3 million. Use a gyratory compactor which meets the internal angle requirement according to AASHTO T 312.

If more than 1.0 percent hydrated lime is proposed in the JMF, provide AASHTO T 283 test results showing the additional lime is necessary to meet the minimum tensile strength ratio requirements in Table 401-1.

(c) Submission

(1) Aggregate and mineral filler.

(a) Target values: Delete line *(2)* and substitute the following:

(2) Designate target values within the gradation band specified for the nominal maximum size aggregate grading shown in Table 703-4. Allowable deviations are shown in Table 703-5:

(2) Asphalt binder. Add the following:

(e) Laboratory mixing and compaction temperatures and maximum plant mixing temperature

(3) Antistrip additives. Add the following:

(e) Dosage rate.

(4) RAP. Add the following:

(f) Optional sheet for RAP on Form FHWA 1641.

(d) Verification. Delete the first paragraph and substitute the following:

The verification process starts when all required job mix formula documentation and materials are received. The CO will review the job mix formula and may perform job mix formula verification testing. If verification testing is performed, the information supplied in the Contractor's job mix formula must agree with the verification test results within the tolerances shown below. Do not begin asphalt concrete mix production for the control strip until the JMF has been approved.

Delete lines (3) and (4) and substitute the following:

(3) Bulk specific gravity of aggregate (G_{sb}). The Contractor's coarse and fine G_{sb} is verified if the CO's results are within 0.038 for AASHTO T 85 and 0.066 for AASHTO T 84.

(4) Voids in the mineral aggregate (VMA). The Contractor's VMA is verified if the CO's result is within the specification limit in Table 401-1.

Add the following:

(8) Hveem stabilometer value. The Contractor's Hveem stabilometer value is verified if the CO's result is above the minimum specification of 30.

Table 401-1 Gyratory Asphalt Concrete Mix Design Requirements, AASHTO R 35. Add the following note:

(4) For AASHTO T 283, use 4-inch (100-millimeter) diameter specimens. Note that AASHTO T 283 requires a freeze-thaw cycle.

401.05 Equipment.

(b) Materials Transfer Vehicle (MTV). Delete this Subsection and substitute the following:

(b) Materials Transfer Vehicle (MTV). Furnish an MTV with the following:

(1) Independently operated with its own driver/operator;

(2) Independent from the paver;

(3) A loading system with the ability to receive mixtures from hauling equipment;

(4) A minimum storage capacity of 15 tons (13.6 metric tons) with a remixing system in the material storage bin;

(5) Remixing capability within the storage bin;

(6) A discharge conveyor to deliver the mixture to the paver hopper; and

(7) A mass not exceeding the maximum legal loadings on structures.

Pick-up machines, hopper inserts, and material transfer devices are not considered MTVs.

In the event the MTV malfunctions during paving operations, the Contractor must suspend paving, however mix in transit and stored in the silo at the time of breakdown may be placed without the use of an MTV. Do not resume mix placement until the MTV is operational.

401.14 Compacting. Add the following:

Do not cause cracking, shoving, or undue displacement. Continue rolling until all roller marks are eliminated, all cracks are sealed, and the required density is obtained. For HMA, do not roll the mix after the surface cools below 175 °F (80°C).

401.15 Joints, Trimming Edges, and Cleanup. Add the following:

Make the longitudinal joint in the top layer at the centerline of the pavement on two-lane roadways or at the lane lines of roadways with more than two lanes. Establish the centerline of the pavement from recorded data defined in Subsection 152.05(b) or construction staking data if provided by the government. Offset the longitudinal joint in the layer immediately below at least 6-inches (150-millimeters) from the joint.

For curve widening see the plans for locations and details. For two-lane roadways make the longitudinal joint at the centerline of the pavement. Do not vary the shoulder width where curve widening exists.

At connections to existing pavements and previously placed lifts, make the transverse joints vertical to the depth of the new pavement. Form transverse joints by cutting back the previous run to expose the full-depth of the course.

401.17 Acceptance. Delete line (b) and substitute the following:

(b) VMA. The specification limit shown in Table 401-1. After the JMF has been verified according to Subsection 401.03 and 401.12, use the Contractor's combined coarse and fine bulk specific gravity of aggregate G_{sb} values to calculate VMA on field produced asphalt concrete mix samples.

401.19 Payment. Add the following:

A price adjustment will be made for fluctuations in the cost of asphalt binder used in the performance of applicable construction work according to Subsection 109.06 Pricing of Adjustments Asphalt Binder Price Adjustment Provision.

A price adjustment will be made for fluctuations in the cost of diesel fuel consumed in the performance of applicable construction work according to Subsection 109.06 Pricing of Adjustments Fuel Price Adjustment Provision.

Section 403. — ASPHALT CONCRETE

Description

403.01 Delete the second paragraph and substitute the following:

Asphalt concrete type is designated as Type I according to Subsection 403.02.

Add the following:

Asphalt binder grade is PG 64-28 M in accordance with AASHTO M 320.

Construction Requirements

403.02 Composition of Mix (Job-Mix Formula). Add the following:

The CO may perform mix design-verification testing to confirm the mix meets the contract requirements. If verification testing is required, submit a loose mix sample to the CO 14 days prior to placement.

(a) Type I. Delete the subsection and Table 403-1 and substitute the following:

Submit a state department of transportation volumetric JMF used locally and approved within the past 12 months for approval at least 30 days before production. For each proposed JMF, submit a production certification conforming to state department of transportation specifications.

If the 401 asphalt mix design is approved before the execution of the crack and seat, the contractor may use the 401 asphalt mix design for the leveling course (without statistical evaluation).

403.09 Compacting. Add the following:

For HMA, do not roll the mix after the surface cools below 175 ºF (80°C).

Along forms, curbs, headers, walls, and other places not accessible to the rollers, compact the mix with alternate equipment to obtain the required compaction.

403.12 Acceptance. Add the following:

During production placement of the mix, sample loose mix and compacted cores according to Table 403-2 and submit to the CO for acceptance. Materials that do not meet the approved job-mix formula are considered unacceptable.

Delete Table 403-2 and substitute the following:

Table 403-2
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
Mix Design								
Asphalt concrete mixture Type I (403.02(a))	Measured and tested for conformance (106.04)	Job-mix formula	Subsection 403.02(a)	When requested by the CO.	Flowing mix stream (bin or belt discharge) or behind the paver before compaction.	Yes	Before approval of job-mix formula	Tested by the CO
Production								
Asphalt concrete, Type I (403.02(a))	Measured and tested for conformance (106.04)	Job-mix formula	Subsection 403.02	1 per 700 tons (650 metric tons)	Behind the paver before compaction.	Yes	24 hours	–
		Density [1]	AASHTO T 166	"	In-place after Compacting	"	"	Deliver cores to CO for testing
		Maximum specific gravity	AASHTO T 209 [2]	"	Behind the paver before compaction	"	"	–
		Surface Tolerance	Straightedge measurement, Subsection 403.11	Continuously, after compaction	Finished pavement surface	No	"	–
		Placement temperature	–	First load and as determined by CO thereafter	Hauling vehicle before dumping, or windrow before pickup	"	Upon completion of measurement	–

Table 403-2 (continued)
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
Production								
	Process control (153.03)	Gradation at the plant	AASHTO T 27 & T 11	Contractor determined	Cold feed or hot bins as applicable	"	24 hours	–
		Moisture content of aggregates	AASHTO T 255	"	Stockpile	"	"	–
		Density	ASTM D2950	1 per 500 feet (150 meters)	In-place after compacting	"	"	–
Asphalt concrete, Type II (403.02(b))	Measured and tested for conformance (106.04)	"	"	3 per 700 tons (650 metric tons)	In-place after compacting	"	"	–

(1) Dry cores to constant mass at 125±5°F (52±3 °C) or vacuum dry, ASTM D7227 before testing. For asphalt concrete Type I, cut two 6-inch (150-millimeter) diameter side by side cores. Remove them with a core retriever and fill and compact the core holes with asphalt concrete mixture. Label the cores and protect them from damage due to handling and temperature. Submit one core for verification testing. Dry the other core to constant mass at 125±5 °F (52±3 °C) or vacuum dry it according to ASTM D7227 before performing the core density and measuring the thickness. Use 62.245 pounds per cubic foot (997.1 kilograms per cubic meter) to convert specific gravity to density. Use AASHTO T 166 regardless of the volume of water absorbed. Use the average maximum specific gravity value (AASHTO T 209) of the first three samples to determine the percent compaction of each Lot.

(2) Do not use the dry back method (Section 11 of AASHTO T 209).

Section 413. – REMOVAL OF ASPHALT PAVEMENT

413.03 Milling. Add the following:

Remove the existing asphalt pavement by cold milling to a depth that exposes all of the surface of the Portland cement concrete pavement prior to cracking and seating where shown on plans.

Section 502. — MODIFIED CRACK AND SEAT CONCRETE PAVEMENT

Delete Section 502 — CONCRETE PAVEMENT RESTORATION and replace with the following:

Description

502.01

This work consists of cracking, seating, and preparing the surface of the existing Portland Cement Concrete Pavement (PCCP) after milling of existing asphalt pavement and prior to placing asphalt leveling course or FDR material.

Equipment

502.02 Equipment.

(a) Pavement Breaker: Use a multi-head type breaker with at least 12 hammers of not more than 1,800 pounds each capable of producing the desired cracking pattern without displacing the concrete more than one-half inch vertically or causing spalling of the concrete to a depth greater than one inch. Do not use guillotine type breakers or unguided free- falling weights such as "headache balls." or pile drivers. Mount the device on a vehicle capable of controlled forward and transverse movement. Provide a screen during the cracking process to protect vehicles in the adjacent lane from flying chips.

(b) Roller: Seat cracked concrete with either:

a. Oscillating type pneumatic-tired roller at least 4 feet wide. Pneumatic tires must be of equal size, diameter, type, and ply. The tires must be inflated to 60 psi minimum and maintained so that the air pressure does not vary more than 5 psi. The roller's gross static weight must be at least 15 tons.

b. Vibratory pad-foot roller exerting a dynamic centrifugal force of at least 10 tons

502.03 General.

(a) Submit a plan for approval by the Contracting Officer documenting the methods and equipment to accomplish the work outlined in Subsection 502.04

(b) Remove existing bituminous patches by cold milling before cracking the concrete pavement.

(c) Crack and seat existing concrete pavement within limits shown on plans.

(d) Roadway is considered two 12-foot lanes. Crack and seat the eastbound and westbound lanes separately unless specifically allowed by these specifications or the Contracting Officer.

(e) Perform all cracking and seating work during daylight hours. Clean the cracked surface of loose material at the end of each working day suitable to allow traffic on treated surface.

(f) Crack the pavement full depth while maintaining aggregate interlock between the pieces. Do not unduly displace the concrete; damage drainage facilities, utilities, or other property; or destabilize the base or subgrade.

(g) Furnish and apply water for dust control as directed by the Contracting Officer.

(h) The Contracting Officer will designate test sections up to 1,000 square feet in area before cracking operations begin.

(i) Crack the test sections using varying striking patterns and energy until a satisfactory cracking method is established. Perform this process for each breaker that is used. Immediately before cracking the test section, apply water to the pavement surface so that cracking can be readily evaluated.

(j) Drill cores at least 6 inches in diameter under ASTM C42 to verify cracking in the CO's presence. Take at least 2 cores per test section and two cores per lane mile for each pavement cracking machine used at locations directed by the Contracting Officer.

(k) Backfill core holes with rapid setting concrete approved by the Contracting Officer.

502.04 Cracking.

(a) Crack existing concrete pavement using the procedures and equipment from the authorized test section.

(b) Do not allow flying debris during cracking operations.

(c) Do not destroy the concrete interlock between the cracked portions during cracking and seating operations.

(d) Cracking equipment must impact the pavement with a variable force in a controlled location.

(e) Crack the concrete pavement transverse to centerline at 18 inch minimum to 30 inch maximum spacings. No more than 20 percent of the spacings to be greater than 24 inches. Crack pavement full depth of the PCCP but still maintain aggregate interlock on the fractured faces. Verify full depth cracking by taking 6 inch cores as directed by the Contracting Officer. Do not impact the pavement within 1 foot of another break line, pavement joint, or edge of pavement.

(f) Cracks must be vertical, continuous, and penetrate the full depth of pavement. Cracks must be within 6 inches of vertical along the full depth of pavement. Do not cause surface spalling over 0.10-foot deep or excessive shattering of the pavement.

(g) Overlay Portland Cement Concrete Pavement (PCCP) within 14 days after cracking and seating. If the concrete pavement has no more than 0.10 foot of asphalt concrete on the surface, you may crack the pavement without removing the asphalt concrete. After cracking, construct an inspection strip by removing at least 500 square feet of asphalt concrete at a location determined by the Engineer. Construct additional inspection strips to demonstrate compliance where ordered by the Engineer.

(h) After cracking, allow public traffic on the cracked or initial pavement layer for no more than 15 days.

502.05 Seating.

(a) Roll the cracked surface to firmly seat the cracked pieces and produce an even surface. Use a minimum of two passes. Continue rolling the cracked pavement until the pieces are seated to the satisfaction of the Contracting Officer. Do not perform rolling operations under excessively wet subgrade conditions.

(b) Remove rocking pieces of concrete detected during the rolling operation. Remove any loose concrete from edges of void after removing rocking pieces. Fill the voids left by removed pieces with concrete conforming to Section 501. Place and consolidate the concrete to eliminate voids at the interface of the patch and existing concrete. Finish surface by troweling and floating to conform to adjacent concrete surface as directed by CO.

502.06 Cleaning.

(a) Clean the cracked and seated pavement of all dirt, spalls, and loose material by power brooming and air blowing with 100-psi nominal pressure before opening to traffic and prior to prime coating.

(b) Fill joints and, cracks wider than ¾ inch and deeper than 1 inch by applying tack coat and placing asphalt pavement patch per Section 418.05.

502.07 Acceptance. Construction of modified crack and seat of concrete pavement will be evaluated under Subsections 106.02 and 106.04. Drill cores at least 6 inches in diameter to verify cracking. The CO will designate test sections up to 1,000 square feet in area. Take 2 cores per test section and 2 cores per lane mile for each pavement cracking machine used at locations directed by the CO.

502.08 Measurement. Measure cracking and seating pavement by the square yard according to Subsection 109.02.

502.09 Payment. The accepted quantities will be paid at the contract price per unit of measurement for the Section 502 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this section. See Subsection 109.05. The work of filling voids, joints, cracks, and spalls will not be paid for separately, but is included in the cost of cracking and seating pavement.

Section 601. — MINOR CONCRETE STRUCTURES

601.07 Acceptance. Add the following:

The concrete mixture's density, air content, slump, temperature, and compressive strength will be evaluated under Subsections 106.02 and 106.04.

Table 601-2
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time	Remarks
Source								
Aggregate (703.01 & 703.02)	Measured and tested for conformance (106.04 & 105)	Quality	Subsection 703.01 & 703.02	1 per material type	Source of material	Yes	Before producing	–
Mix Design								
Concrete Composition (601.03)	"	All	Subsection 601.03	1 per mix design	"	If requested	"	–
Production								
Concrete[(1)]	Measured and tested for conformance (106.04)	Density	AASHTO T 121	1 set per 30 yd^3 (25 m^3), but not less than 1 per day	Discharge stream at point of placing	No	Upon completing tests	–
		Air content	AASHTO T 152 or AASHTO T 196	"	"	No	"	–
		Slump	AASHTO T 119	"	"	No	"	–

		Temperature	ASTM C1064	"	"	No	"	–
		Compressive strength[2][3] (28-day)	AASHTO T 23 & T 22	1 set per 30 yd^3 (25 m^3), but not less than 1 per day	Discharge stream at point of placing	No	28 days	Deliver cylinders to the CO or designated laboratory for scheduled testing

(1) Sample according to AASHTO R 60, except composite samples are not required.
(2) Cast at least four compressive strength test cylinders for 6- by 12-inch (150- by 300-millimeter) specimens or six compressive strength cylinders for 4- by 8-inch (100- by 200-millimeter) and carefully transport the cylinders to the job site curing facility.
(3) A single compressive strength test result is the average result from two 6- by 12-inch (150- by 300-millimeter) or three 4- by 8-inch (100- by 200-millimeter) cylinders cast from the same load.
(4) If the point of placement is different from the point of discharge, correlate the discharge tests with the placement tests to document the changes.

Section 617. — GUARDRAIL

Description

617.01

(a) Add the following:

MGS — Midwest Guardrail System (MGS)

(d) Add the following:

MGS Flared	- Straight flared MGS W-beam terminal
MGS Tangent	- Tangent MGS W-beam terminal
SBL-FAT	- Flared SBL anchor terminal

Material

617.02 Add the following**:**

Painting	563

Construction Requirements

Treat all galvanized material for guardrail systems with a weathering agent according to Section 563.

Use tangent terminals meeting MASH Test Level (2) or flared terminals meeting NCHRP Report 350 as designated in plans . When flared or tangent terminals are required, submit the installation manual from the manufacturer for the terminal, including inspection checklists.

617.04 Post Installation. Delete the fifth and sixth paragraphs and substitute the following:

Layout post locations prior to installing drainage facilities such as pipe culverts and drop inlets. Adjust location of drainage facilities to avoid conflicts with drainage structures as directed by the CO.

When a post cannot be placed at its normal location due to an impenetrable object an additional blockout may be added. If the post cannot be offset, follow the post in rock detail, the long span detail, or omit a post as shown in the plans. Do not change the post lengths or spacings in terminal sections.

Use the post length as shown in the plans.

617.11 Acceptance. Add the following**:**

Painting will be evaluated under Section 563.

Section 623. — GENERAL LABOR

Delete the text of this Section and substitute the following:

Description

623.01 This work consists of furnishing workers and hand tools for construction work, survey crews, and furnishing qualified personnel to perform technical work ordered by the CO and not otherwise provided for under the contract.

623.02 Workers and Equipment. Furnish competent workers and appropriate hand tools for the work. Provide a crew of sufficient size and qualifications necessary to accomplish the required surveying services within acceptable tolerances.

Obtain approval of the length of a workday and workweek before beginning the work. Keep daily records of the number of hours worked. Submit the records along with certified copies of the payroll.

623.03 Surveying Services. Furnish personnel, equipment, and material that conform to the requirements of Subsection 152.01. Survey according to Section 152.

Survey and establish controls within the tolerances shown in Table 152-1, or within other tolerances as established by the CO.

Prepare field notes in an approved format. Furnish calculations. All field notes, supporting documentation, and calculations become the property of the Government upon completion of the work.

623.04 Office Technical Services. Furnish qualified engineering personnel experienced in highway construction and design, capable of performing in a timely and accurate manner. Provide personnel with a minimum of NICET Level II certification in highway design and construction, or State (SHA) or industry certification-related design and construction equivalent to their intended responsibilities. Personnel with 2 years or more of recent job experience in the type of highway design and construction provided for under the contract may be used in lieu of certifications. Provide the names and relevant experience of all personnel. Furnish supporting tools and equipment (e.g., calculator, computer, and software, and appropriate and commonly-used drafting tools for the assigned task).

All calculations, notes, and supporting documentation become the property of the government upon completion of the work.

623.05 Acceptance. General labor work will be evaluated under Subsection 106.02.

Additional surveying services will be evaluated under Section 152.

Hired technical services will be evaluated under Subsections 106.02 and 106.04

Measurement

623.06 Measure the Section 623 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Round portions of an hour up to the nearest half hour. Measure time in excess of 40 hours per week at the same rate as the first 40 hours.

Measure surveying service by the crew hour regardless of crew size. Do not measure time spent in making preparations, performing calculations, plotting cross-sections, processing computer or other data, and other efforts necessary to successfully accomplish the ordered survey services.

Do not measure time for worker’s transportation to and from the project site.

Measure office technical services by the hour, as ordered by the CO, for performing calculations, plotting cross-sections, and processing computer or other data.

Payment

623.07 The accepted quantities will be paid at the contract price per unit of measurement for the Section 623 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this section. See Subsection 109.05.

Section 633. — PERMANENT TRAFFIC CONTROL

Description

633.02 Add the following:

Sign posts to be galvanized metal square tubular steel in accordance with section 718.04(b)(2) and the Nevada County Standard Sign and Post Installation detail, except where wood sign posts are specified in the Permanent Sign Summary in the plans. Wood sign post materials to be in accordance with section 718.04(a).

Construction Requirements

633.05 Sign Panels. Add the following:

For all permanent sign panels, uniformly apply a 2-inch (50 millimeters) wide protective overlay film to the upper edge(s) of the sign and wrap over the front and back of the sign panel equally. Apply the film using methods recommended by the manufacturer. Film must be manufactured expressly for use as a protective overlay film for outdoor traffic signs.

Film must be applied during manufacture of signs; field installation is not permitted.

Section 634. — PERMANENT PAVEMENT MARKINGS

Description

634.01 Add the following to the list of pavement marking types:

Type L – Methyl Methacrylate Pavement Markings.

Construction Requirements

634.03 General. Add the following to the ninth paragraph:

Apply glass beads to parking lot markings immediately following application to ensure adhesion.

Delete the section and substitute the following:

634.09 Methyl Methacrylate Pavement Markings (Type L). Do not apply paint for plural component painted traffic stripes and pavement markings until authorized. Comply with the paint manufacturer's instructions for the temperature of the paint and the temperature and condition of the pavement surface.

Measurement

634.12 Add the following after the first paragraph:

When two applications of paint are required, measure each application.

Delete the second paragraph and substitute the following:

When pavement markings are measured by the linear foot or mile, measure the length of line applied along the centerline of each line applied regardless of color or line width. Measure broken or dotted pavement lines from end to end of the line including gaps. Measure solid pavement lines from end to end of each continuous line. For wide lines (12 inches (300 millimeters) in width or greater), adjust the measured length of line in the ratio of the required width to 4 inches (100 millimeters).

Section 635. — TEMPORARY TRAFFIC CONTROL

Description

635.01 Delete the second paragraph and substitute the following:

Arrow board, portable changeable message sign, barricade, and warning light types are designated in the MUTCD.

Material

635.02 Delete the Subsection and substitute the following:

635.02 Conform to the MUTCD and the following Sections and Subsections:

Concrete barrier (temporary)	618
Delineator and object marker retroreflectors	718.08
Guardrail (temporary)	617
Retroreflective sheeting	718.01
Sign panels	718.03
Sign posts	718.04

Sign hardware	718.06
Temporary plastic fence	710.11
Temporary pavement markings	718.16

Construction Requirements

635.07 Construction Signs. Delete the first paragraph and substitute the following:

Fabricate and install sign panels according to Subsection 633.05. Use Type III, IV, VIII, IX, or XI prismatic retroreflective sheeting. Use fluorescent sheeting for orange signs. For roll-up signs, use fluorescent Type VI retroreflective sheeting.

Add the following:

Provide the same type of sheeting on all post-mounted construction signs that pertain to the project.

Use crashworthy posts within the traversable area adjacent to traffic.

635.09 Flaggers. Add the following:

Perform the work described under MUTCD Part 6. Use fluorescent retroreflective sheeting on the "SLOW" side of the flagger paddle.

635.24 Measurement Delete the Subsection and substitute the following:

Measure the Section 635 pay items listed in the bid schedule according to Subsection 109.02.

635.25 Payment Delete the subsection and substitute the following:

Progress payments for temporary traffic control lump sum will be paid as follows:

(a) 25% of the pay item amount will be paid when initial construction signs are in place and needed devices onsite for use.

(b) Additional 65% of pay item amount will be prorated based on total work complete

(c) The remaining portion of the pay item amount will be paid when the construction signs and devices are no longer needed and have been removed from the project.

Section 702. — ASPHALT MATERIAL

702.01 Asphalt Binder. Delete the Subsection and add the following:

Asphalt binder will be Grade PG 64-28M conforming to Table 702-1A. Blend the PG 64-28M at the source of supply and deliver as a completed mixture to the job site. Do not modify the asphalt binder using polyphosphoric acid.

Table 702-1A
Asphalt Binder Grade PG 64-28M

Test	Test Method	Requirement
Tests on Original Binder:		
Viscosity @ 135°C, Pa·s	AASHTO T 316	3.00 Max. (1)
Dynamic Shear, G*/sin δ, Test Temp 64°C @ 10 rad/s, kPa	AASHTO T 315	1.00 Min.
Polymer Content, % by mass	(2)	Report
Tests on Residue from R.T.F.O., AASHTO T 240:		
Mass Loss, %	AASHTO T 240	1.00 Max.
Dynamic Shear, G*/sin δ, Test Temp 64°C @ 10 rad/s, kPa (3)	AASHTO T 315	2.20 Min.
Dynamic Shear, Delta (degrees), Test Temp @ 10 rad/s)	AASHTO T 315	80 Max.
Elastic Recovery, %, Test Temp 25°C, %	AASHTO T301	75 Min.
Tests on Residue from Pressure Aging Vessel, AASHTO R28 @ 100°C:		
Dynamic Shear, G*sin δ , Test Temp 22°C @ 10 rad/s, kPa	AASHTO T 315	5000 Max.
Creep Stiffness, S, Test Temp –18°C @ 60 sec, MPa	AASHTO T 313	300 Max.
Creep Stiffness, m-value, Test Temp –18°C @ 60 sec	AASHTO T 313	0.300 Min.

