# Proponent's Environmental Assessment – Zayo Prineville-to-Reno Fiber Optic Project

September 2020

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Construction and operation of an underground fiber optic network from Prineville, Oregon, to Reno, Nevada, spanning 193.9 miles within California across portions of Modoc, Lassen, and Sierra Counties.

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# Abbreviations

| | |
|---|---|
| $\mu g/m^3$ | micrograms per cubic meter |
| 303(d) List | Section 303(d) List of Water Quality Limited Segments |
| AADT | average annual daily traffic |
| AB | Assembly Bill |
| ADT | average daily traffic |
| amsl | above mean sea level |
| AP | Alquist-Priolo |
| APE | Area of Potential Effects |
| APM | Applicant-Proposed Measure |
| applicant | Zayo Group, LLC |
| APSA | Above-ground Petroleum Storage Act |
| AST | aboveground storage tank |
| ATCM | Airborne Toxic Control Measure |
| Basin Plan | Water Quality Control Plan |
| BIA | Bureau of Indian Affairs |
| BLM | U.S. Bureau of Land Management |
| BMP | best management practice |
| BRSA | Biological Resources Survey Area |
| BRTR | Biological Resources Technical Report |
| CAAQS | California Ambient Air Quality Standards |
| CAFE | Corporate Average Fuel Economy |
| CAISO | California Independent System Operator |
| CalARP | California Accidental Release Program |

| | |
|---|---|
| CalEEMod | California Emissions Estimator Model |
| CAL EMA | California Emergency Management Agency |
| CalEPA | California Environmental Protection Agency |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CalOSHA | Division of Occupational Safety and Health |
| Caltrans | California Department of Transportation |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CCAA | California Clean Air Act |
| CCR | California Code of Regulations |
| CDFW | California Department of Fish and Wildlife |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| CERCLA | California Environmental Response, Compensation, and Liability Act |
| CESA | California Endangered Species Act |
| CFC | California Fire Code |
| CGP | Construction General Permit |
| CGS | California Geological Survey |
| $CH_4$ | methane |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |

| | |
|---|---|
| CPCN | Certificate of Public Convenience and Necessity |
| CPUC | California Public Utilities Commission |
| CRHR | California Register of Historical Resources |
| CSLC | California State Lands Commission |
| CUPA | Certified Unified Program Agency |
| CWA | Clean Water Act |
| CWHR | *A Guide to Wildlife Habitats of California* |
| CWPP | Community Wildfire Protection Plan |
| dB | decibel |
| dBA | A-weighted decibel |
| DNL | day-night sound level |
| DOSH | Division of Occupational Safety and Health |
| DPM | diesel particulate matter |
| DTSC | Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| EDR | Environmental Data Resources, Inc. |
| EO | Executive Order |
| EPA | U.S. Environmental Protection Agency |
| ESA | federal Endangered Species Act |
| °F | degrees Fahrenheit |
| FCAA | federal Clean Air Act |
| FEMA | Federal Emergency Management Agency |
| FGC | California Fish and Game Code |
| FHSZ | Fire Hazard Severity Zone |
| FHWA | Federal Highway Administration |

| | |
|---|---|
| FIRM | Flood Insurance Rate Map |
| FLPMA | Federal Land Policy and Management Act |
| FMMP | Farmland Mapping and Monitoring Program |
| FPPA | Farmland Protection Policy Act |
| FRA | Federal Responsibility Area |
| g | percentage of gravity |
| GHG | greenhouse gas |
| G.O. | General Order |
| GSA | Groundwater Sustainability Agency |
| GSP | Groundwater Sustainability Plan |
| HAP | Hazardous Air Pollutants |
| HDPE | high-density polyethylene |
| HMTA | Hazardous Materials Transportation Act |
| HSC | California Health and Safety Code |
| ILA | In-Line Amplifier |
| LCAPCD | Lassen County Air Pollution Control District |
| $L_{dn}$ | day-night sound level |
| $L_{eq}$ | equivalent noise level |
| $L_{max}$ | maximum noise level |
| LMU | Lassen-Modoc Unit |
| LOS | Level of Service |
| LRA | Local Responsibility Area |
| LRMP | Land and Resource Management Plan |
| LSAA | Lake or Streambed Alteration Agreement |
| MBTA | Migratory Bird Treaty Act |

| | |
|---|---|
| MCAB | Mountain Counties Air Basin |
| MCAPCD | Modoc County Air Pollution Control District |
| MCV | *Manual of California Vegetation, Second Edition* |
| MJUSD | Modoc Joint Unified School District |
| mm | millimeter |
| $MMTCO_2e$ | million metric tons of carbon dioxide equivalent |
| mph | miles per hour |
| MRZ | Mineral Resource Zone |
| $MTCO_2e/yr$ | metric tons of carbon dioxide equivalent per year |
| $N_2O$ | nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NAHC | Native American Heritage Commission |
| NEIC | National Earthquake Information Center |
| NEPA | National Environmental Policy Act |
| NESC | National Electrical Safety Code |
| NFIP | National Flood Insurance Program |
| NFMA | National Forest Management Act |
| NFPA | National Fire Protection Association |
| NHPA | National Historic Preservation Act |
| NHTSA | National Highway Traffic Safety Administration |
| $NO_2$ | nitrogen dioxide |
| NOA | naturally occurring asbestos |
| NOAA Fisheries | National Oceanic and Atmospheric Administration Fisheries |
| $NO_X$ | Nitrogen oxide |
| NPAB | Northeast Plateau Air Basin |

| | |
|---|---|
| NPDES | National Pollutant Discharge Elimination Service |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSAQMD | Northern Sierra Air Quality Management District |
| $O_3$ | ozone |
| OHP | California State Office of Historic Preservation |
| OHV | off-highway vehicle |
| OPR | Governor's Office of Planning and Research |
| OSHA | Occupational Safety and Health Administration |
| PAD | California Fish Passage Assessment Database |
| Pb | lead |
| PBDB | Paleo Biology Database |
| PCAPCD | Placer County Air Pollution Control District |
| PCE | passenger car equivalent |
| P-C Regions | Production-Consumption Regions |
| PEA | Proponent's Environmental Assessment |
| PFYC | Potential Fossil Yield Classification |
| PM | suspended particulate matter |
| $PM_{2.5}$ | particulate matter with an aerodynamic diameter of 2.5 micrometers or less |
| $PM_{10}$ | particulate matter with an aerodynamic diameter of 10 micrometers or less |
| PMP | Paleontological Mitigation Plan |
| Porter-Cologne Act | Porter-Cologne Water Quality Control Act |
| POU | publicly owned utilities |
| ppm | parts per million |

| | |
|---|---|
| PPV | peak particle velocity |
| project | construction and operation of an underground fiber optic network from Prineville, Oregon, to Reno, Nevada |
| PRPA | Paleontological Resources Preservation Act |
| PTC | Permit to Construct |
| PU Code | Public Utilities Code |
| QSP | Qualified Stormwater Pollution Prevention Plan Practitioner |
| RCRA | Resource Conservation and Recovery Act |
| ROG | reactive organic gas |
| RPS | Renewables Portfolio Standard |
| RRP | Revegetation and Restoration Plan |
| RTP | Regional Transportation Plan |
| RTPA | Regional Transportation Planning Agency |
| RWQCB | Regional Water Quality Control Board |
| SB | Senate Bill |
| SHPO | State Historic Preservation Officer |
| SIP | state implementation plan |
| SMARA | Surface Mining and Reclamation Act of 1975 |
| SMARTS | Storm Water Multiple Application and Report Tracking System |
| SMGB | State Mining and Geology Board |
| $SO_2$ | Sulfur dioxide |
| SPCC | Spill Prevention, Countermeasure, and Control |
| SRA | State Responsibility Area |
| Stantec | Stantec Consulting Services Inc. |
| SWPPP | Stormwater Pollution Prevention Plan |

| | |
|---|---|
| SWRCB | State Water Resources Control Board |
| TAC | toxic air contaminant |
| TCP | Traditional Cultural Property |
| TK | Transitional Kindergarten |
| TMDL | Total Maximum Daily Load |
| TPP | Transmission Planning Process |
| TPZ | Timberland Production Zone |
| UCMP | University of California Museum of Paleontology |
| US 395 | United States Highway 395 |
| USACE | U.S. Army Corps of Engineers |
| USC | United States Code |
| USDA | U.S. Department of Agriculture |
| USDOT | U.S. Department of Transportation |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| UST | underground storage tank |
| VMT | vehicle miles travelled |
| WDID | Waste Discharger Identification |
| WEAP | Worker Environmental Awareness Program |
| WRP | Wetlands Reserve Program |

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# 1.0 EXECUTIVE SUMMARY

## 1.1 PROPOSED PROJECT SUMMARY

Zayo Group, LLC (applicant), a California telephone corporation, proposes the construction and operation of an underground fiber optic network from Prineville, Oregon, to Reno, Nevada (project), spanning 433.8 miles. The purpose is to improve the quality of rural broadband in south-central Oregon, northeastern California, and northwestern Nevada, and to make affordable broadband internet services available to currently underserved communities in these areas.

The portion of the project that crosses California would extend 193.9 miles across portions of Modoc, Lassen, and Sierra Counties. The running line generally follows United States Highway 395 (US 395) but also county roads between the communities of Standish and Buntingville in Lassen County, California, where it follows Standish Buntingville Road (Lassen County Road A3) for 7.35 miles and Cummings Road for 1.15 miles before returning to the right-of-way parallel to US 395.

Conduit to house the new fiber optic cable would be buried using a combination of plowing or trenching construction techniques. Alternatively, horizontal directional drilling would be used to cross water bodies and roads, and where necessary to avoid existing infrastructure or biological or cultural resources. For some water- or road-crossing locations, the conduit may be affixed to the side or underside of bridges. Ancillary equipment would be installed at three small buildings that would serve as amplifier sites (In-Line Amplifiers [ILAs]). Fiberglass vaults would be installed flush to the ground along the running line to provide maintenance access and at splice locations. All construction activities would be conducted in compliance with California Department of Transportation (Caltrans) requirements and county longitudinal utility encroachment permit procedures.

## 1.2 LAND OWNERSHIP AND RIGHT-OF-WAY REQUIREMENTS

The project would be located along US 395 within the right-of-way managed by Caltrans and would require an encroachment permit from Caltrans. The lands underlying the Caltrans right-of-way are owned or administered by various state, federal, and private entities, including the U.S. Bureau of Land Management (BLM), the U.S. Forest Service, the U.S. Fish and Wildlife Service (USFWS), the California State Lands Commission, and several tribal entities. An 8-mile segment of the running line would deviate from US 395 and run along Standish Buntingville Road (Lassen County Road A3) and Cummings Road between the communities of Standish and Buntingville in Lassen County, California. In this location, the underlying land is owned by Lassen County.

### 1.2.1 New, Existing, and Temporary Rights-of-Way or Easements

The running line and associated ancillary equipment would be placed within existing Caltrans and county-maintained roadway rights-of-way and on private property. These existing rights-of-way range from 60 to 1,500 feet wide. No new or modified rights-of-way would be required to accommodate construction of the

project. The project would not change any existing land uses or displace any properties, and no temporary rights-of-way would be required. New easements would be required for the portions of the running line that traverse the Bureau of Indian Affairs' XL Rancheria, the Modoc Wildlife Refuge, and BLM land.

### 1.2.2 Rights-of-Way or Easement Applications

The applicant would apply for an encroachment permit from Caltrans for construction within the US 395 right-of-way, and permits from Lassen, Modoc, and Sierra Counties for construction within county road rights-of-way. Easements will be obtained for underlying rights, including the California State Lands Commission, BLM, the U.S. Forest Service, and the Bureau of Indian Affairs.

## 1.3 AREAS OF CONTROVERSY

There are no known areas of controversy and no major issues that must be resolved related to the project.

## 1.4 SUMMARY OF IMPACTS

Project impacts are primarily construction-related, and the project has been planned and engineered to avoid or minimize the largely-temporary environmental impacts. Applicant-Proposed Measures (APMs) would be implemented to further avoid or minimize impacts on environmental resources, ensuring that any remaining impacts would be less than significant. These APMs are identified in the respective resource sections within Section 5.0 and are summarized in Section 3.0, Proposed Project Description.

## 1.5 SUMMARY OF ALTERNATIVES

To avoid and minimize all environmental impacts, the running line and associated ancillary equipment have been located within or immediately adjacent to an existing transportation corridor (i.e., right-of-way) and thereby minimizing impacts to undisturbed sensitive environmental resources. In addition, selection of ILAs, staging areas, and material storage yards prioritized locations within the existing roadway right-of-way or on previously disturbed parcels.

The exact placement of the running line within the existing transportation corridor has changed over several years of agency coordination and in response to environmental surveys that were conducted in 2019 and 2020. As such, the applicant rejected or dismissed design alternatives that would potentially impact sensitive environmental resources and rerouted the alignment, chose an alternative construction method, or potentially placed the running line in a less sensitive area closer to the edge of pavement.

The project as proposed in Section 3.0, Proposed Project Description, would be the "best fit" running line because it was designed to maximize avoidance of sensitive environmental resources, particularly cultural and biological resources, while still meeting the project objectives.

Under the No Project Alternative, the fiber optic line would not be granted authorization by the California Public Utilities Commission (CPUC) to provide broadband capacity to rural communities. The project

would not provide connectivity between the network hub in Prineville and the communities of Bend and La Pine in Oregon; Alturas, Lakeview, and Susanville in California; and the greater Reno/Sparks metropolitan area in Nevada. These communities would not experience improved reliability of current telecom services.

## 1.6 PRE-FILING CONSULTATION AND PUBLIC OUTREACH SUMMARY

### 1.6.1 Bureau of Land Management

Stantec Consulting Services Inc. (Stantec) corresponded with Larry Ashton of BLM's Deschutes Field Office on April 10, 2020, during which Mr. Ashton noted that the two California districts crossed by the project would be preparing wildlife clearance documents outlining the BLM's concerns regarding potential project impacts on biological resources and would provide recommendations to avoid or minimize impacts. Mr. Ashton also indicated that the project would likely result in a "No Effect" determination for all potential federal Endangered Species Act-listed species in California, including Carson wandering skipper.

On May 1, 2020, Stantec received the wildlife clearance document from Melissa Nelson of the Eagle Lake Field Office via Larry Ashton. The following summarizes the comments and recommendations from Ms. Nelson. Ms. Nelson referred the applicant to sections of the *Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment* (BLM 2015) for information pertaining to greater sage-grouse avoidance, and minimization and mitigation strategies for construction of the project. She also indicated that greater sage-grouse habitat and other pertinent data would be provided when possible, and that habitat mitigation for greater sage-grouse may be required.

On May 1, 2020, Stantec received the wildlife clearance document from the Katrina Krause of the Sierra Front Field Office via Larry Ashton. Ms. Krause summarized the special status species that may be affected where Sierra Front Field Office lands in Nevada and California overlap the project, which include burrowing owls, raptors and other migratory birds, and some reptiles (specifics not provided). Greater sage-grouse habitat is present within the project area, but there are no known leks in proximity to the project, and seasonal restrictions do not apply.

On May 28, 2020, Stantec received the wildlife clearance document from the Applegate Field Office via Larry Ashton. Mr. Ashton noted that, given the linear nature of the project along US 395, the project would not significantly impact greater sage-grouse, no seasonal restrictions or mitigation measures were recommended, and because the field office is outside of the range of Carson wandering skipper, no seasonal restrictions or mitigation measures were recommended. In addition, Mr. Ashton noted that the California Natural Diversity Database reports a Swainson's hawk nest within 50 meters of the road on the east side of US 395 about 5.5 miles south of Alturas. The nest should be considered active until it is formally surveyed, and if active, a 0.5-mile line-of-sight-buffer should be applied. Impacts would be minimal outside of the species' breeding season (April 15 to August 15), but Mr. Ashton suggested that the applicant move the route to the west side of the road in this area if flexibility allows.

### 1.6.2 California Department of Fish and Wildlife

Stantec met with California Department of Fish and Wildlife (CDFW) in Redding, California, on August 29, 2019, to provide the agency with project background, a summary of field surveys underway, and California Environmental Quality Act history pertinent to the project segment. During that meeting, CDFW requested a Swainson's hawk survey be undertaken; that the project avoid sandhill crane nesting areas; that avoidance, rather than translocation, be the preferred mitigation for potential impacts to special status plants; that a "frac-out" response plan be developed; and that analyses include invasive species.

Stantec met with CDFW (Amy Henderson and Adam McKannay) on March 2, 2020, in Redding, California, to provide an overview of the completed 2019 biological field surveys and the surveys planned for 2020. CDFW recommended that Stantec biologists use the Nevada or Utah survey protocol for pygmy rabbits, that a protocol-level preconstruction Swainson's hawk survey be conducted, that biologists look for bank swallows in the Long Valley Creek area during surveys, and that biologists coordinate with BLM for greater sage-grouse lek information.

### 1.6.3 California Department of Transportation

On behalf of the applicant, Stantec has been coordinating frequently with Caltrans since early 2019. Agency-applicant meetings and calls were held on July 17, August 29, September 16, September 19, October 24, November 20, and December 20, 2019. As one of two public agencies with the greatest responsibility for approving the project, initial conversations centered on the potential for Caltrans to serve as CEQA lead. Other topics discussed included the potential for the applicant to co-locate fiber optic with other providers, routes to CEQA compliance, potential impacts to cultural sites along US 395, the timing and process of Caltrans' encroachment permit relative to the CEQA process, contracting mechanisms, the positioning of the telecom running line in relation to highway pavement, cultural and biological survey methods, and public and tribal outreach requirements.

### 1.6.4 Native American Heritage Commission

On October 11, 2019, the applicant contacted the Native American Heritage Commission (NAHC) to request a search of the Sacred Lands File for the full length of the project right-of-way in California. The NAHC responded on October 29, 2019, to report positive findings and urged contact with the Alturas Rancheria of Pit River Indians for further information. The NAHC also suggested contact with the following tribes and bands: Alturas Rancheria of Pit River Indians, Fort Bidwell Indian Community of Paiute, Greenville Rancheria of Maidu Indians, Honey Lake Maidu, Pit River Tribe of California, Susanville Indian Rancheria, Tsi Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, and the Washoe Tribe of Nevada and California. Stantec has contacted the following tribes and bands about this project: Washoe Tribe of Nevada and California, Fort Bidwell Indian Community of Paiute, Pit River Tribe of California, Susanville Indian Rancheria, Honey Lake Maidu, Greenville Rancheria of Maidu Indians, Cedarville Rancheria of Northern Paiute, and the Alturas Rancheria of Pit River Indians.

### 1.6.5 U.S. Fish and Wildlife Service

On October 23, 2019, USFWS provided Stantec with lists of Federal Endangered Species Act-protected plant, fish, and wildlife species, including candidate and proposed species that are known or have the potential to occur in the Biological Resources Survey Area (BRSA). The BRSA is within the jurisdictions of two USFWS field offices, Klamath Falls and Reno, both of which provided official species lists for this project. Stantec obtained updated official species lists from the USFWS on June 9, 2020.

## 1.7 CONCLUSIONS

This Proponent's Environmental Assessment describes the environmental setting, regulations, and APMs for minimizing potential effects and evaluates potential environmental impacts that could result from construction or operation and maintenance of the project. With implementation of the APMs, all potential project-related impacts would be avoided or would be less than significant.

## 1.8 REMAINING ISSUES

There are no known major issues that remain to be resolved related to the project.

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# 2.0 INTRODUCTION

## 2.1 PROJECT BACKGROUND

### 2.1.1 Purpose and Need

The purpose of the project is to improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada and to make affordable broadband internet services available to currently underserved communities in these areas. This project would provide connectivity between the network hub in Prineville and the communities of Bend and La Pine in Oregon; Alturas, Lakeview, and Susanville in California; and the greater Reno and Sparks metropolitan area in Nevada. These communities need increased redundancy and alternative bandwidth services to improve the poor reliability of current options.

To function as a truly redundant system, the fiber optic interconnection facilities must not only provide expanded and alternative bandwidth in the case of an emergency or catastrophic event (e.g., landslides or windstorms) but must be located away from existing infrastructure to avoid vulnerability to the same outage threats to which the current corridors are subjected.

The California Independent System Operator (CAISO) Transmission Planning Process (TPP) performs a yearly assessment of the electric transmission system in the context of California's public policy concerns; however, telecommunications are not identified, and therefore, the project was not applicable to be considered by CAISO.

### 2.1.2 Project Objectives

The objective of the project is to improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada, and to make affordable broadband internet services available to currently underserved communities in these areas. These communities need increased redundancy and alternative bandwidth services to improve the poor reliability of current options.

### 2.1.3 Project Applicant

Zayo Group, LLC (applicant), a California telephone corporation, is a publicly traded company headquartered in Boulder, Colorado, with European headquarters in London. The applicant provides communications infrastructure services, including fiber and bandwidth connectivity, colocation and cloud infrastructure. The applicant's primary customer segments include data centers, wireless carriers, national carriers, ISPs, enterprises and government agencies.

# 2.2 PRE-FILING CONSULTATION AND PUBLIC OUTREACH

Approximately 42.6 miles of the proposed alignment pass through federal lands (40.75 miles of BLM lands, 23.09 miles of Bureau of Indian Affairs [BIA] or tribal trust lands, 1.76 miles of USFWS lands, and 0.09 miles of Modoc National Forest lands); 5.4 miles are on California State lands (including 2.7 miles of CDFW lands, 2.7 miles of State Lands Commission holdings, and 0.01 miles of other state lands); and the remaining 145.7 miles pass through private or local municipal landholdings. Therefore, a number of federal, state, and tribal entities were consulted during the pre-filing phase.

Section 3.10, Anticipated Permits and Approvals, summarizes the anticipated permits and approvals for the project. Coordination with the agencies and entities would continue through the project's planning process. The applicant would obtain applicable permits, approvals, and licenses, and would participate in reviews and consultations as required with federal, state, and local agencies.

## 2.2.1 Bureau of Land Management

### Cultural Resources/Section 106 of the National Historic Preservation Act Consultation

On March 9, 2020, Stantec held a conference call with Penni Borghi of USFS and Tara McLain of BLM to discuss compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act. BLM announced they would be serving as federal lead for the entire project, with BIA and USFWS acting as NEPA cooperating agencies. Penni Borghi was assigned as Section 106 lead for USFS for this project. Penni directed Stantec to submit sections of the Section 106 reports (by state) to the respective field offices for review on a rolling basis, which will help expedite the BLM reviews. Penni confirmed that BLM is already consulting with tribes under Section 106 Native American Consultation (formal). The call also established the Area of Potential Effect as the US 395 right-of-way, meaning that the Area of Potential Effects (APE) would vary in width to match the right-of-way. To date, cultural reports have been submitted to the relevant BLM field offices in Oregon, California, and Nevada for review.

### Biological Resources/Endangered Species Act Consultation

Stantec corresponded with Larry Ashton of BLM's Deschutes Field Office on April 10, 2020, during which Mr. Ashton noted that the two California districts crossed by the project would be preparing wildlife clearance documents outlining the BLM's concerns regarding potential project impacts on biological resources and would provide recommendations to avoid or minimize impacts. Mr. Ashton also indicated that the project would likely result in a "No Effect" determination for all potential federal Endangered-Species-Act-listed species in California, including Carson wandering skipper.

On May 1, 2020, Stantec received the wildlife clearance document from Melissa Nelson of the Eagle Lake Field Office via Larry Ashton. The following summarizes the comments and recommendations from Ms. Nelson. Ms. Nelson referred the applicant to sections of the *Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment* (BLM 2015) for information pertaining to greater sage-grouse avoidance, minimization, and mitigation strategies for construction of the project.

She also indicated that greater sage-grouse habitat and other pertinent data would be provided when possible, and that habitat mitigation for greater sage-grouse may be required.

On May 1, 2020, Stantec received the wildlife clearance document from Katrina Krause of the Sierra Front Field Office via Larry Ashton. Ms. Krause summarized the special status species that may be affected where Sierra Front Field Office lands in Nevada and California overlap the project, which include burrowing owls, raptors and other migratory birds, and some reptiles (specifics not provided). Greater sage-grouse habitat is present within the project area, but there are no known leks in proximity to the project, and seasonal restrictions do not apply.

On May 28, 2020, Stantec received the wildlife clearance document from the Applegate Field Office via Larry Ashton. Mr. Ashton noted that, given the linear nature of the project along US 395, the project would not significantly impact greater sage-grouse, and no seasonal restrictions or mitigation measures would be recommended, and that because the field office is outside of the range of Carson wandering skipper, no seasonal restrictions or mitigation measures would be recommended. In addition, Mr. Ashton noted that the California Natural Diversity Database (CNDDB) reports a Swainson's hawk nest within 50 meters of the road on the east side of US 395 about 5.5 miles south of Alturas. The nest should be considered active until it is formally surveyed, and, if active, a 0.5-mile line-of-sight-buffer should be applied. Impacts would be minimal outside of the species' breeding season (April 15 to August 15), but Mr. Ashton suggested that the applicant move the route to the west side of the road in this area if flexibility allows.

### 2.2.2 California Department of Fish and Wildlife

Stantec met with CDFW in Redding, California, on August 29, 2019, to provide the agency with project background, a summary of field surveys underway, and CEQA history pertinent to the project segment. During that meeting, CDFW requested that a Swainson's hawk survey be undertaken; that the project avoid sandhill crane nesting areas; that avoidance, rather than translocation, be the preferred mitigation for potential impacts to special status plants; that a "frac-out" response plan be developed; and that analyses include invasive species.

Stantec met with CDFW (Amy Henderson and Adam McKannay) on March 2, 2020, in Redding, California, to provide an overview of the completed 2019 biological field surveys and the surveys planned for 2020. CDFW recommended that Stantec biologists use the Nevada or Utah survey protocol for pygmy rabbits, that a protocol-level preconstruction Swainson's hawk survey be conducted, that biologists look for bank swallows in the Long Valley Creek area during surveys, and that biologists coordinate with BLM for greater sage-grouse lek information.

### 2.2.3 California Department of Transportation

#### CEQA Compliance

On behalf of the applicant, Stantec has been coordinating frequently with Caltrans since early 2019. Agency-applicant meetings and calls were held on July 17, August 29, September 16, September 19, October 24, November 20, and December 20, 2019. As one of two public agencies with the greatest responsibility for approving the project, initial conversations centered on the potential for Caltrans to serve

as CEQA lead. Other topics discussed included the potential for the applicant to co-locate fiber optic with other providers, routes to CEQA compliance, potential impacts to cultural sites along US 395, the timing and process of Caltrans' encroachment permit relative to the CEQA process, contracting mechanisms, the positioning of the telecom running line in relation to highway pavement, cultural and biological survey methods, and public and tribal outreach requirements. Stantec met or held conference calls with Caltrans on March 3, April 2, and May 15, 2020. Caltrans received an updated running line in September 2020. As of September 2020, Caltrans will serve as a responsible agency under CEQA.

### Cultural Resources

Prior to a 2019 site visit, Stantec cultural resources contractor, Pacific Legacy, contacted Russell Adamson, the Caltrans District 2 Archaeologist, to obtain copies of Caltrans' records for the project right-of-way. Mr. Adamson provided an Excel spreadsheet listing those resources so that Pacific Legacy might compare the results with holdings on file at the National Earthquake Information Center (NEIC). All resources in the Caltrans list appeared among those noted by the NEIC, and no further data were requested from Caltrans. Prior to inventory and evaluation surveys in 2020, Stantec made a similar request for Caltrans' cultural data.

## 2.2.4 Native American Heritage Commission and Tribal Outreach

No formal consultation with federally or non-federally recognized tribes has yet been conducted for the project. The project's state lead (CPUC) would conduct consultation efforts consistent with Assembly Bill 52, and the BLM federal lead agency would conduct consultation efforts consistent with implementing regulation for Section 106 of the NHPA.

On October 11, 2019, Pacific Legacy contacted the NAHC to request a search of the Sacred Lands File for the full length of the project in California. The NAHC responded on October 29, 2019, to report positive findings and urged contact with the Alturas Rancheria of Pit River Indians for further information (Appendix D). The NAHC also suggested contact with the following tribal representatives:

- Vi Riley, Cultural Resources Coordinator, Alturas Rancheria of Pit River Indians
- Alturas Rancheria, Tribal Administrator/Environmental, Alturas Rancheria of Pit River Indians
- Bernold Pollard, Chairperson, Fort Bidwell Indian Community of Paiute
- Kyle Self, Chairperson, Greenville Rancheria of Maidu Indians
- Paul Garcia, Chairperson, Honey Lake Maidu
- Ron Morales, Chairperson, Honey Lake Maidu
- Charles White, Tribal Administrator, Pit River Tribe of California
- Natalie Forrest-Perez, Tribal Historic Preservation Officer, Pit River Tribe of California
- Agnes Gonzalez, Chairperson, Pit River Tribe of California
- Deana Bovee, Chairperson, Susanville Indian Rancheria
- Grayson Coney, Cultural Director, Tsi Akim Maidu
- Gene Whitehouse, Chairperson, United Auburn Indian Community of the Auburn Rancheria
- Darrel Cruz, Cultural Resources Department, Washoe Tribe of Nevada and California

Stantec has contacted the following tribes regarding the project (Table 2-1).

## Table 2-1: Stantec Consultation with Regional Tribes

| Tribe | Date Mailed | Emailed | Date Emailed | Response | Follow-Up |
|---|---|---|---|---|---|
| Washoe Tribe of Nevada and California | 3/25/2020 | - | n/a | Shelly received a phone call from the Washoe Tribe on March 31, 2020, saying that they received the letter for Neil Mortimer, but he is no longer Chair. The letter was forwarded to the new Chair, Serrel Smokey. | - |
| Washoe Tribe of Nevada and California | 3/25/2020 | X | 3/27/2020 | Darrel Cruz (THPO) sent an email to Shelly Tiley on April 10, 2020 and attached a formal response letter that states that he is not aware of cultural resources within the project area but wants to maintain consultation and wants to review the archaeological report. | - |
| Fort Bidwell Indian Community of Paiute | 3/25/2020 | X | 3/27/2020 | - | - |
| Pit River Tribe of California | 3/25/2020 | | 3/30/2020 | Meeting with Pit River and Shelly Tiley held in person on February 28, 2020. Follow up letters and emails sent on March 25, 2020. Email sent to Shelly Tiley on April 21, 2020 from Raymond Lee Alvarez requesting tribal monitors, TERO, and free fiber optics. Tiley also received letter via email from Kyle Desautel (Pit River Tribal Administrator) on March 31, 2020 who sent documents. | Wants to consult; also see important information on employment of tribal members etc. on tribal lands (TERO). |
| Susanville Indian Rancheria | 3/25/2020 | X | 3/27/2020 | - | - |
| Honey Lake Maidu | 3/25/2020 | | n/a | - | - |
| Honey Lake Maidu | 3/25/2020 | X | 3/27/2020 | - | - |
| Greenville Rancheria of Maidu Indians | 3/25/2020 | X | 3/27/2020 | - | - |
| Cedarville Rancheria of Northern Paiute | 3/25/2020 | X | 3/27/2020 | - | - |
| Alturas Rancheria of Pit River Indians | 3/25/2020 | X | 3/27/2020 | - | - |

| Tribe | Date Mailed | Emailed | Date Emailed | Response | Follow-Up |
|---|---|---|---|---|---|

Notes:
APE = Area of Potential Effects
BLM = Bureau of Land Management
TERO = Tribal Employment Rights Office
THPO = Tribal Historic Preservation Officer
Zayo = Zayo Group, LLC

### 2.2.5 Records of Consultation and Public Outreach

For records of agency consultation and public outreach, see Appendix G.

## 2.3 ENVIRONMENTAL REVIEW PROCESS

### 2.3.1 CEQA Review

CPUC reviews permit applications under two concurrent processes: (1) an environmental review pursuant to CEQA, and (2) the review of project need and costs pursuant to Public Utilities Code (PU Code) sections 1001 et seq. and General Order (G.O.) 131-D (Certification of Public Convenience and Necessity [CPCN] or Permit to Construct [PTC]). The CPUC is the lead state agency for the project under CEQA and a discretionary approval will be required for a CPCN. This Proponent's Environmental Assessment (PEA) includes the information required by the *CPUC PEA Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC 2019). The CPUC requires applicants to provide this information for review in compliance with the mandates of CEQA. This PEA is designed to meet the CPUC and CEQA requirements.

The CPUC granted the applicant a CPCN in 1998 and documented compliance with CEQA with an Initial Study and Mitigated Negative Declaration (MND), referred to as "Negative Declaration 12" (D.98-12-083). Pursuant to these processes, the applicant submits an application for modification of its CPCN to authorize construction of the proposed project. In addition to the modification to the applicant's CPCN, the applicant would obtain all applicable permits for the project from federal, state, and local agencies. Table 3.11-1 provides the potential permits and approvals that may be required for project construction.

### 2.3.2 National Environmental Policy Act Review

For the entirety of the project between Prineville, Oregon, and Reno, Nevada, the proposed route crosses approximately 122 miles of federally owned or managed lands belonging to three National Forests, the U.S. Fish and Wildlife Service, and BLM. Each federal agency would complete a separate National Environmental Policy Act (NEPA) review process for their own lands; there will not be a single federal lead agency for NEPA. Table 2.3-1 details federal land ownership and anticipated level of NEPA analysis for the project.

**Table 2.3-1: Federal Land Ownership and Level of NEPA Analysis**

| Federal agency | Location | Miles crossed by the proposed route (approximate) | Anticipated level of NEPA evaluation |
|---|---|---|---|
| Deschutes National Forest | Oregon | 31 | Categorical Exclusion |
| Fremont-Winema National Forest | Oregon | 2 | Categorical Exclusion |
| Bureau of Land Management | Oregon | 57.5 | Environmental Assessment |
| | California | 29.7 | |
| U.S. Fish and Wildlife Service- Modoc National Wildlife Refuge | California | 1 | Categorical Exclusion |
| Toiyabe National Forest | Nevada | 0.4 | Categorical Exclusion |

### 2.3.3 Pre-filing California Environmental Quality Act and National Environmental Policy Act Coordination

A pre-file Draft PEA was submitted to CPUC on August 31, 2020. CPUC provided comments on the pre-file Draft PEA on September 24, 2020 with requests for additional data and clarification. The comments were incorporated and into this PEA.

## 2.4 DOCUMENT ORGANIZATION

### 2.4.1 Proponent's Environmental Assessment Organization

As required by CPUC, the *CPUC PEA Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* and Appendix G of CEQA (hereafter referred to as the CPUC checklist) were used as the format for describing the setting and analyzing the potential environmental impacts of the project (CPUC 2019). As lead agency, the CPUC will review this information and will be responsible for preparing and providing public review of the environmental documents for the project, and for making final siting and project approval decisions.

This PEA is organized into nine sections with appendices. The PEA is in the same organizational format as the updated CPUC Checklist and adheres to the Pre-filing Consultation Guidelines in coordination with CPUC CEQA Unit Staff. For security reasons, certain information, including Geographic Information System (GIS) data, will be submitted confidentially, although GIS data layers may be used to prepare portable document file (PDF) maps for public use.

This PEA is organized in the following manner:

Introduction

- Section 1.0, Executive Summary, provides a summary of the proposed project and its underlying purpose and basic objectives.
- Section 2.0, Introduction, describes the project background, an overview of project outreach efforts, and the PEA organization.
- Section 3.0, Proposed Project Description, provides a detailed project description. In addition, this section provides a list of the APMs that will be implemented (see Section 3.10, Anticipated Permits and Approvals).
- Section 4.0, Description of Alternatives
- Section 5.0, Environmental Setting and Impact Assessment Summary, describes the environmental setting and presents an analysis of potential impacts to various categories of resources (as defined in Appendix G of the CEQA Guidelines) that may result from implementing the project. Each subsection includes a description of the regulatory context, environmental setting, resource-specific APMs for minimizing potential impacts, and analysis of potential impacts resulting from construction or operation and maintenance of the project. Section 5.0 also addresses findings of significance and an analysis of the project's potential contribution to cumulative projects. This section covers all elements of the CEQA checklist, including the following resource area sections:
    - 5.1 Aesthetics
    - 5.2 Agriculture and Forestry
    - 5.3 Air Quality
    - 5.4 Biological Resources
    - 5.5 Cultural Resources
    - 5.6 Energy
    - 5.7 Geology, Soils, and Paleontological Resources
    - 5.8 Greenhouse Gas Emissions
    - 5.9 Hazards, Hazardous Materials, and Public Safety
    - 5.10 Hydrology and Water Quality
    - 5.11 Land Use and Planning
    - 5.12 Mineral Resources
    - 5.13 Noise
    - 5.14 Population and Housing
    - 5.15 Public Services
    - 5.16 Recreation
    - 5.17 Transportation
    - 5.18 Tribal Cultural Resources
    - 5.19 Utilities and Service Systems
    - 5.20 Wildfire
    - 5.21 Mandatory Findings of Significance

Introduction

- Section 6.0, Comparison of Alternatives, provides a comparison of each alternative described in Section 4.0 and a ranking in order of environmental superiority.
- Section 7.0, Cumulative and Other CEQA Considerations, provides cumulative and growth-inducing impacts.
- Section 8.0, List of Preparers, provides a list of persons, their organizations, and their qualifications for all authors and reviewers of each section of the PEA.
- Section 9.0, References, provides the references used for development of the PEA organized by resource category.

Appendices include the following:

- Appendix A Detailed Maps and Design Drawings
- Appendix B Emissions Calculations
- Appendix C Biological Resources Technical Report and Appendices
- Appendix D Cultural Resources Studies
- Appendix E Detailed Tribal Consultation Report
- Appendix F Environmental Data Resources Report
- Appendix G Agency Consultation and Public Outreach Report and Records of Correspondence
- Appendix H Water Body Crossing
- Appendix I Paleontological Resources Constraints Analysis
- Appendix J Soils Mapping

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# 3.0 PROPOSED PROJECT DESCRIPTION

## GLOSSARY OF TERMS

| | |
|---|---|
| Broadband | Related to a high-speed communications network, especially one in which a frequency range is divided into multiple independent channels for signal transmission (e.g., voice, data, or video). |
| Conduit | Protective tube into which fiber optic cable is placed. |
| Directional boring | Steerable, trenchless method of installing underground conduits and cables along a prescribed bore path by using a surface drilling rig. Involves excavation of a launch (entry) pit and exit pit. |
| Fiber optic | Systems that use optical fiber (which transmits light signals) to transfer information in a communications network. |
| Frac-out | A release of bentonite drilling fluid during directional boring caused by the hydraulics of drilling fluid finding the path of least resistance. |
| In-Line Amplifier (ILA) | A collection of equipment that regenerates fiber optic signals and provides tie-ins to regional wireless service providers. Each ILA would be housed within a metal or concrete facility called a "regeneration hut." |
| Materials Storage Yard | Offsite, long-term location identified for worker staging and parking, materials storage, equipment maintenance, and placement of construction trailers. |
| Plowing in | Method of cable installation that involves using a vibrating blade to split the ground, insert a bundle of conduit at the desired depth, and compact the soil, resulting in a seamless and minimally invasive cable installation process. |
| Right-of-way | Defines the boundaries of the easement maintained by Caltrans along United States Highway 395, which varies in width from 60 to 1,500 feet in California. Also defines the boundaries of the easement maintained by County roadways. |
| Running line | Planned pathway for the installed fiber optic cable and conduit. |
| Staging Area | Temporary equipment and materials storage areas located within the right-of-way adjacent to the running line. |
| Trenching | In rocky or inaccessible areas, fiber optic cable may be installed by digging an open trench using an excavator or backhoe, laying the fiber optic conduit, and backfilling and compacting. |
| Vault | Underground cabinet or manhole that provides maintenance access to the fiber optic system. Vaults are made of fiberglass and would be covered by a secure hatch that lays flush with the ground. |

# 3.1 PROJECT OVERVIEW

Zayo Group, LLC (applicant), a California telephone corporation, proposes the construction and operation of an underground fiber optic network from Prineville, Oregon, to Reno, Nevada (project), spanning 433.8 miles. The purpose is to improve the quality of rural broadband in south-central Oregon, northeastern California, and northwestern Nevada, and to make affordable broadband internet services available to currently underserved communities in these areas.

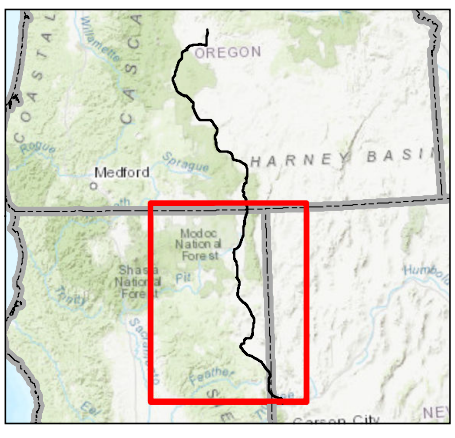
The portion of the project that crosses California would extend 193.9 miles across portions of Modoc, Lassen, and Sierra Counties. In order to minimize environmental impacts, the project has been sited along existing rights-of-way where other utilities are currently located. The majority of the project would follow US 395. A portion of the line between the communities of Standish and Buntingville in Lassen County, California, would follow the country roads Standish Buntingville Road (Lassen County Road A3) for 7.35 miles and Cummings Road for 1.15 miles before returning to the right-of-way parallel to US 395 (Figure 3-1).

Along the majority of the route, conduit to house the new fiber optic cable would be buried using a combination of plowing or trenching construction techniques. Alternatively, horizontal directional drilling would be used to cross water bodies and roads, and where necessary to avoid existing infrastructure or biological or cultural resources. For some water- or road-crossing locations, the conduit may be affixed to the side or underside of bridges. Ancillary equipment would be installed at three small buildings that would serve as amplifier sites (ILAs). Fiberglass vaults would be installed flush to the ground along the running line to provide maintenance access and at splice locations. All construction activities would be conducted in compliance with Caltrans requirements and county longitudinal utility encroachment permit procedures. The applicant would be installing conduit beyond the immediate need of the current project to ensure future capacity.

# 3.2 EXISTING AND PROPOSED SYSTEM

## 3.2.1 Existing System

The project would provide broadband infrastructure to improve connectivity from locations within California to high-capacity data centers in other western states, supporting some of the most innovative and largest employers in California. Another potential benefit would be future access to broadband by resellers of ISP and other services in rural broadband in south-central Oregon, northeastern California, and northwestern Nevada by providing a redundant system. In order to meet the needs of a truly redundant system, the line would need to not only provide expanded and alternative bandwidth in the case of an emergency or catastrophic event (e.g., landslides, earthquakes) but to be located a distance from existing infrastructure as to not be vulnerable to the same outage threats to which current corridors are subjected.


Alignment
Highway
County Boundary
State Boundary

0 10 20 Miles
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N

Stantec

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; CPAD 2019
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Project Location
Prineville, OR to Reno, NV

2272020011
Prepared by JC on 2020-06-19
Technical Review by SV on 2020-06-19
Independent Review by DW on 2020-06-19

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**3-1**

Title
**Project Location**
**Proposed Prineville to Reno**
**Fiber Optic Line**

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### 3.2.2 Proposed Project System

Prineville and Reno are both network hubs and thus were considered as the end points of the running line (i.e., logical termini). Because California state agencies such as CPUC maintain jurisdiction and discretionary authority solely for actions within the State of California, this PEA only analyzes project activities taking place within California. Environmental impact information for the Oregon and Nevada portions of the project will be incorporated by reference into the PEA from reports analyzing impacts within those states, as required by relevant state and federal agencies.

### 3.2.3 Planning Area

The project would provide connectivity between the network hub in Prineville and the communities of Bend and La Pine in Oregon; Alturas, Lakeview, and Susanville in California; and the greater Reno/Sparks metropolitan area in Nevada. These communities need increased redundancy and alternative bandwidth services to improve the poor reliability of current telecom services.

## 3.3 PROJECT COMPONENTS

### 3.3.1 Preliminary Design and Engineering

The preliminary design and engineering are described in Section 3.3.4, Proposed Facilities. Figure 3-2 depicts a summary of the project components; Appendix A includes detailed maps.

### 3.3.2 Segments, Components, and Phases

The project would be constructed over a period of 6 months as further described in Section 3.6.4, Construction Schedule. Proposed components associated with the project are outlined in Section 3.3.4, Proposed Facilities.

### 3.3.3 Existing Facilities

As described in Section 3.2.1, Existing System, the project would provide broadband infrastructure to improve connectivity from locations within California to high-capacity data centers because existing infrastructure is not currently in place to support this objective. As such, no existing fiber optic facilities are located within the proposed alignment location.

### 3.3.4 Proposed Facilities

#### 3.3.4.1 Fiber Optic Cable

The project would involve construction of approximately 193.9 miles of underground, shielded fiber optic telecommunications cable within three protective 3.2-centimeter-diameter (1.25-inch-diameter) high-density polyethylene (HDPE) standard dimension ratio 11 conduits (i.e., the outside diameter is 11 times the thickness of the conduit wall) (Figure 3-2). An additional conduit would be installed from the Oregon-California border to Davis Creek for a total of four conduits. A fifth and sixth conduit would be added from

Davis Creek to Alturas, for a total of six. From Alturas to Standish there would be five conduits total. These additional conduits would remain empty and would receive cable at some point in the future in coordination with other network providers. The project would be constructed in one phase that would occur over a period of 6 months as described in Section 3.6.4, Construction Schedule. The fiber optic network would be capable of a range of upload and download speeds depending on the customers and providers. Appendix A includes detailed maps of the proposed facilities.

### 3.3.5 Other Potentially Required Facilities

#### In-Line Amplifiers

ILAs are a collection of equipment that regenerates signals and provides tie-ins to regional wireless service providers. ILAs are currently planned to occupy properties in Herlong (0.78 acre), Spanish Springs (0.12 acre), and Alturas (0.25 acre), California. Each ILA would consist of a prefabricated concrete or steel regeneration hut erected on a concrete pad with a surrounding perimeter fence around the hut. The regeneration hut structure would be setback from the fence line, would be approximately 420 square feet (0.01 acre), and would be approximately 11 feet in height. Electrical power would be supplied to the ILAs by a commercial power company, and a backup emergency generator would be housed onsite. Tie-in locations would occur at vaults. Figure 3-3 shows an example ILA. Section 3.5.5.4, Ancillary Facility Construction, includes additional details regarding the ILA locations.

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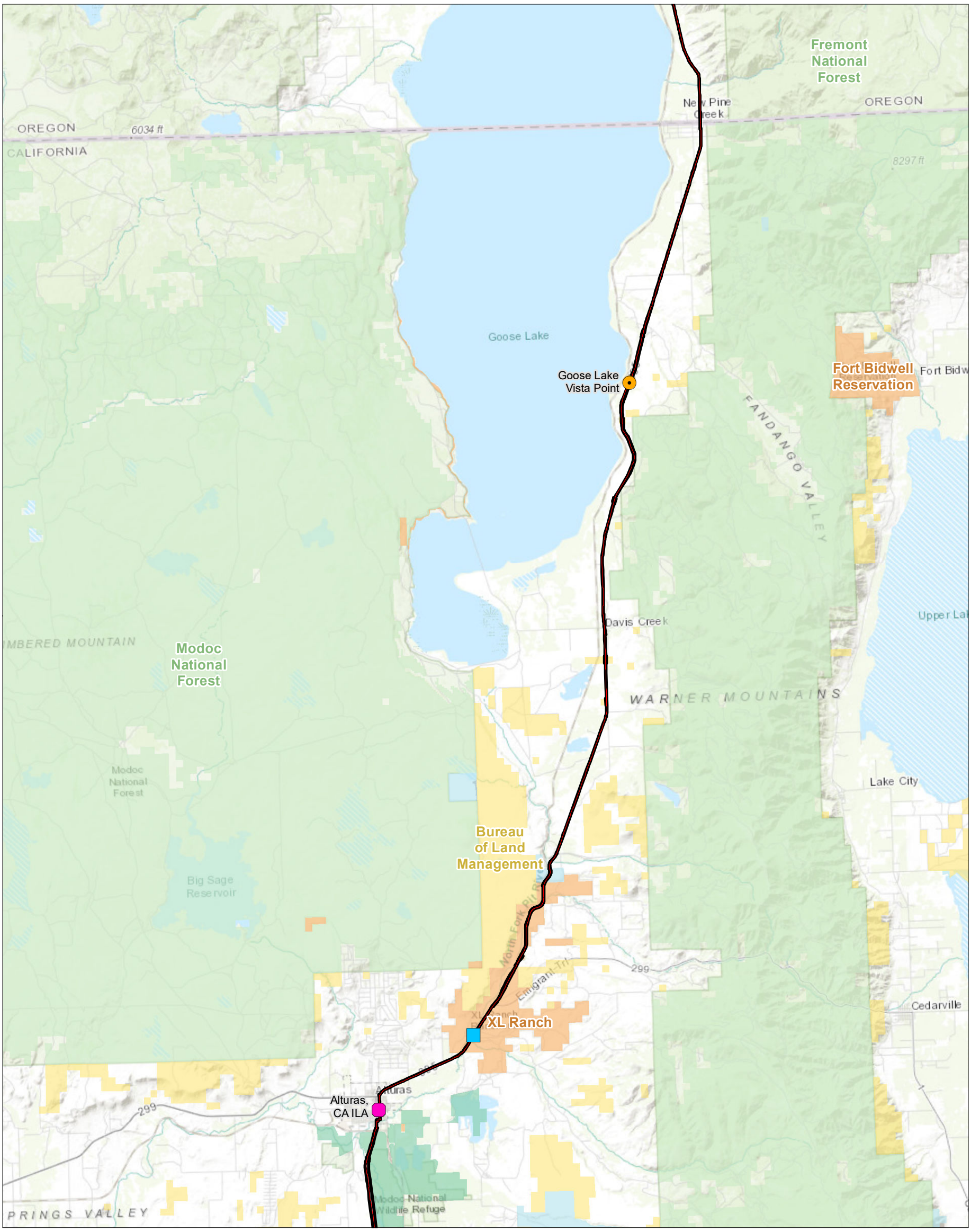


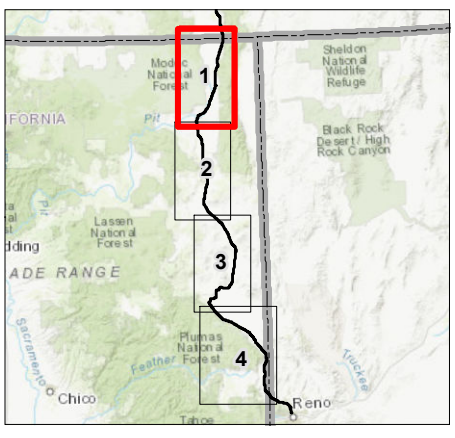


- Alignment
- Right-of-Way
- ILA
- Staging Area
- Goose Lake View Point

Land Ownership
- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles

1:230,000 (At Original document size of 11x17)

N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011
Prepared by JC on 2020-07-20
Technical Review by CS on 2020-07-20
Independent Review by CB on 2020-07-20

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**3-2**



Title
**Project Components**
**Proposed Prineville to Reno**
**Fiber Optic Line**

**Notes**
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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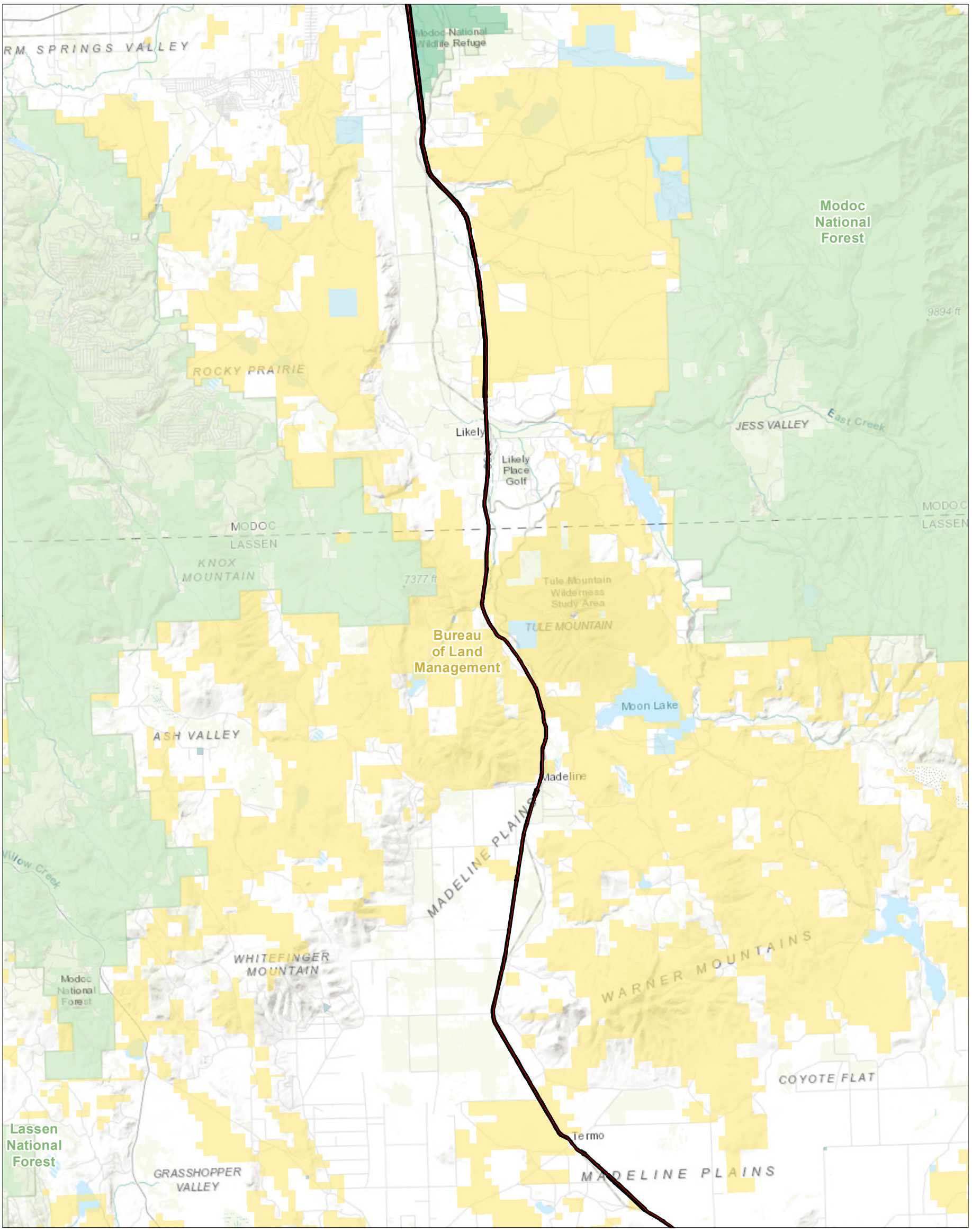


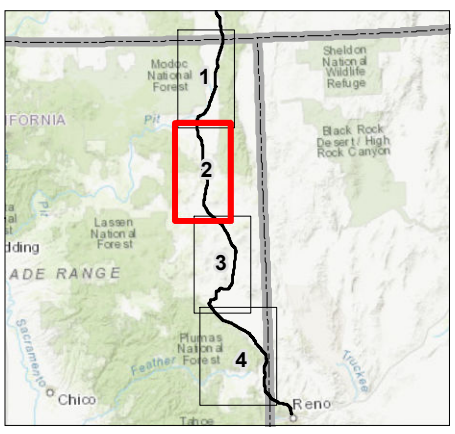


Alignment
Right-of-Way

Land Ownership
- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles
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Prepared by JC on 2020-07-20
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Figure No.
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Title
**Project Components**
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**Fiber Optic Line**

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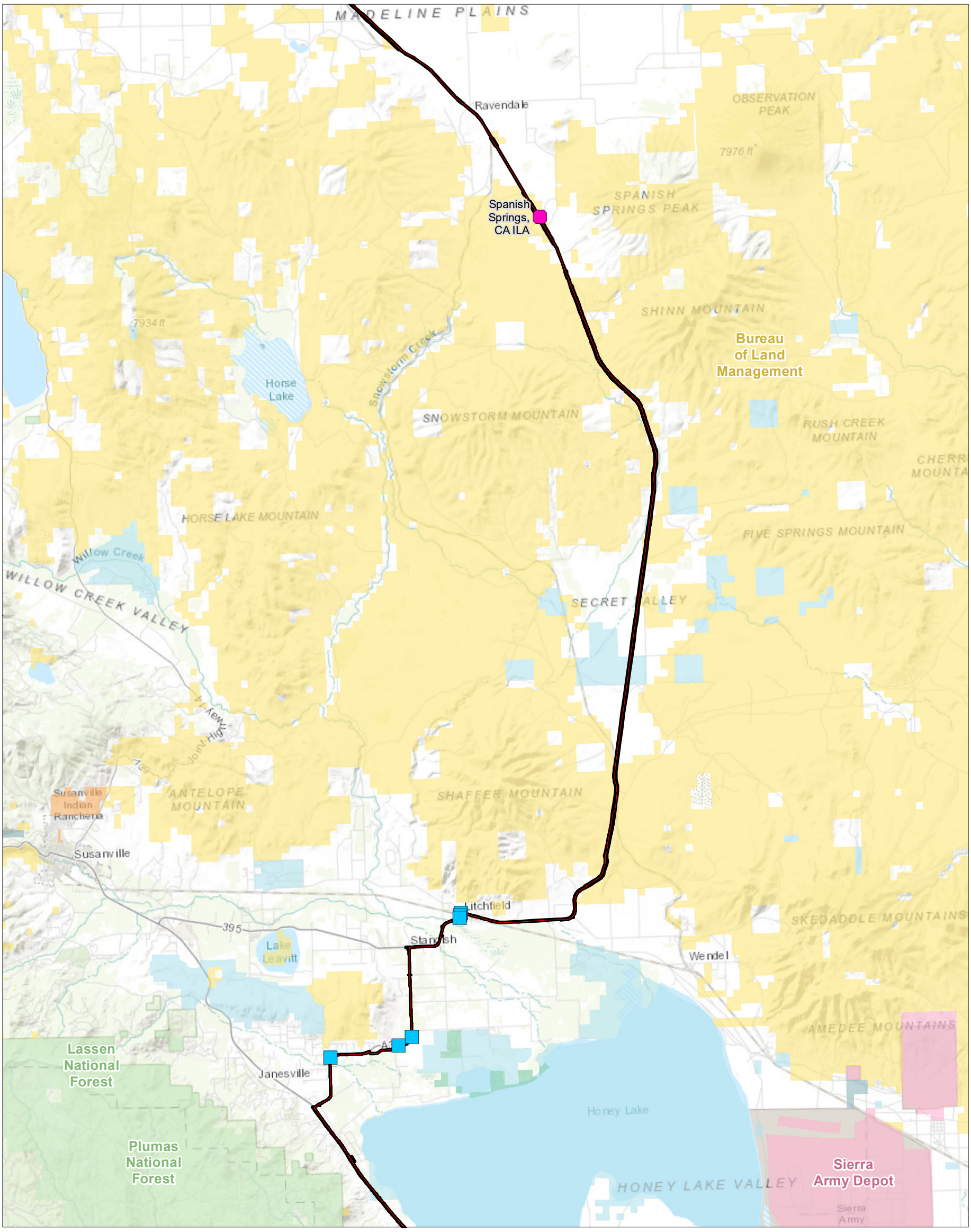


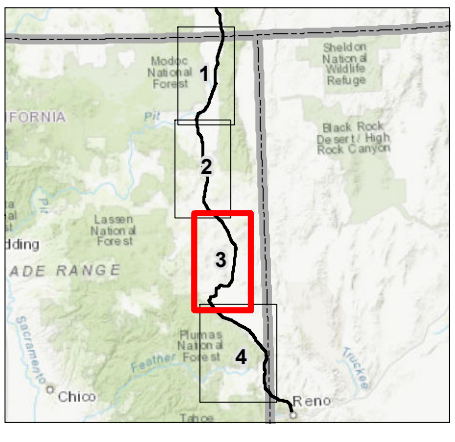


Alignment
Right-of-Way
ILA
Staging Area

Land Ownership
- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- Department Of Defense (DOD)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles
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Prepared by JC on 2020-07-20
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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**3-2**



Title
**Project Components**
**Proposed Prineville to Reno**
**Fiber Optic Line**

**Notes**
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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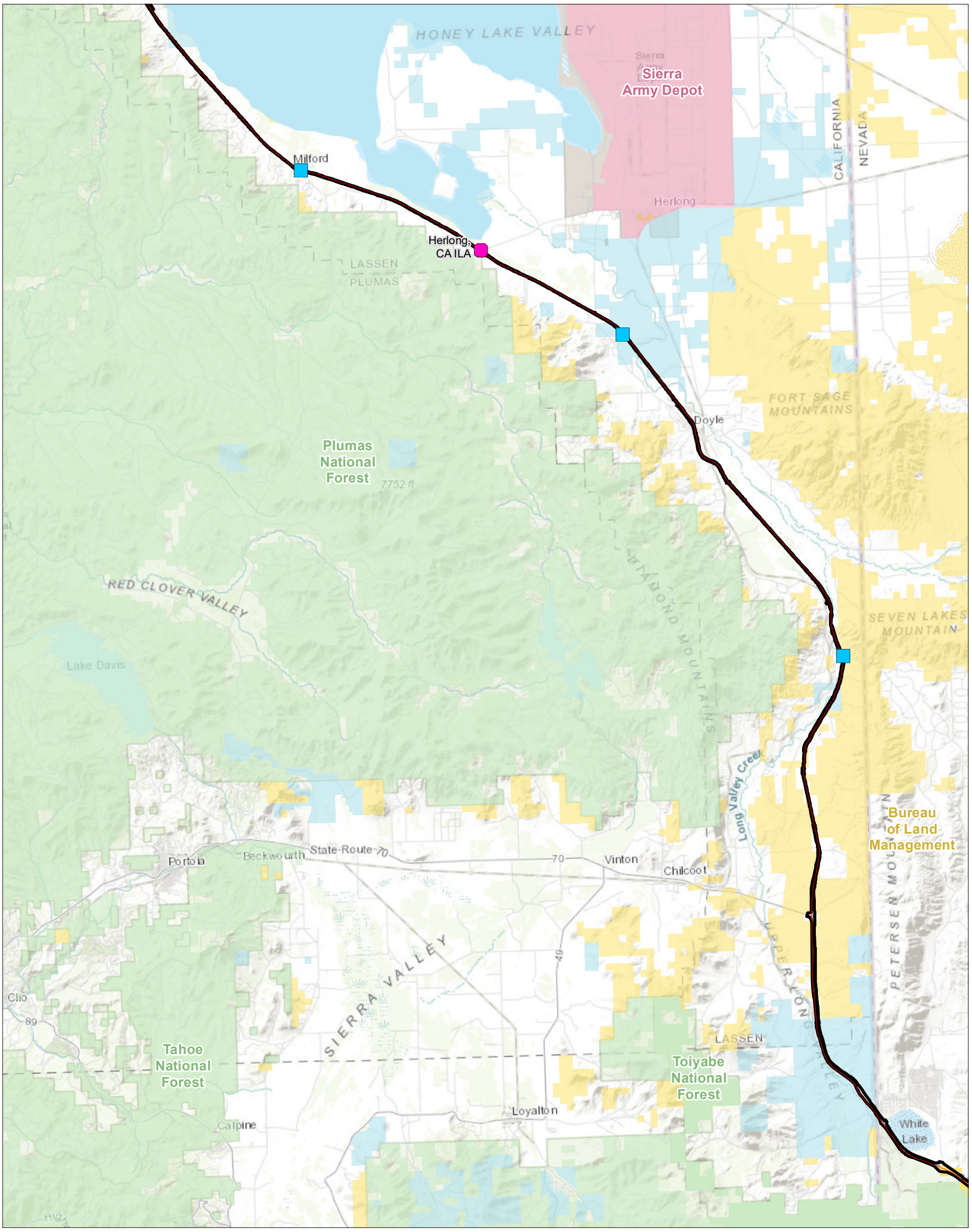


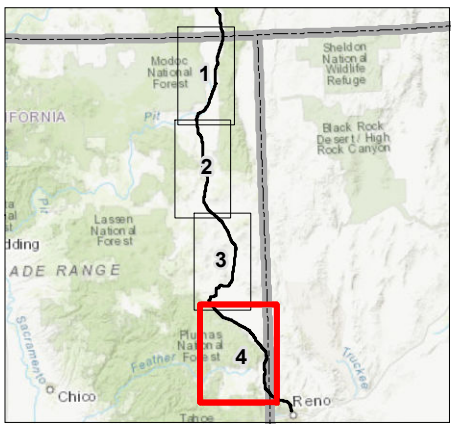


Alignment
Right-of-Way
ILA
Staging Area

Land Ownership
- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- Department Of Defense (DOD)
- US Forest Service (USFS)
- State
- Local
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0 2.5 5 Miles
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Stantec

Project Location
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2272020011
Prepared by JC on 2020-07-20
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Independent Review by CB on 2020-07-20

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**3-2**



Title
**Project Components**
**Proposed Prineville to Reno**
**Fiber Optic Line**

**Notes**
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

**Figure 3-3: Example Regeneration Hut Housing an In-Line Amplifier**

### Vaults

A vault provides maintenance access to the underground fiber optic cable conduit and connections. Each vault would be flush to the ground and covered with a secure access door. The vaults would be spaced approximately every 3,500 feet along the running line. Vaults would be approximately 30 inches by 48 inches and would be installed in sets of three. The dimensions of each three-vault excavation area would be 15 feet by 3 feet. The excavation area would be backfilled and compacted. Additional excavation space may be needed at splice locations or when transitioning from one installation method to another. Splice boxes (i.e., small, rectangular plastic or HDPE enclosures) would be installed within the vaults to hold wire connections. Figure 3-4 depicts a typical vault and line marker.

**Figure 3-4: Typical Vault and Line Marker**

### Line Markers

Line markers, which would be co-located with the vaults along the running line, are 4-foot-tall, flexible fiberglass posts used to mark the location of the buried conduit. The exact location of the marker posts would vary depending on the environmental site conditions and vegetation.

## 3.3.6 Future Expansions and Equipment Lifespans

As described in Section 3.1, Project Overview, while the applicant does not anticipate future expansions, the applicant would be installing conduit beyond the immediate need of the current project to ensure future capacity. The applicant anticipates lifespan of the project facilities to be approximately 35 years.

# 3.4 LAND OWNERSHIP, RIGHTS-OF-WAY, AND EASEMENTS

## 3.4.1 Land Ownership

The majority of the project would be located along US 395 within the right-of-way managed by Caltrans and would require an encroachment permit from Caltrans. The lands underlying the Caltrans right-of-way are owned or administered by various state, federal, and private entities, including BLM, USFS, USFWS, California State Lands Commission, and several tribal entities. Details regarding the land ownership underlying the running line are provided in Table 3-1. An 8-mile segment of the running line would deviate from US 395 and run along Standish Buntingville Road (Lassen County Road A3) and Cummings Road between the communities of Standish and Buntingville in Lassen County, California. In this location, the underlying land is owned by Lassen County. While the majority of the project would be within existing roadway right-of-way, several ancillary facilities (ILAs), staging areas, and material storage yards would be located within previously disturbed areas adjacent to the existing right-of-way.

**Table 3-1: Land Ownership Underlying the Running Line**

| Ownership | Miles Crossed by Running Line |
|---|---|
| Bureau of Indian Affairs | 6.41 |
| Bureau of Land Management | 38.52 |
| US Fish and Wildlife Service | 1.02 |
| California Dept. of Fish and Wildlife | 3.37 |
| California State Lands | 2.56 |
| Undefined[1] | 139.29 |
| Hallelujah Junction Wildlife Area | 2.79 |

Note:

1. Undefined includes land within Caltrans right-of-way or local roadways that is not within jurisdiction of federal and state resource agencies identified in the table.

## 3.4.1 New, Existing, and Temporary Rights-of-Way or Easements

The running line and associated ancillary equipment would be placed within existing Caltrans and county-maintained roadway rights-of-way and on private property. These existing rights-of-way range from 60 to 1,500 feet wide. No new or modified rights-of-way are anticipated to accommodate construction of the project. The project would not change any existing land uses or displace any properties, and no temporary rights-of-way would be required. New easements would be required for the portions of the running line that traverse the Bureau of Indian Affairs' XL Rancheria, the Modoc Wildlife Refuge, and BLM land. Staging areas and material storage yards located on private land would require temporary construction easements. Ancillary facilities, such as ILAs, would be located on leased private land.

# 3.5 CONSTRUCTION

## 3.5.1 Construction Access

### 3.5.1.1 Access Roads and Overland Access Routes

The project would be accessible using existing roadways and local arterials. No new access roads would be constructed, and no road or bridge modifications or stabilization activities would be required to accommodate project construction. No overland access would be needed during construction or operation of the project. The majority of project activities would be limited to the road right-of-way or within the existing roadway prism.

### 3.5.1.2 Watercourse Crossings

No new or temporary watercourse crossings would be required during construction or operation of the project. Construction equipment would cross watercourses using existing bridges. Fiber optic cable would be attached to the side of existing bridges or directionally drilled beneath minor watercourses (Figure 3-5).

**Figure 3-5: Bridge Attachment**

#### 3.5.1.3 Helicopter Access

The use of helicopters during construction would not be required.

### 3.5.2 Staging Areas and Materials Storage Yards

#### 3.5.2.1 Staging Area Locations

Staging areas would average 130 feet by 75 feet, with the longer side parallel to the right-of-way. The exact size would depend upon site conditions. Staging areas would be intermittently active as construction advances. Temporary parking of vehicles (overnight) would occur within the right-of-way or in materials storage yards. Table 3-2 and Figure 3-2 detail the number and acres of potential staging areas.

**Table 3-2: Staging Areas by County**

| County | Staging Areas (Count) | Staging Areas (Acres) |
|---|---|---|
| Lassen | 9 | 3.46 |
| Modoc | 1 | 0.23 |

#### 3.5.2.2 Staging Area Preparation

Staging areas would typically be located within or close to the right-of-way in previously disturbed areas, so little site preparation should be required. In areas that contain sparse vegetation that could cause a fire hazard for parked vehicles or equipment, the vegetation may be mown. No grading, or extensive vegetation removal would be conducted; and no fencing, temporary electrical power lines, or lighting would be installed. For staging areas near sensitive resources, the construction contractor would have the staging area boundaries marked prior to use. Staging areas would be used for vehicle parking and short-term placement of equipment, conduit, and cable and would be located within or close to the right-of-way, with the exception of several staging areas that would be located outside of the right-of-way in previously disturbed areas such as the shoulder of a spur road.

#### 3.5.2.3 Material Storage Yards

Offsite materials storage yards would be located at existing, leased industrial or commercial space in Summer Lake, Lakeview, Alturas, Termo, and Standish, California. Locations chosen would be paved or well graded and ideally would be fenced, would range between 5,000 and 15,000 square feet, and would be located approximately 60 miles apart from each other along the running line as shown on Figure 3-2. It is anticipated that no additional ground disturbance would be required for site preparation of the material storage yards. These yards provide locations to store materials and equipment and conduct fueling and maintenance work. These areas would also be used for worker parking and training; as emergency muster points; and for storage of cable, conduit, and equipment. These yards may also house temporary construction trailers, bathrooms, and break facilities. Power would be supplied through grid power and the use of generators is not anticipated. Materials staging yards are generally composed of previously

disturbed or developed areas (e.g., asphalt, gravel, or dirt parking lots). It is expected that more yards would be identified than would actually be needed. Additional locations have been identified to allow for flexibility should any of the proposed yards prove to be impractical.