(1) The spec is waived if the supplier provides written certification the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
(2) Certificates of compliance provided for the material shall certify that the minimum polymer content is present.
(3) The test temperature is the temperature at which G*/sin δ is 2.2 kPa. A graph of log G*/sin δ plotted against temperature may be used to determine the test temperature when G*/sin δ is 2.2 kPa. A graph of delta versus temperature may be used to determine the delta at the temperature when G*/sin δ kPa. The graph must have at least 2 points that envelope G*/sin δ of 2.2 kPa, and the test temperature must not be more than 6 °C apart. Direct measurement of delta at the temperature when G*/sin δ is 2.2 kPa is also acceptable.

Section 703. — AGGREGATE

703.01 Add the following:

703.01 Fine Aggregate for Concrete.

(c) Sand equivalent value, AASHTO T 176, Alternate Method No. 2 — 75 min.

703.06 Crushed Aggregate. Add the following to the end of the paragraph:

When aggregate is used as a surface course, furnish an aggregate with a Plasticity index (AASHTO T 90) conforming to Table 703-3a.

Table 703-3a
Surface Course Gradation and Plasticity Index

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)
¾ inch (19 mm)	100
No. 4 (4.75 mm)	41-71
No. 40 (425 µm)	12-28
No. 200 (75 µm)	5-20
Plasticity Index (PI)	4-12

Section 704. – SOIL

704.03 Backfill Material. Replace line (a)(2) with the following:

(2) Soil Classification, AASHTO M 145 — A-1

704.04 Structural Backfill. Delete line (c) and add the following:

(c) Plastic index, AASHTO R 58 and T 90 — 6 max.

(d) Liquid limit, AASHTO R 58 and T 89 — 30 max.

Add the following Subsection:

704.09 Slope Fill. Furnish sound, durable, granular soil free from organic matter or other deleterious material (such as shale or other soft particles with poor durability). Conform to the following:

(a) Quality requirements.

(1) Gradation	Table 704-3
(2) Sodium sulfate soundness loss (5 cycles)	15% max.
(3) Liquid limit, AASHTO R 58 and T 89	40 max.
(4) Plastic index, AASHTO R 58 and T 90	20 max.

Table 704-3
Slope Fill Gradation

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)
4 inch	100
No. 4	20–100
No. 40	0 – 60
No. 200	0 – 35

Section 705. — ROCK

705.06 Rock for Rockeries. Delete the following:

(d) Coarse durability index, AASHTO T 210	52 min.

Add the following:

705.08 Wall Facing Fill. Furnish hard, durable, angular rock that is free of organic or other unsuitable material. Angular rock is characterized by sharp, clean edges at the intersections of relatively flat surfaces. Do not use shale, rock with shale seams, or other fissile or fissured rock that may break into smaller pieces in the process of handling and placing. Conform to the following:

(a) Gradation. Furnish rock with breadth and thickness at least one-third its length with a 6 in (150 mm) maximum dimension. Ensure that 95 percent of wall facing fill particles minimum dimension exceeds welded wire facing opening with remaining 5 percent exceeding one-half welded wire facing opening.

(b) Soundness of aggregate using sodium sulfate, AASHTO T 104 (5 cycles)	15 percent loss max.
(c) Los Angeles abrasion, AASHTO T 96	50 percent max.

Section 710. — FENCE AND GUARDRAIL

710.06 Rail Elements.

(a) Metal beam rail. Delete the first sentence and substitute the following:

Furnish guardrail posts conforming to the Task Force 13 *Guide to Standardized Roadside Safety Hardware* available at www.tf13.org.

(b) Box beam rail. Delete the first sentence and substitute the following:

Furnish guardrail posts conforming to the Task Force 13 *Guide to Standardized Roadside Safety Hardware* available at www.tf13.org.

(d) Steel-backed log rail. Delete the second paragraph and substitute the following:

Fabricate steel backing elements according to ASTM A242.

710.07 Guardrail Posts. Delete the first sentence and substitute the following:

Furnish guardrail posts conforming to the Task Force 13 *Guide to Standardized Roadside Safety Hardware* available at www.tf13.org.

710.09 Guardrail Nuts, Bolts, and Cables.

(b) Weathering nuts and bolts. Delete the second sentence and substitute the following:

Furnish bolts conforming to ASTM F3125, Type 3.

710.10 Guardrail Hardware. Delete the first sentence and substitute the following:

Furnish guardrail posts conforming to the Task Force 13 *Guide to Standardized Roadside Safety Hardware* available at www.tf13.org.

Delete the last paragraph and substitute the following:

Use a flexible hinged guardrail delineator which allows the reflector to fold down and spring back to an upright position after impact. Furnish retroreflective sheeting conforming to ASTM D4956, including supplementary requirements. Use type IV or XI retroreflective sheeting permanently adhered to 0.090-inch minimum thick body.

Section 713. — ROADSIDE IMPROVEMENT MATERIAL

713.04 Seed. Add the following:

Use the following seed mix, except in wetland areas:

Botanical Name	**Common Name**	**LBS/ACRE**
Herbaceous Plants - Grasses	Sandberg bluegrass	2.0
Poa secunda	Red fescue	5.0
Festuca rubra	California brome, Sierra	4.0
Bromus carinetus	Slender wheatgrass, Pryor	3.0
Elymus trachycaulus	Idaho fescue, Joseph	4.0
Festuca idahoensis 'Joseph'	Prairie June grass	2.0
Koeleria macrantha	Creeping wildrye	3.0
Leymus triticoides	Pine blue grass, Sherman	3.0
Poa ampla		
Herbaceous Plants - Forbs	Rydberg's penstemon	0.3
Penstemon Rydbergii	California poppy	1.0
Eschsholzia californica	Brewer's aster	0.5
Eucephalus breweri	Brewer's lupine	2.5
Lupinus breweri	Sierra lupine	2.5
Lupinus grayi	Mountain mule ears	2
Wyethia mollis	White yarrow	0.5
Achillea millefolium		

Shrubs	Sulphur buckwheat	0.5
Erigonum umbellatum	Big mountain sage brush	0.5
Artemisia tridentata	Sandberg bluegrass	2.0

Use the following wetland seed mix in wetland areas:

Species	**Min Purity**	**Min Germination**	**LBS/ACRE**
Hordeum brachyantherum	90	80	4.5
Vulpia microstachys, db	90	80	4.3
Elymus glaucus	98	85	8.7
Carex praegracilis	95	80	1.4
Achillea millefolium	98	85	0.5
Lupinus bicolor	98	85	4.3

713.12 Fiber Rolls and Socks
(b) Straw fiber rolls Add the following:

Only clean wheat, barley, oat or rice straw should be utilized to prevent the spread of noxious weeds.

Section 718. — TRAFFIC SIGNING AND MARKING MATERIAL

718.01 Retroreflective Sheeting. Add the following:

Furnish fluorescent type sheeting for all signs and all devices specifying an orange or a yellow background.

Add the following section:

718.18 Methyl Methacrylate Pavement Markings. Furnish a plural component product conforming to the following:

(a) Density. ASTM D1475; 14 to 16 lbs/gallon

(b) Viscosity. Daniel Flow; 10-13

(c) Total Solids. D2205; >99%

(d) Pot Life. AASHTO T-237; >8 minutes

(e) No Track Time. D711; 30 minutes max

(f) Adhesion. D4541; >200 psi

(g) Hardness. Type D, ASTM D2240; 50 minutes

(h) Skid Resistance. ASTM E303; ≥45 bpn

(i) Chemical Resistance. 7 Day emersion; Pass

(j) Reflectance. Y value, ASTM D6628; White: >80, Yellow: >50

(k) Tensile Strength. kPa, ASTM D-638; 125 min

(l) Elongation. ASTM D-638; 20% min

(m) Water Absorption. ASTM D-570; 0.5% max

(n) VOC. EPA Ref. Method 24, 40 CFR, Appendix A to Subpart D of Part 59; <100g/l

Section 725. — MISCELLANEOUS MATERIAL

725.04 Pozzolans. Delete line (a) and substitute the following:

(a) Fly ash. Conform to AASHTO M 295 Class C or Class F. When used to mitigate alkali-silica reactivity, also available alkalies as equivalent Na_2O	4.5 percent max

APPENDIX A
FIRE PLAN
General Fire Prevention Plan for Road Projects

The intention of this plan is to help prevent wildland fires while personnel are completing road construction or repair projects. It is in the best interest of the contractor and park employees to prevent wildfires while completing road projects. If negligence is found, the person or entity that caused the fire can be held liable and charged with the cost of the suppression effort plus any damages that occurred from the fire. The following is a minimum list of requirements that must be followed to help prevent a wildfire. Additional precautions can be followed, as required by the individual activity.

1. No smoking is allowed off of maintained roads or outside of vehicles when the project is located in an area of Very High or Extreme fire danger.

2. Smoking will not be allowed on dry grass at any time. Smoking must occur in vehicles or while standing on pavement, bare dirt or other non-flammable materials.

3. Comply with any local fire restrictions when in effect. No open fires except in designated campgrounds and picnic areas at any time. Unless otherwise posted by local agencies, no wood fires are allowed when in Very High fire danger and no charcoal fires are allowed when in Extreme fire danger.

4. No off road vehicle travel at any time.

5. Refueling must take place in a pull out or other paved area. Refueling will not occur on a vegetated area.

6. Smoking will not be allowed within 50 feet of the refueling operation.

7. All refueling vehicles will carry a functioning fire extinguisher appropriate for the type and amount of fuel that is carried and dispensed.

8. All vehicles will carry an appropriate functioning fire extinguisher.

If a fire starts, it is paramount that action be taken as soon as possible. The vegetative fuels burn very fast, and depending on the conditions, a fire could very quickly get out of control and do significant damage to both private and public property and threaten many lives.
There is limited cellular phone coverage near the project site. If there is no cellular phone coverage, drive to the nearest phone and report the fire to someone there or call the Nevada County Sherriff's Office, 530-265-1471 and the Placer County Sherriff's Office, 530-889-7800. Information to pass on includes the location of the fire, what started it and about how big it was when last seen.

APPENDIX B
NEVADA COUNTY ENCROACHMENT PERMIT

COUNTY OF NEVADA
COMMUNITY DEVELOPMENT AGENCY
DEPARTMENT OF PUBLIC WORKS
950 MAIDU AVENUE, NEVADA CITY, CA 95959-8617
(530) 265-1411 FAX (530) 265-9849 www.mynevadacounty.com

ENCROACHMENT PERMIT APPLICATION

APPLICANT TO COMPLETE ONLY THE APPLICABLE PORTIONS NOTED BY SHADED AREAS

Assessor's Parcel No.: _____
Use Permit No.: _____
Site Plan No.: _____
Land Division No. _____

Building Permit No. _____
Encroachment No. _____ **Fee: $364.52**
Receipt No.: _____
Issue Date: _____
Expiration Date: _____

Permittee:

_____
_____
_____

Telephone Number: _____

Contractor:

_____
_____
_____

Telephone Number: _____

Location of Encroachment: _____

ROAD CONNECTION:

- ☐ **Standard Driveway**
- ☐ **Aggregate Surface**
- ☐ **Dike Section**
- ☐ **Culvert – Diameter _____ inches length _____ feet**
- ☐ **Private Road**
- ☐ **Asphalt Concrete**
- ☐ **Valley Swale**
- ☐ **Parking Pad**
- ☐ **Concrete Surface**
- ☐ **No Drainage**
- ☐ **Other**

UTILITIES, if applicable:

- ☐ **Power**
- ☐ **Phone**
- ☐ **Water**
- ☐ **Sewer**
- ☐ **Cable TV**
- ☐ **Blanket Permit**
- ☐ **Service Connection**
- ☐ **Overhead**
- ☐ **Underground**
- ☐ **Mainline Extension or Relocation**

SPECIAL EVENTS:

- ☐ **Filming/Commercial**
- ☐ **Athletic**
- ☐ **Parade**
- ☐ **Road Closure**
- ☐ **Other**

Construction Plans Prepared by: _____ Dated: _____

DEVELOPMENT PROJECTS:

Construct per plans approved on _____ by the Director of Public Works

OTHER:

_____
_____

This permit is approved subject to payment of fees and Permittee's acceptance of conditions of approval. The start of any specified work shall constitute acceptance of all provisions. The permit shall become void if all contemplated work is not completed before the expiration date and is revocable at any time. Any voided or revoked permit shall become a violation, which will be handled in accordance with applicable State and County Regulations.

The applicant acknowledges the general conditions listed on "Encroachment Permit General Provisions" and receipt of general encroachment permit information as follows:

Signed: _____

NO WORK SHALL COMMENCE PRIOR TO ISSUANCE OF PERMIT

APPENDIX C
PLACER COUNTY ENCROACHMENT PERMIT

PLACER COUNTY
DEPARTMENT OF PUBLIC WORKS

Ken Grehm, Director
Peter Kraatz, Deputy Director

GENERAL RIGHT-OF-WAY ENCROACHMENT PERMIT PROCESS AND STANDARDS

CONTACTS

Community Resource Development Agency, Auburn	**530-745-3000 (office) - 530-745-3101 (fax)**
Community Resource Development Agency, Tahoe City	**530-581-6227 (office) - 530-581-6228 (fax)**
Department of Public Works, Kings Beach	**530-581-6238 (office) - 530-581-6239 (fax)**

FEES

Standard Encroachment Permit (driveways, landscaping, drainage, signs)	**$60.00**
Utility Encroachment Permit (minor repairs, service connections, maintenance)	**$55.00 (utilities) $75 (private)**
Recordable Encroachment Permit (structures in right-of-way or in setbacks)	**$75.00**

GENERAL INFORMATION AND STANDARD PLATES

Encroachment Permit Information on the Placer County website at:

- **http://www.placer.ca.gov/Departments/CommunityDevelopment/Eng/EncroachmentPermits.aspx**

Engineering Design Detail Plates on the Placer County website at:

- **http://www.placer.ca.gov/Departments/CommunityDevelopment/Eng/DesignPlates.aspx**

Commonly Used Road Plates:

- **Plate R-3, R-4** - Road and shoulder requirements for rural minor residential & rural secondary
- **Plate R-17, R-18** - Driveway connections, radius returns & sight distance requirements
- **Plate R-16, R-22** - Asphalt dike requirements
- **Plate R-15, R-21** - Concrete curb and gutter requirements
- **2010 Caltrans Standard Plan T13** - State of California Department of Transportation traffic control

Commonly Used Utility Plates:

- **Plate U-26.1, U-26.2** - Transverse and longitudinal trench requirements
- **Plate U-28, U-29** - Trench excavation and backfill requirements
- **Plate U-2, U-27** - Rock inlet/outlet protection, culvert/storm drain initial backfill requirements

Commonly Used BMP Plates:

- **Plate C-4** - Stabilized Construction Entrance
- **Plate C-5** - Silt Fence
- **Plate C-6** - Fiber Roll Installation

General Provisions for encroachment permit

ENCROACHMENT PERMIT

Encroachment permits are required by law for any work within the county right-of-way (driveways, utilities, landscaping, road crossings, signs, parades, structures, road closures, obstructions). Violations are a misdemeanor punishable by fine and/or six months in jail. The county has the right to remove any structure or obstacle located in the right-of-way which is not permitted. Applicants must submit an encroachment permit application and include a site plan map. An encroachment permit only authorizes work in the County right-of-way.

ENCROACHMENT PLANS

All proposed longitudinal trenches shall submit an application with Utility Encroachment Plans. For information regarding application and submittal process, contact the CDRA Engineering and Surveying Division in Auburn.

SITE PLAN MAP

All encroachment permit applications shall include a site plan map (8.5" x 11") showing: site address; APN number; adjacent road(s) name(s); property owner(s) name(s); property lines and corners; north arrow; dimensions of proposed work; existing features (structures, fences, landscaping); slopes, flow directions and conveyance systems in the right-of-way; proposed permanent Best Management Practices (BMP's) for driveway; and edge of pavement for width of property.

For final inspections above 5000' elevation contact the Department of Public Works before October 15.

All construction sites within Placer County must be winterized October 15 through May 1.

APPENDIX D
BIOLOGICAL ASSESSMENT

Biological Assessment

CA FLAP NEV 40(1)
Donner Pass Road Improvements
Nevada and Placer Counties, California

Prepared for:
Federal Highway Administration
Central Federal Lands Highway Division

Prepared by:
Wood Environment & Infrastructure Solutions, Inc.

November 19, 2018

TABLE OF CONTENTS

TABLES

APPENDICES

ACRONYMS

%	percent
BA	Biological Assessment
BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CH	Critical Habitat
CM	Conservation Measure
CNDDB	California Natural Diversity Database
DPS	Distinct Population Segment
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FHWA-CFHD	Federal Highway Administration - Central Federal Lands Highway Division
FLAP	Federal Lands Access Program
FR	Federal Register
GPS	Global Positioning System
HUC	Hydrologic Unit Code
IPaC	Information, Planning and Conservation System
NHD	National Hydrology Dataset
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
ROW	Right of way
SNYLF	Sierra Nevada yellow-legged frog
SWPPP	Storm Water Pollution Prevention Plan
US	United States
USDA	US Department of Agriculture
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
WOTUS	Waters of the US

1.0 Introduction

The Federal Highway Administration Central Federal Lands Highway Division (FHWA-CFHD), in cooperation with Nevada County, is proposing to reconstruct an approximately 6.54-mile segment of Donner Pass which provides access to recreational facilities located in and around the Tahoe National Forest. This Biological Assessment (BA) provides data and analysis for the Endangered Species Act (ESA) evaluation of the project proposed by the FHWA-CFHD, in cooperation with Nevada County and Placer County, to complete road improvements on Donner Pass Road (Old US Highway 40). Donner Pass Road is a primary access route to popular recreational facilities located within the Tahoe National Forest. Recreational facilities include the Pacific Crest Trail; Donner Summit Canyon Trail; historic emigrant trails such as Roller Pass and Coldstream Canyon; and the Black Wall and Donner Pass rock climbing sites; and prehistoric and historic features located along the 20-Mile Museum, such as the Rainbow Bridge, the China Wall, Washoe Tribe petroglyphs, wagon train routes, and portions of the original transcontinental railroad.

1.1 Project Description and Purpose

The Project is located on Donner Pass Road beginning near the I-80 / Donner Pass Road interchange in Soda Springs, CA (I-80 Exit 174), extending over Donner Pass, and ending at the Truckee, CA city limit east of the pass. The roadway travels through both Nevada and Placer Counties California (**Figure 1, Appendix A**), with the majority of the project located in Nevada County. The proposed project would rehabilitate a 6.54-mile portion of Donner Pass road, widen shoulders, replace guardrail, repair/replace culverts and inlets, add cross culverts, and pave select existing pullouts. The 65-foot wide project area is approximately 55.8 acres and includes pullouts, and parking areas designated for improvements. Key elements of the project include comprehensive road rehabilitation, culvert extension and clean-out, guardrail upgrades, and paving of selected existing pullouts to improve parking for trailhead, rock climbing, and historical sightseeing access.

West of Donner Pass, both sides of the road will be widened to provide 4-foot wide paved shoulders to accommodate designated bicycle lanes. East of Donner Pass, only the westbound (uphill) side of the road will be widened to provide a 4-foot wide paved shoulder due to tightly constrained terrain. In some locations on the westbound side of the road, minor rock cuts along the existing granite rock slopes will be needed for the 4-foot wide paved shoulder. Minor and limited rock cuts and excavation will involve scaling, controlled trim blasting, and using hoe ram techniques. Excavations will remove up to 1,000 cubic yards of hard granite rock. They will occur at up to 16 locations along relatively short (i.e. 10 to 20 feet in length) sections and total at most 1,835 lineal feet (or 0.35 miles) of the uphill westbound side of the road. Drainage improvements will consist of cleaning select culverts, as well as extending, replacing, and installing new inlets and culverts to accommodate the widened shoulders. Utility impacts are expected to be limited to adjusting existing manholes and valve boxes to facilitate construction and minor adjustments to the roadway profile.

Paving of select existing pullouts and parking areas will occur at four locations along Donner Pass Road: the chain-up area near Bunny Hill Drive (near project Milepost 1.3), gravel pullout at the “airway station” near Donner Summit, paved parking area at Rainbow Bridge and Adjoining Overlook, and the gravel pullout at the China Wall rock climbing area. Local business access in Soda Springs will involve minor modifications associated with the reconfiguration of ingress/egress driveways. The project is estimated to last two full construction seasons from May to October of 2019 and 2020.

The purpose of the Project is to enhance public access and safety along Donner Pass Road, reduce road maintenance costs, and improve access to the Tahoe National Forest. The Project is needed because:

- The existing roadway has been degraded by extreme weather conditions, such as freeze/thaw conditions along the high-altitude pass.
- If unaddressed, the road's structural deficiencies will continue to deteriorate, causing the asphalt pavement to break apart and result in higher maintenance costs.
- The combination of narrow lane widths and lack of adequate shoulder space create safety concerns for bicyclists and motorists.
- The project partners seek to enhance public access to trails, recreational areas, and historic sites in or near the Tahoe National Forest.

The Project Area encompasses approximately 55.8 acres which includes an approximately 65 feet wide right of way (ROW) corridor. Additional ROW is not anticipated to implement the proposed improvements. The term "Project Area" is used throughout this report to generally reference the limits of construction where project activities will occur. The Action Area (**Figure 2**, **Appendix A**) includes a 500-foot buffer of the Project Area and is the area analyzed for potential impacts.

Section 7(a)(1) of ESA of 1973 (as amended) directs all federal agencies to participate in the conservation and recovery of threatened and endangered species. Section 7(a)(2) of the ESA states that each federal agency shall consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. The Project will be federally funded and FHWA-CFHD is the lead agency for the Section 7 consultation.

This BA evaluates the potential impacts to federally listed species from the proposed Project. Identifying federally listed species with potential to occur and where habitat exists will allow the planning and design staff at FHWA-CFHD to avoid and minimize impacts to species during the Project.

1.1.1 Project Best Management Practices

Best Management Practices (BMPs) integrated into the Project plan would reduce impacts to the surrounding environment, including to federally listed species. These measures will be implemented to avoid, reduce, or eliminate adverse environmental effects and can benefit protected species (**Table** 1). Additional species-specific measures are discussed under Conservation Measures (**Section 5.4**).

Table 1. Project Best Management Practices.

BMP Number	Description
BMP-1	Implementation of the project will require approval of a site-specific Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program that would implement effective measures to protect water quality, which may include a hazardous spill prevention and additional erosion prevention techniques.
BMP-2	Existing vegetation will be protected in place where feasible to provide an effective form of erosion and sediment control.
BMP-3	Stabilizing materials will be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities.
BMP-4	Roughening and/or terracing will be implemented to create unevenness on bare soil through construction of furrows running across a slope, creation of stair steps, or by utilization of construction equipment to track the soil surface. Surface roughening or terracing reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing infiltration of water into the soil, and aiding in the establishment of vegetative cover from seed.

BMP Number	Description
BMP-5	Soil exposure must be minimized through the use of temporary BMPs, groundcover, and stabilization measures.
BMP-6	The construction contractor must conduct periodic maintenance of erosion- and sediment-control measures.
BMP-7	Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must be a minimum of 100 feet from surface waters. Any necessary equipment washing must occur where the water cannot flow into surface waters. The project specifications will require the contractor to operate under an approved spill prevention and clean-up plan.
BMP-8	Construction equipment will not be operated in flowing water.
BMP-9	Construction work must be conducted according to site-specific construction plans that minimize the potential for sediment input to Waters of the U.S. and State.
BMP-10	Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products from contaminating the soil or entering surface waters.
BMP-11	Equipment used in and around surface waters must be in good working order and free of dripping or leaking contaminants.
BMP-12	Any surplus of concrete, rubble, asphalt, or other debris from construction must be taken to an approved disposal site.
BMP-13	Plastic mono-filament netting (erosion control matting) or similar material containing netting must not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
BMP-14	Water diversion pumps will utilize screening devices with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats.

1.2 Areas Analyzed

For purposes of field work, the Project Area encompassed a 65-foot-wide corridor, centered along the road. The corridor extended approximately 20 feet from edge of pavement on both sides of the roadway. Some areas included a wider survey corridor where impacts outside the 20-foot buffer may occur. The Project Area totals 55.8 acres and ranges in elevation from approximately 6,100 to 7,100 feet. This area was evaluated for the potential to support federally listed wildlife and plant species in the field on October 16-19, 2017 and May 21-23, 2018. Protocol-level surveys were not conducted for any species for this Project.

The Action Area, or the indirect and direct disturbance limits, is a 500-foot buffer from the Project Area (**Figure 2**). The Action Area includes both temporary and permanent direct impact areas and the existing roadways. The existing roadway is included in the Action Area because of the extensive work to be done alongside the roadway, although no new disturbance would result from repaving an already paved area except in the locations where the road will be widened. Permanent impacts result from shoulder widening, culvert work, and other permanent types of road rehabilitation. Temporary impacts include culvert replacement, staging areas, and a 20-foot buffer from the existing edge of pavement to provide work areas during construction. Indirect impact areas include downstream habitat and areas affected by construction noise in the Action Area. The overall Action Area totals approximately 823 acres (**Figure 2**).