## 3.5.3 Construction Work Areas

### 3.5.3.1 Construction Work Areas

Construction work areas would primarily occur within or adjacent to the existing right-of-way and would vary based on conduit installation method. Overall, all conduit installation activities would be encompassed within a work area with an average width of 20 feet. Soil disturbance from the plowing-in method is anticipated to be approximately 4 to 6 inches wide but may be slightly wider, and to a depth of up to 42 inches. If pre-treatment (e.g., ripping hard soil, removal of boulders) is required prior to plowing, temporary soil disturbance may extend to a width of 6 feet. Soil disturbance associated with trenching installation is anticipated to be approximately 12 inches wide and at a depth of up to 42 inches, and would require a work area of approximately 6 feet based on terrain type and accounting for side-cast soils.

Work areas for directional boring would vary based on topography and environmental factors. Each bore would require excavation of a launch (entry) pit and exit pit approximately 3 feet wide by 10 feet long to allow for the entrance and exit of the bore. Directional bores can extend from approximately 50 feet to more than 2,500 feet. The minimum depth of the bore would be in compliance with requirements of the regulatory agencies. Following conduit installation, all temporary work areas would be restored to original conditions. Table 3-3 summarizes the temporary and permanent impacts by project component.

**Table 3-3: Temporary and Permanent Impacts by Project Component**

| Component | Temporary Impact (acre) | Permanent Impact (acre) |
|---|---|---|
| Staging Areas | 3.69 | N/A |
| Material Storage Yards | 0.75 | N/A |
| ILAs | N/A | 1.15 |
| Vaults/Markers* | 0.10 | 0.20 |
| Running Line Construction Footprint | 470.44 | N/A |
| Total | 474.98 | 1.35 |

Note:* Vaults and markers are located within the running line impact acreage. As a result, their impact acreage has been calculated separately and is not included in the running line impact acreage.

### 3.5.3.2 Temporary Power

If needed, power would be provided to the work areas via diesel generators. No temporary power lines would be installed.

## 3.5.4 Site Preparation

### 3.5.4.1 Surveying and Staking

Environmentally sensitive areas adjacent to planned work areas would be staked or identified in some way as exclusion areas prior to construction. The proposed placement for conduit may be marked ahead of installation with washable spray paint or other temporary markers to serve as an installation guide.

### 3.5.4.2 Utilities

Prior to mobilization, the contractor would call in a DigAlert in compliance with utility regulations to confirm the locations of existing utilities that may be within work areas. Prior to conduit installation, the contractor would locate existing utilities using a vacuum truck or via hand tools to safely expose their location. The project would not involve the relocation of any existing underground or overhead utilities.

### 3.5.4.3 Vegetation Clearing and Tree Trimming or Removal

In areas within the right-of-way that contain vegetation that could cause a fire hazard for parked vehicles or equipment, the vegetation would be mown or grubbed prior to conduit installation. No grading, tree removal or trimming, or extensive vegetation removal is anticipated to be required for conduit installation.

### 3.5.4.4 Work Area Stabilization

Prior to cable installation, sloped areas would be "track walked" where treads from heavy equipment run parallel to the contours of the slope and act as mini terraces, reducing soil movement. Side-cast from trenching installation methods would be bermed with wattles or covered should the spoils remain in place for more than 1 work day.

### 3.5.4.5 Grading

No grading would occur along the running line.. Minor grading may be required to provide a level surface for regeneration huts at ILA sites.

## 3.5.5 Fiber Optic Line Installation

The project would involve the installation of an underground fiber optic network. Construction would primarily be performed using plowing or trenching. Alternatively, horizontal directional drilling would be used to cross water bodies and roads and where necessary to avoid sensitive or protected biological or cultural resources. For some water- or road-crossing locations, the conduit may be affixed to the side or underside of bridges.

Ancillary equipment would be installed within regeneration huts at ILA sites. Figure 3-2 depicts an example of a regeneration hut. Along with these ILAs, the project would install fiberglass vaults flush to the ground surface to provide maintenance access at splice locations.

Installation of the fiber optic line would involve four main steps:

1. Conduit installation: Protective conduit for the fiber optic cable would be installed by plowing, trenching, or directional boring, or by affixing conduit onto an existing bridge.

2. Conduit proofing: The conduit would be prepared to receive the fiber optic cable by a process known as proofing. This process involves forcing a cleaning sponge or plug through the conduit using compressed air to clean and lightly lubricate the inside of the conduit. A cable pulling tape would then be sent through the line to reduce friction. The lubricant used during the conduit proofing process is a mineral-based oil containing silicone.

3. Cable pulling and blowing: The fiber optic cable would be blown into and pulled through the conduit. The cable pulling tape would be attached to the leading end of the fiber and pulled, while compressed air would be used to blow the cable into the conduit.

4. Ancillary facility construction: Construction of vaults and ILAs would occur concurrently with conduit installation.

The construction method used to install conduit would include a combination of plowing, trenching, boring, and bridge hanging. The project construction sequence would include several construction "spreads" operating concurrently, each with its own team or teams of construction workers and equipment. The running line would be placed as far away from the roadway edge of pavement as practicable to minimize possible disturbance to highway operations. The applicant would coordinate with Caltrans regarding the placement of the running line to ensure the reduction of potential impacts to environmental resources.

### 3.5.5.1 Conduit Installation

#### Trenching

In areas where soils are rocky, trenching techniques may be used for the conduit installations. Trenching would use an excavator to dig a trench from 36 to 42 inches deep for placement of the conduit. Excavated soil would temporarily be placed adjacent to the running line until the conduit is placed. If needed, a bulldozer equipped with a specialized single ripper would loosen the soil and rocks along the installation path ahead of the trenching excavator. Where soils are extremely rocky or bedrock is present, a rock hammer or rock saw may be required to prepare the ground before trenching. Conduit would either be fed from the plow bulldozer or from a separate truck-mounted reel through a plow chute attached to the plow and would be laid directly in the bottom of the trench. The trench would then be backfilled by an excavator using the native soil that was excavated onsite, followed by a compaction machine that would restore the ground surface to its original contour. Where native soil is not conducive for backfill, material would be provided by an offsite source. Excess or inadequate fill would be disposed of under the appropriate permit at a licensed, offsite facility.

Each crew could typically install 500 linear feet of conduit per day using the trenching method. The total width of the construction corridor would be 20 feet. The trench would be backfilled with native materials

soon after conduit installation. Dust control measures would be implemented during both plowing and trenching to reduce fugitive dust as further outlined in Section 3.5.7, Dust, Erosion, and Runoff Controls.

**Figure 3-6: Typical Fiber Optic Conduit Plow**

## Plowing

In areas where soils are relatively free of rocks and directional boring is not required to avoid sensitive resources on or near the surface, "plowing in" construction techniques would be used for the conduit installations. Plowing would be conducted using an excavator to dig a trench from 36 to 42 inches deep for placement of the conduit. This method would insert a plow shank into the ground to loosen soil at depth. Soil disturbance from the plow shank would be approximately 12 feet wide. This method would simultaneously excavate and place the conduit in a single operation. As the plow shank moves forward, the conduit would be fed into the space created by the plow shank. Figure 3-6 depicts an example of the fiber optic conduit plowing method.

After the conduit is installed, a mid-size excavator with a backhoe or a vibra-plate would follow directly behind the plow shank to restore the ground surface to its original contour. A static roller or a dozer would follow behind to ensure that ground is sealed and compacted.

This method is the preferred installation method because it is fast and results in the least amount of ground disturbance; however, it requires soils to be relatively free of rocks or other obstructions. Based on preliminary field reconnaissance, this method would be appropriate in only small segments of the running line. This method would not be used within any paved areas.

## Directional Boring

Directional boring is conducted by specialized drill equipment that places conduit by an underground drill-and-push method, which allows placement of conduit with minimal ground disturbance. This method is commonly used to install utility lines under waterbodies and beneath roads and in other areas where the avoidance of surface disturbance is desirable. For this project, directional boring would be used to avoid or minimize encroachment into certain sensitive surface resources such as wetlands, waterbodies, and cultural sites.

Directional boring machines are essentially horizontal drilling rigs with a steerable drill bit. Each directional bore begins with the creation of a pilot hole through which the drill bit is guided by the operator as it progresses along the desired boring path. After the pilot hole has been bored, conduit is attached to the end of the drill string and is pulled back through the bore. Bores would be of sufficient diameter to accommodate the 1.25-inch-diameter conduit, and the conduit would be placed at a depth of 36 to 42 inches below ground.

**Figure 3-7: Horizontal Drilling Rig and Conduit**

Small launch (entry) and exit pits are needed on either side of the bore. The entry and exit pits would be 4 feet long by 1 foot wide by 1 foot deep (4 cubic feet) and would be accompanied by a ground-level "setup area." The shorter the bore, the smaller the setup area (15 to 20 feet for short bores, up to 60 feet for large bores). The maximum length of the bore would be 750 feet. Bores in excess of 750 feet would be split—one bore would originate from the northern side of the avoidance area and head south toward an exit pit. A second bore originating from the southern side of the avoidance area would head north and would use the same exit pit, effectively "meeting in the middle." This exit pit would become a vault at which the two segments of cable would be joined.

Bores are accomplished using a nontoxic bentonite clay drill slurry, or "mud," which serves several purposes: it lubricates the passage of the drill, cools and insulates the electronics in the drill head and rods, supports the walls of the bore to prevent collapse, and captures and transports excess soil ("cuttings") to the exit pits. Entry and exit pits would catch drill slurry, groundwater ingress, and any rainfall that may occur during drilling. Straw wattle would be installed around the entry pit as secondary containment, and a vacuum truck and/or tank would be available onsite for clearing the pits post-bore. Following the installation of the conduits, the bore pits would be filled and compacted or converted to vaults.

Depth of bores beneath roads would depend on permit requirements but would typically be located 4 feet below the lowest point of the crossing. Bores beneath water bodies would average between 4 and 10 feet but up to 15 feet below the water body bed. Bores beneath culverts would average 2 to 3 feet below the bed or approximately 4 feet below the water's surface. For bores beneath water bodies, frac-out would be prevented via best management practices (BMPs) such as using a thicker bentonite solution, which both better supports the bore walls during the bore and is less likely to escape through a fissure into the water body. Frac-outs are more common on large-diameter bores than on small-diameter installations such as this project.

A single crew can typically install 600 linear feet of conduit per day using the boring method in rock-free conditions and 300 linear feet of conduit per day for cobble or rocky conditions. Figure 3-7 depicts an example of the horizontal drilling rig construction method and Figures 3-3 through 3-6 depict typical bore plans in cross-section.

### Bridge Crossings

Boring is the preferred method proposed for water body crossings. However, in areas where boring is not feasible, conduit would be attached to existing bridges. Prior to bridge work, the contractor would establish safe access points and traffic control measures to protect workers on the bridge. Anchors would be drilled and installed onto the side or underside of the bridge, and conduit would be placed into hangers at each of the anchor locations. Conduit would then be connected with couplers or would tie in at each end of the bridge. Alternatively, cable would be placed within existing conduit. Measures would be put into place to prevent construction debris (drillings, fasteners, etc.) from falling onto underlying roads or railroads, or into water bodies.

## 3.5.5.2 Conduit Proofing

Conduit must be prepared prior to fiber optic cable insertion through a process called proofing. Proofing removes blockages or debris and enables the fiber optic cable to be inserted more smoothly, reducing potential damage to the cable. In some areas, major conduit blockages may require excavating the conduit and cutting and replacing the blocked section. Proofing also involves pulling a mandrel (a small metal or wooden device) through the conduit on a line to clear debris. Once the conduit is proved, a pull and splice crew would pull in the fiber optic cable from vault locations.

## 3.5.5.3 Fiber Optic Cable Blowing and Pulling

Typically, fiber optic cable is installed through a combination of pulling and blowing it through conduit via existing vaults. Cable may be pulled unidirectionally (e.g., from one vault to another in sequence) or bidirectionally (e.g., from a central vault to two other vaults in opposite directions). The method would be chosen based on site-specific variables related to the section of cable being pulled. To reduce friction between the cable and the conduit, a non-toxic, mineral-based lubricant may be applied to the conduit interior and the cable itself.

Cable blowing is an alternative technique of fiber optic cable installation involving use of a "blowing machine." This machine, consisting of a trailer-mounted compressor and 3-foot-by-2-foot blower, is placed at a vault at the beginning or middle of the cable segment to be installed. The machine uses compressed air to blow the cable through the conduit. A lubricant may be applied to the inside of the conduit via a sponge prior to cable installation.

## 3.5.5.4 Ancillary Facility Construction

### In-Line Amplifiers

In order to support wireless signal transmittal, three ILAs would be constructed along the running line to serve as points of interconnection for local service providers. Each would consist of a prefabricated concrete or steel regeneration hut erected on a concrete pad. Vegetation clearing and minor grading may be required to level the site for the concrete slab, and soil stabilization would be achieved via track walking or plate compaction. ILAs would be placed on private property. ILAs are currently planned to be located on properties in Herlong (0.78 acre), Spanish Springs (0.12 acre), and Alturas (0.25 acre),

California. Electrical power would be supplied to each ILA by local carriers and backed up by batteries and/or an emergency generator. The huts would not be manned but would be visited periodically to check on equipment and service parts. On such visits, maintenance workers would park on existing roadways.

#### Vaults

Vaults would be spaced approximately every 3,500 feet along the running line. Vaults would be approximately 30 inches by 48 inches and would be installed in sets of three. The dimensions of each three-vault excavation area would be 15 feet by 3 feet. The excavation area would be backfilled and compacted. Additional excavation space may be needed at splice locations or when transitioning from one installation method to another. Splice boxes (i.e., small, rectangular plastic or HDPE enclosures) would be installed within the vaults to hold wire connections. Vaults would be covered by a secure hatch laid flush with the ground.

#### Line Markers

Line markers, which would be co-located with the vaults along the running line, are 4-foot-tall, flexible fiberglass posts used to mark the location of the buried conduit. The marker posts would be placed above the buried conduit, or can be offset as necessary to avoid sensitive resources or topographical limitations (e.g., rocks). Markers would be placed, to the extent possible, in unvegetated areas.

## 3.5.6 Public Safety and Traffic Control

### 3.5.6.1 Public Safety and Traffic Control

Emergency and evacuation access would be maintained throughout construction of the project, and no full roadway closures would be required. However, the applicant may require partial lane closures for installation of the running line in several locations. In these areas, the applicant would implement traffic control procedures required by Caltrans' encroachment permit that are described in further detail in Section 3.10, Anticipated Permits and Approvals.

Rarely, short sections of a trench may remain open overnight, such as in vault locations where work must continue into the next day. In these instances, appropriate safety measures, such as installation of barricades or trench covers, would be implemented. No trenches would be left uncovered overnight. In areas identified as sensitive habitat, all trenches would be inspected prior to being covered and again prior to backfilling or permanently covering to prevent wildlife entrapment.

### 3.5.6.2 Security

The project would add security lighting associated with the ILAs. This lighting would be similar to that of existing surrounding properties. Nighttime lighting would be limited to low-wattage, outdoor security lighting. All lighting would be shielded and directed downward.

No project component would be able to be accessed by the public. The majority of the project consists of buried fiber optic line, which is intrinsically safe from vandalism or tampering by members of the public.

Temporary materials staging yards would be fenced and locked or otherwise secured (e.g., via onsite security or monitored cameras, alarms, etc.) for the duration of use. Vault covers and regeneration huts would be locked and made tamper-proof.

### 3.5.7 Dust, Erosion, and Runoff Controls

The applicant would be required to obtain construction permits from responsible agencies, including Caltrans, USFS, BLM. Project construction activities would be needed to meet the requirements outlined in Attachment A of the California Construction General Permit, such as preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would detail measures to prevent fugitive dust, erosion, and runoff, such as preservation of existing vegetation where feasible; using BMPs such as installation of silt fences, straw bales, wattles, or sand bags to stabilize sediments and control erosion; applying water to loose sediments to reduce fugitive dust and wind erosion; and covering stockpiled sediment during transport or temporary storage. Attachment A of the California Construction General Permit also specifies good site management procedures for construction materials, waste management, vehicle storage and maintenance, and landscape materials, and includes requirements for non-stormwater management, erosion control, sediment controls, run-on and run-off controls, and BMP inspection, maintenance, and repair. During construction, contractors would adhere to requirements and BMPs outlined in these permits and plans. Additional details are described in Section 5.3, Air Quality, and Section 5.10, Hydrology and Water Quality.

### 3.5.8 Invasive Plants

Table 3-4 lists the invasive plant species documented in the BRSA during botanical surveys in 2019 and their statuses according to state agencies that track invasive species. Stantec did not observe invasive plants considered noxious by the U.S. Department of Agriculture (USDA) in the BRSA.

**Table 3-4: Invasive Plants Documented in the Biological Resources Survey Area**

| Scientific Name | Common Name | Origin | Family | CAL-IPC/CDFA /ODA/NDA[1] |
|---|---|---|---|---|
| *Acroptilon repens* | Russian knapweed | non-native (invasive) | Asteraceae | Moderate/Noxious/List B/Noxious |
| *Agrostis stolonifera* | redtop | non-native | Poaceae | Limited/-/-/- |
| *Alopecurus pratensis* | meadow foxtail | non-native | Poaceae | Watch/-/-/- |
| *Bassia hyssopifolia* | five horn bassia | non-native (invasive) | Chenopodiaceae | Limited/-/-/- |
| *Briza maxima* | rattlesnake grass | non-native (invasive) | Poaceae | Limited/-/-/- |
| *Bromus hordeaceus* | soft chess | non-native (invasive) | Poaceae | Limited/-/-/- |
| *Bromus japonicus* | hairy chess | non-native (invasive) | Poaceae | Limited/-/-/- |
| *Bromus tectorum* | downy chess | non-native (invasive) | Poaceae | High/-/-/- |

| Scientific Name | Common Name | Origin | Family | CAL-IPC/CDFA /ODA/NDA[1] |
|---|---|---|---|---|
| *Carduus acanthoides* | plumeless thistle | - | Asteraceae | Limited/Noxious/List A/- |
| *Centaurea diffusa* | diffuse knapweed | - | Asteraceae | Moderate/Noxious/List B/Noxious |
| *Centaurea solstitialis* | yellow starthistle | non-native (invasive) | Asteraceae | High/Noxious/List B/Noxious |
| *Centaurea stoebe* ssp. *micranthos* | spotted knapweed | non-native (invasive) | Asteraceae | High/Noxious/List B/- |
| *Cirsium arvense* | Canada thistle | non-native (invasive) | Asteraceae | Moderate/Noxious/List B/Noxious |
| *Cirsium vulgare* | bullthistle | non-native (invasive) | Asteraceae | Moderate/Noxious/List B/- |
| *Conium maculatum* | poison hemlock | non-native (invasive) | Apiaceae | Moderate/-/List B/Noxious |
| *Cynoglossum officinale* | hound's tongue | non-native (invasive) | Boraginaceae | Moderate/-/List B/Noxious |
| *Dactylis glomerata* | orchardgrass | non-native (invasive) | Poaceae | Limited/-/-/- |
| *Descurainia sophia* | herb sophia | non-native (invasive) | Brassicaceae | Limited/-/-/- |
| *Dipsacus fullonum* | wild teasel | non-native (invasive) | Dipsacaceae | Moderate/-/-/- |
| *Elaeagnus angustifolia* | Russian olive | non-native (invasive) | Elaeagnaceae | Moderate/-/-/- |
| *Elymus caput-medusae*[3] | medusa head | non-native | Poaceae | High/Noxious/List B/Noxious |
| *Erodium cicutarium* | coastal heron's bill | non-native (invasive) | Geraniaceae | Limited/-/-/- |
| *Euphorbia virgata* | leafy spurge | non-native | Euphorbiaceae | High/Noxious/-/- |
| *Festuca arundinacea* | reed fescue | non-native (invasive) | Poaceae | Moderate/-/-/- |
| *Festuca myuros* | rattail sixweeks grass | non-native (invasive) | Poaceae | Moderate/-/-/- |
| *Halogeton glomeratus* | halogeton | non-native (invasive) | Chenopodiaceae | Moderate/Noxious/List B |
| *Holcus lanatus* | common velvetgrass | non-native (invasive) | Poaceae | Moderate/-/-/- |
| *Hordeum murinum* | foxtail barley | non-native (invasive) | Poaceae | Moderate/-/-/- |
| *Isatis tinctoria* | dyers woad | non-native (invasive) | Brassicaceae | Moderate/Noxious/List B/Noxious |
| *Kochia scoparia* | Kochia | non-native (invasive) | Chenopodiaceae | Limited/-/List B/- |

| Scientific Name | Common Name | Origin | Family | CAL-IPC/CDFA /ODA/NDA[1] |
|---|---|---|---|---|
| *Lepidium chalepense* | lens-podded hoary cress | non-native | Brassicaceae | Moderate/Noxious/List B/- |
| *Lepidium draba*[2] | whitetop | non-native (invasive) | Brassicaceae | Moderate/Noxious/List B/Noxious |
| *Lepidium latifolium* | perennial pepperweed | non-native (invasive) | Brassicaceae | High/Noxious/List B/Noxious |
| *Linaria dalmatica* ssp. *dalmatica* | Dalmatian toadflax | - | Plantaginaceae | Moderate/Noxious/List B/Noxious |
| *Marrubium vulgare* | white horehound | non-native (invasive) | Lamiaceae | Limited/-/-/- |
| *Onopordum acanthium* ssp. *acanthium* | Scottish thistle | non-native (invasive) | Asteraceae | High/Noxious/List B/Noxious |
| *Plantago lanceolata* | ribwort | non-native (invasive) | Plantaginaceae | Limited/-/-/- |
| *Poa pratensis* ssp. *pratensis* | Kentucky blue grass | non-native (invasive) | Poaceae | Limited/-/-/- |
| *Polypogon monspeliensis* | rabbitsfoot grass | non-native (invasive) | Poaceae | Limited/-/-/- |
| *Robinia pseudoacacia* | black locust | non-native (invasive) | Fabaceae | Limited/-/-/- |
| *Rubus armeniacus* | Himalayan blackberry | non-native (invasive) | Rosaceae | High/-/List B/- |
| *Rumex acetosella* | sheep sorrel | non-native (invasive) | Polygonaceae | Moderate/-/-/- |
| *Rumex crispus* | curly dock | non-native (invasive) | Polygonaceae | Limited/-/-/- |
| *Salsola tragus* | russian thistle | non-native (invasive) | Chenopodiaceae | Limited/Noxious/-/- |
| *Salvia aethiopis* | mediterranean sage | non-native (invasive) | Lamiaceae | Limited/Noxious/List B/Noxious |
| *Tribulus terrestris* | puncture vine | non-native (invasive) | Zygophyllaceae | Limited/Noxious/List B/Noxious |
| *Trifolium hirtum* | rose clover | Non-native (invasive) | Fabaceae | Limited/-/-/- |
| *Ventenata dubia* | ventenata grass | non-native | Poaceae | Watch/-/List B/- |
| *Verbascum thapsus* | woolly mullein | non-native (invasive) | Scrophulariaceae | Limited/-/-/- |

[1]**Invasive/Noxious Status**
California Invasive Plant Council (Cal-IPC)
**High**: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
**Moderate**: These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate

to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

**Limited**: These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

**Watch**: These species are not currently invasive in California. An assessment has found them to be a high risk for becoming invasive in the future

California Department of Food and Agriculture (CDFA)
**Noxious**=Listed as a noxious weed under Section 4500

Oregon Department of Agriculture (ODA)
**A List:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states make future occurrence in Oregon seem imminent.
**B List:** A weed of economic importance which is regionally abundant, but which may have limited distribution in some counties.

Nevada Department of Agriculture (NDA)
**Noxious**= Listed as a noxious weed

[2]*Cardaria draba* under the NDA Noxious Weed list.
[3]*Taeniatherum caput-medusae* under the ODA and NDA Noxious Weed list.

## 3.5.9 Water Use and Dewatering

Approximately 18,000 gallons of water would be used each day for dust control and fire response during construction, assuming three construction spreads working concurrently. This amount equals approximately 2.7 million gallons over the 6-month construction period. Water would be obtained from local municipal sources via existing water rights. Dewatering is not anticipated to be needed because conduit would be installed at a depth that is shallower than the groundwater table.

## 3.5.10 Hazardous Materials and Management

### 3.5.10.1 Hazardous Materials

Temporary construction activities associated with the project would involve the transport and use of gasoline, diesel fuel, hydraulic fuel, solvents, and oils typically associated with operation of construction equipment and vehicles. These chemicals would be used and stored on the project site during construction, as well as transported along public roadways. Federal, state, and local laws governing the hauling, storage, and transport of these and other hazardous materials and spill response are discussed in Section 5.9.2, Regulatory Setting, and would be required for the storage and transport of hazardous materials for the project. Non-toxic, non-hazardous bentonite drilling fluid would be used for directional boring and a mineral-based, non-toxic, non-hazardous lubricant would be used for conduit proofing. Operation of the project would not involve the routine transport, use, or disposal of hazardous materials. As further described in Section 5.9, Hazards, Hazardous Materials, and Public Safety, construction workers would be trained to test soils adjacent to hazardous materials sites prior to the start of construction activities and would implement measures for proper containment and treatment of potentially hazardous materials should contact with these sites not be avoidable.

### 3.5.10.2 Hazardous Materials Management

Hazardous materials management during construction would be outlined in a Hazardous Materials Release Prevention Plan (APM HAZ-1), SWPPP, and Spill Prevention, Countermeasure, and Control (SPCC) Plan. Additional details are provided in Section 5.9, Hazards, Hazardous Materials, and Public Safety.

The Hazardous Materials Release Prevention Plan would identify control measures to prevent the release of hazardous materials, as well as a detailed action plan to respond to an incidental spill in compliance with all local, state, and federal regulations relating to the handling of hazardous materials. Specific measures of this plan would include the following:

- Site-specific buffers to be used if work occurs adjacent to any hazardous sites and if not possible, remediation or containment efforts to be taken if construction activities would go through a hazardous site
- Testing of soils near known hazards materials sites prior to the start of construction activities
- Emergency response and reporting procedures
- Proper disposal of potentially hazardous materials
- Containment of spills from construction equipment and vehicles

Under Attachment A of the California Construction General Permit, the applicant would also be required to prepare a SWPPP, which would further detail hazardous materials management and spill prevention and response. Contents of the SWPPP are outlined in Section 3.5.7, Dust, Erosion, and Runoff Controls.

To minimize the potential for spills or leaks to enter waterbodies or sensitive habitats adjacent to work areas, the applicant will prepare a SPCC Plan. The plan would contain measures such as the following:

- Maintenance and inspection of all construction vehicles
- Refueling and parking restrictions to prevent fuel from entering adjacent waterbodies
- Specifications for the availability of spill containment and response equipment
- Designation of responsibilities and communication and reporting procedures in the event of a spill
- Spill response procedures

## 3.5.11 Waste Generation and Management

### 3.5.11.1 Solid Waste

Construction activities would generate a certain amount of non-hazardous solid waste. Items such as cable trimmings, package materials, and construction debris would necessitate proper handling and

disposal methods. The volume of waste generated is expected to be minimal for this project, and waste materials would be properly disposed of in one of the landfills or recycling centers along the project route. Dumpsters for construction waste would be provided at materials storage yards for temporary storage prior to transport to a licensed local waste management or recycling facility.

### 3.5.11.2 Liquid Waste

Most liquid waste associated with construction of the project would occur in the form of bentonite (clay-based) drilling fluid, which is not considered a hazardous material and therefore would not require special disposal procedures. At each bore location, any excess drilling fluid that seeps from the bore hole would be captured in exit pits and siphoned into a holding tank to be reused or properly disposed of.

Non-toxic drilling fluid could harm aquatic habitats if released into waterbodies. To minimize the potential for an accidental release of bentonite drilling fluid caused by a fracture in the rock underlying the water body (an event known as a "frac-out"), an Accidental Release Prevention Plan (APM HAZ-3) would be prepared. Measures in this plan would include the following:

- Visual inspection of the bore path at all times during drilling operations
- Personnel stationed upstream and downstream of the bore path to monitor water conditions, when water is flowing
- Specifications for availability of containment and cleanup equipment in the event of a frac-out
- Designation of responsibilities, communication protocols, and reporting procedures in the event of a frac-out

## 3.5.12 Fire Prevention and Response

The applicant would prepare a Fire Protection Plan prior to construction that would detail fire prevention and response measures such as the following:

- Identification of daily site-specific risk conditions
- The tools and equipment needed on vehicles and to be on hand at sites
- Reiteration of fire prevention and safety considerations during tailboard meetings
- Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity
- Coordination procedures with federal and local fire officials
- Crew training, including fire safety practices and restrictions
- Method(s) for verifying that all Plan protocols and requirements are being followed

Details on fire risk, prevention, and response can be found in Section 5.20, Wildfire.

# 3.6 CONSTRUCTION, WORKFORCE, EQUIPMENT, TRAFFIC, AND SCHEDULE

## 3.6.1 Construction Workforce

The number of construction workers present on the running line would vary each day. At the peak of construction, approximately 48 construction workers, or about eight crews of six people, would be located across various construction locations simultaneously. Onsite construction workers would be supplemented by construction foremen, construction managers, and trailer-based administrative personnel, maintenance and cleaning staff, and security guards.

## 3.6.2 Construction Equipment

Equipment would be operating 10 hours per day, 5 days per week. Table 3-5 summarizes construction equipment that would be used, assuming approximately eight crews would be constructing segments of the project simultaneously.

**Table 3-4: Construction Equipment and Usage Factors**

| Phase Name | Equipment Type | Equipment Number | Horsepower | Load Factor |
|---|---|---|---|---|
| Plowing In (3 crews operating simultaneously) | Crawler Tractors | 3 | 212 | 0.43 |
| | Excavators | 6 | 158 | 0.38 |
| | Off-Highway Trucks | 3 | 402 | 0.38 |
| | Tractors/Loaders/Backhoes | 3 | 97 | 0.37 |
| Open Trenching (2 crews) | Excavators | 4 | 158 | 0.38 |
| | Tractors/Loaders/Backhoes | 4 | 97 | 0.37 |
| Directional Boring (4 crews) | Bore/Drill Rigs | 4 | 221 | 0.5 |
| | Tractors/Loaders/Backhoes | 4 | 97 | 0.37 |
| Bridge Attachments (1 crew) | Excavators | 1 | 158 | 0.38 |
| Blowing/Splicing (1 crew) | Air Compressors | 6 | 78 | 0.48 |

## 3.6.3 Construction Traffic

The influx of construction vehicles and workers' personal vehicles associated with the project would cause a temporary and short-term increase in traffic surrounding work areas within the US 395 right-of-way. This temporary traffic volume increase would be spread out over the entire project alignment, and the increased traffic levels during peak construction would remain within acceptable limits in the context of road capacities and level of service (LOS). Traffic on US 395 may be temporarily affected by the slower

movements and larger turning radii of construction trucks entering and exiting the highway, and the region would temporarily experience increases in vehicle-trip generation as a result of project construction, which would vary based on the construction activity, location, equipment needs, and other factors. However, once construction is completed, construction-related traffic would cease, and vehicle miles traveled levels would return to pre-project conditions. An estimate of construction vehicle trips is included in Table 3-6.

### Table 3-5: Construction Vehicle Trips

| Phase Name | Vehicle Category | Truck Trips/Day1 | One-Way Trip Length (miles) | Daily Miles Traveled |
|---|---|---|---|---|
| Plowing In | HHDT | 6 | 30 | 180 |
| | LHDT2 | 18 | 30 | 540 |
| Open Trenching | LHDT2 | 12 | 30 | 360 |
| Directional Boring | HHDT | 16 | 30 | 480 |
| | LHDT2 | 16 | 30 | 480 |
| Bridge Attachments | HHDT | 4 | 30 | 120 |
| | LHDT2 | 4 | 30 | 120 |
| Blowing/Splicing | LHDT2 | 12 | 30 | 360 |

Notes:
1 Truck trips represent trucks traveling to and from the project site.
HHDT = heavy heavy duty truck
LHDT2 = light heavy duty truck 2

Emergency access routes would be maintained throughout project construction. Construction vehicles and equipment are anticipated to access project construction areas by using existing roadways and work would generally occur within the roadway right-of-way. Construction vehicles and equipment are expected to be staged or parked within project area rights-of-way, approved temporary construction easements, or alongside access roads. During and after construction, roads would continue to operate at the same acceptable LOS, with similar travel speeds and no capacity deficiencies.

## 3.6.4 Construction Schedule

The duration of construction activity would be approximately 6 months. Construction crews would typically work 8- to 10-hour days, 5 days per week during daylight hours. Saturday work may be required in some areas, as needed, but approval would be obtained from the appropriate regulatory agency in advance of the work. No work is anticipated to be conducted on national holidays.

Based on the proposed schedule, up to six crews would be working concurrently along the running line. During construction, various activities would be occurring simultaneously, including conduit plowing, trenching, cable blowing or pulling, splicing, marker pole installation, and site cleanup and restoration. Work phases would be staggered such that cable installation crews would follow conduit installation

crews and site cleanup and restoration crews would follow marker pole crews. Staging areas and materials storage yards would be intermittently active as crews move through each work location.

## 3.7 POST-CONSTRUCTION

### 3.7.1 Landscaping, Demobilization, and Site Restoration

Construction activities and sequencing would occur such that cable would be laid, backfilled, compacted, and restored in a single pass, leaving no disturbed ground, open trenches, or loose sediments in each work area. Each work area would be restored to pre-project topography immediately following cable installation. No changes to existing drainage patterns are anticipated, and no permanent erosion control measures would be used. Revegetation would occur naturally, and no seeding is anticipated to be required. Construction-related track-out would be removed from public roads via a street sweeper or by manually sweeping. No new landscaping would be required, but any private property such as fencing, landscaping, or driveways that is damaged during construction would be restored or compensated in coordination with the property owner.

Construction debris would be loaded onto vehicles at the end of each work day and temporarily stored at materials staging yards or hauled directly to local waste management or recycling centers. Staging areas and materials storage yards would become inactive as work progresses beyond them. Staging areas in the right-of-way that are being decommissioned would be cleaned of debris and fluid drips and lightly recontoured or recompacted if necessary. Materials, equipment, vehicles, and trailers would be removed from materials staging yards along with construction debris, trash, and construction-related signage. Yards would be cleaned, swept, and lightly recontoured or recompacted if necessary. If fencing were erected as part of the project, the applicant would coordinate its removal or preservation with the property owner.

## 3.8 OPERATION AND MAINTENANCE

Operation and maintenance activities would be implemented along the project running line over the life of the project as permitted by lead and responsible agencies. The utility owner would be required to apply for, obtain, and maintain an encroachment permit from Caltrans to operate and maintain the telecommunications facilities within the state highway right-of-way.

Project infrastructure would be monitored remotely from the applicant's system operations headquarters in Tulsa, Oklahoma. Routine maintenance checks would be performed by local contractors or applicant staff, as appropriate. Maintenance staff would access project infrastructure via existing roads. Routine maintenance activities would include checking aboveground infrastructure and stopping to open vault hatches. Ground disturbance during routine maintenance would typically be minor if it occurred at all and would center upon repair of cable conduits in the event of storm damage, landslides, or other emergencies. Most maintenance activities would take place within the right-of-way. The appropriate agencies would be contacted if maintenance activities are required outside previously authorized areas. No long-term vegetation disturbance, trimming, or maintenance is anticipated to be required during operations.

# 3.9 DECOMMISSIONING

During decommissioning, underground project infrastructure would be abandoned in place. Above-ground components, such as regeneration huts, would be excavated to below ground level, disconnected from the underground conduit, backfilled, and compacted. Concrete pads would be broken up and removed. Vaults would be cleared of equipment, backfilled, and compacted or paved, as appropriate. Marker poles would be removed or abandoned in place.

# 3.10 ANTICIPATED PERMITS AND APPROVALS

## 3.10.1 Anticipated Permits and Approvals

Table 3-7 summarizes anticipated and approvals that would be required as part of the project.

**Table 3-6: Anticipated Permits and Approvals**

| Regulatory Agency | Authorizing Action/Permits |
|---|---|
| **Federal** | |
| U.S. Army Corps of Engineers | Individual or Nationwide Section 404 Permit (Clean Water Act) |
| Bureau of Land Management | Special Use Permit for Operation and Maintenance, Temporary Use Permit for Construction, Cultural Resources Use Permit, Plan of Development<br>National Environmental Policy Act Lead<br>National Historic Preservation Act Section 106 Consultation |
| U.S. Forest Service | Right-of-Way Grant, Temporary Use Permit, Cultural Resources Use Permit<br>National Environmental Policy Act Lead |
| U.S. Fish and& Wildlife Service | Informal Section 7 Consultation/No effect determination (Endangered Species Act) |
| National Environmental Policy Act lead or State Historic Preservation Office | |
| **State** | |
| California Public Utilities Commission | California Environmental Quality Act Lead |
| California Department of Transportation | Encroachment Permit |
| California State Lands Commission | Right-of-Way Easement |
| California State Historic Preservation Office | Impact Concurrence |
| California Department of Fish and Wildlife | Streambed Alteration 1601 Permit<br>Section 2081 Permit |
| California Regional Water Quality Control Boards (Lahontan and Central Valley)/State Water Board | Section 401 Water Quality Certification<br>Authorization of Discharge of Fill into Waters of the State<br>National Pollutant Discharge Elimination Service Permit |

| Regulatory Agency | Authorizing Action/Permits |
|---|---|
| California State Historic Preservation Office | National Historic Preservation Act Section 106 Consultation |
| **Local** | |
| County of Modoc | Encroachment Permit, Grading Permit |
| County of Lassen | Encroachment Permit, Grading Permit |
| County of Sierra | Encroachment Permit, Grading Permit |

Note:

### 3.10.2 Rights-of-Way or Easement Applications

The applicant would apply for an encroachment permit from Caltrans for construction within US 395 right-of-way, and from Lassen, Modoc, and Sierra Counties for construction within county road rights-of-way. Easements will be obtained for underlying rights, including the California State Lands Commission, BLM, USFS, and the Bureau of Indian Affairs. Leases would be obtained for components located on private land.

## 3.11 APPLICANT PROPOSED MEASURES

### 3.11.1 Applicant Proposed Measures

**APM AES-1: Staging Area Maintenance**

All project sites will be maintained in a clean and orderly state. Where commercially feasible and physically possible, construction staging areas will be located away from public view. Upon completion of project construction, project staging and temporary work areas will be returned to pre-project conditions, normal wear and tear accepted.

**APM AES-2: Aboveground Ancillary Equipment**

All aboveground ancillary equipment, including the ILA huts and line markers shall use paints, materials, and finishes that are earth-toned in color.

**APM AG-1: Coordination with Agricultural Landowners**

For the staging area located on prime farmland, or any subsequent staging areas identified that would need to be located on prime farmland, unique farmland, or farmland of local or statewide importance, prior to construction, the applicant will provide written notice to the landowner(s) outlining construction activities, preliminary schedule, and estimated timing of restoration efforts. The applicant will coordinate with the landowner(s) to minimize construction-related disruptions to seasonal farming operations. Following construction in the applicable area, the applicant will revegetate temporarily mpacted agricultural areas.

**APM AIR-1: Fugitive Dust Control**

The Applicant shall implement measures to control fugitive dust in compliance with all local air district(s) standards. Dust control measures shall include the following at a minimum:

- All exposed surfaces with the potential of dust-generating shall be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site.
- The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- Cover all haul trucks entering/leaving the site and trim their loads as necessary.
- Use wet power vacuum street sweepers to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. The use of dry power sweeping is prohibited.
- All trucks and equipment, including their tires, shall be washed off prior to leaving project sites.
- Apply gravel or non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at project sites.
- Water and/or cover soil stockpiles daily.
- Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- All vehicle speeds shall be limited to fifteen (15) miles per hour or less on unpaved areas.
- Implement dust monitoring in compliance with the standards of the local air district.
- Halt construction during any periods when wind speeds are in excess of 50 mph.

**APM AIR-2: Low-emission Vehicles**

All off-road construction equipment, except for air compressors, shall meet EPA Tier 4 Final off-road emissions standards (or equivalent) to reduce NOX emissions during construction activities.

**APM BIO-1: Worker Environmental Awareness Training**

The applicant will prepare and implement a Worker Environmental Awareness Training to be presented by the Lead Biologist to all onsite personnel prior to commencing construction (i.e., staging vehicles or equipment). Training will instruct personnel how to identify sensitive resources and the locations of sensitive resource exclusion areas. Personnel will be instructed about roles and responsibilities in protecting sensitive biological resources, including penalties for violations, conducting sweeps for wildlife around equipment and vehicles before moving them, parking and driving only in approved areas, and

stopping work immediately and notifying onsite biological and cultural monitors if sensitive resources are encountered. Handling and relocating special status species by non-approved personnel will be prohibited.

**APM BIO-2: Work Areas and Access Routes**

The applicant will confine all equipment, vehicles, and construction work within approved access routes and work areas to the maximum extent possible. Approved access routes and work areas will be clearly marked using stakes, flagging, or other means. No work, staging, or ground disturbance will occur outside of approved access routes and work areas. If off-pavement or gravel vehicle travel is required, the applicant will instruct personnel to use a spotter.

**APM BIO-3: Speed Limit**

Vehicles and equipment will adhere to a 15 miles per hour speed limit on all unpaved project access roads.

**APM BIO-4: General Project Area Use**

The applicant will prohibit trash dumping, firearms, hunting, open fires (those not required for project activities), smoking outside designated areas, and pets in project areas.

**APM BIO-5: Site Restoration**

Ground disturbance and vegetation clearing will be limited to the minimum extent practicable. Open excavations will be backfilled and recompacted after installation of the conduit with native soils . At locations where the excavated material is not adequate to use for backfilling, construction crews will remove it from the project workspaces and dispose of it at a location that meets California Department of Transportation's (Caltrans') requirements. In areas where backfill material must be imported (e.g., areas were excavated material has high rock content), the applicant will obtain soils from commercially available sources approved by Caltrans. After completion of project activities, all temporarily disturbed work areas will be restored to their pre-construction contours, and areas of exposed soils in natural habitats will either be re-seeded with native seed mixes or stabilized. Non-natural habitats, such as agricultural, urban, and barren areas, are maintained by landowners and will not be revegetated.

The applicant will prepare and implement a Revegetation and Restoration Plan (RRP) with detailed specifications for restoring all temporarily disturbed native vegetation in accordance with project permits. The RRP will discuss mitigation and restoration methods where vegetation is temporarily or permanently impacted. The RRP will include plants and seed mixes that will be used for temporary and permanent revegetation, plant container sizes and appropriate planting methods, and maintenance requirements, including irrigation needs and design plans that will show the specific plant species and planting locations.

**APM BIO-6: Invasive Species**

To prevent the introduction and spread of invasive plants during construction, the applicant will ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. Incoming

vehicles and wheeled or tracked equipment will be inspected by a biological monitor prior to deployment onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel clothing and boots will be swept or cleaned prior to deployment to a different construction site. If application of herbicides is needed to control designated noxious weeds, only approved weed control contractors would apply herbicides in adherence with all state and manufacturer's guidelines.

**APM BIO-7: Biological Monitors**

The applicant will appoint a Lead Biologist and one or more biological monitors. Biological monitors will be onsite daily during project activities to minimize incidental impacts to sensitive biological resources by conducting pre-construction surveys and sweeps, ensuring compliance with all avoidance and minimization measures, demarcating sensitive biological resource exclusion areas (e.g., active den or nest, special status plant occurrence, sensitive natural community, or wetland or waterway boundary) with flagging or signage, and ensuring that flagging and signage remain intact and that project activities remain outside of exclusion areas. If a special status species is encountered in the work areas, construction in the immediate vicinity will cease, and personnel will notify the biological monitors. Biological monitors will establish a buffer to restrict work near the species. If it is a wildlife species, a biological monitor will observe the behavioral responses of the species to the work occurring in proximity to them. The biological monitors will halt work if a wildlife species exhibits an adverse response to nearby project work activities. The species will be allowed to move offsite on their own. If the species is in danger of injury or does not leave the work area, the biological monitor will relocate the species to adjacent suitable habitat, if feasible, and with prior approval from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service or will consult with agencies for further guidance.

**APM BIO-8: Protection of Botanical Resources**

The locations of the special status plants will be marked as avoidance areas both in the field; using flagging, staking, fencing, or similar devices; and on construction plans. Locations shall be incorporated into project siting, design, avoidance, and management in accordance with APM BIO-7 and APM BIO-9.

**APM BIO-9: Special Status Plant Impacts**

If additional special status plants are identified during pre-construction surveys, complete avoidance is not practicable, and the project would directly or indirectly affect more than 10 percent of a local occurrence by either number of plants or extent of occupied habitat, a conservation and restoration plan shall be implemented in coordination with a qualified biologist. The conservation plan may consist of but is not limited to purchase of mitigation credits at a regional conservation bank; collection and subsequent planting of seed or incorporating seed from native nursery into seed mix used for revegetation efforts; stockpiling, storing, and replacing topsoil containing the local seed bank; or other measures determined practicable based on the species and site conditions. For some species and site conditions, conservation bank credits and seed may not be available, or conservation efforts may not have a reasonable probability of success or could result in detrimental effects on existing special status plant populations. In these cases, as determined by a qualified biologist, no conservation measures will be required.

**APM BIO-10: Work Timing**

Construction activities will be restricted to daylight hours . If nighttime work is required, lights will be shielded and/or pointed downward and into work areas, and not into surrounding areas.

**APM BIO-11: Nesting Birds**

Biological monitors will conduct pre-construction nesting bird surveys during the nesting season (February 1 to August 31) within 100 feet of the construction workspaces for non-raptors, and within 0.5 mile for raptors. Pre-construction surveys for non-raptors would be valid for 1 week, and surveys for raptors would be valid for the full season if conducted after May 1. Biological monitors will establish exclusionary buffers around active nests, which would be 100 feet for non-raptors and 0.25 mile for raptors, increasing to 0.5 mile for bald eagles, golden eagles, ferruginous hawks (*Buteo regalis*), Swainson's hawks (*Buteo swainsoni*), and prairie falcons (*Falco mexicanus*) when nests are in line-of-sight. Project activities will be prohibited within the exclusionary buffer until the nest fledged or failed. To the extent possible, work will be scheduled during the non-breeding season or in construction spreads that lack active nests.

**APM BIO-12: Greater Sage-grouse Leks**

The applicant will avoid construction activities within 4 miles of active or pending greater sage-grouse leks from 6 PM to 9 AM between March 1 and May 15. [Additional information pending further consultation with BLM].

**APM BIO-13: Open Excavations**

The applicant will backfill or cover open excavations at the end of each workday to avoid wildlife entrapment. When this is not possible, the applicant will install escape ramps overnight to allow wildlife to escape (2:1 slope ratio or less), and a biological monitor will inspect excavations that remained open overnight before construction activities begin each morning.

**APM BIO-14: Minimum Bore Depth**

The applicant will impose minimum bore depths when boring under sensitive natural communities and special status plant occurrences to prevent root damage and plant mortality. The minimum depths are 30 feet for tree-dominated, 23 feet for shrub-dominated, and 15 feet for herbaceous-dominated communities or occurrences.

**APM BIO-15: Wetland Impacts**

The applicant will avoid directly impacting wetlands; however, for wetlands that cannot be avoided, or for which direct, temporary disturbance (e.g., trenching) outweighs the risk of effort-intensive avoidance techniques (e.g., boring) the applicant will implement the following measures:

- Construction activities within wetlands will be performed during the dry season (e.g., generally May through September) while the features are dry.

- If construction activities are required in perennially wet features or if features do not fully dry due to local weather conditions, a coffer dam with appropriately sized bypass pumps (if needed) will be installed to dewater the area prior to the activities.
- As currently designed, only temporary impacts on wetlands are anticipated, and the applicant will restore temporarily disturbed areas to pre-construction conditions and according to applicable permit requirements. If changes during final design could result in permanent impacts that cannot be avoided, the applicant will compensate for the permanent loss of wetlands at a ratio of at least 1:1; however, final compensation ratios will be based on site-specific information and will be determined through coordination with the applicable resource agencies as part of the permitting processes for the project.

**APM BIO-16: Vegetation Clearing for Birds and Bats**

If vegetation clearing occurs during nesting bird season (February 1 to August 30) biological monitors will establish a 300-foot no-vegetation clearing buffer around active nests that shall remain in place until the nest has fledged or failed. Prior to tree removal, a biological monitor will conduct pre-construction surveys for roosting bats, and if present, the trees will not be removed until a biological monitor determines that the roost is no longer active.

**APM CR-1: Avoid and Minimize Impacts to Significant or Potentially Significant Cultural Resources.**

Wherever feasible, the applicant shall avoid or minimize impacts to archaeological resources, regardless of its CRHR or NRHP eligibility status. This includes siting all ground-disturbing activities outside a buffer zone established around each recorded archaeological site within or immediately adjacent to the alignment. Because many archaeological resources are made up of subsurface deposits, features, and artifacts, it may not be possible to recognize all potentially significant attributes of archaeological resources during construction activities. There is the potential for making unanticipated discoveries of previously unidentified remains at archaeological sites that could require efforts to reassess their CRHR or NRHP eligibility. Avoiding impacts or minimizing the area of an archaeological resource that could be affected during construction protects the resource and reduces the possibility that unanticipated discoveries would cause project delays. The applicant will avoid or minimize impacts to archaeological resources by redesign, reroute, and implementation of avoidance procedures (i.e., establishing environmentally sensitive areas), or other protective measures within or immediately adjacent to construction activities. Additionally, impacts will be avoided or minimized through the following measures prior to construction.

**APM CR-2: Design Avoidance.**

Where sites cannot be avoided, the proponent shall use directional bore and place the fiber optic line conduit under archaeological sites to a depth of at minimum 2 meters or 1 meter below known maximum depth of cultural resources.

**APM CR-3: Conduct a Pre-Construction Worker Education Awareness Program.**

The Worker Environmental Awareness Program (WEAP) will be provided for all proposed project personnel who have the potential to encounter and alter unique archaeological sites, historical resources, or historic properties, or properties that may be eligible for listing in the CRHR or NRHP. This includes construction supervisors as well as field construction personnel. No construction worker will be involved in ground-disturbing activities without having participated in the WEAP.

**APM CR-4: Evaluate the Significance of All Cultural Resources That Cannot Be Avoided.**

Archaeological resources, buildings, and structures that cannot be avoided and that have not been evaluated to determine their eligibility for listing in the CRHR will be evaluated to determine their historical significance. Evaluation studies shall be conducted and documented as per applicable laws, regulations, and guidelines and in accordance with professional standards. Evaluation of properties will take into account attributes of each property that could contribute to its historical significance. Evaluation procedures will be consistent with applicable laws, regulations, and guidelines and in accordance with professional standards as follows.

**APM CR-5: Implement Measures to Minimize Impacts to Significant Archaeological Sites.**

Prior to construction and during construction, the following measures will be implemented by the applicant to minimize unavoidable impacts to significant archaeological sites.

- To the extent practical, all activities shall minimize ground surface disturbance within the bounds of unique archaeological sites or historical resources.
- Portions of significant archaeological sites, historical resources, or historic properties that can be avoided will be protected as environmentally sensitive areas and will remain undisturbed by construction activities.
- Monitoring by qualified professionals and/or Native Americans to ensure that impacts to sites are minimized will be carried out at each affected cultural resource for the period during which construction activities pose a potential threat to the site and for as long as there is the potential to encounter unanticipated cultural or human remains.
- Additional archaeological studies will be carried out at appropriate sites to ascertain if project facilities could be located on a portion of a site and cause the least amount of disturbance to significant cultural materials.
- If impacts to significant archaeological (NRHP- or CRHR-eligible) sites cannot be avoided, archaeological data recovery will be carried out in the portions of affected significant sites that will be impacted.
- A data recovery plan will be prepared, reviewed by the appropriate agencies, and then implemented to recover an adequate sample of cultural remains that can be used to address important research questions per CRHR Criterion 4 or NRHP Criterion D eligibility. Archaeological data recovery will involve scientific excavations; identification of recovered cultural and ecological remains; cataloging,

scientific analysis, and interpretation of recovered materials; and preparation of a scientific technical report that describes the methods and results of the data recovery program.

- Reports of any excavations at archaeological sites will be filed with the appropriate Information Center of the California Historical Resources Information System.

**APM CR-6: Implement measures to minimize impacts to significant buildings and structures.** Prior to construction and during construction, the applicant will implement the following measures to minimize unavoidable impacts to significant buildings and structures.

- Locate proposed project facilities to minimize effects on significant buildings or structures.
- If impacts to significant buildings or structures cannot be avoided, document significant architectural and engineering attributes consistent with National Park Service Historic American Buildings Survey/Historic American Engineering Record documentation standards.
- File reports and other documentation with the National Park Service, if appropriate, and appropriate Information Center of the California Historical Resources Information System

**APM CR-7: Prepare and Implement a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan.**

During construction, it is possible that previously unknown archaeological or other cultural resources or human remains could be discovered. Prior to construction, the applicant will prepare a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan to be implemented if an unanticipated discovery is made. At a minimum the plan shall detail the following elements:

- Worker and supervisor training in the identification of cultural remains that could be found in the proposed project area
- Worker and supervisor response procedures to be followed in the event of an unanticipated discovery, including appropriate points of contact for professionals qualified to make decisions regarding the potential significance of any find
- Identification of persons authorized to stop or redirect work that could affect the discovery and their on-call contact information
- Provide for monitoring of construction activities in archaeologically sensitive areas
- Stipulate a minimum radius around any discovery within which work will be halted until the significance of the resource has been evaluated and mitigation implemented as appropriate
- Procedures for identifying and evaluating the historical significance of any find
- Procedures for consulting Native Americans in the process of identification and evaluation of significance of discoveries involving Native American cultural materials

- Procedures to be followed for the treatment of discovered human remains per current state law and protocol developed in consultation with Native Americans.

**APM CR-8: Inadvertent Discovery of Human Remains.**

Any human remains discovered during project activities in California will be protected in accordance with current state law, specifically Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill (AB) 2641. The provisions of the Native American Graves and Repatriation Act (NAGPRA) are applicable when Native American human remains are found on federal land (Bureau of Land Management land in California and Nevada). The discovery of human remains will be treated as defined in the Construction Monitoring and Unanticipated Cultural Resources Discovery Plan. Archaeological excavations at sites will not, if at all possible, inappropriately disturb or remove human remains. Native Americans will be consulted to develop a protocol to be followed if human remains are encountered during any project activity, as required by state and federal law. When human remains are discovered, work must cease around the find and the area will be flagged off to protect the discovery from disturbance (AB 2641 and NAGPRA). The discovery must be reported immediately to the County Coroner (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the Native American Heritage Commission (NAHC), which then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code [PRC]). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641). NAGPRA also requires notification of the appropriate Native American group and certification by that group before the ground-disturbing activity is resumed.

**APM PALEO-1: Paleontological Mitigation Plan**

Prior to construction, a Paleontological Mitigation Plan (PMP) should be prepared. It should provide detailed recommended monitoring locations; a description of a worker training program; detailed procedures for monitoring, fossil recovery, laboratory analysis, and museum curation; and notification procedures in the event of a fossil discovery by a paleontological monitor or other project personnel. Any subsurface bones or potential fossils that are unearthed during construction should be evaluated by a professional paleontologist as described in the PMP.

**APM PALEO-2: Paleontological Resource Monitoring**

Construction excavations which disturb geologic units with moderate paleontological potential (Potential Fossil Yield Classification [PFYC] 3) should be monitored by a professional paleontologist in conjunction with worker environmental training to reduce potential adverse impacts on scientifically important paleontological resources to a less than significant level. The timing and frequency (e.g., part-time vs. full-

time) of monitoring should be determined by the professional paleontologist based on initial field observations and excavation activities. Additionally, excavations which disturb geologic units with unknown paleontological potential (PFYC U) should be initially monitored in order to inspect for the presence of sensitive sediments and any resources that may be harbored within. In the event that a highly fossiliferous facies are encountered, full time monitoring should occur until excavations within that facies are complete. Worker environmental training of construction personnel is recommended for excavations impacting sedimentary geological units with low paleontological potential (PFYC 2). No additional measures are recommended for excavations impacting volcanic and plutonic rock units with very low paleontological potential (PFYC 1) or very low to low potential (PFYC 2 to 1). As summary of the recommended monitoring procedures for each of the mile posts is provided in Appendix B of the Paleontological Report.

**APM HAZ-1: Prepare and Implement a Hazardous Materials Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan**

Zayo, or its chosen consultant, shall create and implement a hazardous materials release prevention plan and Spill Prevention, Countermeasure, and Control (SPCC) plan to reduce the risk of sensitive receptors from being exposed to hazards due to the handling of hazardous materials during construction. These plans shall identify control measures to prevent the release of hazardous materials, as well as a detailed action plan to respond to an incidental spill in compliance with all local, state, and federal regulations relating to the handling of hazardous materials. These plans would also be implemented in conjuncture with the Stormwater Pollution and Prevention Plan (SWPPP). Specific measures of these plans shall include the following:

- Site-specific buffers to be used if work occurs adjacent to any hazardous sites, and if not possible, remediation or containment efforts to be taken if construction activities will go through a hazardous site
- Testing of soils near known hazardous materials sites prior to the start of construction activities
- Emergency response and reporting procedures
- Proper disposal of potentially hazardous materials
- Containment of spills from construction equipment and vehicles (also required through the preparation of a SPCC), which would include the following:
    - Maintenance and inspection of all construction vehicles
    - Refueling and parking restrictions to prevent fuel from entering adjacent waterbodies
    - Specifications for the availability of spill containment and response equipment
    - Designation of responsibilities and communication and reporting procedures in the event of a spill
    - Spill response procedures

**APM HAZ-2: Worker Environmental Awareness Program for Hazardous Materials**

The purpose of a Worker Environmental Awareness Program (WEAP) is to educate personnel (i.e.,construction workers) about the existing onsite and surrounding resources and the measures required to protect these resources and to avoid potential hazards within these sites. The WEAP, developed by Zayo or their chosen consultant, shall include materials and information on potential hazards resulting from construction within the project area, and applicable precautions personnel should take to reduce potential impacts.

The WEAP presentation shall be given to all personnel who may be exposed to site hazards. The WEAP presentation shall be given prior to the start of construction and as necessary throughout the life of the project as new personnel arrive onsite. Zayo and the contractor are responsible for ensuring that all onsite personnel attend the WEAP presentation, receive a summary handout, and sign a training attendance acknowledgement form to indicate that the contents of the program are understood and to provide proof of attendance. Each participant of the WEAP presentation shall be responsible for maintaining their copy of the WEAP reference materials and making sure that other onsite personnel are complying with the recommended precautions. The contractor shall keep the sign in sheet onsite and submit copies of the WEAP sign-in sheet to Zayo's Project Manager, who shall keep it on file at their offices.

The following information and implementation steps shall be prepared, presented, and executed prior to and during construction to prevent exposure and raise awareness of potential site hazards:

Inform personnel about potentially hazardous sites within the project areas and how to identify hazardous materials sites. Signs of potential contamination within soils could include stained soils, discolored or oily water, previously unknown underground storage tanks, etc. Work should be stopped if any of these signs are identified within the project area, and APM HAZ-1 should be implemented before work shall resume.

**APM HAZ-3: Accidental Release Prevention Plan**

To minimize the potential for an accidental release of bentonite drilling fluid caused by a fracture in the rock underlying the water body (an event known as a "frac-out"), an Accidental Release Prevention Plan will be prepared. Measures in this plan would include the following:

- Visual inspection of the bore path at all times during drilling operations
- Personnel stationed upstream and downstream of the bore path to monitor water conditions when water is flowing,
- When boring is necessary adjacent to wetlands and waterways, the bore rigs would be set back 15 ft beyond the top of waterway banks or a minimum of 75 ft from the edge of wetland vegetation,
- Specifications for availability of containment and cleanup equipment in the event of a frac-out
- Designation of responsibilities, communication protocols, and reporting procedures in the event of a frac-out

**APM HYDRO-1: Prepare and Implement a Stormwater Pollution Prevention Plan (SWPPP)**

The applicant will prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to prevent construction-related erosion, sediment runoff, and discharge of other pollutants into adjacent waterways and onto neighboring properties. Because project activities would result in ground disturbance of more than one (1) acre, the applicant will obtain coverage under the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-DWQ (and as amended by 2010-0014-DWQ and 2012-006-DWQ). To obtain coverage under the permit, the applicant will develop and submit permit registration documents—including a Notice of Intent, SWPPP, risk assessment, site map, construction drawings, certification by a Legally Responsible Person, contractor contact information, and annual fee—to the State of California's Storm Water Multiple Application and Report Tracking System (SMARTS) database and obtain a Waste Discharger Identification (WDID) number prior to initiating construction activities.

The SWPPP shall outline implementation of best management practices (BMPs) for each activity that has the potential to impact neighboring properties or degrade surrounding water quality through erosion, sediment runoff, dewatering, and discharge of other pollutants. BMPs to be part of the project-specific SWPPP may include but are not limited to the following control measures.

- Implementing temporary erosion control measures (such as silt fences, staked straw bales and wattles, silt and sediment basins and traps, check dams, geofabric, sandbag dikes, grass buffer strips, high-infiltration substrates, grassy swales, and temporary revegetation or other ground cover) to control erosion from disturbed areas.
- Protecting drainage facilities in downstream offsite areas from sediment using BMPs acceptable to Modoc, Lassen, and Sierra counties and the Lahontan and Central Valley Regional Water Quality Control Boards.
- Protecting the quality of surface water from non-stormwater discharges such as equipment leaks, hazardous materials spills, and discharge of groundwater from dewatering operations.
- Restoring disturbed areas, after project construction is completed, unless otherwise requested by the landowner in agricultural land use areas.

Requirements of the SWPPP shall be coordinated with the requirements of any Section 401 Water Quality Certification issued for the project under the Clean Water Act and/or Streambed Alteration Agreement issued under Fish and Game Code Section 1602, as applicable.

**APM REC-1: Coordination with BLM**

The Applicant will coordinate closely with the BLM Northern California District Office to communicate potential disruptions of trail access during project construction activities, including Shaffer Mountain Trail near Litchfield (Post Mile 77.3), Belfast Petroglyphs OHV Trail near Litchfield (Post Mile 93.4), Buckhorn Backcountry Byway (Post Mile 115.2), and California Historic Trail (Post Miles 21.9, 29.2, 29.5, 30.2, 31.1, 34, 42.8, 42.9, 43.1, 43.9, 50.6, 72.5, 76.4, 77.6). Signs advising recreational facility users of

construction activities and potential trail closures will be posted at access points to trails identified by BLM. Information on trail closures and any temporary displacement will be made available on the project website. The Applicant will document preconstruction conditions at the trail locations and will repair or replace facilities inadvertently damaged during construction activities.

**APM TCR-1: Consultation**

If necessary, the applicant will assist the California Public Utilities Commission CPUC in Assembly Bill (AB) 52 consultation with Native Americans regarding traditional cultural values that may be associated with archaeological resources. Archaeological or other cultural resources associated with the project may have cultural values ascribed to them by Native Americans. The applicant will assist the CPUC during consultation with Native Americans regarding evaluations of resources with Native American cultural remains.

**APM TCR 2: Prepare Ethnographic Study on TCR**

If necessary, the applicant will retain a professional ethnographic consultant to undertake a detailed recordation of any locations considered important to the tribe. The recordation will commence prior to construction and will include photographic documentation of pre- and post-construction conditions of any identified culturally sensitive location.

The information gathered as a result of field, interview, and research tasks will be compiled into a report that will be transmitted to the Tribe. The Tribe will have the right to submit the report to the California Historical Resources Information System. Detailed recordation of any ethnographic location in this manner will create a photographic and written record of the cultural resource prior to construction of the proposed project, resulting in partial compensation for project impacts.

**APM TRA-1: Traffic Management Plan**

Zayo will obtain any necessary transportation and encroachment permits from Caltrans and the local jurisdictions, as required, and will implement temporary traffic controls as required to prevent congestion or traffic hazards during construction. Construction activities that are in, along, or cross local roadways will follow best management practices (BMPs) and local jurisdictional encroachment permit requirements, such as traffic controls in the form of signs, cones, and flaggers, to minimize impacts on traffic and transportation in the project area. When working on state highways, Zayo will follow traffic control guidelines outlined in the California Manual on Uniform Traffic Control Devices.

**APM UTL-1: Utility Company Coordination**

The applicant shall notify all utility companies with utilities located within or crossing the project right-of-way to locate and mark existing underground utilities along the entire length of the project at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party

utilities and underground excavations is less than 5 feet, the applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.

**APM UTL-2: Recycling of Construction Materials**

During construction activities, the contractor shall use recycling centers for materials that can be recycled, rather than hauling all materials to landfills. Materials that could be recycled may include plastics, paper, cans, and bottles. At each construction site, a designated container or vessel shall be set up at the beginning of construction activities with appropriate signage indicating where construction workers should place recyclable materials.

**APM FIRE-1: Construction Fire Prevention Plan**

A project-specific Construction Fire Prevention Plan for construction of the project shall be submitted for review to the California Public Utilities Commission (CPUC) and state and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall also include federal, state, or local agencies with jurisdiction over areas where the project is located. The final Plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The Plan shall be fully implemented throughout the construction period and include the following at a minimum:

- The purpose and applicability of the Plan
- Responsibilities and duties
- Preparedness training and drills
- Procedures for fire reporting, response, and prevention that include:
    - Identification of daily site-specific risk conditions
    - The tools and equipment needed on vehicles and to be on hand at sites
    - Reiteration of fire prevention and safety considerations during tailboard meetings
    - Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity
    - Coordination procedures with federal and local fire officials
    - Crew training, including fire safety practices and restrictions
    - Method(s) for verifying that all Plan protocols and requirements are being followed

A project Fire Marshal or similarly qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the Plan.

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# 4.0 DESCRIPTION OF ALTERNATIVES

## 4.1 ALTERNATIVES CONSIDERED

The primary purpose of an alternatives analysis is to provide decision-makers and the public with a reasonable number of feasible project alternatives that could attain project objectives while avoiding or reducing any of the project's significant adverse environmental effects.

To avoid and minimize all environmental impacts, the running line and associated ancillary equipment have been located within or immediately adjacent to an existing transportation corridor (i.e., right-of-way) and thereby minimizing impacts to undisturbed sensitive environmental resources. In addition, selection of ILAs, staging areas, and material storage yards prioritized locations within the existing roadway right-of-way or on previously disturbed parcels.

The exact placement of the running line within the existing transportation corridor has changed over several years of agency coordination and in response to environmental surveys that were conducted in 2019 and 2020. As a result, the current, "best fit" version of running line has been designed to maximize avoidance of sensitive environmental resources, particularly cultural and biological resources, while still remaining feasible to build. In instances where the running line would potentially intersect with a sensitive resource, the applicant had several design options (e.g., to reroute to the other side of the right-of-way; choose an alternative construction method, such as boring underneath the resource; or place the running line in a less sensitive area closer to the edge of pavement).

About 42.6 miles of the proposed alignment are on federal lands (40.75 miles of BLM lands, 23.09 miles of Bureau of Indian Affairs or tribal trust lands, 1.76 miles of USFWS lands, and 0.09 miles of Modoc National Forest lands); 5.4 miles are on California State lands (including 2.7 miles of CDFW lands, 2.7 miles of State Lands Commission holdings, and 0.01 miles of other state lands); and the remaining 145.7 miles pass through private or local municipal landholdings. Therefore, a number of federal, state, and tribal entities were consulted during the pre-filing phase to discuss the proposed alignment, as further described in Section 2.0, Introduction. As a result of this multi-agency coordination, the applicant has considered a range of variations that avoid potential environmental conflicts, and the current, "best-fit" running line is the least impactful running line option.

## 4.2 NO PROJECT ALTERNATIVE

Under the No Project Alternative, the fiber optic line would not be granted authorization by CPUC to provide broadband capacity to rural communities. The project would not provide connectivity between the network hub in Prineville and the communities of Bend and La Pine in Oregon; Alturas, Lakeview, and Susanville in California; and the greater Reno/Sparks metropolitan area in Nevada. These communities would not experience improved reliability of current telecom services.

## 4.3 REJECTED ALTERNATIVES

In designing the "best fit" running line, the applicant considered the screening criteria listed below. Proposed alignments that did not meet the screening criteria were rejected.

The following criteria were used to screen potential alternatives:

- Does the alternative meet the project objectives to:
  - improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada
  - make affordable broadband internet services available to currently underserved communities in these areas.
- Is the alternative mostly within the existing roadway right-of-way?
- Would the alternative reduce or avoid potential impacts to environmental resources?

The exact placement of the running line within the existing transportation corridor has changed over several years of agency coordination and in response to environmental surveys that were conducted in 2019 and 2020. As such, the applicant rejected or dismissed design alternatives that would conflict with any of the above screening criteria and rerouted the alignment, chose an alternative construction method, or potentially placed the running line in a less sensitive area closer to the edge of pavement. Accordingly, there are no alternative alignments that can meet the project objectives and reduce potentially significant impacts.

# 5.0 ENVIRONMENTAL ANALYSIS

## 5.1 AESTHETICS

This section describes existing conditions and potential impacts on aesthetic resources as a result of construction and operation of the project. The analysis in Section 5.1.5, Draft Environmental Measures, concludes that with the implementation of APMs, impacts on aesthetic resources would be less than significant. The project's potential effects on aesthetic resources were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines.

### 5.1.1 Environmental Setting

#### 5.1.1.1 Landscape Setting

The project would install 193.9 miles of fiber-optic cable underground in California across the eastern portions of Modoc, Lassen, and Sierra Counties. The proposed alignment would mostly be within the existing Caltrans right-of-way of US 395, a major north-south highway that traverses northeastern California and ultimately connects to Oregon and Nevada. The running line generally follows US 395 but also county roads between the communities of Standish and Buntingville in Lassen County, California, where it follows Standish Buntingville Road (Lassen County Road A3) for 7.35 miles and Cummings Road for 1.15 miles before returning to the right-of-way parallel to US 395.

In this part of California, US 395 extends along the Modoc Plateau, a high, flat terrain that is bordered by the eastern slopes of the Cascade and Sierra Nevada Mountain Ranges and the western edge of the Great Basin (USFS 2006). The Modoc Plateau is characterized by arid basins and uplands, forested mountain ranges, alkaline lakes, and streams. These landscape features are visible from the highway throughout much of the project area. The separation of the project area into discrete landscape units is therefore not necessary. Specific landscape features include the forested mountain ranges of the Modoc and Plumas National Forests, Goose Lake, Honey Lake Basin, and the eastern Sierra Valley. Vegetation in the project area is typical of the high-desert landscape and mostly consists of sagebrush steppe, grasslands, and juniper woodlands. Elevations within the project area generally range from 4,000 to 6,000 feet above mean sea level.

The area immediately surrounding US 395 is sparsely populated and contains agricultural lands and open space. There are also existing aboveground transmission and distribution lines that parallel either side of the highway. Development appears sparse throughout most of the project, outside of the comparatively concentrated communities along US 395, including the City of Alturas in Modoc County and the unincorporated communities of Standish and Buntingville in Lassen County. Figure 3-1 shows the location of the proposed alignment and provides the context of the regional and local landscapes.

### 5.1.1.2 Scenic Resources

The visual resources in the area primarily consist of varying natural landscape features. While not officially designated as a state scenic highway by Caltrans, US 395 provides intermittent views of these features and is identified as a local scenic roadway by Modoc, Lassen, and Sierra Counties. The highway also provides locations to view these features at both designated scenic vista points, such as the one overlooking Goose Lake, and informal overlooks (e.g., pull-outs along US 395). Figures 5.1-1 to 5.1-4 provide representative photographs of the various landscape features and scenic resources that are seen from along US 395.

**Figure 5.1-1: View from Northbound US 395 in Central Lassen County**

**Figure 5.1-2: View from Northbound US 395 in Northern Lassen County**

**Figure 5.1-3: View from Northbound US 395 in Southeast Lassen County toward Honey Lake**

**Figure 5.1-4: View from Southbound US 395 in Central Modoc County Near the Modoc National Wildlife Refuge**

### 5.1.1.3 Viewers and Viewer Sensitivity

Accepted visual assessment methods, including those adopted by the U.S. Department of Transportation, Federal Highway Administration (FHWA), establish sensitivity levels as a measure of public concern for changes to scenic quality. Viewer sensitivity, one of the criteria for evaluating visual impact significance, can be divided into high, moderate, and low categories. Factors considered in assigning a sensitivity level include viewer activity, view duration, viewing distance, adjacent land use, and special management or planning designation. Research suggests that certain activities tend to heighten viewer awareness of visual and scenic resources, while others tend to be distracting (FHWA 2015). Because most of the project would be underground, no formal viewshed analysis was completed for this project. Aboveground structures, where present, would generally be aligned with US 395. Three ILAs are currently planned to occupy properties in Herlong (0.78 acre), Spanish Springs (0.12 acre), and Alturas (0.25 acre), California. Each ILA would consist of a prefabricated concrete or steel regeneration hut erected on a concrete pad with a surrounding perimeter fence around the hut. The regeneration hut structure would be setback from the fence line, would be approximately 420 square feet (0.01 acre) and would be approximately 11 feet in height. In addition, proposed line markers would be about 4 feet tall (refer to Figures 5.1-5 and 5.1-6 to see the typical appearance of these structures). Therefore, the project's area of potential visibility, or its viewshed, is considered to be the US 395 corridor. No mapping of the potential viewshed is warranted.

Viewer groups in the project area include highway travelers and residential neighbors. Highway travelers, the largest viewer group, include people traveling on US 395 and county roadways, including Standish Buntingville Road (Lassen County Road A3) and Cummings Road. Highway travelers have views from

the highway and include both local and regional travelers. Local travelers are familiar with the visual setting, whereas regional travelers are less familiar as they do not use the roadway on a regular basis. Views from US 395 consist of the varied landscape features that characterize this region, such as the arid basins and uplands, forested mountain ranges, alkaline lakes, and streams. Views of these landscape features are brief, as drivers are travelling at high speeds. Drivers are also generally more focused on the road compared to passengers, who are more likely to view the surrounding landscape. Therefore, their sensitivity to visual change is considered low to moderate.

There are several residences located along US 395 and several established communities, including the City of Alturas in Modoc County and the unincorporated communities of Standish and Buntingville in Lassen County. Views of US 395 from residential areas vary throughout the project area. In more rural areas, views consist of the agricultural lands and open space areas that are adjacent to US 395. In more developed areas, US 395 passes through commercial, residential, and industrial areas. Views of US 395 from residential areas may be of long duration. Therefore, their sensitivity to visual change is considered moderate to high.

## 5.1.2 Regulatory Setting

### 5.1.2.1 Federal

There are no applicable federal regulations or policies related to aesthetics.

### 5.1.2.2 State

#### California Scenic Highway Program

California's Scenic Highway Program, a provision of the Streets and Highways Code, was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway Program includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives the designation from Caltrans. A city or county may propose to add routes with outstanding scenic elements to the list of eligible highways; however, state legislation is required for a highway to be officially designated.

According to the Caltrans list of eligible and officially designated state scenic highways, US 395 is not designated a state scenic highway or an eligible state scenic highway in Modoc, Lassen, or Sierra Counties (Caltrans 2020).

### 5.1.2.3 Local

CPUC has exclusive discretionary authority over this project's siting, design, and construction. However, a summary of local standards or ordinances that describe the visual character of the project area is provided for informational purposes and to assist with the CEQA review process.

## Modoc County General Plan

The Modoc County 1988 General Plan does not contain any goals or policies related to aesthetics and scenic resources. There are no officially designated state scenic highways in Modoc County (Caltrans 2020). However, the Modoc County General Plan recognizes that every highway in the county, including US 395, is a scenic highway as they are located in highly scenic areas (Modoc County 1988, as amended). Additionally, Highway 139, about 18 miles west of the project, is an eligible state scenic highway (Caltrans 2020).

## Lassen County General Plan

There are no officially designated or eligible State scenic highways in Lassen County (Caltrans 2020, Lassen County 2000). However, the Lassen County 2000 General Plan recognizes all state highways, including US 395, as scenic corridors. The Lassen County General Plan defines scenic corridors as areas bordering major highways which have significant or sensitive scenic values due to the existence of significant scenic features and the level of public exposure to those areas (Lassen County 2000).

The Natural Resources Element of the 2000 Lassen County General Plan includes the following goals and policies related to scenic resources:

**Goal N-23:** Scenic resources of high quality which will continue to be enjoyed by residents and visitors and which will continue to be an asset to the reputation and economic resources of Lassen County.

> **NR78 Policy:** The County has identified areas of scenic importance and sensitivity along state highways and major County roads and has designated those areas as "Scenic Corridors". (Refer to the General Plan land use map and related designations in various area plans, which may also be regarded as "scenic highway corridors".) The County will develop and enforce policies and regulations to protect areas designated as scenic corridors from unjustified levels of visual deterioration.
>
> **NR79 Policy:** The County shall continue to use "Design Review Combining Districts" to review the visual impacts of development in designated areas to minimize significant adverse impacts.
>
> **NR80 Policy:** In the course of adopting policies pertaining to scenic resources in other general plan elements and area plans, the County may consider additional and more particular policies and measures to protect scenic resources and prevent or reduce the adverse visual impacts of development in visually sensitive areas.

**Goal N-24:** Protection of the scenic qualities of the county's night sky.

> **NR81 Policy:** The County shall maintain and enforce policies, development standards and mitigation measures to control lighting generated by development and to minimize the unnecessary adverse impacts of such lighting in the vicinity of the development and on the general scenic qualities of the night sky in the area.

> **NR82 Policy:** The County will encourage projects within Lassen County but outside the County's jurisdictional authority to include provisions to minimize the adverse intrusion of lighting on the surrounding area and the night sky in general.

### Sierra County General Plan

The scenic quality of Sierra County is defined by its natural scenery as well as its historic communities (Sierra County 2012). Important scenic features in Sierra County include the Sierra Crest, lakes and reservoirs, Sierra Valley, Sierra Buttes, mountain meadows, rivers and streams, the Lakes Basin area, and historic communities (Sierra County 2012). The Sierra County General Plan also recognizes views from the county's more heavily travelled routes, as well as those that pass through recreational areas or visually unique or highly scenic areas, are of particular importance to protect. A portion of Highway 49 from the Yuba County line to the Yuba Pass Summit about 20 miles west of the project is the only officially designated state scenic highway in Sierra County (Caltrans 2020).

The Visual Resources Element of the Sierra County 2012 General Plan contains the following goals and policies related to visual resources:

**Goal 1:** Protect and preserve important scenic resources in the County.

**Goal 2:** Protect visually sensitive areas by promoting and providing for aesthetic design in new development which reflects the customs and culture of the County.

> **Policy 1:** Protect the visual quality of the County's scenic corridors (local and State).
>
> **Policy 2:** Limit encroachments onto scenic highways to maintain safety and quality of driving and viewing experience through scenic corridors.
>
> **Policy 4:** Seek official State Scenic Highway Status for all State highways and I-80 in the County (except in community areas).
>
> **Policy 5:** Consider scenic values as a component of roadway construction, reconstruction, and maintenance on State and County highways and roads, with or without Scenic designation status.
>
> **Policy 6:** Strive for a built environment that reflects the County's rural and historic qualities.
>
> **Policy 7:** Protect the visual integrity of the County's living historic communities.
>
> **Policy 8:** Protect important scenic resources.

## 5.1.3 Impact Questions

The visual analysis is based on review of technical data, including project maps and drawings, aerial imagery of the project area, and local planning documents. The impact analysis is based, in part, on methods adopted by FHWA's guidance and other accepted visual analysis techniques. In determining the extent and implications of the visual changes that would attend construction and operation of the project, consideration was given to the existing visual quality of the affected environment, specific changes in the

visual character and quality of the affected environment, the extent to which the affected environment contains places or features that provide unique visual experiences or that have been designated in plans and policies for protection or special consideration, and the sensitivity of viewers and their activities and the extent to which these activities are related to the aesthetic qualities affected by the project. The project would mostly be undergrounded within the existing roadway right-of-way and once operational would not be visible to viewers; therefore, visual simulations of the project were not prepared. However, the project would include aboveground structures, such as ILAs and line markers. Representative photographs of these features have been included to support the impact analysis findings. The project's potential effects on aesthetic resources were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are discussed in more detail in Section 5.1.5, Draft Environmental Measures.

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

## 5.1.4 Impact Analysis

### a) Have a substantial adverse effect on a scenic vista?

**Less Than Significant Impact.** There is one officially designated scenic vista point, the Goose Lake scenic vista point, which is a designated pull-off area located within the project area, on the west side of US 395 in Modoc County. From this vista point, views of Goose Lake are oriented to the west and directed away from the project construction activities which would occur within the existing Caltrans right-of-way on the east side of US 395. Therefore, temporary construction activities would not obstruct views of Goose Lake from this designated scenic vista.

Once construction is completed, the project mostly would be underground and would not be visible to highway travelers or from the Goose Lake scenic vista. The project would include certain other above- and belowground equipment, such as the three ILAs, line markers, and vaults (see Figures 5.1-5 and Figure 5.1-6 for examples of these features). As shown on Figure 3-1, the three ILAs are mainly proposed

in developed commercial and residential areas, and not located near the Goose Lake scenic vista. The line markers would be about 4 feet tall, placed mostly within the existing roadway right-of-way on the east side of the highway at roughly 500-foot intervals, and would be visible to highway travelers but for a short duration only. Therefore, the line markers would not obstruct views of Goose Lake or other surrounding landscape features that are visible from US 395. The project would not have a substantial adverse effect on a scenic vista, and impacts would be less than significant.

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

**Less Than Significant Impact.** US 395 is not an officially designated state scenic highway, nor is it an eligible state scenic highway (Caltrans 2020). However, it is considered a local scenic highway by Modoc, Lassen, and Sierra Counties. The proposed running line and aboveground ancillary equipment would mostly be installed within the existing roadway right-of-way of US 395 or immediately adjacent within in developed commercial or residential areas. These areas do not contain scenic resources, such as rock outcroppings or historic buildings. In areas within the right-of-way that contain vegetation that could cause a fire hazard for parked vehicles or equipment, the vegetation may be mown or grubbed prior to conduit installation. No grading, tree removal or trimming, or extensive vegetation removal is anticipated to be required for the project. Once construction of the project is completed, the disturbed areas would be restored to pre-project conditions. As described in Section 5.4. Biological Resources, the applicant would revegetate areas in accordance with the revegetation and restoration plan. Therefore, the project would not substantially damage scenic resources within a state scenic highway, and impacts would be less than significant.

**c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

**Less Than Significant Impact.** During construction, the presence of construction equipment, materials, and vehicles in staging areas and material storage yards would be temporarily visible to highway travelers and residents located along US 395 and in the communities of Standish and Buntingville in Lassen County, and the City of Alturas. Construction activities would occur mostly within the existing roadway right-of-way and are expected to only last for a few days at each location. As required by APM AES-1, the applicant would maintain the project site and staging areas in a clean and orderly state. Additionally, the proposed construction staging areas would be located away from public views where possible. Upon completion of construction, the project site and staging areas would be returned to pre-project conditions. Therefore, temporary construction activities would not substantially degrade the existing visual character or quality of the project area, and impacts would be less than significant.

Once construction is completed, the project would be mostly underground and would not be visible to highway travelers or residents located along the running line. The project would remove some vegetation to reduce fire hazards and prepare for conduit installation. However, no grading, tree removal or trimming, or extensive vegetation removal is anticipated to be required. As described in Section 5.4. Biological

Resources, the applicant would revegetate areas in accordance with the revegetation and restoration plan..

The project would include other above- and belowground equipment, such as three ILAs, vaults, and line markers. As shown in Figure 5.1-5, the ILAs would consist of a prefabricated metal and concrete regeneration "hut" constructed on a concrete pad. Figure 3-1 shows the proposed locations of the individual ILAs in the communities of Herlong, Alturas, and Spanish Springs. The ILAs proposed in Herlong and Alturas would be located in developed commercial and residential areas, and appear similar in size to existing development. The ILA proposed in Spanish Springs would be located in an undeveloped area, but setback about 200 feet from the highway and only visible to vehicles for a short duration while driving along US 395.

**Figure 5.1-5: Example of a Typical Regeneration Hut**

The proposed vaults and line markers would be constructed of fiberglass and placed mostly within the existing Caltrans right-of-way. The vaults would be approximately 36 inches by 48 inches and would not be visible to highway travelers as they would be installed flush to the ground. Figure 5.1-6 provides an example of a typical line marker that would be placed along US 395 as part of the project. The line markers would be about 4 feet tall and would be visible to highway travelers. Views of linear features are not uncommon in this area. The ILAs and line markers would also be finished with earth-toned paints as required by APM AES-2. The use of earth-toned paints, materials, and finishes would reduce visibility of the ILAs and line markers along the highway and reduce visual contrast with the surrounding landscape. Therefore, the project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Impacts would be less than significant.

**Figure 5.1-6: Example of a Typical Line Marker**

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

**Less Than Significant Impact.** During construction, light and glare may be produced from construction vehicles, construction materials, site construction trailers, and other temporary construction elements placed within the existing right-of-way. However, the presence of construction equipment and materials would be temporary as construction activities would move along the highway corridor and would last for a few days at each location. No nighttime construction work would occur. Construction crews would typically work up to 5 days per week from 7:00 AM to 7:00 PM. The overall project construction phase is expected to take approximately 6 months. Once construction of the project is completed, all construction equipment, vehicles, and materials would be removed. Therefore, due to their temporary nature, construction activities would not create substantial light or glare, and impacts would be less than significant.

The project would add exterior security lighting on the three ILA buildings. This lighting would be similar to that of surrounding properties. All lighting would be low wattage, shielded, and directed downward to reduce light spillover onto nearby properties and residential areas. The proposed ILA buildings would be constructed from metal and concrete. The line markers would be made of fiberglass and would stand about 4 feet tall. All aboveground equipment would be painted and finished earth-toned in color as required by APM AES-2 to reduce the potential for glare. Otherwise, the project would be underground and would not be visible to highway travelers or residents located along the running line. As such, the project would not create a new source of substantial light or glare, and impacts would be less than significant.

## 5.1.5 Draft Environmental Measures

### Applicant Proposed Measures

**APM AES-1: Staging Area Maintenance.** All project sites will be maintained in a clean and orderly state. Where commercially feasible and physically possible, construction staging areas will be located away from public view where possible. Upon completion of project construction, project staging and temporary work areas will be returned to pre-project conditions, normal wear and tear accepted.

**APM AES-2: Aboveground Ancillary Equipment.** All aboveground ancillary equipment, including the ILA huts and line markers shall use paints, materials, and finishes that are earth-toned in color.

# 5.2 AGRICULTURE AND FORESTRY RESOURCES

This section describes the environmental and regulatory setting and potential impacts related to agriculture associated with the construction, operation, and maintenance of the project. This section also describes the environmental and regulatory settings. The project would not result in significant impacts to agricultural or forestry resources.

## 5.2.1 Environmental Setting

### 5.2.1.1 Agricultural Resources

The majority of the project would be located along US 395 within the right-of-way managed by Caltrans and would require an encroachment permit from Caltrans. The California segment of the project spans approximately 193.9 miles from the northern edge of Modoc County, through Lassen County, and into the eastern edge of Sierra County. US 395 is the main defining feature along the entire length of the project. An 8-mile segment of the running line would deviate from US 395 and would run along Standish Buntingville Road (Lassen County Road A3) and Cummings Road between the communities of Standish and Buntingville in Lassen County, California. Generally, agriculture within this area of California includes alfalfa hay, cattle, potatoes, and various other types of hay (California Department of Food and Agriculture 2019).

Agriculture resources in each county are discussed below. California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) data was available for both Modoc and Sierra Counties; however, FMMP data is "unmapped" for Lassen County (Per Comms. with Lassen County Planning Department, Land Use Department, and Lassen County Agricultural Commissioner 2020a). Therefore, with the lack of FMMP data for Lassen County, generalized land use designations were used to determine potential conflicts with agricultural land within Lassen County. Additionally, no Williamson Act contract land data was available in any of the counties (Per Comms. Lassen and Modoc County Planning and Land Use Departments 2020b). Figure 5.2-1 shows the agricultural land, as designated by the FMMP. General Plan land use designations for Modoc, Lassen, and Sierra County area shown in Figure 5.11-1 in Section 5.11, Land Use and Planning. Overall, the project would be entirely located within the existing roadway right-of-way, with the exception of several ancillary facilities that are discussed below.

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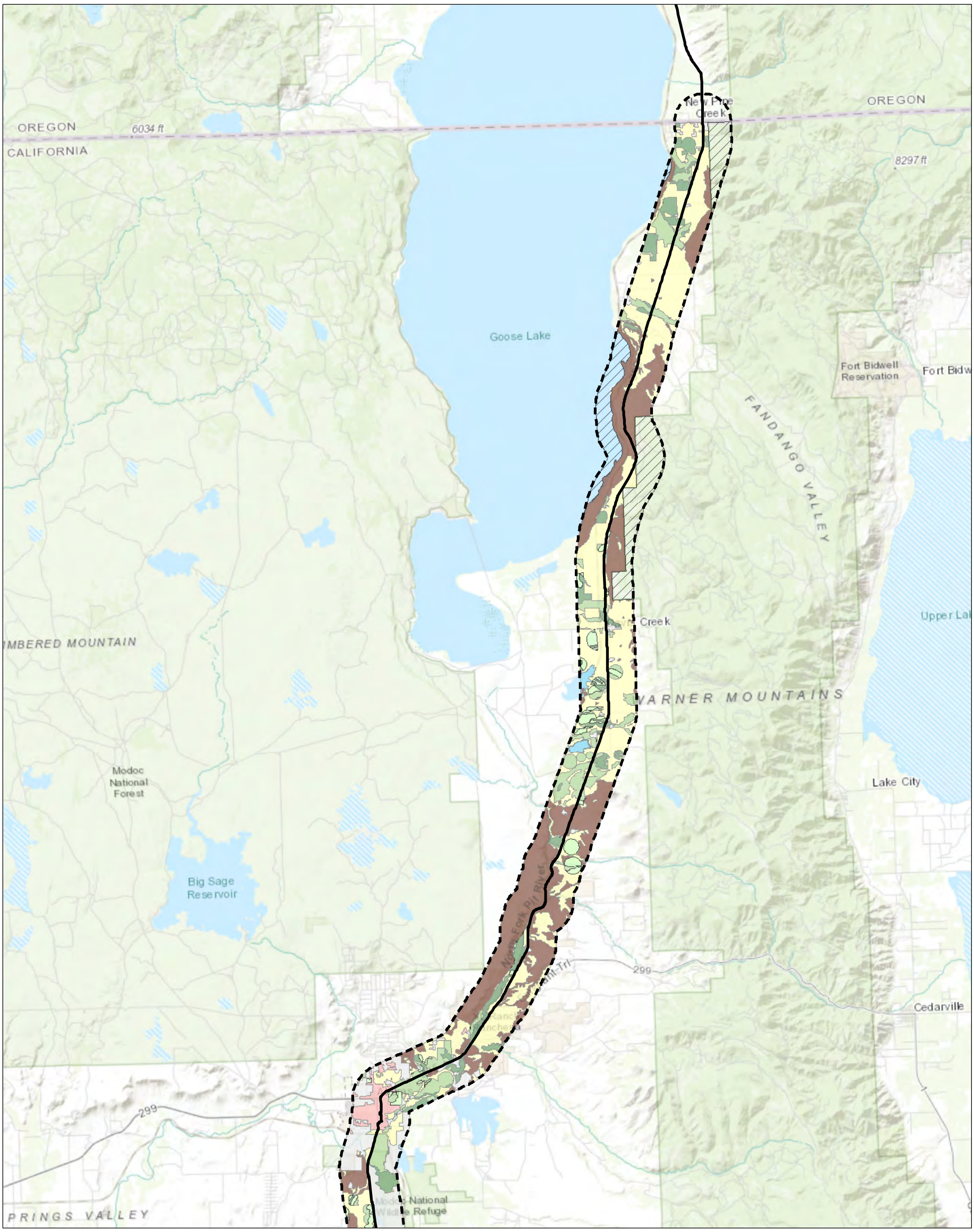


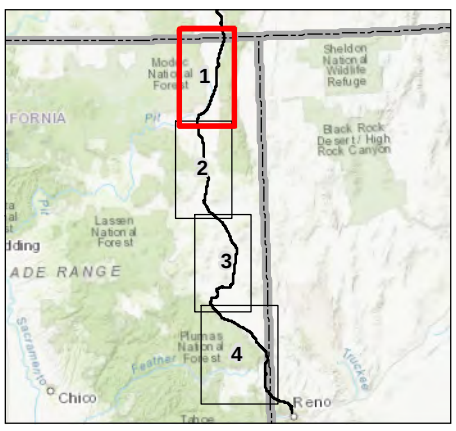


Alignment
1-mile Buffer

**FMMP Designation**

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Grazing Land
- Urban and Built-Up Land
- Other Land
- Water
- Area not mapped*

*FMMP data within portions of Lassen County are not mapped and are shown as "Area not mapped"..

0 2.5 5 Miles

1:230,000 (At Original document size of 11x17)

N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011

Prepared by CP on 2020-06-17
Technical Review by JC on 2020-06-17
Independent Review by CS on 2020-06-17

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.2-1**

Title
Agricultural Resources within One Mile of Proposed Prineville to Reno Fiber Optic Line

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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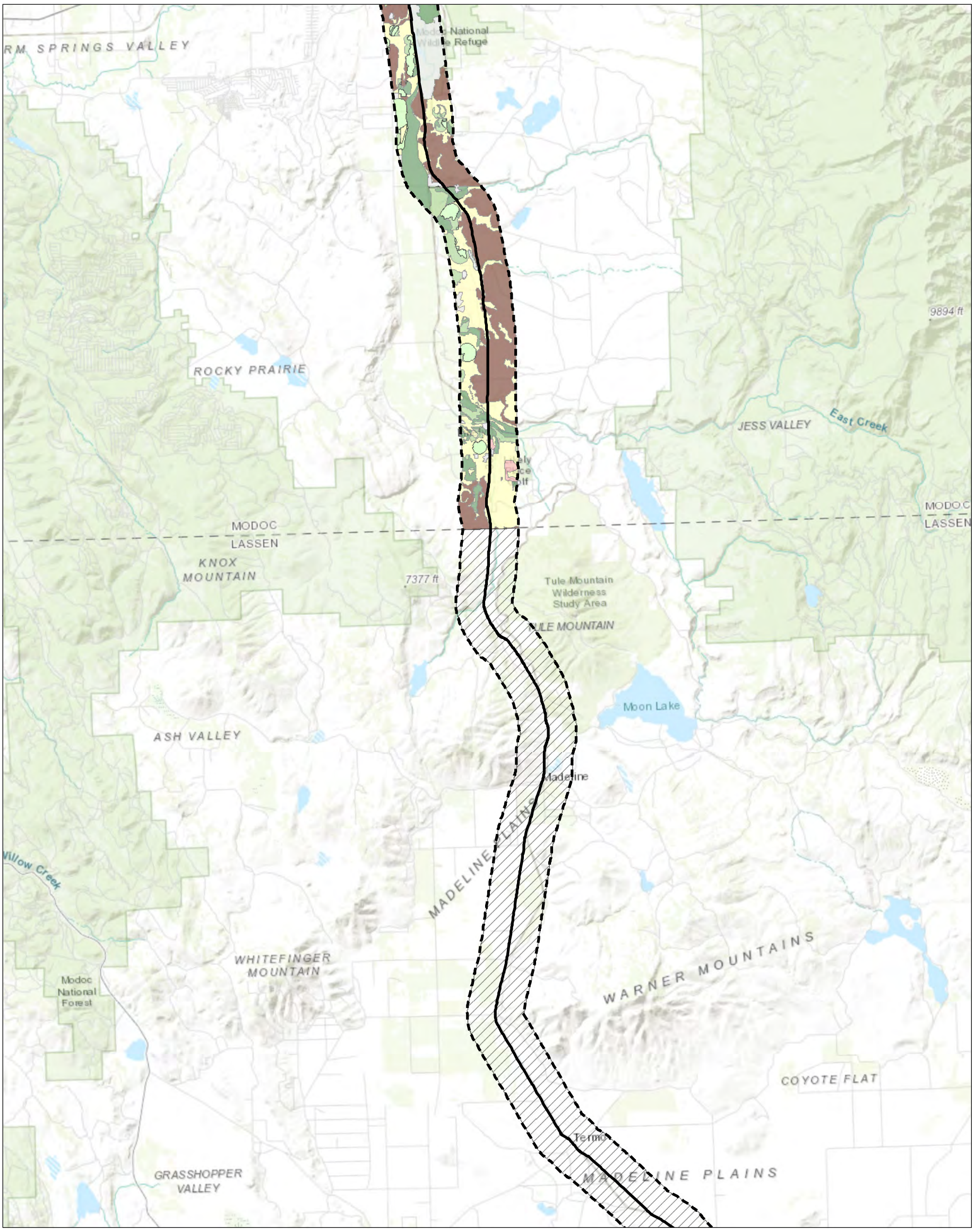


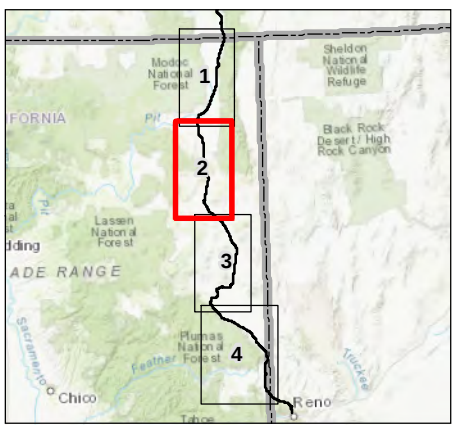


Notes

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

- Alignment
- 1-mile Buffer

**FMMP Designation**

- Prime Farmland
- Farmland of Statewide Importance
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Figure No.
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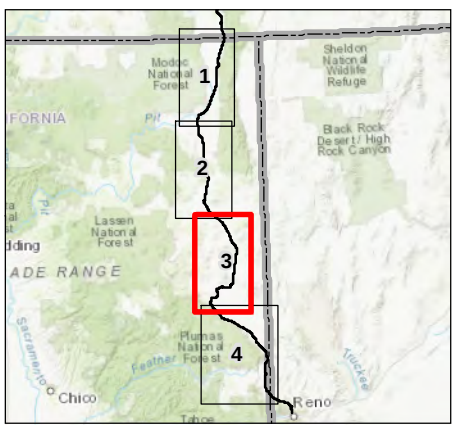
MADELINE PLAINS
Ravendale
OBSERVATION PEAK
7976 ft
SPANISH SPRINGS PEAK
SHINN MOUNTAIN
7934 ft
Snowstorm Creek
Horse Lake
SNOWSTORM MOUNTAIN
RUSH CREEK MOUNTAIN
CHERR MOUNTA
HORSE LAKE MOUNTAIN
Willow Creek
WILLOW CREEK VALLEY
FIVE SPRINGS MOUNTAIN
SECRET VALLEY
Highway 14
Joint-Hig
139
Susanville Indian Rancheria
ANTELOPE MOUNTAIN
SHAFFER MOUNTAIN
Susanville
Litchfield
395
Standish
Lake Leavitt
Wendel
SKEDADDLE MOUNTAINS
AMEDEE MOUNTAINS
A3
Janesville
Honey Lake
HONEY LAKE VALLEY
Sierra Army




Alignment
1-mile Buffer

**FMMP Designation**

Area not mapped*

*FMMP data within portions of Lassen County are not mapped and are shown as "Area not mapped"..

0 2.5 5 Miles

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Stantec

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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.2-1**

Title
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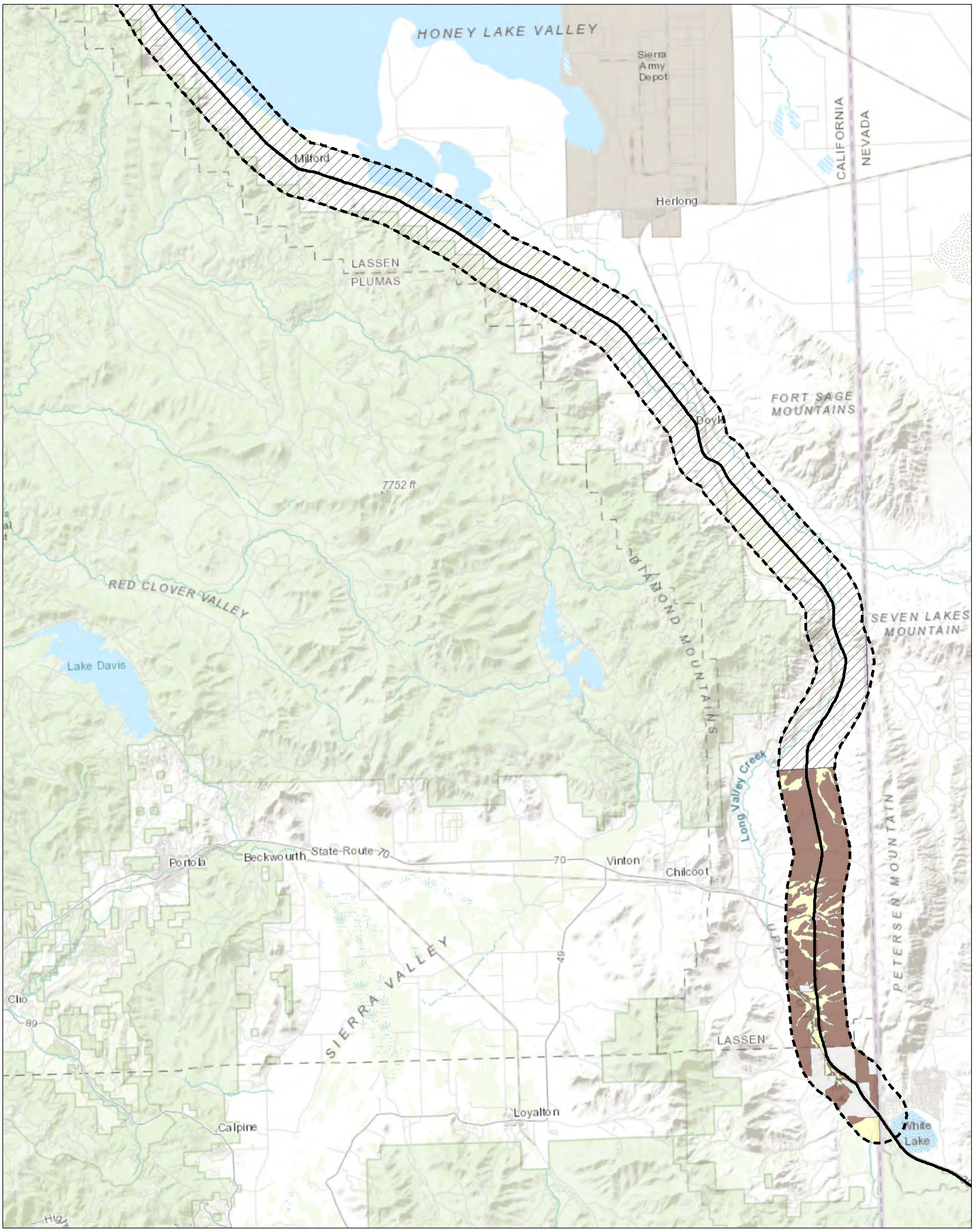


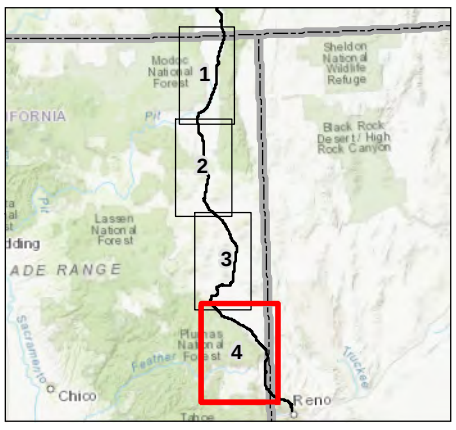


Notes

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Alignment
1-mile Buffer

**FMMP Designation**

- Farmland of Local Importance
- Grazing Land
- Urban and Built-Up Land
- Other Land
- Area not mapped*

*FMMP data within portions of Lassen County are not mapped and are shown as "Area not mapped"..

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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.2-1**

Title
Agricultural Resources within One Mile of Proposed Prineville to Reno Fiber Optic Line

## Modoc County

According to the Modoc County General Plan, agricultural land is the economic base for much of Modoc County (Modoc County 1988, as amended). The Modoc County Department of Agriculture develops an annual crop report of agricultural crop data for the county. According to the 2018 Annual Crop Report, gross agricultural receipts within the county in 2018 totaled $159,836,423, which was an approximate 4 percent increase from the 2017 growing season (Modoc County 2018). However, multiple fires within Modoc County during the fire season destroyed many federal and state grazing allotments (Modoc County 2018).

Within Modoc County, agricultural resources within 1 mile of the project include land designated as Prime Farmland, Farmland of Local Importance, Farmland of Statewide Importance, Unique Farmland, Grazing Land, Urban and Built-up Land, and other land as mapped by the FMMP (California Department of Conservation 2016a). One proposed staging area (0.23 acre) would be located on land designated as Prime Farmland within Modoc County. One proposed ILA location in the City of Alturas would be within Urban and Built-up Land. Additionally, there is one proposed material lay down yard in Modoc County that would be located on land designated as Urban and Built-up Land. The majority of agricultural lands are located in the northern portion of Modoc County as shown in Figure 5.2-1.

## Lassen County

Lassen County considers agricultural resources as an important economic resource within the county. According to the 2017 Census of Agriculture for Lassen County, the county's total market value for agricultural products sold was $45,964,000, and the average farm size was 1,256 acres (United States Department of Agriculture 2017).

According to the Department of Conservation and Lassen County Planning Department, Lassen County does not have mapped farmland per the FMMP. Therefore, the FMMP status for land adjacent to the running line is unknown. The Lassen County General Plan land use designation for much of the land adjacent to the project alignment through Lassen County is "agricultural", which includes intensive agriculture, extensive agriculture, general agriculture, and grazing lands.

There is one ILA location within Lassen County that would be approximately 0.12 acre and is zoned as general agriculture. In addition, two proposed staging areas within Lassen County would also be located on land designated as agriculture (California Resources Agency 2008). These locations are all local directly adjacent to US 395. Two material lay down yards are proposed in Lassen County, one in the unincorporated community of Termo and the other in the unincorporated community of Standish. The Termo material lay down lard would be located on land designated as agriculture; the Standish material lay down yard is designated as very low density residential. Both of these material lay down yard locations are less than a half an acre in size and would temporarily house equipment and materials for the project.

### Sierra County

Agriculture resources, such as farming and crop production, are not as prevalent in Sierra County as they are in Modoc County, because of elevation. Sierra County relies more on grazing and livestock production. According to the 2012 Census of Agriculture for Sierra County, the county's total market value for livestock and crop production was $2,003,000, and the average farm size was 815 acres (United States Department of Agriculture 2012).

Within Sierra County, agricultural resources within 1 mile of the project include mostly land designated grazing land, with smaller portions of land designated as farmland of local importance and other land as designated by the FMMP (California Department of Conservation 2016b). As shown on this Figure 5.2-1, Sierra County does not have designated agricultural land adjacent to the running line. Further, there are no ILA locations or staging areas within Sierra County.

#### 5.2.1.2 Forestry Resources

Portions of US 395 pass through lands with forest resources, particularly in Modoc County and the southern edge of Lassen County. The Lassen County Road A3 segment and Cummings Road portions of the running line would not pass through any lands with forest resources. The state definitions for forest land, timberland, and timberland production zones (TPZs) are included under Section 5.2.2, Regulatory Setting. Lands meeting the definition of forestland (i.e., land that can support 10-percent native tree cover), occur within 1 mile of US 395 and include lands within the Modoc National Forest in Modoc and Lassen Counties as well as the edge of Plumas National Forest in Lassen County. The staging areas and ILAs do not occur on or near any lands meeting the definition of forest land.

## 5.2.2 Regulatory Setting

### 5.2.2.1 Federal

#### Farmland Protection Policy Act

The National Agricultural Land Study of 1980-1981 found that millions of acres of farmland were being converted out of agricultural production in the United states each year. The 1981 Congressional report, "Compact Cities: Energy-Saving Strategies for the Eighties" (Compact Cities report), identified the need for Congress to implement programs and policies to protect farmland and to combat urban sprawl and the waste of energy and resources that accompanies sprawling development. The Compact Cities report indicated that much of the sprawl was the result of programs funded by the federal government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994.

### 5.2.2.2 State

#### California Farmland Mapping and Monitoring Program

The FMMP, which monitors the conversion of the state's farmland to and from agricultural use, relies on information from the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soils surveys, NRCS land inventory and monitoring criteria, and land use and water availability. Topography, climate, soil quality, and available irrigation water all factor into the FMMP farmland classifications.

The FMMP was established by the California Department of Conservation, under the Division of Land Resource Protection. Important farmland maps are compiled by the FMMP pursuant to Section 65570 of the California Government Code. Under the FMMP, "Important Farmland Categories" were established based on soil characteristics that have significant agricultural production values. Categories mapped by the FMMP are as follows:

- Prime Farmland. Prime Farmland is land that has been used for irrigated agricultural production and meets the physical and chemical criteria for Prime Farmland as determined by the NRCS. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- Farmland of Statewide Importance. Farmland of Statewide Importance is similar to Prime Farmland but generally includes steeper slopes or less ability to store soil moisture. In order to be classified as Farmland of Statewide Importance, the land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.

- Unique Farmland. Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards. Land must have been cropped at some time during the 4 years prior to the mapping date.

- Farmland of Local Importance. Farmland of Local Importance is land important to the local economy as determined by the County Board of Supervisors and a local advisory committee. This land includes dryland grain producing lands and farmlands that are presently irrigated but do not meet the soil characteristics of Prime Farmland or Farmland of Statewide Importance.

- Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- Urban and Built-up Land. Urban and Built-up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad

and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- Other Land. Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres.
- Water. This category includes perennial water bodies with an extent of at least 40 acres.

## California Public Resources Code

The following PRC sections are set forth in the thresholds of significance for this section and discussed in the impact analysis below.

PRC Section 12220(g): "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

PRC Section 4526: "Timberland" means land, other than land owned by the federal government, that is designated by the board as experimental forest land, which is available for and capable of growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.

PRC Section 54404(g): "Timberland production zone" or "TPZ" means an area that has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone".

PRC Section 21060.1: "Agricultural land" means Prime Farmland, Farmland of Statewide Importance, or Unique Farmland as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California.

PRC Section 51238: The following guidelines for Williamson Act contracted land and allowable uses is included in Section 51238:

> "(a)(1) Notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve."

### 5.2.2.3 Local

Because CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local discretionary regulations (See Section 5.11, Land Use and Planning, for more detail). This section includes a summary of local standards or ordinances related to agricultural and forestry resources for informational purposes and to assist with the CEQA review process.

#### Modoc County General Plan

The Modoc County General Plan was adopted in September 1988 and includes the following policies related to agricultural and forestry resources that are relevant to the project (Modoc County 1988, as amended):

**Goal:** Protect and support the agricultural economy of Modoc County.

> **Policy 1:** Preserve and protect valuable agricultural lands in the county.
>
> **Policy 3:** Support compatible, mixed, or alternative uses of agricultural land, including hunting and fishing clubs, and recreational ranches.
>
> **Policy 12:** Power transmission line corridors should not be located in any productive agricultural area, including exclusive and general agricultural land or near airports.

#### Lassen County General Plan

The Lassen County General Plan was adopted in September of 1999 and includes the following goals related to agriculture and forestry resources that are relevant to the project (Lassen County 1999, as amended):

**Goal A-1:** Conservation of productive agricultural lands and lands having substantial physical potential for productive agricultural use, and the protection of such lands from unwarranted intrusion of incompatible land uses and conservation to uses which may obstruct or contain agricultural use and value.

> **Policy AG-1:** The County recognizes that land having the physical characteristics (e.g., soil) for production of agricultural crops and livestock is a resource of significant value which needs to be protected for its economic value, its contribution to the character of the community, and its environmental and scenic values.
>
> **Policy AG-5:** In order to minimize the disruption and displacement of agricultural operations and lands by non-agricultural development, non-agricultural development in agricultural areas should be directed to: sites where soils do not have significant potential for productive agricultural use; sites least likely to impact productive agricultural uses in the vicinity; sites where, or which ae adjacent to where, similar non-agricultural uses already exist; and sites where adequate community services are or will be available.

**Policy AG-12:** Subject to case-by-case review (including review for compatibility with surrounding agricultural uses), and in compliance with relevant area plan, zoning, permitting and environmental review requirements, the development and operation of the following land uses will typically be deemed to be consistent with the Extensive ad Intensive Agriculture land use designations and will not require zoning to an "Industrial" zoning district, nor will they be interpreted by the County to constitute an "agricultural conversion" pursuant to this General Plan:

a) Processing plants for the production of agricultural products;

b) Processing plants for the production of natural resource products where the location of the resource is fundamental to the location of processing and packaging facilities (e.g., water bottled at the source, etc.);

c) Mines, the extraction of minerals, and the ancillary processing of mineral materials generated on-site, including the production of asphalt, ready-mix concrete and similar products;

d) Sawmills and related timber processing operations;

e) Geothermal and natural gas wells, hydroelectric projects, and ancillary facilities for the production of energy; and

f) Uses of similar character as may be determined by the Board of Supervisors.

**Goal A-4:** Support for the economic viability and continuation of agricultural operations and the protection of agricultural resource lands.

### Sierra County General Plan

The Sierra County General Plan was first adopted in 1996 and includes the following goals and policies related to agriculture and forestry resources that are relevant to the project (Sierra County 1996, as amended):

**Timber Resources Element Goal 1:** It is the goal of the County to support the prudent management of timber and to maintain the timber industry as a valuable part of the County economy.

**Timber Resources Element Policy 7:** Promote compatible secondary timber land uses.

**Agricultural Resources Element Goal 1:** Protect and defend agriculture as a priority land use, one of those which give the County its essential character.

### Alturas General Plan

The City of Alturas General Plan was first adopted in June 1987 (City of Alturas 1987, as amended). There are no agricultural or forestry goals or policies in the Alturas General Plan that are relevant to the project.

## 5.2.3 Impact Questions

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

## 5.2.4 Impact Analysis

**a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural land?**

**Less Than Significant Impact.** As discussed in Section 5.2.1, Environmental Setting, the project adjacently traverses areas designated by the FMMP as Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Unique Farmland, Grazing Land, Urban Built-up Land, and Other Land.

The majority of the project would be constructed and operated within the roadway right-of-way and would not result in any permanent conversion of any FMMP agricultural lands to non-agricultural use. The project may result in temporarily disruptions adjacent to these lands and within adjacent staging areas and material lay down yard locations as construction vehicles and equipment are moved through the project alignment; however, these disruptions would be temporary and would not result in any conversions to farmlands or preclude adjacent agricultural activities. One staging area in Modoc County (0.23 acre) would be located on land mapped by the FMMP as prime farmland. As such APM AG-1 would

be implemented to notify the landowner(s) of construction activities and revegetate any temporarily impacted areas to pre-project conditions after construction activities are complete. No other staging areas would be located on Prime, Unique, or Farmland of Local or Statewide importance. Therefore, construction related impacts from conversion of Prime Farmland, Unique Farmland, or Farmland of Local or Statewide Importance would be less than significant.

Once operational, the fiber optic cable would be largely located underground within the existing right-of-way and would not result in any permanent conversions of farmlands. Aboveground features would include three ILA locations (one in Modoc County and two in Lassen County) that would be located outside of the right-of-way. The ILA location in Modoc County would be located within the City of Alturas in Urban and Built-up Land; therefore, this ILA location would not result in any conversion of agricultural uses. The other two ILA locations are located in Lassen County, which shows FMMP data as unmapped. With the lack of FMMP data unmapped, the generalized land use designations were used for analytical purposes to determine if any possible agricultural lands would be converted as a result of these two ILA locations. One of the ILA locations is located on land designated as Very Low Density Residential and therefore would not result in any conversion of agricultural land. The other ILA location has a zoning designation of general agriculture; however, this ILA is located directly adjacent to US 395 right-of-way on a gravel pull-out and is vacant. The site does not include adequate soil that could sustain agricultural uses or substantial amounts of crops. It is unlikely that this site is currently used or would be used for agricultural uses in the future. Further, under the Lassen County municipal code, utilities are considered an allowable use with a conditional use permit. Therefore, there would be a less than significant impact to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as a result of the project.

**b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**Less Than Significant Impact.** As discussed in Section 5.2.1, Environmental Setting, Williamson Act contract data was not available for public distribution from Modoc, Lassen, or Sierra Counties**.** The majority of the project would be located in the right-of way of US 395 and would not affect any possible Williamson Act contracted lands in the area. However, the ILA locations and staging areas are located directly adjacent to the US 395 right-of-way could have the possibility of being located on Williamson Act contracted lands. All staging areas would be temporary and would not permanently affect any possible Williamson Act contracted lands. As described in impact a), one ILA location is located on land with a zoning designation of general agriculture. However, this location is located directly adjacent to the US 395 right-of-way on a gravel pull-out and is vacant. The site does not include adequate soil that could sustain agricultural uses or substantial amounts of crops. It is unlikely that this site is currently used or would be used for agricultural or Williamson Act uses in the future. In addition, Section 51238 of the PRC (Section 5.2.2, Regulatory Setting) states that the construction and maintenance of gas, electric, water, communication, or agricultural laborer housing facilities would be considered a compatible use with agricultural preserves, including Williamson Act contracted lands. Further, under the Lassen County municipal code, utilities are considered an allowable use with a conditional use permit. Therefore, pursuant to PRC Section 51238 and the Lassen County Municipal Code, there would be no conflicts with

Williamson Act contracts, and the impact that would occur from installation of the project would be less than significant.

**c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

**No Impact.** The project area includes areas that are surrounded by timberlands and forest lands, particularly near Modoc National Forest and Plumas National Forest. Construction activities associated with the project would occur directly adjacent to some of these areas, which could result in a possible temporary disturbance to timberland and TPZs' operations if timber harvesting activities were to occur at the same time as construction of the project. Because construction of the project would occur directly within or adjacent to the existing roadway right-of-way, it is unlikely that construction activities would interfere with any timber harvesting activities. Additionally, because the project is a linear project, construction activities would not occur in one area for an extended period of time with the rate of installation occurring at an approximate rate of 500 feet per day. Therefore, the project would have no impact related to confliction of forest land, timberland, and TPZs during construction.

Once constructed, the project would largely be located underground and within the existing right-of-way, with the exception of several ancillary facilities that would be located adjacent to the existing right-of-way. The running line does not include any forest lands, timberlands, or TPZs. Therefore, there would be no impact related to operational confliction with zoning of forestlands, timberlands, or TPZs.

**d) Result in the loss of forest land or conversion of forest land to non-forest use?**

**No Impact.** Although there is land that meets the definition of forestland (as defined by PRC 12220(g)) within the project area, the project would be constructed and operated within the existing roadway right-of-way, with the exception of several ancillary facilities that would be located adjacent to the existing right-of-way. The project would not result in any loss of forest land or conversion or forestland to non-forest use. The most heavily forested areas within the project area include the areas near Modoc National Forest and Plumas National Forest. The project would not result in any removal of trees in these areas. Therefore, there would be no impact related to loss of forest and or conversion or forestland to non-forest use from implementation of the project.

**e) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?**

**No Impact.** The project, once constructed, would consist of an underground fiber optic line used for broadband internet services. As discussed in the impact analyses above for questions a through d, the construction and operation of this fiber optic line would not result in conversion of agricultural lands or forest lands nor would it preclude adjacent agricultural activities. Therefore, there would be no impact related to conversion of farmland or forest lands to non-agricultural or non-forest use.

## 5.2.5 Draft Environmental Measures

### Applicant Proposed Measures

**APM AG-1**: **Coordination with Agricultural Landowners.** For the staging area located on prime farmland, or any subsequent staging areas identified that would need to be located on prime, unique, or farmland or local or statewide importance, prior to construction, the applicant would provide written notice to the landowner(s) outlining construction activities, preliminary schedule, and estimated timing of restoration efforts. The applicant will coordinate with the landowner(s) to minimize construction-related disruptions to seasonal farming operations. Following construction in the applicable area, the applicant will revegetate temporarily impacted agricultural areas.

# 5.3 AIR QUALITY

This section describes the environmental and regulatory setting and potential air quality impacts related associated with the construction, operation, and maintenance of the project and concludes impacts would be less than significant.

## 5.3.1 Environmental Setting

The project alignment would extend approximately 193.9 miles across portions of Modoc, Lassen, and Sierra Counties and would be located in the Northeast Plateau Air Basin (NPAB) and Mountain Counties Air Basin (MCAB). These counties have a varying landscape with a mixture of vast arid basins and uplands as well as forested mountain ranges interspersed with wetlands. The climate is characterized as dry, cold, and continental.

### 5.3.1.1 Air Quality Plans

As required by the federal Clean Air Act (FCAA), the United States Environmental Protection Agency (EPA) has identified criteria pollutants and established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone ($O_3$), carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), suspended particulate matter (PM), and lead (Pb). Suspended PM has standards for both particulate matter with an aerodynamic diameter of 10 micrometers (0.01 millimeter [mm]) or less (respirable PM, or $PM_{10}$) and particulate matter with an aerodynamic diameter of 2.5 micrometers (0.0025 mm) or less (fine PM, or $PM_{2.5}$). The California Air Resources Board (CARB) has established separate standards for the state (i.e., the California Ambient Air Quality Standards [CAAQS]). CARB has established CAAQS for all the federal pollutants, as well as sulfates, hydrogen sulfide, and visibility-reducing particles.

For some of the pollutants, the identified air quality standards are expressed in more than one averaging time to address the typical exposures found in the environment. For example, CO is expressed as a 1-hour averaging time and an 8-hour averaging time. Regulations have set NAAQS and CAAQS limits in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). Table 5.3-1 provides these standards.

**Table 5.3-1: National and State Ambient Air Quality Standards**

| Pollutant | Averaging Time | California Standards[a] | National Standards[b] | |
|---|---|---|---|---|
| | | | Primary[c] | Secondary[d] |
| **Ozone ($O_3$)** | 1 hour<br>8 hours | 0.09 ppm<br>0.070 ppm | --<br>0.070 ppm | --<br>0.070 ppm |
| **Carbon monoxide (CO)** | 1 hour<br>8 hours | 20 ppm<br>9.0 ppm | 35 ppm<br>9 ppm | --<br>-- |
| **Nitrogen dioxide ($NO_2$)** | 1 hour<br>Annual Arithmetic Mean | 0.18 ppm<br>0.030 ppm | 0.100 ppm [e]<br>0.053 ppm | --<br>0.053 ppm |

| Pollutant | Averaging Time | California Standards[a] | National Standards[b] | |
|---|---|---|---|---|
| | | | Primary[c] | Secondary[d] |
| **Sulfur dioxide ($SO_2$)** | 1 hour | 0.25 ppm | 0.075 ppm [f] | -- |
| | 3 hours | -- | -- | 0.5 ppm |
| | 24 hours | 0.040 ppm | 0.014 ppm | -- |
| | Annual Arithmetic Mean | -- | 0.030 ppm | -- |
| **Particulate matter less than 10 microns ($PM_{10}$)** | 24 hours | 50 µg/m$^3$ | 150 µg/m$^3$ | 150 µg/m$^3$ |
| | Annual Arithmetic Mean | 20 µg/m$^3$ | -- | -- |
| **Particulate matter less than 2.5 microns ($PM_{2.5}$)** | 24 hours | -- | 35 µg/m$^3$ | 35 µg/m$^3$ |
| | Annual Arithmetic Mean | 12 µg/m$^3$ | 12 µg/m$^3$ | 15 µg/m$^3$ |
| **Lead [g]** | 30-day Average | 1.5 µg/m$^3$ | -- | -- |
| | Calendar Quarter | -- | 1.5 µg/m$^3$ | 1.5 µg/m$^3$ |
| | Rolling 3-month Average | -- | 0.15 µg/m$^3$ | 0.15 µg/m$^3$ |
| **Visibility reducing particles (VRP) [g]** | 8 hours | [h] | -- | -- |
| **Sulfates** | 24 hours | 25 µg/m$^3$ | -- | -- |
| **Hydrogen sulfide ($H_2S$)** | 1 hour | 0.03 ppm | -- | -- |
| **Vinyl chloride** | 24 hours | 0.01 ppm | -- | -- |

Notes:
a. California Ambient Air Quality Standards for ozone, CO (except 8-hour Lake Tahoe), sulfur dioxide ($SO_2$; 1- and 24-hour), $NO_2$, and particulate matter ($PM_{10}$, $PM_{2.5}$, and VRP), are values that are not to be exceeded. All others are not to be equaled or exceeded.
b. National Ambient Air Quality Standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year averaged over 3 years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m$^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations averaged over 3 years are equal to or less than the standard.
c. Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
d. Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
e. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 0.100 ppm.
f. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 0.075 ppm.
g. CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
h. Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.
CARB = California Air Resources Board
ppm = parts per million
µg/m$^3$ = micrograms per cubic meter
-- = No standard has been adopted for this averaging time

Source: CARB 2016

## Attainment Status

In California, air quality management responsibilities exist at local, state, and federal levels. In general, air quality management planning programs developed during the past few decades have been in response to requirements established by the FCAA. However, the enactment of the California Clean Air Act (CCAA) and its subsequent revisions has produced changes in the structure and administration of air quality management programs in California. The attainment status of the project area is described below for federal and state criteria pollutants.

The project would span across portions of Modoc and Lassen Counties located in the NPAB, and Sierra County located in the MCAB. Designation criteria specify four categories: nonattainment, nonattainment-transitional, attainment, and unclassified. A nonattainment designation indicates that one or more violations of the state standard have occurred. A nonattainment-transitional designation is a subcategory of nonattainment that indicates improving air quality with only occasional violations or exceedances of the state standard. In contrast, an attainment designation indicates that no violations of the state standard have occurred within the last three years. Finally, an unclassified designation indicates either no air quality data or an incomplete set of air quality data. Table 5.3-2 and Table 5.3-3 show that all criteria pollutants are in attainment for federal and state standards except for Sierra County with a nonattainment designation for $PM_{10}$.

### Table 5.3-2: Federal Designations/Classifications for the Project Area

| Pollutant | Modoc County | Lassen County | Sierra County |
|---|---|---|---|
| | Federal Designation (Classification) | | |
| Ozone – 1 Hour | No Federal Standard | | |
| Ozone – 8 Hour | Unclassified/Attainment | | |
| Inhalable coarse particles ($PM_{10}$) | Unclassified | | |
| Fine particulate matter ($PM_{2.5}$) | Unclassified/Attainment | | |
| Carbon Monoxide (CO) | Unclassified/Attainment | | |
| Nitrogen Dioxide ($NO_2$) | Unclassified/Attainment | | |
| Sulfur Dioxide | Unclassified/Attainment | | |
| Lead | Unclassified/Attainment | | |
| Sulfates | No Federal Standard | | |
| Hydrogen Sulfide | | | |
| Visibility Reducing Particles | | | |

Source: CARB 2019

### Table 5.3-3: State Designations/Classifications for the Project Area

| Pollutant | Modoc County | Lassen County | Sierra County |
|---|---|---|---|
| | State Designation (Classification) | | |
| Ozone – 1 Hour | Attainment | Attainment | Unclassified |
| Ozone – 8 Hour | Attainment | Attainment | Unclassified |
| Inhalable coarse particles ($PM_{10}$) | Unclassified | Unclassified | Nonattainment |
| Fine particulate matter ($PM_{2.5}$) | Attainment | Attainment | Unclassified |
| Carbon Monoxide (CO) | Unclassified | | |
| Nitrogen Dioxide ($NO_2$) | Attainment | | |
| Sulfur Dioxide | Attainment | | |
| Lead | Attainment | | |
| Sulfates | Attainment | | |
| Hydrogen Sulfide | Unclassified | | |
| Visibility Reducing Particles | Unclassified | | |

Source: CARB 2019

### 5.3.1.2 Air Quality

The project area would be located in three rural counties where air quality is considered to be good. The project area is designated nonattainment for only $PM_{10}$ in Sierra County, which is mainly attributable to smoke from wood burning heaters in Sierra County and surrounding areas. Based on CARB data, there are no pollutant monitoring stations in any of the counties where the project would be located. The closest monitoring station is located in the City of Portola in Plumas County and only measures $PM_{2.5}$. The lack of monitoring stations in the project area indicates that there are not significant sources of pollution in these counties, and overall, air quality levels meet ambient air quality standards.

### 5.3.1.3 Sensitive Receptor Locations

The portion of the project that crosses California would extend across portions of Modoc, Lassen, and Sierra Counties. The running line generally follows US 395, but also county roads between the communities of Standish and Buntingville in Lassen County, California, where it follows Standish Buntingville Road (Lassen County Road A3) and Cummings Road before returning to the right-of-way parallel to US 395. The running line and associated ancillary equipment would be placed within existing Caltrans and county-maintained roadway rights-of-way and on immediately adjacent private property. Rural residential homes are scattered along the mainline of the fiber optic installation route. Some of these homes are located within 1,000 feet of where project activities would occur; however, the exposure that sensitive receptors would experience would be temporary and of very limited duration (Table 5.3-4).

**Table 5.3-4: Sensitive Receptors within 1,000 feet**

| Jurisdiction | Distance from Project | | | | | Total |
|---|---|---|---|---|---|---|
| | 1-50 feet | 50-100 feet | 100-250 feet | 250-500 feet | 500-1,000 feet | |
| Modoc County | 17 | 54 | 89 | 132 | 188 | 480 |
| Lassen County | 10 | 48 | 142 | 184 | 263 | 647 |
| Sierra County | 0 | 2 | 0 | 4 | 0 | 6 |
| City of Alturas | 5 | 19 | 20 | 45 | 139 | 228 |

Source: Stantec 2020

## 5.3.2 Regulatory Setting

### 5.3.2.1 Federal

EPA is the federal agency responsible for overseeing state air programs as they relate to the FCAA, approving the state implementation plans (SIPs), establishing NAAQS, and setting emission standards for mobile sources under federal jurisdiction. EPA has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

### 5.3.2.2 State

CARB is the state agency responsible for establishing CAAQS, adopting and enforcing emission standards for various sources, including mobile sources (except where federal law preempts their authority), fuels, consumer products, and toxic air contaminants (TACs). CARB is also responsible for providing technical support to California's 35 local air districts, which are organized at the county or regional level, and oversee local air district compliance with state and federal law, approving local air plans and submitting the SIP to EPA. CARB also regulates mobile emission sources in California, such as construction equipment, trucks, and automobiles.

For the purposes of managing air quality in California, the California Health and Safety Codes gave CARB the responsibility to divide the state into air basins, "based upon similar meteorological and geographic conditions and consideration for political boundary lines whenever practicable." Modoc and Lassen Counties are located in the NPAB and Sierra County is located in the MCAB.

In 2004, CARB initially approved an airborne toxic control measure (ATCM) to implement idling restrictions of diesel-fueled commercial motor vehicles operating in California (13 CCR Section 2485) (CARB 2005). The ATCM applies to diesel-fueled commercial vehicles with a gross vehicle rating greater than 10,000 pounds. The ATCM would limit idling times of these vehicle's primary engine to no more than 5 minutes at any location. This measure would help reduce exposure to diesel particulate matter (DPM) and other diesel exhaust pollutants.

### 5.3.2.3 Local

The project spans across multiple counties and multiple local air quality districts. Modoc County Air Pollution Control District (MCAPCD) has jurisdiction over Modoc County, Lassen County Air Pollution Control District (LCAPCD) has jurisdiction over Lassen County, and the Northern Sierra Air Quality Management District (NSAQMD) has jurisdiction over Sierra County. All three of these air districts are located in rural areas with good air quality and are required by state law to achieve and maintain NAAQS a CAAQS. Currently, these air quality districts have not established emissions thresholds for pollutants generated from construction or operations of development projects. In order to evaluate criteria pollutant impacts, project emissions would be compared to thresholds established by the nearby Placer County Air Pollution Control District (PCAPCD), which provides construction thresholds for reactive organic gases (ROG), nitrogen oxides ($NO_X$), and $PM_{10}$ of 82 pounds per day (PCAPCD 2016).

## 5.3.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☒ | ☐ |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | ☐ | ☐ | ☒ | ☐ |
| c) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |

## 5.3.4 Impact Analysis

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

**Less Than Significant Impact.** Currently, air districts in the project area have not adopted clean air plans. The project area is designated nonattainment for the state health-based air quality standard for $PM_{10}$. The project area is designated as attainment or unclassified for all other federal and state health-based air quality standards. To assess the project's potential to obstruct implementation of an air quality plan, localized criteria pollutant emissions were analyzed as these are the pollutants with established ambient air quality standards. Potential localized impacts would include exceedances of state standards for $PM_{10}$. PM emissions, primarily $PM_{10}$, could result in fugitive dust emissions during construction earth-

disturbing activities. During construction, exhaust and fugitive dust emissions would be generated from equipment delivery, construction personnel commutes, and operation of various types of equipment and vehicles. Additionally, the project would implement APM AIR-1, which would reduce fugitive dust emissions from installation activities and vehicle travel during construction. Additionally, use of diesel-powered equipment would generate emissions of criteria pollutants.

Air quality modeling was performed using project-specific details to determine whether the project would result in criteria air pollutant emissions exceeding applicable thresholds of significance. Table 5.3-5 shows that the project's unmitigated construction-related emissions would exceed the significance threshold for $NO_X$. Exceedance of the $NO_X$ threshold would result in potential significant impacts, and mitigation measures would be required. APM AIR-2 would implement cleaner engines for a majority of the off-road construction fleet. With implementation of APM AIR-2, daily construction-related $NO_X$ emissions would be reduced to levels below significance thresholds. The project would also comply with the ATCM to limit heavy duty diesel motor idling to no more than 5 minutes. Operations of the project would be on an as-needed basis and would have no impact. Overall, the project would not conflict with or obstruct implementation of applicable air quality plans, therefore, impacts would be less than significant with mitigation.

**b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?**

**Less Than Significant Impact.** Construction of the project would result in temporary increases in emissions of criteria pollutants and fugitive dust associated with the use of off-road diesel equipment and vehicle trips. Emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 and CARB's most recent version of its EMission FACtor model, EMFAC2017. The project would result in emissions of criteria pollutants for which the region is in nonattainment. Sierra County fails to meet the CAAQS for $PM_{10}$ and is therefore considered a state nonattainment area for this pollutant.

Table 5.3-5 shows the unmitigated daily construction emissions. The maximum daily construction emissions were estimated for the project, which includes construction activities located at different areas along the installation route but that could potentially occur simultaneously. The maximum daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day of construction.

### Table 5.3-5: Unmitigated Daily Construction Emissions

| Source | Daily Emissions (lbs/day) | | |
|---|---|---|---|
| | ROG | $NO_X$ | $PM_{10}$ |
| Off-road Equipment | 12.44 | 131.37 | 7.85 |
| Mobile Sources | 1.04 | 23.40 | 2.59 |
| Fugitive Dust | 0.00 | 0.00 | 0.78 |

| Source | Daily Emissions (lbs/day) | | |
|---|---|---|---|
| | **ROG** | **$NO_X$** | **$PM_{10}$** |
| **Project Total** | **13.49** | **154.77** | **11.22** |
| PCAPCD Threshold | 82 | 82 | 82 |
| **Exceeds Threshold?** | **No** | **Yes** | **No** |

Notes:
lbs/day = pounds per day
$NO_X$ = nitrogen oxide
PCAPCD = Placer County Air Pollution Control District
$PM_{10}$ = particulate matter with an aerodynamic diameter of 10 micrometers or less
ROG = reactive organic gas

As shown in Table 5.3-4, the project would exceed the threshold for $NO_X$, impacts would be potentially significant without implementation of APM AIR-2 which would require the use of EPA Tier 4 off-road equipment during construction. Details of the criteria pollutant emissions modeling are provided in Appendix B.

APM-AIR-2 would require all offroad equipment except air compressors to meet USEPA Tier 4 Final emission standards. Tier 4 Final emission standards are the most stringent emissions standards available which reduce NOx and $PM_{10}$ emissions substantially. Table 5.3-6 shows that with implementation of APM AIR-2, the project's construction emissions would be reduced below PCAPCD's significance threshold for $NO_X$, therefore construction impacts would be considered less than significant.

### Table 5.3-6: Mitigated Daily Construction Emissions

| Source | Daily Emissions (lbs/day) | | |
|---|---|---|---|
| | **ROG** | **$NO_X$** | **$PM_{10}$** |
| Off-road Equipment | 4.86 | 27.42 | 3.42 |
| Mobile Sources | 1.04 | 23.40 | 2.59 |
| Fugitive Dust | 0.00 | 0.00 | 0.78 |
| **Project Total** | **5.91** | **50.82** | **6.79** |
| PCAPCD Threshold | 82 | 82 | 82 |
| **Exceeds Threshold?** | **No** | **No** | **No** |

Notes:
lbs/day = pounds per day
$NO_X$ = nitrogen oxide
PCAPCD = Placer County Air Pollution Control District
$PM_{10}$ = particulate matter with an aerodynamic diameter of 10 micrometers or less
ROG = reactive organic gas

Operations of the project would be on an as-needed basis and would have no impact.

**c) Expose sensitive receptors to substantial pollutant concentrations?**

**Less Than Significant Impact.** Construction of the project may result in temporary increases in emissions of DPM from off-road diesel equipment and vehicle trips. Health-related risks associated with DPM emissions are primarily associated with long-term exposure and the associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure to TACs are typically calculated based on a long-term period of exposure. Based on updated guidelines from the Office of Environmental Health Hazard Assessment, cancer risks are based on constant daily exposure for 30 years and 25 years for offsite residential and worker receptors, respectively. Construction activities would occur over an approximately 6-month construction period, which would constitute approximately 1.7 percent and 2 percent of the residential and worker exposure durations, respectively. Furthermore, the use of diesel-powered construction equipment would be temporary and episodic, lasting only a few hours at any given location, and would span approximately 193.9 linear miles across three counties. Given this, offsite residential and worker receptors would not be constantly exposed to DPM emissions. Furthermore, with implementation of APM AIR-1, DPM emissions would be significantly reduced. For these reasons, and given the relatively high dispersive properties of DPM, exposure to construction-generated DPM would not be anticipated to exceed applicable health risk thresholds (i.e., incremental increase in cancer risk of 10 in one million).

Fugitive dust emissions would be generated from vehicle travel and soil disturbance during fiber-optic cable installation. Installation of the fiber-optic cable would be conducted using three types of installation methods: plowing, trenching, and directional boring. A majority of the cable would be installed using the plowing method, which results in the least amount of soil disturbed among the three methods. For areas where plowing is not an option (e.g., bodies of water or rocky soils), trenching and directional boring would be utilized. To minimize fugitive dust emissions during construction activities, the project would implement dust control measures as shown in APM AIR-1.

With implementation of APM AIR-1 and APM AIR-2, construction emissions are not expected to have impacts on sensitive receptors. Operation of the project would have no impact. The project would not expose sensitive receptors to substantial pollutant concentrations; therefore, impacts would be less than significant.

**d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

**Less Than Significant Impact.** During construction, use of diesel-powered vehicles and equipment would create temporary, localized odors. Construction activities near sensitive receptors would be temporary, lasting only a few hours. Based on this, project construction would not result in emissions or odors that would adversely affect a substantial number of people; therefore, impacts would be less than significant.

### 5.3.5 Draft Environmental Measures

**APM AIR-1: Fugitive Dust Control**

The Applicant shall implement measures to control fugitive dust in compliance with all local air district(s) standards. Dust control measures shall include the following at a minimum:

- All exposed surfaces with the potential of dust-generating shall be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site.
- The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- Cover all haul trucks entering/leaving the site and trim their loads as necessary.
- Use wet power vacuum street sweepers to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. The use of dry power sweeping is prohibited.
- All trucks and equipment, including their tires, shall be washed off prior to leaving project sites.
- Apply gravel or non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at project sites.
- Water and/or cover soil stockpiles daily.
- Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- All vehicle speeds shall be limited to fifteen (15) miles per hour or less on unpaved areas.
- Implement dust monitoring in compliance with the standards of the local air district.
- Halt construction during any periods when wind speeds are in excess of 50 mph.

**APM AIR-2: Low-emission Vehicles**

All off-road construction equipment, except for air compressors, shall meet EPA Tier 4 Final off-road emissions standards (or equivalent) to reduce $NO_X$ emissions during construction activities.

# 5.4 BIOLOGICAL RESOURCES

## 5.4.1 Environmental Setting

### 5.4.1.1 Biological Resources Technical Report

The *Biological Resources Technical Report* (BRTR) is Appendix C to this document and details the desktop and field analyses conducted to identify vegetation communities, aquatic features, and special status species occurring within and potentially affected by the project segment in California. The following discussion of the environmental setting is largely a summarization of the BRTR and references specific sections or appendices of the BRTR for full details.

### 5.4.1.2 Survey Area (Local Setting)

The Biological Resources Survey Area (BRSA) includes the entire Caltrans right-of-way along US 395 and the Lassen County rights-of-way along County Route A3 and Cummings Road, plus ancillary facilities, staging areas, and materials storage yards outside these rights-of-way (Appendix C, Figure A-2). The project segment requires a relatively narrow construction, but the full width of the Caltrans and Lassen County transportation rights-of-way would allow the project segment to shift if necessary to avoid sensitive resources or due to engineering constraints. Thus, the BRSA contains all areas that could be directly impacted, temporarily or permanently, by the project segment and can accommodate any changes to project limits or design that may occur during project development. The BRSA consists of both private and public lands, including Bureau of Land Management (BLM), USFWS, and CDFW land ownerships.