2.0 Existing Conditions of the Project Area

2.1 Land Cover

The majority of the area is within the Tahoe National Forest. Land use adjacent to the roadway consists primarily of coniferous forests used for wildlife habitat, recreation, and wood production.

The topography along the Project Area varies greatly between 2% and 60% slopes with cliffs, rock walls, and granite outcroppings dominating the eastern portion of the Project Area and more moderate sloping topography of 8-12% dominating the western portion of the Project Area. The dominant Calveg-defined vegetation community was Urban-Related Bare Soil comprising 39.8 percent of the Project Area. The Urban or Developed community was the second largest community within the Project Area at 28.2 percent. The Barren community was the third largest community within the Project Area at 12.7 percent. The Mixed Conifer-Fir community comprises 9.6 percent of the Project Area. Dominant species in this community include Jeffrey pine (*Pinus jeffreyi*), white fir (*Abies concolor*), and lodgepole pine (*Pinus controta* ssp. *murrayana*). Understory shrubs that often occur in this community include bitterbrush (*Purshia tridentata*), sagebrushes (*Artemesia* spp.), and curlleaf mountain mahogany (*Cercocarpus ledifolius*). The Upper Montane Mixed Shrub Alliance comprises 3.5% of the Project Area. Dominant shrub species in this community include huckleberry oak (*Quercus vaccinifolia*), creeping snowberry (*Symphoricarpos mollis*), pinemat manzanita (*Arctostaphylos nevadensis*) and bush chinquapin (*Chrysolepis sempervirens*).

The remaining vegetation communities within the Project Area include the Lodgepole Pine Alliance (3.2%), the Huckleberry Oak Alliance (2.7%), the Willow (Riparian Scrub) Alliance (0.3%), and the Jeffrey Pine Alliance (0.1%).

Plant species identified in a previous survey (FHWA 2018) and during the field surveys associated with this BA are listed in **Appendix B**. Dominant plant species observed in the field include lodgepole pine, Jeffrey pine, willows (*Salix* spp.), speckled alder (*Alnus incana*), red fir (*Abies magnifica)*, quaking aspen (*Populus tremuloides),* white fir, incense cedar (*Calocedrus decurrens)*, manzanita (*Arctostaphylos* spp*.)*, mountain white thorn (*Ceanothus cordulatus)*, fern (*Tracheophyta sp.)*, and California juniper (*Juniperus californica)*.

2.2 Wildlife

The dominant land cover types (81% of land cover) are urban-related bare soil (40%), urban or developed (28%), and barren (13%) and do not provide habitat for wildlife or special-status species. The most abundant vegetation community present in the Project Area is the mixed conifer-fir community, which can support a high abundance of wildlife species. Wildlife species found in the Soda Springs and Norden quadrangles include, but are not limited to, the Sierra Nevada red fox (*Vulpes vulpes necator*), Sierra Nevada mountain beaver (*Aplodontia rufa californica*), California wolverine (*Gulo gulu*), Sierra marten (*Martes caurina sierra*), North American porcupine (*Erethizon dorsatum*), gray-headed pika (*Ochotona princeps schisticeps*), black swift (*Cypseloides niger*), southern long-toed salamander (*Ambystoma macrodactylum sigillatum*), fisher (*Pekania pennanti*) (CDFW 2018a).

During biological surveys, a total of 15 bird species and six mammal species were observed through audial or visual cues (songs, calls, direct visual observation, scats, tracks, etc.) within or near the Project Area. A list of all wildlife species identified during surveys is included in **Appendix B**.

2.3 Hydrology

The Project Area is located within the Upper South Yuba River (USGS Hydrologic Unit Code [HUC] 1802012506) and the Prosser Creek-Truckee River [HUC 1605010202] watersheds, and the Upper

Yuba [HUC 18020125] and Truckee [HUC 16050102] subbasins. The NHD identifies several USGS "blue-lined" streams within the Project Area including the South Yuba River, Donner Creek, and Upper Castle Creek. Additionally, the project crosses approximately 21 unnamed "blue-lined" tributaries. The area is composed primarily of ephemeral drainages, numerous intermittent channels, and four perennial streams.

A wetland delineation was conducted on October 16-19, 2017 and May 21-24, 2018 to evaluate the presence of potentially jurisdictional wetlands and other Waters of the US (WOTUS) that may be affected by the proposed project and regulated under Section 404 of the Clean Water Act. Survey results identified 11 channels with riparian areas totaling 0.073 acres within the Project Area (FHWA 2018). In addition, there was one Palustrine Emergent Wetland identified that was 0.029 acres in size (FHWA 2018). There is a pond that occurs on the edge of the Project Area. In addition to these, several large water features are within or near the Project Area, including the following features (FHWA 2018):

- South Yuba River
- Upper Castle Creek
- Donner Creek
- Lake Van Norden, Van Norden Meadow (nearby)
- Truckee river (nearby)
- Donner Lake (nearby)

2.4 Soils

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, there are eight mapped soil types within the approximate 56-acre Project Area (see **Table 2**) (USDA, NRCS 2016). The dominant soil types within the Project Area are the Ahart-Waca, rhyolitic substratum-Cryumbrepts, wet complex association soil type, with 30 to 50 percent slopes (11.7 acres), and Tinker-Rock outcrop, granitic-Cryumbrepts, wet complex, 2 to 30 percent slopes (11.5 acres). Six other soils make up smaller areas within the Project Area (USDA, NRCS 2016). None of the soils within the Project Area are classified in California as hydric soils (USDA, NRCS 2016).

Table 2. Soil Units within the Project Area.

Soil Unit Symbol	Soil Unit Name	Acres in Project Area	Landform	Natural Drainage Class
ADE	Ahart-Waca, rhyolitic substratum-Cryumbrepts, wet complex, 2 to 30 percent slopes	7.8	Ridges	Well drained
ADF	Ahart-Waca, rhyolitic substratum-Cryumbrepts, wet complex, 30 to 50 percent slopes	11.7	Mountain Slopes	Well drained
AQB	Aquolls and Borolls, 0 to 5 percent slopes	3.1	Marshes and Swales	Very poorly drained
RRG	Rock outcrop, granitic-Tinker complex, 30 to 75 percent slopes	14.3	Mountain Slopes	Excessively drained
RSE	Rock outcrop, granitic-Tinker-Cryumbrepts, wet complex, 2 to 30 percent slopes	1.4	Mountain Slopes	Excessively drained
TBE	Tallac-Cryumbrepts, wet complex, 2 to 30 percent slopes	1.4	Moraines	Moderately well drained
TIE	Tinker-Rock outcrop, granitic-Cryumbrepts, wet complex, 2 to 30 percent slopes	11.5	Moraines	Well drained
TIG	Tinker-Rock outcrop, granitic-Cryumbrepts, wet complex, 30 to 75 percent slopes	4.6	Moraines	Well drained
	Total	**55.8 acres**		

3.0 Methods

3.1 Background Research

The Project Area was evaluated for the presence of and potential to support federally listed sensitive wildlife and plant species. Data and resources from USFWS, California Natural Diversity Database (CNDDB), and National Oceanic and Atmospheric Administration (NOAA) were reviewed to identify special-status species that occur, or have the potential to occur, in the Project Area. The data sources included:

- USFWS species list records from the Information, Planning and Conservation System (IPaC) (USFWS 2018)(**Appendix C**);
- CNDDB occurrence records for sensitive species from the Soda Springs and Norden USGS 7.5-minute quadrangles (CDFW 2018a,b); and
- NOAA California Species List Tool (NOAA 2016).

3.2 Species with Potential to Occur

As a result of the data searches, a total of three wildlife species were considered for analysis, including two fish and one amphibian. The two fish are listed as threatened and the amphibian is listed as endangered under ESA. These species were evaluated for potential presence and habitat (including soils, climate, disturbance, plant communities, etc.) within the Project Area. This included examining CNDDB location occurrences within the Project vicinity and region. A summary of these species is presented in **Table 3**, which includes a description of the species habitat requirements and their potential occurrence within the Project Area.

Table 3. Federally-listed Species with the Potential to Occur in the Project Area.

Species	Status	Habitat Description	Critical Habitat Present	Potential within the Project Area
Amphibians				
Sierra Nevada Yellow-legged Frog ***Rana sierrae***	Endangered	Sunny river margins, meadow streams, isolated pools and lake borders, high elevation lakes, and slow-moving streams. Seldom found far from water but may move between upland and aquatic habitat seasonally.	Yes; the Project Area overlaps with designated Critical Habitat.	Yes, wetlands and perennial streams overlap with the project area, which may provide habitat for the species.
Fish				
Delta Smelt ***Hypomesus transpacificus***	Threatened	Endemic to the San Francisco Bay and Sacramento-San Joaquin Delta Estuary (Delta) in California. Inhabits open waters of bays, tidal rivers, channels, and sloughs. Rarely found in waters with a salinity of more than 10-12 ppt.	No	No, habitat not present in the river delta east of mountain ridge; species range does not overlap with project area.
Lahontan Cutthroat Trout ***Oncorhynchus clarkia henshawi***	Threatened	Historically, found in large, terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributaries.	No	No. Habitat is present nearby but does not overlap with the project area. Occurrence records exists, but more than 5 miles from the project area.
Source: (NatureServe 2018 and ECOS Species Profiles, USFWS)				

The Sierra Nevada yellow-legged frog (SNYLF), Delta smelt, and Lahontan cutthroat trout were evaluated for their potential to occur near the Project based on a desktop review, which included a review of recorded occurrences, known range, and habitat requirements of each species, as well as a biological survey.

3.2.1 Sierra Nevada Yellow-Legged Frog

The SNYLF was listed by the federal ESA as endangered on April 29, 2014 (*79 FR 24255 24310*) by the USFWS. The species was listed as endangered, and in immediate danger of extinction in its entire range due to threats, including habitat degradation and fragmentation, predation and disease, climate change, inadequate regulatory protections, and the integration of these various stressors impacting small remnant populations. Critical habitat (CH) was subsequently designated to assist in the protection of the species on August 26, 2016 (*81 FR 592045 59119*).

SNYLF is a type of mountain yellow-legged frog and was previously thought to be a subspecies of foothill yellow-legged frogs (*Rana boylii*), until recently, when mountain yellow-legged frogs were identified through DNA analysis as a separate species, which was then divided into three separate species, two of which inhabit the Sierra Nevada Mountains. SNYLF (*Rana sierrae*) and the Northern Distinct Population Segment (DPS) of the mountain yellow-legged frog (*Rana mucosa*) are the two species found in the Sierra Nevadas. These two species share much of the same life history

information but occupy different areas within California and have different genetic information (USFWS 2013a).

Mountain yellow-legged frogs and SNYLF range from 1.5 to 3.25 inches long, with females being slightly larger than males. Their dorsal areas are typically a mix of brown and yellow, but can range from grey, red, green or brown, with dark spots in various sizes and densities. Lichen- and moss-like colorations may also be present on the backside. The species' belly and hind limb undersides are yellow and orange. The species occasionally emits a mink or garlic-like odor when disturbed. The two Sierra Nevada species are very similar morphologically but can be distinguished by a comparison of lower leg to snout vent length. The SNYLF typically has shorter limbs than the Northern DPS of mountain yellow-legged frogs. Tadpoles of SNYLF are typically mottled brown on the dorsal side with a faintly yellow underside (USFWS 2013a).

At lower elevations, the species has been found in rocky streambeds and wet meadows surrounded by coniferous forests and at high elevations, the species uses lakes, ponds, tarns and streams and returns to breeding and wintering grounds year after year. Individuals are often found resting on rocks near gently sloping shorelines of water sources and are less common along shorelines that abruptly drop more than two feet. Stream use may vary from fast-flowing, well developed, rocky streams to low gradient streams with vegetated edges and emergent marshes.

Breeding occurs in shallow ponds or the inlets of streams immediately following snowmelt, usually from April – May at lower elevations and June – July at higher elevations (USFWS 2013a; USFS 2014). Individuals deposit egg masses underwater, attached to rocks, gravel, or vegetation (USFWS 2013a). Successful breeding sites must be located in waterbodies that do not dry out in the summer and do not completely freeze in the winter (USFWS 2013a). SNYLF has been found to lay eggs mostly in marsh or pond/marsh habitats (USFS 2014). SNYLF reach sexual maturity between three and four years after metamorphosis (USFWS 2013a). From the time of fertilization to metamorphosis, as much as one to four years may elapse and is highly dependent upon temperature resulting from elevation (USFS 2014). Combined with the time it takes to fully complete metamorphosis, it may take five to eight years for the species to begin reproducing.

3.2.2 Delta Smelt

The delta smelt was listed by the federal ESA as threatened on April 5, 1993 (58 FR 12854 12864; USFWS 2016a). Its populations have sharply declined in the past several years. There is no designated CH that overlaps or is near the Project Area. The delta smelt is a small fish that is endemic to the San Francisco Estuary and the Sacramento and San Joaquin Delta in California. The species inhabits open waters of bays, tidal rivers, channels, and sloughs with low salinity. This species is not found east of the mountain divide and, therefore, does not occur in the Project Area, although it was identified on the official USFWS species list in IPaC (see **Section 3.3**).

Delta smelt are not likely to occur in the Action Area and, therefore, the Proposed Action will have "no effect" on the species or its potential habitat and is not carried forward for analysis in this BA.

3.2.3 Lahontan Cutthroat Trout

The Lahontan cutthroat trout was listed by the federal ESA as threatened on August 25, 1970 (35 FR 13519 13520; USFWS 2013b). There is no designated CH that overlaps or is near the Project Area. Historically, this species was found in large, terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributaries. There is habitat for this species nearby, but it does not overlap with the Project Area. The closest populations of Lahontan cutthroat trout to the Project Area are approximately 7 miles north of the Project Area in Independence Creek and approximately 7 miles southeast of the Project Area in Pole Creek (CDFW 2018b). This species does not occur in the Project Area, although it was identified on the official USFWS species list in IPaC (see **Section 3.3**).

Lahontan cutthroat trout are not likely to occur in the Action Area and, therefore, the Proposed Action will have “no effect” on the species or its potential habitat and is not carried forward for analysis in this BA.

3.3 Coordination to Date

FHWA-CFHD coordinated with USFWS to obtain information regarding the potential for sensitive species to occur within the Project Area. A summary of coordination dates, agencies and individuals contacted, FHWA-CFHD and Wood contacts, and subjects discussed is summarized in **Table 4** below.

Table 4. Agency Coordination Dates, Contacts, and Subjects.

Date	Agency	Agency Contact	Wood Contact	Communication Method	Items Discussed
July 20, 2018 (originally January 2018)	US Fish and Wildlife Service	N/A	Corinna Photos	Online	Official species list obtained from IPaC
August 23-29, 2018	US Fish and Wildlife Service	Ian Vogel	Craig Friesen, Corinna Photos	Email	FHWA-CFHD (Seth Wilcher) requested Section 7 Consultation and example conservation measures for SNYLF from USFWS

3.4 Personnel and Survey Dates

Biological surveys, including a wildlife and plant habitat suitability assessment, wildlife and plant occurrences, and wetland delineation were conducted within the Project Area by Wood on October 16-19, 2017 and May 21 - 24, 2018. California noxious weeds were also documented during this time. Biologists walked the majority of the Project Area and data was recorded using Trimble© R1 geographic positioning system (GPS) receivers and tablets. GPS data points, lines, and polygons were collected on vegetation communities, vegetation species, wildlife species including direct and indirect observations (nests, tracks, scat), noxious weeds, and waters of the US (WOTUS).

4.0 Results for Sierra Nevada Yellow-legged Frog

Based on desktop and field results, it was determined that the SNYLF has potential to occur in the vicinity of the Project. The wetland delineation survey identified water resources in the Project Area that contained suitable SNYLF habitat.

4.1 Background

As temperatures decrease, frogs become less active (USFS 2014). Larvae and post metamorphic individuals overwinter in aquatic habitats (lakes or streams), under ice. Adults and tadpoles overwinter for up to nine months in waters that are at least 5.6 feet deep, but survival is best in waters at least 8.2 feet deep (USFWS 2013a; USFS 2014). Stream-dwelling individuals were found to overwinter in rock crevices, undercut banks, and seeps within mud holes (USFS 2014).

Mountain yellow-legged frogs and SNYLF historically were abundant in the Sierra Nevada (USFWS 2013a). SNYLF previously occurred in California from north of the Feather River, in Butte and Plumas Counties, to the south at the Monarch Divide, in Fresno County, west of the Sierra Nevada

crest. East of the Sierra Nevada Crest, the range extended from the Glass Mountains of Mono County, through Inyo County, to areas north of Lake Tahoe. The current documented range of the SNYLF is primarily restricted to publicly managed lands at high elevations, including streams, lakes, ponds, and meadow wetlands located within National Forests and National Parks, including Tahoe National Forest. SNYLF currently occupies areas north of the Kern River watershed and over the eastern crest of the Sierra Nevada into Inyo County at its most southern extent (USFWS 2014).

SNYLF has previously been recorded in the vicinity of the Project Area. In 1964 -1965, SNYLFs were caught on a baited line while sport-fishing on a reach of Summit Creek about 0.8 km above the western end of Donner Lake (USFS 2014). Since 1980, mountain yellow-legged frogs (or more likely SNYLF) have been recorded at approximately 50 locations in both stream and pond habitats in the Tahoe National Forest, but most observations have been of single frogs. The USFS conducts range-wide monitoring for the species as a part of the Sierra Nevada Amphibian Monitoring Program, but neither the USFS nor any partners have conducted monitoring in the vicinity of the Project Area. This program has found that a loss of 60 to 93 percent of SNYLFs has occurred within its range (USFS 2014).

4.2 Survey Results

Species specific surveys were not conducted for the SNYLF. Habitat for SNYLF was documented during wetland and waters field surveys and is discussed below.

Water resource surveys identified 78 delineated waterways totaling 7,697 linear feet and 0.54 acres within the Project Area. Of the 78 delineated waterways, 56 intersect with Donner Pass Road. There are ten waterways that have a width greater than 10 feet, 20 waterways that are between two and four feet wide, and 48 waterways that have a width of 2 feet or less. Of the 78 delineated waterways in the Project Area, 75 overlapped with SNYLF Critical Habitat. The three waterways located outside of the SNYLF Critical Habitat are located at the far eastern edge of the Project Area and are not perennial streams.

Out of the 78 delineated waterways, 11 were determined to be SNYLF potential habitat due to presence of aquatic habitat, permanent water sources, and associated riparian areas that provide habitats for breeding and nonbreeding, foraging, shelter from predators, or aquatic dispersal. Potential habitat within the Project Area includes riparian areas, wetland, upland buffers, and perennial streams as well as intermittent, ephemeral, and drainages that supply and are adjacent to riparian areas (**Figure 3; Table 5**). Potential habitat does not include the intermittent, ephemeral, and ditches that are not associated with a riparian area.

All of the SNYLF potential habitat observed in the Project Area was within SNYLF Critical Habitat except for one intermittent stream and one riparian zone. These two habitats were outside of the Critical Habitat area and were located at the far east edge of the Project Area.

Table 5. Potential Habitat for SNYLF within Project Area

Habitat Type	Number of Features	Number in SNYLF Critical Habitat	Area in Project Area (acres)
Riparian	12	11	0.13
Wetland	1	1	0.03
Perennial stream	5	5	0.16
Intermittent stream with riparian	2	1	0.02
Ephemeral stream with riparian	3	3	0.03
Drainage ditch with riparian	1	1	0.01
Upland buffer	11	10	1.54
Total	**35**	**32**	**1.91**

4.3 Critical Habitat

Approximately 1,082,147 acres of CH has been designated for the SNYLF in Plumas, Lassen, Sierra, Nevada, Placer, El Dorado, Amador, Calaveras, Alpine, Mariposa, Mono, Madera, Tuolumne, Fresno, and Inyo Counties in California (USFWS 2016b).

The primary constituent elements specific to the Sierra Nevada yellow-legged frog and the northern DPS of the mountain yellow-legged frog are (USFWS 2016b):

1. Aquatic habitat for breeding and rearing.
2. Aquatic nonbreeding habitat (including overwintering habitat).
3. Upland areas.

CH exists in Placer and Nevada Counties, where the Project Area occurs, and there is potential SNYLF habitat in the Action Area. CH for SNYLF overlaps the Project Area and Action Area. There are 54.1 acres of CH for the SNYLF in the 55.8-acre Project Area. There are 792 acres of CH overlapping the 823-acre Action Area.

The primary consitituent elements of CH for the SNYLF consists of riparian zones, perennial streams, wetlands, upland buffers, and other streams that support adjacent riparian areas. The upland buffers omit existing roadways and consist of a 25-meter buffer from the stream bank that provides an area for feeding and movement from the primary aquatic habitat (USFWS 2016b). Other streams such as intermittent, ephemeral, and drainage ditches are not generally considered SNYLF habitat but may be included in SNLYF potential habitat if they support an adjacent riparian area as they may serve as corridors or marginal habitat.

There are 1.89 acres of potential habitat within the designated CH within Project Area that contains the primary constituent elements, with an additional 0.02 acres that meet the criteria but are not within designated CH (**Figures 3 and 4**).

5.0 Project Effects

This section describes how the Proposed Action may affect SNLYF and its potential/critical habitat based on 30 percent design (**Appendix D**). The Project Area and Action Area were used to analyze direct and indirect effects. Effects are defined broadly enough that impacts are not anticipated to exceed the maximum limits described here, and may be reduced by the time the design is complete. The Action Area was defined based on ground, noise, and visual disturbances that could affect SNLYF, and therefore is larger than the Project Area (as described in Section 1).

Direct effects are those effects caused by the Project and that occur at the time of the action. Examples of direct effects include, but are not limited to, harm or mortality, failed breeding attempts, interference with food resources and migration patterns, loss or degradation of habitat, and displacement resulting from construction-related activities. Areas of construction that do not have a connection to potential SNYLF habitat are not anticipated to produce any direct effects to SNYLF or its habitat.

Indirect effects are “those effects that are caused by or will result from the Project and are later in time, but are still reasonably certain to occur” (50 CFR § 402.02). Examples of indirect effects include, but are not limited to, changes in stormwater flow, changes in infiltration after project completion, and changes in ability to access potential habitat within the Action Area. Indirect effects are often managed by BMPs and CMs and will likely be negligible both inside and outside the Project Area.

5.1 Anticipated Disturbance

Within the Project Area, disturbances are direct and are considered either temporary or permanent. Permanent disturbance areas consist of new ground disturbance outside of the existing roadway prism that will remain after the Project is complete, which includes areas associated with guardrails, culverts, shoulder widening, paved pullouts, and riprap placement. Areas that are already disturbed, such as existing, paved roadways are not considered in the overall permanent disturbance. Temporary disturbance includes noise and visual disturbances from construction activities, staging areas, culvert replacements, and buffers for construction activities where it is likely the contractor will require additional room for construction.

The Project would require widening the road up to four feet on one or both sides, in addition to paving select pullouts or pull offs within the Project Area. Based on 30% design, there would be 117,670 square yards of prime coat used in preparation for asphalt and a total of 82 trees would be removed.

Disturbances and impacts are summarized in **Table 6**; not all the disturbance identified occurs in SNYLF habitat. Anticipated disturbance is shown in **Figure 4 in Appendix A** and the designs are included in **Appendix D**.

Table 6. Total Anticipated Impacts within Project Area

	Area (acres)	Area (square feet)
Project Area	55.80	2,430,093
Existing Impervious	21.58	940,103
Permanent Disturbance (New Impervious)	3.21	139,729
Temporary Disturbance	6.29	273,939

5.2 Potential Impacts to SNYLF Habitat

Activities such as road construction in the Sierra Nevadas may impact the SNYLF by altering the environment of their aquatic habitat or causing habitat fragmentation (USFWS 2014). The implementation of BMPs (**Table 1**) and the design of the road can minimize negative impacts to the streams, stream processes, and aquatic habitats. This limits the potential effects of roads and roads alone have not been implicated as important contributors to the decline of this species (USFWS 2014). Avoidance and minimization measures are discussed below in **Section 5.4**.

Project actions that may impact the SNYLF and their habitat include stream crossing/culvert modifications and road widening, which will result in small impacts to wetlands, waterways, and riparian areas. Culvert modifications include removing and/or replacing inlets or culverts, extending existing culverts, and riprap placement. Sediments entering waterways from construction activities could reduce the volume of water conveyed, and riparian vegetation could also be damaged. The results outlined in **Section 4.2** serve as the basis for our analysis of project effects. The potential effects of Project actions on perennial channels, riparian areas, one wetland area, and one pond on the edge of the project area are calculated in **Table 7** and discussed below and shown in **Figures 3 and 4**.

Based on 30% design, there are 29 culvert modifications. In addition, 82 trees will be removed throughout the Project Area, although only approximately half of them are located within potential habitat. These trees are located along the edge of the existing road, even if they are also in potential habitat, and provide either no habitat or low quality habitat. The distribution of disturbance by habitat type is shown in **Table 7**. In order to protect water quality and aquatic species, reduce sediment,

and protect vegetation and species with potential to occur, BMPs from **Table 1** will be used to minimize or avoid impacts.