The BRSA overlaps three ecoregions of California: Eastern Cascade Slopes and Foothills, Northern Basin and Range, and Central Basin and Range (Griffith et al. 2016). Elevation within the BRSA ranges from approximately 4,006 ft to 5,570 ft. The topography of the BRSA varies from level to moderately sloped foothills and high mountain passes. The surrounding landscape has similar topography as well as some high mountain peaks, with Eagle Peak being the highest mountain near the BRSA, approximately 15 miles east of Modoc County MP 6.8, at a height of 9,892 ft. Refer to Section 1.2.2 of the BRTR (Appendix C) for a detailed description of the physical conditions of the BRSA.

### 5.4.1.3 Vegetation Communities and Land Cover

Stantec mapped natural vegetation communities in the BRSA to the alliance level as described in *A Manual of California Vegetation, Second Edition* (MCV) (Sawyer et al. 2009) and updated in the current online edition (CNPS 2019). Stantec then used *A Guide to Wildlife Habitats of California* (CWHR) (Mayer and Laudenslayer 1988) to convert the mapped MCV natural vegetation communities and field-delineated waters of the U.S. and state in the BRSA to wildlife habitat communities. MCV is ideal for determining natural vegetation communities and identifying sensitive natural communities; however, CWHR methods are more appropriate for identifying and describing habitat communities as they pertain to wildlife use. Hereafter, "natural vegetation communities" refers to MCV methods, and "habitat communities" refers to CWHR methods, which are used exclusively in discussions of wildlife use. Stantec biologists also

reviewed each field-mapped natural vegetation community against the *California Natural Community List* to identify sensitive natural communities within the BRSA (CDFW 2019a).

## Natural Vegetation Communities (MCV)

Stantec mapped 61 natural vegetation communities in the BRSA to the alliance or association level (Figure 3 in BRTR Appendix D). Western juniper (*Juniperus occidentalis*) woodland alliance occurs throughout the BRSA and was the most common type of tree-dominated vegetation community observed (431.1 acres [ac]). For shrubland vegetation communities, big sagebrush (*Artemisia tridentate*) alliance was the most common throughout the BRSA (2,025.8 ac). Cheatgrass grassland (*Bromus tectorum*) alliance occurs throughout the BRSA, especially in disturbed roadside areas, and was the most common herbaceous community observed (395.9 ac). The most common other alliance observed in the BRSA was areas of little or no vegetation (1,275.5 ac), including roads, road shoulders, structures, and parking areas. Refer to the *Botanical Resources Report* (Section 4.1 in BRTR Appendix D) for detailed descriptions of natural vegetation communities in the BRSA and figures depicting their locations.

## Sensitive Natural Communities

CDFW considers 22 of the 61 mapped natural vegetation communities in the BRSA to be sensitive natural communities (Table 5.4-1). Refer to the *Botanical Resources Report* (Appendix C: Appendix D, Section 4.1) for detailed descriptions of sensitive natural communities in the BRSA and figures depicting their locations.

**Table 5.4-1: Sensitive Natural Vegetation Communities in the Biological Resources Survey Area**

| Alliance | Association | Area (Acres) |
|---|---|---|
| **Forests and Woodlands** | | |
| Jeffrey pine forest | *Pinus jeffreyi / Purshia tridentate* | 6.46 |
| Aspen groves | *Populus tremuloides / Symphoricarpos rotundifolius* | 0.48 |
| Black cottonwood forest | *Populus trichocarpa* | 0.18 |
| **Shrublands** | | |
| Little sagebrush scrub | *Artemisia arbuscula* ssp. *arbuscula / Poa secunda*[1] | 192.03 |
| Silver sagebrush scrub[3] | *Artemisia cana (ssp. bolanderi,* ssp. *viscidula) / Poa secunda*[2] | 0.93 |
| Bitterbrush scrub | *Purshia tridentata – Artemisia arbuscula*[3] | 22.48 |
| | *Purshia tridentata – Artemisia tridentata – Tetradymia canescens* | 39.51 |
| | *Purshia tridentata – Artemisia tridentata / Bromus tectorum*[2] | 5.52 |
| | *Purshia tridentata – Artemisia tridentata* | 416.89 |
| | *Purshia tridentata – Prunus subcordata*[2] | 1.26 |
| Interior rose thickets | *Rosa woodsii* | 7.11 |
| Shining willow groves | *Salix lucida – Rosa woodsii /* Mixed Herbs[2] | 3.81 |

| Alliance | Association | Area (Acres) |
|---|---|---|
| Greasewood scrub | *Sarcobatus vermiculatus – Artemisia tridentata*[1] | 198.02 |
| **Herbaceous Vegetation** | | |
| Sheldon's sedge patch[2] | *Carex sheldonii – Elymus cinereus*[1,3] | 3.39 |
| One spike oat grass meadows[2] | *Danthonia unispicata – Poa secunda*[1] | 7.46 |
| Ashy ryegrass meadows | *Elymus cinereus – Alopecurus geniculatus*[2,3] | 22.63 |
| | *Elymus cinereus*[3] | 46.24 |
| Blue bunch wheat grass meadows | *Pseudoroegneria spicata – Poa secunda* | 19.37 |
| Hardstem bulrush marshes | *Schoenoplectus acutus* | 0.14 |
| American bulrush marsh | *Schoenoplectus americanus* | 0.07 |
| Needle-and-thread grassland[2] | *Stipa comata*[1] | 0.71 |
| Tansyleaf evening primrose patch[2] | *Taraxia tanacetifolia – Iva axillaris*[1] | 70.26 |

Notes:
1. Association not described in the MCV but is presumed sensitive because it is like other sensitive associations under the alliance or is dominated by uncommon native species.
2. Association not described in the MCV but is included within an existing alliance in MCV that is designated as sensitive
3. *Leymus cinereus* is no longer an active name, though it is still used in the MCV. *Elymus cinereus* is used exclusively to reflect current nomenclature.

Source: Sawyer et al. 2009; CNPS 2019b

### Habitat Communities (CWHR)

Stantec mapped 16 CWHR habitat communities within the BRSA, including sagebrush (2,407.60 ac), Jeffrey pine (6.46 ac), juniper (507.84 ac), aspen (0.48 ac), montane riparian (57.52 ac), bitterbrush (478.37 ac), montane chaparral (1.12 ac), alkali desert scrub (278.36 ac), annual grassland (393.75 ac), perennial grassland (437.40 ac), wet meadow (48.62 ac), fresh emergent wetland (0.48 ac), riverine (27.99 ac), irrigated hayfield (42.68 ac), urban (1.52 ac), and barren (1,275.66 ac). Refer to the *Biological Resources Technical Report* (Appendix C: Appendix D, Section 3.1.1.2 and Figure A-2) for detailed descriptions of habitat communities in the BRSA and their mapped locations, respectively.

## 5.4.1.4 Aquatic Features

Stantec identified 238.21 ac of potential waters of the U.S. and state within the BRSA, which includes 14.25 ac of riparian wetlands, 26.48 ac of riparian fresh emergent wetland complexes, 67.22 ac of fresh emergent wetlands, 94.70 ac of seasonal wetlands, 1.40 ac of wetland swales, 1.75 ac of wetland seep springs, 12.75 ac of perennial streams, 2.32 ac of intermittent streams, 3.76 ac of ephemeral streams, 3.82 ac of irrigation canals, 0.02 ac of vegetated ditches, 0.12 ac of non-vegetated ditches, and 9.62 ac of ponds. Refer to the *Delineation of Potential Waters of the U.S.* report (Appendix C: Appendix B, Section 4.0) for complete details of the waters of the U.S. and state in the BRSA, including figures depicting their locations.

### 5.4.1.5 Habitat Assessment

*Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* (CPUC 2019) defines special status species as species that are listed, candidates, or proposed for listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA); plants listed as rare or endangered under the California Native Plant Protection Act; species that meet the definitions of rare and endangered under CEQA; plants considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (California Rare Plant Rank 1A, 1B, 2A, and 2B), as well as California Rare Plant Rank 3 and 4 plant species; species designated by CDFW as Fully Protected or as a Species of Special Concern; species protected under the Bald and Golden Eagle Protection Act; Birds of Conservation Concern or Watch List species; and bats considered by the Western Bat Working Group to be "high" or "medium" priority. Collectively, species that meet any of these designations will be referred to as "special status species" in this document.

Stantec biologists evaluated the potential for special status species to occur within the BRSA based on field-collected and publicly available occurrence records and the availability of potential habitat. They identified 127 plants, 19 mammals, 47 birds, five amphibians, 1 reptile, 10 fish, and 3 invertebrates known to or potentially occurring in at least part of the BRSA. Tables 3-4 and 3-5 in the BRTR (Appendix C) provide the conservation status, habitat characteristics, and potential to occur for special status plant and wildlife species, respectively. The *Botanical Resources Report* (Appendix C: Appendix D, Section 4.4) provides further details about special status plants, including locations of Stantec's field-collected records. Figure A-2 of the BRTR (Appendix C) depicts the locations of special status wildlife species recorded by Stantec biologists.

### 5.4.1.6 Critical Habitat

No federally designated or proposed critical habitat occurs within the BRSA. One designated critical habitat polygon for Sierra Nevada yellow-legged frog (*Rana sierrae*) occurs approximately 4 miles west of the BRSA near Janesville. Six designated critical habitat polygons for Webber's ivesia (*Ivesia webberi*) occur within 5 miles of the BRSA, with the closest abutting the BRSA between Lassen County MP 0.7 and 1.0, approximately (USFWS 2020) (Appendix C, Figure A-3). No direct impacts would occur to designated critical habitats because these habitats occur outside of the BRSA. For measures that the applicant would implement to prevent potential indirect impacts, which would include but not be limited to wildfires, accidental spills, and introduction or spread of invasive plant species, refer to Section 5.4.5, Draft Environmental Measures.

### 5.4.1.7 Native Wildlife Corridors and Nursery Sites

#### Native Wildlife Corridors

In the BRSA, habitat corridors may consist of woodland riparian segments, canyons, wetlands, and ridgelines. Waterways may also serve as habitat corridors for fish and other species. Northeastern

California falls within the Pacific Flyway, which has numerous narrow bird migration corridors that pass through the BRSA and the surrounding lands (PFC 2019).

The California Fish Passage Assessment Database (PAD) maps known and potential barriers to anadromous fish (CalFish 2020). Although no special status anadromous fish occur within the BRSA, the PAD-mapped barriers could also prevent or hinder movement of non-anadromous special status fish species that may occur in waterways in the BRSA. The PAD includes the following the waterway crossings within the BRSA:

- New Pine Creek between Modoc County MP 61.4 and 61.5 – remediated but fish response unconfirmed, meaning that the barrier structures were removed; however, there is no evidence of fish presence above the remediated site
- Cottonwood Creek between Modoc County MP 58.0 and 58.1 – remediated but fish response unconfirmed and unknown passage status
- Willow Creek between Modoc County MP 54.4 and 54.5 – remediated but fish response unconfirmed
- Lassen Creek between Modoc County MP 53.6 to 53.7 – partial barrier from steep culvert

The remaining waterways have either not been assessed or do not contain barriers, and therefore may serve as passages for special status fish.

The BLM Sierra Front Field Office considers the section of the BRSA from about Lassen MP 0.0 to MP 18.9 as mule deer (*Odocoileus hemionus*) movement corridor (Krause 2020). Mule deer generally use the movement corridors from March 1 to May 15 and from October 1 to November 30 (BLM 2014). The project lies within the Caltrans US 395 right-of-way in this area, which likely serves a barrier to big game movement under existing conditions, and the BLM Sierra Front Field Office did not apply seasonal restrictions to these areas.

#### Native Wildlife Nursery Sites

Based on desktop reviews and habitat field surveys, no known regional and local native wildlife nursery sites occur within the BRSA. The BLM Eagle Lake Field Office noted that pronghorn kidding (*Antilocapra americana*) kidding habitat occurs outside of the BRSA west of US 395 near Viewland and west of the BLM Ravendale Fire Station near Termo (Nelson 2020).

### 5.4.1.8 Biological Resource Management Area

Several biological resource management areas occur within 5 miles of the BRSA (GreenInfo Network 2019) (Figure 5.4-1). Where these areas overlap the BRSA, direct impacts would be limited to the construction work areas and would be restored to preconstruction conditions. For measures that the applicant would implement to mitigate direct impacts and prevent potential indirect impacts, which would include but not be limited to wildfires, accidental spills, and introduction or spread of invasive plant species, refer to Section 5.4.5, Draft Environmental Measures. Biological resource management areas that occur within 5 miles of the BRSA include USFWS' Modoc National Wildlife Refuge; CDFW's Bass Hill

Wildlife Area, Biscar Wildlife Area, Doyle Wildlife Area, Hallelujah Junction Wildlife Area, and Honey Lake Wildlife Area; and The Nature Conservancy's Matley Ranch.

## 5.4.2 Regulatory Setting

### 5.4.2.1 Federal

#### Clean Water Act

The Clean Water Act (CWA), also known as the Federal Water Pollution Control Act of 1972, as amended (33 United States Code [USC] 1251 et seq.), was established to restore and maintain the chemical, physical, and biological integrity of waters throughout the U.S. Discharge of dredged or fill material into waters of the U.S., including wetlands, lakes, streams, rivers, and estuaries, is regulated under Section 404 of the CWA (EPA 2002). Section 404 is jointly implemented by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE), with the USACE issuing Section 404 permits and monitoring permit compliance (EPA 2019a). Section 404 permit applicants are also required to obtain a Section 401 water quality certification from the state or authorized tribe in the region where the discharge would originate (EPA 2019b). In California, the State Water Resources Control Board (SWRCB) regulates multi-regional projects, and the Regional Water Quality Control Boards (RWQCB) regulate specific regional projects (SWRCB 2019).

#### Federal Endangered Species Act

The federal ESA of 1973, as amended (16 USC 1531 et seq.), was established to protect and recover imperiled species and their habitats. Under the ESA, wildlife and plant species may be listed as either endangered or threatened and along with their critical habitat, if designated, are protected from actions that would cause take of any listed species except under federal permit. The USFWS and the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) administer the ESA and consult with other federal agencies under Section 7 of the ESA to ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat for these species (USFWS 2013a).

#### Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act (MBTA), it is unlawful to take any migratory bird or any part, nests, or eggs of migratory birds unless permitted by regulations (USFWS 2017). Migratory birds, as defined by the MBTA, include all species native to the U.S. or its territories, except some upland game birds (e.g., California quail [*Callipepla californica*]), that occur as a result of natural biological or ecological processes (1,026 total species). Non-native species introduced into the U.S. or its territories by intentional or unintentional human assistance are not included in the MBTA (USFWS 2013b).

Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, was issued on January 10, 2001, by President Clinton to direct federal agencies that are taking actions that have or are likely to have a negative effect on migratory birds to develop and implement a Memorandum of Understanding with USFWS to promote conservation of migratory bird populations. This EO further

implements the MBTA and requires coordination between the USFWS and federal agencies (USEO 2001).

On December 22, 2017, the U.S. Department of the Interior issued a legal opinion memorandum outlining an alternative interpretation of the MBTA as it applies to incidental or accidental take. The opinion concluded that the "MBTA's prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control" (USDI 2017).

### Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940, as amended (16 USC 668-668c), prohibits take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) or any part, nests, or eggs of bald and golden eagles unless federally permitted. The Bald and Golden Eagle Protection Act also prohibits human-induced alterations around an unoccupied nest site if upon return of the eagle, the alterations result in adverse impacts on the eagle (USFWS 2018).

### Executive Orders

Federal agencies are required to demonstrate that their actions comply with EOs, which are directives issued by the President to manage operations of the federal government. Relevant EOs include the following:

#### *Executive Order 11988 – Floodplain Management*

EO 11988, Floodplain Management, was issued on May 24, 1977, by President Carter to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid floodplain development wherever there is a practicable alternative. Under this EO, federal agencies are required to evaluate the potential effects of the action on the floodplain and to identify practicable alternatives to avoid adverse effects and incompatible development in the floodplains. Federal agencies are also required to provide opportunity for early public review of any plans or proposals for actions in floodplains (USEO 1977).

#### *Executive Order 11990 – Protection of Wetlands*

EO 11990, Protection of Wetlands, was issued on May 24, 1977, by President Carter to avoid adverse impacts associated with the destruction or modification of wetlands and to avoid new construction in wetlands wherever there is a practicable alternative. Under this EO, federal agencies are required to demonstrate that there is no practicable alternative to avoid wetlands for new construction and to include all practicable measures to minimize harm to wetlands that may result from the proposed action. Federal agencies are also required to provide opportunity for early public review of any plans or proposals for new construction in wetlands (USEO 1977).

### *Executive Order 13112 – Invasive Species and Executive Order 13751 – Safeguarding the Nation from the Impacts of Invasive Species*

EO 13112, Invasive Species, was issued on February 3, 1999, by President Clinton to prevent the introduction of invasive species, to provide control of invasive species, to minimize impacts from invasive species, and to the establish the National Invasive Species Council. Federal agencies are required to prevent the introduction of invasive species and not authorize actions that could cause or promote the introduction or spread of invasive species. Federal agencies also need to identify all feasible and prudent measures to minimize the risk of harm caused by invasive species. This EO also revoked EO 11987, Exotic Organisms, which was issued by President Jimmy Carter in 1977 (USEO 1999).

EO 13751, Safeguarding the Nation from the Impacts of Invasive Species, was issued on December 5, 2016, by President Obama to amend EO 13112. EO 13751 directed continuing coordination of federal control and prevention of invasive species and maintained the National Invasive Species Council and Invasive Species Advisory Committee (USEO 2016).

The Federal Highway Administration (FHWA) issued Guidance on Invasive Species on August 10, 1999, in response to EO 13112. The FHWA guidance defined known invasive plants as those listed on the official noxious weed list of the state in which the activity occurs (FHWA 2019). In California, the California Invasive Species Advisory Committee under the Invasive Species Council of California developed and maintains the list of statewide invasive species (ISCC 2019).

## 5.4.2.2 State

### Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969, as amended (Water Code Section 13000 et seq.), was established to provide a comprehensive program to protect water quality that applies to surface waters, wetlands, groundwater, and point and nonpoint pollution sources. Under the Porter-Cologne Act, the SWRCB and nine RWQCBs were created and authorized to implement state water quality regulations. The SWRCB oversees water rights and water quality policy, and the RWQCBs protect and enhance water quality at the regional and local levels. CWA Section 401 grants the SWRCB the authority to review proposed federally permitted or licensed activities that may impact state water quality and to certify, condition, or deny the activities if they do not comply with state water quality standards. RWQCBs may impose specific discharge prohibitions or requirements for activities that may affect any waters of the state, including isolated wetlands (SWRCB 2019). Per the 2001 U.S. Supreme Court decision of *Solid Waste Association of Northern Cook Counties v. United States Corps of Engineers* and the Porter-Cologne Act, RWQCBs retained the authority to regulate discharges of waste into any waters of the state regardless of whether the waters are subject to USACE jurisdiction under CWA Section 404 (SWRCB 2001).

### California Endangered Species Act

The CESA of 1970, as amended (California Fish and Game Code [FGC] Sections 2050-2089), was established to conserve, protect, restore, and enhance any listed species and its habitat. The CESA

prohibits the take of any species designated by the California Fish and Game Commission as endangered, threatened, or candidate species and protects all native animals and plants and their habitats that are threatened with extinction or experiencing significant declines that would lead to threatened or endangered designation if not halted. The CESA authorizes the CDFW to issue an Incidental Take Permit (FGC Sections 2081 and 2089) for state-listed species when specific criteria are met (CDFW 2019b).

## California Fish and Game Code

The FGC provides several provisions for the protection of state wildlife resources, including the following relevant sections:

### *Sections 1600-1616 – Lake and Streambed Alteration*

Under Section 1602, CDFW has the authority to issue Lake or Streambed Alteration Agreements (LSAAs) for activities that substantially divert or obstruct the natural flow; substantially change or use any material from the bed, channel, or bank; or deposit or dispose of materials into any river, stream, or lake. Applicants are required to obtain a LSAA prior to commencing these activities in any river, stream, or lake, including features with ephemeral and perennial flow. The notification may also apply to specific activities within floodplains (CDFW 2019c).

### *Sections 1900-1913 – Native Plant Protection Act*

The Native Plant Protection Act allows the California Fish and Game Commission to designate plants as endangered or rare. The Native Plant Protection Act prohibits take, possession, or sale within the state of any native-listed plants. The CDFW has the authority to enforce the provisions of this act and authorize incidental take permits for activities if deemed appropriate (CDFW 2019d).

### *Sections 3500-3516 – Birds*

The CDFW protects game birds, birds of prey, migratory birds, Fully Protected birds, and their nests and eggs from take or possession except as otherwise provided by the FGC (e.g., incidental take under CESA, state waterfowl hunting validations, etc.). In response to the U.S. Department of Interior's December 22, 2017, memorandum interpreting incidental take of migratory birds (USDI 2017), the CDFW and California Office of Attorney General published a legal guidance on November 29, 2018, affirming that California State Law will continue to prohibit the incidental take of migratory birds (CDFW 2018). On September 27, 2019, the California State Legislature passed the California Migratory Bird Protection Act (Assembly Bill 454) amending Section 3513 of the FGC, which clarifies that incidental but avoidable take of migratory birds is prohibited.

### *Sections 3511, 4700, 5050, and 5515 – Fully Protected Species*

Prior to the CESA listings, California Statutes accorded a Fully Protected status to specifically identified birds, mammals, reptiles, amphibians, and fish. Most of these Fully Protected species have also been listed under the CESA. Fully Protected species cannot be taken or possessed, and no take licenses or

permits (e.g., incidental take permit) can be issued except for collecting for scientific research and relocation for protection of livestock (CDFW 2019e).

#### 5.4.2.3 Local

Below is a list of policies from the General Plans of Modoc, Lassen, and Sierra Counites that are most relevant to the project segment. Because CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local land use and zoning regulations or discretionary permits. This section identifies local land use plans and regulations for informational purposes and to assist with CEQA review.

##### Modoc County General Plan

The following policies from the Conservation and Open Space Element of the Modoc County General Plan (Modoc County 1988) directly pertain to biological resources:

*Wildlife*

- **Policy #2 –** Maintain countywide consistency on the types of fish and wildlife protection measures for mitigating adverse impacts on critical or sensitive wildlife habitats on a case-by-case basis. Similar consistency is desirable for protection measures for threatened and endangered species.

- **Policy #3 –** Specific requirements to be considered for mitigating adverse impacts on critical or sensitive wildlife habitats, including habitat important to threatened or endangered species, shall be on a case-by-case basis with adequate consideration given to landowner needs.

*Timber/Vegetation*

- **Policy #3 –** Protect timber resources through vegetation program.

- **Policy #4 –** Protect timber resources for its wildlife habitat and scenic resources.

- **Policy #5 –** Protect officially listed rare and endangered plants in Modoc County which contribute to the natural diversity of plant life.

##### Lassen County General Plan

The following policies from the Natural Resources, Wildlife, and Open Space Elements of the Lassen County General Plan 2000 (Lassen County 1999) directly pertain to biological resources:

*Vegetation*

- **Policy NR26 –** In order to avoid or reduce the extent of potential adverse impacts to important vegetation communities which may result from projects and land use decisions within its jurisdiction, the County shall consider the potential extent of such impacts in the course of project review.

Biological Resources

- **Policy NR27 –** Projects subject to County approval which will result in significant disturbance of a site's vegetative cover shall be required to prepare and implement as effective plan to revegetate disturbed, undeveloped areas of the site.

- **Policy NR28 –** The County recognizes the need to identify and provide reasonable measures for the protection of rare and endangered plant species in the consideration of projects and land use decisions.

- **Policy N29 –** The County supports strong measures to eliminate or prevent the spread of invasive and noxious weeds and plant species including but not limited to medusahead, yellow starthistle, and perennial peeperweed (whitetop), and to control the adverse effects from the excessive spreading of such species as juniper and cheatgrass.

*Wildlife*

- **Policy WE16 –** The County supports interagency efforts to protect and restore the wildlife habitat values of lakes, riverine and riparian areas and wetlands.

- **Policy WE 17 –** The County supports cooperative efforts to protect and enhance the wildlife habitat values of upland vegetation communities of bitterbrush, mountain mahogany, and aspen.

## Sierra County General Plan

The following policies from the Water Resources and Wildlife Elements of the Sierra County General Plan 2012 (Sierra County 2012) directly pertain to biological resources:

*Water*

- **Policy 22 –** Protect natural swales and wetlands, plus a buffer from those features, for water quality protection.

- **Policy 31 –** Preserve the integrity of water courses throughout the County.

*Plants and Wildlife*

- **Policy 2 –** Within stream zones, control uses over which the County has jurisdiction to prevent significant impacts on riparian and aquatic habitat.

- **Policy 3 –** Prohibit removal of native vegetation in lake and stream zones except when done in conjunction with the permitted uses as described under #2, above.

- **Policy 4 –** Protect bodies of water and their watersheds to prevent water degradation.

- **Policy 7 –** Prohibit development on meadows.

Biological Resources

- **Policy 8 –** Protect, and whenever possible enhance, threatened, endangered, and special plants and animals and their habitats, as defined by the California Department of Fish and Game, as well as migratory birds from proposed land uses.
- **Policy 9 –** Encourage and assist in efforts to sustain plant and animal populations for recreational and other values.
- **Policy 10 –** Encourage the protection of natural populations which are unique and representative of the habitats of Sierra County and which could provide for educational and research purposes. Identify and preserve heritage and landmark trees and groves where appropriate.
- **Policy 17 –** Discourage removal or significant disturbance of any remaining old growth forests.
- **Policy 21 –** Protect all habitat types and the continuity of habitats.
- **Policy 22 –** Protect critical deer migration corridors as well as the movement corridors of other animals. Protect the integrity and continuity of wildlife habitats.
- **Policy 30 –** Require monitoring of projects with the potential to significantly impact biotic resources.

## 5.4.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service? | ☐ | ☐ | ☒ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service? | ☐ | ☐ | ☒ | ☐ |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☒ | ☐ |

| Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ☒ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |
| g) Create a substantial collision or electrocution risk for birds or bats? | ☐ | ☐ | ☒ | ☐ |

## 5.4.4 Impact Analysis

For biological resources, permanent impacts would occur where permanent above-ground structures are located, such as underground vaults, which would each require 15-ft-by-3-ft areas of permanent surface disturbance, line markers, which would have a very small footprint (less than 1 ft by 1 ft each), and ILA locations, which would be less than one ac footprint. Temporary impacts are those impacts that would return to pre-construction conditions following the construction phase or within several years of construction completion. The BLM Deschutes Field Office, with whom the applicant is consulting as the lead federal agency, anticipates a "No Effect" determination for species listed under the ESA. In addition, the applicant does not anticipate needing an Incidental Take Permit from CDFW.

**a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?**

### 5.4.4.1 Special Status Plants

**Less than Significant Impact.** The project has been sited to avoid impacts to special status plant species to the extent possible. In instances where the applicant is not able to route the running line to avoid special status plant species, the project would avoid impacts by using directional boring techniques to install conduit under these occurrences. Directional boring uses a bentonite clay lubricant that in certain rare circumstances, could escape to the surface as a frac-out, which could smother plants in the area. The applicant would implement its Accidental Release Prevention Plan, which would detail

measures such as monitoring and response actions in the event of a frac-out (APM HAZ-3, Accidental Release Prevention Plan). Where required, bore rigs and entry and exit bore pits would be placed a minimum of 75 ft from the edge of special status plant occurrences. Special status plant occurrences require a minimum bore depth below the surface to ensure that directional boring does not disturb the root zone and result in plant mortality. The applicant would incorporate a minimum bore depth into the project design, following the specifications in APM BIO-14, Minimum Bore Depth.

While the project would avoid impacts on the majority of the special status plant species through siting and directional boring efforts, some special status plants may be unavoidable (Table 5.4-2). Where direct impacts are unavoidable site restoration would be implemented to help ensure plant site recurrence after construction is complete. Site restoration measures (APM BIO-5, Site Restoration) would facilitate occurrence recovery post-construction. If impacts cannot be avoided through project design, a conservation plan would be created (APM BIO-9, Special Status Plant Impacts).

### Table 5.4-2: Special Status Plant Project Impacts

| Special Status Plants | Temporary Impact (Acres) |
|---|---|
| Purple loco weed (*Astragalus agrestis*) | 0.001 |
| Snake milk-vetch (*Astragalus iodanthus* var. *diaphanoides*) | 0.063 |
| Sickle saltbush (*Atriplex gardneri* var. *falcata*) | 0.517 |
| Slough sedge (*Carex atherodes*) | 0.020 |
| Sheldon's sedge (*Carex sheldonii*) | 0.054 |
| Great Basin calicoflower (*Downingia laeta*) | 0.029 |
| Volcanic daisy (*Erigeron elegantulus*) | 0.005 |
| Ephemeral monkeyflower (*Erythranthe inflatula*) | 0.002 |
| Modoc frasera (*Frasera albicaulis* var. *modocensis*) | 0.029 |
| Rigid pea (*Lathyrus rigidus*) | 0.374 |
| Canby's lomatium (*Lomatium canbyi*) | 0.037 |
| Raven's lomatium (*Lomatium ravenii* var. *ravenii*) | 2.619 |
| Adobe lomatium (*Lomatium roseanum*) | 0.543 |
| Sagebrush bluebells (*Mertensia oblongifolia var. oblongifolia*) | 0.016 |

| Special Status Plants | Temporary Impact (Acres) |
|---|---|
| Volcanic beardtongue (*Penstemon sudans*) | 0.064 |
| Williams's combleaf (*Polyctenium williamsiae*) | 0.0001 |
| Spiny milkwort (*Polygala subspinosa*) | 0.044 |
| Winged dock (*Rumex venosus*) | 0.496 |
| Many-flowered thelypody (*Thelypodium milleflorum*) | 0.059 |
| Plummer's clover (*Trifolium gymnocarpon* ssp. *plummerae*) | 0.396 |
| Total | 5.368 |

Special status plant mortality could result from herbicide use for invasive plant control, as well as fuel or other chemical spills, if overspray or a spill occurs on or near special status plants. The applicant would avoid or minimize potential impacts from hazardous materials by implementing a series of measures. Approved invasive plant control contractors would apply herbicides in adherence with state and manufacturer guidelines. In addition, the applicant would implement measures to handle, store, and transport hazardous materials safely (APM HAZ-1, Prepare and Implement a Hazardous Materials Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan), and to prevent spills associated with refueling and maintenance (APM HAZ-2, Worker Environmental Awareness Program for Hazardous Materials). The applicant would also develop and implement a project-specific SWPPP during construction that would describe the measures and steps to prevent, contain, and clean up spills of hazardous materials (APM HYDRO-1, Prepare and Implement a Stormwater Pollution Prevention Plan).

Special status plant occurrences could also be impacted by wildfires accidentally sparked by construction vehicles and equipment under dry conditions. To avoid wildfires, the applicant would instruct construction crews about the danger of wildfires and ways to prevent fires, including prohibiting idling over vegetated areas (APM FIRE-1, Construction Fire Protection Plan, and APM FIRE-2, Construction Fire Prevention Practices). In addition, all work vehicles would be equipped with a fire extinguisher, and crews would be trained to put out incipient brush fires when it is safe to do so. The applicant does not plan to conduct any welding as part of the project. The effects of spills and fires could be temporary or permanent depending on the species or population affected, the type of habitat affected, the severity of the incident, and the effectiveness of response efforts.

Introduction of invasive species to a new area could become a permanent impact without immediate and follow-up treatment. To prevent special status plant occurrence impacts from the introduction and spread of invasive plants, the applicant would ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel clothing and boots would be swept or cleaned prior to deployment to a different

construction spread (APM BIO-6, Invasive Species). Site restoration measures (APM BIO-5), including using native soils for backfill and re-seeding disturbed areas with native plant mixes, would help to ensure that adjacent areas are restored to pre-construction conditions and would prevent the spread of invasive plant species.

A biological monitor (APM BIO-7, Biological Monitors) would be onsite to demarcate exclusion areas around special status plant occurrences with flagging or signage to ensure that project activities would remain outside of exclusion areas. These exclusion areas and restoration measures would avoid permanent impacts and reduce potential temporary impacts on special status plant species and their habitats. The applicant would restrict vehicle and equipment access to approved project areas only (APM BIO-2, Work Areas and Access Routes), which would be located outside of special status plant occurrences. With the implementation of these exclusion area measures and the measures previously discussed in this section, the project would be unlikely to have significant impacts on special status plants in the BRSA.

The applicant expects operational impacts to be minimal as all project access would occur at vault and ILA locations. The vaults and ILAs would be located outside of special status plant occurrences, and thus, compaction from overland travel from the adjacent highway and shoulder to the vaults and ILAs would not impact these species. Therefore, construction and operation of the project would have a less than significant impact on special status plants with mitigation incorporated.

### 5.4.4.2 Special Status Wildlife

**Less than Significant Impact.** This section evaluates the potential impacts of project construction and operation on special status wildlife within the BRSA. The project is about 193 miles long, with 85 special status fish and wildlife species that are known to or potentially occur in the BRSA. Given the scale of the project, the impact analysis addresses special status animals collectively unless an impact uniquely affects a species or species group. The discussion is organized by three general types of impact: mortality or injury, sensory disturbance (i.e., noise, vibration, and visual), and habitat loss or modification.

#### Mortality or Injury

Several project activities or elements could result in mortality or injury of wildlife; however, nearly all the potential for mortality or injury would occur during construction as project activities during operations and maintenance would be minimal. During construction, project vehicles and equipment could collide with wildlife within the BRSA, causing mortality or injury. Wildlife collisions could occur on vegetated or unvegetated portions of the right-of-way or project access roads. Trench excavation and plowing could harm wildlife underground. Sedentary and less mobile animals, such as amphibians, would be at greater risk of collisions at the surface or of being harmed underground. More mobile animals would likely be able to avoid construction vehicles and equipment approaching occupied sites, but the potential for collisions would still exist.

The risk of wildlife collisions could increase with certain seasonal changes in animals' behavior, including breeding, migration, and dormancy. Migratory birds are generally very mobile and would be able to avoid construction equipment, but eggs and young birds would be more susceptible to crushing, mortality, or

injury by equipment during the breeding season. Adults may suffer mortality or injury while defending their nests or less mobile young. Similarly, some adult birds may remain still and quiet in response to a threat or disturbance. To avoid collisions with wildlife, the applicant would restrict vehicles and equipment use to designated work areas and approved access roads (APM BIO-2, Work Areas and Access Routes) and would enforce speed limits for vehicles and equipment on the right-of-way and access roads (APM BIO-3, Speed Limits).

The applicant would also implement additional measures to minimize the potential for direct mortalities or injuries of migratory birds and bats during soil disturbing or vegetation management construction activities. Biologists would conduct pre-construction bird nest surveys during the breeding season and establish exclusionary buffers around the nests to avoid disturbances to the adults or young. Construction activities would be prohibited within the exclusionary bird nest buffer until the nest fledged or failed (APM BIO-11, Nesting Birds). Additionally, biological monitors would establish a 300-foot no-vegetation clearing buffer around active nest until the nest has fledged or failed (APM BIO-16, Vegetation Clearing for Birds and Bats). If tree-roosting bats are documented, the applicant would not remove the tree and would contact agencies for further guidance (APM BIO-16). The applicant would also conduct construction activities during daylight hours,  (APM BIO-10, Work Timing), have biological monitors onsite (APM BIO-7), and ensure that all onsite personnel receive Worker Environmental Awareness Training prior to starting work on the project (APM BIO-1, Worker Environmental Awareness Training).

Open trenches or other excavations could result in mortality or injury of wildlife that fall in and become trapped. To avoid this impact, the applicant would backfill or cover open excavations at the end of each workday. When this is not possible, the applicant would install escape ramps of sufficient slope to allow wildlife to escape (2:1 slope or less), and biological monitors would inspect excavations that remained open overnight before construction activities begin each morning (APM BIO-13, Open Excavations).

The applicant would not construct in or on the banks of fish-bearing waterways, avoiding the possibility of direct mortality or injury of special status fish and other special status aquatic wildlife. To avoid waterways, the applicant would attach cables to bridges or use directional boring to go underneath waterways and some wetlands. The applicant would avoid or minimize the potential for mortalities or injuries of fish and other in-water special status animals in the event of a frac-out during boring by implementing its Accidental Release Prevention Plan (APM HAZ-3). In wetlands that could not be avoided, the applicant would minimize the potential for mortality or injury impacts to special status wildlife by implementing APM BIO-15, Wetland Impacts, as discussed in Section 5.4.1.3, Vegetation Communities and Land Cover, which calls for constructing during the dry season among other steps.

Sedimentation of wetlands, rivers, and other waters as a result of construction-related ground disturbance and erosion could also result in mortality or illness of special status aquatic species within or near the BRSA. Suspended and deposited sediment introduced to aquatic features from project-related stormwater runoff or erosion could result in mortality or injury of fish and amphibians by impeding oxygen exchange at the gills, reducing available fish spawning and rearing habitats, reducing available interstitial spaces for amphibian cover and breeding habitats, suffocating developing embryos, reducing growth rates in larvae, and negatively affecting prey (Pilliod et al. 2003; Chapman et al. 2014). The applicant's

project-specific SWPPP would describe the measures and steps to prevent and control erosion and sediment transport into aquatic habitats (APM HYDRO-1).

Mortalities and illness could also directly result from herbicide use for invasive plant control, as well as fuel or other chemical spills, if any animal comes in direct contact with overspray or a spill. Similarly, spills could cause mortality or illness indirectly if water or prey are contaminated. As discussed in the special status plant impacts analysis, the applicant would avoid or minimize potential impacts from hazardous materials through APM HAZ-1 and APM HYDRO-1.

Construction vehicles and equipment operation could accidentally spark wildfires under dry conditions. To avoid wildfires, the applicant would compile a Construction Fire Prevention Plan which, among other measures, would instruct construction crews about the danger of wildfires and ways to prevent fires, including prohibiting idling over-vegetated areas (APM FIRE-1, APM FIRE-2). In addition, all work vehicles would be equipped with a fire extinguisher, and crews would be trained to put out incipient brush fires when it is safe to do so. The applicant does not plan to conduct any welding as part of the project.

Trash created by project personnel could attract predators, such as common ravens (*Corvus corax*) or raccoons (*Procyon lotor*). The applicant would practice good housekeeping during project activities (APM UTL-2, Recycling of Construction Materials) to minimize the potential impacts on fish and wildlife through increased predation. Likewise, the applicant would prohibit project personnel from having dogs onsite to avoid potential harm to local wildlife (APM BIO-4, General Project Area Use).

During the operation phase, the risks of mortality or injury of fish and wildlife would be very low. Once the conduit is installed underground, most parts of the running line would not require regular maintenance or even inspection. Rather, inspection and maintenance would be infrequent and would typically be conducted from the vault or ILA sites unless underground segments of the conduit are damaged in other locations. Maintenance personnel would usually reach the vault or ILA sites by foot, although in some instances light trucks or all-terrain vehicles could be used. If off-pavement or off-gravel vehicle travel is required, the applicant would instruct crews to use a spotter to attempt to avoid wildlife, including nesting birds, or driving over woody vegetation. All APMs implemented during construction would be implemented during operation, as applicable. With implementation of APMs BIO-1, BIO-2, BIO-3, BIO-4, BIO-10, BIO-11, BIO-13, BIO-15, BIO-16, HAZ-3, HYDRO-1, FIRE-1, FIRE-2, and UTL-2 impacts to special status species related to mortality or injury would be reduced to less than significant.

### Sensory Disturbances

During construction, noise and vibrations associated with equipment operation and an increased presence of humans outside of vehicles and equipment could result in direct sensory impacts on special status wildlife within or near the BRSA. Wildlife responses to sensory disturbances may include displacement from or avoidance of suitable habitat near construction activities and stress. Displacement or avoidance of areas could divert time and energy away from important activities like foraging, reproduction, and parental care (Frid and Dill 2002). Stress of wildlife may also result in indirect impacts on the health and reproductive fitness of individuals, and potentially local populations.

Biological Resources

Project activities near active migratory bird nests pose the greatest potential for adverse sensory disturbance impacts for migratory birds, as they may affect reproductive success. The applicant would identify active nests during pre-construction surveys and daily sweeps and would prohibit project activities near them to avoid potential adverse impacts on migratory bird nests (APM BIO-7 and APM BIO-11). Sensory disturbances of greater sage-grouse (*Centrocercus urophasianus*) during lekking would potentially have adverse impacts on breeding success for the individuals associated with the lek. Leks are groups of male greater sage-grouse that gather to perform courtship displays from about March to mid-May for a group of females in or near suitable breeding habitat (Hall et al. 2008). The size of leks may range from a few individuals to several hundred. Though no active greater sage-grouse leks were observed during wildlife surveys in 2020, the applicant would prevent impacts on any greater sage-grouse leks that may be present by avoiding construction activities within 4 miles of active or developing leks from 6 PM to 9 AM between March 1 and May 15 (APM BIO-12, Greater Sage-grouse Leks).

In wetlands and waterways where directional boring would occur, the bore rigs would be set back 15 ft beyond the top of waterway banks or a minimum of 75 ft from the edge of wetland vegetation (APM HAZ-3). Therefore, the potential for noise and vibration impacts as a result of boring on species inhabiting those aquatic habitats would be substantially reduced or avoided altogether.

Nighttime construction lighting could cause disorientation to some special status wildlife species within or near the BRSA that could cause adverse effects. Some wildlife species use natural light sources and patterns for navigation, interspecific interactions, and other critical biological behaviors (Longcore and Rich 2004). Introduction of artificial nighttime lighting could disrupt foraging, reproduction, and communication. The applicant would restrict construction activities to daylight hours (APM BIO-10) to avoid potential impacts from nighttime lighting. If nighttime work is required, lights would be shielded and/or pointed downward and into work areas, and not into surrounding areas.

The applicant would install the conduit and fiber optic cable along well-traveled highways and roads, within Caltrans and County rights-of-way. It is assumed that nearby wildlife would already be acclimatized to at least some levels of sensory disturbance from the passing traffic and from occasional road and utility maintenance crews. Any resulting sensory impacts on wildlife would be expected to be intermittent and temporary, occurring during work hours and ceasing after construction activities have moved from a given area. In general, construction activities would proceed in a linear fashion, and the applicant estimates that up to 1 mile of conduit would be installed and the ground restored per day, per spread.

During operation, the risks of sensory disturbance of wildlife would be greatly reduced or absent. Once the conduit is installed, most parts of the running line would not require regular maintenance or even inspection. Rather, most maintenance would be conducted from vault and ILA sites. Maintenance personnel would typically reach the vault and ILA sites on foot, although in some instances light trucks or all-terrain vehicles could be used. Maintenance activities are typically not loud and would usually be accomplished quickly during daylight hours with crews of just one to several people. With implementation of APMs BIO-7, BIO-10, BIO-11, BIO-12, and HAZ-3, impacts to special status species related to sensory disturbance would be reduced to less than significant.

## Habitat Loss or Modification

Construction activities would result in impacts on some special status wildlife through the loss or modification of wildlife habitat within the BRSA. Vehicles and equipment traveling over the right-of-way would trample or crush vegetation and plowing, and trenching for conduit installation would remove some vegetation. The duration of the impacts could be temporary or permanent depending on the location. Permanent impacts would occur where permanent above-ground structures are constructed, such as underground vaults, which would each require 15-ft-by-3-ft areas of permanent surface disturbance every 3,500 feet, and line markers, which would each have a very small footprint (less than 1 ft by 1 ft) and which would be colocated with vaults. ILAs would be permanent above-ground structures with a footprint of less than one acre.

In areas with grasslands or other fast-growing habitat communities, impacts would be short-term, and vegetation would be expected to return to pre-construction conditions quickly. In areas dominated by slower-growing plant species, such as shrublands and woodlands, impacts could have short or long-term temporary impacts. Loss of sagebrush is considered a long-term temporary impact, as sagebrush may take several years to recover from disturbances under favorable conditions (McArthur and Kitchen 2007). Alkali scrub recovery from severe disturbance may take several years and would be a long-term temporary impact. Recovery of forested areas, such as Jeffrey pine, juniper, and aspen, would also be considered long-term temporary impacts (Mayer and Laudenslayer 1988); however, the applicant does not plan to clear trees for the project. Table 5.4-3 identifies the acreages of temporary and permanent impacts on CWHR habitat communities by the project.

### Table 5.4-3: CWHR Habitat Community Project Impacts

| CWHR Habitat Community | Temporary Impacts (Acres) | Permanent Impact (Acres)[1] |
|---|---|---|
| Jeffrey Pine | 1.143 | -- |
| Juniper | 40.235 | 0.029 |
| Aspen | 0.190 | 0.001 |
| Montane Riparian | 0.000[2] | 0.000[2] |
| Bitterbrush | 25.854 | 0.019 |
| Sagebrush | 200.101 | 0.143 |
| Montane Chaparral | 0.0003 | -- |
| Alkali Desert Scrub | 7.316 | 0.003 |
| Annual Grassland | 51.160 | 0.033 |
| Perennial Grassland | 40.690 | 0.031 |
| Wet Meadow | 4.169 | --- |
| Fresh Emergent Wetland | 0.024 | -- |
| Riverine | 0.000[2] | 0.000[2] |
| Irrigated Hayfield | 0.468 | -- |
| Urban | 0.294 | --- |

| CWHR Habitat Community | Temporary Impacts (Acres) | Permanent Impact (Acres)[1] |
|---|---|---|
| Barren | 82.956 | 0.041 |
| Total | 454.6003 | 0.300 |

Note:

1. Permanent above-ground structure locations are approximate and permanent impact acreage is subject to change.
2. Implementation of APM BIO-5 would avoid impacts to all aquatic or riparian habitat communities.

CWHR = *A Guide to Wildlife Habitats of California*

Source: Mayer and Laudenslayer 1988

The applicant would implement several measures that would reduce the amount of habitat loss or modification, including restricting vehicle and equipment travel to approved project areas (APM BIO-2); backfilling trenches and recompacting loose soils above the conduit after installation (APM BIO-13); using directional boring methods to install conduit under, rather than through, some aquatic and sensitive habitats; and restoring work areas to pre-construction conditions where feasible (APM BIO-5). Where directional boring occurs, bore rigs and entry and exit bore pits would be placed a minimum of 15 ft beyond the top of waterway banks and a minimum of 75 ft from the edge of wetland vegetation. For wetlands that cannot be avoided, the applicant would implement APM BIO-15, as discussed in Section 5.4.1.3, Vegetation Communities and Land Cover, to minimize and mitigate the associated habitat impacts. The project would also temporarily avoid direct impacts on vegetation in proposed workspaces within 300 ft of active migratory bird nests until after the young have fledged or the nest failed (APM BIO-7, APM BIO-11, and APM BIO-16).

Several additional construction-related factors could result in habitat loss or modification. As described above, sensory disturbances associated with equipment noise and the increased presence of personnel could cause displacement or avoidance of species. This would effectively amount to temporary habitat loss within or near the BRSA, although the associated impacts would end when construction activities cease. Habitats could also be modified through the introduction or spread of invasive plants and animals. Invasive species could be introduced to new areas via contaminated soil attached to vehicles and equipment entering the BRSA or moving from one part of the BRSA to another. Overspray or misuse of herbicides for invasive plant control, frac-outs, or accidental spills of hazardous materials could also adversely alter both aquatic and upland habitats. In addition, fire associated with construction equipment and personnel could result in habitat loss or modification.

The effects of spills and fires would typically be temporary, with the duration of impacts depending on the type of vegetation affected, the severity of the incident, and effectiveness of response efforts. Introduction of invasive species to a new area can increase in duration or become a permanent impact without immediate and follow-up treatment. To prevent habitat impacts from the introduction and spread of invasive plants, the applicant would ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel's clothing and boots would be swept or cleaned prior to deployment to a different construction spread (APM BIO-6). Potential habitat loss or modification from improper herbicide use, frac-outs, spills of hazardous materials, and fires would be avoided or reduced by the

implementation of avoidance and minimization measures: APM BIO-4, APM FIRE-1, APM FIRE-2, APM HAZ-1, APM HAZ-3, and APM HYDRO-1).

Habitat loss and modification can result in habitat fragmentation, which may have numerous impacts on fish and wildlife resources. However, due to the relatively small areas of expected ground disturbance for the project (a 20-ft-wide corridor for vehicle and equipment travel, less than 30 in. wide for conduit trench or plow line, and 15-ft-by-3-ft areas for vaults approximately every 3,500 ft), habitat fragmentation would be minimal. In addition, the project would be constructed along highways within existing transportation rights-of-way, which already have fragmented local habitats and serve as potential barriers to movement.

The removal or modification of vegetation may create edge habitats, which could indirectly decrease the likelihood of migratory bird young fledging from their nests. Brown-headed cowbirds (*Molothrus ater*) prefer woodland-grassland transitional (i.e., edge) habitats, which facilitate the species parasitizing the nests of other birds (Lowther 1993). Female cowbirds may lay 40 eggs per season in the nests of other migratory bird species, and the young often out-compete the hosts' young for food. Although brown-headed cowbirds are common throughout much of the BRSA and surrounding areas (eBird 2020), the project is unlikely to contribute to increases of this species or in nest parasitism. The applicant would avoid tree removal; therefore, no additional woodland-grassland edge habitats would be created. During operation, habitat removal or modification would be unlikely, occurring only in the event that repairs are required, and conduit must be excavated. With implementation of APMs BIO-2, BIO-4, BIO-5, BIO-7, BIO-11, BIO-13, BIO-15, BIO-16, FIRE-1, FIRE-2, HAZ-1, HAZ-3, and HYDRO-1, impacts to special status species related to habitat modification would be reduced to less than significant.

**b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?**

**Less than Significant Impact.** The applicant designed the project to avoid sensitive natural communities. In areas where the running line could not be routed to avoid sensitive resources, directional boring techniques would be used to install conduit under these features where feasible. The applicant's Accidental Release Prevention Plan would provide measures to minimize impacts if frac-out occurs (APM HAZ-3). Where required, bore rigs and any entry and exit bore pits would be placed a minimum of 75 ft from the edge of sensitive natural communities. The applicant would incorporate a minimum bore depth into the project design to not disturb the root zone, following the specifications in APM BIO-14.

For sensitive communities that cannot be avoided (Table 5.4-4), the applicant would restore the temporary impacted areas to their pre-construction contours and would re-seed with localized native seed mixes (APM BIO-5). A biological monitor (APM BIO-7) would be onsite to demarcate exclusion areas around the sensitive natural communities with flagging or signage to ensure that project activities would remain outside of exclusion areas. The applicant would restrict vehicle and equipment access to approved project areas only (APM BIO-2).

### Table 5.4-4: Sensitive Natural Vegetation Community Project Impacts

| Sensitive Natural Vegetation Community Alliance | Temporary Impact (Acres)[1] |
|---|---|
| **Forests and Woodlands** | |
| Jeffrey pine forest | 1.143 |
| Aspen groves | 0.191 |
| Black cottonwood forest | 0.057 |
| **Shrublands** | |
| Little sagebrush scrub | 16.01 |
| Silver sagebrush scrub | -- |
| Bitterbrush scrub | 24.092 |
| Interior rose thickets | 0.713 |
| Shining willow groves | 0.163 |
| Greasewood scrub | 7.138 |
| **Herbaceous Vegetation** | |
| Sheldon's sedge patch | 0.800 |
| One spike oat grass meadows | 0.342 |
| Ashy ryegrass meadows | 2.834 |
| Blue bunch wheat grass meadows | 0.221 |
| Hardstem bulrush marshes | 0.024 |
| American bulrush marsh | -- |
| Needle-and-thread grassland | 0.201 |
| Tansyleaf evening primrose patch | 0.029 |
| Total | 53.958 |

1 No permanent impacts to sensitive natural communities are anticipated

Plant mortality in sensitive natural communities could result from herbicides, fuel, or other chemicals, if overspray or a spill occurs on or near sensitive communities. The applicant would implement several measures, as previously discussed for special status plants in Section 5.4.4.1, Special Status Plants, including APM HAZ-1 and APM HYDRO-1. To avoid wildfires, the applicant would implement APM FIRE-1 and APM FIRE-2, would equip all work vehicles with a fire extinguisher, and would train crews to put out incipient brush fires when it is safe to do so. The effects of hazardous chemicals and fires could be temporary or permanent depending on the occurrence affected, the type of vegetation community affected, the severity of the incident, and the effectiveness of response efforts.

Introduction of invasive species to sensitive natural communities could become a permanent impact without immediate and follow-up treatment. To prevent impacts from the introduction and spread of invasive plants, the applicant would thoroughly clean staff clothing and footwear and the interior and exterior of all construction equipment and vehicles prior to arrival onsite or travel to different areas within the BRSA (APM BIO-6). Site restoration measures (APM BIO-5), including using native soils for backfill

and re-seeding disturbed areas with native plant mixes, would ensure that areas adjacent to sensitive natural communities are restored to pre-construction conditions and would prevent the spread of invasive plant species.

The applicant expects operational impacts to be minimal as all project access would occur at vault locations. The vaults would be located outside of sensitive natural communities, thus compaction from overland travel from the adjacent highway and shoulder to the vaults would not impact these communities. Therefore, construction and operation of the project would have a less than significant impact on riparian habitats or other sensitive natural communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

**c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**Less than Significant Impact.** The applicant would avoid all waterways and most wetlands (Table 5.4-5) by installing conduit under features using directional boring techniques or by attaching the cables to bridges, where available. Entry and exit pits along the running line would be located a minimum of 15 ft from top of bank of waterways and a minimum of 75 ft from the edge of wetland vegetation to avoid any direct impacts and to avoid or minimize potential indirect impacts. An Accidental Release Prevention Plan would be prepared and implemented (APM HAZ-3) in the event of a frac-out during horizontal boring. In addition, the applicant would develop and implement a project-specific SWPPP (APM HYDRO-1) to prevent contamination of adjacent waterbodies and wetlands during construction.

For wetlands that cannot be avoided (Table 5.4-5) with project siting, directional boring, or attaching to bridges, the applicant would perform construction activities in the wetland during the dry season (generally May through September) while the features are dry. If wetlands are perennial or do not fully dry due to local weather conditions, a coffer dam with appropriately sized bypass pumps (if needed) would be installed to dewater the area prior to the activities. Only temporary impacts on wetlands are anticipated, and the applicant would restore temporarily disturbed areas to pre-construction conditions . If changes during final design could result in permanent impacts that cannot be avoided, the applicant would compensate for the permanent loss of wetlands at a ratio of at least 1:1; however, final compensation ratios would be based on site-specific information and would be determined through coordination with the applicable resource agencies as part of the permitting processes for the project. Additionally, a Revegetation and Restoration Plan with detailed specifications for restoring all temporarily disturbed wetlands in accordance with project permits would be prepared (APM BIO-15).

### Table 5.4-5: Potential Waters of the U.S. and State Project Impacts

| Potential Waters of the United States and State | Temporary Impact (Acres)[1] |
|---|---|
| **Wetlands** | |
| Riparian Wetland | 0.19 |
| Riparian Fresh Emergent Wetland Complex | 0.35 |
| Fresh Emergent Wetland | 1.41 |
| Seasonal Wetland | 0.38 |
| Wetland Swale | 0.08 |
| **Other Waters** | |
| Pond | 0.000001 |
| Total | 2.410 |

1 No permanent impacts to waters of the U.S. or State are anticipated

To avoid or minimize indirect impacts from hazardous materials, spill kits would be provided at all locations where hazardous materials are being stored (APM HAZ-1) and refueling and maintenance for all vehicles and equipment would be prohibited within 100 ft of wetlands and other waters (APM HAZ-2). Also, a biological monitor (APM BIO-7) would be onsite to demarcate exclusion areas around most wetlands and all waterways with flagging or signage to ensure that project activities remain outside of exclusion areas. Therefore, construction and operation of the project would have a less than significant impact on state or federally protected wetlands with mitigation incorporated.

**d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less than Significant Impact.** The applicant would install the conduit and fiber optic cable along well-traveled highways and roads within Caltrans and Lassen County rights-of-way. These highways and roads experience high traffic volumes, which likely disrupts movement of many species to some extent. Existing roads often separate and isolate plant and animal habitats and sever corridors, acting as a physical barrier to movement or inducing avoidance behavior for some species and causing mortalities or injuries for some others (Ascensão et al. 2016; Bennett 2017; Jacobson et al. 2016). It is assumed that wildlife that are present within or in proximity to the BRSA would already exhibit at least some level acclimatization to disturbances from the passing traffic and from occasional road and utility maintenance crews. However, to minimize potential adverse effects on wildlife moving through the BRSA, the applicant would restrict vehicles and equipment use to designated work areas and approved access roads (APM BIO-2), enforce speed limits for vehicles and equipment on the right-of-way and access roads (APM BIO-3), conduct construction activities during daylight hours, (APM BIO-10), have biological monitors onsite (APM BIO-7), and ensure that all onsite personnel receive Worker Environmental Awareness Training prior to starting work on the project (APM BIO-6). Additionally, the applicant would backfill or

cover open excavations at the end of each workday to prevent wildlife moving through the project area from being entrapped. When this is not possible, the applicant would install escape ramps of sufficient slope to allow wildlife to escape (2:1 slope or less), and project biologists would inspect excavations that remained open overnight before construction activities begin each morning (APM BIO-13). Therefore, construction and operation of the project would have a less than significant impact on the movement of any native resident or migratory fish and wildlife species, with established migratory wildlife corridors, or the use of native wildlife nursery sites would be less than significant with mitigation incorporated.

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

**No Impact.** The applicant does not anticipate project-related conflicts with local policies or ordinances protecting biological resources. Therefore, construction and operation of the project would have no impact on local policies and ordinances protecting biological resources.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**No Impact.** The project does not occur within any current Habitat Conservation Plans or Natural Community Conservation Plans and the applicant does not anticipate project-related conflicts with approved local, regional, or state conservation plans. Therefore, construction and operation of the project would have no impact on any approved local, regional, or state habitat conservation plans.

**g) Create a substantial collision or electrocution risk for birds or bats?**

**Less than Significant Impact**. During construction, there is the potential for vehicle and equipment collisions with wildlife; however, the applicant would restrict vehicles and equipment use to designated work areas and approved access roads (APM BIO-2) and would enforce speed limits for vehicles and equipment on the right-of-way and access roads (APM BIO-3). The applicant would further minimize the potential for collision impact with migratory birds by conducting pre-construction nest surveys and establishing exclusionary buffers around active nests until the nest fledged or failed (APM BIO-11). Additionally, the applicant would conduct construction activities during daylight hours (APM BIO-10) to further minimize the potential for collision impact on bats and nocturnal birds. The applicant does not plan to build aboveground facilities that would provide risk for electrocutions or collisions with structures or wires. Therefore, construction and operation of the project would have a less than significant impact on the risk for collision or electrocution for birds and bats with mitigation incorporated.

### 5.4.5 Draft Environmental Measures

The applicant sited the running line not only to meet engineering requirements and constraints, but also to avoid or minimize impacts on sensitive cultural, aquatic, and biological resources. Caltrans initially directed the applicant to route the running line close to the outer edges of the transportation right-of-way; however, the applicant adjusted the placement of the running line within the Caltrans right-of-way to avoid

sensitive resources. These adjustments involved shifts within the right-of-way on same side of the road, or in some cases, placing the running line on the opposite side of the road.

The applicant would also avoid impacts on some sensitive resources by using directional boring methods to install the conduit under these resources rather than through them. Bores beneath water bodies would average between 4 and 10 feet but up to 15 feet below the water body bed. Bores beneath culverts would average 2 to 3 feet below the bed or approximately 4 feet below the water's surface.

In addition to project siting to avoid known locations of sensitive or protected resources, the applicant would also implement measures that would avoid or minimize impacts on special status plants and animals, sensitive natural communities, and waters of the U.S. and state. The APMs apply to the project's potential impacts on biological resources.

**APM BIO-1: Worker Environmental Awareness Training**

The applicant will prepare and implement a Worker Environmental Awareness Training to be presented by the Lead Biologist to all onsite personnel prior to commencing construction (i.e., staging vehicles or equipment). Training will instruct personnel how to identify sensitive resources and the locations of sensitive resource exclusion areas. Personnel will be instructed about roles and responsibilities in protecting sensitive biological resources, including penalties for violations, conducting sweeps for wildlife around equipment and vehicles before moving them, parking and driving only in approved areas, and stopping work immediately and notifying onsite biological and cultural monitors if sensitive resources are encountered. Handling and relocating special status species by non-approved personnel will be prohibited.

**APM BIO-2: Work Areas and Access Routes**

The applicant will confine all equipment, vehicles, and construction work within approved access routes and work areas to the maximum extent possible. Approved access routes and work areas will be clearly marked using stakes, flagging, or other means. No work, staging, or ground disturbance will occur outside of approved access routes and work areas. If off-pavement or gravel vehicle travel is required, the applicant will instruct personnel to use a spotter.

**APM BIO-3: Speed Limit**

Vehicles and equipment will adhere to a 15 miles per hour speed limit on all unpaved project access roads.

**APM BIO-4: General Project Area Use**

The applicant will prohibit trash dumping, firearms, hunting, open fires (those not required for project activities), smoking outside designated areas, and pets in project areas.

**APM BIO-5: Site Restoration**

Ground disturbance and vegetation clearing will be limited to the minimum extent practicable. Open excavations will be backfilled and recompacted after installation of the conduit with native soils . At locations where the excavated material is not adequate to use for backfilling, construction crews will remove it from the project workspaces and dispose of it at a location that meets California Department of Transportation's (Caltrans') requirements. In areas where backfill material must be imported (e.g., areas were excavated material has high rock content), the applicant will obtain soils from commercially available sources approved by Caltrans. After completion of project activities, all temporarily disturbed work areas will be restored to their pre-construction contours, and areas of exposed soils in natural habitats will either be re-seeded with native seed mixes or stabilized. Non-natural habitats, such as agricultural, urban, and barren areas, are maintained by landowners and will not be revegetated.

The applicant will prepare and implement a Revegetation and Restoration Plan (RRP) with detailed specifications for restoring all temporarily disturbed native vegetation in accordance with project permits. The RRP will discuss mitigation and restoration methods where vegetation is temporarily or permanently impacted. The RRP will include plants and seed mixes that will be used for temporary and permanent revegetation, plant container sizes and appropriate planting methods, and maintenance requirements, including irrigation needs and design plans that will show the specific plant species and planting locations.

**APM BIO-6: Invasive Species**

To prevent the introduction and spread of invasive plants during construction, the applicant will ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. Incoming vehicles and wheeled or tracked equipment will be inspected by a biological monitor prior to deployment onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel clothing and boots will be swept or cleaned prior to deployment to a different construction site. If application of herbicides is needed to control designated noxious weeds, only approved weed control contractors would apply herbicides in adherence with all state and manufacturer's guidelines.

**APM BIO-7: Biological Monitors**

The applicant will appoint a Lead Biologist and one or more biological monitors. Biological monitors will be onsite daily during project activities to minimize incidental impacts to sensitive biological resources by conducting pre-construction surveys and sweeps, ensuring compliance with all avoidance and minimization measures, demarcating sensitive biological resource exclusion areas (e.g., active den or nest, special status plant occurrence, sensitive natural community, or wetland or waterway boundary) with flagging or signage, and ensuring that flagging and signage remain intact and that project activities remain outside of exclusion areas. If a special status species is encountered in the work areas, construction in the immediate vicinity will cease, and personnel will notify the biological monitors. Biological monitors will establish a buffer to restrict work near the species. If it is a wildlife species, a biological monitor will observe the behavioral responses of the species to the work occurring in proximity to them. The biological monitors will halt work if a wildlife species exhibits an adverse response to nearby project work activities. The species will be allowed to move offsite on their own. If the species is in danger

of injury or does not leave the work area, the biological monitor will relocate the species to adjacent suitable habitat, if feasible, and with prior approval from the California Department of Fish and Wildlife and/or the U.S. Fish and Wildlife Service or will consult with agencies for further guidance.

**APM BIO-8: Protection of Botanical Resources**

The locations of the special status plants will be marked as avoidance areas both in the field; using flagging, staking, fencing, or similar devices; and on construction plans. Locations shall be incorporated into project siting, design, avoidance, and management in accordance with APM BIO-7 and APM BIO-9.

**APM BIO-9: Special Status Plant Impacts**

If additional special status plants are identified during pre-construction surveys, complete avoidance is not practicable, and the project would directly or indirectly affect more than 10 percent of a local occurrence by either number of plants or extent of occupied habitat, a conservation and restoration plan shall be implemented in coordination with a qualified biologist. The conservation plan may consist of but is not limited to purchase of mitigation credits at a regional conservation bank; collection and subsequent planting of seed or incorporating seed from native nursery into seed mix used for revegetation efforts; stockpiling, storing, and replacing topsoil containing the local seed bank; or other measures determined practicable based on the species and site conditions. For some species and site conditions, conservation bank credits and seed may not be available, or conservation efforts may not have a reasonable probability of success or could result in detrimental effects on existing special status plant populations. In these cases, as determined by a qualified biologist, no conservation measures will be required.

**APM BIO-10: Work Timing**

Construction activities will be restricted to daylight hours . If nighttime work is required, lights will be shielded and/or pointed downward and into work areas, and not into surrounding areas.

**APM BIO-11: Nesting Birds**

Biological monitors will conduct pre-construction nesting bird surveys during the nesting season (February 1 to August 31) within 100 feet of the construction workspaces for non-raptors, and within 0.5 mile for raptors. Pre-construction surveys for non-raptors would be valid for 1 week, and surveys for raptors would be valid for the full season if conducted after May 1. Biological monitors will establish exclusionary buffers around active nests, which would be 100 feet for non-raptors and 0.25 mile for raptors, increasing to 0.5 mile for bald eagles, golden eagles, ferruginous hawks (*Buteo regalis*), Swainson's hawks (*Buteo swainsoni*), and prairie falcons (*Falco mexicanus*) when nests are in line-of-sight. Project activities will be prohibited within the exclusionary buffer until the nest fledged or failed. To the extent possible, work will be scheduled during the non-breeding season or in construction spreads that lack active nests.

**APM BIO-12: Greater Sage-grouse Leks**

The applicant will avoid construction activities within 4 miles of active or pending greater sage-grouse leks from 6 PM to 9 AM between March 1 and May 15. [Additional information pending further consultation with BLM].

**APM BIO-13: Open Excavations**

The applicant will backfill or cover open excavations at the end of each workday to avoid wildlife entrapment. When this is not possible, the applicant will install escape ramps overnight to allow wildlife to escape (2:1 slope ratio or less), and a biological monitor will inspect excavations that remained open overnight before construction activities begin each morning.

**APM BIO-14: Minimum Bore Depth**

The applicant will impose minimum bore depths when boring under sensitive natural communities and special status plant occurrences to prevent root damage and plant mortality. The minimum depths are 30 feet for tree-dominated, 23 feet for shrub-dominated, and 15 feet for herbaceous-dominated communities or occurrences.

**APM BIO-15: Wetland Impacts**

The applicant will avoid directly impacting wetlands; however, for wetlands that cannot be avoided, or for which direct, temporary disturbance (e.g., trenching) outweighs the risk of effort-intensive avoidance techniques (e.g., boring) the applicant will implement the following measures:

- Construction activities within wetlands will be performed during the dry season (e.g., generally May through September) while the features are dry.
- If construction activities are required in perennially wet features or if features do not fully dry due to local weather conditions, a coffer dam with appropriately sized bypass pumps (if needed) will be installed to dewater the area prior to the activities.
- As currently designed, only temporary impacts on wetlands are anticipated, and the applicant will restore temporarily disturbed areas to pre-construction conditions and according to applicable permit requirements. If changes during final design could result in permanent impacts that cannot be avoided, the applicant will compensate for the permanent loss of wetlands at a ratio of at least 1:1; however, final compensation ratios will be based on site-specific information and will be determined through coordination with the applicable resource agencies as part of the permitting processes for the project.

**APM BIO-16: Vegetation Clearing for Birds and Bats**

If vegetation clearing occurs during nesting bird season (February 1 to August 30) biological monitors will establish a 300-foot no-vegetation clearing buffer around active nests that shall remain in place until the nest has fledged or failed. Prior to tree removal, a biological monitor will conduct pre-construction surveys for roosting bats, and if present, the trees will not be removed until a biological monitor determines that the roost is no longer active.

# 5.5 CULTURAL RESOURCES

This section describes existing conditions and potential impacts on cultural resources as a result of construction, operation, and maintenance of the project. It presents the methods and results of cultural resources studies of the project area. The conclusions are summarized in Table 4.5-1 and discussed in more detail in Section 5.5.4, Impact Analysis.

## 5.5.1 Environmental Setting

### 5.5.1.1 Cultural Background

#### Modoc Uplands

The northernmost of the regions defined for organizing cultural resources within the project right-of-way is the Modoc Uplands, which ranges in elevation from 4,800 feet above mean sea level (amsl) at the southern border of Oregon and California near the eastern edge of Goose Lake, to the City of Alturas at 4,400 feet amsl. The Modoc Uplands are characterized by numerous block-faulted Cenozoic basalt flows and smaller rhyolitic domes and shield volcanoes (Bailey 1966). The Modoc Uplands include the Tule Lake Basin to the west of the project right-of-way and the Modoc Plateau, which descends towards Warms Springs Valley and the Pit River drainage.

The region is marked by dry, temperate summers and cold, wet winters during which most of the 30 to 40 centimeters of precipitation is received in the form of snow. Soil development is slow and limited to open meadows and seasonal wetlands in the form of aeolian sediments and pumiceous tephras. Basal ridges and tablelands primarily contain thin deposits of colluvial and alluvial sediments interrupted by expanses of rough, exposed volcanic bedrock. The following descriptions of Modoc Uplands flora and fauna are largely excerpted from Delacorte et al. (1997:10-15).

Vegetation growing in this region is generally transitional between the Sierra Nevada/Cascade uplands and the arid Great Basin to the east. Dominant trees include ponderosa and Jeffrey pine (*Pinus ponderosa* and *P. jeffreyi*), white and Douglas-fir (*Abies concolor* and *Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), and lodgepole pine (*Pinus contorta*), many of which have been reduced through commercial harvest (Pease 1965; Fitzhugh 1988). In more exposed settings, these montane species give way to an open woodland of western juniper (*Juniperus occidentalis*) that has significantly expanded its range as a result of fire suppression and other modern land-use practices.

Among the more common shrubs growing in woodland and more extensive tracts of open country are big and low sagebrush (*Artemisia tridentata* and *Artemisia arbuscula*), serviceberry (*Amelanchier* spp.), buckbrush (*Ceanothus* spp.), bitterbrush (*Purshia tridentate*), rabbitbrush (*Chrysothamnus* spp.), and currants (*Ribes* spp.). Perennial grasses and herbaceous vegetation in dryer settings include bluegrass (*Poa* spp.), squirreltail (*Sitanion hystrix*), buttercup (*Ranunculus* spp.), biscuitroot (*Lomatium* spp.), and the invasive Eurasian annual cheatgrass (*Bromus tectorum*). In more mesic settings around seasonal wetlands are various rushes (*Juncus* spp.), sedges (*Carex* spp.), tufted hairgrass (*Deschampsia*

*caespitosa*), water groundsel (*Senecio hydrophilus*), cinquefoil (*Potentilla* spp.), and brodiaea (*Brodiaea* spp.).