Table 7. Anticipated Impact by Habitat Type within Project Area

Habitat Type	Total Potential Habitat in Project Area (acres)	Permanent Impact (acres)	Temporary Impact (acres)
Riparian	0.13	0.01	0.04
Wetland	0.03	0.00	0.03
Perennial stream	0.16	0.01	0.03
Intermittent stream with riparian	0.02	0.00	0.00
Ephemeral stream with riparian	0.03	0.00	0.01
Drainage stream with riparian	0.01	0.00	0.00
Upland buffer	1.54	0.16	0.38
Total	**1.91**	**0.19**	**0.49**

Direct, permanent impacts are those that result in the loss of potential habitat. In the case of this proposed project that loss is almost entirely in the upland buffer. Direct, temporary impacts may include decreased water quality caused by sedimentation during construction or temporary damage to vegetation. Indirect, temporary impacts may include noise, dust, and human activity increases on a temporary basis during construction. These could also have the potential to be long-term impacts, resulting from recreation not from construction, given that the Project is intended to improve recreational access in the area (**Section 1.1**).

However, between the BMPs and the Conservation Measures (**Tables 1 and 8**), these potential effects will either be avoided or minimized and will be either unlikely or very small. Of these, noise is likely to travel the farthest from the construction site, but construction activities will occur primarily during the day, while frog calling primarily occurs in the evening and at night (from May – August; Federal Register 2013).

5.3 Cumulative Effects

Under ESA, cumulative effects are defined as the effects of future state or private activities not involving federal activities that are reasonably certain to occur within the action area of an action subject to consultation. Past and present land uses within the Action Area include rural-residential use, commercial use, recreation use and developed recreation facilities, and timber and thinning operations. Management activities include seeding of native and non-native species, fire suppression, natural and prescribed fire, noxious weed control, and other special uses such as firewood and post cutting. There has been restoration activity at Van Norden Meadow, which is at the headwaters of the South Yuba River, including dam maintenance that may involve cleaning out debris, removing sediment debris, and minimizing erosion near the embankment and outlet. There are also ski resort expansion and improvement activities including new lodges, paved roads, and parking areas that have occurred at Sugar Bowl Resort and Donner Ski Ranch. Land uses and management activities in the reasonably foreseeable future are anticipated to be similar to existing activities. The activities may contribute to effects to federally listed species, including habitat fragmentation, habitat loss, possible loss of quality habitat due to sedimentation, air pollution, audio and visual disturbance, and other disturbances caused by wildlife/public interactions.

Private and public road maintenance activities similar to this Project would occur near the Project but are unlikely to affect SNYLF or its potential habitat. Road maintenance activities will occur within the road prism (previously disturbed area) and include the installation of temporary and permanent BMPs and will not remove or downgrade suitable wildlife habitat; therefore, there should be no cumulative effects to the SNYLF in terms of habitat loss or disturbance as a result of other private and public road maintenance projects. Thus, cumulative effects from the implementation of this Project are anticipated to be negligible.

5.4 Avoidance and Minimization Measures

As required under the ESA, FHWA-CFHD would implement reasonable and prudent measures to minimize and avoid potential taking of SNYLF. Conservation measures (CM) listed in Error! Reference source not found. would be implemented to minimize effects to SNYLF. Additionally, BMPs that are part of the project plans would be implemented and are discussed in **Section 1.1.1, Table 1.**

Table 8. Conservation Measures for SNYLF

Conservation Measure	Description
CM-1	Prior to ground disturbance, environmental awareness training will be given to all construction personnel by the project biologist to brief them on how to recognize the SNYLF, and other sensitive species with potential to occur within the project area. Training will include what to do if a SNYLF or other sensitive species are encountered. Personnel will sign a form stating they attended environmental awareness training.
CM-2	No more than 20 working days prior to any ground disturbance in an area with known or potential SNYLF habitat, preconstruction SNYLF surveys will be conducted by a Service-approved biologist in known or potential SNYLF habitat.
CM-3	If SNYLF are found at any time during project work, construction will stop within known or potential SNYLF habitat in the vicinity, and the Service will be contacted immediately for further guidance.

6.0 Summary

Direct impacts to SNYLF and designated critical habitat from culvert modifications and road widening resulting from the Proposed Action may affect, but are not likely to adversely affect the SNYLF or its Critical Habitat for SNYLF. The Project would create a total of 3.21 acres of new impervious area causing permanent disturbance, create 6.29 acres of temporary disturbance during construction that will be revegetated, and remove 82 trees, which currently provide low quality to no habitat for the SNYLF. As part of this larger disturbance, the Proposed Action would permanently impact 0.19 acres and temporarily impact 0.49 acres of Critical Habitat for SNYLF within the Project Area. The majority (0.16 acres and 0.38 acres respectively) would be in the upland buffer. A number of BMPs and Conservation Measures will be used to ensure that any potential impacts are avoided and minimized.

Although no SNYLF have been documented in the area at this time, even if they occur, CM-2 and CM-3 will prevent direct impacts to any SNYLF found in the project area during construction. The small area permanently impacted (0.03 acres in aquatic habitat and 0.16 in the upland buffer) and the various protective measures reduce the potential impacts so they are not likely to adversely affect SNYLF.

7.0 References

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USFWS (2018) Information, Planning and Conservation System (IPaC) - Sacramento Fish and Wildlife Office.

APPENDIX A: FIGURES

Figure 1 – Project Vicinity
Figure 2 – Action Area
Figure 3 – Sierra Nevada Yellow-Legged Frog (SNYLF) Habitat
Figure 4 – Project Impacts (28 figures)

Summit Valley Overlook

Airway Station Pullout

Donner Lake Overlook

Donner Summit/Rainbow Bridge and Overlook

China Wall Pullout

Legend

- Project Area
- Landmark
- City
- Interstate
- Truckee Ranger District

Eureka
Redding
Project Location
Reno
NEVADA
CALIFORNIA
Sacramento
Pacific Ocean
0 50 100 Miles

Pyramid Lake
Plumas
Washoe
Sierra
Reno
Sparks
Storey
NEVADA
CALIFORNIA
Nevada
Yuba
Grass Valley
Placer
Carson City
Lake Tahoe
Douglas
El Dorado
Roseville
Citrus Heights
0 10 20 40 Miles

0 0.75 1.5 3 Miles

N

Job No.:	32781005
PM:	CF
Date Prepared:	9/19/2018
Date Revised:	N/A
Scale:	1:63,360
Map Maker:	Gordon Kersten
Organization:	Wood E&IS

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Central Federal Lands
USGS Norden and Soda Springs Quadrangles
Donner Pass Road
Nevada and Placer Counties, California

FIGURE **1**

Project Overview and Vicinity

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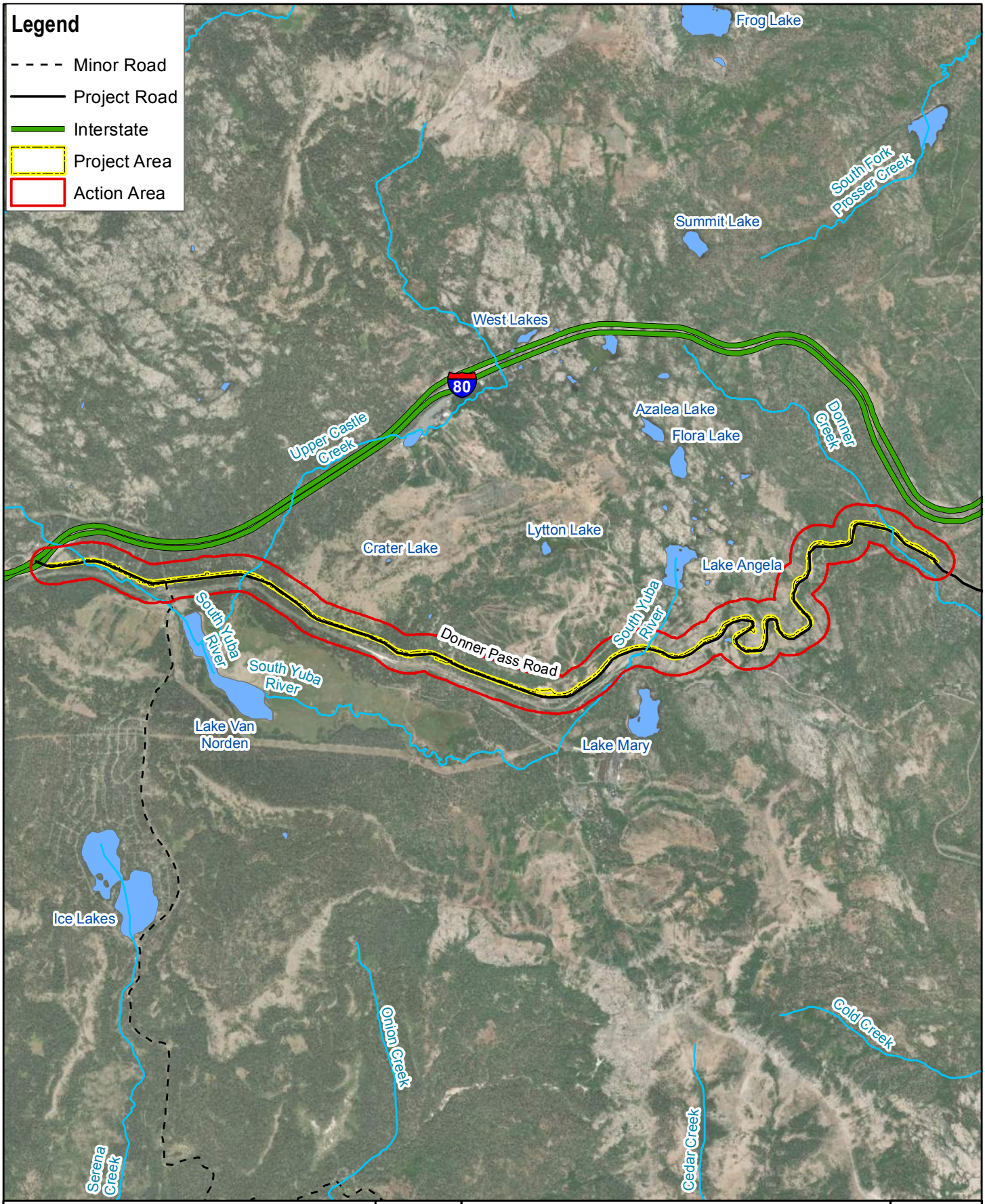

0 0.75 1.5 Miles

N

Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

FIGURE 2

Project Action Area

wood.

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PM: CF
Date: 9/19/2018
Scale: 1" = 45,614

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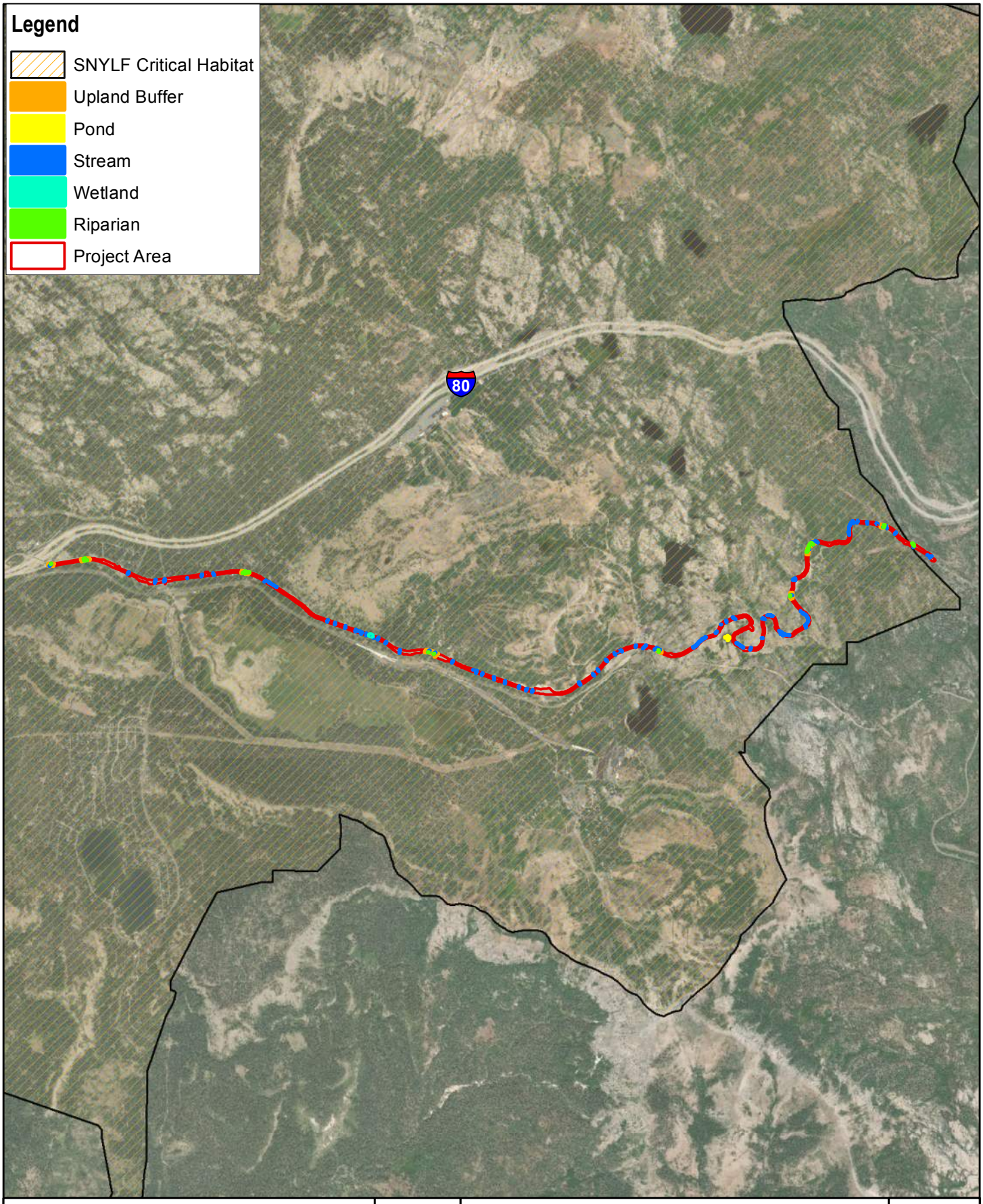

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N

Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

FIGURE
3

Sierra Nevada Yellow-Legged Frog (SNYLF) Critical Habitat

wood.

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Scale: 1" = 45,616

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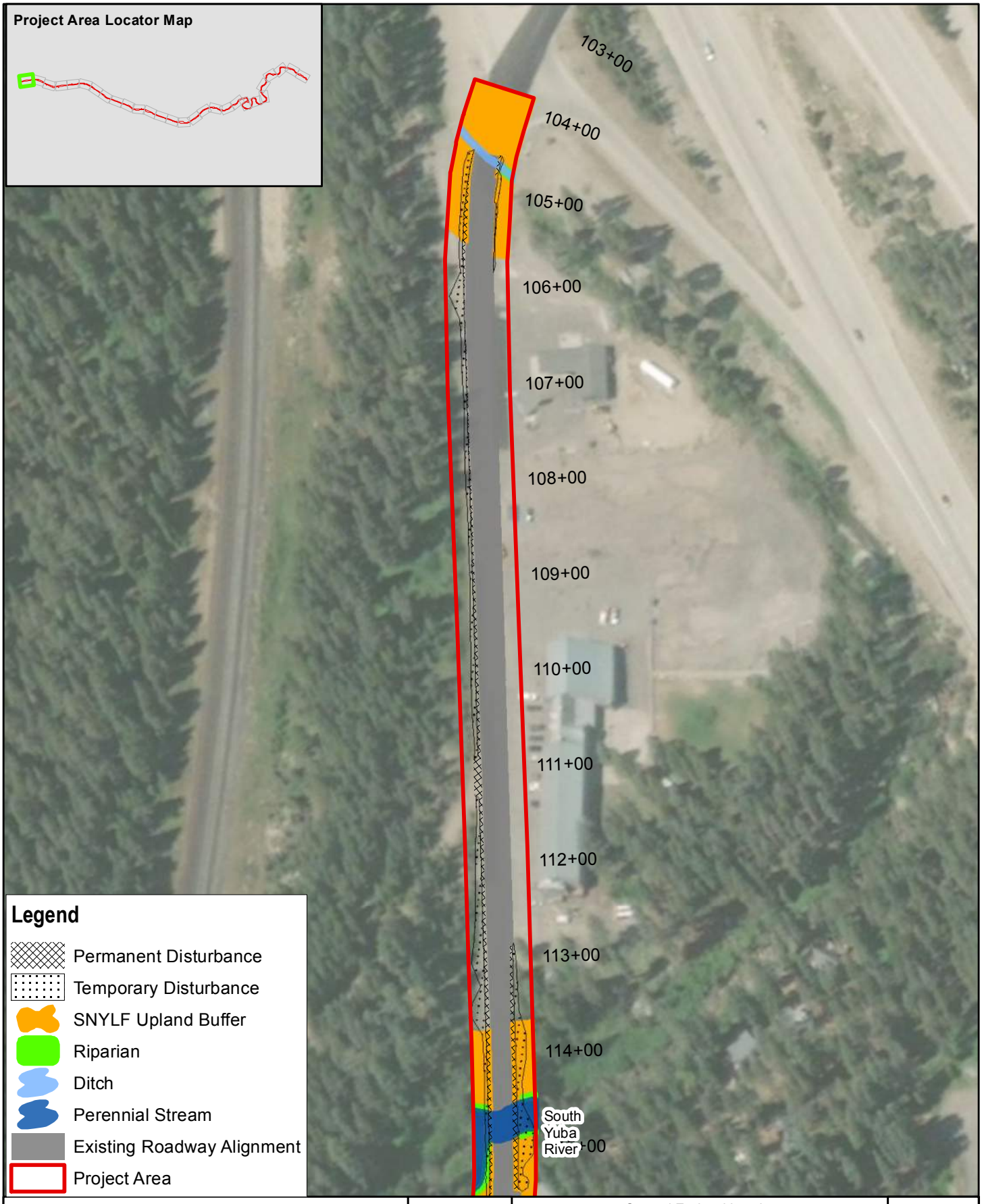

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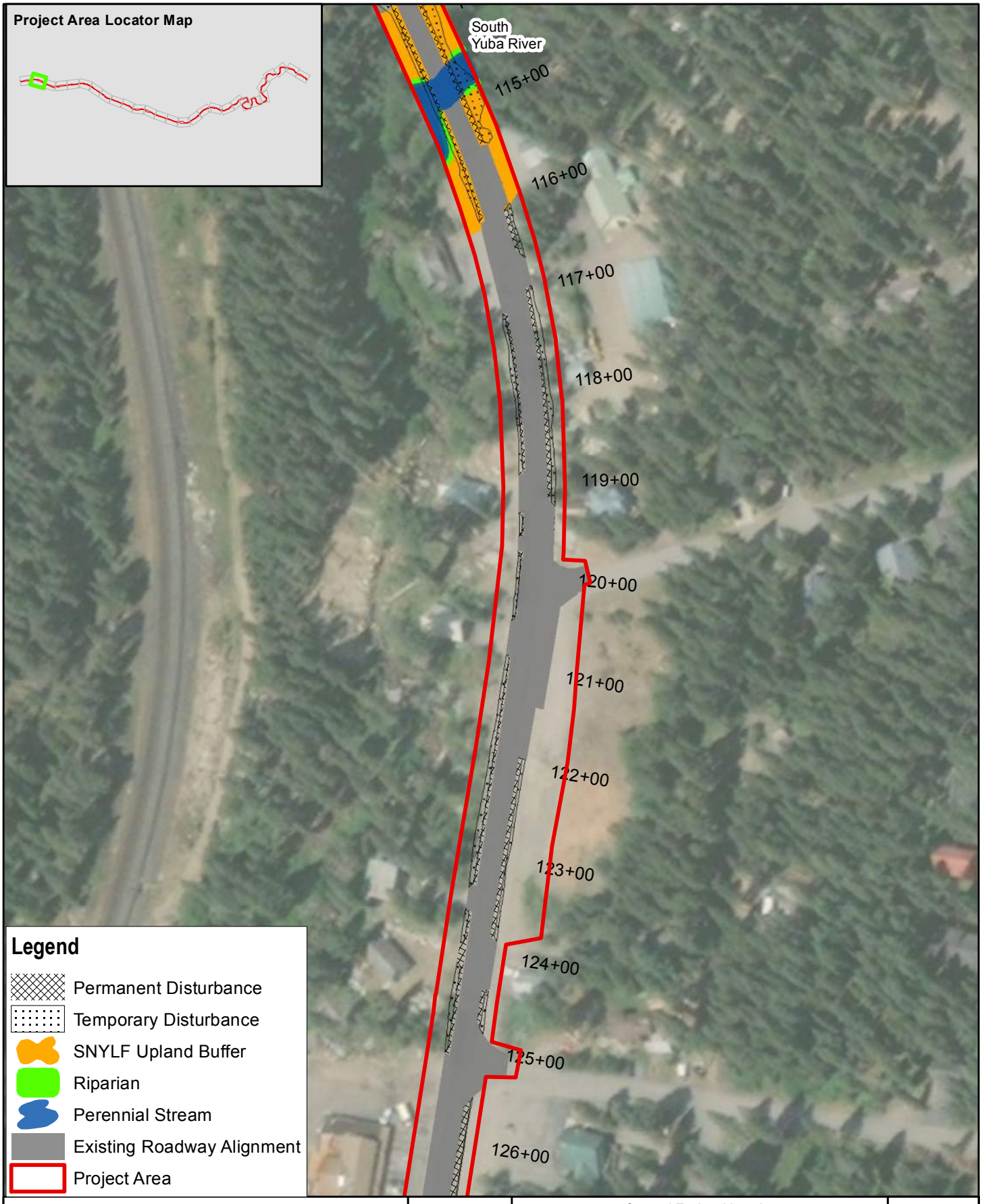
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4
Page 1 of 28

wood.



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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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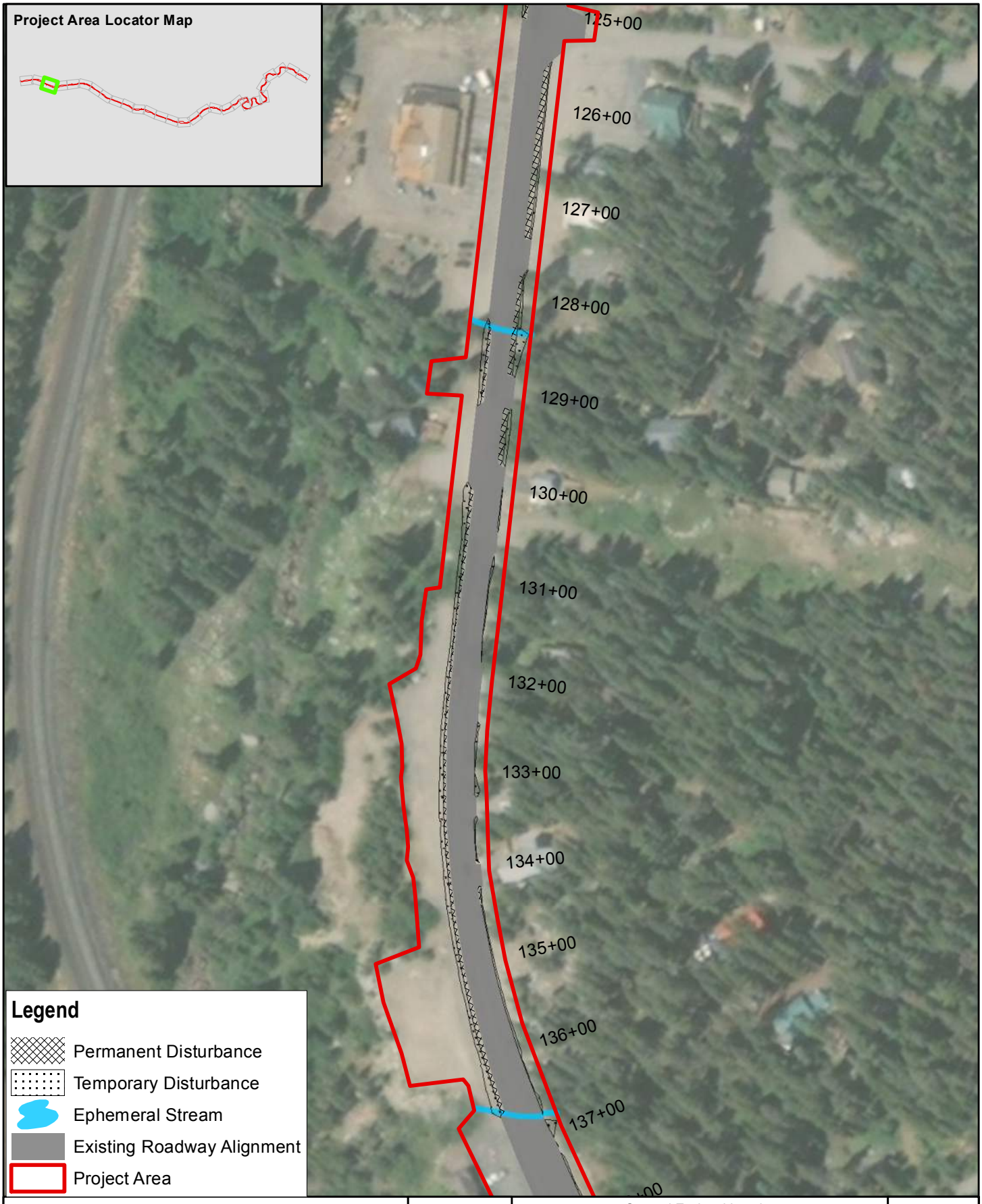
Page 2 of 28

wood.



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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4
Page 3 of 28

wood.

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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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Page 4 of 28

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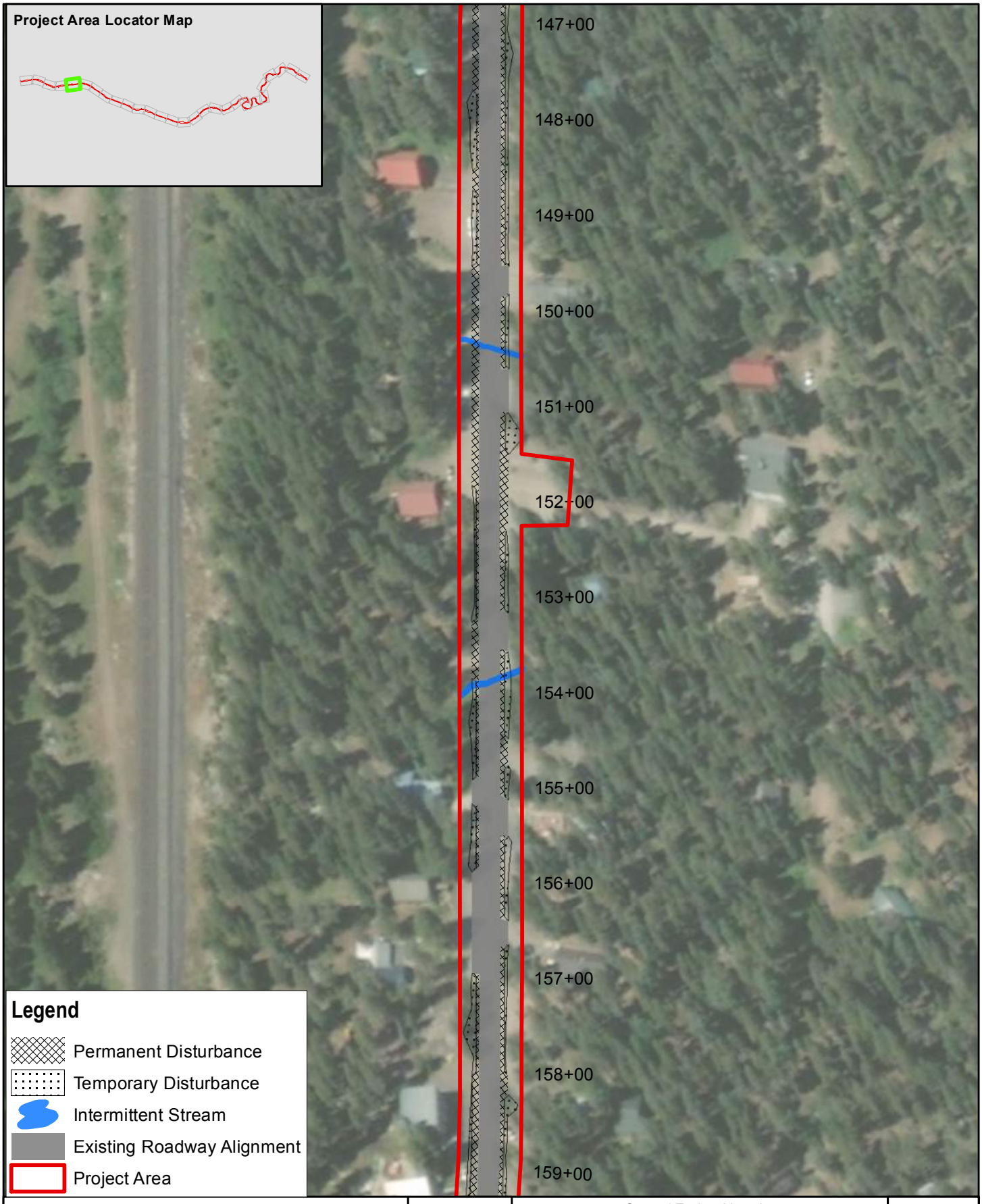

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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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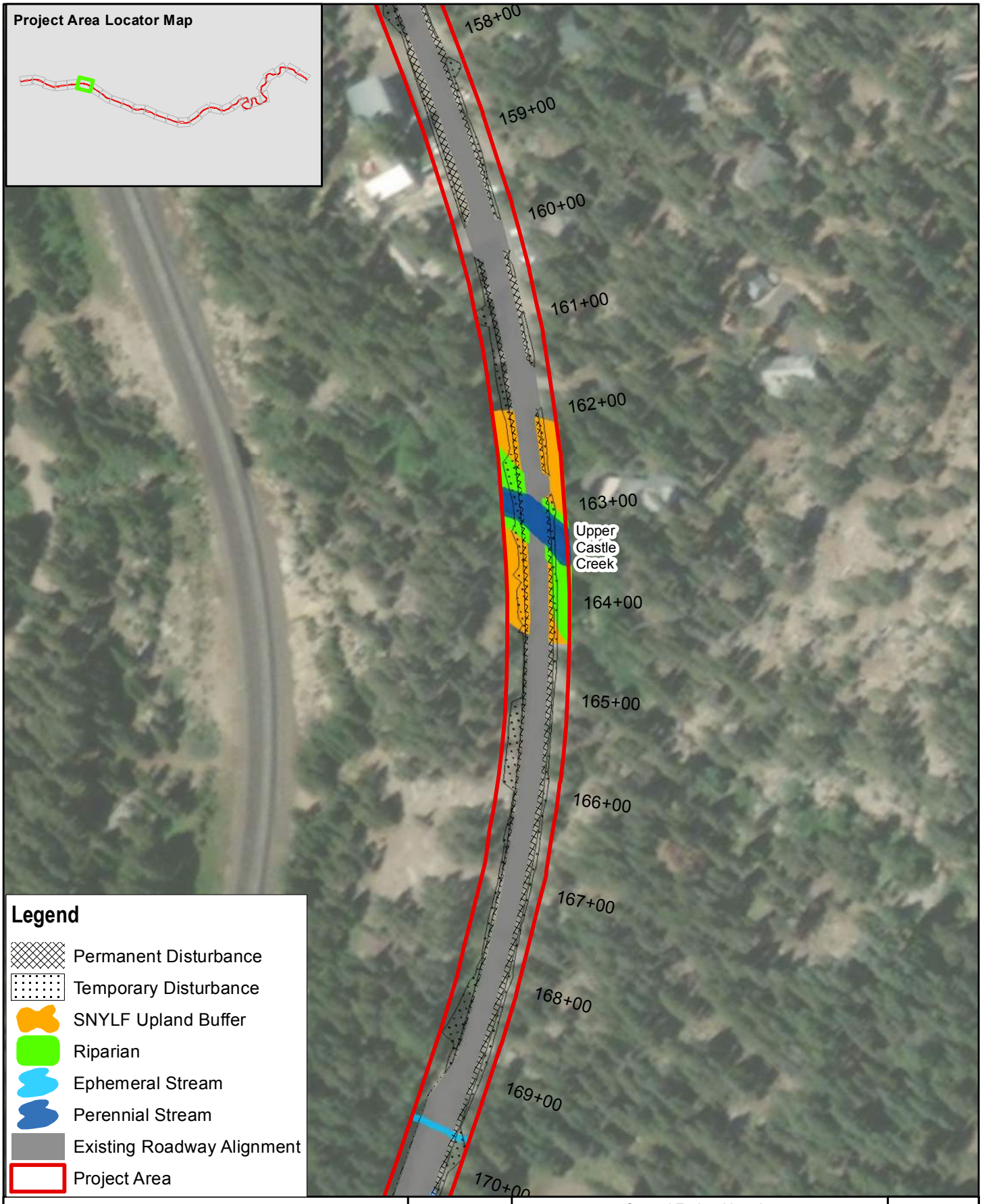
Page 5 of 28

wood.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Upper Castle Creek
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167+00
168+00
169+00
170+00
Legend
Permanent Disturbance
Temporary Disturbance
SNYLF Upland Buffer
Riparian
Ephemeral Stream
Perennial Stream
Existing Roadway Alignment
Project Area
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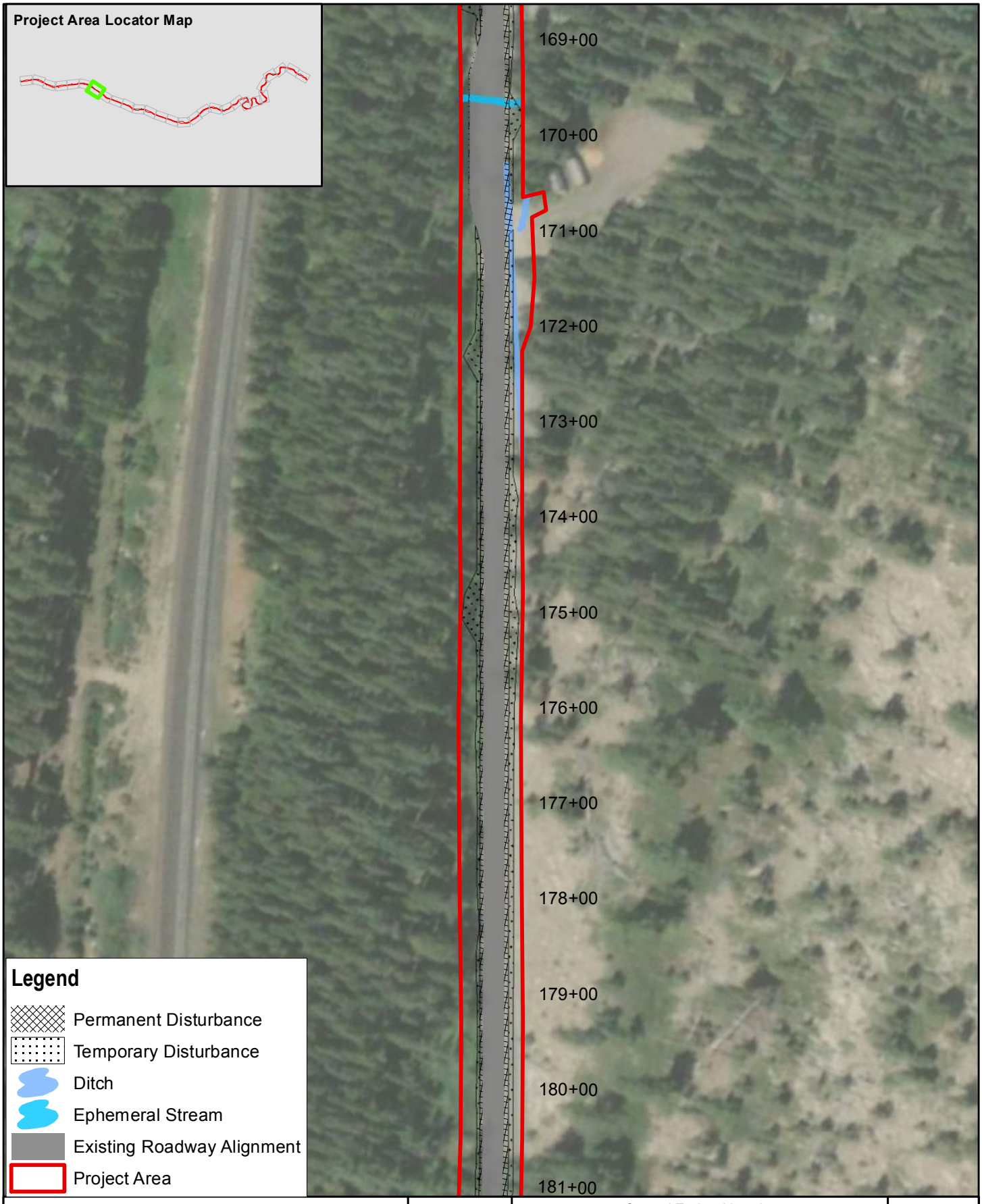
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California
Project Disturbance
FIGURE
4
Page 6 of 28
wood.



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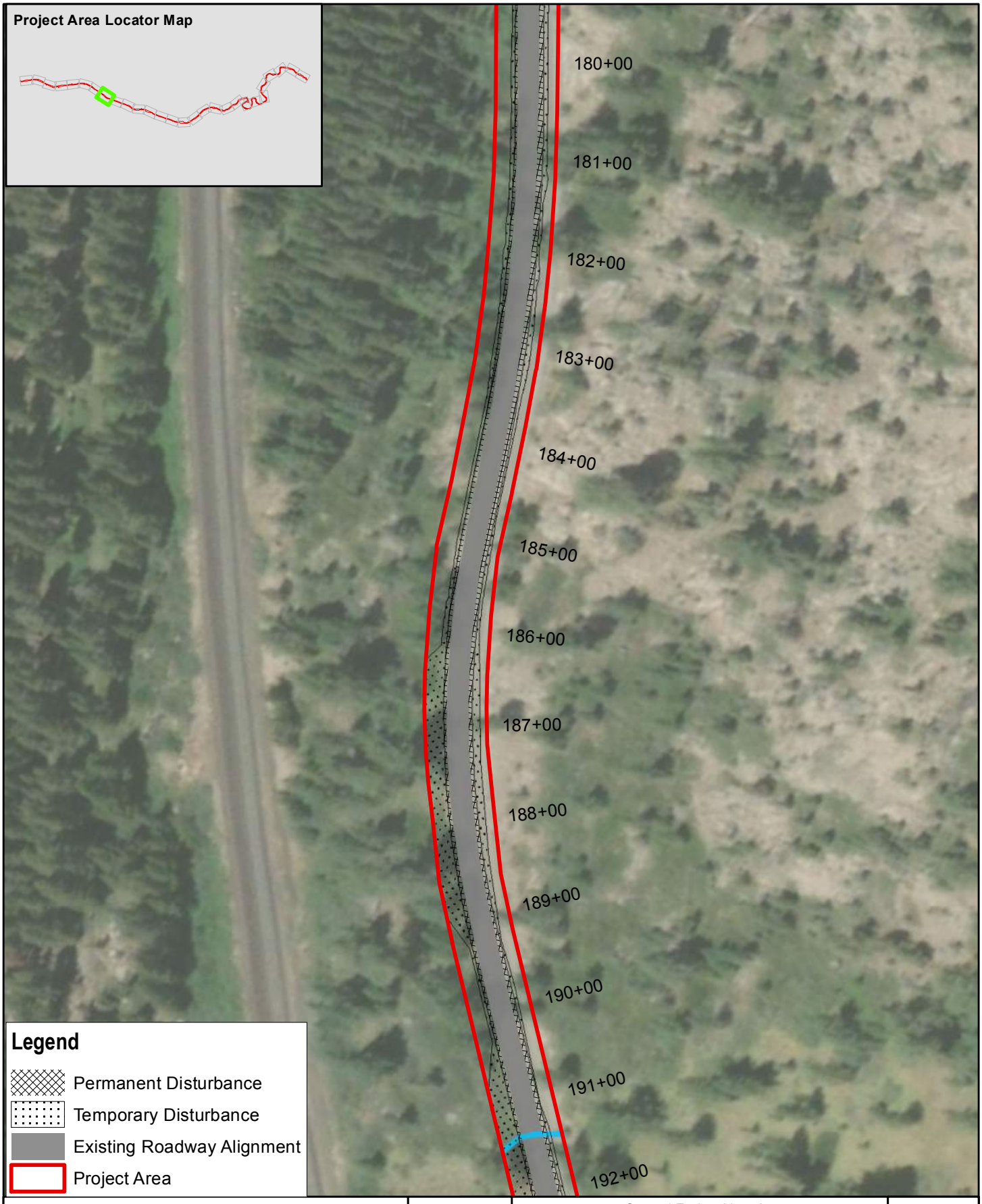
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4

wood.



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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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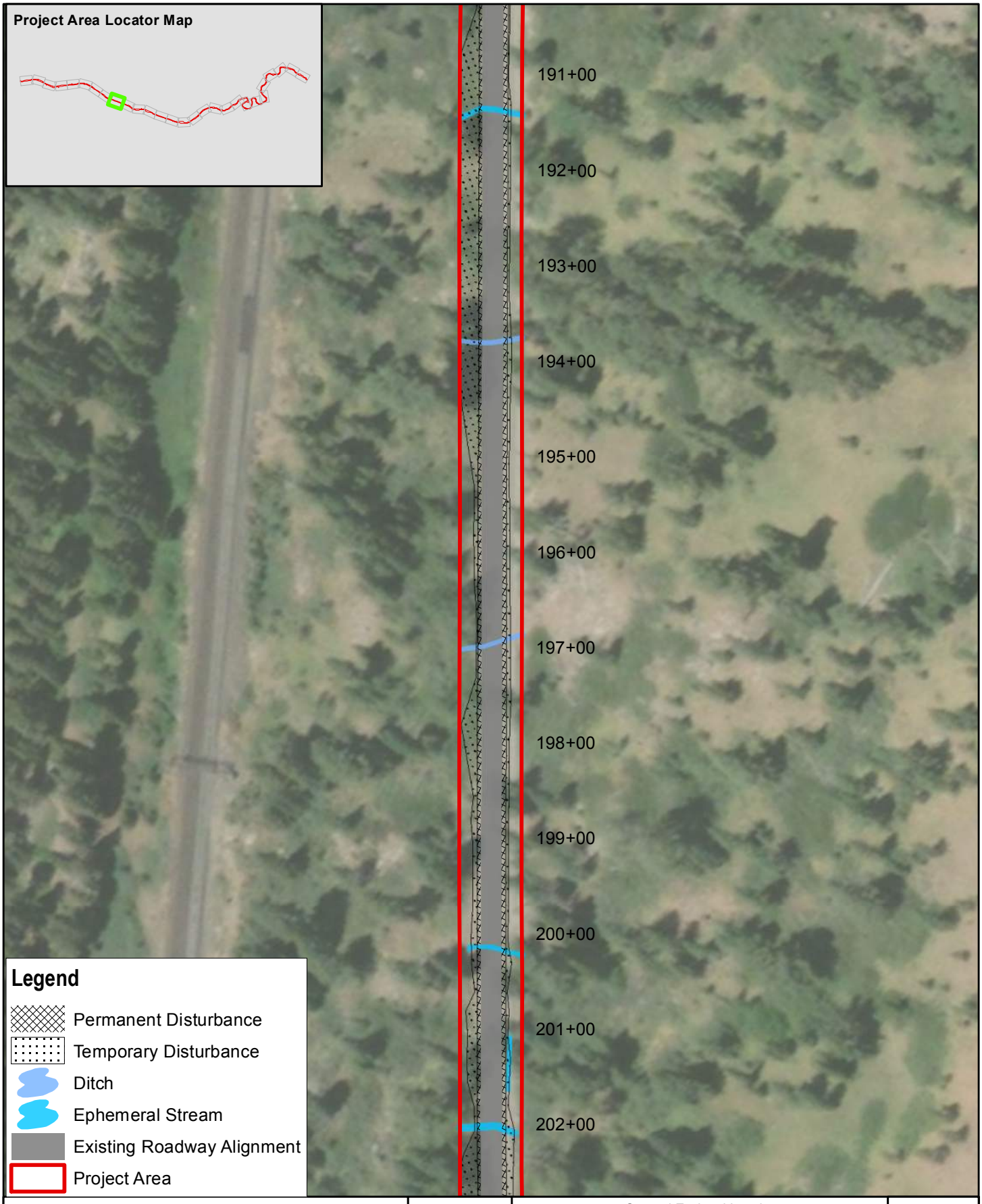
wood.



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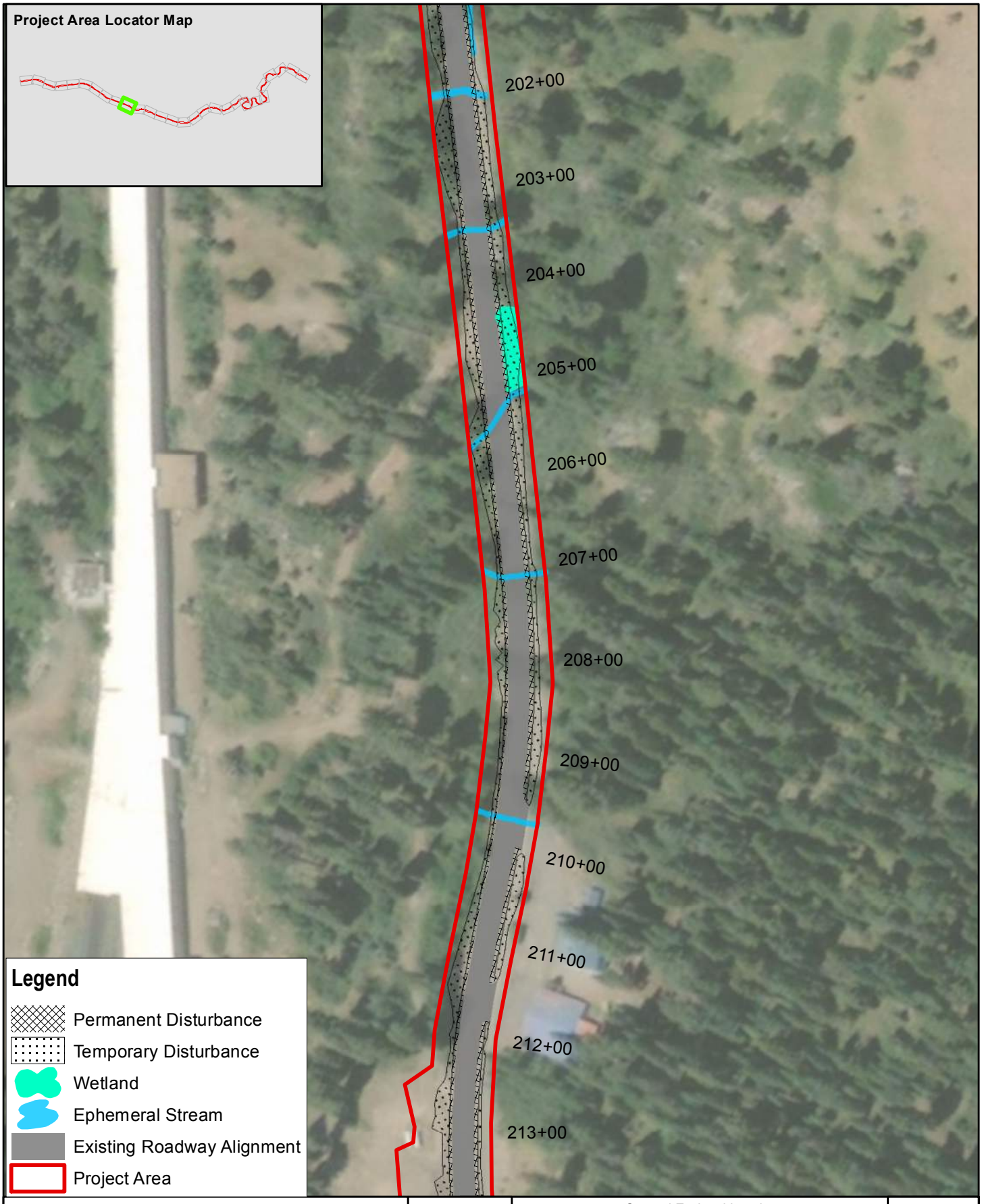
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE **4**
Page 9 of 28

wood.