Diverse fauna inhabit the vegetational mosaic of the Modoc Uplands and like many of the grasses and other plants, constituted an important aboriginal subsistence resource. Large vertebrates of significance include mule deer (*Odocoileus hemionus*) and pronghorn (*Antilocapra americana*), with mountain sheep (*Ovis canadensis*), elk (*Cervus canadensis*), and bison (*Bison bison*) less widely distributed than in the past (O'Connell 1971, 1975; Sampson 1985). Smaller mammals that frequent the area include black-tailed jackrabbit (*Lepus californicus*), cottontail (*Sylvilagus* spp.), porcupine (*Erethizon dorsatum*), and a wide array of squirrels (Sciuridae), pocket gophers (Geomyidae), mice (Heteromyidae), and rats (Cricetidae). Coyote (*Canis latrans*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*), badger (*Taxidea taxus*), and striped skunk (*Mephitis mephitis*) are the major contemporary predators, although wolves (*Canis lupus*) and grizzly bears (*Ursus horribilis*) also occupied the area in the past.

Waterfowl that continue to find seasonal nesting habitats in the ephemeral pools and marshes of the Modoc Uplands include a variety of dabbling ducks of the *Anas* genus (e.g., mallard, pintail, shoveler, green-winged teal, and cinnamon teal, etc.) that would have been even more abundant prior to the draining of Tule Lake. Canada geese (*Branta canadensis*) and snow geese (*Chen caerulescens*), American white pelicans (*Pelecanus erythrorhynchos*), and other aquatic birds (e.g., gulls, coots, grebes, and loons) also frequent the Tule and other large lake basins but are of minor consequence over most other parts of the Modoc Uplands. Other birds of food value to indigenous populations probably included sage grouse (*Centrocercus urophasianus*), quail (*Callipepla californica*), and mourning dove (*Zenaida macroura*). Finally, to these economically important taxa can be added more numerous passerine species, migratory raptors, and a diverse herpetofauna, which comprise a conspicuous element of the local wildlife but likely contributed little to the prehistoric diet.

The lava plain is underlain by basalts and andesites extruded over vast areas of land during the Cenozoic Tertiary and Quaternary periods. Mountains in the regions include the Warner Mountains to the east, Adin and Big Valley Mountains to the south, and the Medicine Lake Highlands to the west. Goose Lake, a large alkaline lake in Goose Valley that spans the Oregon-California border, is roughly 2 miles west of the right-of-way. It is a pluvial lake that formed during the Pleistocene from precipitation and melting glaciers and would have been accessible to the region's prehistoric inhabitants. The major landforms with the region include lava platforms, mountains, and basins filled with lava-derived alluvium. Lava flows in the area contain numerous underground tubes, many with percolating water or ice. Volcanic activity occurred fairly continuously from the Pleistocene to 900 years ago. Obsidian sources in the area include Medicine Lake Highlands, East Medicine Lake, Grasshopper Flat/Lost Iron Well/Red Switchback, Buck Mountain, and Blue Mountain (Hughes 1986; Gates 2007).

Soil development within the region is limited to open meadows, ephemeral pools, and seasonal wetlands where aeolian sediments and pumiceous tephras from Holocene eruptions of the Medicine Lake Highlands have been redeposited to varying depths. Elsewhere, exposed ridges support only thin sediments overlying decomposing basalt bedrock. Vegetation on the Modoc Plateau mostly consists of juniper savannah, where Sierra juniper (*Juniperus* spp.) trees dot the landscape at varying densities against a sagebrush (*Artemisia* spp.) and bunchgrass (*Stipa* spp.) background. Portions of the right-of-

way are also characterized by a mosaic of sagebrush steppe, juniper savannah, ponderosa pine/scrub (pine intermixed with sage brush and juniper), and open ponderosa pine forest, while the surrounding mountains are characterized by montane forest with ponderosa pine, Douglas fir, sugar pine (*Pinus lambertiana*), incense cedar (*Calocedrus decurrens*), and other high-altitude species.

Diverse fauna inhabit the vegetated areas of the Modoc Plateau. Large vertebrates include mule deer and pronghorn, though mountain sheep inhabited the more rugged uplands in the past. Elk and bison have also been recovered from the region in archaeofaunal collections (Sampson 1985). Squirrels, pocket gophers, black-tailed jackrabbits, porcupines, mice, and rats are common smaller mammals in the area. Ephemeral pools and marshes provide seasonal nesting habitats for waterfowl. Historically, there was a spring-run of suckers (*Catostomus* spp.) in the tributaries of Tule, Goose, and Lower Klamath Lakes. Current predators consist of coyotes, striped skunks, mountain lions, badgers, and bobcats, while wolves and grizzly bears would have inhabited the area in the past. Today, much of the Modoc Plateau is used for grazing and lumbering, though intensive agriculture is practiced on the Tule Lake lakebed to the west. The high lava plains of the Modoc Plateau are generally uncleared and uncultivated. Logging of pine and fir primarily takes place on adjacent mountains where larger timber is available.

### Madeline Plains

The Madeline Plains region of the project right-of-way includes the well-watered valleys of the Pit River system (e.g., Warm Springs and South Fork), as well as the scrub-covered flats of the Madeline Plains. Structurally, the valleys consist of broad, down-warped troughs bounded by Basin and Range-type faulting on the west and the towering Warner Mountains on the east. Apart from locally offset scarps and low basalt bluffs, terrain over most the valley bottoms is comparatively level to gently rolling, with an average elevation of 4,300 feet amsl. The South Fork of the Pit River courses north through South Fork Valley, joining the northern branch near the City of Alturas where the stream turns west and eventually drains into the Sacramento River. Alluvium washed from the surrounding uplands blankets most of the valleys, especially cut-off meanders, pools, and marshes formed by periodic flooding of the Pit River.

In contrast to the valleys, the Madeline Plains are a nearly featureless landscape that was formed when pluvial Lake Madeline receded and finally dried up after its last major high stand following the deposition of the Trego Hot Springs tephra, dated at 23,400 before the present (Young 1996). Prominent wave-cut benches can still be seen along the flanks of the basin, which formerly drained into Secret Valley and the Honey Lake Basin of the Lake Lahontan impoundment (Mifflin and Wheat 1979). Temperatures and precipitation on the Madeline Plains, situated at an elevation of approximately 5,300 feet amsl, are similar to those in the Modoc Uplands, though the nearly impervious alluvial/lacustrine sediments inhibit drainage, and large areas of the plains can be seasonally inundated with a thin sheet of water. An exception occurs along the flanks and the southern end of the basin near Spanish Springs, where more recent colluvial deposits and outcrops of Quaternary-age basalt rise above the plains and provide substantially better drainage.

Vegetation across most of the Madeline Plains and the better-drained sections of the Pit River valleys resembles that over much of the Modoc Uplands, constituting a sagebrush-steppe community (Billings 1951; Cronquist et al. 1972). Plants characteristic of this association include big and low sagebrush,

bitterbrush (*Purshia tridentate*), rabbitbrush, and various native and introduced grasses. At higher elevations along the base of the surrounding hills, these are interspersed with stands of western juniper, which appears to have expanded its range during the historic period.

A second riverine or marsh community occurs in moist areas bordering the Pit River and its sloughs. Plants growing in this mesic environment include bulrush (*Scirpus* spp.), cattail (*Typha* spp.), common reed (*Phragmites communis*), willow (*Salix* spp.), bentgrass (*Agrostis* spp.), and various rushes and sedges. In better-drained places along the stream channels are also stands of wild rose (*Rosa* spp.), mustard (*Brassica* spp.), peppergrass (*Lepidium* spp.), thistle (*Cirsium* spp.), mullein (*Verbascum* spp.), and Great Basin wild rye (*Leymus cinereus*). To the south in moister sections of the Madeline Plains is a similarly luxuriant meadow association, supporting taxa such as bentgrass and hairgrass (*Eleocharis* spp.), squawroot (*Perideridia* spp.), and various rushes and sedges. *Perideridia*, or *epos*/*yapa* as it was called aboriginally (Kniffen 1928, Riddell 1960), may have been especially important in these contexts because it provided large quantities of nutritious roots that were gathered, dried, and stored for winter food. Indeed, the local distribution of this plant appears to coincide closely with the ground stone scatters that distinguish Madeline Plains archaeological sites from those of other areas within the project right-of-way.

Fauna within Madeline Plains region generally resemble those of the Modoc Uplands. Deer inhabit the brushy river bottoms and wooded foothills, while pronghorn congregate seasonally in large herds on the open flats and valley bottoms. Cottontails and jackrabbits (*Lepus* spp.) have a similar distribution and are joined by a host of smaller rodents and their predators (e.g., coyote, badger, fox, etc.). Even more abundant are the thousands of resident and migratory waterfowl and shorebirds that flock to the streams, sloughs, and marshes of the Pit River system and the seasonally flooded parts of the Madeline Plains. Greater sage grouse may have been of comparable significance in terms of aboriginal subsistence, which would have found ideal habitat over much of the sagebrush-covered plains.

Other aquatic fauna of importance along permanent waterways of the Pit River drainage include river otter (*Lontra canadensis*), muskrat (*Ondatra zibethica*), mink (*Mustela vison*), and raccoon (*Procyon lotor*) that thrive in this biotically rich habitat. Native fish of the Pit River and its tributaries include an assortment of mostly 'warm-water' species such as suckers, squawfish (*Ptychocheilus grandis*), California roach (*Hesperoleucus symmetricus*), dace (*Rhinichthys osculus*), sculpin (*Cottus* spp.), lamprey (*Lampetra lethophaga*), and trout (*Salmo* spp.). Finally, aquatic invertebrates of potential economic importance are freshwater mussel (*Anodonta californiensis*, *Gonidea angulata*, and *Margaritifera falcata*) and possibly crayfish (*Pacifastacus* spp.).

## Honey Lake Basin

Upon leaving Secret Valley, the project right-of-way continues south into the Honey Lake Basin. As with most of the valleys that make up the Pluvial Lake Lahonton system in California and Nevada, Honey Lake is bordered by steep, generally north-south trending mountains that drain into a series of alkaline playas and marshy sumps. However, under wetter conditions during the Pleistocene, the Honey Lake Basin contained a deep lake that was connected via Astor and Sand Passes to the Pyramid and Smoke Creek arms of Lake Lahonton. Today, most of these impoundments have either dried completely, are only

periodically flooded, or contain only a fraction of their original volume as indicated by the prominent wave-cut terraces that ring the Honey Lake and other basins.

Geomorphological conditions and soil development are consistent throughout the region. Low-lying areas that formed the floor of ancient lakes and extant playas consist of fine-grained alluvial sediments and clays containing high concentrations of alkaline salts, heavy metals, and other evaporates (Mifflin and Wheat 1979; Smith and Street-Perrott 1983). Often bordering the leeward side of these playas are Holocene dune fields that formed when beach and alluvial sand was exposed and redeposited by aeolian processes following the desiccation of the lakes. At higher elevations on the valley piedmont is more course-grained Quaternary alluvium that blankets most of the basins to a depth of several hundred meters or more. Finally, steeper slopes contain increasingly massive accumulations of alluvial and then colluvial debris that form broad, often coalescing bajadas along the mountain fronts.

The current climate of the Honey Lake Basin and regions to the south is regulated by many factors, including elevation and the influence of numerous mountain ranges that produce rain shadows of varying intensity. In general, climatic conditions throughout the area are characterized by warm, dry summers and cold, wet winters, with the lowest temperatures of the year occurring around the winter solstice when cold air becomes trapped in the basins and daily temperatures fluctuate little.

Topographic gradients in temperature and precipitation exert a strong influence on the distribution of plant and animal species in this part of the project right-of-way. At low elevations in the Honey Lake and other valley bottoms is a shadscale scrub community (Billings 1951; Cronquist et al. 1972). Woody shrubs characteristic of this zone include shadscale (*Atriplex confertifolia*), saltbrush (*Atriplex* spp.), greasewood (*Sarcobatus* spp.), spiny hopsage (*Grayia spinosa*), Nevada ephedra (*Ephedra nevadensis*), rabbitbrush, and big sagebrush. Important seed-bearing grasses and weedy annuals in the shadscale and other lowland communities are ricegrass (*Oryzopsis* spp.), Great Basin wild rye, wheatgrass, needlegrass (*Achnatherum* spp.), blazing star (*Mentzelia albicaulis*), tansy mustard (*Descurainia* spp.), inkweed (*Suaeda depressa*), and several members of the Asteraceae family. A second lowland habitat of importance along the Susan River and other seasonally flooded areas of the Honey Lake Basin is a Great Basin wetland. Emergent and other vegetation distinguishing the habitat include bulrush, cattail, common reed, rushes, sedges, willow, alkali arrow grass (*Triglochin debilis*), spike-rush (*Eleocharis rostellata*), ditch grass (*Ruppia* spp.), alkali sacaton (*Sporobolus airoides*), saltgrass (*Distichlis spicata*), yerba mansa (*Anemopsis californica*), and brodiaea (*Brodiaea spp*).

At higher elevations in the mountains is a fairly typical sagebrush community composed of woody shrubs (e.g., sagebrush, bitterbrush, rabbitbrush) and a variable mix of perennial grasses and herbaceous annuals. Where temperatures are sufficiently cool and moisture adequate, there are open stands of Utah juniper (*Juniperus osteosperma*) that continue to the crest of the most low-elevation mountain ranges. Finally, along the eastern slope of the Sierra Nevada Range are a series of montane coniferous forests (Billings 1951) that extend down nearly to the floor of the Honey Lake Basin. Trees characteristic of these environments include ponderosa, Jeffrey and lodgepole pine, Douglas fir and red fir (*Abies magnifica*), and, at lower elevations in the Diamond Mountains, California black oak (*Quercus kelloggii*).

Various large and small mammals, resident and migratory birds, and reptiles frequent the Honey Lake Basin. Mule deer and pronghorn are presently the largest vertebrates of significance, with mountain sheep and possibly bison present but never as abundant as in the past. Small mammals include, among others, jackrabbit, cottontail, and a wide array of squirrels, pocket gophers, and rodents such as kangaroo rats and mice (*Dipodomys* spp. and *Microdipodops* spp.), woodrats (*Neotoma* spp.), and pocket mice (*Perognathus* spp.). Apart from assorted foxes and mustelids, coyote and bobcat are the major predators, joined in the Sierra Nevada high country by mountain lions, black bears (*Ursus americanus*), and ringtails (*Bassariscus astutus*). Resident and migratory waterfowl of the same species found elsewhere within the project vicinity frequent the few remaining wetlands and would have been substantially more abundant in the past. Other birds include a variety of native gallinaceous fowl and more numerous raptors and passerine species. Cold-blooded vertebrates of significance in the aboriginal diet included various native fish of the Susan River (e.g., sucker, trout) and the Pyramid Lake/Truckee watershed (e.g., Cui-ui [*Chasmistes cujus*], Tahoe sucker [*Catostomus tahoensis*], and trout [*Salmo spp.i*]). Amphibians and reptiles are represented by numerous species, and invertebrates of subsistence value were represented by one or more species of freshwater mussels.

## Long Valley Region

The Long Valley region is situated east of the Sierra Nevada Range at an elevation of 4,500 feet amsl. Long Valley is a north-south trending valley beginning at its northern extreme near the town of Doyle, the center of residential and commercial development for the area. The water table in the area appears to be relatively shallow, as evidenced by marshy pastures. Areas surrounding US 395 are characterized by a sagebrush scrub community. The region's natural environment has been altered by a number of historic period activities, including farming, ranching, mining, and transportation. Much of the valley in the project vicinity surrounding US 395 is planted with alfalfa with the remaining area being used for cattle grazing.

The Long Valley region lies in the rain shadow of the Sierra Nevada Range and experiences a continental climate characterized by hot, dry summers and cold winters. Most regional precipitation occurs as winter rain or snow, but brief late-afternoon thunderstorms are not uncommon during the summer. Long Valley Creek is the principal waterway coursing through the project right-of-way, roughly paralleling US 395 and flowing north into Honey Lake. Numerous perennial and seasonal creeks flow into Long Valley Creek from the surrounding mountain ranges. According to the U.S. Department of Agriculture (1996), annual precipitation near Doyle averaged 27.6 centimeters between 1948 and 1995. Regional temperatures ranged from below freezing to more than 100 degrees Fahrenheit, with daily minimum and maximum temperatures at Doyle (years 1961 to 1990) ranging from 34.5 degrees Fahrenheit to 64.6 degrees Fahrenheit (U.S. Department of Agriculture 1996).

The region is characterized by complex local geology. Long Valley is bounded by three upland bedrock formations. The western boundaries at the southern end of Long Valley consist of the Verdi and Bald Mountain Ranges and part of the granitic Sierra Nevada Range, which also include pre-Tertiary metamorphic formations. Volcanic rocks mostly composed of andesite are of Tertiary age and lie above the bedrock complex. The Bald Mountain Range terminates near Beckwourth Pass, north of which lies the Diamond Mountain Range. Small streams of the Bald and Diamond Mountain Ranges flow east and

provide the sources for Long Valley Creek. The Diamond Mountains are a continuation of the Sierra Nevada Range formed by granitic plutons related to the Sierran uplift.

Long Valley is bounded on the east by the Fort Sage Mountains, which were also formed by an uplifted granitic pluton. The Mesozoic rocks of the Sierra Nevada and associated ranges are overlain by middle and late Cenozoic continental volcanic and sedimentary rocks, called "roof pendants," that have eroded onto the Sierran slopes (Elston 1979:7). These metamorphic formations are interdigitated with Sierran granitics and appear along the western slopes of the Fort Sage Mountains. These older deposits are incorporated into sediments, knolls, and low-lying ridges in some places at the western base of the mountains on the eastern terraces above Long Valley Creek. Metamorphic formations include a variety of silicate rocks generically described as chert, jasper, chalcedony, and agate, along with coarser grained metavolcanic rocks. The silicates predominantly occur as cobbles and small boulders less than 20 centimeters in diameter. Quartz crystal is also found in selected locations and deposits in the area.

Soils within much of Long Valley result from the weathering and erosion of local granitic rocks in the Fort Sage Mountains and foothills. Degradation of the mountains has also exposed knolls and small hills at their base. These foothill formations are made up of more durable underlying rock types. Less resistant locations have been eroded, forming swales and terraces of colluvial sands primarily derived from erosion of upland granitics. The more resistant knolls, ridges, and hills are covered with much shallower soils. Granitic outcrops occur on these prominences, as well as a mixture of redeposited volcanic and metasedimentary rocks. This mixture is particularly prominent on the south-facing slopes of these knolls and small ridges. Prevailing south and southwesterly winds have eroded soils on the southern slopes, exposing these rocks. Aeolian deposits have accumulated on the north-facing slopes and adjacent swales, contributing to the depth of the soils on those terraces and swales. The relatively deep aeolian and colluvial soil deposition on swales and terraces has important implications for the nature of archaeological materials on those terraces. Soil deposits are generally devoid of naturally deposited large rocks and cobbles. When such materials are found in archaeological deposits on the terraces, they are probably the result of human transport.

Long Valley vegetation is typical of flora in the Great Basin at this elevation (approximately 4,500 feet amsl) and latitude. The region is just below the transition zone between sagebrush prairie and the piñon-juniper community and is typical of the low sage, sagebrush, bitterbrush, and perennial grassland habitats. These plant communities are dominated by sagebrush with rabbitbrush, Nevada ephedra, and antelope bitterbrush. The grassland communities include but are not limited to bluebunch wheatgrass (*Agropyron spicatum*), Idaho fescue (*Festuca idahoensis*), Mountain brome (*Bromus marginatus*), Indian ricegrass (*Oryzopsis hymenoides*), and needlebrush. Stands of willow trees are abundant in pockets adjacent to Long Valley Creek, and western junipers are scattered throughout the project vicinity. Western junipers are, however, more abundant at slightly higher elevations.

Wildlife in the region includes pronghorn, mule deer, and small mammals such as chipmunk (*Eutamias* spp.), antelope ground squirrel (*Ammospermophilus leucurus*), jackrabbit, cottontail, and coyote (Offermann 1996:5-6). A variety of bird species also inhabit the area, including sage grouse; mourning dove; quail (*Callipepla Californica*); red-tailed hawk (*Buteo jamaicensis*); and other raptors, crows, and

magpies (Corvidae), with waterfowl (*Anseriformes*) present near Honey Lake. The common fish historically found in Long Valley Creek was the Lahontan sucker (*Pantosteus lahontan*).

### 5.5.1.2 Cultural Resources Summary

On May 11, 2020, Stantec requested that NEIC conduct a search of the California Historical Resources Information System. The records search included a 0.25-mile buffer around the APE. The search encompassed 180 miles extending through Modoc, Lassen, and Sierra Counties from New Pine Creek, California in the north to Bordertown, Nevada in the south. On May 19, 2020, the NEIC provided the existing data (records and shapefiles) for cultural resources investigations within 0.25-mile of the APE (I.C. File No. D20-81).

A total of 586 cultural resource have been recorded within 0.25-mile of the APE. Of these, 259 resources are located within the APE, and 327 resources have been recorded within 0.25-mile of the APE (Table 5.5-1). Of these, 259 resources are located within the APE, and 327 resources have been recorded within 0.25-mile of the APE. The *Cultural Resources Technical Report* (Appendix D) includes more details regarding previously recorded sites within each county.

**Table 5.5-1: Previously Recorded Resources within Each County**

| | Lassen County | Modoc County | Sierra County | Plumas County | Total |
|---|---|---|---|---|---|
| **Within 0.25 Mile of APE** | 193 | 113 | 20 | 1 | 327 |
| **Within the APE** | 150 | 99 | 10 | 0 | 259 |
| **Total** | 343 | 212 | 30 | 1 | 586 |

Note:
APE = Area of Potential Effects

### 5.5.1.3 Cultural Resources Survey Boundaries

The project APE for archaeology encompasses the extent of all proposed ground-disturbing activities along the fiber optic utility line and underground vault locations proposed as part of the project and is equivalent to the right-of-way. The APE has been approved by BLM. The horizontal APE varies in width but averages 200 feet across and is centered on US 395 for most of its length, except where it departs US 395 to follow Lassen County Road A3. In certain areas, for instance in the City of Alturas, the right-of-way contracts to a width of 60 feet; in other areas, such as at Hallelujah Junction, it expands to a width of 600 feet. The right-of-way extents serve as the boundary within which Zayo would conduct all project construction and staging activities.

In general, the vertical APE would include open trench installation, which would require excavation of a trench measuring up to 12 inches wide and 36 inches deep below the existing ground surface. The applicant proposes HDD to install conduit beneath paved roadways, drainages, and other environmentally sensitive areas identified during the NEPA environmental review process. Vaults would be installed at the starting and ending points between HDD segments and at service junctions. Each of

the vaults would measure 36 inches wide and 48 inches long, and the bottom of the vault would be set at least 36 inches below the existing ground surface. Table 5.5-2 outlines land ownership by entity for the APE.

### Table 5.5-2: Land Ownership Underlying the Area of Potential Effects

| Ownership | Acres of Area of Potential Effects |
|---|---|
| Bureau of Indian Affairs | 166.54 |
| Bureau of Land Management | 1661.50 |
| U.S. Fish and Wildlife Service | 86.11 |
| California Department of Fish and Wildlife | 104.12 |
| State Lands | 104.12 |
| Undefined | 3715.18 |
| Hallelujah Junction Wildlife Area | 173.89 |
| U.S. Forest Service | 0.78 |
| **Total** | **6011.45** |

Note:
"Undefined" includes land within Caltrans right-of-way or local roadways that is not within jurisdiction of federal/state resource agencies identified in the table.

Stantec conducted a Cultural Resources Inventory and Evaluation for the Project. Between June 1 and July 2, 2020, Stantec archaeologists conducted a pedestrian field survey of the APE. The California project segment would extend 193.9 miles across portions of Modoc, Lassen, and Sierra Counties. Stantec archaeologists were accompanied by Pit River tribal representatives when surveying traditional tribal territories of the Pit River Tribe.

The Area of Direct Impact (ADI) for the project would encompass all areas of direct ground disturbance associated with construction, including all areas that would be subject to plowing and furrowing, trench installation, vault installation, and directional boring. The horizontal extents of the ADI are expected to average 6 to 18 inches across for plowing and furrowing and trench installation. The vertical ADI for plowing, trenching, and vault excavations would average 42 inches, though deeper excavations would be required for directional boring to bypass sensitive areas or paved roads. Temporary staging areas would not require grading, grubbing, or clearing and would not be considered part of the ADI, though they would be confined to the right-of-way boundaries.

The entire APE was surveyed during these efforts. All sites located within the APE were recorded or updated, however, preliminary evaluations were only applied to sites which intersect the ADI.

Based on background research and pedestrian survey efforts, a total of 248 sites are located within the APE. Of these sites,197 would be avoided by the project, have been determined not eligible or recommended not eligible, and 51 would require additional testing or analysis (Table 5.5-3).

### Table 5.5-3: Total Survey Site Counts and Recommendations

| Property | All | Avoid/Recommend/Determined Not Eligible | Eligible/Testing or Additional Analysis |
|---|---|---|---|
| Total | 248 | 197 | 51 |

### 5.5.1.4 Buried Site Sensitivity

As part of the cultural resource inventory, a desktop buried site sensitivity analysis was developed to describe the relative likelihood of a paleosol with the potential to contain archaeological material to occur in the proposed project area. Using systems theory as a guiding framework, this study assumes the interrelatedness of diverse ecological and cultural factors to analyze patterns of geology, hydrology, climate, sedimentology and anthropogenic land use, and to identify the potential for buried sites within the project area. Digital spatial data for geologic units and soils data were available for the entire project area and were used as base layers for the sensitivity model. This foundation was then modified by subsequent data related to paleoclimate, hydrology, historical map imagery, site location data, as well as historical and modern anthropogenic land use patterns. Using the results of the model, areas of the project were classified as containing either no, low, medium, or high sensitivity for containing paleosols (buried soil horizon) that may contain intact buried archaeological resources.

The geology and soils that are present in the project APE generally date to the Pleistocene and Holocene and are primarily associated with loess, alluvial, and lake deposits. These data suggest that the area is associated with active landscapes affected by short- and long-term episodes of deposition. These conditions across the project APE in combination with its generally arid climate do not make it conducive to long-term permanent settlement.

The regional archaeological and ethnographic record indicates that the area was typically inhabited by mobile populations that occupied areas located at or near the intersection of watercourses and resources (e.g., plants and animals). Based on the geology, soil types, and the known distribution of archaeological and ethnographic sites, the project APE generally exhibits a low to moderate sensitivity for the presence of buried archaeological sites or other cultural material. However, the areas along the margins of existing lakes (e.g., Lake Madeline and Honey Lake) and former Pleistocene lakes (e.g., Lake Lahontan) have a high sensitivity for the presence of buried archaeological sites or other cultural material because of their age and proximity to environments containing resources (e.g., water, plants, and animals) that were attractive to human occupation. Regardless, any sites in these areas would likely be associated with mobile populations and would represent temporary use of the area.

In summary, the overall sensitivity of the proposed project APE for the presence of buried archaeological sites is low to moderate, with any buried sites not likely occurring at a depth greater than 100 centimeters because of the types of soils across the APE.

## 5.5.2 Regulatory Setting

### 5.5.2.1 Federal

#### National Environmental Policy Act

Encroachment onto federal lands would require discretionary authorization from the respective administering agencies. These encroachment authorizations would likely be in the form of "special use permits." BLM is the NEPA lead agency for the project, with the Bureau of Indian Affairs (BIA) and USFWS acting as NEPA cooperating agencies.

NEPA (40 CFR 1500-508) requires that federal projects take into account effects on historic and cultural resources. NEPA Section 1500.1 states the following:

> *(a) The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out the policy. Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of section 101.*
>
> *(b) NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.*
>
> *(c) Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork--even excellent paperwork--but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. These regulations provide the direction to achieve this purpose.*

Following NEPA Section 1500.2:

> *Federal agencies shall to the fullest extent possible:*
>
> *(a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations.*
>
> *(b) Implement procedures to make the NEPA process more useful to decision makers and the public; to reduce paperwork and the accumulation of extraneous background*

> *data; and to emphasize real environmental issues and alternatives. Environmental impact statements shall be concise, clear, and to the point, and shall be supported by evidence that agencies have made the necessary environmental analyses.*
>
> *(c) Integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.*
>
> *(d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment.*
>
> *(e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.*
>
> *(f) Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.*

## National Historic Preservation Act

The project will cross lands managed by federal agencies. The applicant must obtain permits to construct and operate the project through lands managed by these agencies, and the issuance permits are considered federal undertakings subject to the provisions of Section 106 (54 USC Section 306108) of the National Historic Preservation Act (NHPA) and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800). Section 106 of the NHPA requires federal agencies to consider the effects of their proposed actions (undertakings) on historic properties and provides the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Because the project would cross lands under the direct jurisdiction of several federal land-managing agencies, these agencies must be consulted and must comply with Section 106 requirements. The federal lead agency and cooperating agencies would require that Zayo provides the information that they deem necessary to meet their Section 106 obligations.

Regulations at 36 CFR Part 800 provide a process for satisfying the requirements of Section 106 that involves identifying historic properties, determining the effects of an undertaking on historic properties, and resolving adverse effects on historic properties. These activities would occur within a consultation process involving the federal agency or agencies, the State Historic Preservation Officer (SHPO), and other participants as defined at 36 CFR Part 800.2. BLM is identified as the lead agency for Section 106 compliance for the project.

## National Register of Historic Places

Regulations listed in 36 CFR Part 800.16 define a "historic property" as any prehistoric or historic period district, site, building, structure, or object listed in or eligible for listing in the NRHP. Cultural resources that

cannot be avoided by a project must be evaluated according to NRHP criteria listed under 36 CFR Part 60.4, which states the following:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
>
> (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) that are associated with the lives of persons significant in our past; or
>
> (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (d) that have yielded, or may be likely to yield, information important in prehistory or history.

A cultural resource that meets one or more of the above criteria and retains integrity sufficient to convey its significance may be determined to be eligible for listing in the NRHP.

A property of traditional or Native American religious and cultural importance, called a Traditional Cultural Property (TCP) per Section 101(d)(6)(A) of the NHPA, can also be evaluated for eligibility and listed in the NRHP. The TCP must be a physical property or place, must retain integrity, and must meet one of the four basic NRHP criteria per 36 CFR Part 60.4. Such properties are usually found to be NRHP-eligible under 36 CFR 60.4(a) or for their association with important events that have made contributions to the broad patterns of local or regional Native American history. The identification and evaluation of TCPs involves obtaining information from contemporary tribes regarding traditional values that are represented by cultural resources.

Consultation is a significant part of the Section 106 process, and regulations under 36 CFR Part 800.2(c)(2) outline the steps that federal lead agencies must take in consulting with federally recognized tribes on tribal and other lands. Non-federally recognized tribes with concerns about an undertaking's effects on historic properties are often invited to participate as "additional consulting parties" under 36 CFR Part 800.2(c)(5).

### 5.5.2.2 State

#### California Environmental Quality Act

For projects financed or approved by public agencies, CEQA requires that the effects of a project on historical resources be assessed. "Historical resources" are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance.

Cultural Resources

Under CEQA Guidelines, an impact is considered significant if a project will have an effect that may change the significance of a resource (PRC Section 21084.1). Actions that would change the significance of a historical resource include demolition, replacement, substantial alteration and/or relocation of historical properties. Before the significance of impacts can be determined and mitigation measures developed, the significance of cultural resources must be determined.

A basis for defining the significance of historical resources under CEQA may be found in PRC 5024.1, Title 14 CCR Section 4850.3. CRHR was established "to identify the state's historical resources and indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Historical resources may be listed in the CRHR if they meet the eligibility criteria for listing in the register as defined at PRC 5024.1, Title 14 CCR Section 4850.3. According to CEQA Guidelines Section 15064.5(a)(3), "a resource shall be considered by the lead agency to be 'historically significant' if the resource has integrity and meets at least one of the criteria for listing in the California Register of Historic Resources."

Integrity describes the degree to which a resource's defining characteristics persist, and it is assessed in terms of retention of location, design, setting, materials, workmanship, feeling, and association. To maintain integrity, a resource must possess at least some of these aspects. A historical resource may have lost sufficient integrity to be eligible for listing in the NRHP and yet still be eligible for listing on the CRHR. A resource may have lost its historic character and yet still be eligible for listing on the CRHR if it has the potential to yield significant scientific or historical information or specific data.

A project that may cause a substantial adverse change to the significance of a historical resource is considered to have a significant adverse impact on the environment (CEQA Guidelines Section 15064.5[4][b]). A substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5[4][b][1]).

## California Register of Historical Resources

CEQA requires lead agencies to consider the potential impacts of a project on historical resources. "Historical resources" may include but are not limited to any object, building, structure, site, area, place, record, or manuscript that is considered historically or archaeologically significant (PRC Section 5020.1). Generally, a resource would be considered historically significant if it is listed or is eligible for listing in the CRHR. Per PRC Section 5024.1, a resource may be listed as a historical resource in the CRHR if it meets any of the following criteria:

(1) It is associated with events that have made a contribution to the broad patterns of California history;

(2) It is associated with the lives of persons important in our past;

(3) It embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important individual or possesses high artistic values; or

(4) The resource has yielded, or may be likely to yield, important information in prehistory or history.

These criteria mirror the NRHP criteria found under 36 CFR Part 60.4. The CRHR was created to identify important cultural resources and to indicate what properties would be subject to protection from substantial adverse change, to the extent prudent and feasible. Certain resources are automatically included in the CRHR, including California properties listed or determined to be eligible for listing in the NRHP, California Historical Landmarks numbers 770 and above, and California Points of Historical Interest.

Per CEQA Guidelines Section 15064.5[b], project activities may have a significant impact on the environment if they would cause a substantial adverse change in the significance of a historical resource. Activities that could result in a substantial adverse change include demolition, replacement, substantial alteration, and/or relocation of the resource. Steps that must be implemented to comply with CEQA Guidelines include the identification of cultural resources that may be impacted by a project; the evaluation of cultural resources that cannot be avoided by a project based on established thresholds of historical, architectural, archaeological, cultural, or scientific importance; the evaluation of the effects of a project on historical resources; and the development and implementation of measures to mitigate the effects of the project on historical resources and unique archaeological resources as defined under PRC Section 21083.2.

The State Office of Historic Preservation has broad authority under federal and state law regarding the implementation of historic preservation programs within California. The SHPO comments on effect determinations and the eligibility of cultural resources for listing in the NRHP and CRHR.

The California Governor's Office of Planning and Research offers guidance on procedures to identify historical resources, evaluate their importance and potential for listing in the CRHR, and estimate potential impacts on historical resources. The guidance strongly recommends that Native American concerns and the concerns of other interested parties be solicited as part of the cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains.

### 5.5.2.3 Local

CPUC has exclusive discretionary authority over this project's siting, design, and construction. However, a summary of local standards or ordinances that describe the visual character of the project area is provided for informational purposes and to assist with the CEQA review process.

#### Sierra County General Plan

**Cultural Resources Goal:** Identify and protect the cultural, historical and archaeological resources of Sierra County recognizing that the historic structures, archaeological sites, and cultural resources centered upon the County's agricultural, mineral and forest setting is the link to the County's past and should continue to define the future.

Cultural Resources

Since all of the County's cultural resources have not been (and may never be) located, it is important to recognize areas with potential sensitivity for cultural resources.

### Modoc County General Plan

**Historic and Cultural Resources:** Prehistoric and historic archaeological sites of the Native American Modoc and Achumawi are central to the understanding and interpretation of the Native American cultural heritage of Modoc County. Early settler-Indian battle sites, many of which are registered as State Historical landmarks, give testimony to the historical interactions and conflicts between Native American culture and Euro-American culture.

### Lassen County General Plan

Lassen County's General Plan does not discuss cultural resources.

## 5.5.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? | ☐ | ☐ | ☒ | ☐ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | ☐ | ☐ | ☒ | ☐ |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☐ | ☒ | ☐ |

## 5.5.4 Impact Analysis

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

**Less Than Significant Impact.** As described above, most of the cultural resources that have been identified in the project survey area are recommended or determined not eligible on the NRHP or CRHR, and therefore, do not meet the criteria to be considered a historical resource.

Construction work areas would avoid 197 sites entirely. Of these 197 sites, 14 have been determined or recommended eligible for listing on the NRHP and CRHR and 12 have been recommended or determined not eligible for listing on the NRHP and CRHR. To further protect these resources, APM CR-5 and CR-6, which requires archaeological monitoring, and APM CR-1, which requires flagging, fencing, monitoring and/or signage to avoid accidental encroachment, would be implemented. Therefore, no impacts on these known historical resources or potential historical resources would occur.

Cultural Resources

A potentially significant impact would occur if an eligible cultural resource is located within the ADI. As described above, the applicant would avoid known cultural resources to the greatest extent possible with implementation of APM CR-1. Additional avoidance measures include APM-CR-2, which requires the applicant to reroute the alignment in or near the US 395 road shoulder in areas of fill or prior disturbance or directionally bore and place the fiber optic line conduit a minimum of 2 meters below the known maximum depth of archaeological sites.

However, where resources cannot be avoided per APM CR-1 and APM CR-2, the applicant would implement APM CR-4 and APM CR-5 which includes formal evaluation, archeological test excavations and data recovery within the ADI. Archeological testing and data recovery would be performed in consultation with tribal representatives.

In the event that additional historical resources are discovered during construction activities, APMs CR-3, 5, CR-7, and CR-8 would reduce the potential damage or destruction to historical resources from the inadvertent discovery because the applicant would train workers on procedures for unanticipated discoveries, properly treat human remains if discovered, establish work exclusion zones around new discoveries until an appropriate action can be taken to evaluate and manage the new resource in consultation with CPUC staff, and ensure that a qualified archaeological monitor is present during ground-disturbing construction in areas with high or moderate sensitivity for buried resources. Therefore, impacts would be less than significant.

**b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

**Less Than Significant Impact.** The majority of the project alignment would occur within the existing roadway right-of-way and has been previously disturbed through construction of US 395 and other local roadways; however, the potential for buried archaeological sites still exists based on cultural sensitivity of the region. As described in Section 5.5.1, Environmental Setting, the regional archaeological and ethnographic record indicates that the area was typically inhabited by mobile populations that occupied areas located at or near the intersection of watercourses and resources (e.g., plants and animals). However, the overall sensitivity of the proposed project APE for the presence of buried archaeological sites is low to moderate, with any buried sites not likely occurring at a depth greater than 100 centimeters because of the types of soils across the APE.

Stantec's intensive pedestrian field survey of the APE resulted in the recordation or update of the 248 sites located within the APE. Of these sites,197 were determined to be avoidable through project design or have been determined or recommended not eligible for the CRHR or the NRHP; the remaining 51 sites would require additional testing or analysis to determine eligibility as summarized in APM CR-5. Such sites include lithic scatters with tools or diagnostic artifacts, prehistoric habitational debris, and known ethnographic sites, as further detailed in Appendix D.

A potential impact would occur if an eligible cultural resource is located within the ADI. The applicant would avoid known cultural resources to the greatest extent possible with APM CUL-1. If necessary, additional avoidance measures would be implemented (APM CR-2) to either reroute the alignment in or

near the US 395 road shoulder in areas of fill or prior disturbance or directionally bore and place the fiber optic line conduit under archaeological sites to a minimum depth of 2 meters or 1 meter below known maximum depth of cultural resources. However, where avoidance measures are not feasible, archeological test excavations may be required to obtain information sufficient to evaluate the eligibility of sites for inclusion in the NRHP and the CRHR (APM CR-4 and APM CR-5).

Project construction would create subsurface disturbances that could result in damage to or destruction of previously undiscovered subsurface archaeological deposits. Although all the areas of construction and access roads have been subject to the archaeological survey, the potential remains for previously unidentified archaeological remains to be discovered below the visible ground surface. As discussed above, in the event that archaeological resources are discovered during construction, implementation of APM CR-5, CR-7, and CR-8 would ensure that potential impacts to archaeological resources remain less than significant. As a result, with implementation of APM CR-1 to APM CR-8, the project would have a less-than-significant impact.

**c) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less Than Significant Impact.** The possibility exists that unmarked burials may be unearthed during proposed project construction. APM CR-8 outlines procedures for an inadvertent discovery of human remains during proposed project construction. The CPUC would consult with eligible tribes under PRC Section 21080.3.1 once the application is complete. Impacts on TCRs are addressed in Section 5.18, Tribal Cultural Resources, because, under AB 52, the CPUC must identify these resources during consultation. Any discovery of Native American human remains on Federal lands will be handled in accordance with the Native American Graves Repatriation Act (NAGPRA). Under NAGPRA (25 USC 3001) and implementing regulations 43 CFR Part 10, the federal landowner is responsible for the protection of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on federal lands.

Inadvertent discoveries on non-federally owned or managed lands would comply with California State law governing the treatment of Native American human remains and associated funerary objects found on state or private lands including PRC, 5097.9-5097.991 and Health and Safety Code 7050.5. Per the Health and Safety Code, the County Coroner must be notified of the discovery of human remains. If the remains are determined to be Native American, the coroner will notify the NAHC, and follow the procedures outlined in the CEQA Guidelines Section 15064.5(e). With implementation of APM CR-8, the impact would remain less than significant.

## 5.5.5 Draft Environmental Measures

**APM CR-1: Avoid and Minimize Impacts to Significant or Potentially Significant Cultural Resources.**

Wherever feasible, the applicant shall avoid or minimize impacts to archaeological resources, regardless of its CRHR or NRHP eligibility status. This includes siting all ground-disturbing activities outside a buffer zone established around each recorded archaeological site within or immediately adjacent to the

alignment. Because many archaeological resources are made up of subsurface deposits, features, and artifacts, it may not be possible to recognize all potentially significant attributes of archaeological resources during construction activities. There is the potential for making unanticipated discoveries of previously unidentified remains at archaeological sites that could require efforts to reassess their CRHR or NRHP eligibility. Avoiding impacts or minimizing the area of an archaeological resource that could be affected during construction protects the resource and reduces the possibility that unanticipated discoveries would cause project delays. The applicant will avoid or minimize impacts to archaeological resources by redesign, reroute, and implementation of avoidance procedures (i.e., establishing environmentally sensitive areas), or other protective measures within or immediately adjacent to construction activities. Additionally, impacts will be avoided or minimized through the following measures prior to construction.

**APM CR-2: Design Avoidance.**

Where sites cannot be avoided, the proponent shall use directional bore and place the fiber optic line conduit under archaeological sites to a depth of at minimum 2 meters or 1 meter below known maximum depth of cultural resources.

**APM CR-3: Conduct a Pre-Construction Worker Education Awareness Program.**

The Worker Environmental Awareness Program (WEAP) will be provided for all proposed project personnel who have the potential to encounter and alter unique archaeological sites, historical resources, or historic properties, or properties that may be eligible for listing in the CRHR or NRHP. This includes construction supervisors as well as field construction personnel. No construction worker will be involved in ground-disturbing activities without having participated in the WEAP.

**APM CR-4: Evaluate the Significance of All Cultural Resources That Cannot Be Avoided.**

Archaeological resources, buildings, and structures that cannot be avoided and that have not been evaluated to determine their eligibility for listing in the CRHR will be evaluated to determine their historical significance. Evaluation studies shall be conducted and documented as per applicable laws, regulations, and guidelines and in accordance with professional standards. Evaluation of properties will take into account attributes of each property that could contribute to its historical significance. Evaluation procedures will be consistent with applicable laws, regulations, and guidelines and in accordance with professional standards as follows**APM CR-5: Implement Measures to Minimize Impacts to Significant Archaeological Sites.**

Prior to construction and during construction, the following measures will be implemented by the applicant to minimize unavoidable impacts to significant archaeological sites.

- To the extent practical, all activities shall minimize ground surface disturbance within the bounds of unique archaeological sites or historical resources.

Cultural Resources

- Portions of significant archaeological sites, historical resources, or historic properties that can be avoided will be protected as environmentally sensitive areas and will remain undisturbed by construction activities.
- Monitoring by qualified professionals and/or Native Americans to ensure that impacts to sites are minimized will be carried out at each affected cultural resource for the period during which construction activities pose a potential threat to the site and for as long as there is the potential to encounter unanticipated cultural or human remains.
- Additional archaeological studies will be carried out at appropriate sites to ascertain if project facilities could be located on a portion of a site and cause the least amount of disturbance to significant cultural materials.
- If impacts to significant archaeological (NRHP- or CRHR-eligible) sites cannot be avoided, archaeological data recovery will be carried out in the portions of affected significant sites that will be impacted.
- A data recovery plan will be prepared, reviewed by the appropriate agencies, and then implemented to recover an adequate sample of cultural remains that can be used to address important research questions per CRHR Criterion 4 or NRHP Criterion D eligibility. Archaeological data recovery will involve scientific excavations; identification of recovered cultural and ecological remains; cataloging, scientific analysis, and interpretation of recovered materials; and preparation of a scientific technical report that describes the methods and results of the data recovery program.
- Reports of any excavations at archaeological sites will be filed with the appropriate Information Center of the California Historical Resources Information System.

**APM CR-6: Implement measures to minimize impacts to significant buildings and structures.** Prior to construction and during construction, the applicant will implement the following measures to minimize unavoidable impacts to significant buildings and structures.

- Locate proposed project facilities to minimize effects on significant buildings or structures.
- If impacts to significant buildings or structures cannot be avoided, document significant architectural and engineering attributes consistent with National Park Service Historic American Buildings Survey/Historic American Engineering Record documentation standards.
- File reports and other documentation with the National Park Service, if appropriate, and appropriate Information Center of the California Historical Resources Information System

**APM CR-7: Prepare and Implement a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan.**

During construction, it is possible that previously unknown archaeological or other cultural resources or human remains could be discovered. Prior to construction, the applicant will prepare a Construction

Cultural Resources

Monitoring and Unanticipated Cultural Resources Discovery Plan to be implemented if an unanticipated discovery is made. At a minimum the plan shall detail the following elements:

- Worker and supervisor training in the identification of cultural remains that could be found in the proposed project area
- Worker and supervisor response procedures to be followed in the event of an unanticipated discovery, including appropriate points of contact for professionals qualified to make decisions regarding the potential significance of any find
- Identification of persons authorized to stop or redirect work that could affect the discovery and their on-call contact information
- Provide for monitoring of construction activities in archaeologically sensitive areas
- Stipulate a minimum radius around any discovery within which work will be halted until the significance of the resource has been evaluated and mitigation implemented as appropriate
- Procedures for identifying and evaluating the historical significance of any find
- Procedures for consulting Native Americans in the process of identification and evaluation of significance of discoveries involving Native American cultural materials
- Procedures to be followed for the treatment of discovered human remains per current state law and protocol developed in consultation with Native Americans.

**APM CR-8: Inadvertent Discovery of Human Remains.**

Any human remains discovered during project activities in California will be protected in accordance with current state law, specifically Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill (AB) 2641. The provisions of the Native American Graves and Repatriation Act (NAGPRA) are applicable when Native American human remains are found on federal land (Bureau of Land Management land in California and Nevada). The discovery of human remains will be treated as defined in the Construction Monitoring and Unanticipated Cultural Resources Discovery Plan. Archaeological excavations at sites will not, if at all possible, inappropriately disturb or remove human remains. Native Americans will be consulted to develop a protocol to be followed if human remains are encountered during any project activity, as required by state and federal law. When human remains are discovered, work must cease around the find and the area will be flagged off to protect the discovery from disturbance (AB 2641 and NAGPRA). The discovery must be reported immediately to the County Coroner (Section 7050.5 of the Health and Safety Code). If the Coroner determines that the remains are Native American, the Coroner will notify the Native American Heritage Commission (NAHC), which then designates a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code [PRC]). The designated MLD then has 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains (AB 2641). If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the

remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a document with the county in which the property is located (AB 2641). NAGPRA also requires notification of the appropriate Native American group and certification by that group before the ground-disturbing activity is resumed.

# 5.6 ENERGY

This section describes existing conditions and potential impacts on energy as a result of construction, operation, and maintenance of the project, and concludes that potential impacts would be less than significant. The proposed project's potential effects on energy were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines.

## 5.6.1 Environmental Setting

### 5.6.1.1 Existing Energy Use

The project involves the installation of an underground fiber optic network to improve the quality of rural broadband in northeast California and would not replace or upgrade an existing facility or infrastructure. The project's main energy consumption would be from transportation fuels used during construction. Operation of the project would consume minor amounts of energy, and maintenance would be on an as-needed basis and would consume negligible amounts of energy, chiefly from the use of maintenance vehicles traveling to and from any repair sites.

Transportation accounted for nearly 40 percent of California's total energy consumption in 2017 (U.S. Energy Information Administration 2020). In 2018, California consumed 15.5 billion gallons of gasoline and 3.1 billion gallons of diesel fuel (CEC 2020). Petroleum-based fuels currently account for more than 90 percent of California's transportation fuel use (CEC 2016). However, the state is now developing strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and greenhouse gases (GHGs) from the transportation sector, and reduce vehicle miles travelled. The California Energy Commission (CEC) has developed plans and policies to expand the infrastructure of alternative fuel refueling stations to encourage the use and reliability of alternatively fueled vehicles. (CEC 2007).

## 5.6.2 Regulatory Setting

### 5.6.2.1 Federal

#### Corporate Average Fuel Economy Standards

First established by Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards aim to reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and EPA jointly administer CAFE standards. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for the following: 1) technological feasibility; 2) economic practicality; 3) effect of other standards on fuel economy; and 4) need for the nation to conserve energy (NHTSA 2010).

Fuel efficiency standards for medium- and heavy-duty trucks were jointly developed by EPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and

vans, and vocational vehicles for model years 2014 through 2018 and resulted in a reduction of fuel consumption from 6 to 23 percent less than the 2010 baseline, depending on the vehicle type (EPA 2011). EPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (EPA 2016).

#### 5.6.2.2 State

Air Toxic Control Measure

In 2004, CARB initially approved an ATCM to implement idling restrictions of diesel-fueled commercial motor vehicles operating in California (13 CCR Section 2485) (CARB 2005). The ATCM applies to diesel-fueled commercial vehicles with a gross vehicle rating greater than 10,000 pounds. The ATCM would limit idling times of these vehicle's primary engine to no more than 5 minutes. Although the ATCM's intent was to reduce DPM, this measure would also reduce fuel consumption.

#### 5.6.2.3 Local

Policies and programs for reducing consumption or increasing energy efficiency have not been established by counties within the project area.

### 5.6.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency? | ☐ | ☐ | ☒ | ☐ |
| c) Would the project add capacity for the purpose of serving a non-renewable energy resource? | ☐ | ☐ | ☐ | ☒ |

### 5.6.4 Impact Analysis

**a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

**Less Than Significant Impact.** Construction of the project would result in energy consumption from the use of heavy-duty construction equipment and heavy-duty trucks and worker vehicles commuting to and from the project. The project would use electricity during construction to provide temporary power for

lighting at staging areas and would not result in a substantial increase of electricity demand. Electricity consumption would be temporary over the construction duration and would be considered negligible over the long-term. Energy consumption from project operations would be negligible. Project operations would include maintenance activities that would be on an as-needed basis, therefore operational energy consumption would have no impacts.

The construction phasing and equipment assumptions used in generating air quality and GHG impacts were used to generate energy use estimates. It was assumed that off-road equipment mobile sources would primarily be diesel-fueled. Table 5.6-1 shows the project's total diesel fuel consumption during construction. Details of the energy calculations are provided in Appendix B.

### Table 5.6-1: Project Construction Fuel Consumption

| Source | Fuel Consumption (gallons) |
|---|---|
| Off-road Equipment | 159,384 |
| Heavy Duty Trucks | 20,257 |
| Worker Vehicles | 14,134 |
| **Project Total** | **193,775** |
| 2018 Diesel Fuel Data for Lassen County[1] | 2,083,333 |
| **Percentage of County** | **9.3%** |

1. Diesel is adjusted to account for retail (48 percent) and non-retail (52 percent) diesel sales.

Source: CEC 2020

The project would span across three counties; however, specific fuel data was only available for Lassen County; thus, the analysis conservatively assumed that all diesel fuel would be consumed from Lassen County supply. As shown in Table 5.6-1, the amount of diesel fuel consumed by the project would not represent a substantial fraction of the available diesel fuel supply in Lassen County. Furthermore, the project would comply with the state's anti-idling and emissions regulations, which would result in a more efficient use of diesel fuel consumption. Based on this, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

**b) Conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency?**

**Less Than Significant.** The project would comply with CARB's ATCM and reduce fuel consumption during idling events. The project would not conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency; therefore, impacts would be less than significant.

**c) Would the project add capacity for the purpose of serving a non-renewable energy resource?**

**No Impact.** The project would install an underground fiber optic telecommunications line and would not add capacity for the purpose of serving a non-renewable energy resources; therefore, the project would have no impact.

Energy

### 5.6.5 Draft Environmental Measures

There are no applicable environmental measures for energy.

# 5.7 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

This section describes the geology, soils, and paleontological resources along the project alignment and assesses potential impacts related to project construction and operation activities.

This analysis reviews state and local resources characterizing geologic units and soils in the project area, including databases maintained by the following agencies:

- U.S. Geological Survey (USGS)
- NRCS
- California Geological Survey (CGS)
- University of California Museum of Paleontology (UCMP)
- Paleo Biology Database (PBDB)
- General Plans, including seismic hazard maps for the City of Alturas and the Counties of Modoc, Lassen, and Sierra

## 5.7.1 Environmental Setting

### 5.7.1.1 Regional and Local Geologic Setting

The project alignment extends 193.9 miles across portions of Modoc, Lassen, and Sierra Counties within the State of California. The alignment extends through portions of the Modoc Plateau Geomorphic Province and portions of the northwest Basin and Range Province, where it borders the northeastern portion of the Sierra Nevada Province. The Basin and Range Province is characterized by interior drainage with lakes and playas, and the typical horst and graben structure. The northern Basin and Range Province includes the Honey Lake Basin (CGS 2002). The Modoc Plateau is a volcanic table land approximately 4,000 to 6,000 feet above mean sea level. The plateau consists of a thick accumulation of lava flows and tuff beds along with many small volcanic cones. The plateau is cut by many north-south faults and is bound by the Cascade Range on the west and the Basin and Range on the east and south (CGS 2002).

The local physiographic setting includes basaltic and andesitic mountains and flows, which comprise the southern end of a series of tertiary and quaternary flows of the Cascade Mountain Range and the northern end of the Sierra Nevada Range (NRCS 2004). Sedimentary deposits along the project alignment are largely lake and associated basin-margin deposits. The geology of the area primarily consists of Tertiary and Quaternary volcanic rocks as well as Mesozoic granite and Quaternary sedimentary deposits.

### 5.7.1.2 Seismicity

Alquist-Priolo earthquake fault zones are areas of the state where surface rupture of a fault could damage structures in the vicinity. Both Lassen and Modoc Counties contain Alquist-Priolo earthquake fault zones. Segments of the project alignment are located in seismically active areas of these counties, with numerous Holocene (including "latest Quaternary") faults that have been identified as potential seismic

sources (Figure 5.7-1). Holocene faults are considered to have been active within the past 11,000 to 15,000 years, approximately. There are also numerous older Quaternary and pre-Quaternary faults along the alignment, though these are not regarded as potential seismic sources by CGS or USGS. Active faults that have a relatively high potential for surface rupture along, across, or near the alignment include the Honey Lake Fault Zone, the Upper Long Valley Fault Zone, the Fort Sage Fault, the Warm Springs Valley Fault Zone, and the Surprise Valley Fault, as well as multiple unnamed faults.

**Honey Lake Fault Zone.** The Honey Lake Fault forms a 50-kilometer-long zone of landforms typical of active strike-slip faults with a slip rate estimated between 1.0 and 5.0 millimeters per year (Adams et. al 2017; Willis and Borchardt 1993). The Honey Lake Fault Zone is primarily composed of northwest-striking, right lateral, dextral strike-slip strands characterized by geomorphic evidence indicative of Holocene displacement (Adams et. al 2017). A fault exposure in Holocene alluvium shows evidence of late Holocene surface-faulting earthquakes (Willis and Borchardt 1993).

**The Upper Long Valley Fault Zone.** The Long Valley Fault Zone is cut by dozens of major north-northwest trending faults and down-faulted blocks (USGS 2020).

**The Fort Sage Fault.** The Fort Sage Fault is a high-angle, normal fault along the western side of the Fort Sage Mountains. It extends obliquely between the Honey Lake and Warm Springs Valley Fault Zones. The most recent historic earthquake was the 1950 ML 5.6 Fort Sage Mountain earthquake, which ruptured nearly the full extent of the approximately 8-kilometer-long Fort Sage Fault (Gianella 1957; Sawyer et al. 2013).

**Warm Springs Valley Fault Zone**. The Warm Springs Valley Fault Zone is composed of right lateral, dextral strike-slip to dextral normal faults that locally offset Holocene alluvial deposits (Sawyer et al. 1999).

**The Surprise Valley Fault**. The Surprise Valley Fault is an active down-to-east normal fault, delineated by geomorphic features indicative of Holocene normal faulting, bounding the Modoc Plateau (to the west) and Basin and Range (to the east) geomorphic provinces (Bryant 2000).

#### 5.7.1.3 Ground Shaking

Ground shaking is the motion that occurs as a result of energy released during faulting. When ground shaking occurs, it can result in the damage or collapse of buildings and other structures. Ground shaking is influenced by earthquake magnitude, epicenter location, the character and duration of the ground motion, soil conditions, and depth to groundwater. Southern Lassen County along the Honey Lake Basin and extending into northeastern Sierra County is anticipated to have a moderate to high potential for ground shaking (Branum et al. 2016). The CGS's Probabilistic Seismic Hazards Assessment indicates a minimum peak horizontal acceleration of 0.1 to 0.2g (where g is the percentage of gravity) along most of the proposed route through Modoc County and into northern Lassen County, and a potential acceleration of 0.2 to 0.4g in the areas south of Susanville in Lassen County, with a 10 percent probability of earthquake occurrence in a 50-year time frame.

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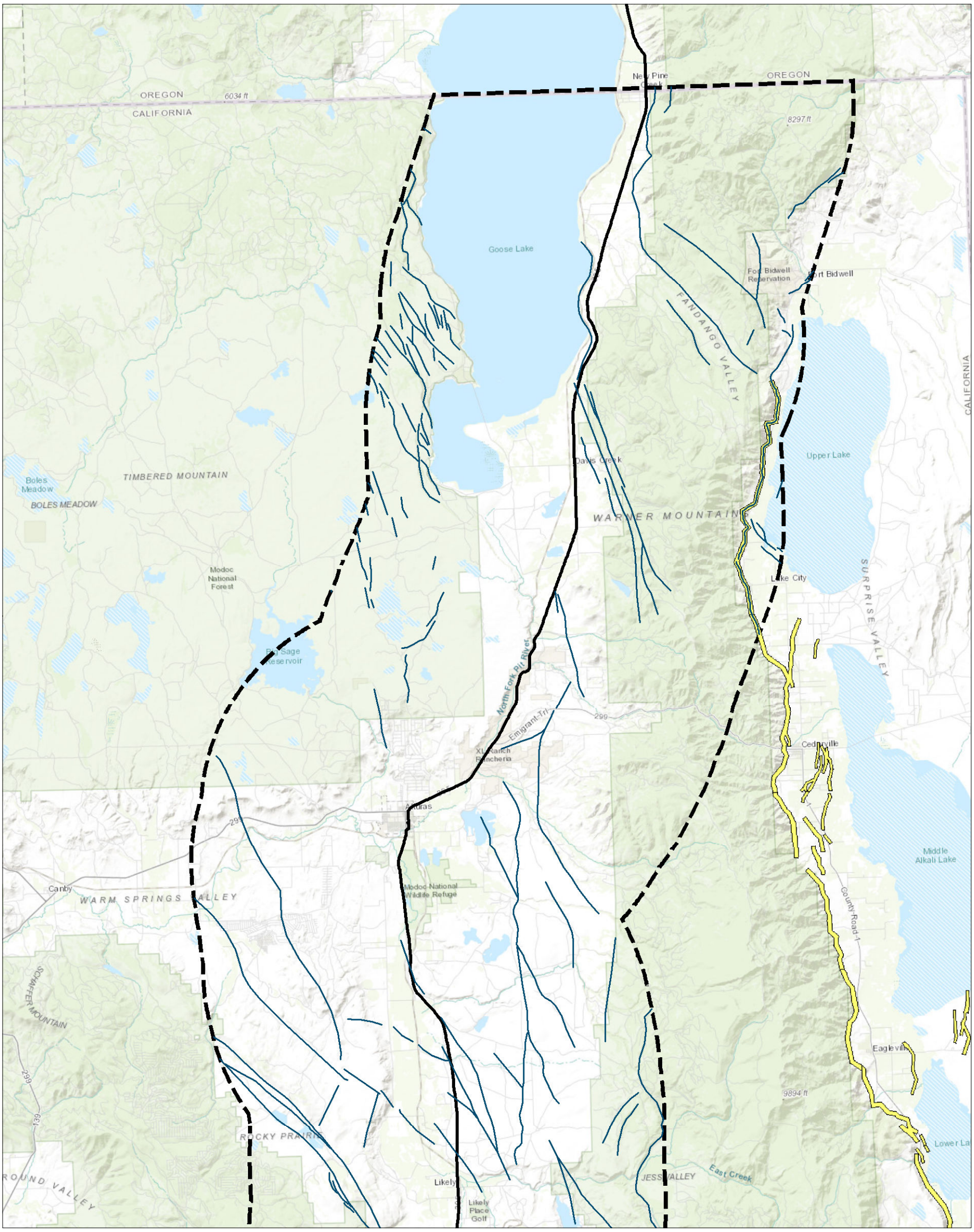


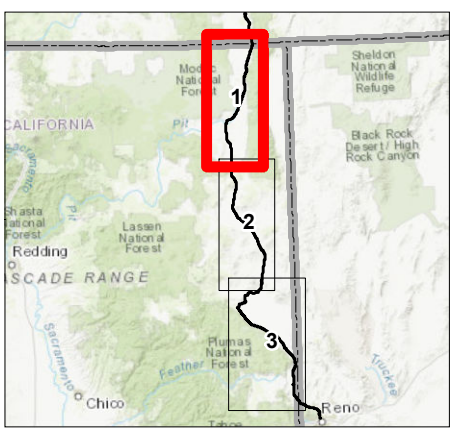


Alignment

10-mile Buffer

**CGS Hazard Zones**

Quaternary Fault Zones

Alquist-Priolo Fault Zones

0 3.5 7 Miles

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N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011

Prepared by CP on 2020-06-17
Technical Review by JC on 2020-06-17
Independent Review by CS on 2020-06-17

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.7-1**

Title
**Active Faults within 10 miles of Project Alignment**

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Seismic Hazards Program, California Geological Survey, California Department of Conservation Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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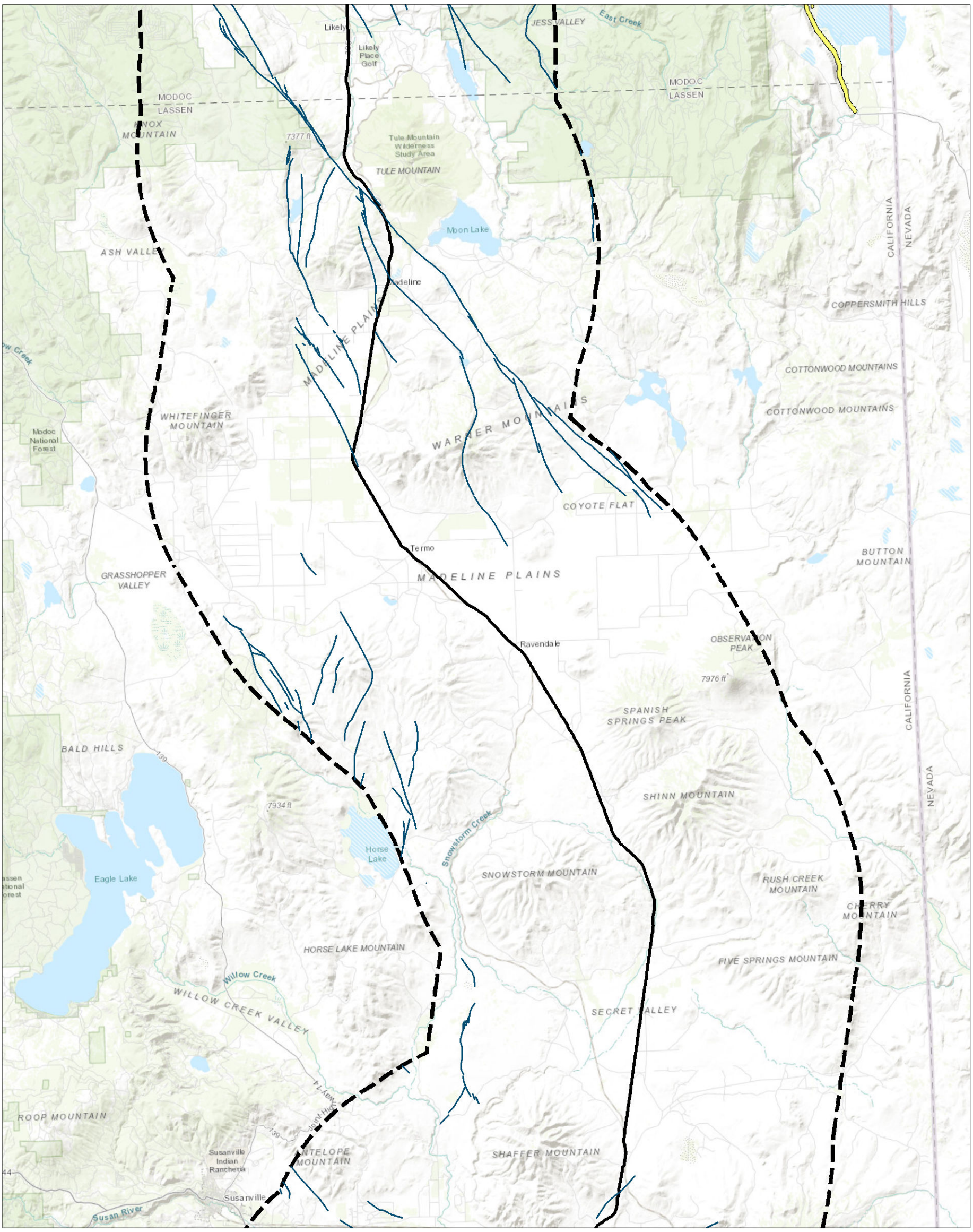


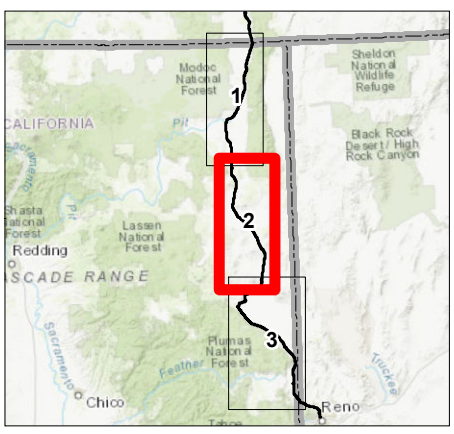


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Client/Project

Zayo
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Figure No.

**5.7-1**

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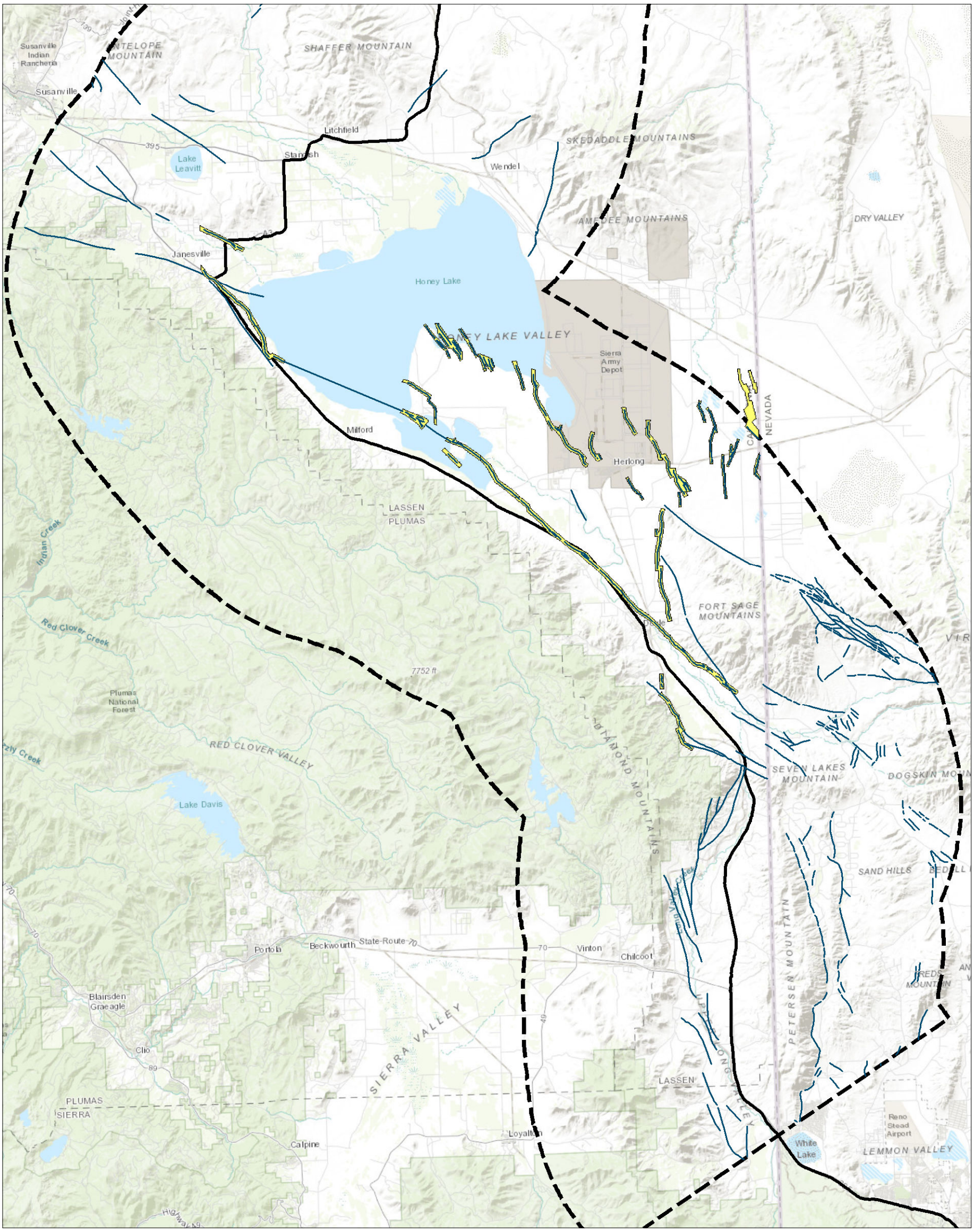


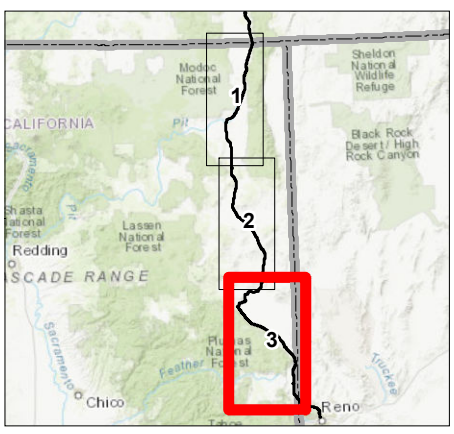


Alignment

10-mile Buffer

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1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Seismic Hazards Program, California Geological Survey, California Department of Conservation Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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### 5.7.1.4 Liquefaction

Liquefaction occurs when groundwater is forced out of the pores of soil as it subsides. This excess water momentarily liquefies the soil, causing an almost complete loss of strength. If this layer is at the surface, its effect is much like that of quicksand for any structure located on it. If the liquefied layer is subsurface, the material above it may slide laterally depending on the confinement of the unstable mass. Liquefaction can occur as a result of strong motions in excess of 0.1g in areas of unconsolidated granular sediment and shallow groundwater. Therefore, there is a potential risk of liquefaction along the project alignment, primarily in the areas south of Susanville in Lassen County where potential ground motion acceleration is between 0.2 to 0.4g. The CGS's Seismic Hazard Zonation Program includes mapping of earthquake induced liquefaction zones. However, this program focuses on the major metropolitan areas of California and has not addressed the areas along the project alignment.