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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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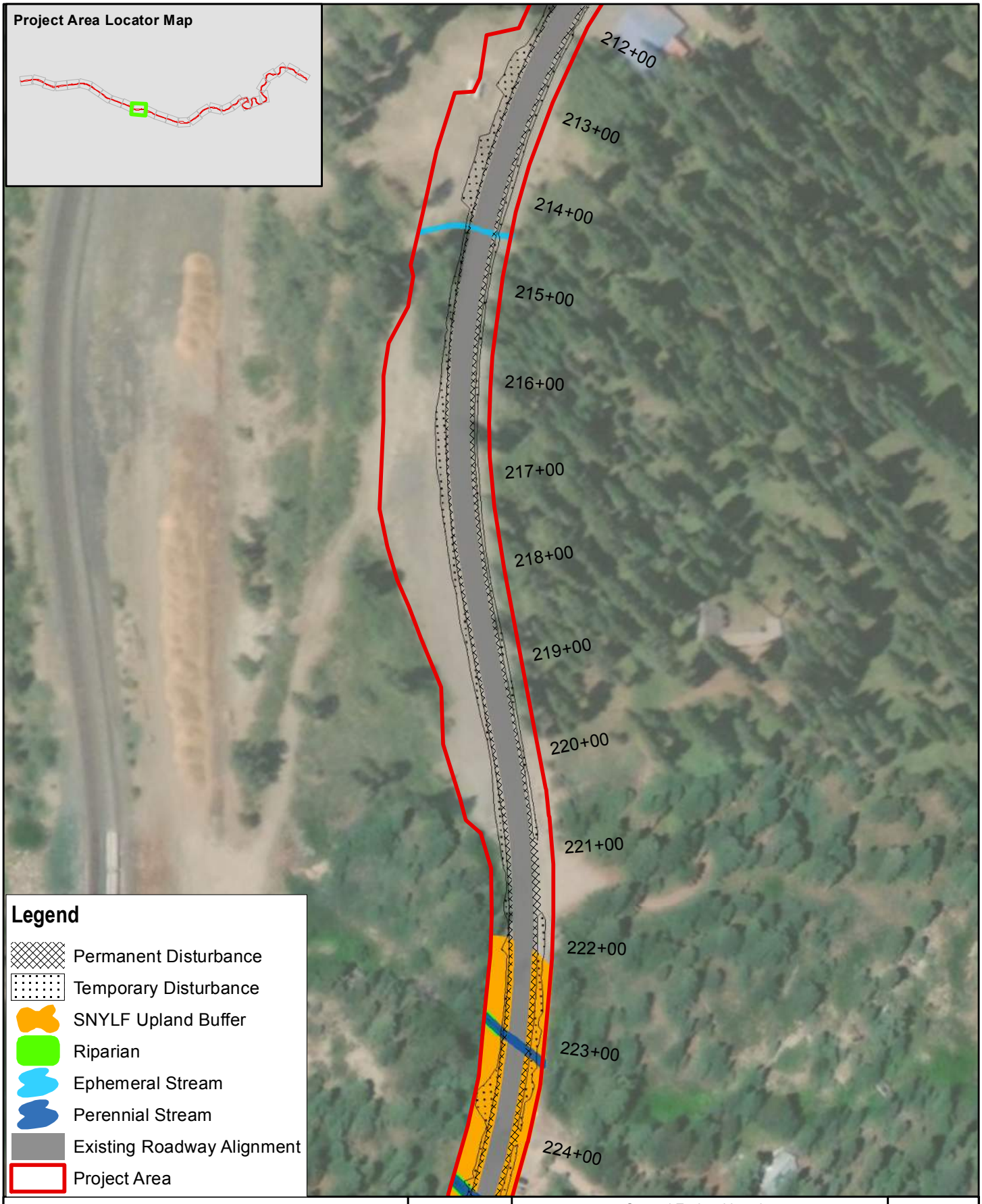
wood.



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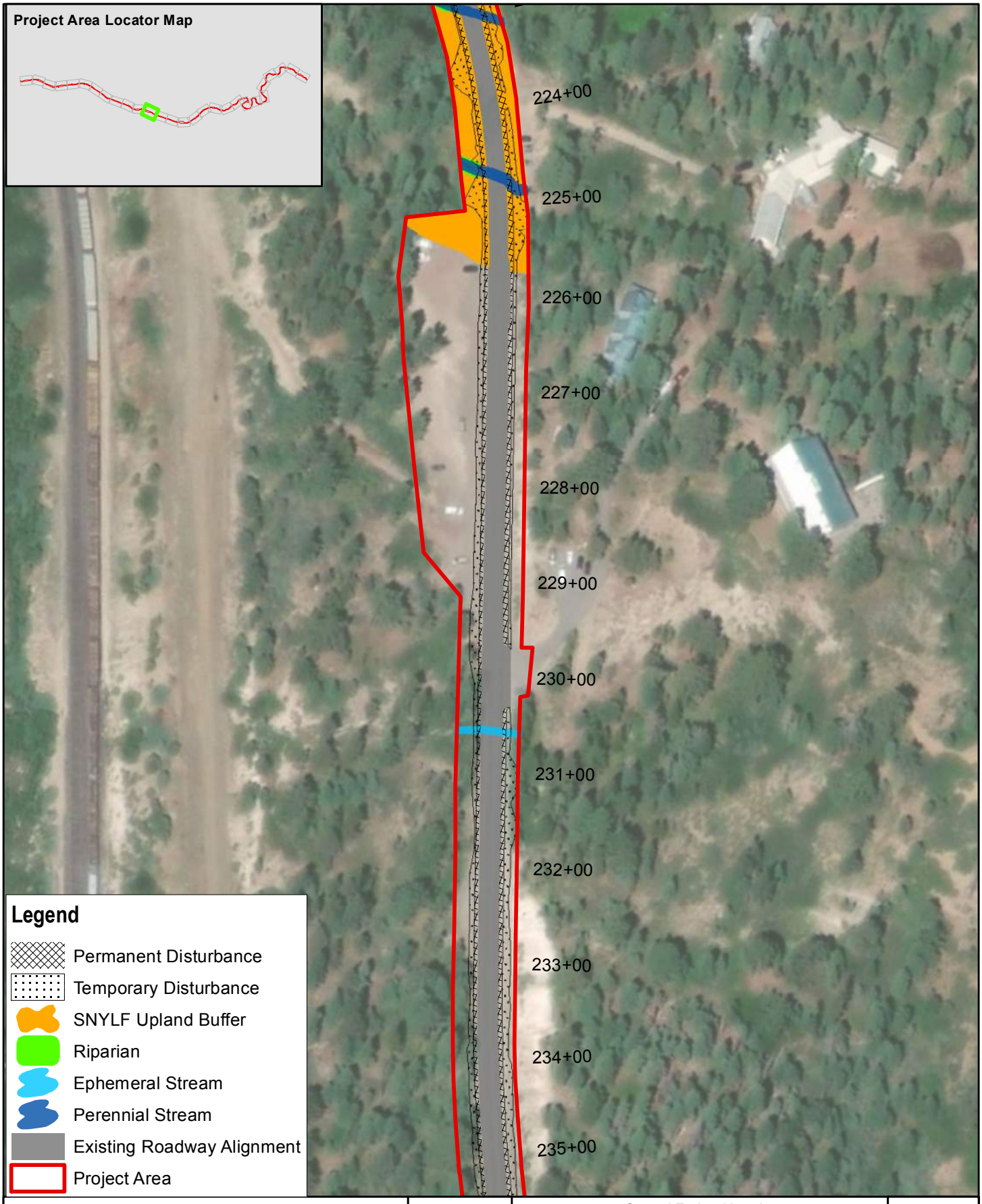
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4
Page 11 of 28

wood.



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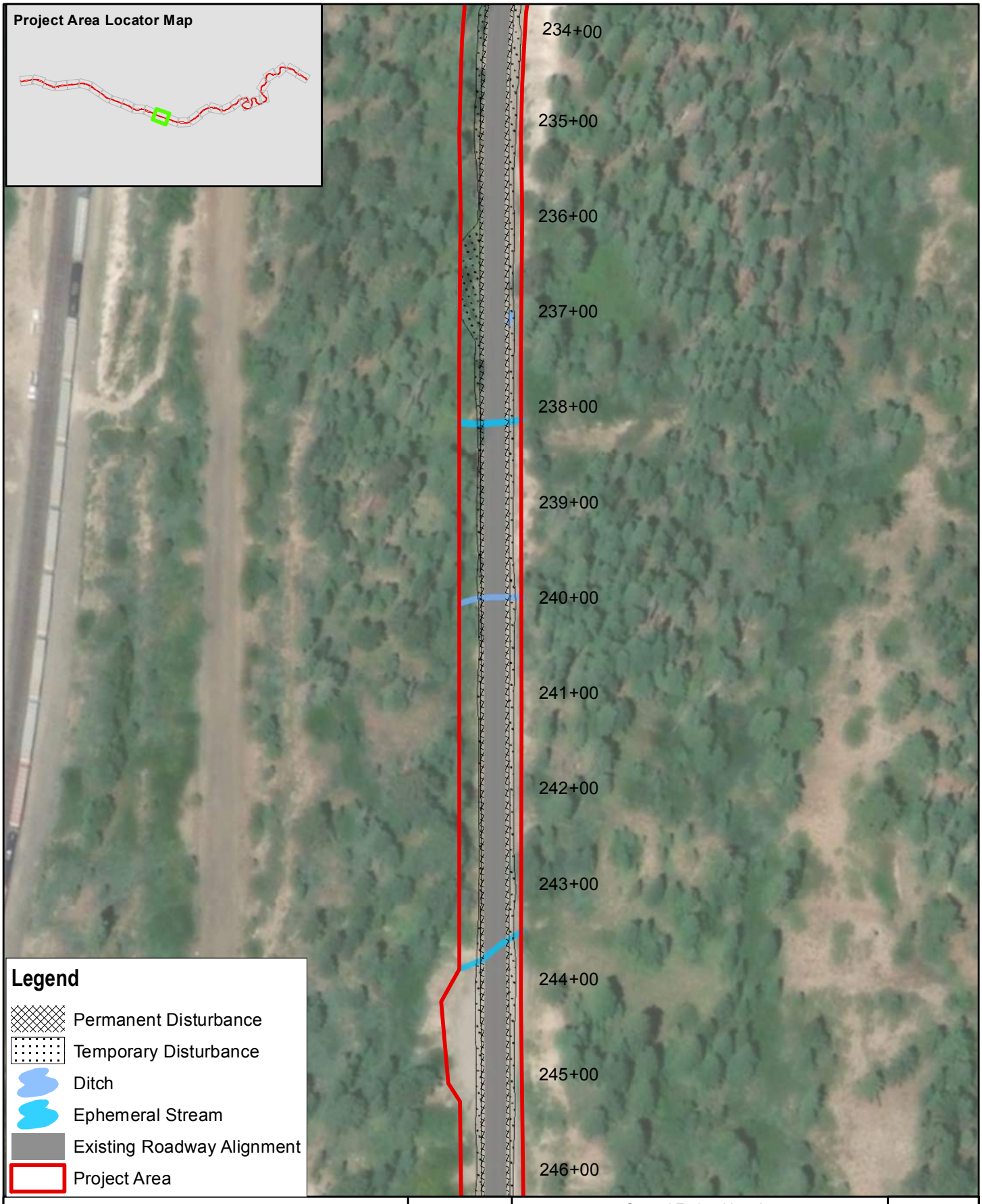
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4

wood.



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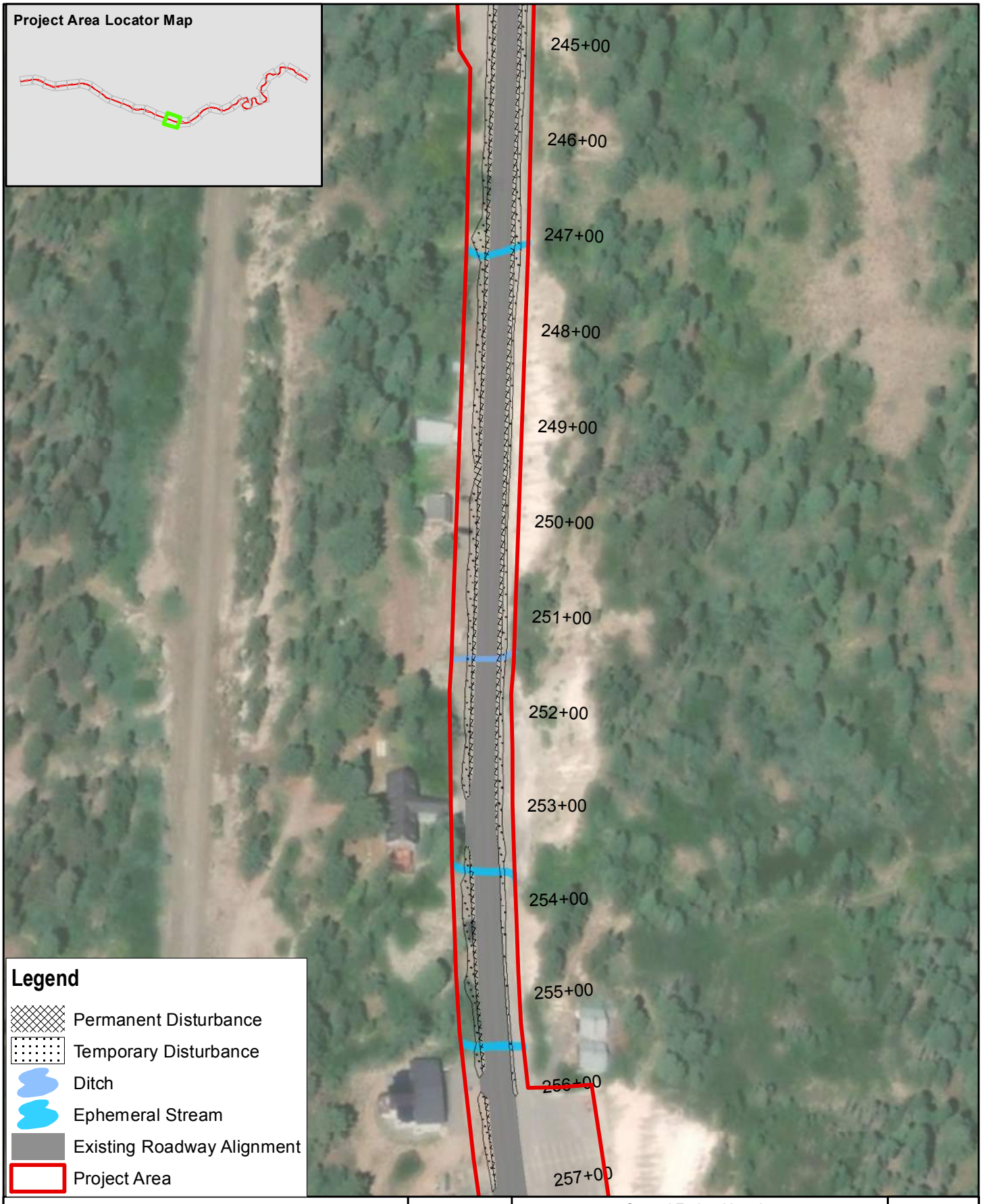
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4
Page 13 of 28

wood.



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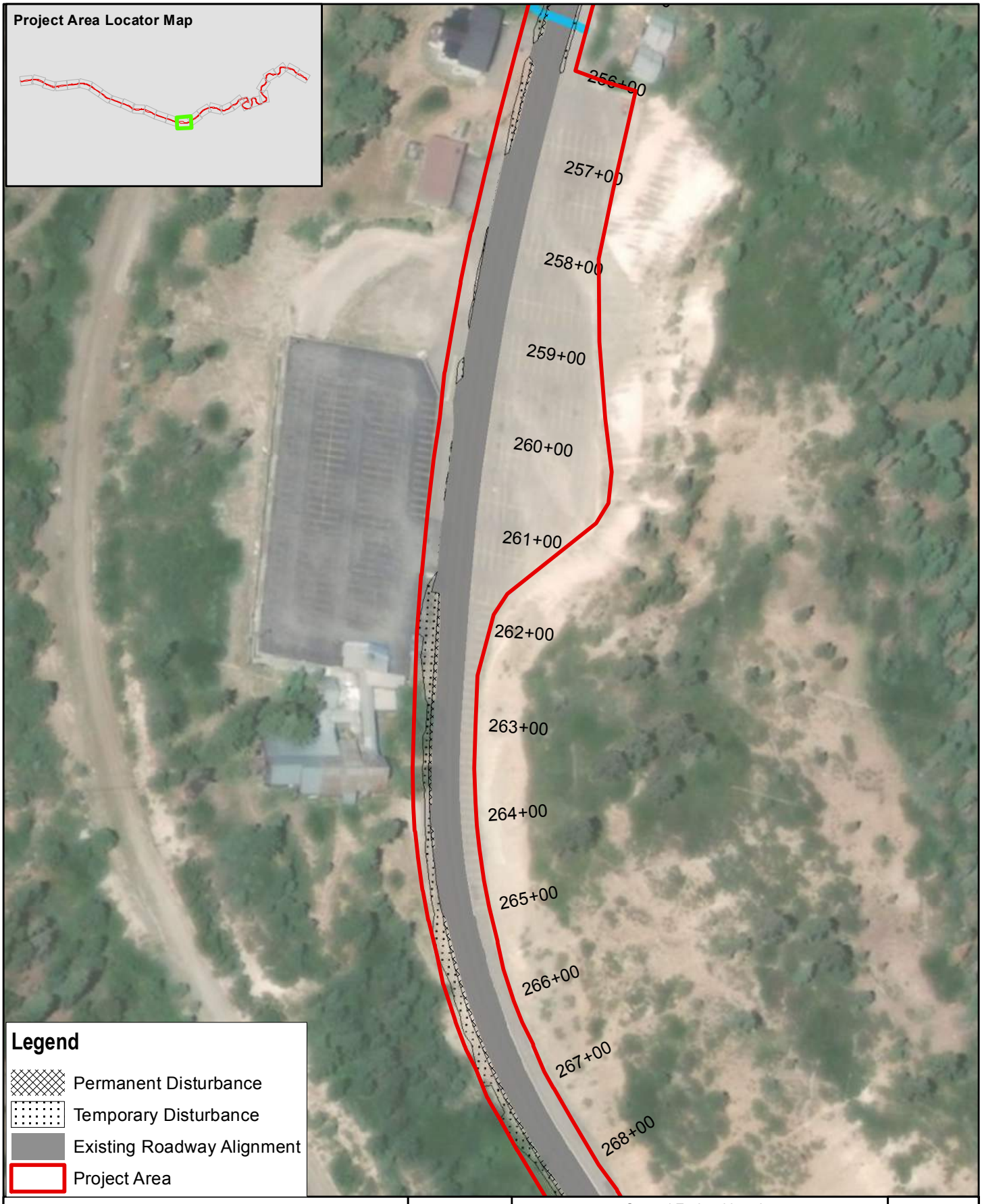
Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
4
Page 14 of 28

wood.



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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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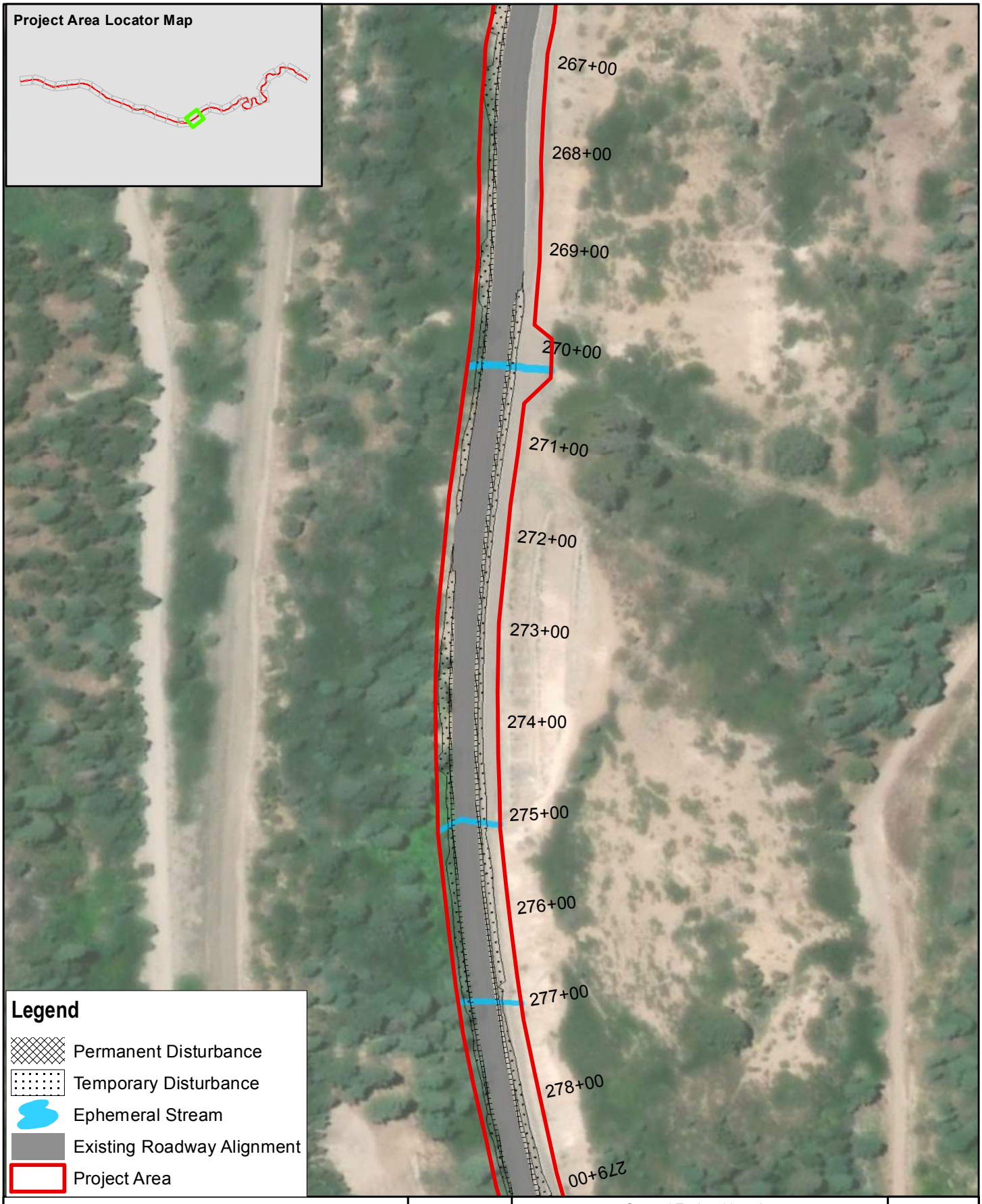

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Central Federal Lands
Donner Pass Road
Nevada and Placer Counties, California

Project Disturbance

FIGURE
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Project Disturbance

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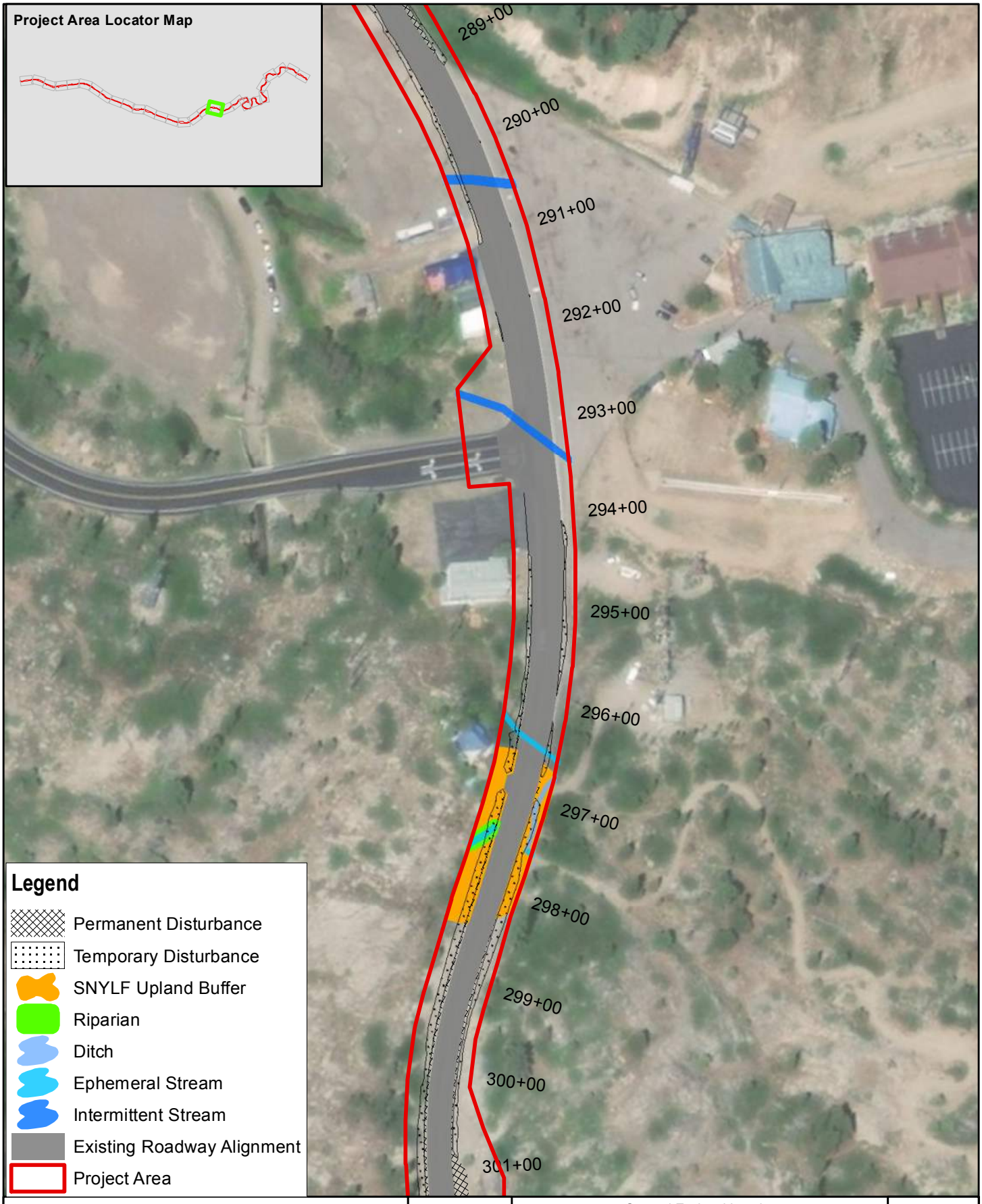

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Project Disturbance

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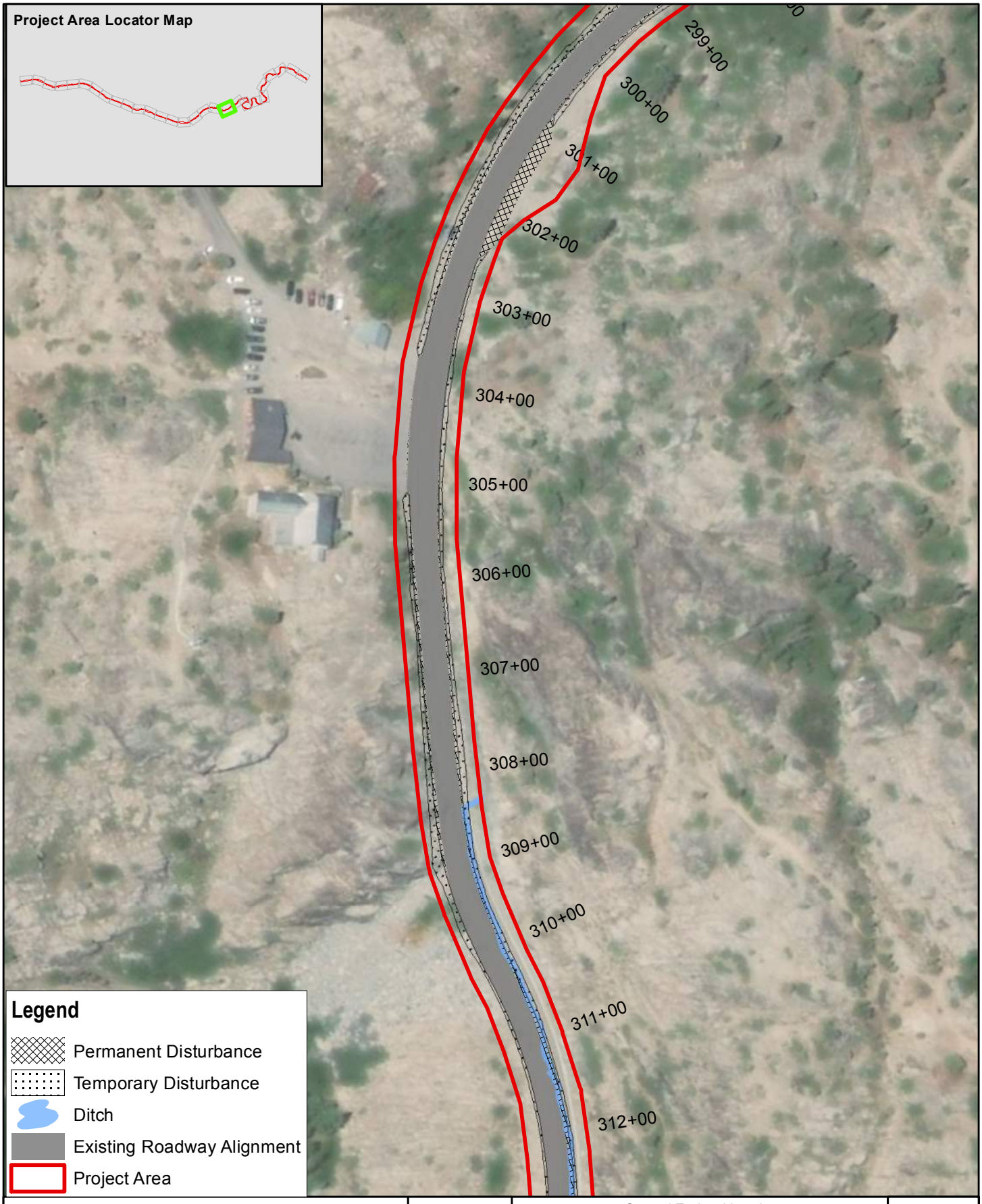

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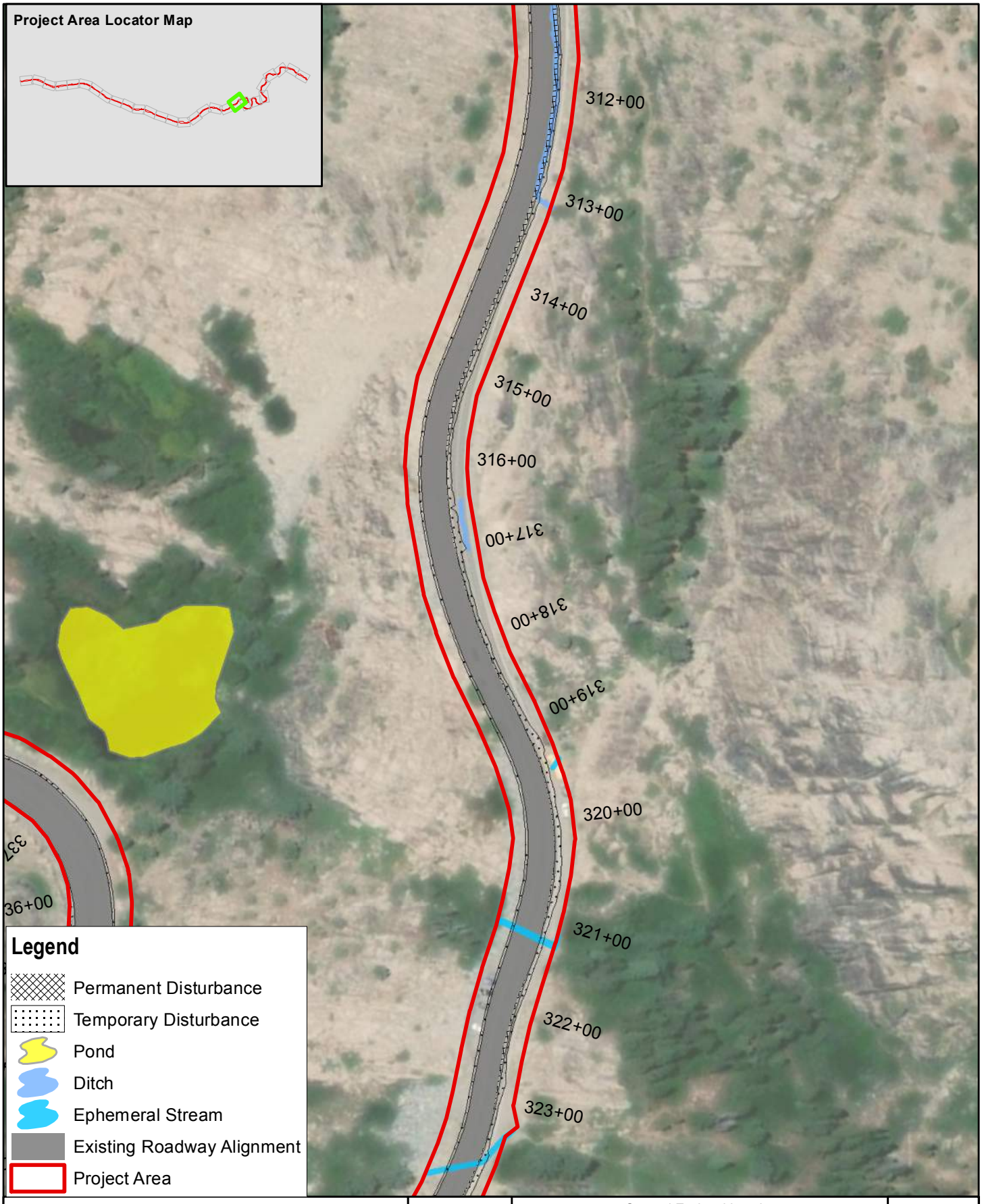

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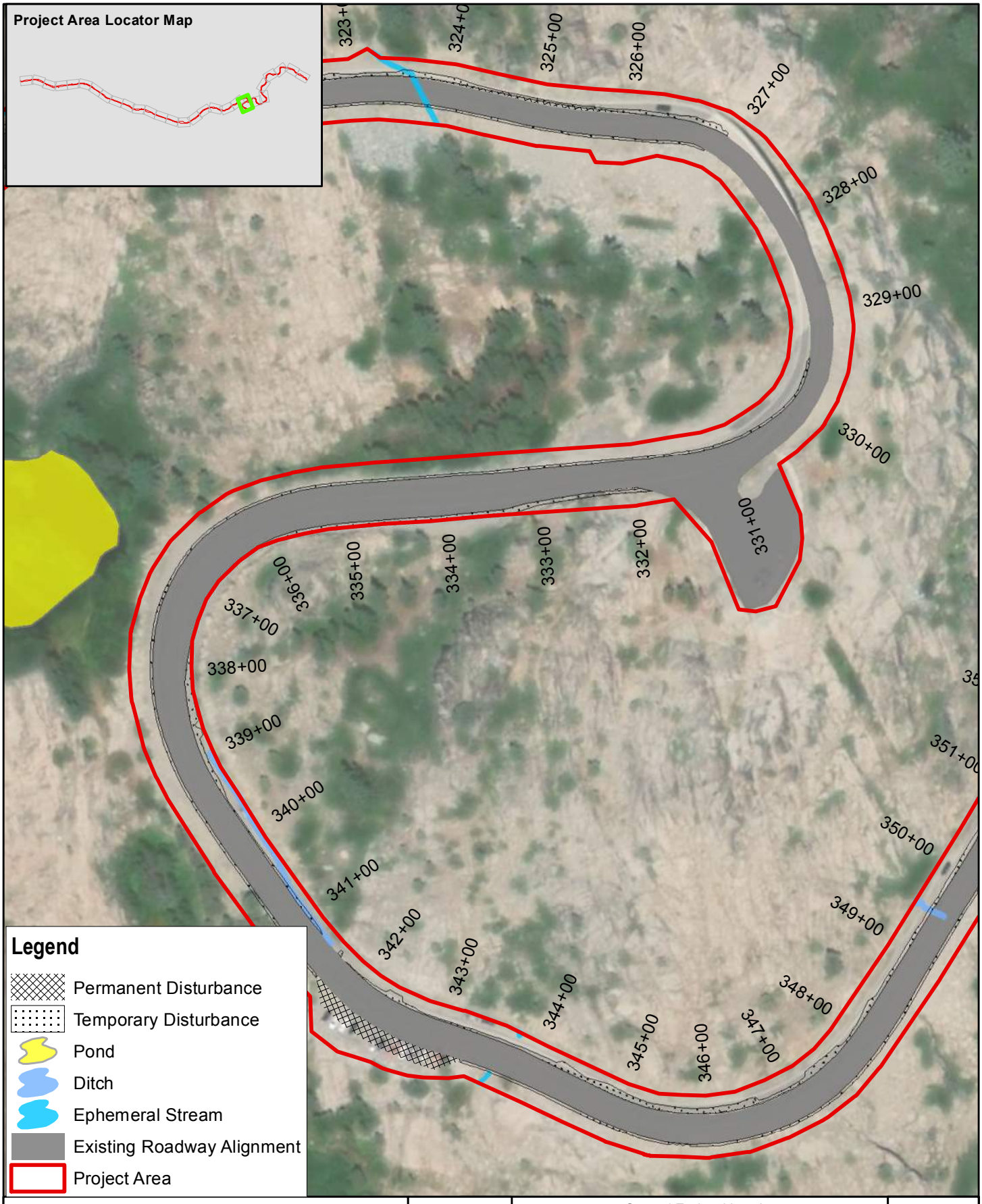

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Nevada and Placer Counties, California

Project Disturbance

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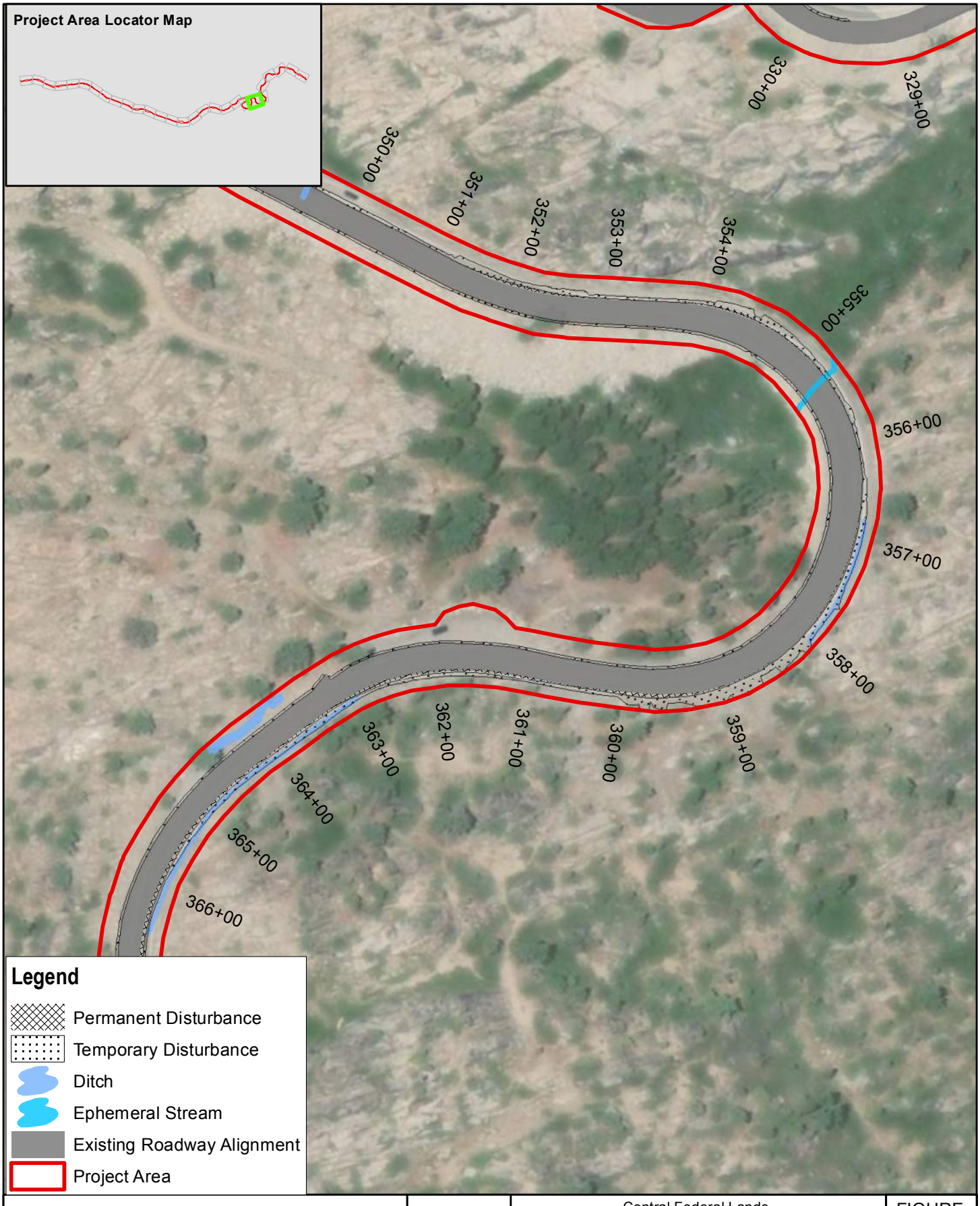

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Project Disturbance

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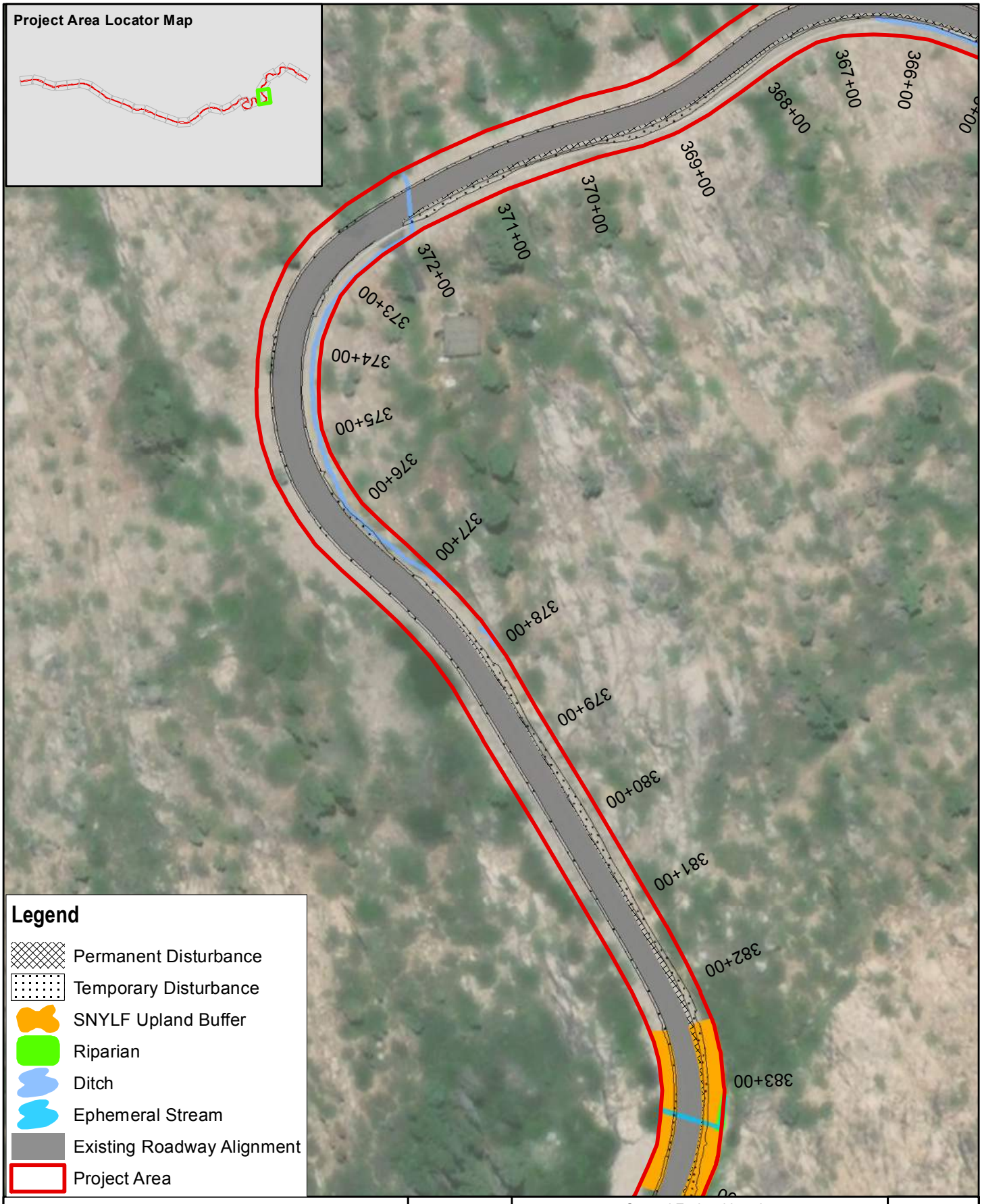

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Central Federal Lands
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Project Disturbance

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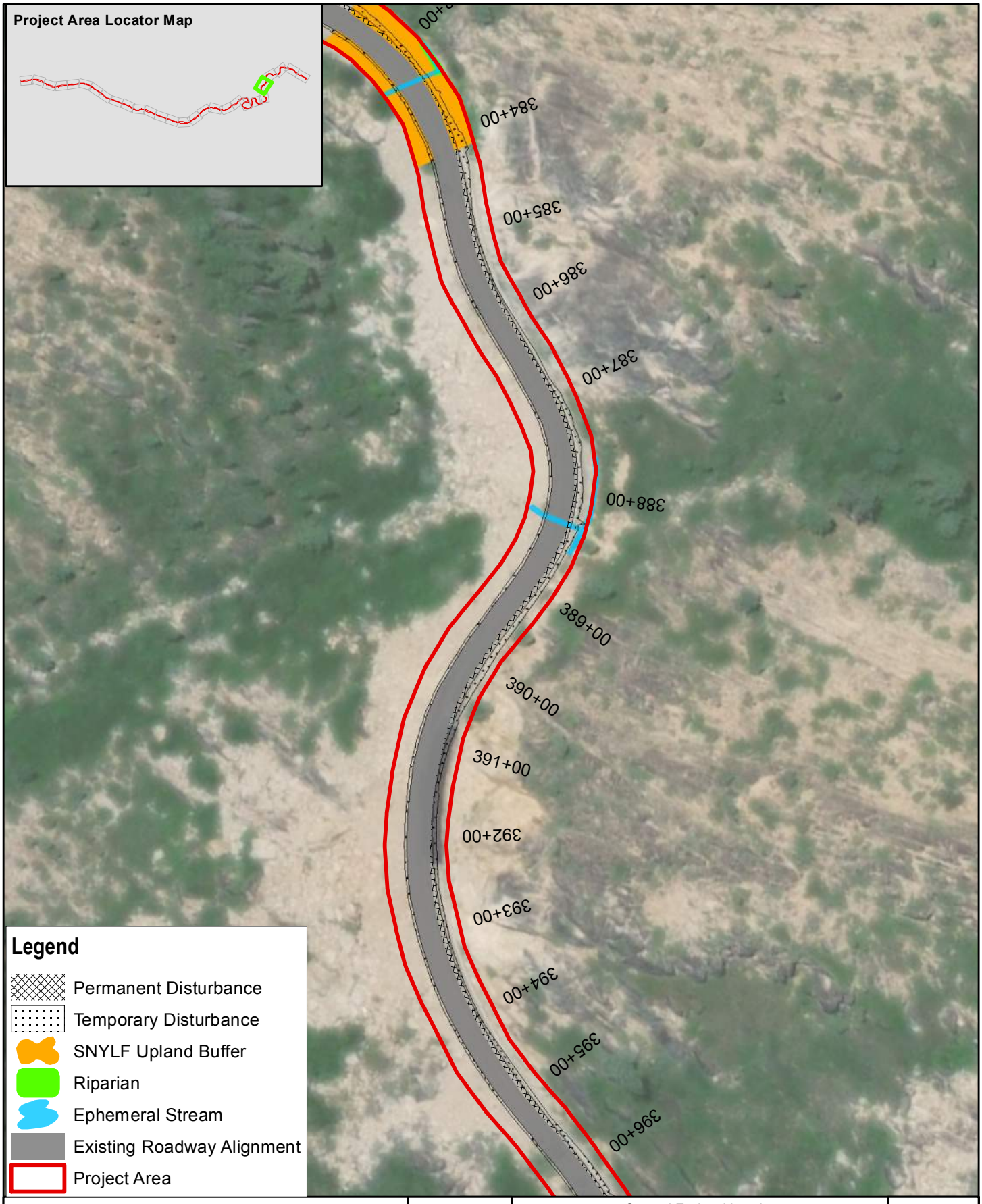

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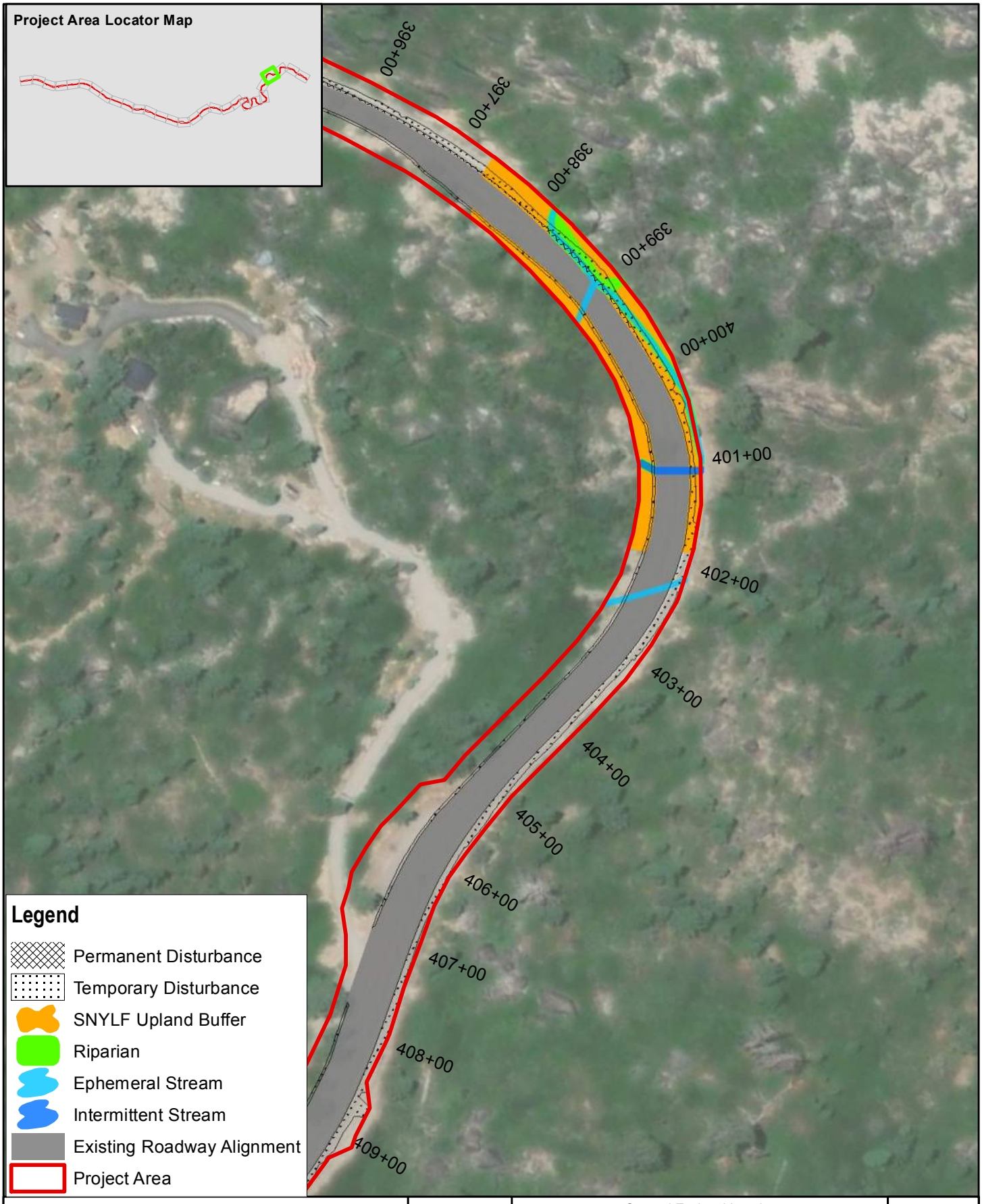