### 5.7.1.5 Landslides

Ground motions associated with earthquakes have the potential to trigger landslides or rockfalls along the project alignment. Seismically induced landslides are most commonly associated with earthquakes of magnitude 4.0 or more (Keefer 1984). Therefore, there is a potential risk of landslide along the project alignment, primarily in the areas south of Susanville in Lassen County where the alignment passes through Alquist-Priolo earthquake fault zones. CGS's Seismic Hazard Zonation Program includes mapping of earthquake induced landslide zones. However, this program focuses on the major metropolitan areas of California and has not addressed the areas along the project alignment.

### 5.7.1.6 Geologic Units

Geologic units along the project alignment primarily consist of the following USGS classification types:

- Quaternary volcanic flow rocks, unit 1 (Qv1, Cascade Volcanic Field), which include minor pyroclastic deposits.
- Tertiary (2-24 Ma) volcanic flow rocks, unit 17 (Tv17, Cascade Range), which include minor pyroclastic deposits.
- Quaternary (Pleistocene to Holocene) alluvium (Q), including alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated.
- Older Quaternary alluvium (Qoa) consisting of older alluvium, lake, playa, and terrace deposits.
- Tertiary (2-24 Ma) pyroclastic and volcanic mudflow deposits, unit 9 (Tvp9, Cascade Range).
- Plio-Pleistocene and Pliocene loosely consolidated deposits (QPOc) consisting of Pliocene and/or Pleistocene sandstone, shale, and gravel deposits; Miocene to Pleistocene.
- Mesozoic granitic rocks, unit 3 (grMZ3, Sierra Nevada) consisting of Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite; Permian to Tertiary.

According to geologic maps of the Cedarville, Alturas, Eagle Lake, and Susanville 30- x 60-minute quadrangles, geologic units along the project alignment primarily consist of hard volcanic rock and unconsolidated or moderately consolidated sedimentary deposits that are largely made up of lake and associated basin-margin deposits.

Additional information regarding geologic units along the project alignment is discussed within the Paleontological Report (Appendix I) and Section 5.7.1.8, Paleontological Resources. Maps of the geologic units along the project alignment are provided as Attachment A of the Paleontological Report (Appendix I).

### 5.7.1.7 Soils

The project alignment generally follows US 395 through Modoc, Lassen, and Sierra Counties within the Caltrans right-of-way and Lassen County roads between the communities of Standish and Bunting. Soils along the Caltrans right-of-way have been previously graded, compacted, and completed using road base and engineered fills. Soils along the project alignment consist primarily of clay to gravelly loams, coarse sands, and silty clays (NRCS 2020) and are depicted within Appendix J.

Soils along the project alignment include soils with a low to high plasticity index (PI), or shrink-swell potential. Soils with a high shrink-swell potential, also known as expansive soils, are prone to shrinking or swelling due to changes in water content of the soil. Soils with a low shrink-swell potential are generally suitable for construction, whereas soils with a high shrink-swell potential may result in structural damage.

Primary soil types (soils that cover less than or equal to 2.5 percent of the total project area) include the following:

- **Bieber gravelly loam** (jb3t) – Alluvium derived from basic igneous rock with 0 to 9 percent slopes and a moderate to high PI.
- **Deven-Rock outcrop complex** (jb4k) – Residuum weathered from basic igneous rock comprised of very stony clay loam to clay loam with 2 to 30 percent slopes and a moderate to high PI.
- **Galeppi loamy coarse sand** (jb86) – Alluvium derived from granite with 5 to 30 percent slopes and a low PI.
- **Horsecamp-Brubeck association** (jcb4)
    - Horsecamp – Residuum weathered from volcanic rock comprised of cobbly silty clays to silty clays with 2 to 9 percent slopes and a moderate to high PI.
    - Brubeck – Colluvium derived from volcanic rock and residuum weathered from volcanic rock comprised of very cobbly clay to clay with 2 to 9 percent slopes and a moderate to high PI.

- **Loomis-Fivesprings association** (jcch)
    - Loomis – Colluvium derived from basalt over residuum weathered from basalt comprised of very cobbly loam to very gravelly clay with 5 to 9 percent slopes and a low to moderate PI.
    - Fivesprings – Colluvium derived from volcanic rock and residuum weathered from volcanic rock comprised of very cobbly loam to very gravelly clay with 9 to 30 percent slopes and a low PI.
- **Mottsville loamy coarse sand** (jcd0) and **Mottsville gravelly loamy coarse sand** (jcd2) – Alluvium derived from granite with 2 to 9 percent slopes and a low PI.
- **Ravendale silty clay** (jcgb) – Alluvium derived from volcanic rock with 0 to 2 percent slopes and a moderate to high PI.

### 5.7.1.8 Paleontological Resources

Paleontological resources or fossils are the remains, imprints, or traces of once-living organisms preserved in rocks and sediments. Paleontological resources include the fossils themselves, the associated organic matter, and the physical characteristics of the fossils' associated sedimentary matrix (Paleo Solutions 2020). This section summarizes the methods and results of a paleontological resource inventory and sensitivity analysis conducted by Paleo Solutions (2020) (Appendix I).

The paleontological sensitivity of geologic units identified at or near the ground surface within the project area was analyzed through a review of literature, maps, and databases. Previous paleontological finds and sediment characteristics were evaluated to determine potential paleontological sensitivity. Potential impacts to paleontological resources resulting from ground disturbing activities due to project construction were analyzed using the BLM PFYC system. The PFYC is a predictive resource management tool that classifies geologic units on their likelihood to contain paleontological resources on a scale of 1 (very low potential) to 5 (very high potential), as well as unknown potential.

A review of geologic maps of the Cedarville, Alturas, Eagle Lake, and Susanville 30 x 60-minute quadrangles (CGS 2013, 2014, 2016, 2017) and Saucedo and Wagner (1992) indicates that the project alignment is underlain by Holocene-age, very young sedimentary deposits; Holocene- to Pleistocene-age, young sedimentary deposits; Pleistocene-age, old sedimentary deposits; Pliocene-age, very old sedimentary deposits; Pleistocene- to Oligocene-age volcanic rocks; and Miocene- and Mesozoic-age plutonic rocks. Maps noting the geologic units and paleosensitivity along the project alignment are provided as Appendix A of the Paleontological Report (Appendix I).

**Artificial Fill (Recent).** Artificial fill is made up of recent deposits of previously disturbed sediments deposited by construction operations and is found in areas where recent construction has taken place. Color is highly variable, and sediments are mottled in appearance. These sediments are not mapped within the project area but are expected to be encountered within previously disturbed portions of the project, primarily along the Caltrans right-of-way. Any fossil resources contained within these sediments will have been removed from their original deposition locations, and therefore, lack significant

stratigraphic contextual data. Therefore, these deposits are considered to have a low potential for producing significant paleontological resources (PFYC 2) based on BLM (2016) guidelines.

**Very Young Sedimentary Deposits (Q, Qa, Qc, Qf, Qt, Ql, Qhs, Qhe, Qhds) (Holocene).** Very young sedimentary deposits are Holocene-age (less than 11,000 years old) and include surficial deposits made up of variable compositions of clay, silt, sand, gravel, and larger clasts that were laid down in modern fluvial and lacustrine systems. Gravel is composed of igneous and metamorphic rocks that range from granule- to cobble-sized and that generally vary between subangular to subrounded depending on the source proximity. These surficial units are generally unconsolidated, undissected, and less topographically developed than older units. There are seven Holocene-age geologic units mapped within the project alignment: alluvium (Q, Qa), colluvium (Qc), alluvial fan (Qf), terrace deposits (Qt), lake deposits (Ql), sand deposits (Qhs), and eolian, fluvial, and lacustrine deposits (Qhe) (CGS 2013, 2014, 2016, 2017; Saucedo and Wagner 1992). Also mapped within a quarter mile buffer of the project alignment is Holocene-age dune sand (Qhds) (Saucedo and Wagner 1992). Holocene-age sediments are typically too young to contain fossilized material (SVP 2010), although they may shallowly overlie sensitive older (e.g., Pleistocene) deposits at variable depth. Therefore, Holocene-age sedimentary deposits are considered to have a low potential for producing significant paleontological resources (PFYC 2) based on BLM (2016) guidelines.

**Young Sedimentary Deposits (Qa, Qf, Qd, Qol, Qlmd, Qls, Qg) (Holocene to Pleistocene).** Young sedimentary deposits are Holocene- to Pleistocene-age (approximately 2.51 million years to less than 11,000 years old) and include surficial deposits made up of variable compositions of clay, silt, sand, gravel, and larger clasts that were laid down in modern and ancient fluvial and lacustrine systems. Gravel is composed of igneous and metamorphic rocks that range from granule- to cobble-sized and that generally vary between subangular to subrounded depending on the source proximity. These sediments are generally unconsolidated to weakly consolidated and are often dissected where elevated. They are moderately indurated, relatively elevated, and contrast the lower-lying Holocene-age surficial sediments.

There are six Holocene- to Pleistocene-age geologic units mapped within the project alignment, including alluvium (Qa), alluvial fan deposits (Qf), delta deposits of the Susan River (Qd), older lake deposits (Qol), near-shore and deltaic deposits of Lake Madeline (Qlmd), and landslide deposits (Qls), the latter of which are made up of displaced sections of land masses (CGS 2013, 2014, 2016, 2017; Saucedo and Wagner, 1992). Also mapped in the project vicinity within a 0.25-mile buffer is Holocene- to Pleistocene-age colluvial gravel (Qg) (CGS 2016). Holocene-age sediments are typically too young to contain fossilized material (SVP 2010), although they may shallowly overlie sensitive older (e.g., Pleistocene) deposits at variable depth.

Therefore, Holocene- to Pleistocene-age sedimentary deposits are considered to have an unknown potential for producing paleontological resources (PFYC U) based on BLM (2016) guidelines, until more subsurface data is acquired. Additionally, fossils contained within landslide deposits may lack stratigraphic context due to displacement from the original area of deposition, thereby reducing the significance of the fossils. However, the resources may retain some significance if any stratigraphic structure is preserved in the landslide masses. Therefore, Holocene- to Pleistocene-age landslide

deposits (Qls) are also considered to have an unknown potential for producing paleontological resources (PFYC U) based on BLM (2016) guidelines, until more subsurface data is acquired.

**Old Sedimentary Deposits (Qoa, Qof, Qpl, Qplg, Qos, Qpfd) (Pleistocene).** Old sedimentary deposits are Pleistocene-age (approximately 2.51 million years to 11,000 years old) and include deposits consisting of variable compositions of clay, silt, sand, gravel, and larger clasts that were laid down in ancient terrestrial and marine environments. Gravel is composed of igneous and metamorphic rocks that range from granule to cobble-sized and that generally vary between subangular to subrounded depending on the source proximity. These deposits are moderately to well indurated and are generally characterized by their low-moderate to moderate relief and dissected surfaces. They are relatively elevated and contrast the lower-lying Holocene-age sedimentary deposits.

There are six Pleistocene-age sedimentary geologic units mapped within the project alignment: older alluvium (Qoa), older fan deposits (Qof), near-shore deposits of Lake Lahontan (Qpl), gravel deposits of Lake Lahontan (Qplg), nonmarine sedimentary rocks (Qos), and fan delta deposits of Long Creek (Qpfd) (CGS 2013, 2014, 2016, 2017; Saucedo and Wagner 1992). Numerous Ice Age taxa have been recovered from Pleistocene-age deposits throughout Lassen and Modoc Counties as well as other areas of California. Fossils recorded from Pleistocene-age sediments within the project vicinity are listed in Table 5.7-1.Therefore, Pleistocene-age sedimentary deposits are considered to have a moderate potential for producing paleontological resources (PFYC 3) based on BLM (2016) guidelines.

**Very Old Sedimentary Deposits (Ps) (Pliocene).** Very old sedimentary deposits are Pliocene-age (approximately 5.51 million years to 2.33 million years old) and include nonmarine sedimentary rocks (Ps) within the project area. This unit is made up of undifferentiated deposits of fluvial and lacustrine shale, sandstone, and ash (Saucedo and Wagner 1992).

Geologic units with informal names like Pliocene-age nonmarine sedimentary deposits (Ps) are not responsive to searches in the literature because they lack formal designation. However, online databases record numerous vertebrate fossils from similar Pliocene-age sedimentary sediments in Lassen and Modoc Counties. Fossils recorded from Pliocene-age sedimentary deposits within the project vicinity are listed in Table 5.7-1. Therefore, Pliocene-age nonmarine sedimentary deposits (Ps) are considered to have an unknown potential for producing paleontological resources (PFYC U) based on BLM (2016) guidelines until more lithological data is obtained.

**Volcanic Rocks (Tmma, Tlma, Ttmb, Tvb, Tdrb, Tsbl, Tlrt, Tvgb, Tdgb, Tb, Ta, Tabpf, Tsht, Tvsa, Ttpw, Ttab, Trpt, Tsha, Tssa, Tsl, Tfcb, Tdct, Tesa, Tsab, Tsbu, Tvbi, Tld, Tlp, Tpvu, Tfp, Ttpf, Omv) (Pleistocene to Oligocene).** Igneous rocks are crystalline or non-crystalline rocks that form through the cooling and subsequent solidification of lava or magma. Volcanic (extrusive) igneous rocks form at the Earth's surface when lava erupts and rapidly solidifies. Lava is formed by the partial melting of pre-existing plutonic rocks in the Earth's crust or mantle due to increases in temperature, changes in pressure, or changes in geochemical composition.

Extreme temperatures in the environments in which most extrusive igneous rocks form prevent the preservation of fossils (e.g., basaltic and andesitic lava flows, pyroclastic flows). However, some volcanic

deposits, namely ash and tuff, can harbor significant intact paleontological resources. There are no specimens in the UCMP or PBDB specifically attributed to ash or tuff deposits within Lassen, Modoc, or Sierra Counties. However, the Pliocene-age Alturas Formation, which includes tuff and volcaniclastic sandstone deposits as well as lake clays, has produced vertebrate fossils in Modoc County (PBDB 2020; UCMP 2020). Most of the listed localities do not specify which facies of the Alturas Formation that the fossils were recovered from; however, several were reported from sandstone, volcaniclastic sandstone, and siltstone facies. Recorded specimens from the Alturas Formation are listed in Table 5.7-1.

The majority of volcanic rocks within the project area are considered to have very low to low potential for producing significant paleontological resources (PFYC 2 to 1) based on BLM (2016) guidelines. However, the Pliocene- to Miocene-age Alturas Formation (Ta) and the unnamed and undifferentiated Oligocene- to Miocene-age rhyolite tuff and sedimentary rocks (Omv) are considered to have an unknown potential for producing paleontological resources (PFYC U) based on BLM (2016) guidelines.

**Plutonic Rocks (Tovi, Kgd, KJgr) (Miocene and Mesozoic).** Igneous rocks are crystalline or non-crystalline rocks that form through the cooling and subsequent solidification of lava (volcanic) or magma (plutonic). Intrusive (plutonic) igneous rocks form below the Earth's surface. Magma is formed by the partial melting of pre-existing plutonic rocks in the Earth's crust or mantle due to increases in temperature, changes in pressure, or changes in geochemical composition. Three plutonic geologic units are mapped within the project alignment, including Miocene-age hypabyssal intrusions (Tovi), Cretaceous-age hornblende-biotite granodiorite (Kgd), and Mesozoic-age granite and granodiorite (KJgr) (CGS 2013, 2017; Saucedo and Wagner 1992).

Extreme temperatures and the environments in which these intrusive igneous rocks form prevent the preservation of fossils. Therefore, plutonic rocks are considered to have a very low potential for producing significant paleontological resources (PFYC 1) based on BLM (2016) guidelines.

## Table 5.7-1. Paleontological Literature and Record Search Results

| Institutional Locality Number/Name | Geologic Unit | Taxon | Common Name | Location | Source |
|---|---|---|---|---|---|
| Not Reported | Pleistocene-age sedimentary deposits | *Gila bicolor* | blue chub | Lassen County | UCMP 2020; PBDB 2020 |
| | | *Gila coerulea* | blue chub | | |
| | | *Acrocheilus* | chiselmouth | | |
| | | *Ptychocheilus* | cyprinid fish | | |
| | | *Lavinia* | cyprinid fish | | |
| | | *Chasmistes* | ray-finned fish | | |
| | | *Oncorhyncus* | Pacific salmon/trout | | |
| | | *Peromyscus* | deer mouse | | |
| | | *Sigmodon medius* | cotton rat | | |
| | | *Ammospermophilus* | antelope squirrel | | |
| | | *Lepus* | hare/jackrabbit | | |

| Institutional Locality Number/Name | Geologic Unit | Taxon | Common Name | Location | Source |
|---|---|---|---|---|---|
| | | *Sylvilagus* | cotton rabbit | | |
| | | *Canis* | dog | | |
| | | *Canis latrans* | coyote | | |
| | | *Equus* | horse | | |
| | | *Camelops* | camel | | |
| | | *Sphenophalos* | pronghorn | | |
| | | *Bison latifrons* | bison | | |
| | | *Smilodon* | sabre-tooth cat | | |
| | | *Mammut pacificus* | mastodon | | |
| | | *Mammuthus* | mammoth | | |
| UCMP V5037, V6037, V6613, V6629 | Pleistocene-age sedimentary deposits | *Equus* | horse | Modoc County | UCMP 2020; PBDB 2020 |
| | | *Symbos* | musk oxen | | |
| | | *Bison* | bison | | |
| | | Camelidae | camel | | |
| | | Proboscidean | elephant | | |
| Not Reported | Pleistocene-age sedimentary deposits | *Mammuthus* | mammoth | Southern and Central California | Jahns 1954; Jefferson 1991 |
| | | *Mammut* | mastodon | | |
| | | Camelidae | camel | | |
| | | Equidae | horse | | |
| | | *Bison* | bison | | |
| | | *Megatherium* | giant ground sloth | | |
| | | Tayassuidae | peccary | | |
| | | *Acinonyx* | cheetah | | |
| | | *Panthera* | lion | | |
| | | *Smilodon* | saber-tooth cat | | |
| | | *Hydrochoerus* | capybara | | |
| | | *Canis dirus* | dire wolf | | |
| | | Rodentia | rodent | | |
| Not Reported | Pliocene-age sedimentary deposits | *Anas* | dabbling duck | Modoc County | UCMP 2020; PBDB 2020 |
| | | *Gila coerulea* | blue chub | | |
| | | *Oncorhyncus* | Pacific salmon/trout | | |
| | | *Acrocheilus* | chiselmouth | | |
| | | *Ptychocheilus* | cyprinid fish | | |
| | | *Chasmistes* | ray-finned fish | | |
| | | *Catostomus* | common sucker | | |

| Institutional Locality Number/Name | Geologic Unit | Taxon | Common Name | Location | Source |
|---|---|---|---|---|---|
| | | *Cottus* | sculpin | | |
| | | *Felis* | small cat | | |
| | | *Hypolagus* | rabbit | | |
| | | *Plesippus* | extinct horse | | |
| | | *Titanotylopus* | camel | | |
| | | *Hemiauchenia* | camel | | |
| | | *Odocoileus lucasi* | American mountain deer | | |
| UCMP V95026, V95027, V95028, V95029, V95030, V95031, V95032, V95033, V95038 | Alturas Formation (Pliocene-age) | *Rana* | pond frog | Lassen County | UCMP 2020; PBDB 2020 |
| | | *Sceloporus* | spiny lizard | | |
| | | Aves | bird | | |
| | | *Anas* | dabbling duck | | |
| | | *Cyprinidae* | carp/minnow | | |
| | | *Gila coerulea* | blue chub | | |
| | | *Oncorhyncus* | Pacific salmon/trout | | |
| | | *Acrocheilus* | chiselmouth | | |
| | | *Ptychocheilus* | cyprinid fish | | |
| | | *Chasmistes* | ray-finned fish | | |
| | | *Catostomus* | common sucker | | |
| | | *Peromyscus* | deer mouse | | |
| | | *Cryptotis* | small-eared shrew | | |
| | | *Mimomys sawrockensis* | mouse | | |

## 5.7.2 Regulatory Setting

### 5.7.2.1 Federal

**Clean Water Act Section 402p**. The CWA was amended in 1987 to include Section 402p. This amendment created a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination Service (NPDES) program. SWRCB is responsible for implementing the NPDES program. Pursuant to the state's Porter-Cologne Act, it delegates implementation responsibility to California's nine RWQCBs. Both the Central Valley and the Lahontan RWQCBs have jurisdiction along areas of the project alignment. The Central Valley RWQCB has jurisdiction along the northern extent from the Oregon–California border to the northern portion of Lassen County. The Lahontan RWQCB has jurisdiction along the remaining extent through Lassen County to the Nevada–California border.

Under the NPDES Phase II Rule, any construction project disturbing greater than or equal to 1.0 acre must obtain coverage under the state's Construction General Permit (CGP) for stormwater discharges associated with construction activity. The purpose of the Phase II Rule is to avoid or mitigate the effects of construction activities, including earthwork, on surface waters. CGP applicants are required to file a Notice of Intent to Discharge Stormwater with the regulating RWQCB and to prepare a SWPPP stipulating BMPs that would be implemented to avoid adverse effects on water quality.

**Federal Land Policy and Management Act (FLPMA) (43 USC 1701).** Federal law, including the Federal Land Policy and Management Act (FLPMA) of 1976 (43 USC 1701), includes objectives such as the evaluation, management, protection, and location of fossils on BLM-managed lands, defines fossils, and lays out penalties for the destruction of significant fossils. Also, NEPA requires the preservation of "historic, cultural, and natural aspects of our national heritage." Most recently, the Omnibus Public Lands Act refines NEPA and FLPMA guidelines and strictures and outlines minimum punishments for removal or destruction of fossils from federal and public lands.

**Paleontological Resources Preservation Act (PRPA).** Paleontological Resources Preservation, Title VI, Subtitle D in the Omnibus Public Lands Act of 2009, Public Law 111-011 Purpose: The Secretaries of Interior and Agriculture shall manage and protect paleontological resources on federal land using scientific principles and expertise. With the passage of the PRPA, Congress officially recognizes the importance of paleontological resources on federal lands (U.S. Department of the Interior, USDA) by declaring that fossils from federal lands are federal property that must be preserved and protected using scientific principles and expertise. The PRPA provides the following:

- Uniform definitions for "paleontological resources" and "casual collecting"
- Uniform minimum requirements for paleontological resource use permit issuance (terms, conditions, and qualifications of applicants)
- Uniform criminal and civil penalties for illegal sale, transport, theft, and vandalism of fossils from federal lands
- Uniform requirements for curation of federal fossils in approved repositories

**Code of Federal Regulations, Title 43.** Under Title 43, CFR Section 8365.1-5, the collection of scientific and paleontological resources, including vertebrate fossils, on federal land is prohibited. The collection of a "reasonable amount" of common invertebrate or plant fossils for non-commercial purposes is permissible (43 CFR 8365.1-5).

### 5.7.2.2 State

**Alquist-Priolo Earthquake Fault Zoning Act.** In 1972, the State of California passed the Alquist-Priolo (AP) Geologic Hazards Zone Act (renamed the Alquist-Priolo Earthquake Fault Zoning Act in 1994).The act limits the hazards of fault surface rupture to occupied structures and prohibits the development of new structures intended for human occupancy from being located across the trace of an active fault. AP earthquake fault zones are areas designated along faults that are "sufficiently active and well defined."

Fault Evaluation Reports and maps for AP earthquake fault zones summarize data on fault location, age of activity, orientation, and probable magnitude of displacement.

**Seismic Hazard Mapping Act.** In 1990, the State of California passed the Seismic Hazards Mapping Act. This law was codified in the PRC as Division 2, Chapter 7.8A. It addresses non-surface fault rupture earthquake hazards, including liquefaction, ground shaking, and seismically induced landslides. Under the Seismic Hazard Mapping Act, these hazards are identified and mapped to assist local governments in land use planning.

**California Environmental Quality Act.** The procedures, types of activities, persons, and public agencies required to comply with CEQA are defined in the CEQA Guidelines as amended on March 18, 2010 (Title 14, CCR Section 15000 et seq.) and further amended January 4, 2013, and December 28, 2018. (CEQA Guidelines Appendix G, Section VII).

**State of California Public Resources Code.** PRC Chapter 1.7, Sections 5097 and 30244, includes additional state-level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from the development on state lands, and define the excavation, destruction, or removal of paleontological "sites" or "features" from public lands without the express permission of the jurisdictional agency as a misdemeanor. As used in Section 5097, "state lands" refers to lands owned by or under the jurisdiction of the state or any state agency. "Public lands" is defined as lands owned by or under the jurisdiction of the state, or any city, county, district, authority, public corporation, or any agency thereof.

### 5.7.2.3 Local

Per Section 65302 (g) of the California Government Code, the Safety Element of a General Plan shall include policies and implementation measures designed to protect the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards.

**Modoc County General Plan, Safety Element.** The Safety Element of the Modoc County General Plan (Modoc County 1988, as amended) includes components related to geologic and seismic hazards. Modoc County lies in the lowest rated area in the State of California for earthquake activity. There are no recorded epicenters in the area. Modoc County does, however, adhere to the most recent accepted building standards for earthquakes. Policies including restrictions to new development on slopes of more than 30 percent or on land which has been identified as environmentally unsound to support development are implemented to support the goal of protecting the public health and safety though limitation of development in hazardous areas.

**Lassen County General Plan Safety and Seismic Safety Element.** The Safety and Seismic Safety Element of the Lassen County General Plan (Lassen County 1999, as amended) contains a number of goals, policies, and implementation measures designed to add safety considerations to the active planning process in order to reduce loss of life, injuries, damage to property, socio-economic dislocation

from fire, seismic hazards, and other possible seismic disasters. It addresses hazards related to seismic earth shaking, surface rupture, and seiches, as well as unstable slopes and soils, mudslides, landslides, subsidence, volcanism and erosion among other topics.

**Sierra County General Plan Safety Element.** The Safety Element of the Sierra County General Plan (Sierra County 1996, as amended) contains a number of goals, policies, and implementation measures designed to maintain a high level of safety for people and property by limiting the exposure of its residents to safety hazards including seismic and geologic hazards, flooding, and fire. It addresses geologic hazards including seismicity, mine shafts, avalanche hazards, and evacuation routes.

**City of Alturas General Plan**. The Safety Element of the City of Alturas General Plan includes components related to geologic and seismic hazards. Alturas lies in the lowest rated area in the State of California for earthquake activity. There are no recorded epicenters in the area. However, Alturas does adhere to the most recent accepted building standards for earthquakes. The goals, policies, and implementation measures reflect that of Modoc County. Policies, including restrictions to new development on slopes of more than 30 percent or on land, which has been identified as environmentally unsound to support development, are implemented to support the goal of protecting the public health and safety though limitation of development in hazardous areas.

## 5.7.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | ☐ | ☐ | ☒ | ☐ |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ |
| iv) Landslides? | ☐ | ☐ | ☒ | ☐ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | ☐ | ☐ | ☒ | ☐ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | ☐ | ☐ | ☒ | ☐ |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste-water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☒ | ☐ |

## 5.7.4 Impact Analysis

Impacts on geology, soils, and paleontological resources that could result from the construction and operation of the project were evaluated based on general locations and proposed construction activities. Geologic and seismic hazards that could potentially result from installation of the proposed underground fiber optic network, and that could expose people to injury and infrastructure to damage, were considered in terms of adverse impacts on public safety.

**a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**Less Than Significant Impact.** Topographic maps of the Honey Lake Basin in southern Lassen County show active faults that have a relatively high potential for surface rupture. Topographic maps of eastern Modoc County identify the Surprise Valley Fault as an active fault trace extending parallel along the northern portion of the project alignment. The Surprise Valley fault runs within 10 miles of the project alignment near Goose Lake. Additional late Quaternary faults identified along the project alignment include the Likely Fault Zone in southern Modoc County and northern Lassen County, the Nelson Corral Fault in northern Lassen County, the Fitzhugh Creek and the Davis Creek Fault Zones at the southern edge of Goose Lake, and the Goose Lake graben faults.

With the exception of the active fault areas described above, the majority of the project alignment would be located outside of Alquist-Priolo earthquake fault zones. Furthermore, both the Modoc County and the City of Alturas General Plans state that they are within the lowest rated area in the State of California for earthquake activity and that there are no recorded epicenters in their respective planning areas.

Known faults located along the project alignment have the potential to rupture at any time. However, because project infrastructure primarily consists of underground fiber optic cable and unmanned ancillary equipment, any surface fault rupture or seismic-related ground failure would not expose people or structures present to potential substantial adverse effects as a result of the project, or increase the risk of loss, injury or death as a result of surface fault rupture. Under this criterion, the impact is less than significant.

**ii) Strong seismic ground shaking?**

**Less Than Significant Impact.** Southern Lassen County along the Honey Lake Basin and extending into northeastern Sierra County is anticipated to have a moderate to high potential for ground shaking. The extent of the alignment that runs through these areas would be subject to the effects of strong seismic ground shaking. Construction activities would not substantially increase risks of seismic hazard exposure over typical seismic hazard risks throughout the area. In addition, the project would be belowground and unmanned. Thus, the project would not directly or indirectly cause potential substantial adverse effects involving strong seismic ground shaking including the risk of loss, injury, or death. Under this criterion, the impact is less than significant.

**iii) Seismic-related ground failure, including liquefaction?**

**Less Than Significant Impact.** Soils along the project alignment include expansive soils with a low to high shrink-swell potential, which could result in damage to concrete foundations associated with the regeneration huts. However, all aboveground structures would be built in accordance with the California Building Code, and all construction activities would be conducted according to applicable grading codes and best practices associated with compaction and treatment of soils. In addition, no habitable structures are included as part of the project, and therefore, there would be no increased risk of loss, injury, or death associated with seismic-related ground failure or liquefaction as a result of project construction or operations. Under this criterion, the impact is less than significant.

**iv) Landslides?**

**Less Than Significant Impact.** The fiber optic conduit is proposed to be installed approximately 36 to 42 inches below ground surface and generally within the Caltrans right-of-way and existing roadways. Therefore, the risk of localized ground failure due to preexisting geologic conditions has been previously accounted for and reduced through grading, compaction, and use of road base and engineered fills. In addition, any seismic-related ground failure, including landslides, would not expose people or structures to potentially substantial adverse effects because the project would be underground and monitored remotely. Thus, the project would not directly or indirectly cause potential substantial adverse effects,

including the risk of loss, injury, or death, involving landslides. Under this criterion, the impact is less than significant.

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

**Less Than Significant Impact.** Project construction would involve ground-disturbing activities such as vegetation clearing, minor grading, trenching, plowing, and directional drilling. These activities would have the potential to exacerbate erosion or contribute to the loss of topsoil if soil were improperly contained during trenching or drilling, or if the construction contractor failed to adequately isolate and reapply topsoil during backfilling of excavations.

However, because the extent of earth-moving activities would be limited, and most of the project area is relatively flat, substantial erosion or loss of topsoil is not expected to occur. In addition, Zayo would obtain coverage under the SWRCB General Permit for Storm Water Discharges Associated with Construction Activity because project activities would result in ground disturbance of more than 1 acre. As a result, Zayo would prepare and implement an SWPPP to prevent construction-related erosion, sediment runoff, and discharge of pollutants into waterways or onto neighboring properties (APM HYDRO-1; see Section 5.10, Hydrology and Water Quality). The SWPPP would require implementation of temporary erosion control measures to control erosion from disturbed areas, sedimentation control measures, and post-construction restoration and sediment stabilization measures. As such, implementation of APM HYDRO-1 would further reduce any impacts associated with soil erosion or loss of topsoil, and impacts under this criterion would remain less than significant.

**c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

**Less Than Significant Impact.** The fiber optic conduit is proposed to be installed approximately 36 to 42 inches below ground surface and generally within the Caltrans right-of-way and existing roadways. Additionally, no areas along the alignment have been evaluated for liquefaction or landslides. Therefore, the risk of soil instability, landslide, lateral spreading, subsidence, liquefaction, or collapse resulting from the project has previously been accounted for and is considered low. Under this criterion, the impact is less than significant.

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

**Less Than Significant Impact.** Soils along the project alignment include expansive soils with a low to high shrink-swell potential, which could result in damage to concrete foundations associated with the regeneration huts. However, all aboveground structures would be built in accordance with the California Building Code, and all construction activities would be conducted according to applicable grading codes and best practices associated with compaction and treatment of soils. In addition, no habitable structures are included as part of the project, and therefore, there would be no direct or indirect risks to life or

property as a result of project construction or operations. Under this criterion, the impact is less than significant.

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

**No Impact.** No septic tanks or alternative waste-water disposal systems are proposed as part of the project. Therefore, no impacts would occur.

**f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**Less than Significant Impact.** A paleontological evaluation and inventory of the project area analyzed existing paleontological data to determine sensitivity (Paleo Solutions 2020). Components of the analysis included a review of geologic maps, literature, and online databases. Reviews of literature and online databases yielded numerous vertebrate fossils recorded from sediments similar to those that occur within the project vicinity. Additionally, numerous geologic units with unknown (PFYC U) and moderate paleontological potential (PFYC 3) are encountered within 0.25 mile of the project alignment. Ground disturbing activities that impact these areas may encounter important paleontological resources if the sediments are conducive to fossilization. Surface grading or shallow excavations in sedimentary geologic units with low paleontological potential (PFYC 2) are unlikely to uncover significant fossil vertebrate remains since these units are either too young or not conducive to fossilization. Excavations entirely within volcanic and plutonic rocks with very low paleontological potential (PFYC 1) or very low to low potential (PFYC 2 to 1) are unlikely to encounter any fossil resources because of the environments in which these rocks form.

In areas of unknown or moderate paleontological potential (PFYC U and 3), construction-related ground disturbing activities have the potential to result in significant adverse direct impacts to paleontological resources. However, the proposed alignment would be located within existing roadway right-of-way that have been previously graded, compacted, and backfilled. Surface grading or shallow excavations entirely within artificial fill or previously disturbed sediments are unlikely to uncover significant fossil vertebrate remains since any recovered resources would lack stratigraphic context. However, these deposits may shallowly overlie older sedimentary deposits. Implementation of APM PALEO-1 and APM PALEO-2 would lessen the potential impact. Therefore, the risk of directly or indirectly destroying a unique paleontological resource or site or unique geologic feature is anticipated to be less than significant.

## 5.7.5 Draft Applicant Proposed Measures

### Applicant Proposed Measures

#### APM PALEO-1: Paleontological Mitigation Plan

Prior to construction, a Paleontological Mitigation Plan (PMP) should be prepared. It should provide detailed recommended monitoring locations; a description of a worker training program; detailed

procedures for monitoring, fossil recovery, laboratory analysis, and museum curation; and notification procedures in the event of a fossil discovery by a paleontological monitor or other project personnel. Any subsurface bones or potential fossils that are unearthed during construction should be evaluated by a professional paleontologist as described in the PMP.

**APM PALEO-2: Paleontological Resource Monitoring**

Construction excavations which disturb geologic units with moderate paleontological potential (Potential Fossil Yield Classification [PFYC] 3) should be monitored by a professional paleontologist in conjunction with worker environmental training to reduce potential adverse impacts on scientifically important paleontological resources to a less than significant level. The timing and frequency (e.g., part-time vs. full-time) of monitoring should be determined by the professional paleontologist based on initial field observations and excavation activities. Additionally, excavations which disturb geologic units with unknown paleontological potential (PFYC U) should be initially monitored in order to inspect for the presence of sensitive sediments and any resources that may be harbored within. In the event that a highly fossiliferous facies are encountered, full time monitoring should occur until excavations within that facies are complete. Worker environmental training of construction personnel is recommended for excavations impacting sedimentary geologic units with low paleontological potential (PFYC 2). No additional measures are recommended for excavations impacting volcanic and plutonic rock units with very low paleontological potential (PFYC 1) or very low to low potential (PFYC 2 to 1). As summary of the recommended monitoring procedures for each of the mile posts is provided in Appendix B.

**APM HYDRO-1: Prepare and Implement a Storm Water Pollution Prevention Plan (SWPPP)**

See Section 5.10, Hydrology and Water Quality.

# 5.8 GREENHOUSE GAS EMISSIONS

This section discusses potential GHG emissions associated with project construction, operation, and maintenance, and concludes that impacts will be less than significant. GHG emissions were calculated and reported in carbon dioxide equivalents ($CO_2e$) for carbon dioxide ($CO_2$), nitrous oxide ($N_2O$) and methane ($CH_4$) emissions from project emissions.

## 5.8.1 Environmental Setting

### 5.8.1.1 GHG Setting

The project alignment approximately 193.9 miles of Modoc, Lassen, and Sierra Counties located in the NPAB and MCAB. The project involves the installation of an underground fiber-optic network to improve the quality of rural broadband in northeast California and would not replace or upgrade an existing facility or infrastructure that emits GHG emissions.

Many chemical compounds in the Earth's atmosphere act as GHGs, as they absorb and emit radiation within the thermal infrared range. Many gases exhibit "greenhouse" properties. Some of them occur in nature (e.g., water vapor, $CO_2$, $CH_4$, and $N_2O$, while others are exclusively human made (like gases used for aerosols) (EPA 2019). A $CO_2e$ is a metric measure used to compare from the global warming potentials of these various GHG sources by converting amounts of the other gases to the equivalent amount of $CO_2$ with the same global warming potential.

## 5.8.2 Regulatory Setting

### 5.8.2.1 Federal

The federal government is taking steps to address the challenges of climate change. EPA collects various types of GHG emissions data. These data help EPA, policy-makers, and businesses track GHG emissions trends and identify opportunities for reducing emissions and increasing efficiency. EPA has been collecting a national inventory of GHG emissions since 1990, and in 2009 EPA established mandatory reporting of large GHG emissions sources.

The EPA is also achieving GHG reductions through partnerships and initiatives; evaluating policy options, costs, and benefits; advancing the science; partnering internationally and with states, localities, and tribes; and helping communities to adapt to climate change.

### 5.8.2.2 State

#### Executive Order S 3-05

On June 1, 2005, the Governor issued Executive Order S 3-05, which set the following GHG emission reduction targets:

- By 2010, reduce GHG emissions to 2000 levels

- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

To meet these targets, the Climate Action Team prepared a report to the Governor in 2006 that contains recommendations and strategies to help ensure that the targets in EO S-3-05 are met (CalEPA 2006).

## Assembly Bill 32

California Assembly Bill (AB) 32, also known as the Global Warming Solutions Act of 2006 (codified in the California Health and Safety Code [HSC] Division 25.5), requires CARB to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB was also required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels set in 1990, which must be achieved by 2020. The 2020 GHG emissions limit is 431 million metric tons of carbon dioxide equivalents ($MMTCO_2e$).

Toward achieving the maximum technologically feasible and cost-effective GHG emission reductions, AB 32 permits the use of market-based compliance mechanisms and requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts. CARB has adopted nine early action measures for implementation, including the following:

- Ship electrification at ports
- Reduction of high global warming-potential gases in consumer products
- Heavy-duty vehicle GHG emission reduction (aerodynamic efficiency)
- Reduction of perfluorocarbons from semiconductor manufacturing
- Improved landfill gas capture, reduction of hydroflourocarbon-134a from do-it-yourself motor vehicle servicing
- Sulfur hexafluoride reductions from the non-electric sector, a tire inflation program, and a low-carbon fuel standard

## Executive Order B-30-15 and Senate Bill 32/Assembly Bill 197

In 2015, EO B-30-15 established the following new interim GHG emission reduction target:

- By 2030, California shall reduce GHG emissions to 40 percent below 1990 levels.
- All state agencies with jurisdiction over sources of GHG emissions shall implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$.

Senate Bill (SB) 32 and its companion bill, AB 197, were passed in 2016. SB 32 expanded upon AB 32, amending HSC Division 25.5 to codify the GHG emissions target in EO B-30-15 of 40 percent below 1990

levels by 2030. AB 197 provides the legislature greater authority over CARB and requires CARB to provide a GHG emissions inventory report at least once a year.

## Climate Change Scoping Plan

In December 2008, CARB approved the AB 32 Scoping Plan outlining the state's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimated a reduction of 174 $MMTCO_2e$ (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high climate-change-potential sectors, and proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every 5 years to evaluate the implementation of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. The First Update to the Climate Change Scoping Plan was approved by CARB on May 22, 2014. In 2016, the legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the legislature passed companion legislation AB 197, which provided additional direction for developing the Scoping Plan. On December 14, 2017, the CARB approved the Second Update to the Climate Change Scoping Plan, the 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target.

In the 2017 Scoping Plan, CARB estimated the projected statewide 2030 emissions for the Reference Scenario (under business-as-usual conditions [i.e., emissions that would occur without any plans, policies, or regulations to reduce GHG emissions]) to be 389 $MMTCO_2e$. HSC Division 25.5 set the emissions target of 260 $MMTCO_2e$. Based on this, the Reference Scenario is expected to exceed the 2030 target by 129 $MMTCO_2e$.

## Renewables Portfolio Standard

In 2002, a state law established the basic policy framework for the increased use of renewable energy resources in California, known as the Renewables Portfolio Standard (RPS). Specific requirements were established for investor-owned utilities, including a 20 percent target and provisions for the types of renewable resources that could be used to meet the target. The major eligible renewable energy resources, as defined by CEC, include biomass, geothermal, solar, wind, and small hydroelectric facilities. Under the law, publicly owned utilities (POUs) were directed to pursue voluntary actions to increase the use of renewable energy in their portfolios but were allowed the flexibility to define their targets and the types of resources that could meet those targets. CEC and CPUC work collaboratively to implement the RPS.

In 2006, new state policy heightened the need to increase the use of renewable energy as part of the state's GHG reduction efforts. In April 2011, Governor Brown signed SB X1-2, which revised the RPS target to be 33 percent renewables by 2020. The new RPS standards apply to all electricity retailers in the state, including POUs, investor-owned utilities, electricity service providers, and community choice aggregators. In October 2015, Governor Brown signed SB 350, which expanded and increased the target of the RPS program to 50 percent by the end of 2030. SBs X1-2 and 350 included new enforcement provisions and directed CARB to collect financial penalties for any Notice of Violation issued by CEC to a POU for its failure to comply with requirements of the state's RPS Program. Lastly, in 2018, SB 100 was

signed into law, which again increased the RPS program to 60 percent by 2030 and requires all of the state's electricity to come from carbon-free resources by 2045.

#### Senate Bill 375

SB 375 passed the Senate on August 30, 2008, and was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, contributing more than 40 percent of the GHG emissions in California, with automobiles and light trucks alone contributing almost 30 percent. SB 375 indicated that GHGs from automobiles and light trucks can be reduced by new vehicle technology. However, significant reductions from changed land use patterns and improved transportation policy were also necessary. SB 375 stated, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 did the following: 1) required metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions; 2) aligned planning for transportation and housing; and 3) specified incentives for the implementation of the strategies.

#### Executive Order B-30-15

On April 29, 2015, the Governor issued EO B-30-15, which added an interim target of GHG emissions reductions to help ensure that the state meets its 80 percent reduction by 2050 as set in EO S-3-05. The interim target is reducing GHG emissions by 40 percent by 2030. It also directed state agencies to update the Scoping Plan, update the Adaptation Strategy every 3 years, and take climate change into account in their planning and investment strategies. Additionally, it required that the state's Five-Year Infrastructure Plan take current and future climate change impacts into account in all infrastructure projects.

#### Executive Order B-18-12

EO-B-18-12 calls for significant reductions in state agencies' energy purchases and GHG emissions. The EO included a Green Building Action Plan, which provided additional details and specific requirements for implementation of the EO.

#### Airborne Toxic Control Measure

In 2004, CARB initially approved an ATCM to implement idling restrictions of diesel-fueled commercial motor vehicles operating in California (13 CCR, Section 2485) (CARB 2005). The ATCM applies to diesel-fueled commercial vehicles with a gross vehicle weight rating greater than 10,000 pounds. The ATCM would limit idling times of these vehicle's primary engine to no more than 5 minutes. Although the ATCM's intent was to reduce DPM, this measure would also reduce GHG emissions.

### 5.8.2.3 Local

The project spans multiple counties and multiple local air quality districts. MCAPCD has jurisdiction over Modoc County, LCAPCD has jurisdiction over Lassen County, and NSAQMD has jurisdiction over Sierra County. Currently, these air quality districts have not established GHG emissions thresholds for emissions generated from construction or operations of development projects or guidance on evaluating GHG impacts. To evaluate impacts of GHG emissions, project emissions would be compared to the GHG

threshold established by the nearby PCAPCD. PCAPCD's annual GHG threshold is 10,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e/yr$) (PCAPCD 2016).

## 5.8.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ |

## 5.8.4 Impact Analysis

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

**Less Than Significant Impact.** Emissions of GHGs associated with the construction of the project were calculated for the duration of construction activities. Construction of the project would result in temporary increases in GHG emissions associated with the use of off-road diesel equipment and vehicle trips. GHG emissions were estimated using CalEEMod Version 2016.3.2 and CARB's most recent version of its EMission FACtor model, EMFAC2017. Details of the GHG emissions modeling are provided in Appendix B.

Because impacts from construction activities would be brief, they contribute a relatively small portion of the overall lifetime project GHG emissions. In addition, there are few effective options for reducing GHG emissions from construction equipment. Therefore, a standard practice is to amortize construction emissions over the anticipated lifetime of a project, so that GHG reduction measures would address construction GHG emissions as part of the operational GHG reduction strategies. In the case of the project, there is no anticipated increase in operational activities, as such, there is no increase in operational GHG emissions. Nonetheless, GHG construction emissions are amortized to evaluate the lifetime impact of the project. The project's GHG emissions are shown in Table 5.8-1.

### Table 5.8-1: Project Annual Construction GHG Emissions

| Source | $MTCO_2e$/year |
|---|---|
| Off-road Equipment | 1,457.31 |
| Mobile | 350.31 |
| **Project Total** | **1,807.62** |
| **30-Year Amortization** | **60.25** |
| PCAPCD Threshold | 10,000 |
| **Exceeds Threshold?** | **No** |
| Source: PCAPCD 2016 | |

The project's GHG emissions would not exceed the PCAPCD's threshold as shown in Table 5.8-1. Operations of the project would have no impact. The project's GHG emissions would be below the PCAPCD's thresholds; therefore, the project would have a less than significant impact.

**b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

As a statewide plan, California's 2017 Climate Change Scoping Plan adopted by CARB on December 14, 2017, would be applicable to the project. The 2017 Climate Change Scoping Plan Update addressed SB 32 to achieve a 40 percent below 1990 statewide GHG emissions limit no later than 2030.

Many of the measures included in the 2017 Scoping Plan are implemented on a statewide level and do not specifically apply to the project. However, by using cleaner construction equipment, the project would participate in generating fewer short-lived climate pollutants consistent with the state's Short-Lived Climate Pollutant Reduction Strategy for black carbon. The construction worker and haul fleet would also be subject to cleaner fuels as regulations are implemented at the statewide level. The project would not be inconsistent with any of the state's strategies included in the 2017 Scoping Plan, and as such, would not conflict with this plan.

The project would comply with CARB's ATCM, which would reduce excessive GHG emissions from heavy duty truck idling during construction and equipment would be properly maintained according to the manufacturer's specifications to ensure efficient engine performance. Overall, the project would not conflict with any applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions; therefore, impacts would be less than significant.

## 5.8.5 Draft Environmental Measures

There are no applicable environmental measures for GHG emissions.

# 5.9 HAZARDS, HAZARDOUS MATERIALS, AND PUBLIC SAFETY

This section describes the existing hazards, hazardous materials, and public safety concerns in the vicinity of the project and analyzes potential hazards, hazardous materials, and public safety impacts associated with the construction, operation, and maintenance of the project. This section also describes environmental and regulatory settings.

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the Code of Federal Regulations as "a substance or material that . . . is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> *Hazardous material means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.*

Hazardous wastes are defined in California Health and Safety Code Section 25141(b) as wastes that:

> *Because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.*

Section 25532(j) of the Health and Safety Code defines "regulated substances accident risk" to mean a potential for the accidental release of a regulated substance into the environment that could produce a significant likelihood that persons exposed may suffer acute health effects resulting in significant injury or death.

Section (j) defines "regulated substance" to mean any substance that is either of the following (20 CFR Article 2 Section 25532):

(1) A regulated substance listed in Section 68.130 of Title 40 of the CFR pursuant to paragraph (3) of subsection (r) of Section 112 of the Clean Air Act (42 U.S.C. Sec. 7412(r)(3)).

(2) An extremely hazardous substance listed in Appendix A of Part 355 (commencing with Section 355.10) of Subchapter J of Chapter I of Title 40 of the CFR that is any of the following:

   i. A gas at standard temperature and pressure.

ii. A liquid with a vapor pressure at standard temperature and pressure equal to or greater than 10 millimeters mercury.

iii. A solid that is one of the following:

I. In solution or in molten form.

II. In powder form with a particle size less than 100 microns.

III. Reactive with a National Fire Protection Association rating of 2, 3, or 4

iv. A substance that the office determines may pose a regulated substances accident risk pursuant to subclause (II) of clause (i) of subparagraph (B) or pursuant to Section 25543.3.

## 5.9.1 Environmental Setting

### 5.9.1.1 Hazardous Materials Report

The vast majority of the project would be located within the existing right-of-way of public roads; therefore, a Phase I Environmental Site Assessment of the project was not conducted. To determine existing hazardous materials along the planned conduit route the regulatory agency database search report was obtained from Environmental Data Resources, Inc. (EDR), a third-party environmental database search firm. A complete copy of the database search report, including the date that the report was prepared, the date that the information was last updated, and the definition of databases searched, is provided in Appendix F.

The EDR database was reviewed to evaluate if properties located adjacent to or in close proximity to the planned conduit route represented an environmental concern or concerns to the conduit placement. Those concerns could include the potential presence of soil, soil vapor, or groundwater impacts within the planned construction depth of 4 feet below ground surface.

The location of the listed facilities are depicted on individual Focus Maps ranging from the northern tip of the Project site on the California-Oregon border (Focus Map 1, Appendix F) to the southeastern tip on the California-Nevada border (Focus Map 79, Appendix F).

Table 5.9-1 below show the potential hazardous sites within or adjacent to the project.

## Table 5.9-1 Potential Hazardous Sites Within or Adjacent to the Project Area

| Listed Facility Name/Address | Database Listing | Distance to the Project | Site Type |
|---|---|---|---|
| Wayside Inn<br>718-710 Highway 395<br>Standish, CA 96128 | CA UST; CA CERS; CA CUPA; CA LUST; CA Cortese | Adjacent to US 395 | UST |
| Termo Store<br>713-785 Highway 395<br>Termo, CA 96132 | CA CPS-SLIC | Approximately 20 feet from construction footprint | Water well contamination |
| XL Ranch Rancheria / XL Ranch – Hay Loading Area<br>Madeline, CA 96119 | Indian Reservation/ Open Dumps / CA NPDES; CA CIWQS | Adjacent to US 395 | Contains an open dump |
| Sierra Army Depot | DOD | Adjacent to US 395, approximately 900 feet from the right-of-way | Ammunition storage |
| PacifiCorp – Alturas Substation<br>Northwest Side of US Highway 395<br>0.3 Miles Northeast of EA<br>Alturas, CA 96101 | CA CERS | Adjacent to US 395 | Chemical storage facility |
| Federated Community Church<br>First and East Streets<br>Alturas, CA 96101 | CA HIST UST | Adjacent to US 395 | UST |
| Riverside Texaco / B&B Liquor<br>103 East Carlos Street<br>Alturas, CA 96101 | EDR HIST Auto; CA SWEEPS UST; CA HIST Cortese | Adjacent to US 395 | UST |
| Monitoring Station / US Forest Services<br>600 South Main Street<br>Madeline, CA 96119 | FINDS; CA CERS; CA HAZNET; CA HWTS; RCRA-LQG | Adjacent to US 395 | Air quality monitoring station |
| Caltrans – Alturas<br>406 East Hwy 395<br>Alturas, CA 96101 | CA AST; CA CERS | Adjacent to US 395 | AST |
| Modoc National Forest<br>700 South Main Street<br>Alturas, CA 96101 | CA HAZNET; CA HWTS | Adjacent to US 395 | Offsite disposal area with inorganic solid waste |
| Alturas Ranches – Alturas Shop<br>65A County Road 187 C<br>Alturas, CA 96101 | CA CERS; CA AST | Adjacent to US 395 | UST |

| Listed Facility Name/Address | Database Listing | Distance to the Project | Site Type |
|---|---|---|---|
| Likely General Store<br>3260 Highway 395<br>Alturas, CA 96101 | CA CERS | Adjacent to US 395 | Above ground petroleum storage |
| Walter Sphar Trucking<br>3112 Highway 395<br>Likely, CA 96116 | FINDS; CA AST | Adjacent to US 395 | AST |
| Bureau of Land Management<br>474-000 Highway 395<br>Litchfield, CA 96117 | CA CUPA, CA CERS | Adjacent to US 395 | Chemical storage facility |
| Sierra Cascade Aggregate<br>474-315 Highway 395<br>Madeline, CA 96119 | CA CERS; CA CUPA | Adjacent to US 395 | AST |
| Mapes Lane Bridge 7C-02 Replacement<br>Susanville, CA 96130 | CA CIWQS; CA CERS | Adjacent to US 395 | Dredge/fill site |
| Milford Yard<br>450-040 US Highway 3<br>Milford, CA 96121 | CA CERS; CA CUPA; CA AST | Adjacent to US 395 | AST – petroleum |
| Ross Ranch<br>454-175 US Highway 395 N<br>Milford, CA 96121 | CA HIST UST | Adjacent to US 395 | UST |
| Donald Morgan<br>450-415 US Highway 395<br>Milford, CA 96121 | CA HIST UST | Adjacent to US 395 | UST |
| Milford Yard / Milford Maintenance<br>450-040 US Highway 395<br>Milford, CA 96121 | FINDS; CA AST | Adjacent to US 395 | AST |
| The Mark<br>445-625 Highway 395<br>Herlong, CA 96113 | CA CERS; CA CUPA; CA AST | Adjacent to US 395 | AST – petroleum |
| Payless Gas and Grocery / Doyle Payless<br>Highway 395 and Rachel Drive<br>745-7500 Rachel Drive<br>Doyle, CA 96130 | CA HIST UST; CA SWEEPS UST; EDR HIST Auto; CA HIST UST; FINDS; CA AST; CA CERS; CA CUPA; | Adjacent to US 395 | UST |
| 02 4E4204 Bordertown<br>02 LAS 395 PM 0 0 5 6 02 sie 395 pm 0 0 3 1<br>Chilcoot, CA 96105 | CA NPDES; CA CIWQS; CA CERS | Adjacent to US 395 | Construction site with stormwater permit |

| Listed Facility Name/Address | Database Listing | Distance to the Project | Site Type |
|---|---|---|---|
| Modoc Road Department – Davis Creek Shop<br>41900 Hwy 395<br>Davis Creek, CA 96108 | CA AST; CA CERS | Adjacent to US 395 | AST – petroleum |
| Bureau of Land Management<br>Highway 395<br>Ravendale, CA 96128 | CA CUPA; CA CERS; CA AST | Adjacent to US 395 | AST – petroleum |
| B&B Deli<br>130 Carlos Street E<br>Alturas, CA 96101 | CA LUST; CA CERS | Adjacent to US 395 | UST |
| Heard's Market<br>473-525 Market Street<br>Litchfield, CA 96117 | CA LUST; CA SWEEPS UST; CA HIST UST; CA CERS | Adjacent to US 395 | Release of gasoline to groundwater |
| Lassen County Road Department District 3<br>718-950 Church Street<br>Standish, CA 96128 | CA CUPA; CA CERS | Adjacent to US 395 | Chemical storage facility |
| Sierra Landy Placer County<br>P.O. Box 34719 | CA Mines | Adjacent to US 395, approximately 100 feet west of the construction footprint | Mining operations |
| Hindle Pit-Modoc<br>202 West 4th Street | CA Mines | Adjacent to US 395, approximately 230 feet southeast of the construction footprint | Mining operations |
| Pozzolan Hill Pit-Reclaimed<br>608 SE 50th Avenue<br>County of Lassen, CA | CA Mines | Adjacent to US 395, approximately 270 feet southeast of construction footprint | Mining operations |
| Surian Litchfield<br>707-010 Wingfield Road<br>County of Lassen | CA Mines | Adjacent to US 395, approximately 270 feet southeast of construction footprint | Mining operations |
| Madeline Pit<br>1657 Riverside Drive<br>County of Lassen, CA | CA Mines | Adjacent to US 395, approximately 280 feet east of the construction footprint | Mining operations |
| Holdorff's Recycling<br>605 North Court Street<br>Altura, CA 96101 | CA SWRCY | Adjacent to US 395, approximately 330 feet west of construction footprint | Recycling center |
| Davis Creek Transfer / Davis Creek Disposal<br>1 MI S Davis Creek / County Road 133B<br>Davis Creek, CA | CA SWF/LF; CA CERS | Adjacent to US 395, approximately 400 feet east of the construction footprint | Waste collection facility |

| Listed Facility Name/Address | Database Listing | Distance to the Project | Site Type |
|---|---|---|---|

Notes:

AST = aboveground storage tank

CA = California

CERS = California Environmental Reporting System

CIWQS = California Integrated Water Quality System

Cortese = California Hazardous

CPS-SLIC = Cleanup Program Sites – Spills, Leaks, Investigations, and Cleanups

CUPA= Certified Unified Program Agency

DOD = United States Department of Defense

FINDS = Facility Index System/Facility Registry System

HAZNET = Facility and Manifest Data

HIST = historical

HWTS = Hazardous Waste Tracking System

LUST= Leaking Underground storage tank

NPDES = National Pollution Discharge Elimination System

RCRA-LQG = Resource Conservation and Recovery Act – Large Quantity Generator

SWEEPS = Statewide Environmental Evaluation and Planning System

SWRCY = Recycling Facilities in California Database

SWF/LF = Solid Waste Information System / Landfill

US 395 = United States Highway 395

UST = underground storage tank

Sources:

EDR 2020, SWRCB 2020, DTSC 2020

### 5.9.1.2 Airports and Airport Land Use Plans

The following airports are located within 2 miles of US 395 (AirNav 2020):

- Alturas Muni Airport. This airport is a city-owned public use airport located approximately 1 mile west of the project.
- Wesinger Ranch Airport. This is a private use airport located approximately 1.5 miles west of the project.
- Bates Field Airport. This is a private use airport located approximately 1.25 miles west of the project.
- Ravendale Airport. This airport is a publicly owned public use airport located approximately 0.25 mile northeast of the project.

There are no commercial flights from these airports.

### 5.9.1.3 Fire Hazard

As further discussed in Section 5.20, Wildfire, the project traverses through areas with a classification of Local Responsibility Area (LRA), State Responsibility Area (SRA), and Federal Responsibility Area (FRA), which relate to the jurisdiction of wildfire response. Both the California Department of Forestry and Fire Protection (CAL FIRE) and CPUC have mapped high fire severity areas within or adjacent to the project.

### 5.9.1.4 Metallic Objects

There are several electrical power lines that run along US 395 adjacent to the construction area that provide regional electrical power to much of the area. Additionally, there are several pipelines that run under or adjacent to US 395, particularly in more populated areas like the City of Alturas. Since the project itself includes the placement of a fiber optic line underground within existing roadway right-of-way, it would not provide a source of alternating current. The placement of the fiber optic line would be located away from any utility lines, if present, and would not cause corrosion. Additionally, the fiber optic line would be shielded with three 3.2-centimeter-diameter HDPE, which would prevent the cable from interacting with any nearby metallic objects. Since the project is not an electrical project, metallic objects within 25 feet of the project are not identified in this PEA.

### 5.9.1.5 Hazardous Air Pollutants

EPA defines hazardous emissions, also known as Hazardous Air Pollutants (HAP), as those pollutants that are known or suspected to cause cancer or other serious health effects (EPA 2017). These pollutants can come from sources such as gasoline, motor oils, asbestos, and paint strippers and can be inhaled or ingested. Fuels, such as diesel and gasoline, that are required for the operation of construction equipment are considered Class 3, flammable liquid, and hazardous materials that can lead to fires or explosions if handled incorrectly. Additionally, oils and lubricants for operation of equipment are also considered Class 3 hazardous materials.

#### Asbestos

A review of the USGS *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California* map indicated that there are no known occurrences of naturally occurring asbestos (NOA) or ultramafic rock formations in Modoc or Lassen Counties. Some NOA occurrences are located within Sierra County; however, these occurrences are located in the western portion of Sierra County, well outside of the project area (USGS 2011). This map is only intended for use by government agencies and private industry to inform the likelihood of NOA in particular regions of California and it is not intended as final determination of the presence or lack of presence of NOA. However, a site-specific review of the NRCS Web Soil Survey further indicated that there is no ultramafic rock present along US 395. Therefore, the likelihood of the presence of NOA within or near the project is very low to none and is not discussed or analyzed further.

### 5.9.1.6 Schools

The following schools are located within 0.25 mile of the project:

- State Line Elementary School. This school is located approximately 350 feet west of US 395.
- Modoc High School. This school is located approximately 60 feet east of US 395 in the City of Alturas.
- South Fork Elementary School. This school is located approximately 70 feet west of US 395.

- Madeline School. This school is located approximately 150 feet west of US 395.
- Shaffer Elementary School. This school is located approximately 80 feet north of US 365.
- Lake School. This school is located approximately 380 feet east of US 395.
- Bird Flat School. This school is located approximately 180 feet south of US 395.
- Long Valley Elementary School. This school is located approximately 200 feet east of US 395.

## 5.9.2 Regulatory Setting

### 5.9.2.1 Federal

#### Resource Conservation and Recovery Act / Comprehensive Environmental Response, Compensation, and Liability Act

EPA regulates hazardous substance sites under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 regulates hazardous waste from the time that waste is generated through its management, storage, transport, and treatment, until its final disposal.

#### 49 Code of Federal Regulations 100-185, Hazardous Materials Regulations

The U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation. Title 49 of CFR Parts 100 through 185 addresses hazardous materials classification, packaging, hazard communication, emergency response information, and training.

#### Hazardous Materials Transportation Act

The transport of hazardous materials is regulated by the USDOT under the Hazardous Materials Transportation Act (HMTA). To accomplish this, the Federal Aviation Administration, Federal Motor Carrier Safety Administration, Federal Railway Administration, Pipeline and Hazardous Materials Safety Administration, and the United States Coast Guard have been given authority to enforce hazardous material transport regulations.

#### Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 created the Occupational Safety and Health Administration (OSHA), which is responsible for protecting the health of workers, such as during the handling of hazardous materials. OSHA has created regulations to set federal standards of workplace safety including exposure limits, mandatory workplace training, accident and injury reporting, and safety procedures. These regulations are recorded in the CFR Title 29.

### 5.9.2.2 State

#### California Regional Water Quality Control Board

The primary responsibility for the California RWQCBs is to provide protection of water quality in California, and there are nine RWQCBs within California. The RWQCBs set policy for implementation of state and federal laws and regulations within the state. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) that recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities) (SWRCB 2020).

#### California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) is a part of the California Environmental Protection Agency (CalEPA) and regulates the generation, handling, treatment, and disposal of hazardous wastes in California. DTSC enforces the RCRA program in California.

According to the Government Code Section 65962.5(a), DTSC "shall compile and update as appropriate, but at least annually, and submit a list of the following to the Secretary for Environmental Protection:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code

2. All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code"

#### California Environmental Protection Agency

CalEPA develops, implements, and enforces environmental laws that regulate air, water and soil quality, pesticide use and waste recycling and reduction. Senate Bill 1082 (1993) requires that CalEPA do the following (CalEPA 2020):

- Grant to either DTSC or the SWRCB and RWQCBs the sole authority to implement and enforce the requirements of Article 6 (commencing with Section 66264.90) of Chapter 14 of, and Article 6 (commencing with Section 66264.90) of Chapter 15 of, Division 4.5 of Title 22 of the California Code of Regulations (CCR) and of Article 5 (commencing with Section 2530) of Chapter 15 of Division 3 of Title 23 of the CCR.

- Develop a process for ensuring that each hazardous waste facility cleans up or abates the effects of a release of hazardous substance pursuant to Section 13304 of the Water Code, takes corrective action for a release of hazardous waste or constituents pursuant to Section 25200.10, or both. Sole jurisdiction over the supervision of these actions (meaning oversight of those corrective action activities) is vested in either DTSC or SWRCB and RWQCBs.

- Develop a unified hazardous waste facility permit issued by the department that incorporates all conditions, limitations, and requirements imposed by SWRCB or the RWQCBs to protect water quality, and incorporate all conditions, limitations, and requirements imposed by the department.

Hazards, Hazardous Materials, and Public Safety

- Develop a consolidated enforcement and inspection program that is designed to ensure effective, efficient, and coordinated enforcement of the laws implemented by DTSC or SWRCB and RWQCBs, as those laws relate to facilities conducting offsite hazardous waste treatment, storage, or disposal activities, and to facilities conducting onsite treatment, storage, and disposal activities, which are required to receive a permit under Senate Bill 1082.

## Cortese List Government Code Section 65962

Government Code Section 65962 was enacted in 1985 and amended in 1992. It is used as a planning tool to comply with CEQA and requires information about locations of hazardous materials release sites. It states that through the combined efforts of the DTSC, the Department of Health Services, SWRCB, and local enforcement agencies, a list of potentially hazardous areas and sites will be compiled and will remain up to date (updated annually, at minimum). The list is consolidated by the Secretary for Environmental Protection and is distributed to each city and county where sites on the list are located. The list can be found on the DTSC's data management system known as EnviroStor, which includes information from the SWRCB GeoTracker database.

## California Department of Transportation

Caltrans manages interregional transportation, including the management and construction of the California highway system. In addition, Caltrans is responsible for the permitting and regulation of state roadways and requires that permits be obtained for transportation of oversized loads and transportation of certain materials, such as hazardous materials, and for construction-related traffic disturbance.

## California Public Resources Code

**Public Resources Code Section 21151.4**. (a) An environmental impact report shall not be certified or a negative declaration shall not be approved for any project involving the construction or alteration of a facility within one-fourth of a mile of a school that might reasonably be anticipated to emit hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code, that may pose a health or safety hazard to persons who would attend or would be employed at the school, unless both of the following occur:

1) The lead agency preparing the environmental impact report or negative declaration has consulted with the school district having jurisdiction regarding the potential impact of the Project on the school.

2) The school district has been given written notification of the Project not less than 30 days prior to the proposed certification of the environmental impact report or approval of the negative declaration.

(b) As used in this section, the following definitions apply:

> (1) "Extremely hazardous substance" means an extremely hazardous substance as defined pursuant to paragraph (2) of subdivision (g) of Section 25532 of the Health and Safety Code.
>
> (2) "Hazardous air emissions" means emissions into the ambient air of air contaminants that have been identified as a toxic air contaminant by the State Air Resources Board or by the air pollution control officer for the jurisdiction in which the Project is located. As determined by the air pollution control officer, hazardous air emissions also means emissions into the ambient air of a substance identified in subdivisions (a) to (f), inclusive, of Section 44321 of the Health and Safety Code. [Amended by Stats. 2008, Ch. 148, Sec. 1. Effective January 1, 2009]

## Division of Occupational Safety and Health

The Division of Occupational Safety and Health (DOSH or CalOSHA), is responsible for enforcing workplace safety regulations and requirements in California, including hazardous materials requirements recorded under CCR Title 8. These regulations include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about hazardous substance exposure (such as asbestos), and preparation of emergency action and fire prevention plans.

DOSH also enforces hazard-communication program regulations that contain training and information requirements. Such requirements include procedures for identifying and labeling hazardous substances, for communicating information about hazardous substances and their handling, and for preparing health and safety plans to protect workers and employees at hazardous waste sites. Under the hazard-communication program, employers must make Safety Data Sheets available to employees and document employee information and training programs.

## California Emergency Services Act

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor and/or appropriate local authorities. Local government and district emergency plans are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act.

The California Emergency Management Agency (CAL EMA) is the state agency responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. CAL EMA requires specific businesses to prepare an inventory of hazardous materials (CCR Title 19). CAL EMA is also the lead state agency for emergency management and is responsible for coordinating the state-level response to emergencies and disasters.

## Fire Protection

California state fire safety regulations apply to SRAs during the time of year designated as having hazardous fire conditions. CAL FIRE has developed a fire hazard severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazard in all SRAs. An SRA is defined as

the part of the state where CAL FIRE is primarily responsible for providing basic wildland fire protection assistance. Areas under the jurisdiction of other fire protection services are considered to be Local Responsibility Areas or on federal lands are considered Federal Responsibility Areas.

During the fire hazard season, these regulations include the following: (a) restrict the use of equipment that may produce a spark, flame, or fire; (b) require the use of spark arrestors on any equipment that has an internal combustion engine; (c) specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and (d) specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. CAL FIRE has primary responsibility for fire protection within SRAs.

#### 5.9.2.3 Local

Because CPUC has exclusive jurisdiction over the project's siting, design, and construction, the project is not subject to local hazard regulations or discretionary permits. This section identifies local hazards regulations, policies, and plans for informational purposes and to assist with CEQA review.

##### Modoc County General Plan

The Modoc County General Plan was adopted in September 1988 and includes the following policies related to hazards that are relevant to the project (Modoc County 1988, as amended):

- **Goal:** To protect the public health and safety through limitation od development in hazardous areas
    - **Policy:** Recommendations within the state Fire Safe Guide should be implemented wherever practicable in Modoc County.

##### Lassen County General Plan

The Lassen County General Plan was adopted in September of 1999 and includes the following goals related to hazards that are relevant to the project (Lassen County 1999, as amended):

- **Goal O-6:** To support the protection of the public from natural hazards and from threats to health and safety which could result from damage to or contamination of public resources.