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Nevada and Placer Counties, California

Project Disturbance

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Page 25 of 28

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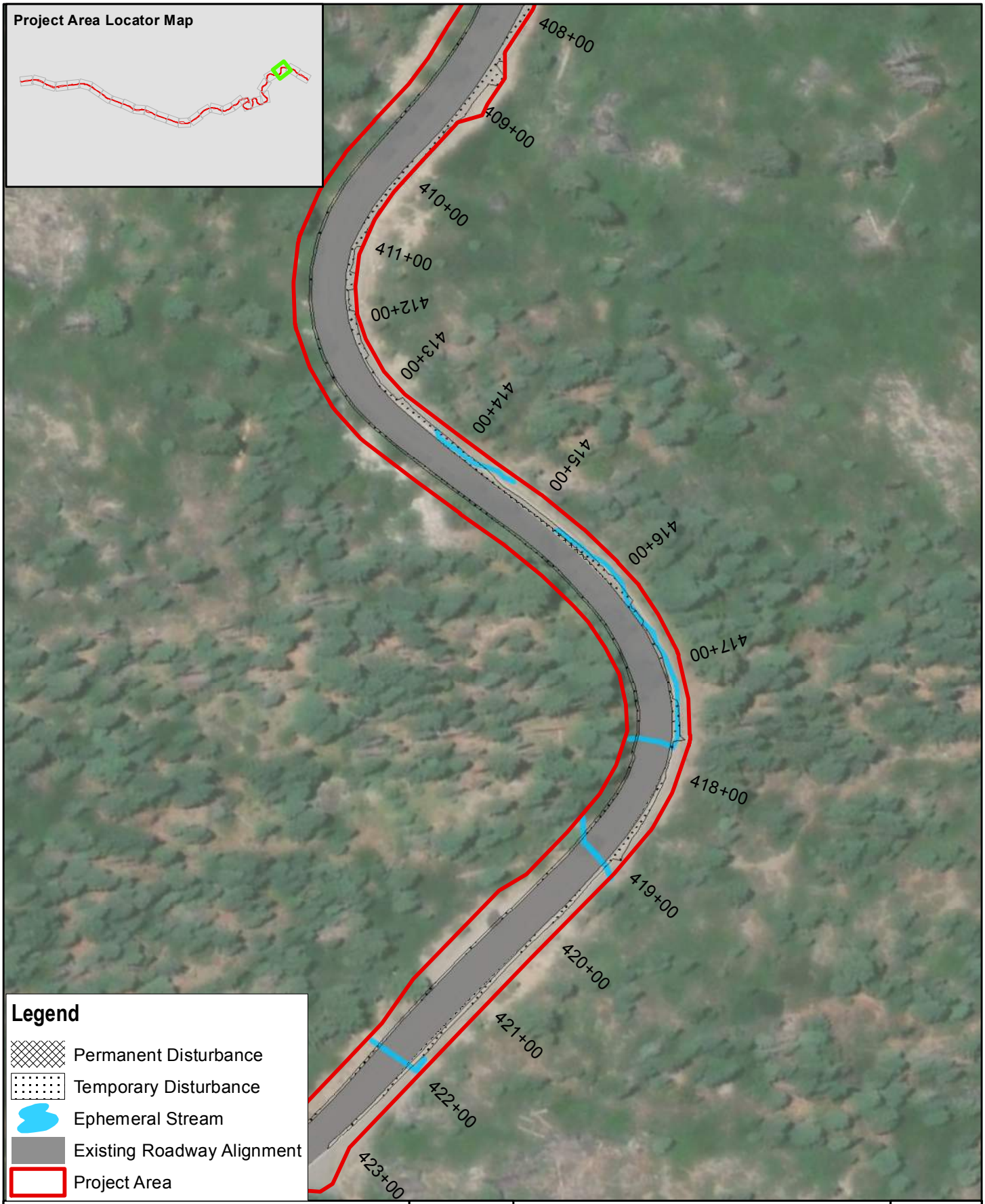

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Project Disturbance

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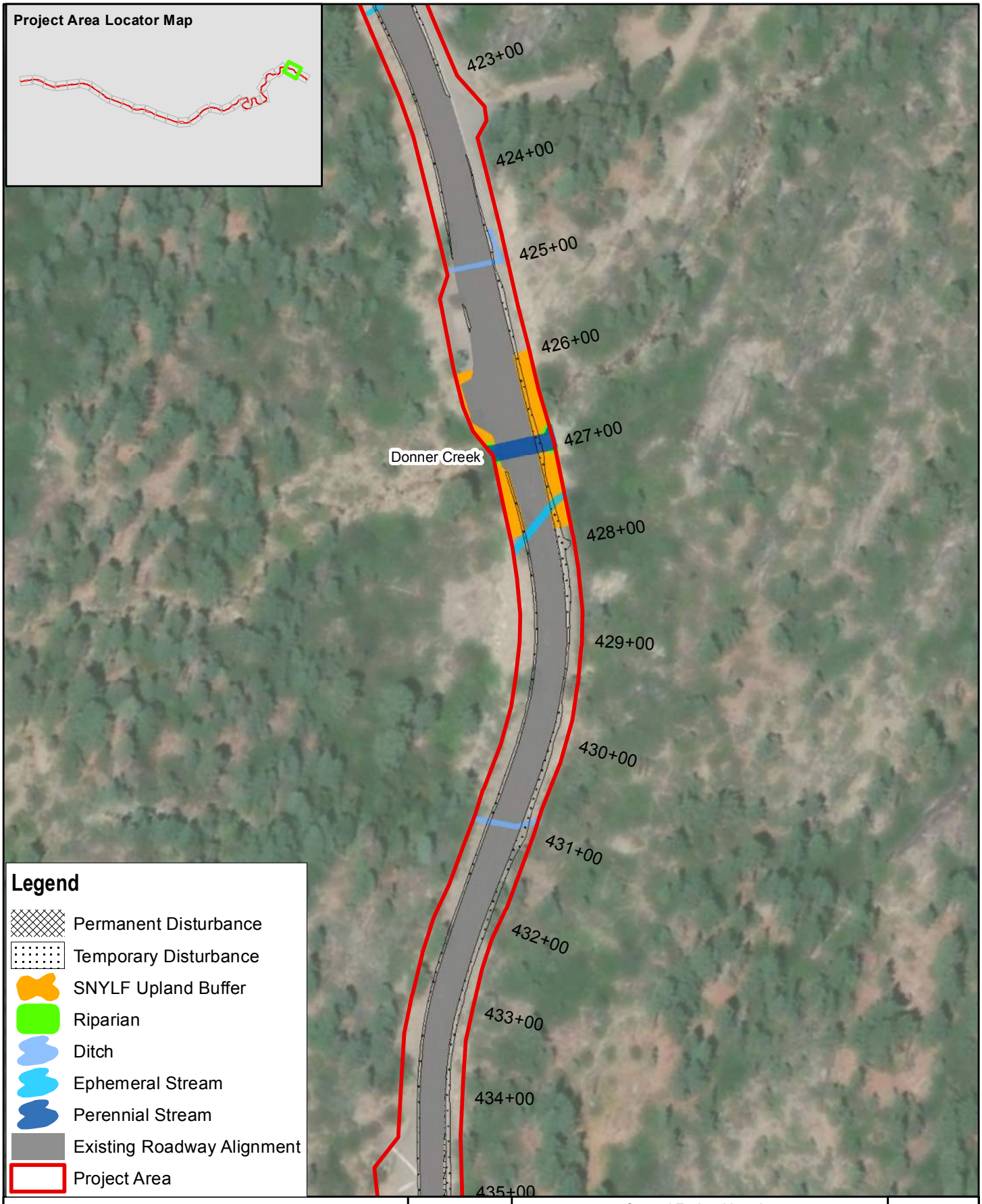

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Project Disturbance

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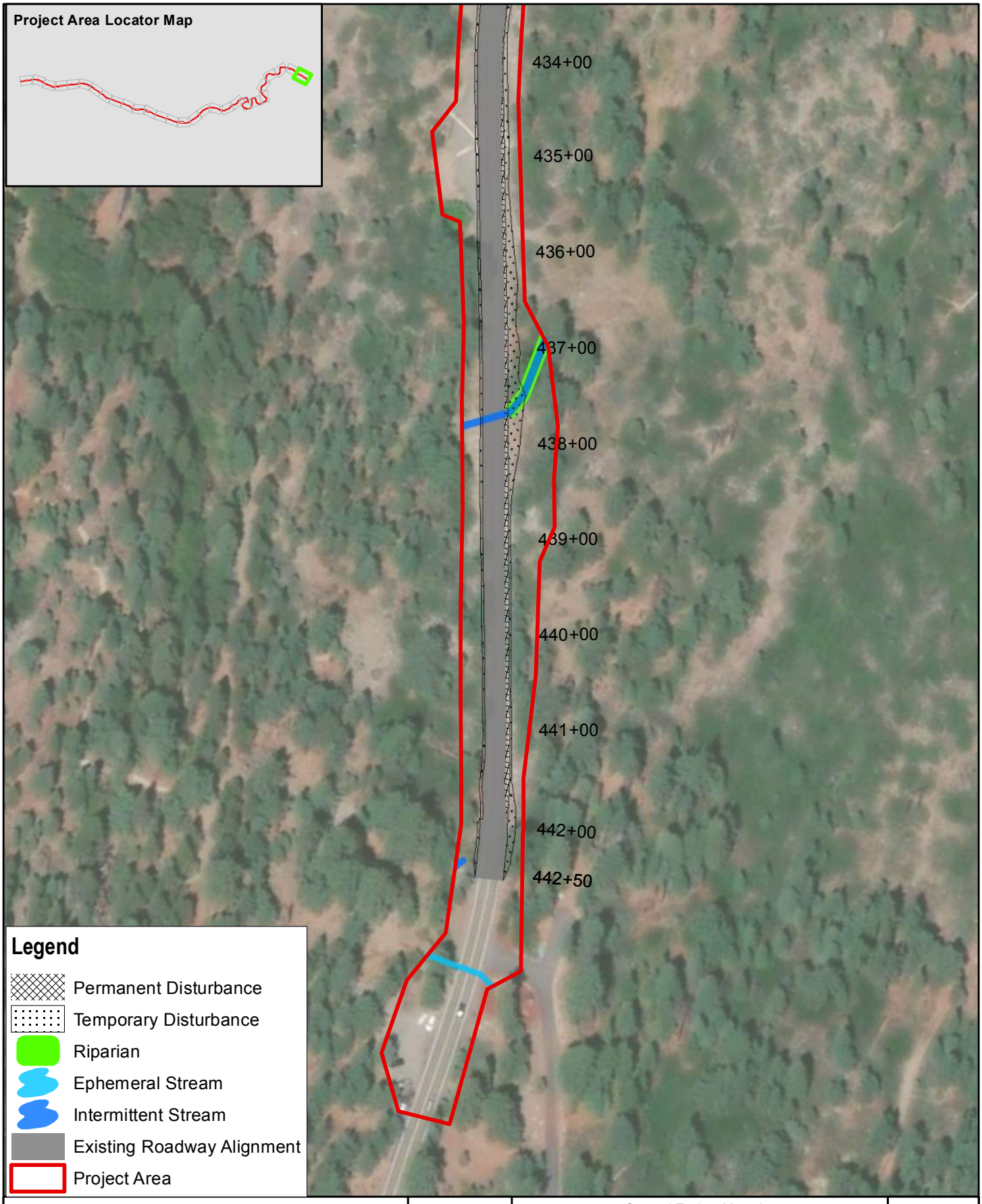

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Central Federal Lands
Donner Pass Road
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Project Disturbance

FIGURE
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APPENDIX B: FIELD SURVEY SPECIES LISTS

PLANT SPECIES LIST

Scientific name	Common name
From Wildlife Surveys	
Pinus contorta	Lodgepole pine
Pinus jeffreyi	Jeffrey pine
Salix sp.	Willow
Alnus sp.	Alder
Abies magnifica	Red fir
Populus tremuloides	Quaking aspen
Abies concolor	White fir
Calocedrus decurrens	Incense cedar
Arctostaphylos sp.	Green manzanita
Ceanothus cordulatus	Mountain white thorn
Tracheophyta sp.	Fern
Juniperus californica	California juniper
Quercus vaccinifolia	Huckleberry oak
From Wetland Delineation Report	
Abies concolor	White fir
Ailanthus altissima	Tree of heaven
Alnus incana	Speckled alder
Arctostaphylos patula	Green-leaf manzanita
Arctostaphylos nevadensis	Pinemat manzanita
Artemisia arbuscula	Little sage
Betula occidentalis	Water birch
Bromus inermis	Smooth brome
Bromus tectorum	Cheatgrass
Calocedrus decurrens	Incense cedar
Carex nebrascensis	Nebraska sedge
Carex simulata	Analogue sedge
Carex sp.	Sedge
Ceanothus cordulatus	Whitethorn ceanothus
Ceanothus prostratus	Prostrate ceanothus
Chamerion angustifolium ssp. circumvagum	Fireweed
Chrysolepis sempervirens	Bush cinquapin
Cornus nuttallii	Pacific flowering dogwood
Drymocallis hansenii	Yosemite woodbeauty
Epilobium densiflorum	Dense-flower willowherb
Epilobium sp.	Willowherb
Ericameria nauseosa	Rubber rabbitbrush
Glyceria elata	Tall manna grass
Iris missouriensis	Rocky Mountain iris
Juncus nevadensis	Sierran rush
Juncus sp.	Rush
Juncus tenuous	Lesser poverty rush
Juniperus californica	California juniper
Juniperus communis	Common juniper
Lonicera involucrata	Four-line honeysuckle
Lupinus latifolius	Broad-leaf lupine
Melissa officinalis	Lemon balm
Mentha arvensis	American wild mint
Nasturtium officinale	Watercress

Paeonia brownii	Western peony
Phalaris arundinacea	Reed canary grass
Pinus contorta	Lodgepole
Pinus jeffreyi	Jeffrey pine
poa bulbosa	Bulbous bluegrass
Poa secunda	Sandberg bluegrass
Polulus tremuloides	aspen
Populus balsamifera	black cottonwood
Potentilla sp.	Cinquefoil
Prunus virginiana	Choke cherry
Pteridium aquilinum	Northern bracken fern
Quercus vacciniifolia	Huckleberry oak
Ribes nevadensis	Sierran currant
Rosa woodsii	Wood's rose
Salix exigua	Narrow-leaf willow
Salix lasiandra	Pacific willow
Salix scouleriana	Scouler's willow
Scirpus microcarpus	Red-tinge bulrush
Sparganium natans	Arctic burr-reed
Spiraea splendens	Rose meadowsweet
Symphoricarpus mollis	Creeping snowberry
Symphyotrichum sp	Aster
Ulmus pumila	Siberian Elm
Veronica scutellata	Grass-leaf speedwell
Wyethia mollis	Wolly mule-ears

WILDLIFE SPECIES LIST

Scientific name	Common name
Birds	
Colaptes auratus	Northern flicker
Xanthocephalus xanthocephalus	Yellow-headed blackbird
Cyanocitta stelleri	Steller's jay
Haemorhous purpureus	Purple finch
Corvus corax	Common raven
Euphagus cyanocephalus	Brewer's blackbird
Zonotrichia leucophrys	White-crowned sparrow
Poecile gambeli	Mountain chickadee
Sitta canadensis	Red-breasted nuthatch
Poecile rufescens	Chestnut-backed chickadee
Catharus ustulatus	Swainson's thrush
Myadestes townsendi	Townsend's solitaire
Turdus migratorius	American robin
Buteo jamaicensis	Red-tailed hawk
Leuconotopicus villosus	Hairy woodpecker
Mammals	
Odocoileus sp.	Deer
Soricidae sp.	Shrew
Tamias sp.	Chipmunk
Microtus sp.	Vole
Tamiasciurus douglasii	Douglas squirrel
Marmota flaviventris	Yellow-bellied marmot

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2017-SLI-3396
Event Code: 08ESMF00-2018-E-08092
Project Name: Donner Pass

July 20, 2018

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2017-SLI-3396

Event Code: 08ESMF00-2018-E-08092

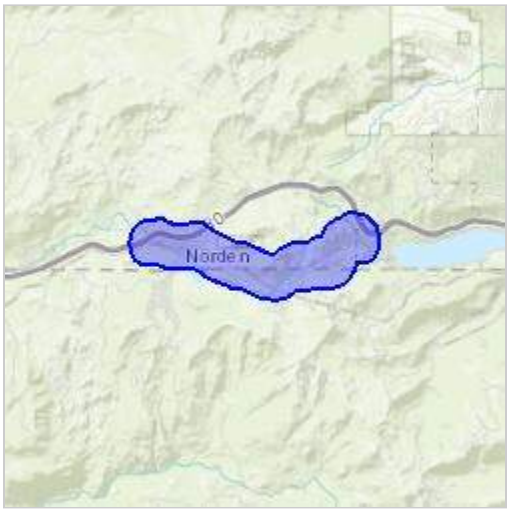
Project Name: Donner Pass

Project Type: TRANSPORTATION

Project Description: CFLHD Project Donner Pass

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.32049356588066N120.34757768026086W



Counties: Nevada, CA | Placer, CA

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* https://ecos.fws.gov/ecp/species/9529#crithab	Final

APPENDIX D: PLANNED DESIGN ACTIVITIES (30%)

OMITTED FOR SCRs

APPENDIX E
SAMPLE SMALL BUSINESS SUBCONTRACTING PLAN

APPENDIX E – FHWA SUBCONTRACTING PLAN

1. INSTRUCTIONS:
   - The following information shall be provided in the bidder subcontracting plan submission and shall be expressed in terms of goal percentages of the total planned subcontracting dollars.

SUBCONTRACTING PLAN for Solicitation number: 6982AF19B000002				
a.	Total prime contract amount:	$ [insert amount]	RATIO	PERCENT
b.	Total planned subcontract awards:	$ [insert amount]		
c.	Total planned subcontract awards to other than small business concerns (i.e., large, non-profit, etc.)	$ [insert amount]	(c/b)	[insert #]%
d.	Total planned subcontract awards to Small Business concerns (SB) (not elsewhere counted in e. f. g. or h. below)	$ [insert amount]	(d/b)	[insert #]%
e.	Total planned subcontract awards to Veteran Owned Small Business concerns (VOSB)[1]:	$ [insert amount]	(e/b)	[insert #]%
f.	Total planned subcontract awards to Service Disabled Veteran Owned Small Business concerns (SDVOSB):	$ [insert amount]	(f/b)	[insert #]%
g.	Total planned subcontract awards to Small Business concerns located in Historically Underutilized Business Zones (HUBZone):	$ [insert amount]	(g/b)	[insert #]%
h.	Total planned subcontract awards to Small Disadvantaged Business (SDB) concerns (includes 8(a)s, Alaska Native Corporations (ANC) and Indian Tribes):	$ [insert amount]	(h/b)	[insert #]%
i.	Total planned subcontract awards to Women-Owned Small Business concerns (WOSB)[2] concerns:	$ [insert amount]	(i/b)	[insert #]%
j.	Combined total planned subcontract awards to all small business (SB) concerns: NOTE: If a subcontractor qualifies in more than one sub-category of SB above, show that amount in each applicable sub-category, but include that amount only once in this line.	$ [insert amount]	(c+d+e+f+ g+h+i)/b	[insert #]%

e. Rationale if establishing a goal lower than 3% for VOSB:

f. Rationale if establishing a goal lower than 3% for SDVOSB:

g. Rationale if establishing a goal lower than 3% for HUBZone:

[1] Any dollar amount applied to SDVOSB also applies to VOSB.

[2] In this document, the term WOSB includes Economically Disadvantaged WOSB (EDWOSB) concerns.

h. Rationale if establishing a goal lower than 5% for SDB:

i. Rationale if establishing a goal lower than 5% for WOSB:

j. Rationale if establishing a goal lower than 48.5% for SB:

2. The following principal types of supplies and/or services are planned to be subcontracted under this contract. [Add additional rows if more space is needed.]

Type of Supply/Service to be Subcontracted	Company/Firm Name	Address	Subcontractor Size Standard (Other Than SB, SB, VOSB, SDVOSB, HUBZone, SDB, WOSB)[3]

3. The following methods was used to develop the subcontract percentage goals:

[3] List all applicable size standards for each proposed subcontractor.

4. The following methods were used to identify potential subcontract sources for solicitation purposes. (i.e. source lists used and organizations contacted to identify potential SB concerns, such as the System for Award Management (www.SAM.gov), Dynamic Small Business Search (www.DSBS.sba.gov), trade associations, industry conferences/fairs, etc.)

5. Indirect costs [were/were not] included in establishing the subcontracting goals specified in the table above.

6. If indirect costs were included, the following method was used to determine the proportionate share of indirect costs to be incurred with SB, VOSB, SDVOSB, HUBZone, SDB and WOSB subcontractors:

7. The following individual will administer the subcontracting program:

Name:	
Title:	
Address:	
Telephone:	
E-mail:	

This individual's specific duties, as they relate to the subcontracting program, are as follows:

8. The following efforts will be taken to ensure that SB, SDB, VOSB, SDVOSB, HUBZone, and WOSB subcontractors will have an equitable opportunity to compete for subcontracts:

☐ [initial] It is agreed that FAR Clause 52.219-8, Utilization of Small Business Concerns, will be included in all subcontracts, which offer further subcontracting opportunities. It is further agreed that all subcontractors (except small business concerns) at all tiers below the prime contractor who receive subcontracts in excess of $700,000 ($1.5M for construction of any public facility with further subcontracting possibilities) will be required to adopt and

comply with a subcontracting plan in accordance with FAR Clause 52.219-9.

9. The following types of records will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan (i.e., establishment of source lists, guides and other data that identify SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns; a description of the offeror's efforts to locate SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns and to award subcontracts to them, etc.) and shall be maintained through completion of the contract:

10. In accordance with FAR Subpart 19.704(a)(10) through (15), the Contractor further agrees to: [Initial each line]

☐ Cooperate in any studies or surveys as may be required;

☐ Submit periodic reports as may be required so that the Government can determine the extent of compliance by the Contractor with the subcontracting plan;

☐ After November 30, 2017, include subcontracting data for each order when reporting subcontracting achievements for indefinite-delivery, indefinite-quantity contracts intended for use by multiple agencies;

☐ Submit the Individual Subcontract Report (ISR), and the Summary Subcontract Report (SSR) using the Electronic Subcontracting Reporting System (eSRS) at http://www.esrs.gov/ within the timeframes identified at FAR Subpart 19.704(a)(10)(iv);

☐ Ensure that other than small business subcontractors with subcontracting plans agree to submit eSRS documents online as required;

☐ Provide its prime contract number and its unique entity identifier, and the e-mail address of the offeror's official responsible for acknowledging receipt of or rejecting the ISRs to all first-tier subcontractors with subcontracting plans so they can enter this information into the eSRS when submitting their ISRs;

☐ Require that each subcontractor with a subcontracting plan provide the prime contract number, its own unique entity identifier, and the e-mail address of the subcontractor's official responsible for acknowledging receipt of or rejecting the ISRs, to its subcontractors with subcontracting plans;

☐ Make a good faith effort to acquire articles, equipment, supplies, services, or materials, or obtain the performance of construction work from the small business concerns that the offeror used in preparing the bid or proposal, in the same or greater scope, amount, and quality used in preparing and submitting the bid or proposal;

☐ Provide the contracting officer with a written explanation if the contractor fails to

acquire articles, equipment, supplies, services or materials or obtain the performance of construction work as described in FAR 19.704(a)(12) of this section. This written explanation will be submitted to the contracting officer within 30 days of contract completion;

☐ Will not prohibit a subcontractor from discussing with the contracting officer any material matter pertaining to payment to or utilization of a subcontractor; and

☐ Pay its small business subcontractors on time and in accordance with the terms and conditions of the subcontract, and notify the contracting officer if the offeror pays a reduced or an untimely payment to a small business subcontractor (see FAR 52.242-5).

Submitted by:

POC Name:	
Title:	
Email Address:	
Company Name:	
Mailing Address:	

_____

Signature

APPENDIX F
401 (Pending) / 404 Permits