##### Sierra County General Plan

The Sierra County General Plan was first adopted in 1996 and includes the following goals and policies related to hazards that are relevant to the project (Sierra County 1996, as amended):

- **Goal:** It is the County's goal to maintain a high level of safety for people and property by limiting the exposure of its residents to safety hazards, including seismic and geologic hazards, flooding and fire.
    - **Policy 23:** Provide for the identification, safe use, storage, transport, and disposal of hazardous materials.

## Certified Unified Program Agency

A Certified Unified Program Agency (CUPA) are local agencies certified by DTSC or SWRCB or RWQCBs to conduct the Unified Program established by Senate Bill 1082 (as explained under Section 5.9.2.2, State). DTSC, the Modoc County Department of Environmental Health, the Lassen County Department of Environmental Health, and the Sierra County Department of Environmental Health are the CUPAs with jurisdiction in the vicinity of the project area.

## Modoc County Department of Environmental Health

The Modoc County Department of Environmental Health had legal authority for local environmental health programs as cited in the California Health and Safety Code, CCR Titles 17 (Drinking Water) and 22 (Environmental Health), and local ordinances. As the CUPA, Modoc County conducts site inspections of hazardous materials programs (aboveground storage tanks [ASTs], underground storage tanks [USTs], hazardous waste tiered treatment, hazardous waste generators, hazardous materials management and response plans, and the California Fire Code). The county also provides permits to drill, destroy, deepen, or recondition a water well (Modoc County Environmental Health 2020).

## Lassen County Department of Environmental Health

The Lassen County Department of Environmental Health is responsible for the programs designed to control or prevent disease, improve the overall environment, and enhance the general welfare and health of the community. The environmental health programs include body art, food safety, hazardous material management, liquid waste management, medical waste, recreation waters, septic systems and onsite sewage disposal, solid waste, USTs, water supply protection, water wells, water systems, and other insect and disease control programs. As the CUPA, Lassen County conducts site inspections of hazardous materials programs (ASTs, USTs, hazardous waste tiered treatment, hazardous waste generators, hazardous materials management and response plans, and the California Fire Code). The Lassen County Department of Environmental Health also provides emergency response to hazardous materials events, performing health and environmental risk assessment and substance identification (Lassen County Department of Environmental Health 2020).

## Sierra County Department of Environmental Health

The Sierra County Department of Environmental Health is the local agency for implementing state and local laws affecting the public health of Sierra County. The Sierra County Department of Environmental Health response to code complaints involving surfacing sewage, food facilities, hazardous materials, public pools, water systems, noise and other un-permitted land use issues. Under the CUPA, Sierra County performs and oversees site inspections of hazardous materials programs, the California Accidental Release Prevention (CalARP) Program, the Underground Storage Tank Program, the Above-ground Petroleum Storage Act (APSA) Program, Hazardous Waste Generator and Onsite Hazardous Waste Treatment (Tiered Permitting) Programs, Area Plans for Hazardous Materials Emergencies, and the California Fire Code (Sierra County Environmental Health 2020).

Lahontan Regional Water Quality Control Board

The Lahontan RWQCB (Region 6) jurisdiction extends from the Oregon border to the northern Mojave Desert and includes all of California east of the Sierra Nevada crest. Counties under the jurisdiction include Modoc (east), Lassen (east side and Eagle Lake), Sierra, Nevada, Placer, El Dorado, Alpine, Mono, Inyo, Kern (east), San Bernardino, and Los Angeles (northeastern corner).

### 5.9.3 Touch Thresholds

Fiber optic cable transmits light, not electricity, and therefore does not pose a shock hazard. Electrical power would be supplied to nodes by the local power company through interconnections with adjacent distribution lines. Interconnection would occur within underground vaults that are not accessible to members of the public. In installing these interconnections, the contractor selected for the project would be required to follow all standard electrical safety and worker safety regulations for electrical equipment usage.

The National Electrical Safety Code (NESC) addresses shock hazards to the public by providing guidelines on minimum clearances to be maintained for practical safeguarding of persons during the installation, operation, or maintenance of electric power and communication utility systems.

### 5.9.4 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☒ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☒ | ☐ |

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | ☐ | ☐ | ☒ | ☐ |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | ☐ | ☐ | ☒ | ☐ |
| h) Create a significant hazard to air traffic from the installation of new power lines and structures? | ☐ | ☐ | ☐ | ☒ |
| i) Create a significant hazard to the public or environment through the transport of heavy materials using helicopters? | ☐ | ☐ | ☐ | ☒ |
| j) Expose people to a significant risk of injury or death involving unexploded ordnance? | ☐ | ☐ | ☐ | ☒ |
| k) Expose workers or the public to excessive shock hazards? | ☐ | ☐ | ☐ | ☒ |

## 5.9.5 Impact Analysis

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

**Less Than Significant Impact**. Temporary construction activities associated with the project would involve the transport and use of gasoline, diesel fuel, hydraulic fuel, solvents, and oils typically associated with operation of construction equipment and vehicles. These chemicals would be used and stored on the project site during construction, as well as transported along public roadways. Federal, state, and local laws governing the hauling, storage, and transport of these and other hazardous materials and spill response are discussed in Section 5.9.2, Regulatory Setting, and would be required for the storage and transport of hazardous materials for the project. These regulations are established to prevent the improper use of materials and reduce the risk of exposure to the public.

Accidental release of potentially hazardous materials during construction may cause a potentially significant impact if not properly managed. However, APM HAZ-1, Prepare and Implement a Hazardous Release Prevention Plan and Spill Prevention, Countermeasures, and Control Plan; APM HAZ-2, Worker Environmental Awareness Program for Hazardous Materials; APM HAZ-3, Accidental Release Prevention

Plan; and implementation of the SWPPP (APM HYDRO-1) would be required to ensure that potentially hazardous material releases are contained in accordance with all applicable laws and regulations and to ensure that construction workers are properly trained on the potentially hazardous conditions in the project area. APMs HAZ-1 and HAZ-2 and APM HYDRO-1 would be implemented throughout construction activities and would ensure that impacts related to the routine transport, use, or disposal of hazardous materials are reduced to a less than significant level.

Operation of the project would consist of an underground fiber optic line and would not involve the routine transport, use, or disposal of hazardous materials. Therefore, there would be no operational impacts.

**b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

**Less Than Significant Impact.** The potential for release of hazardous materials into the environment could result from discovery of hazardous materials in the soils excavated during construction or from spills related to construction equipment and activities. Directional boring activities would use a nontoxic bentonite clay drill slurry, or "mud," which would lubricate the passage of the drill, would cool and insulate the electronics in the drill head and rods, would support the walls of the bore to prevent collapse, and would capture and transport excess soil ("cuttings") to the exit pits. In addition, the use of heavy construction equipment requires the use of small amounts of hazardous materials such as oils, fuels, and other potentially flammable substances that have the potential to be released into the environment if not handled properly. The amount of these materials needed for equipment maintenance would not be enough to cause a significant hazard to the public if released since the quantity of these hazardous materials onsite at any one given time would only amount to a refueling truck and the construction equipment. However, given the possibility of accidental release of hazardous materials during construction, APM HAZ-1, APM HAZ-2, APM HAZ-3, and APM HYDRO-1 would be required and would include measures for containment of potentially hazardous materials and spills from leaving the project site as well as a WEAP to educate construction workers on the proper identification, handling, and disposal of hazardous materials that could occur onsite. Therefore, construction of the project would result in a less than significant impact related to significant hazards to the public or the environment from the release of hazardous materials.

Operation of the project would consist of an underground fiber optic line and would not involve the potential for release of hazardous materials into the environment. Therefore, there would be no operational impact.

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

**Less Than Significant Impact.** There are eight schools located within 0.25 mile of the project, including State Line Elementary School, Modoc High School, South Fork Elementary School, Madeline School, Shaffer Elementary School, Lake School, Bird Flat School, and Long Valley Elementary School. As discussed under impact questions a and b, construction of the project has the potential to emit hazardous

materials in the form of gasoline, diesel fuel, hydraulic fuel, solvents, and oils. Construction activities would occur within 0.25 mile of schools along US 395 area; however, because construction activities would be linear and would not occur in any one location for extended periods of time, potential impacts from emissions of hazardous materials near schools would be extremely temporary, likely not lasting for more than a week's time. No individual school would be exposed substantial emissions from construction activities. Additionally, PRC Section 21151.4 (Section 5.9.2, Regulatory Setting), requires that projects that are located within 0.25 mile of a school that might reasonably be anticipated to emit hazardous air emissions, that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code, or that may pose a health or safety hazard to persons who would attend or would be employed at the school would either need to consult with the school or give written notification to the school. The Applicant would comply with PRC Section 21151.4 and would notify the appropriate school personnel if construction activities would require work with hazardous materials or emissions within 0.25 mile of a school. Additionally, the Applicant would follow applicable rules and regulations governing transport and use of hazardous materials as discussed herein. Further, hazardous materials emissions would be minimized through APM HAZ-1 and through compliance with standard fugitive dust measures required by local and state regulations, which would prevent hazardous materials or substances from leaving the project site and impacting nearby schools. Therefore, the construction of the project would have a less than significant impact to schools with APM HAZ-1 incorporated.

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

**Less Than Significant Impact.** As shown in Table 5.9-1, there are several potentially hazardous materials sites located within the construction work area and adjacent to project construction activities. A significant hazard could occur if construction activities were to result in the release of hazardous materials or further contamination associated with these sites.

Work directly within hazardous materials sites would be avoided, where possible. However, due to the proximity to some sites (which include a UST site and an underground well contamination site), and the potential of these sites occurring near the fiber optic line, potential impacts related to the release of hazardous materials to the public or the environment could occur. APM HAZ-1 and APM HAZ-2 would be implemented for construction activities that could occur in close proximity to hazardous materials sites identified in Table 5.9-1. APM HAZ-1 includes measures to test soils adjacent to hazardous materials sites prior to the start of construction activities and measures for proper containment and treatment of potentially hazardous materials should contact with these sites not be avoidable. Therefore, the potential for the construction of the project to be located on a site defined by Government Code Section 65962.5 that could result in a significant hazard to the public or the environment would be considered less than significant.

Operation of the project would consist of an underground fiber optic line and would not pose an additional hazard to the public or the environment. Therefore, there would be no operational impact.

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

**Less Than Significant Impact**. There are several airports located within 2 miles of the project including: Alturas Mini Airport, Wesinger Ranch Airport, Bates Field Airport, and Ravendale Airport. All of these airports are small airports that do not have any commercial operations or heavy incoming and outgoing airplane use.

During construction, the project could expose construction workers to minor noise levels from these nearby airports, however, because construction of the project would consist of linear work (i.e., not located in one situated place for extended periods of time), and because the operations of these airports are minimal, construction workers would not be exposed to excessive noise. Therefore, construction of the project would result in a less than significant impact related to hazards from nearby airports.

Once constructed, the project would be located entirely underground and would not include any uses for human habitation or for permanent construction workers to conduct their daily work. Therefore, there would be no operational impact related to hazards from nearby airports.

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

**Less Than Significant Impact.** The majority of the project would be located within the roadway right-of-way, which could potentially interfere with use of this roadway for emergency personnel accessing local or regional emergencies. Additionally, if there were a larger emergency in the area, such as a fire or earthquake, the public and emergency personnel would likely use US 395 as a major exit highway going either north or south. As such, to ensure that construction activities do not interfere with any potential emergency access or evacuations, APM TRA-1 would be implemented. APM TRA-1 would include preparation and implementation of a traffic control plan for the project, which would include notification of emergency agencies of the construction timing and location and a construction contact should coordination be required in the event of an emergency. With implementation of this mitigation measure, emergency personnel would be appropriately notified, and construction work would not interfere with any local or regional emergency or evacuation efforts on US 395. Therefore, impacts related to interference with adopted emergency response plans or emergency evacuation plans would be less than significant.

**g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?**

**Less Than Significant Impact.** As discussed in Section 5.20, Wildfire, and under impact question a, construction activities could have the potential to cause sparks or release potentially flammable materials that could start a wildfire in the area, thus potentially causing risk of loss, injury, or death. Use of machinery or "hot work" (e.g., welding) or smoking onsite are particularly dangerous in terms of potentially starting a wildfire in the vicinity of construction activities. As such, compliance with local, state, and federal

regulations pertaining to fire prevention and implementation of APM FIRE-1, Construction Fire Prevention Plan would be required to ensure that workers are appropriately trained on fire prevention, and to ensure that appropriate fire prevention equipment and measures are taken onsite to reduce the potential for sparks and the spread of wildfire. Therefore, construction of the project would result in a less than significant impact.

Once constructed, the fiber optic line would be located underground and would not result in risk of loss, injury, or death involving wildland fires. Therefore, there would be no operational impact.

**h) Create a significant hazard to air traffic from the installation of new power lines and structures?**

**No Impact.** The project, once constructed, would be located entirely underground, with the exception of several ancillary facilities, and would not have the potential to interfere with any air traffic in the area. Therefore, there would be no impact related to air traffic hazards from the project.

**i) Create a significant hazard to the public or environment through the transport of heavy materials using helicopters?**

**No Impact**. Construction of the project does not involve the use of any helicopters to transport heavy materials to the area. The project would be installed underground or strung on bridges using an excavator or directional drill rig. Once constructed, the new fiber optic line would be located underground and would not involve the use of any helicopters for maintenance activities. Therefore, construction and operation of the project would not create a significant hazard to the public involving transport of heavy materials using helicopters.

**j) Expose people to a significant risk of injury or death involving unexploded ordnance?**

**No Impact.** The project area is not located in an area that is known to have unexploded ammunition. Since the project area would be made up of the existing roadway right-of-way, with the exception of some adjacent ancillary features, which is a previously disturbed area that has received traffic in the form of vehicles, bicyclists, and pedestrians, there is little to no potential for any undiscovered ammunition to occur within the area. Therefore, there would be no impact related to unexploded ordnances.

**k) Expose workers or the public to excessive shock hazards?**

**No Impact.** Fiber optic cable transmits light, not electricity, and therefore does not pose a shock hazard. Electrical power would be supplied to nodes by the local power company through interconnections with adjacent distribution lines. Interconnection would occur within underground vaults that are not accessible to members of the public. In installing these interconnections, the contractor selected for the project would be required to follow all standard electrical safety and worker safety regulations for electrical equipment usage. . Therefore, there would be no impacts related to excessive shock hazards.

## 5.9.6 Draft Environmental Measures

### Applicant Proposed Measures

**APM HAZ-1: Prepare and Implement a Hazardous Materials Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan**

Zayo, or its chosen consultant, shall create and implement a hazardous materials release prevention plan and Spill Prevention, Countermeasure, and Control (SPCC) plan to reduce the risk of sensitive receptors from being exposed to hazards due to the handling of hazardous materials during construction. These plans shall identify control measures to prevent the release of hazardous materials, as well as a detailed action plan to respond to an incidental spill in compliance with all local, state, and federal regulations relating to the handling of hazardous materials. These plans would also be implemented in conjuncture with the Stormwater Pollution and Prevention Plan (SWPPP). Specific measures of these plans shall include the following:

- Site-specific buffers to be used if work occurs adjacent to any hazardous sites, and if not possible, remediation or containment efforts to be taken if construction activities will go through a hazardous site
- Testing of soils near known hazardous materials sites prior to the start of construction activities
- Emergency response and reporting procedures
- Proper disposal of potentially hazardous materials
- Containment of spills from construction equipment and vehicles (also required through the preparation of a SPCC), which would include the following:
    - Maintenance and inspection of all construction vehicles
    - Refueling and parking restrictions to prevent fuel from entering adjacent waterbodies
    - Specifications for the availability of spill containment and response equipment
    - Designation of responsibilities and communication and reporting procedures in the event of a spill
    - Spill response procedures

**APM HAZ-2: Worker Environmental Awareness Program for Hazardous Materials**

The purpose of a Worker Environmental Awareness Program (WEAP) is to educate personnel (i.e., construction workers) about the existing onsite and surrounding resources and the measures required to protect these resources and to avoid potential hazards within these sites. The WEAP, developed by Zayo or their chosen consultant, shall include materials and information on potential hazards resulting from construction within the project area, and applicable precautions personnel should take to reduce potential impacts.

The WEAP presentation shall be given to all personnel who may be exposed to site hazards. The WEAP presentation shall be given prior to the start of construction and as necessary throughout the life of the project as new personnel arrive onsite. Zayo and the contractor are responsible for ensuring that all onsite personnel attend the WEAP presentation, receive a summary handout, and sign a training attendance acknowledgement form to indicate that the contents of the program are understood and to provide proof of attendance. Each participant of the WEAP presentation shall be responsible for maintaining their copy of the WEAP reference materials and making sure that other onsite personnel are complying with the recommended precautions. The contractor shall keep the sign in sheet onsite and submit copies of the WEAP sign-in sheet to Zayo's Project Manager, who shall keep it on file at their offices.

The following information and implementation steps shall be prepared, presented, and executed prior to and during construction to prevent exposure and raise awareness of potential site hazards:

- Inform personnel about potentially hazardous sites within the project areas and how to identify hazardous materials sites. Signs of potential contamination within soils could include stained soils, discolored or oily water, previously unknown underground storage tanks, etc. Work should be stopped if any of these signs are identified within the project area, and APM HAZ-1 should be implemented before work shall resume.

**APM HAZ-3: Accidental Release Prevention Plan.**

To minimize the potential for an accidental release of bentonite drilling fluid caused by a fracture in the rock underlying the water body (an event known as a "frac-out"), an Accidental Release Prevention Plan will be prepared. Measures in this plan would include the following:

- Visual inspection of the bore path at all times during drilling operations
- Personnel stationed upstream and downstream of the bore path to monitor water conditions when water is flowing,
- When boring is necessary adjacent to wetlands and waterways, the bore rigs would be set back 15 ft beyond the top of waterway banks or a minimum of 75 ft from the edge of wetland vegetation,
- Specifications for availability of containment and cleanup equipment in the event of a frac-out
- Designation of responsibilities, communication protocols, and reporting procedures in the event of a frac-out

**APM FIRE-1: Fire Protection Plan.**

See Section 5.20, Wildfire.

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# 5.10 HYDROLOGY AND WATER QUALITY

This section describes existing conditions and potential impacts to hydrological resources, water quality, and flood control as a result of construction, operation, and maintenance of the project. Information on surface water and groundwater in the project area was obtained from published studies prepared by state, county, and local water and related agencies. The applicant would comply with all applicable federal, state, and local regulatory requirements that protect surface water and groundwater. The following analysis concludes that impacts would be less than significant.

## 5.10.1 Environmental Setting

The project area is located within the North Lahontan and Sacramento River Hydrologic Regions, which cover approximately 4 million and 17 million acres, respectively, within Modoc, Lassen, and Sierra Counties. The North Lahontan and Sacramento River Hydrologic Regions receive water through precipitation, stormwater, runoff, and groundwater.

The project area elevation averages approximately 4,658 feet above mean sea level and ranges from approximately 4,006 feet above mean sea level near Honey Lake to 5,568 feet above mean sea level near Madeline, California. The surface topography within the project site is relatively flat and surrounded by high mountains with a maximum slope of 5.3 percent. The majority of the project area consists of high desert lands with some agricultural and isolated rural residential areas.

The project area is located in a warm-summer Mediterranean climate zone typical of the north-eastern reaches of California. The zone is characterized by warm, dry summers and cool winters. The average annual precipitation in this region is approximately 70 inches, with 95 percent of all rain falling between the months of October and April. Periods of abundant rainfall and prolonged droughts are frequent in the historical record.

### 5.10.1.1 Water Bodies

Ephemeral, intermittent, and perennial streams; fresh emergent wetlands; riparian fresh emergent wetland complexes; riparian wetlands; seasonal wetlands; wetland seep springs; wetland swales; irrigation canals; non-vegetated ditches; and vegetated ditches cross or are adjacent to the proposed running line as described below. For a description of wetlands in the project area, refer to Section 5.4, Biological Resources. Table 5.10-1 shows the type of water body crossed by the right-of-way and running line. Appendix H includes waterbody type by milepost.

### Table 5.10-1: Number of Surface Water Body Crossings

| Surface Water Body Type | Right-of-Way Crossings | Running Line Crossings |
|---|---|---|
| Ephemeral streams | 86 | 32 |
| Intermittent streams | 33 | 10 |
| Perennial streams | 42 | 17 |
| Irrigation canals | 13 | 2 |
| Non-vegetated ditches | 11 | 3 |
| Vegetated ditches | 4 | 3 |

Source: Stantec 2020

## 5.10.1.2 Water Quality

Section 303(d) of the federal Clean Water Act and 40 CFR 130.7 require states to identify water bodies that do not meet water quality standards and are not supporting their beneficial uses. These waters are placed on the Section 303(d) List of Water Quality Limited Segments (303[d] List), also known as the 303(d) List of Impaired Waterbodies. The 303(d) List identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. Placement on the 303(d) List generally triggers development of a pollution control plan called a Total Maximum Daily Load (TMDL) for each water body and associated pollutant and stressor on the 303(d) List. The following water bodies are on the state 303(d) List and are downstream of the project area.

**Pit River.** The State of California has listed the North and South Fork of the Pit River in Modoc County, which combined are approximately 55 miles in length, as a 303(d) listed water for pH and salinity levels outside the allowable frequency. The Pit River's beneficial uses include municipal and domestic supply as well as cold freshwater habitat. TMDLs would be adopted in 2021 according to the 303(d) List report.

**Susan River.** The upper and lower reaches of the Susan River, approximately 23 miles in length, in Lassen County, is also included on the 303(d) List for mercury, total dissolved solids, and turbidity from agriculture and other natural sources. TMDLs would be adopted for the Susan River in 2021 according to the 303(d) List report.

**Honey Lake.** The 665-acre Honey Lake Wildfowl Management Ponds and 57,700-acre Honey Lake are also included on the 303(d) List within Lassen County. Primary water quality concerns in these water bodies include arsenic, salinity, total dissolved solids, chlorides, and trace metals, primarily originating from nearby agriculture and geothermal developments, sediment resuspension, and other natural sources. Beneficial uses of the Honey Lake and Honey Lake Wildfowl Management Ponds are cold freshwater habitat, warm freshwater habitat, water contact recreation, and agricultural supply. TMDLs were established for these two water bodies in 2019.

### 5.10.1.3 Groundwater Basins

The Sustainable Groundwater Management Act categorizes groundwater basins as very low, low, medium and high priority, which is based on a technical process involving eight components that are identified in the California Water Code Section 10933(b). The project area is located within eight different groundwater basins identified by EPA and California Department of Water Resources (DWR).Other than localized areas of perched groundwater, particularly in the vicinity of streams, irrigation canals, and reservoirs, groundwater is expected to be relatively deep, greater than 50 feet. On the other hand, depth to groundwater has the potential to be relatively shallow in the vicinity of surface water bodies such as Honey Lake and the Fork Pit River. Table 5.10-2 indicates the groundwater basins and their associated groundwater depths near the project area within each county.

### Table 5.10-2: Groundwater Basins

| County | Groundwater Basins (Recent Groundwater Levels – ft bgs) |
|---|---|
| Modoc | Goose Lake – Fandango Valley (10-25), Goose Lake – Goose Valley (70 – 80), Joseph Creek (unknown), Alturas Area – South Fork Pit River (5 – 10) |
| Lassen | Madeline Plains (50 – 60), Secret Valley (80 – 100), Honey Lake Valley (5 – 50) |
| Lassen & Sierra | Long Valley (50 – 80) |

Source: DWR 2020b

### 5.10.1.4 Groundwater Wells and Springs

Publicly available data for groundwater well locations were accessed through the DWR Well Completion Report Portal (DWR 2020a). Accuracy of this data is limited to the centroid of the section in the section/range/township map where the water supply wells lie. Stantec identified a potential of 67 water supply wells in Modoc County, 208 in Lassen County, and 7 in Sierra County that lie within the sections overlapping the project running line. No springs were found within 150 feet of the proposed site. The closest spring to the proposed project site is the Seven Lakes Spring near Dry Valley Road in Nevada near the southern end of Lassen County, approximately 2 miles from the proposed project site.

### 5.10.1.5 Groundwater Management

All groundwater basins identified in Section 5.10.1.3, Groundwater Basins, are considered low or very low priority, are not adjudicated, and are not critically overdrafted (DWR 2020c). Because of the low and very low priority of these basins, formation of Groundwater Sustainability Agencies (GSAs) and preparation of Groundwater Sustainability Plans (GSPs) are not yet required by the Sustainable Groundwater Management Act.

## 5.10.2 Regulatory Setting

### 5.10.2.1 Federal

#### Clean Water Act Section 404

Section 404 of the CWA (33 USC Section 1251 *et seq*.) requires a permit from the USACE for the discharge of dredged or fill material into "waters of the United States," which include rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b).

#### National Flood Insurance Program

The Federal Emergency Management Act (FEMA) is responsible for determining flood elevations and floodplain boundaries based on USACE studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps (FIRMs) (FEMA 2019) used in the National Flood Insurance Program (NFIP) (42 USC Ch 50, Section 4102).

FIRM identify the locations of special flood hazard areas, including 100-year floodplains. FEMA allows non-residential development in the floodplain but include criteria to "constrict the development of land which is exposed to flood damage where appropriate," and "guide the development of proposed construction away from locations which are threatened by flood hazards." Federal regulations governing development in a floodplain are set forth in Title 44 CFR Part 60, enabling FEMA to require municipalities that participate in NFIP to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

#### Section 10 of the Rivers and Harbors Appropriation Act of 1899

Section 10 of the Rivers and Harbors Act of 1899 requires authorization through USACE for the construction of any structure in or over any navigable waters of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. Section 10 permits are required for work on facilities within navigable waters, including transmission towers and boardwalks, as well as for work on power lines that cross over navigable waters.

### 5.10.2.2 State

#### Clean Water Act Section 303(d)

CWA Section 303(d) (33 USC Section 1313) requires states, territories, and authorized Tribes to develop a list of waters within its boundaries that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law further requires that these jurisdictions establish priority rankings for water on the lists and develop action plans,

called TMDLs, to improve water quality. RWQCBs and SWRCB implement this federal regulation in California.

### Clean Water Act Section 401

CWA Section 401 (33 USC Section 1251 et seq.) requires states to certify whether projects subject to federal permits meet state water quality standards. In California, RWQCBs and SWRCB issue such certifications. The project is under the jurisdiction of the Central Valley and Lahontan RWQCB. If the project requires a federal Water Quality Certification, it would need to be obtained from USACE.

### Clean Water Act Section 402

Under CWA Section 402 (33 USC Section 1251 et seq.), NPDES controls water pollution by regulating point sources of pollution to waters of the U.S. SWRCB administers the NPDES permit program in California. Projects that disturb 1 or more acres of soil are required to obtain coverage under the state NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. A SWPPP must be developed and implemented for each project covered by the general permit. The SWPPP must include BMPs that are designed to reduce potential impacts to surface water quality during project construction and operation.

### Porter-Cologne Water Quality Control Act (California Water Code, Division 7)

Under the Porter-Cologne Act, SWRCB has authority over state waters and water quality. "Waters of the state" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050[e]). Examples include but are not limited to rivers, streams, lakes, bays, marshes, mudflats, unvegetated and seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked baylands, seasonal wetlands, and riparian woodlands. The RWQCBs have local and regional authority. The Central Valley and Lahontan RWQCB has authority in the project area. The RWQCBs prepare and periodically update Basin Plans (water quality control plans), which establish beneficial uses of water designated for each protected water body, water quality standards for both surface water and groundwater, and actions necessary to maintain these water quality standards.

Projects that would discharge waste to waters of the state must file a report of waste discharge with the appropriate RWQCB if the discharge could affect the quality of waters of the state (Article 4, Section 13260). The RWQCB would issue waste discharge requirements or a waiver of the waste discharge requirements for the project. The requirements would implement any relevant water quality control plans that have been adopted and must take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose (Article 4, Section 13263).

### Fish and Game Code Section 1602

This section of California law protects the natural flow, bed, channel, and bank of any river, stream, or lake under the jurisdiction of CDFW. Notification to CDFW is required for activities that would do the following:

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- substantially divert or obstruct the natural flow of a jurisdictional river, stream, or lake
- substantially change or use material from the bed, channel, or bank of a jurisdictional river, stream, or lake
- deposit or dispose of debris, waste, or other material containing crumbed, flaked, or ground pavement where it can flow into a river, stream, or lake

CDFW reviews the notification and determines if the activity may substantially adversely affect fish and wildlife resources. If so, CDFW would issue a Streambed Alteration Agreement for the activity.

### Fish and Game Code Section 5650

This section of California law makes it unlawful to deposit in, permit to pass into, or place where it can pass into waters of the state specific pollutants or any substance or material deleterious to fish, plant life, mammals, or bird life.

## 5.10.2.3 Local

CPUC has exclusive discretionary authority over this project's siting, design, and construction. However, a summary of local goals and policies relevant to the project are provided for informational purposes and to assist with the CEQA review process.

### Modoc County General Plan

The Conservation and Open Space Element of the Modoc County 1998 General Plan includes policies related to the protection of water resources. However, none of these policies are relevant to the project.

### Lassen County General Plan

The Natural Resources Element of the 2000 Lassen County General Plan includes the following goals and policies related to water resources:

**Goal N-3:** Water supplies of sufficient quality and quantity to serve the needs of Lassen County, now and in the future.

> **NR 13 Policy:** The County recognizes the critical importance and future value of its water resources and shall support the conservation of water supplies and protection of water quality.

### Sierra County General Plan

The Water Resources Element of the Sierra County 2012 General Plan contains the following goals and policies:

**Goal 1:** It is the County's goal to protect and maintain its water resources for the benefit of County residents and natural habitats and to assure protection of its watersheds as a primary land use constraint.

**Policy 14:** Cooperate with State and federal agencies In the requirement of reasonable Best Management Practices (BMPs).

**Policy 22:** Protect natural swales and wetlands, plus a buffer from those features, for water quality protection.

**Policy 31:** Preserve the integrity of water courses throughout the County.

## 5.10.3 Impact Questions

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

## 5.10.4 Impact Analysis

**a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

**Less Than Significant Impact.** Impacts on water quality may occur as a result of construction-related activities through the use of fuels or other hazardous materials near waters and increased erosion caused by grading or vegetation clearing that leads to increased sedimentation. It is anticipated that staging of equipment on disturbed ground within the right-of-way may be needed at secure sites and staging areas would not be cleared of vegetation, flattened, graded, or stripped of topsoil for cable installation. In some instances, minor surface contouring may be needed to improve staging areas or existing access roads. Project work areas and access routes have been sited to avoid streams and wetlands wherever possible; however, wetlands and small streams may need to be crossed in a few locations via bridge hanging or directional boring. For passing beneath water bodies, directional boring depth will be 4 to 10 feet but up to 15 feet below the water body bed depending on soil type. Bores beneath culverts would average 2 to 3 feet below the bed or approximately 4 feet below the water's surface which complies with the regulatory standard of a minimum of 4 feet of cover for a 2 to 6 inch diameter borehole (Caltrans 2018).

Directional boring activities would use a nontoxic bentonite clay drill slurry, or "mud," which would lubricate the passage of the drill, would cool and insulate the electronics in the drill head and rods, would support the walls of the bore to prevent collapse, and would capture and transport excess soil ("cuttings") to the exit pits. Entry and exit pits would catch drill slurry, groundwater ingress, and any rainfall that may occur during drilling. Straw wattle would be installed around the entry pit as secondary containment, and a vacuum truck and/or tank would be available onsite for clearing the pits post-bore. Following the installation of the conduits, the bore pits would be filled and compacted or converted to vaults. This work would be performed in accordance with the requirements of federal and state permits under CWA Sections 404 and 401, the Porter-Cologne Act, and the Fish and Game Code Section 1602, as applicable. With these activities, the project has the potential to temporarily adversely affect water quality as a result of erosion and subsequent sedimentation, as well as the frac-out from the use of directional boring equipment. In general, these activities would be dispersed over a broad area along the project alignment and would be limited in scope and duration at any given location. APM HAZ-3: Accidental Release Prevention Plan details measures to minimize potential impacts associated with frac-out, and APM HYDRO-1, Prepare and Implement a Stormwater Pollution Prevention Plan (SWPPP), would specify BMPs for each activity with the potential to degrade surrounding water quality through erosion, sediment runoff, and the presence of other pollutants.

Zayo would assess the risk to water quality based on site-specific soil characteristics, slope, and the construction schedule and would develop a SWPPP that addresses potential water quality concerns, as described in Section 5.10.1.5, Groundwater Management. The SWPPP would specify measures for each activity that has the potential to degrade surrounding water quality through erosion, sediment runoff, and the presence of other pollutants. These measures would be implemented and monitored throughout the project by a Qualified Stormwater Pollution Prevention Plan Practitioner (QSP).

During construction, Zayo would minimize or avoid impacts on wetlands and other waters, which would help to minimize impacts to water quality.

Accidental releases of hazardous materials that are used during construction, such as diesel fuel, hydraulic fluid, or oils and grease, would have the potential to occur. This potential impact would be avoided and minimized by implementing the SWPPP described in Section 5.10.1.5: Groundwater Management and APM HAZ-1: Prepare and Implement a Hazardous Material Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan and APM HAZ-3: Accidental Release Prevention Plan within Section 5.9: Hazards, Hazardous Materials, and Public Safety. Due to the proposed construction methods and activities as well as the preparation of the SWPPP and APMs, the project would not violate any water quality standards or waste discharge requirements, have no observable impact on nearby groundwater wells and springs, and impacts on water quality would be less than significant.

**b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

**Less Than Significant Impact.** A water truck would be available to support project construction activities and dust suppression. The water is expected to be obtained from local municipal sources, which are typically supplied through surface water reservoirs, not groundwater. Based on DWR data, other than localized areas of perched groundwater, particularly in the vicinity of streams, irrigation canals, and reservoirs, groundwater is expected to be relatively deep (greater than 50 feet) and installation of the conduit should have no impact on the groundwater outside the vicinity of surface water bodies. On the other hand, depth to groundwater has the potential to be relatively shallow in the vicinity of surface water bodies where directional boring construction methods could be used. Construction activities associated with directional boring will alter a small volume of sediment and will not substantially alter groundwater flow or groundwater quality. However, in the event of leakage of machine fluids during construction, groundwater quality has the potential to be impacted. To further reduce this impact, appropriate measures would be implemented, per the SWPPP as described in Section 5.10.1.5, Groundwater Management and APM HAZ-1: Prepare and Implement a Hazardous Material Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan and APM HAZ-3: Accidental Release Prevention Plan within Section 5.9: Hazards, Hazardous Materials, and Public Safety. The project also would not result in an increase in impervious surfaces or other areas that could substantially interfere with groundwater recharge. The project's negligible water use during construction would not deplete or interfere with groundwater supply or recharge. Therefore, the impact would be less than significant.

**c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

**(i) result in substantial erosion or siltation on- or off-site;**

**Less Than Significant Impact.** The project would not alter the course of a stream or river or substantially alter the drainage pattern of the project area. Directional boring is anticipated for some surface water body crossings because it allows for minimal disturbance to the water body and will be 4 to 10 feet but up to 15 feet below the water body bed. Bores beneath culverts would average 2 to 3 feet below the bed or approximately 4 feet below the water's surface. Minor surface contouring may be needed in select locations to improve project access or to establish work areas that would accommodate equipment; however, it would be limited in scope and duration and would not substantially alter site drainage or result in substantially increased erosion or siltation. Therefore, the impact would be less than significant.

To further reduce this impact, appropriate measures would be implemented, per the SWPPP as described in Section 5.10.1.5, Groundwater Management and APM HAZ-1: Prepare and Implement a Hazardous Material Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan and APM HAZ-3: Accidental Release Prevention Plan within Section 5.9: Hazards, Hazardous Materials, and Public Safety. After project construction is completed, disturbed areas would be recontoured to approximate pre-project conditions, unless otherwise requested by the landowner. Through project design and implementation of the SWPPP, the temporary and short-term effects of erosion or siltation from site runoff would be further reduced.

**(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;**

**No Impact.** Because the majority of project infrastructure would be underground, the project would not substantially alter existing drainage patterns, increase impervious surfaces, or otherwise cause increased surface water runoff rates, or require substantial modification of any upland sites that would increase the potential for any on- or offsite flooding. Therefore, under this criterion, no impact would occur.

**(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**

**Less Than Significant Impact.** Construction activities would include plowing, trenching, directional boring, vault box installation, and temporary use of staging and materials storage yards. These activities are not anticipated to substantially alter existing drainage patterns within the project area because they would be temporary, confined to a small footprint, and would leave few aboveground or impervious components.

Much of the project area is located within rural or undeveloped parcels where municipal or otherwise-developed stormwater collection systems are not established. The stormwater conveyance systems that are present along US 395 generally consist of open stormwater ditches and waterways along the route.

The project would not substantially increase the amount of impervious surfaces, nor would it substantially modify the grade or runoff conditions along the project route; therefore, the project would not create or contribute additional runoff that could exceed the capacity of existing stormwater systems. To further reduce the potential impacts during construction, appropriate BMPs would be implemented in accordance with the SWPPP. This could include BMPs that would address potential non-stormwater discharges and sources of polluted runoff, such as spills and leaks, as described in Section 5.10.1.5, Groundwater Management and the APM HAZ-1: Prepare and Implement a Hazardous Material Release Prevention Plan and a Spill Prevention, Countermeasure, and Controls Plan and APM HAZ-3: Accidental Release Prevention Plan within Section 5.9: Hazards, Hazardous Materials, and Public Safety. Accordingly, the impact would be less than significant.

**(iv) impede or redirect flood flows?**

**Less Than Significant Impact.** The project does not cross a FEMA 100-year floodplain. No long-term project staging or laydown areas are proposed. Short-term staging areas would be established within or immediately adjacent to the right-of-way, which would be restored following completion of construction, except for areas retained at the request of the landowner. No impedance or redirection of flood flows are anticipated as a result of the project. In addition, temporary work areas would not impede or redirect flood flows. Therefore, the project impact on flood flows would be less than significant.

**d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

**No Impact.** The project is not located in flood hazard, tsunami, or seiche zones and would not risk release of pollutants due to inundation. Therefore, no impact would occur.

**e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

**Less Than Significant Impact.** The project area is located within the Goose Lake–Fandango Valley, Goose Lake–Goose Valley, Joseph Creek, Alturas Area–South Fork Pit River Basin, Madeline Plains, Secret Valley, Honey Lake Valley, and Long Valley groundwater basins, which are managed under the water quality control plans for the Central Valley and Lahontan RWQCBs (RWQCB 2018). The project description does not include any deliberate waste discharges that would conflict with the water quality control plans. Activities associated with project construction would not result in substantial additional sources of polluted runoff due to the low impact and shallow construction methods. A SWPPP would be prepared and implemented to further reduce any impacts. The project's negligible water use during construction would not deplete or interfere with groundwater supply or recharge. Therefore, the project would not conflict with or obstruct the water quality control plan or a sustainable groundwater management plan, and the potential impacts would be less than significant.

## 5.10.5 Draft Environmental Measures

### Applicant Proposed Measures

Hydrology and Water Quality

**APM HYDRO-1: Prepare and Implement a Stormwater Pollution Prevention Plan (SWPPP)**

The applicant will prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to prevent construction-related erosion, sediment runoff, and discharge of other pollutants into adjacent waterways and onto neighboring properties. Because project activities would result in ground disturbance of more than one (1) acre, the applicant will obtain coverage under the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-DWQ (and as amended by 2010-0014-DWQ and 2012-006-DWQ). To obtain coverage under the permit, the applicant will develop and submit permit registration documents—including a Notice of Intent, SWPPP, risk assessment, site map, construction drawings, certification by a Legally Responsible Person, contractor contact information, and annual fee—to the State of California's Storm Water Multiple Application and Report Tracking System (SMARTS) database and obtain a Waste Discharger Identification (WDID) number prior to initiating construction activities.

The SWPPP shall outline implementation of best management practices (BMPs) for each activity that has the potential to impact neighboring properties or degrade surrounding water quality through erosion, sediment runoff, dewatering, and discharge of other pollutants. BMPs to be part of the project-specific SWPPP may include but are not limited to the following control measures.

- Implementing temporary erosion control measures (such as silt fences, staked straw bales and wattles, silt and sediment basins and traps, check dams, geofabric, sandbag dikes, grass buffer strips, high-infiltration substrates, grassy swales, and temporary revegetation or other ground cover) to control erosion from disturbed areas.
- Protecting drainage facilities in downstream offsite areas from sediment using BMPs acceptable to Modoc, Lassen, and Sierra counties and the Lahontan and Central Valley Regional Water Quality Control Boards (RWQCBs).
- Protecting the quality of surface water from non-stormwater discharges such as equipment leaks, hazardous materials spills, and discharge of groundwater from dewatering operations.
- Restoring disturbed areas, after project construction is completed, unless otherwise requested by the landowner in agricultural land use areas.

Requirements of the SWPPP shall be coordinated with the requirements of any Section 401 Water Quality Certification issued for the project under the Clean Water Act and/or Streambed Alteration Agreement issued under Fish and Game Code Section 1602, as applicable.

# 5.11 LAND USE AND PLANNING

This section describes the existing land uses in the vicinity of the project and analyzes potential land use and planning impacts associated with the construction, operation, and maintenance of the project. This section also describes environmental and regulatory settings. The project would not result in significant impacts to existing or proposed land uses, conflict with applicable land use plans and policies, or physically divide an established community.

## 5.11.1 Environmental Setting

The project within California spans approximately 193.9 miles from the northern edge of Modoc County, through Lassen County, and into the eastern edge of Sierra County. The topography and landscape along the running line ranges between 4,000 and 6,000 feet amsl with a combination of foothill, plain, and mountainous landscapes. An 8-mile segment of the running line would deviate from US 395 and run along Standish Buntingville Road (Lassen County Road A3) and Cummings Road between the communities of Standish and Buntingville in Lassen County, California. In this location, the underlying land is owned by Lassen County. Land uses, zoning, and land ownerships of the various areas within and adjacent to the running line are discussed in further detail below. Generalized land use designations across multiple jurisdictions were used in this analysis as a reflection of land use patterns and trends located adjacent to the project area (Figure 5.11-1).

### 5.11.1.1 Land Use and Zoning

The project traverses Modoc, Lassen, and Sierra Counties, mostly within existing roadway right-of-way. The project crosses through unincorporated communities in Modoc County, including New Pine Creek, Davis Creek, Ramsey, and Likely, as well as the City of Alturas. Within Lassen County, the project traverses the communities of Sage Hen, Pinnio, Madeline, Brockman, Moran, Termo, Viewland, Litchfield, Standish, Buntingville, Milford, and Doyle. In Sierra County, the project does not pass through any cities or census-designated communities. The land uses within each county are described in further detail below.

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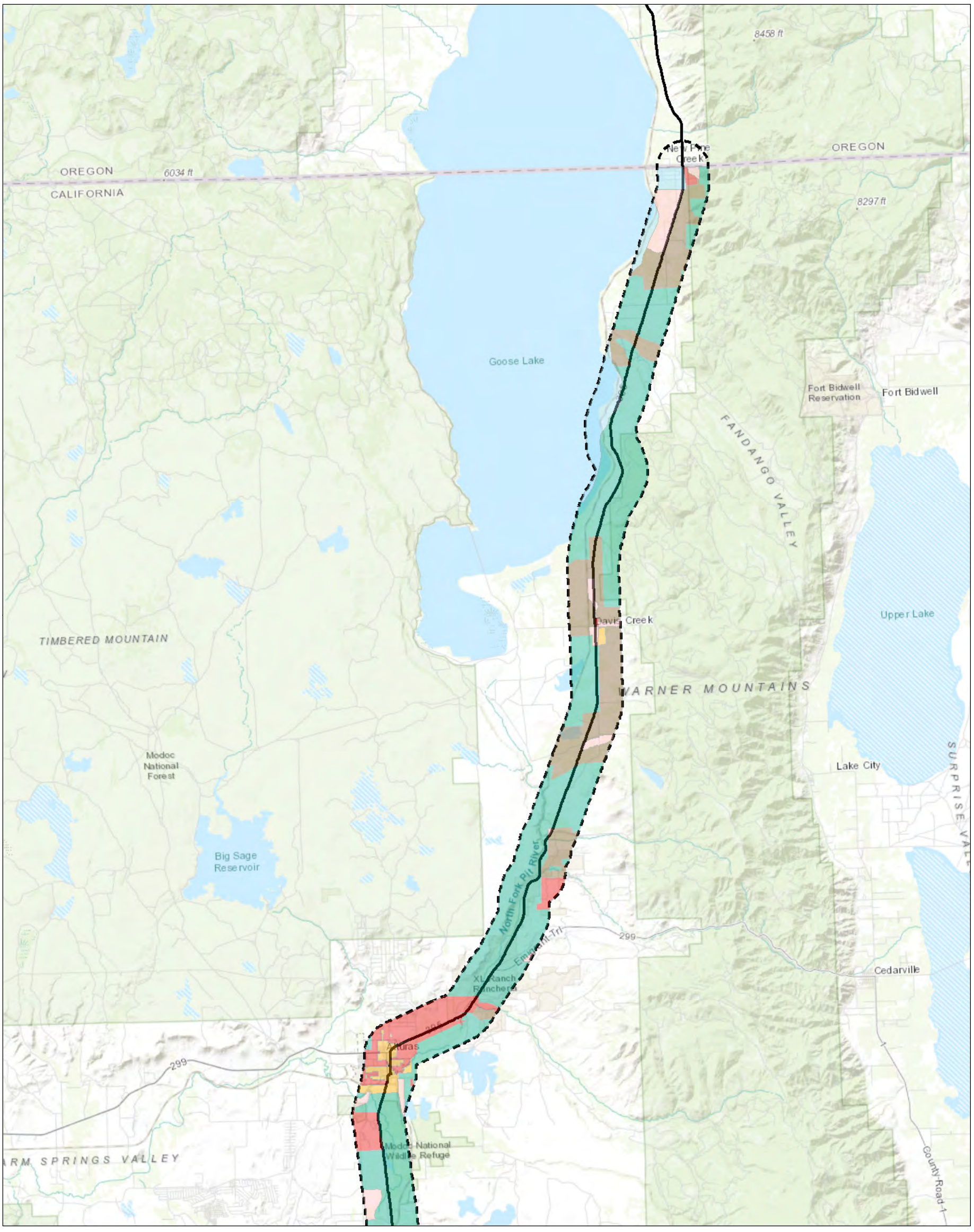


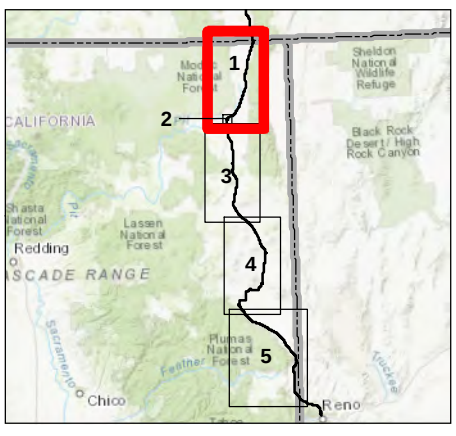


Notes

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Alignment

1-mile Buffer

**General Plan Land Use (CA 2008)**

- Agricultural
- Low Density Residential
- Open Space And Public Lands
- Other - Not Determined
- Urban Reserve
- Very Low Density Residential
- Water

0 2.5 5 Miles

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N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011
Prepared by CP on 2020-06-17
Technical Review by JC on 2020-06-17
Independent Review by CS on 2020-06-17

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
5.11-1

Title
Generalized Land Uses within One Mile of Proposed Prineville to Reno Fiber Optic Line

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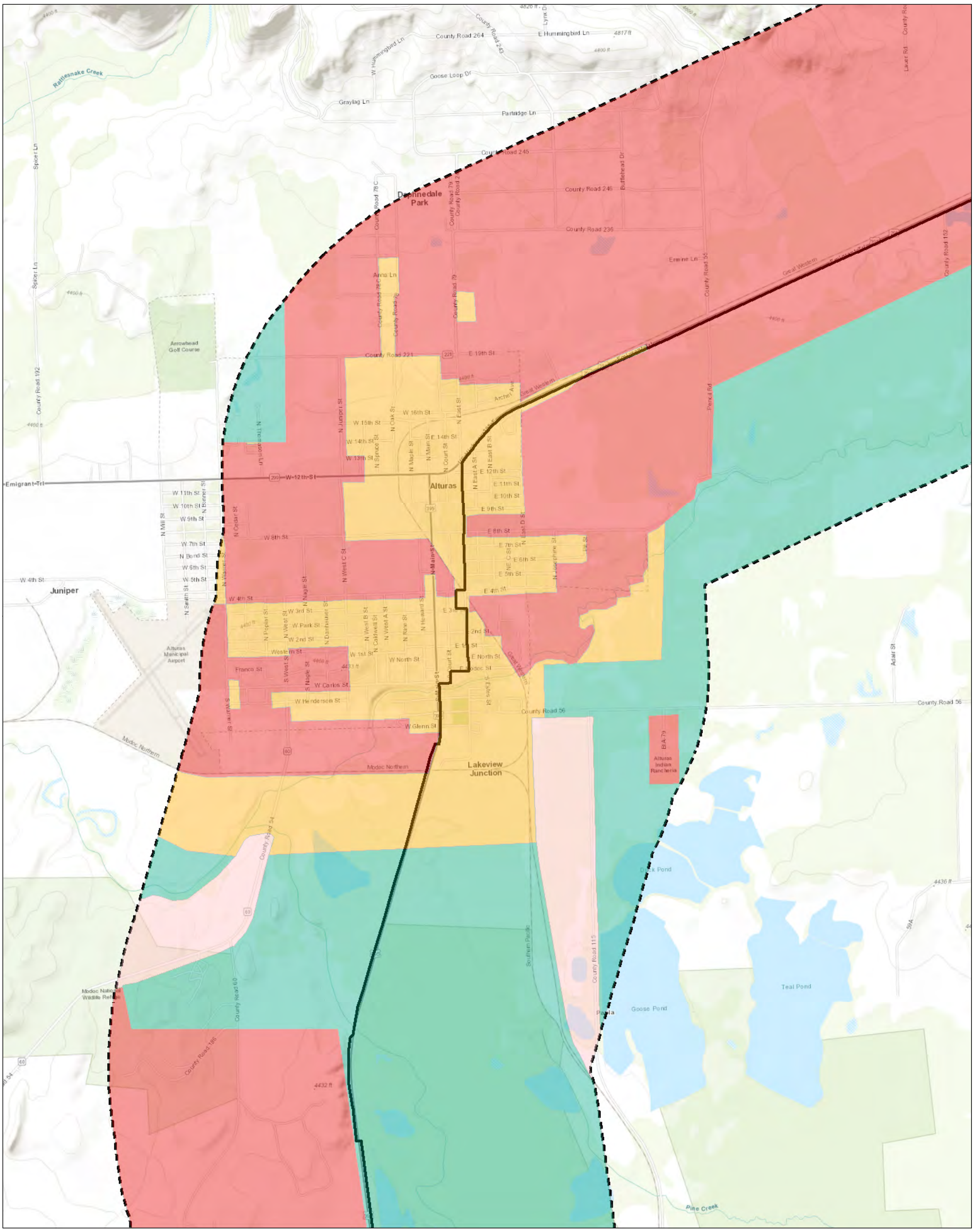


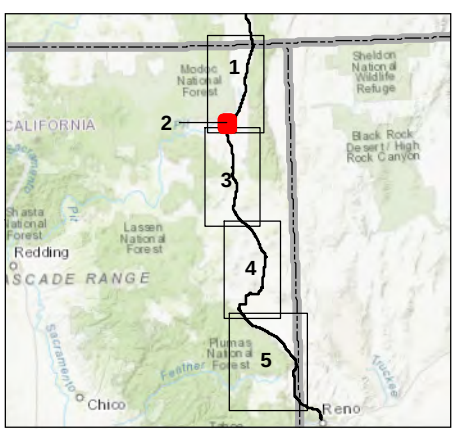


Alignment

1-mile Buffer

Generalized Land Use

- Low Density Residential
- Open Space And Public Lands
- Urban Reserve
- Very Low Density Residential

0 0.3 0.6 Miles

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N

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Project Location
Prineville, OR to Reno, NV

2272020011

Prepared by CP on 2020-06-17
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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.11-1**

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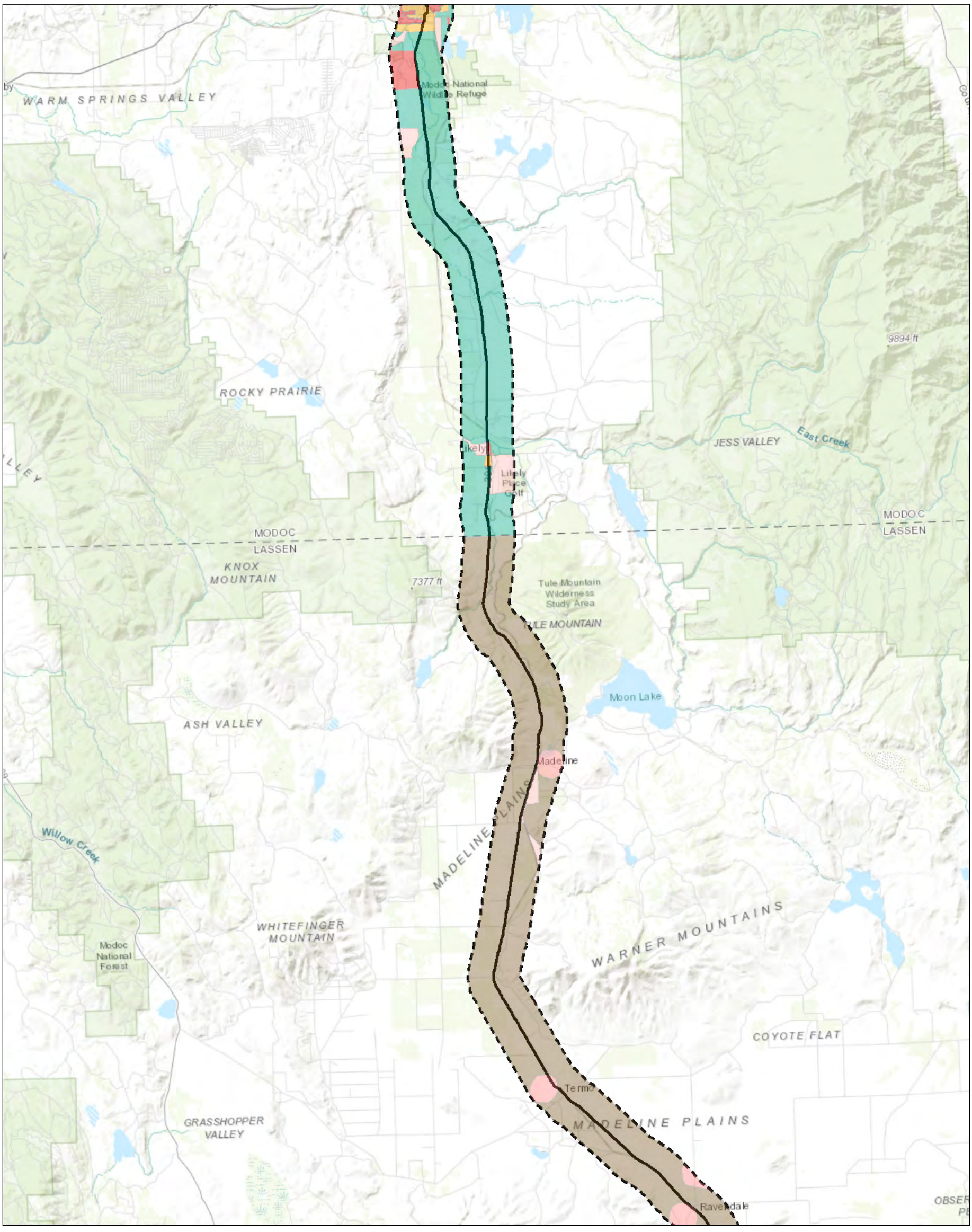


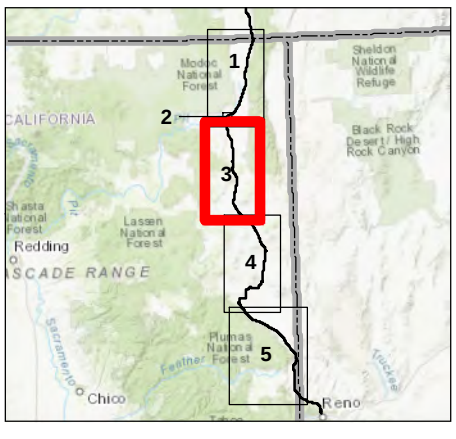


Alignment

1-mile Buffer

Generalized Land Use

- Agricultural
- Low Density Residential
- Medium Density Residential
- Open Space And Public Lands
- Urban Reserve
- Very Low Density Residential

0 2.5 5 Miles

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N

Stantec

Project Location
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2272020011

Prepared by CP on 2020-06-17
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Client/Project
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Fiber Optic Line--Prineville to Reno

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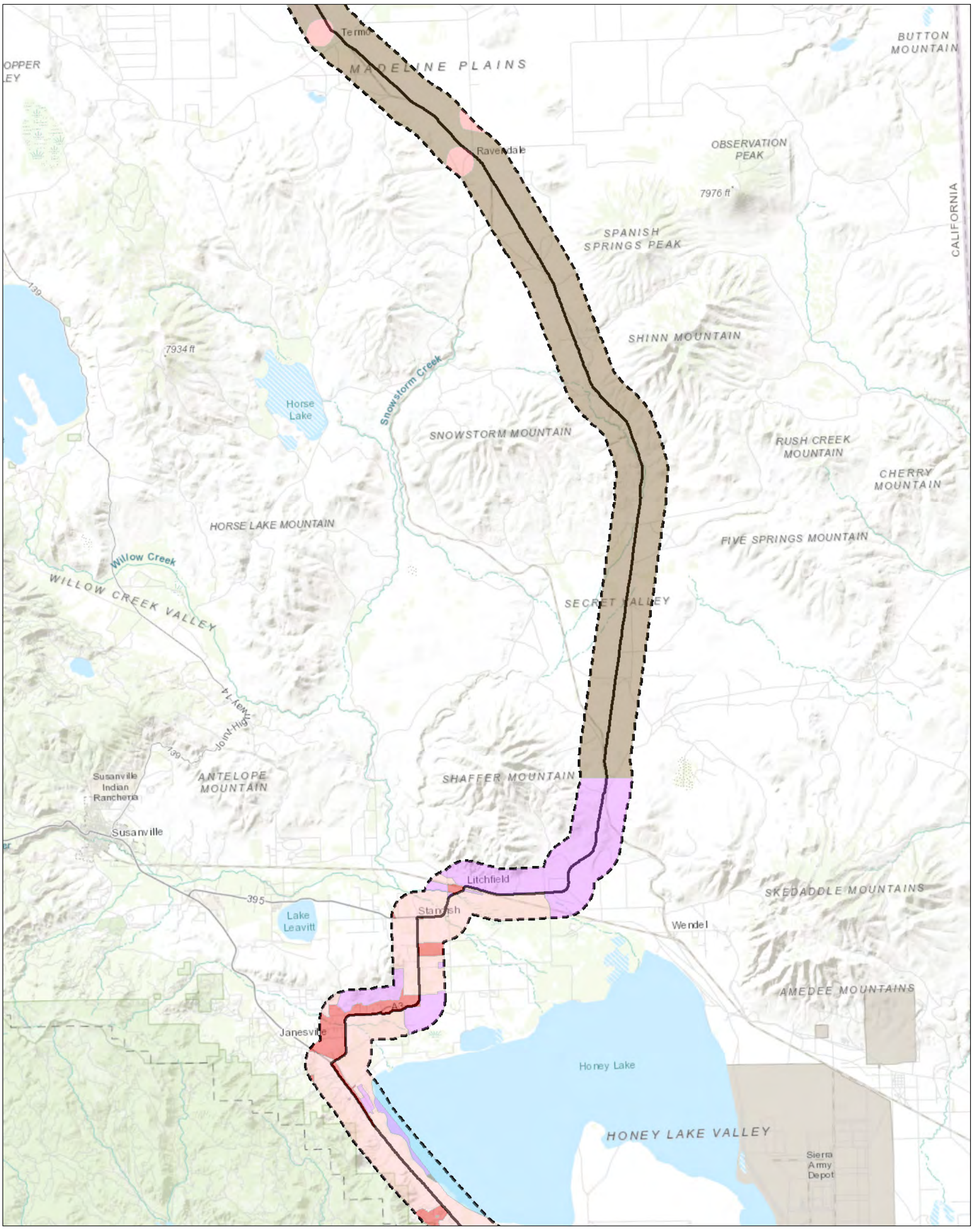


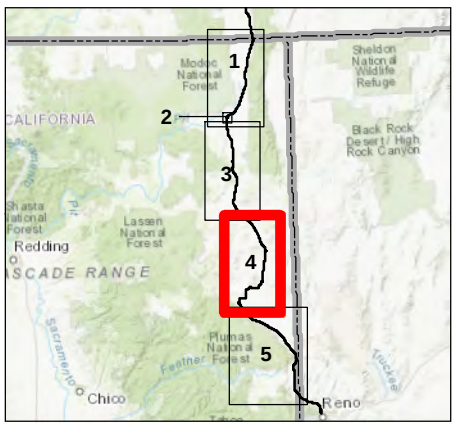


Alignment

1-mile Buffer

Generalized Land Use

- Agricultural
- Low Density Residential
- Medium Density Residential
- Planned Development
- Very Low Density Residential
- Water

0 2.5 5 Miles

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N

Stantec

Project Location
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2272020011

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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.11-1**

Title
Generalized Land Uses within One Mile of Proposed Prineville to Reno Fiber Optic Line

Notes
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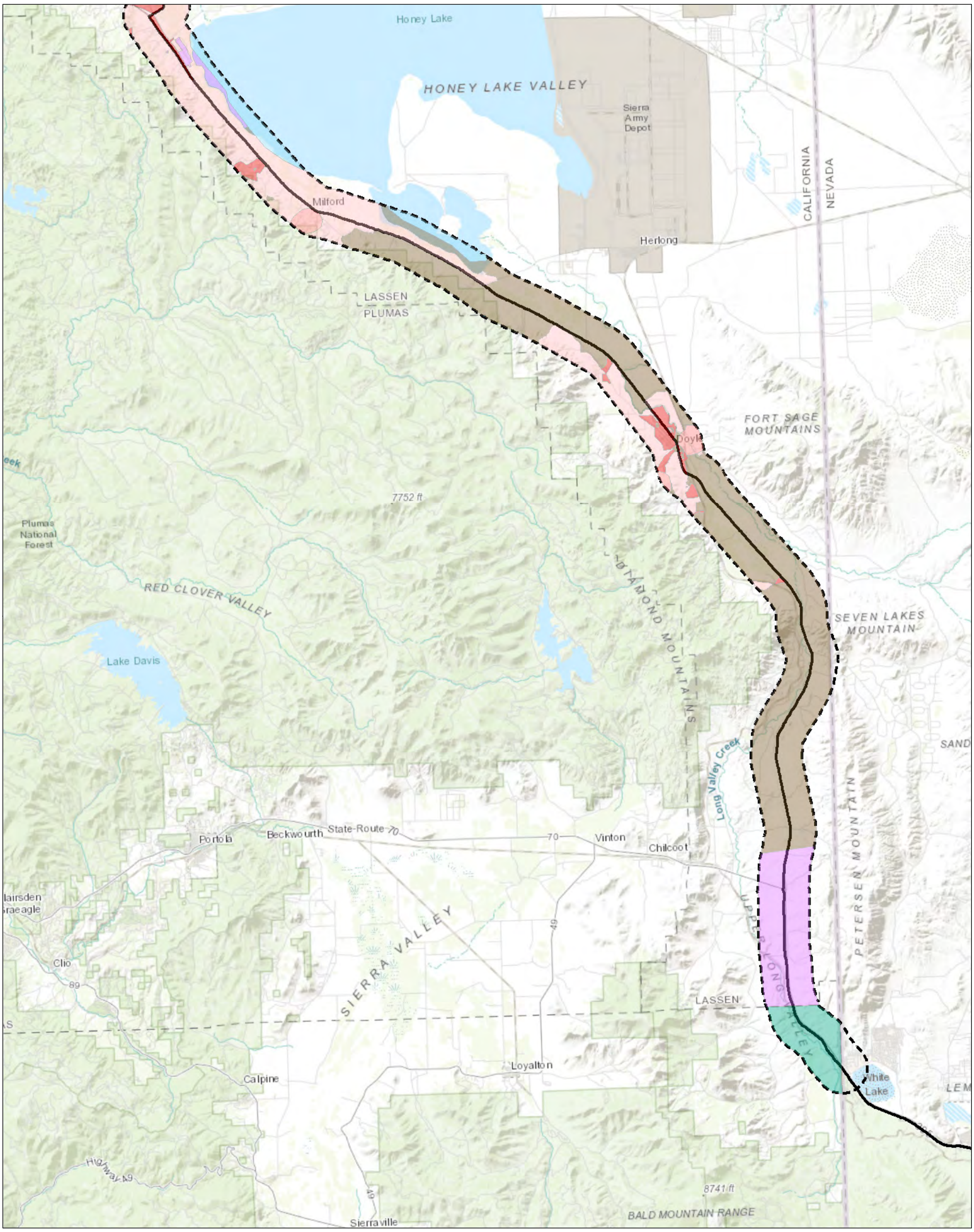


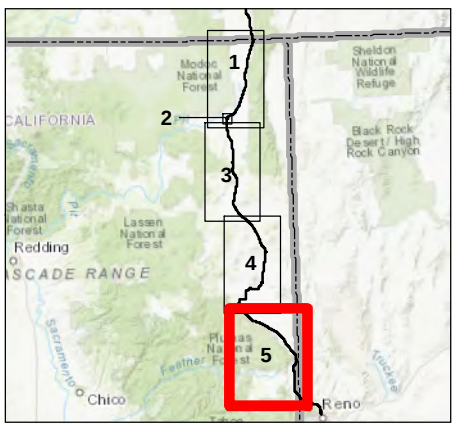


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Alignment

1-mile Buffer

**General**ized Land Use

- Agricultural
- Low Density Residential
- Medium Density Residential
- Open Space And Public Lands
- Planned Development
- Very Low Density Residential
- Water

0 2.5 5 Miles

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N

Stantec

Project Location

Prineville, OR to Reno, NV

2272020011

Prepared by CP on 2020-06-17
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Independent Review by CS on 2020-06-17

Client/Project

Zayo
Fiber Optic Line--Prineville to Reno

Figure No.

**5.11-1**

Title

Generalized Land Uses within One Mile of Proposed Prineville to Reno Fiber Optic Line

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Land Use and Planning

## Modoc County

The Modoc County General Plan characterizes the the county to include natural beauty, abundant wildfire, open space, clean air, and plentiful water (Modoc County 1988, as amended). These values are reflected in the large stretches of open space, public space, and agricultural lands that dominate much of the area rather than development and the built environment. The project spans the length of the county, and traverses through much of the developed and undeveloped areas within the county.

Starting at the Oregon and California state line, the project traverses through adjacent lands designated as very-low- and low-density residential, agricultural, open space and public lands, and urban reserve (in the City of Alturas and the community of Likely). The Modoc National Forest borders the project area on both the east and west and covers the majority of Modoc County. Additionally, the project passes adjacent to Goose Lake near the northern portion of the county and the California Historic Trail that passes through Goose Lake, across US 395, and through Surprise Valley. US 395 passes directly through the center of the City of Alturas, which is includes smaller rural and farming residences as well as businesses and commercial structures closer to downtown.

The running line would be located entirely within existing roadway right-of-way within Modoc County, with the exception of one ILA, one staging area, and one material lay down yard location. The ILA is located in the City of Alturas and has a zoning designation of light industrial; the staging area has a generalized land use designation of low density residential. The material lay down yard location is also located in the City of Alturas and has a generalized land use designation of urban reserve.

## Lassen County

The majority of Lassen County is characterized by forest-covered mountains and plateaus roughly covering the western one-third of the county and rangeland and foothill environments covering the eastern two-thirds of the county. When the running line reaches Lassen County, it crosses adjacent to agricultural lands with smaller very-low-residential and medium-residential land until just before reaching the community of Standish, which includes larger portions of lands designed as planned development, very-low-residential, and low-residential. This continues until reaching the community of Milford, which contains some medium-residential land, but then turns back into agricultural lands. The northern portion of Lassen County also contains some of the Modoc National Forest lands, which borders US 395 on both the east and the west, and the Plumas National Forest borders Lassen County in the south, starting near the community of Janesville. The community of Doyle also contains some medium-residential, very-low-residential and low-residential designated lands. Land uses near the southern border of Lassen County mostly consist of agricultural lands. Additionally, there are several recreational trails that adjacent to US 395, including the Shaffer Mountain and Belfast Petroglyphs off-highway vehicle trail near Litchfield and the California Trail, which passes through Susanville through to Nevada.

The running line would be located entirely within existing roadway right-of-way within Lassen County, with the exception of two ILAs (Spanish Springs ILA and Herlong ILA), nine staging areas, and two material lay down yard locations. The Herlong ILA has a zoning designation of general agriculture district and highway commercial district. The Spanish Springs ILA is within the road-right-of-way and therefore is within the highway commercial district. Additionally, there are nine staging areas in Lassen County that

have planned development, low-density residential/planned development, and agricultural land uses. The two material lay down yard locations are considered to be agriculture and very low-density residential land uses.

#### Sierra County

In general, Sierra County spans a wide variety of environments, including foothill areas in the west and high sierra and mountainous environments in the east (i.e., near the project area). Few developed areas occur within the county, with the nearest city to the project, the City of Loyalton, occurring more than 11 miles west of the project. Similarly, the land uses adjacent to the project within Sierra County are mostly open space and public lands. There are no communities along the Sierra County portion of the project. Additionally, the Humboldt-Toiyabe National Forest occurs south and west of US 395, before the project enters into Nevada.

### 5.11.1.2 Special Land Uses

As summarized in Section 3.0, Proposed Project Description, and in Figure 3-2, the project area traverses lands managed by BLM, the United States Forest Service (Modoc National Forest, Humboldt-Toiyabe National Forest, and Plumas National Forest), the State of California (California State Lands Commission [CSLC] and California Department of Fish and Wildlife]), BIA, USFWS (Modoc National Wildlife Refuge), and NRCS (Wetlands Reserve Program [WRP]). There are no National State Wild and Scenic Rivers or coastal zones within the study area nor does the project traverse any area subject to an approved habitat conservation plans. There are no national landmarks within 1 mile of the project.

## 5.11.2 Regulatory Setting

### 5.11.2.1 Federal

#### Wetlands Reserve Program

The WRP is managed by the USDA NRCS, which offers landowners the opportunity to protect, restore, and enhance wetlands on their properties. The NRCS provides financial assistance to these property owners with the goal of achieving the greatest wetland support functions and values, along with optimum wildlife habitat. Lands within this program are enrolled in a permanent conservation easement, 30-year easement, restoration cost-share agreement, or 30-year contract (for tribal lands) (NRCS 2020). There are several portions of US 395 that pass near WRP lands; however, the project would not directly pass through or conflict with any of these lands.

#### U.S. Forest Service Land and Resource Management Plans

Land and Resource Management Plans (LRMPs) serve as a guide for management of all activities within a National Forest for which the USFS has jurisdiction and authority to manage. The National Forest Management Act (NFMA) of 1976 requires that the USFS conduct an assessment of the nation's renewable resources to develop a program of use and subsequently develop LRMPs for each National

Forest. The project area traverses three National Forests, and the goals and plans of each of the respective LRMPs are discussed below.

### *Modoc National Forest Land and Resource Management Plan*

The Modoc National Forest LRMP was adopted by the USFS in 1999. This LRMP includes general goals and missions as well as standards and guidelines for the Modoc National Forest. The relevant standard to the project is included below (USFS 1999):

- **Facilities – 5a.** Limit allocations of single-purpose transmission and transportation corridors. Place new transportation and utility facilities within or contiguous to existing corridors. Encourage the use of private lands, where appropriate, for new corridors. Appropriateness is determined at the site-specific project level.

### *Plumas National Forest Land and Resource Management Plan*

The Plumas National Forest LRMP was adopted by the USFS in 1988. This LRMP includes general goals and missions as well as standards and guidelines for the Plumas National Forest. The relevant standard to the project is included below (USFS 1988):

- The management direction of this plan is to evolve the Plumas National Forest to a mosaic of:
    - intensively-managed, regulated, sustained-yield, and generally even-aged timberland on the most productive sites;
    - increasingly-productive and utilized rangeland;
    - special interest, semi-primitive, and wild areas; and
    - developed recreation centers;

    While:

    - managing soil productivity and improving water quality,
    - encouraging mineral and energy production,
    - conserving significant cultural resources, and
    - maintaining viability of all wildlife species.

### *Humboldt-Toiyabe National Forest Land Resource Management Plan*

The Humboldt-Toiyabe National Forest LRMP was adopted by the USFS in 1986. This LRMP includes general goals and missions as well as standards and guidelines for the Humboldt-Toiyabe National Forest. The relevant standard to the project is included below (USFS 1986):

Land Use and Planning

- **Management Direction**: Utility Corridors. Minimize potential adverse impacts associated with utility corridors.
    - **Standards and Guidelines**: Place all new utility facilities within designated corridors when practicable.

### 5.11.2.2 State

#### California Public Utilities Commission General Order 131-D

Pursuant to CPUC G.O. 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities in the State of California. Under CEQA, the CPUC is the Lead Agency with respect to such project elements within the State of California.

### 5.11.2.3 Local

Because CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local land use and zoning regulations or discretionary permits. This section identifies local land use plans and regulations for informational purposes and to assist with CEQA review.

#### Modoc County General Plan

The Modoc County General Plan was adopted in September 1988 and includes the following policies related to land use that are relevant to the project (Modoc County 1988, as amended):

> **Agricultural Land Use Policy 12:** Power transmission line corridors should not be located in any productive agricultural area, including exclusive and general agricultural lands or near airports.

#### Lassen County General Plan

The Lassen County General Plan was adopted in September of 1999 and includes the following goals related to land use that are relevant to the project (Lassen County 1999, as amended):

**Goal L-1:** To maintain a system of land use designations which sets forth the County's policies pertaining to the general distribution and intensity of land uses, and which strives to ensure compatibility between land use types by providing for efficient and complimentary patterns and mixtures of land uses.

**Goal L-4:** Compatibility between land use types by providing for complementary mixtures and patterns of land uses.

#### Sierra County General Plan

The Sierra County General Plan was first adopted in 1996 and includes the following goals and policies related to land use that are relevant to the project (Sierra County 1996, as amended):

Land Use and Planning

**Land Use Goal 5.** It is the goal of the County to implement development standards which streamline procedures, maximize public involvement, and which protect environmentally sensitive and natural resource industry areas.

### City of Alturas General Plan

The City of Alturas General Plan was first adopted in June 1987 (City of Alturas 1987, as amended). There are no land use goals or policies in the City of Alturas General Plan that are relevant to the project.

### Lassen County Zoning

Title 18, Chapters 18.16 and 18.28 describes the zoning designations within the county and the allowed land uses within the zoning designations. Utility uses are allowed by permit in both the general agricultural district (A-1) and highway commercial district (C-H) designations (Chapter 18.16.050 and Chapter 18.28.040).

### City of Alturas Zoning

Section 28.21 of the City of Alturas Zoning Ordinance describes the zoning designations within the City and the allowed land uses within the zoning designations. The light industrial zone (M1) is described in Section 28.21.030 of the City's Zoning Ordinance as follows:

> *The "M1", Light Industrial, Zone is intended to accommodate low-intensity industrial uses close to commercial and residential areas with minimum environmental conflicts, and be applied as a buffer zone to protect residential and commercial zones from more impactive Heavy Industrial, M2, uses. Although some commercial uses related to product sales and service activities are allowed by right or permit, they are intended to be incidental to the primary use of light manufacturing and/or storage, or to provide needed buffering between low-intensity and high intensity uses.*

## 5.11.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☒ | ☐ |

## 5.11.4 Impact Analysis

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

**No Impact.** The project would consist of an underground fiber optic cable that would not result in any division of communities. The fiber optic cable would largely be constructed within the roadway right-of-way, which include corridors that are already in place. Additionally, the staging areas, material lay down yard locations, and ILA locations would be constructed within or adjacent to the right-of-way. The majority of the project would be constructed within US 395 right-of-way, which traverse adjacent to rural areas where development is sparse. The running line crosses through more developed areas near the City of Alturas and along Lassen County Road A3 and Cummings Road. Construction activities could result in minor disruptions to these communities; however, these disruptions would be temporary and would not result in any permanent divisions to established communities. Further, because the project consists of a linear installation, construction activities within any established communities would only occur for a very short period and would not result in a physical division of any established communities.

Once constructed, the project would be located entirely underground, with the exception of some of the ancillary equipment (e.g., ILAs and vaults/line markers), and would not result in any permanent divisions of any established communities. Therefore, there would be no impact related to physically dividing established communities.

**b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

**Less Than Significant Impact.**

### Land Use and Zoning Consistency

The majority of the project would not result in any permanent land use conversion or conflict with existing land uses or zoning designations because the project would largely be located within the roadway right-of-way. Additionally, the portions of the running line that would pass through county roads, including Lassen County Road A3 and Cummings Road, and any staging areas or laydown areas along the running line would not result in any permanent conversions of land. For areas adjacent to the project that are more densely populated, such as within the City of Alturas or small unincorporated communities along the running line, construction may result in temporary impacts from air quality emissions, dust, noise, etc. However, construction activities would not stay in any one location for extended periods of time, with the average rate of cable installation occurring at 500 feet per day. Therefore, construction related impacts from the project would be less than significant.

Once constructed, the project would be located underground, with the exception of three aboveground ILA ancillary facilities that would provide tie-ins to regional wireless service providers. As described, the ILAs are planned to occupy properties in Herlong (0.78 acre), Spanish Springs (0.12 acre), and Alturas (0.25 acre), California. Each ILA would consist of a prefabricated concrete or steel regeneration hut

erected on a concrete pad with a surrounding perimeter fence around the hut. The regeneration hut structure would be setback from the fence line, would be approximately 420 square feet (0.01 acre), and would be approximately 11 feet in height.

The zoning designations for each site include light industrial for the Alturas ILA, general agriculture district and highway commercial district for the Herlong ILA, and highway commercial district for the Spanish Springs ILA. Utilities are considered a compatible use under the City of Alturas light industrial zoning designation and a compatible use with a permit for the general agriculture and highway commercial district zoning designations under Lassen County's municipal code. The three ILA locations would be permanently occupied, but would be located within vacant and previously disturbed sites. Accordingly, the project would not conflict with the allowable uses for these sites and would be consistent with the relevant zoning codes. In addition, the CPUC has exclusive jurisdiction over the siting and design of regulated telecommunication facilities in the State of California, including the project. Therefore, the project would have a less than significant impact related to conflicts with existing land use designations and zoning designations.

## General Plan Consistency

The project would be consistent with each county's General Plan (i.e., Modoc County, Lassen County, and Sierra County). The Governor's Office of Planning and Research (OPR) states that, " an action, program, or project is consistent with the General Plan if, considering all its aspects, it will further the objectives and policies of the General Plan and not obstruct their attainment" (OPR 2005). As discussed in Section 5.11.2, Regulatory Setting, there are no relevant land use policies in the City of Alturas General Plan so the project is considered consistent with this General Plan. For the remainder of the General Plans, Tables 5.11-2 through 5.11-4 show that the project would be consistent with all applicable goals and policies of these respective General Plans.

### Table 5.11-1 Modoc County General Plan Consistency

| Policies or Goals | Consistency |
|---|---|
| **Agricultural Land Use Policy 12:** Power transmission line corridors should not be located in any productive agricultural area, including exclusive and general agricultural lands or near airports. | **Consistent**. The project would be largely located within existing roadway right-of-way and would not result in any conversion of land, including agricultural lands. One staging area in Modoc County would be located within land mapped by the Farmland Mapping and Monitoring Program (FMMP) as prime farmland. As discussed in Section 5.2, Agriculture and Forestry Resources, APM AG-1 would be implemented for this staging area which would ensure that all temporarily impacted prime, unique, or farmland of local or statewide importance is returned to its former uses and minimize long-term impacts to these farmlands. Therefore, this temporary interference would be considered a less than significant impact. Once constructed, the project would be largely located underground and within existing roadway right-of-way and would result in no impacts to land uses. |

### Table 5.11-2 Lassen County General Plan Consistency

| Policies or Goals | Consistency |
|---|---|
| **Goal L-1:** To maintain a system of land use designations which sets forth the County's policies pertaining to the general distribution and intensity of land uses, and which strives to ensure compatibility between land use types by providing for efficient and complimentary patterns and mixtures of land uses. | **Consistent.** The majority of the project would not result in any changes in land use or conflict with any adjacent land uses in the area. As discussed above, the three ILA locations would result in permanent above ground structures that could potentially convert existing land to operation of the new fiber optic line. These new ILA structures would be within previously disturbed areas, and would not result in any substantial conversions or conflicts with adjacent land uses. Once constructed, the majority of the project would be located underground within existing roadway right-of-way and county roads and would not have any potential to conflict with and uses in the study area. |
| **Goal L-4:** Compatibility between land use types by providing for complementary mixtures and patterns of land uses. | **Consistent.** As discussed above, the project would not result in any changes to land use within the study area except for the three ILA locations which would include permanent above ground structures. These new ILA structures would not result in any substantial conflict existing land uses. Once constructed, the majority of the project would be located underground, within existing roadway right-of-way and county roads and would not conflict with any adjacent land uses. |

### Table 5.11-3 Sierra County General Plan Consistency

| Policies or Goals | Consistency |
|---|---|
| **Land Use Goal 5.** It is the goal of the County to implement development standards which streamline procedures, maximize public involvement, and which protect environmentally sensitive and natural resource industry areas. | **Consistent.** The project would not conflict with any development standards or impact environmentally sensitive and natural resource industry areas. The project would be constructed within existing roadway right-of-way and would not result in any land use changes. |

## Wetlands Reserve Program Consistency

As discussed in Section 5.11.2, Regulatory Setting, there are several portions of US 395 that pass near WRP lands; however, the project would not directly pass through or conflict with any of these lands. Therefore, the project would result in no impacts related conflict with WRP lands near the project area.

## Land and Resource Management Plans Consistency

As discussed in Section 5.11.2, Regulatory Setting, the project area passes near three National Forests: Modoc National Forest, Plumas National Forest, and Humboldt-Toiyabe National Forest, all of which are managed by the USFS. The LRMPs for these National Forests include several goals, standards, and guidelines, particularly for placement of utility lines or infrastructure, such as transmission and electrical lines, and roads within their boundaries. Any new utility lines or intrastate should be limited to areas within previously designated corridors, where possible. The project would be placed within the right-of-way of

US 395, a previously defined corridor, and would not result in any new corridors within these National Forests. Once constructed, the new fiber optic line would be located underground and would not be visible within the corridor. Therefore, the project would generally be consistent with these LRMPs, and the impact would be less than significant.

### Conclusion

As discussed in the analysis above, the project would be consistent with all plans, policies, and goals that are relevant to the project. Although the project would cross through multiple jurisdictions, CPUC has exclusive jurisdiction over project siting, design, and construction. The project would be constructed within existing roadway right-of-way and would not result in any permanent conversions of land uses or zoning designations and once constructed, the project would be located underground. Therefore, the project would have a less than significant impact related to confliction with plans, policies, and goals.

## 5.11.5 Draft Environmental Measures

### Applicant Proposed Measures

**APM AG-1 Coordination with Agricultural Landowners.**

See Section 5.2, Agriculture and Forestry Resources.

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# 5.12 MINERAL RESOURCES

This section describes the existing mineral resources in the vicinity of the project and analyzes potential mineral resource impacts associated with the construction, operation, and maintenance of the project. The project's potential effects on mineral resources were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The analysis in Section 5.12.4, Impact Analysis, concludes that the project would have no impact on mineral resources.

## 5.12.1 Environmental Setting

### 5.12.1.1 Mineral Resources

Mineral resources are generally finite and occur in sporadic deposits, which often create a relative scarcity and a need to protect access to supplies. Many mineral resources are important to global, national, state, and local economies. In 2015, California had approximately 1,042 active mines responsible for approximately 4.7 percent of the United States' non-fuel mineral production (California Department of Conservation 2020). The largest component of this production was derived from sand and gravel mining. Primary mineral resources within the project area generally include diatomite, gravel, and sand. Active mining sites within the project area and aggregate material resources are discussed in further detail below.

#### Active and Historic Mines

A desktop review of the California Department of Conservation's Mines Online database was conducted for the project. There are numerous historic mines within 1 mile of the project area that have an operation status of closed, idle, or reclaimed; however, there are only four mines that are listed active. The four active mines include the following (California Department of Conservation 2016):

- Hindle Pit–Modoc, Modoc County (sand and gravel)
- Gravier Pit, Lassen County (sand and gravel)
- Viewland Properties #2, Lassen County (sand and gravel)
- Sierra Lady Placer Claims, Lassen County (diatomite)

#### Aggregate Material Resources

Aggregate materials (i.e., sand and gravel) used for construction is California's primary mineral resource. As required by the Surface Mining and Reclamation Act of 1975 (SMARA), CGS defines several geographic areas that collectively cover a single mineral classification study area as Production-Consumption Regions (P-C Regions). The CGS identifies Mineral Resource Zones (MRZs) for each P-C Region, mine/quarry, or other geographic area included in a mineral classification study. MRZs are areas classified by the presence or absence of significant sand, gravel, or stone deposits that are suitable as sources of aggregate, as described in Section 5.12.2.2, State.

Lands not addressed by the CGS, either within a P-C Region or outside a mineral classification area, are defined as "unclassified". Based on review of the California Department of Conservation CGS Mineral

Land Classification database, there are no MRZs within or directly adjacent to the project area (California Department of Conservation 2015).

## 5.12.2 Regulatory Setting

### 5.12.2.1 Federal

There are no federal plans, policies, regulations, or laws pertaining to mineral resources that are applicable to the project.

### 5.12.2.2 State

#### Surface Mining and Reclamation Act

SMARA was enacted in response to land use conflicts between urban growth and essential mineral production. SMARA (PRC Section 2710 et seq., subsequently amended) is the primary regulation for onshore surface mining in the State. SMARA mandated that aggregate resources throughout the state be identified, mapped, and classified by the state geologist so that local governments could make land use decisions in light of the presence of aggregate resources and the need to preserve access to those resources. Local jurisdictions are required to enact specific plan procedures to guide mineral conservation and extraction at particular sites, and to incorporate mineral resource management policies into their general plans. The State Mining and Geology Board (SMGB) has prepared Mineral Land Classification Maps for aggregate resources. The Mineral Land Classification Maps designate four different types of resource sensitivities. The four MRZ sensitivity types are described below.

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood for their presence exists.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
- **MRZ-3:** Areas containing mineral deposits the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment of any other MRZ zone.

### 5.12.2.3 Local

Because the CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local mineral resource regulations. However, this section identifies local mineral resources regulations, policies, and plans for informational purposes and to assist with CEQA review.

#### Modoc County General Plan

The Modoc County General Plan was adopted in September 1988 and includes the following policies related to mineral resources that are relevant to the project (Modoc County 1988, as amended):

Mineral Resources

- **Goal:** To preserve, protect, and enhance the valuable natural, cultural, and historical resources of the County
    - **Policy 1 (Minerals):** Preserve, wherever practical, the mineral resources of the county through limitations on incompatible development on or adjacent to identified resource areas.

### Lassen County General Plan

The Lassen County General Plan was adopted in September of 1999, and although it includes a discussion and goals and policies related to mineral resources, there are no goals or policies that are directly relevant to the project, nor are there any local mineral resource areas that are of local importance within the vicinity of the project (Lassen County 1999, as amended).

### Sierra County General Plan

The Sierra County General Plan was first adopted in 1996 and includes the following goals and policies related to mineral resources that are relevant to the project (Sierra County 1996, as amended):

- **Mineral Management Goal 1:** It is the goal of the Mineral management Element to encourage, enhance, and protect mining and mining related activities in the County, consistent with the fundamental goals of the County General Plan by developing clear and concise policies that coordinate agency jurisdiction over the mineral extraction industry; that clearly establishes compatible, post-mining land uses for previously mineralized areas; and, that identifies and protects existing and potential mineralized areas.

## 5.12.3 Impact Questions

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

## 5.12.4 Impact Analysis

**a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**No Impact.** As discussed in Section 5.12.1, Environmental Setting, the project area is not located in a designated MRZ, which is a land classification created by the CGS used to designate sites with known deposits of commercially viable mineral or aggregate materials in California. Although there are several active mines within 1 mile of the project area, the project would not result in direct impacts to these mines because construction would occur mostly within the US 395 right-of-way and along county roads. Once constructed, the new fiber optic line would be located underground, almost entirely within the US 395 right-of-way, and would not have the potential to adversely affect any of the current or future mining operations in the area. Therefore, the project would not result in the loss of availability of a known mineral resource that is of value to the region. No impact would occur.

**b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No Impact.** There are no locally important mineral resource recovery sites directly located within the project area. Based on review of the applicable general plans (Modoc County, Lassen County, and Sierra County General Plans), there are no locally important mineral resources that occur within the project area. Even though there are several mines that occur within 1 mile of the project area, all construction activities associated with the project would occur mostly within the US 395 right-of-way and along county roads, and would not permanently affect the operation of these mines. Once operational, the new fiber optic line would be located underground, almost entirely within the US 395 right-of-way, and would have no potential to affect any current or future mineral resource recovery sites in the area. Therefore, the project would not result in the loss of availability of a locally-important mineral resource site delineated on a local general plan, specific plan, or other land use plan. No impact would occur.

## 5.12.5 Draft Environmental Measures

There are no applicable environmental measures for mineral resources.

# 5.13 NOISE

This section describes potential noise impacts associated with construction, operation, and maintenance of the project. The project's potential effects on noise were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The analysis in Section 5.13.4, Impact Analysis, concludes that noise impacts related to the project would be less than significant.

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and that interferes with or disrupts normal activities. Although prolonged exposure to high noise levels can cause hearing loss, the principal human response to environmental noise is annoyance. The response by individuals to similar noise events is diverse and influenced by the type of noise, the perceived importance of the noise, its appropriateness in the setting, the time of day and the type of activity during which the noise occurs, and the sensitivity of the individual.

Several ways exist to measure sound, depending on the source of, receiver of, and reason for the measurement. Community sound levels are generally presented in terms of A-weighted decibels (dBA). A-weighting applies a correction factor to a particular sound spectrum, which mimics how a person perceives or hears sound, thus achieving a strong correlation with how people perceive acceptable and unacceptable sound levels. Table 5.13-1 presents A-weighted sound levels and the general subjective responses associated with common sources of noise in the physical environment.

A-weighted sound levels are typically measured or presented as the equivalent sound pressure level ($L_{eq}$), which is defined as the average noise level on an equal-energy basis for a stated period of time and is commonly used to measure steady-state sound that is usually dominant. Statistical methods are used to capture the dynamics of a changing acoustical environment. Statistical measurements are typically denoted by $L_n$, where "n" represents the percentage of time that the sound level is exceeded. Therefore, $L_{90}$ represents the noise level that is exceeded during 90 percent of the measurement period, which typically represents a continuous noise source. Similarly, $L_{10}$ represents the noise level exceeded for 10 percent of the measurement period.

### Table 5.13-1: Typical Sound Levels Measured in the Environment and Industry

| Noise Source at a Given Distance | Sound Level in A-weighted Decibels (dBA) | Qualitative Description |
|---|---|---|
| Aircraft Carrier deck jet operation | 140 | |
| | 130 | Pain threshold |
| Jet takeoff (200 feet) | 120 | |
| Auto horn (3 feet) | 110 | Maximum vocal effort |
| Jet takeoff (1,000 feet)<br>Shout (0.5 foot) | 100 | |

Noise

| Noise Source at a Given Distance | Sound Level in A-weighted Decibels (dBA) | Qualitative Description |
|---|---|---|
| New York subway station<br>Heavy truck (50 feet) | 90 | Very annoying;<br>Hearing damage (8-hour, continuous exposure) |
| Pneumatic drill (50 feet) | 80 | Annoying |
| Freight train (50 feet)<br>Freeway traffic (50 feet) | 70 to 80<br>70 | Intrusive<br>(telephone use difficult) |
| Air conditioning unit (20 feet) | 60 | |
| Light auto traffic (50 feet) | 50 | Quiet |
| Living room<br>Bedroom | 40 | |
| Library<br>Soft whisper (5 feet) | 30 | Very quiet |
| Broadcasting/Recording studio | 20 | |
| | 10 | Just audible |

Source: Adapted from Table E, "Assessing and Mitigating Noise Impacts" (New York Department of Environmental Conservation 2001).

Another metric used to determine the impact of environmental noise is the differences in response that people have to daytime and nighttime noise levels. During the evening and at night, ambient noises generally are lower than daytime levels. However, most household noise also decreases at night, and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are sensitive to intrusive noises. To account for human sensitivity to evening and nighttime noise levels, the day-night sound level ($L_{dn}$, also referred to as DNL) and the community noise equivalent level (CNEL) were developed. $L_{dn}$ is a noise metric that accounts for the greater annoyance of noise during the nighttime hours (10 PM to 7 AM). The CNEL is a noise index that accounts for the greater annoyance of noise during both the evening hours (7 PM to 10 PM) and nighttime hours.

$L_{dn}$ values are calculated by averaging hourly $L_{eq}$ sound levels for a continuous 24-hour period on an energy basis, applying a weighting factor of 10 decibels (dB) to the nighttime values. CNEL values are calculated similarly, except that a 5 dB weighting factor also is added to evening $L_{eq}$ values. The applicable adjustments, which reflect the increased sensitivity to noise during evening and nighttime hours, are applied to each hourly $L_{eq}$ sound level for the calculation of $L_{dn}$ and CNEL. For the purposes of assessing noise, the 24-hour day is divided into three time periods, with the following adjustments:

- Daytime hours: 7 AM to 7 PM (12 hours)—adjustment of 0 dBA
- Evening hours (for CNEL only): 7 PM to 10 PM (3 hours)—adjustment of +5 dBA
- Nighttime hours (for both CNEL and $L_{dn}$): 10 PM to 7 AM (9 hours)—adjustment of +10 dBA

The hourly adjusted time-period noise levels are then averaged (logarithmically) to compute the overall $L_{dn}$ or CNEL value.

Sound levels naturally attenuate with distance. Localized sources (point sources) grouped closely together attenuate greatly with distance at a rate of approximately 6 dB per doubling of distance. Examples of point sources include a piece of construction equipment, intercoms in maintenance yards and other closely grouped sources of noise. Vehicles passing along a track or roadway forming a line are called line sources. Rate of attenuation for line sources varies depending on the noise metric. $L_{eq}$ (1-hour) and $L_{dn}$ noise levels attenuate at a rate of 3 dB per doubling of distance and maximum sound level ($L_{max}$) noise levels attenuate at a rate of 3 to 6 dB per doubling of distance (Federal Transit Administration 2018).

The general human response to changes in noise levels that are similar in frequency content (such as comparing increases in continuous [$L_{eq}$] traffic noise levels) are summarized as follows:

- A 3-dB change in sound level is barely noticeable.
- A 5-dB change in sound level typically is noticeable.
- A 10-dB increase is considered to be a doubling in loudness.

Vibration is energy transmitted in waves through the ground. Because energy is lost during the transfer of energy from one particle to another, vibratory energy is reduced with increasing distance from the source. Human perception of vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level. Groundborne vibration is almost never annoying to people who are outdoors; without the effects associated with the shaking of a building, the rumble noise of vibrations is not perceptible.

Caltrans developed guidance on addressing vibration issues associated with construction, operation, and maintenance of transportation projects (Caltrans 2013). Based on this guidance, continuous/frequent intermittent vibration sources are significant when their peak particle velocity (PPV) exceeds 0.1 inch per second. Table 5.13-2 outlines additional specific criteria for human annoyance due to vibration. Table 5.13-3 details vibration levels for specific equipment at a range of distances. Though the guidance is non-enforceable, it provides a basis for evaluating potential vibration from the proposed project.

### Table 5.13-2: Human Response to Transient Vibration

| Human Response | Peak Particle Velocity (inches/second) |
|---|---|
| Severe | 2.0 |
| Strongly Perceptible | 0.9 |
| Distinctly Perceptible | 0.24 |
| Barely Perceptible | 0.035 |

Source: Caltrans 2013

### Table 5.13-3: Vibration Source Levels for Construction Equipment

| Type of Equipment | Peak Particle Velocity (inches/second) | | | Threshold at which Human Annoyance Could Occur |
|---|---|---|---|---|
| | at 25 Feet | at 50 Feet | at 100 Feet | |
| Caisson Drilling | 0.089 | 0.031 | 0.011 | 0.10 |
| Loaded Trucks | 0.076 | 0.027 | 0.010 | 0.10 |
| Small Bulldozer | 0.003 | 0.001 | 0.000 | 0.10 |
| Vibratory Roller | 0.21 | 0.074 | 0.026 | 0.10 |

Source: Federal Transit Administration 2018

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation estimates the vibration level at a given distance for typical soil conditions (Federal Transit Administration 2006). PPVref is the reference PPV at 25 feet from Table 5.13-3:

$$PPV = PPVref \times (25/Distance)^{1.5}$$

## 5.13.1 Environmental Setting

### 5.13.1.1 Noise Sensitive Land Uses

Noise-sensitive receptors are generally defined as locations where people reside or where the presence of noise may adversely affect the existing land use. Typically, noise-sensitive land uses include residences, hospitals, places of worship, libraries, performance spaces, offices, and schools, as well as nature and wildlife preserves, recreational areas, and parks. Sensitive receptors within 1,000 feet of the project area were analyzed for potential impacts as a result of project construction and operation.

The nearest noise-sensitive receptors to the project area are residents within the City of Alturas that are located 25-50 feet from the project alignment (Table 5.13-4). However, excepting sparsely populated areas, most receptors along the alignment are located at least 250 feet from construction activities.

### Table 5.13-4: Sensitive Receptors within 1,000 feet

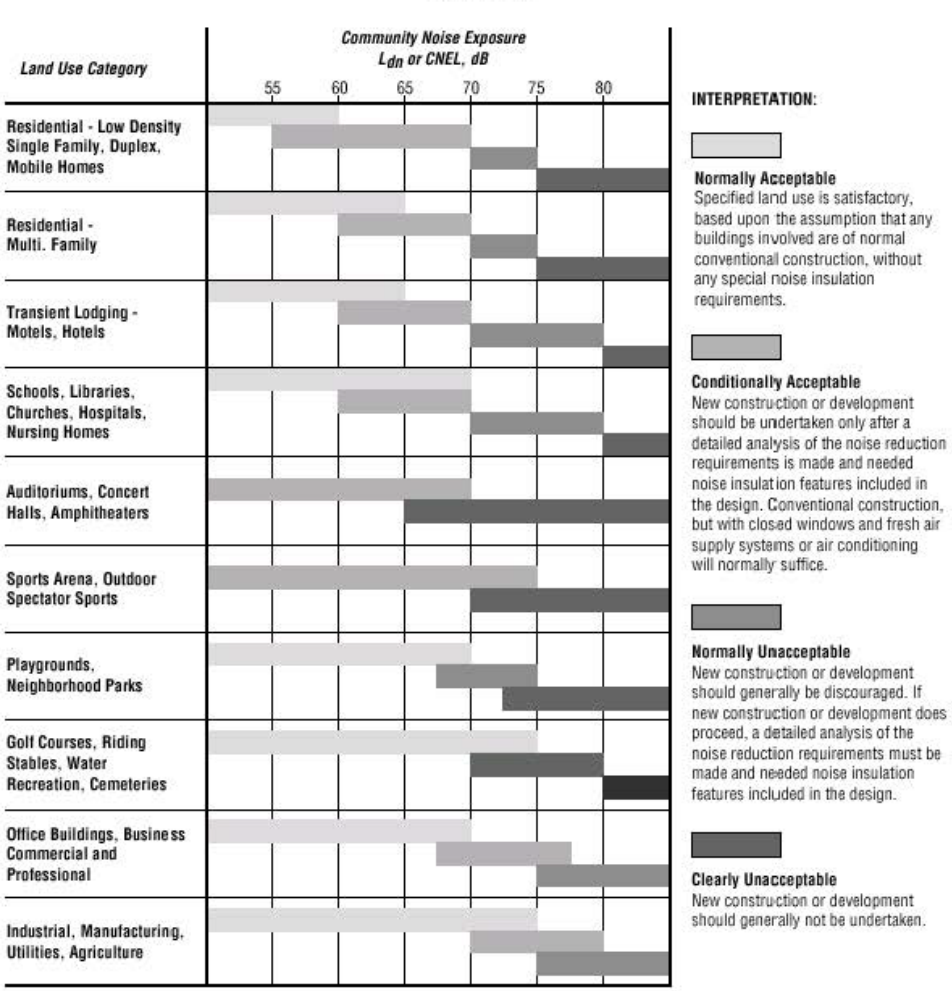
| Jurisdiction | Distance from Project | | | | | Total |
|---|---|---|---|---|---|---|
| | 1-50 feet | 50-100 feet | 100-250 feet | 250-500 feet | 500-1,000 feet | |
| Modoc County | 17 | 54 | 89 | 132 | 188 | 480 |
| Lassen County | 10 | 48 | 142 | 184 | 263 | 647 |
| Sierra County | 0 | 2 | 0 | 4 | 0 | 6 |
| City of Alturas | 5 | 19 | 20 | 45 | 139 | 228 |
| **Total** | **32** | **123** | **251** | **365** | **590** | **1,361** |

Source: Stantec 2020

## 5.13.1.2 Noise Setting

Agricultural lands and undeveloped open space make up the majority of the project area, neither of which is considered particularly noise sensitive. With respect to residential land uses, most residences are located more than 250 feet from the project alignment or construction areas. The least amount of separation between the work area and residential receptors is in the City of Alturas, with approximately 25 feet between the residential property line and the construction area. Figure 5.13-1 displays acceptable noise levels for rural residential areas ranging from 50 dBA to 60 dBA. Based on the rural character of the area, it can be assumed that the outdoor ambient noise levels would be consistent with the California General Plan Guidelines and would range from approximately 50 dBA to 60 dBA.

**Figure 5.13-1: California General Plan Guidelines Community Noise Exposure**




Source: OPR 2017

## 5.13.2 Regulatory Setting

### 5.13.2.1 Federal

EPA has established guidelines for assessing the impact of increased noise (EPA 1973). These guidelines have been used as industry standard to determine the potential impact of noise increases on communities. Most people will tolerate a small increase in background noise (up to about 5 dBA) without complaint, especially if the increase is gradual over a period of years (such as from gradually increasing traffic volumes). Increases greater than 5 dBA may cause complaints and interference with sleep. Increases above 10 dBA (heard as a doubling of perceived loudness) are likely to cause complaints and should be considered a serious increase. Table 5.13-5 defines each of the traditional impact descriptions, their quantitative range, and the qualitative human response to changes in noise levels.

### Table 5.13-5: Environmental Protection Agency Impact Guidelines

| Increase over Existing or Baseline Sound Levels | Impact Per EPA Guidelines | Qualitative Human Perception of Difference in Sound Levels |
|---|---|---|
| 0 dB to 5 dB | Minimum Impact | Imperceivable or Slight Difference |
| 6 dB to 10 dB | Significant Impact | Significant Noticeable Difference – Complaints Possible |
| More than 10 dB | Serious Impact | Loudness Changes by a Factor of Two or Greater. Clearly Audible Difference – Complaints Likely |

Notes:
dB = decibel
EPA = U.S. Environmental Protection Agency
Source: EPA 1981

## 5.13.2.2 State

The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. However, there are no state policies that are applicable to the proposed project.

## 5.13.2.3 Local

Because CPUC has exclusive jurisdiction over the siting, design, and construction of the project, the project is not subject to local discretionary noise requirements. However, this section includes a summary of local noise standards or ordinances in the project area for informational purposes and to assist with CEQA review.

### Modoc County General Plan

The Modoc County General Plan (Modoc County 1988, as amended) states the following regarding noise conditions:

> *Because Modoc County is presently considered a very quiet environment, the expectations of its citizens for maintaining this condition are greater than those of persons living in more densely developed areas, An offsetting factor in Modoc County, however, is also a general perception that individuals have property rights which allow them to undertake activities which may be noisy, provided that the noise does not interfere with others' use and enjoyment of their property. This apparent tolerance for relatively noisy activities (especially those perceived as beneficial to the community) is exemplified by the proximity of seasonal industrial operations such as sawmills and agricultural facilities to residential areas.*

## Lassen County General Plan

As stated in the Lassen County General Plan Noise Element (Lassen County 1999, as amended), the overall goals of the document are to protect the citizens of Lassen County from the harmful and annoying effects of exposure to excessive noise, and to protect the economic base of Lassen County by preventing encroachment of incompatible land uses within areas affected by existing noise-producing uses.

According to the Lassen County General Plan Noise Element, highways are considered potential major noise sources, and analytical noise modeling and noise measurements were used to develop generalized $L_{dn}$ noise contours for major roadways, including for US 395. The noise contour data estimates that in 2008, US 395 would generate 60 dB at the following locations and distances:

- Between the south County Line and Route A-3 – 238 feet
- Between Route A-3 to Highway 36 – 269 feet
- Between Highway 36 and the north County line – 245 feet

## Sierra County General Plan

The Sierra County General Plan (Sierra County 1996, as amended) states:

> *It is the County's most fundamental goal to maintain its rural character and preserve its rural quality of life.*

Table 5.13-6 provides the following noise exposure and land use compatibility guidelines from the Sierra County General Plan (Sierra County 1996).

### Table 5.13-6: Maximum Allowable Noise Exposure for Transportation Sources

| Land Use | Outdoor Activity Areas[1] | Indoor Activity Areas |
|---|---|---|
| | $L_{dn}$/CNEL dB | $L_{dn}$/CNEL dB |
| Residential Transient Lodging | 60[2] | 45 |
| Hospitals, Nursing Homes | 60[2] | 45 |
| Theaters, Auditoriums, Music Halls | - | 45 |
| Churches, Meeting Halls | 60[2] | 35[3] |
| Office Buildings | 60[2] | 40[3] |
| Schools, Libraries, Museums | 60[2] | 45[3] |
| Playgrounds, Schools, Neighborhood Parks | 70 | 45[3] |

Notes:

1. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

2. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn /CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn /CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

3. As determined for a typical worst-case hour during periods of use.

Noise

| Land Use | Outdoor Activity Areas[1] | Indoor Activity Areas |
|---|---|---|
| | $L_{dn}$/CNEL dB | $L_{dn}$/CNEL dB |

CNEL = community noise equivalent level
dB = decibel
$L_{dn}$ = day-night sound level

Land use compatibility noise guidelines for development:

- Residential, theatres, auditoriums, music halls, meeting halls, churches
  - Acceptable 60 dBA $L_{dn}$ /CNEL and below
  - Conditionally Acceptable 61-70 dBA $L_{dn}$ /CNEL
  - Unacceptable 71 dBA $L_{dn}$/CNEL and above
- Schools, libraries, museums, hospitals, nursing homes
  - Acceptable 60 dBA $L_{dn}$/CNEL and below
  - Conditionally Acceptable 61-75 dBA $L_{dn}$/CNEL
  - Unacceptable 76 dBA $L_{dn}$/CNEL and above
- Playgrounds, neighborhood parks
  - Acceptable 70 dBA $L_{dn}$/CNEL and below
  - Conditionally Acceptable 71-75 dBA $L_{dn}$/CNEL
  - Unacceptable 76 dBA $L_{dn}$/CNEL and above

## 5.13.3 Impact Questions

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

## 5.13.4 Impact Analysis

**a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less than Significant Impact.** The project would not result in a permanent increase in ambient noise levels because the project after construction would generate no sound. Once constructed, the system would be monitored remotely, and crews would be sent out only if maintenance is required. Maintenance requirements are expected to be minimal and for these reasons, permanent noise impacts would be negligible.

Construction noise from the project would have a short-term impact on ambient noise levels. The expected equipment noise levels were modeled using the Federal Highway Administration's Roadway Construction Noise Model. The construction equipment used for the project would generally not be operated continuously, nor would the equipment always operate simultaneously. Therefore, there would be times when no equipment is operating, and noise in the vicinity of the project would remain at ambient levels. Table 5.13-7 provides construction equipment sound levels per construction phase, adjusted to reflect a typical workday, expected at various distances, from 25 feet to 500 feet, covering a range of distances to nearby sensitive receptors.

**Table 5.13-7: Construction Noise Levels Based on Distance by Construction Phase**

| Equipment Type by Construction Method | Equipment Quantity | Equipment Noise Level ($L_{eq}$) | | | | | | Phase Duration at Location |
|---|---|---|---|---|---|---|---|---|
| | | At 25 Feet | At 50 Feet | At 100 Feet | At 250 Feet | At 500 Feet | At 1,000 Feet | |
| Plowing-in | | | | | | | | |
| Cable Plow | 1 | 86 | 80 | 74 | 66 | 60 | 54 | 0.25 day |
| Water Truck | 1 | 78.5 | 72.5 | 66.5 | 58.5 | 52.5 | 46.5 | |
| Excavator | 2 | 82.8 | 76.7 | 70.7 | 62.8 | 56.7 | 50.7 | |
| Backhoe | 1 | 79.6 | 73.6 | 67.6 | 59.6 | 53.6 | 47.6 | |
| Pickup Truck | 3 | 77 | 71 | 65 | 57 | 51 | 45 | |
| Lowboy Tractor Trailer | 1 | 78.5 | 72.5 | 66.5 | 58.5 | 52.5 | 46.5 | |
| **Total** | | **90.7** | **84.6** | **78.6** | **70.7** | **64.6** | **58.6** | |
| Open Trench | | | | | | | | |
| Excavator | 2 | 82.8 | 76.7 | 70.7 | 62.8 | 56.7 | 50.7 | 1 day |
| Dozer | 1 | 83.7 | 77.7 | 71.7 | 63.7 | 57.7 | 51.7 | |
| Front End Loader | 1 | 81.2 | 75.1 | 69.1 | 61.2 | 55.1 | 49.1 | |

Noise

| Equipment Type by Construction Method | Equipment Quantity | Equipment Noise Level ($L_{eq}$) | | | | | | Phase Duration at Location |
|---|---|---|---|---|---|---|---|---|
| | | At 25 Feet | At 50 Feet | At 100 Feet | At 250 Feet | At 500 Feet | At 1,000 Feet | |
| Pickup Truck | 3 | 77 | 71 | 65 | 57 | 51 | 45.0 | |
| Rock Saw | 1 | 88.6 | 82.6 | 76.6 | 68.6 | 62.6 | 56.6 | |
| **Total** | | **92.1** | **86.1** | **80.1** | **72.1** | **66.1** | **60.1** | |
| Directional Boring | | | | | | | | |
| Drill Rig | 1 | N/A[1] | 76 | 70 | 62 | 56 | 50 | 2 days |
| Support Equipment | 1 | N/A[1] | 73.6 | 67.6 | 59.6 | 53.6 | 47.6 | |
| Pickup Truck | 2 | N/A[1] | 71 | 65 | 57 | 51 | 45 | |
| Vac Truck | 1 | N/A[1] | 81.3 | 75.3 | 67.3 | 61.3 | 55.3 | |
| 2-ton Truck | 1 | N/A[1] | 72.5 | 66.5 | 58.5 | 52.5 | 46.5 | |
| **Total** | | N/A[1] | **83.8** | **77.8** | **69.8** | **63.8** | **57.8** | |
| Bridge Attachments | | | | | | | | |
| Excavator | 1 | N/A[1] | 76.7 | 70.7 | 62.8 | 56.7 | 50.7 | 1 day |
| Pickup Truck | 2 | N/A[1] | 71 | 65 | 57 | 51 | 45 | |
| Bridge Truck | 1 | N/A[1] | 72.5 | 66.5 | 58.5 | 52.5 | 46.5 | |
| Lowboy Tractor Trailer | 1 | N/A[1] | 72.5 | 66.5 | 58.5 | 52.5 | 46.5 | |
| **Total** | | N/A[1] | **80.3** | **74.3** | **66.3** | **60.3** | **54.3** | |
| Blowing Fiber/Splicing | | | | | | | | |
| Air Compressor | 6 | 79.7 | 73.7 | 67.7 | 59.7 | 53.7 | 47.7 | 1 day |
| Pickup Truck | 6 | 77 | 71 | 65 | 57 | 51 | 45 | |
| **Total** | | **89.4** | **83.3** | **77.3** | **69.4** | **63.3** | **57.3** | |

Notes:

1. The nearest receptors to directional boring and bridge attachment activities would be 50 feet.

See text preceding this table for the parameters of this noise modeling scenario.

dBA = A-weighted decibels;

$L_{eq}$ = equivalent sound pressure level

Source: Federal Highway Administration Roadway Construction Noise Model (RCNM). The following equations are used by the RCNM to calucate Leq:

1. Calculate Leq at the closest point on the lot-line for each item of equipment using the following equation:

Leq (equipment)= E.L. - 20 log (D/50) + 10 log (U.F.%/100)

where:
E.L. and D are as defined above in Article 1.07.B.4.a.1.

U.F. is the "usage factor", and is used to time-average the noise levels associated with an operating piece of equipment. The U.F. is expressed as the percentage of time that the equipment is operated at full power while on site. This factor shall be estimated by

| Equipment Type by Construction Method | Equipment Quantity | Equipment Noise Level ($L_{eq}$) | | | | | | Phase Duration at Location |
|---|---|---|---|---|---|---|---|---|
| | | At 25 Feet | At 50 Feet | At 100 Feet | At 250 Feet | At 500 Feet | At 1,000 Feet | |

the Contractor or the Acoustical Engineer. Guidelines for the selection of usage factors are provided by the U.S. Environmental Protection Agency ("Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances", U.S. Environmental Protection Agency Report NTID 300.1, December 31, 1971).

2. Combine the individual contributions of each piece of equipment to obtain the overall construction Leq at the lot-line as follows:

Leq(overall) = 10 log S 10 $^{[Leq(equipment)/10]}$

The calculated construction equipment noise levels in Table 5.13-6 assume a direct line-of-sight between the equipment and the receptor with no additional noise reduction measures, such as berms or buildings, in the path of sound propagation. These noise levels also assume that all equipment during each phase would operate simultaneously and at the same location, which would not generally be the case, and therefore represents a worst-case-scenario.

### 5.13.4.1 Modoc County

There are few receptors along most of the proposed project segment in Modoc County, although the City of Alturas is comparatively more densely populated. Approximately 2.5 miles of the project extend through the City of Alturas, and there are receptors located as close as 25 feet from the project alignment. Based on the rural character of Modoc County, it is anticipated that ambient noise levels at residences along Highway 395 would be near 60 dBA. Construction noise levels at these receptors would exceed ambient levels and could reach 92.1 dBA $L_{eq}$ using the trenching construction method. However, about 500 feet of conduit can be installed per day, therefore, increased noise levels would be short-term, lasting only about 1 day at a given receptor. The other installation method that could occur within 25 feet of receptors would be plowing. Plowing could produce noise levels at 90.7 dBA $L_{eq}$ at 25 feet. The plowing crew can install 2,000 feet of conduit per day, therefore, noise generated during trenching activities would be considered short-term and would last only a couple hours at any given receptor.

### 5.13.4.2 Lassen County

Approximately 13 miles of the alignment that traverses through Lassen County is within towns that are sparsely populated. Within these sparely populated areas, construction activities could still be approximately 25 feet from residential properties. The loudest construction phase would be the trenching method, which could generate noise levels of 92.1 dBA $L_{eq}$ at 25 feet. A crew can typically install 500 feet of conduit per day using the trenching method, therefore, noise levels experienced by any given receptor would exceed ambient conditions, but the increase would be short-term, and last only for about 1 day. Plowing activities could produce noise levels at 90.7 dBA Leq at 25 feet; however, the plowing crew can install 2,000 feet of conduit per day, therefore, noise generated during plowing would be considered short-term and would last only a couple hours at any given receptor.

### 5.13.4.3 Sierra County

The nearest sensitive receptors along this 3.15-mile segment of the project would be located approximately 250 feet to 300 feet from construction activities. Therefore, it is anticipated that noise levels could reach 70.7 dBA $L_{eq}$ if the plowing-in construction method is used or 69.5 dBA $L_{eq}$ if the open trenching method is used. In addition, this segment of US 395 is a well-traveled, divided four-lane highway, and most of the surrounding residential properties have existing noise barriers, such as fences. Although construction noise levels could temporarily exceed ambient noise conditions, the rise in noise levels would be temporary, lasting approximately 1 day at any given receptor.

### 5.13.4.4 Conclusion

Although construction noise levels would exceed ambient conditions where receptors are located within 1,000 feet of the alignment, impacts would be temporary, ranging from a few hours to 2 day and up to 2 days during directional boring activities. Although some residents are 25 feet from the project alignment, according to Caltrans, residential structures in California typically provide approximately 25 dBA of attenuation from exterior to interior noise levels with windows closed (Federal Transportation Administration 2006). Thus, average construction noise levels in the interiors of the closest residence would be approximately 65.7 dBA $L_{eq}$ with windows closed for the loudest construction phase, which would last for only a few hours at any given receptor.

In addition, EPA recommends maintaining environmental noises below 70 dBA over 8-hours (typical construction day) to prevent noise induced hearing loss (EPA 1974). According to Caltrans, residential structures can provide approximately 25 dBA of noise level attenuation from exterior to interior with the window closed (Federal Transportation Administration 2006). Therefore, a daytime 95 dBA Leq exterior noise exposure significance threshold for construction noise at residential properties is used for the project. Construction noise levels would be below the suggested 95 dBA significance threshold. Therefore, impacts would be considered less than significant.

**b) Generation of excessive groundborne vibration or groundborne noise levels?**

**Less than Significant Impact.** Construction activities (e.g., ground-disturbing activities, including the movement of heavy construction equipment) may generate localized groundborne vibration and noise. However, project construction would not involve the use of impact equipment, such as pile drivers, which can generate groundborne vibration. Operation of heavy equipment that may be used for project construction is not anticipated to result in excessive groundborne vibration. Table 5.13-8 summarizes potential vibration impacts on surrounding receptors.

### Table 5.13-8: Construction-Related Vibration Impacts

| Type of Equipment | Peak Particle Velocity (inches/second) | | | Threshold at which Human Annoyance Could Occur | Potential for Proposed Project to Exceed Threshold |
|---|---|---|---|---|---|
| | at 25 feet | at 50 feet | at 100 feet | | |
| Caisson Drilling | 0.089 | 0.031 | 0.011 | 0.10 | None |
| Loaded Trucks | 0.076 | 0.027 | 0.010 | 0.10 | None |
| Small Bulldozer | 0.003 | 0.001 | 0.000 | 0.10 | None |

Source: Federal Transit Administration 2018

Any groundborne vibration and groundborne noise would occur during daytime hours and would be brief, lasting only 1 to 2 days at each receptor. Therefore, construction of the project would result in a less than significant vibration impact.

**c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**Less than Significant Impact.** There are two publicly owned airports and one private airstrip located within 2 miles of the project alignment. The Alturas Municipal Airport is located about 1 mile from the project alignment and accommodates approximately 54 flights per day. The Ravendale Airport is also publicly owned and is 30 feet from the project alignment. Despite its proximity, the Ravendale Airport receives only about one flight per day. Lastly, Bates Field is a privately owned airstrip about 1 mile from the project alignment. None of these airports have adopted land use plans or developed noise contours. Therefore, considering the number of daily flights at each airport or airstrip, it is not anticipated that the project would expose people working on the project to excessive noise, and impacts would be considered less than significant.

## 5.13.5 Draft Environmental Measures

There are no applicable environmental measures for noise.

# 5.14 POPULATION AND HOUSING

This section describes existing conditions and potential impacts on population and housing as a result of project construction, operation, and maintenance. The analysis concludes that the project would have no impact.

## 5.14.1 Environmental Setting

### 5.14.1.1 Population Estimates

The project crosses through unincorporated communities in Modoc County, including New Pine Creek, Davis Creek, Ramsey, and Likely, as well as the City of Alturas. Within Lassen County, the project traverses the communities of Sage Hen, Pinnio, Madeline, Brockman, Moran, Termo, Viewland, Litchfield, Standish, Buntingville, Milford, and Doyle. The portion of the project within Sierra County is relatively undeveloped.

Historical and projected populations for Modoc, Lassen, and Sierra Counties, and California are shown in Table 5.14-1. The populations of the counties in the project area is projected to decline, while the population of California is anticipated to grow in the 30-year period from 2010 to 2040.

**Table 5.14-1: Regional Historical and Projected Populations**

| Location | 2010 | 2015 | 2020 | 2030 | 2040 | Change in Population 2010 to 2040 (percent) |
|---|---|---|---|---|---|---|
| Modoc County | 9,688 | 9,542 | 9,475 | 9,335 | 9,004 | -7 |
| Lassen County | 34,809 | 30,912 | 30,065 | 29,422 | 27,379 | -21 |
| Sierra County | 3,233 | 3,152 | 3,115 | 3,009 | 2,829 | -12 |
| California | 37,367,579 | 39,055,383 | 40,129,160 | 42,263,654 | 43,946,643 | 18 |

Source: California Department of Finance 2019

Table 5.14-2 summarizes the regional population characteristics within Modoc, Lassen, and Sierra Counties and the City of Alturas. Accordingly, the majority of the population within these counties and the City of Alturas is White alone, followed by Hispanic or Latino.

### Table 5.14-2: Regional Population Characteristics

| Location | Total Population | White Alone | Hispanic or Latino | Black or African American Alone | American Indian and Alaska Native Alone | Asian Alone | Native Hawaiian and Other Pacific Islander Alone | Some Other Race Alone | Two or More Races |
|---|---|---|---|---|---|---|---|---|---|
| Modoc County | 9,017 | 78.0% | 14.6% | 0.7% | 4.0% | 1.1% | 0.1% | 0.0% | 1.5% |
| Lassen County | 31,470 | 66.1% | 18.5% | 8.6% | 2.9% | 1.5% | 0.7% | 0.1% | 1.6% |
| Sierra County | 2,885 | 87.0% | 10.1% | 0.1% | 1.0% | 0.0% | 0.0% | 0.0% | 1.9% |
| City of Alturas | 2,827 | 84.8% | 12.4% | 0.0% | 0.8% | 0.7% | 0.0% | 0.0% | 1.2% |

Source: U.S. Census Bureau 2017

Table 5.14-3 presents the economic and income characteristics and shows that the percentage of population below poverty level is 18.1 in Modoc County, 14.6 in Lassen County, 12.3 in Sierra County, and 19.0 in the City of Alturas. The percent below the poverty level within Modoc County and the City of Alturas is slightly below the State of California average of 15.1 percent.

### Table 5.14-3: Regional Economic and Income Characteristics

| Location | Population 16 years and older | Total in Civilian Labor Force | Total Unemployed | Unemployment Rate | Median Household Income | Percentage Below Poverty Level |
|---|---|---|---|---|---|---|
| Modoc County | 7,506 | 3,494 | 263 | 7.5% | $39,296 | 18.1% |
| Lassen County | 26,937 | 9,781 | 729 | 7.5% | $54,083 | 14.6% |
| Sierra County | 2,490 | 1,213 | 64 | 5.3% | $44,190 | 12.3% |
| City of Alturas | 2,193 | 1,149 | 76 | 6.6% | $32,411 | 19.0% |
| State of California | 30,292,768 | 19,410,607 | 1,476,691 | 7.7% | $67,169 | 15.1% |

Source: U.S. Census Bureau 2017

## 5.14.1.2 Housing Estimates

Table 5.14-5 presents the housing characteristics and shows that the average owner-occupied and renter-occupied household size is 2.35 and 2.30, respectively, in Modoc County; 2.27 and 2.30, respectively, in Lassen County; 2.19 and 3.02, respectively, in Sierra County; and 1.97 and 1.96, respectively, in the City of Alturas.

### Table 5.14-4: Regional Housing Characteristics

| Location | Total Housing Units | Average Household Size (Owner Occupied) | Average Household Size (Renter-Occupied) | Housing Units | | | | Occupied Housing Units | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Occupied | | Vacant | | Owner Occupied | | Renter Occupied | |
| | | | | # | % | # | % | # | % | # | % |
| Modoc County | 5,250 | 2.35 | 2.30 | 3,638 | 69.3 | 1,612 | 30.7 | 2,655 | 73.0 | 983 | 27.0 |
| Lassen County | 12,749 | 2.27 | 2.30 | 9,441 | 74.1 | 3,308 | 25.9 | 6,230 | 66.0 | 3,211 | 34.0 |
| Sierra County | 5,250 | 2.35 | 2.30 | 1,208 | 50.6 | 1,180 | 49.4 | 963 | 79.7 | 245 | 20.3 |
| City of Alturas | 12,749 | 2.27 | 2.30 | 1,312 | 85.3 | 227 | 14.7 | 750 | 57.2 | 562 | 42.8 |

Source: U.S. Census Bureau 2017

### 5.14.1.3 Approved Housing Developments

Section 7.0, Cumulative and Other CEQA Considerations, identifies past, present, and reasonably foreseeable cumulative projects in the project area. No proposed housing development projects have been identified within 1 mile of the project.

## 5.14.2 Regulatory Setting

No regulatory background information is relevant to addressing project-related impacts on population and housing.

## 5.14.3 Impact Questions

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

## 5.14.4 Impact Analysis

**a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

The project would extend 193.9 miles of fiber-optic cable within existing roadways across portions of Modoc, Lassen, and Sierra Counties. No new homes or businesses are proposed as part of the project, and the project is not anticipated to induce population growth either directly or indirectly. The surrounding area in each of the counties is anticipated to decrease from 2020 to 2040, and the project would not affect the change in population, nor would it remove obstacles to population growth. At the peak of construction, approximately 48 construction workers of about eight crews (six people per crew) would be located across various construction locations simultaneously. It is anticipated that construction workers would be drawn from either existing staff in the local area. Because the construction duration is short (approximately 6 months), it is not anticipated that a construction workforce would permanently relocate to the area. The project area has adequate hotels and motels available to provide accommodations to any workers that may temporarily relocate to the area during construction. Thus, project construction activities would not directly or indirectly induce substantial population growth. Once the project is constructed, the system would be remotely monitored through networks in Tulsa, Oklahoma. Based on remote monitoring, the applicant would send out crews if the infrastructure needs to be repaired or if a mandated relocation is needed, and permanent workers would not be required in the project area for the operation and maintenance of the project; therefore, the project would not directly or indirectly induce population growth.

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

The project would extend 193.9 miles of fiber-optic cable within existing roadways across portions of Modoc, Lassen, and Sierra Counties. Such activities would require encroachment permits from Caltrans and Lassen County but would not result in conversion of land or displacement of existing housing. The proposed installations and construction staging associated with the project would occur mostly within existing roadway right-of-way, with the exception of some ancillary facilities that would be placed immediately adjacent to the existing roadway in several locations. The project would not displace existing housing, nor require replacement housing; therefore, replacement housing will not be constructed.

## 5.14.5 Draft Environmental Measures

There are no applicable environmental measures for population and housing.

# 5.15 PUBLIC SERVICES

This section describes existing conditions and potential impacts on public services as a result of construction, operation, and maintenance of the project. The analysis concludes that impacts would be less than significant.

## 5.15.1 Environmental Setting

Public service providers include police protection, fire protection, and maintenance of public facilities such as schools and parks. Public service facilities, including police and fire stations, schools, parks, and hospitals within 1 mile of the project, are identified in Figure 5.15-1.

### 5.15.1.1 Service Providers

#### Police

Police protection within the project area is provided by the Modoc County Sheriff's Office, Lassen County Sheriff's Office, Sierra County Sheriff-Coroner Department, and Alturas Police Department. Police stations within 1 mile of the project are identified in Table 5.15-1. In Lassen County, the average response time in 2019 was 24 minutes and 17 seconds for dispatch and response (Lassen County Sherriff's Office 2020). Response times for the police services in the project area are unavailable for Sierra County, Modoc County, and Alturas.

**Table 5.15-1: Police Facilities within 1 Mile of the Project**

| Name | County | Distance from Project (miles) |
|---|---|---|
| Modoc County Criminal & Civil Sheriff's Department | Modoc County | 0.01 |
| Modoc County Sheriff | Modoc County | 0.07 |
| Alturas Police Department | Modoc County | 0.11 |
| California Highway Patrol | Modoc County | 0.50 |

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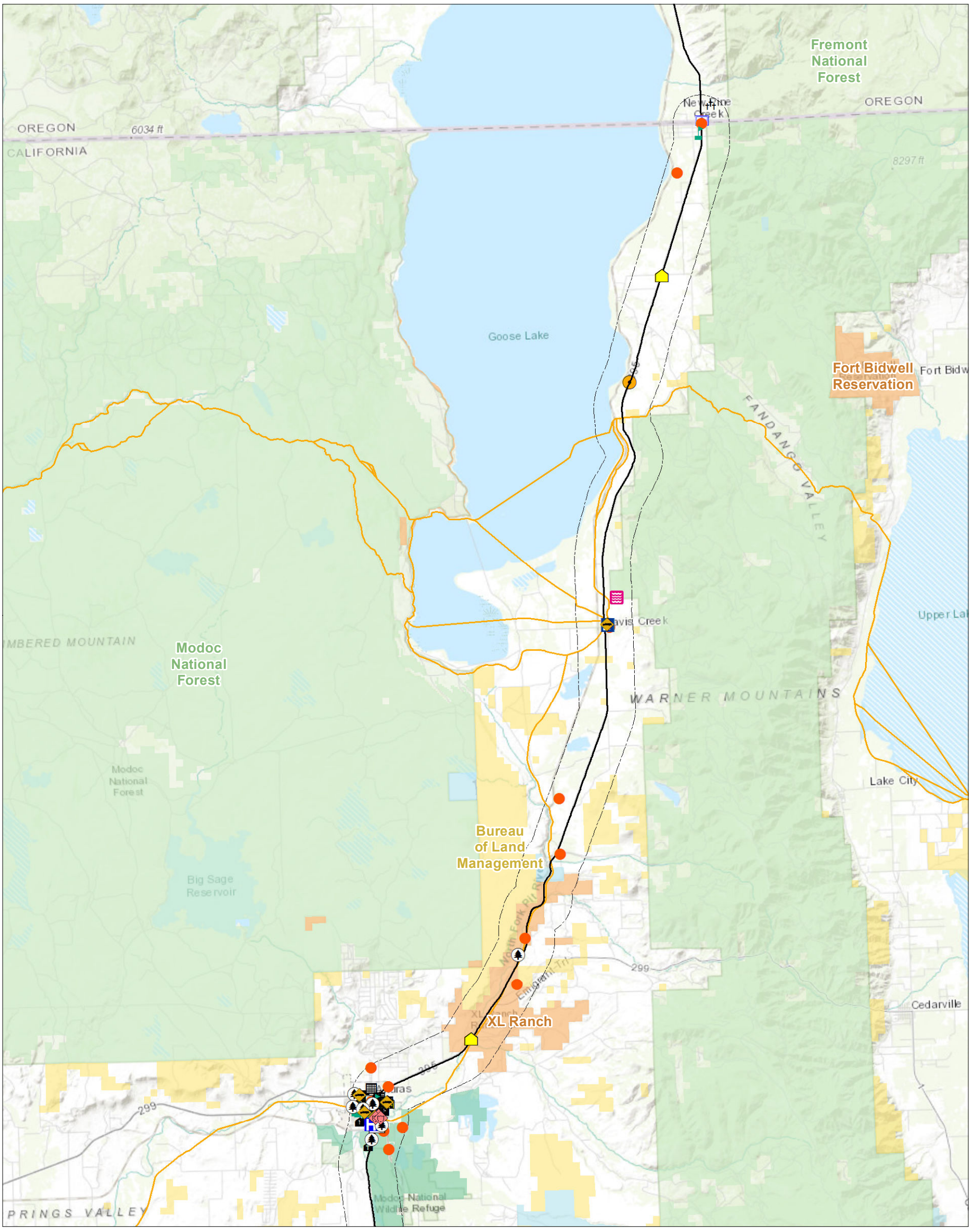


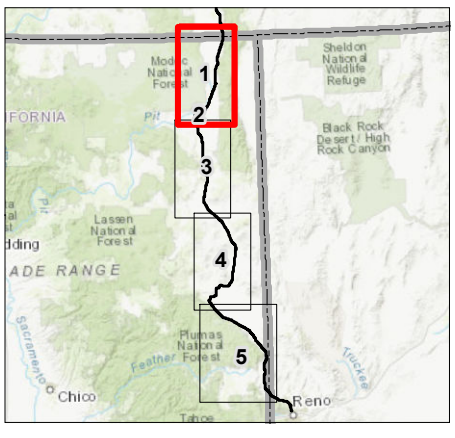


**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

- Police Station
- Fire Station
- Public Building
- Populated Place
- Church
- Hospital
- Lake
- Park
- Post Office
- School
- Goose Lake View Point
- California National Historic Trail
- Alignment
- 1-mile Buffer

Land Ownership

- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles

1:230,000 (At Original document size of 11x17)

N

Stantec

Project Location

Prineville, OR to Reno, NV

2272020011

Prepared by JC on 2020-05-19
Technical Review by DA on 2020-05-19
Independent Review by CS on 2020-05-19

Client/Project

Zayo
Fiber Optic Line--Prineville to Reno

Figure No.

**5.15-1**



Title

**Public Services within One Mile of Proposed Prineville to Reno Fiber Optic Line**

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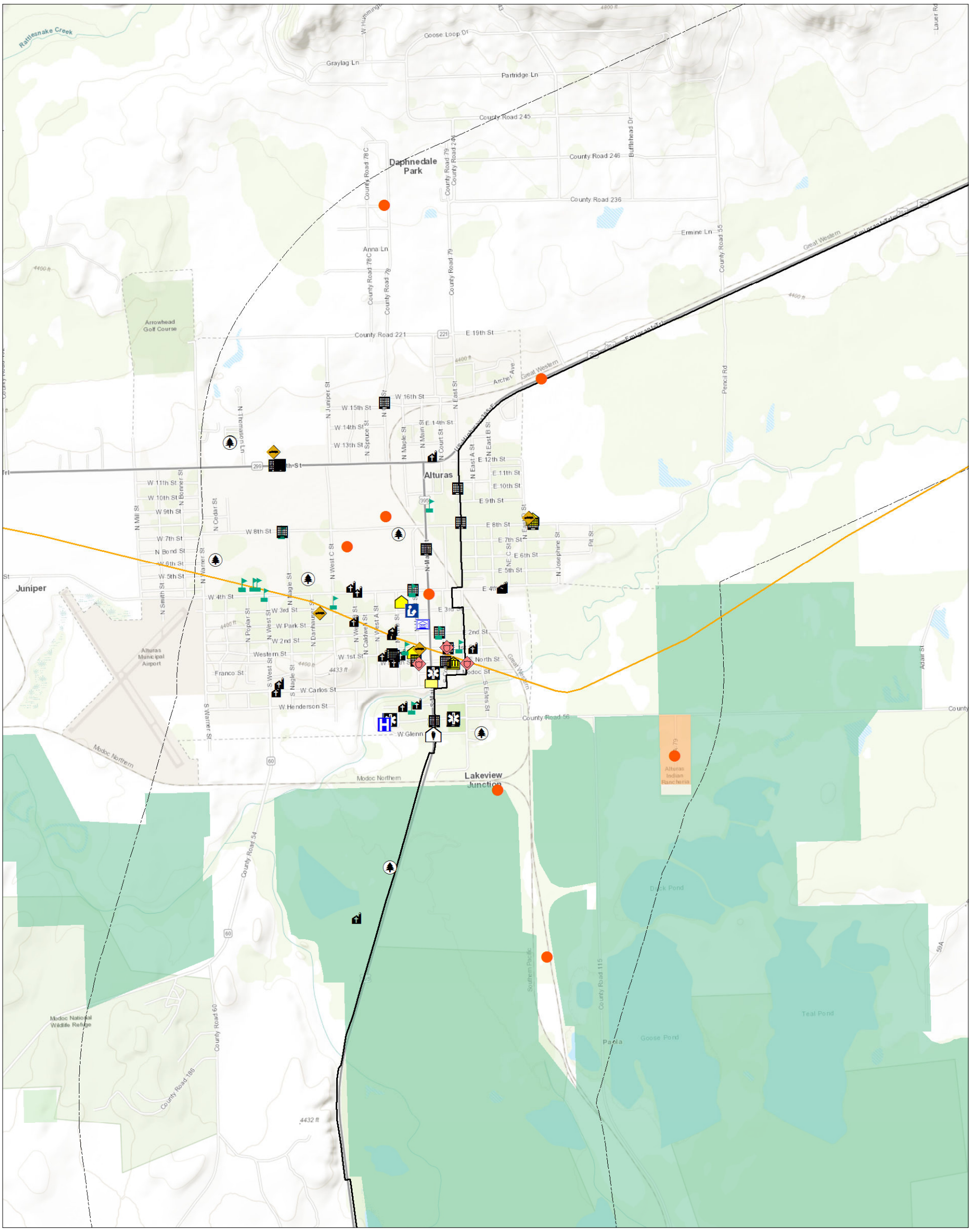


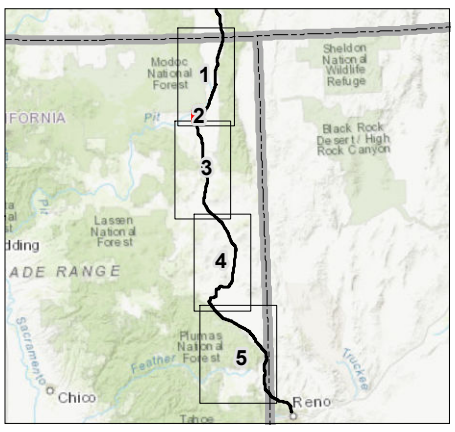


- Police Station
- Fire Station
- Public Building
- Populated Place
- Church
- Hospital
- Post Office
- School
- California National Historic Trail
- Alignment
- 1-mile Buffer

Land Ownership
- Bureau of Indian Affairs (BIA)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)

0 0.25 0.5 Miles

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Stantec

Project Location
Prineville, OR to Reno, NV

2272020011

Prepared by JC on 2020-05-19
Technical Review by DA on 2020-05-19
Independent Review by CS on 2020-05-19

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.15-1**



Title
**Public Services within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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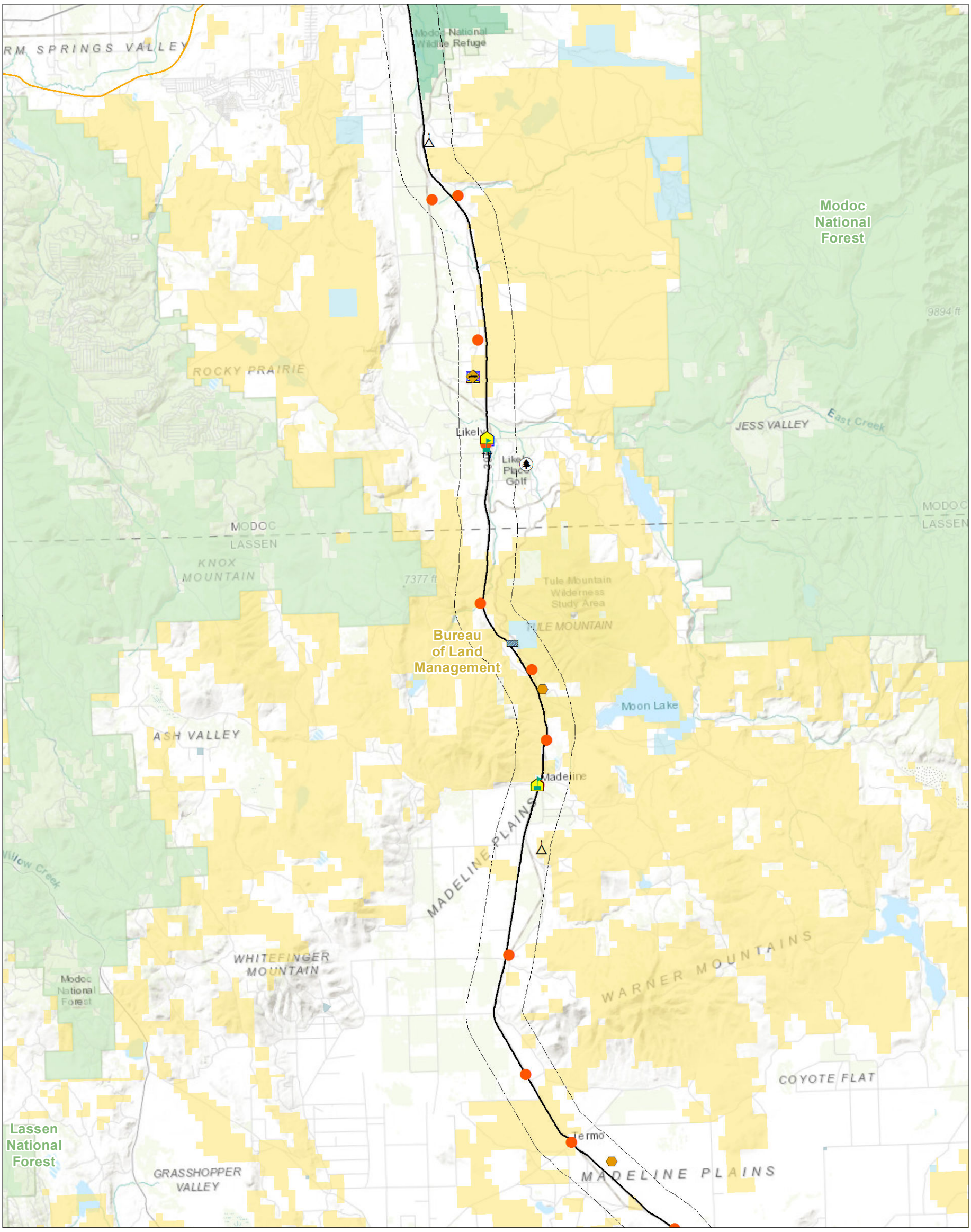


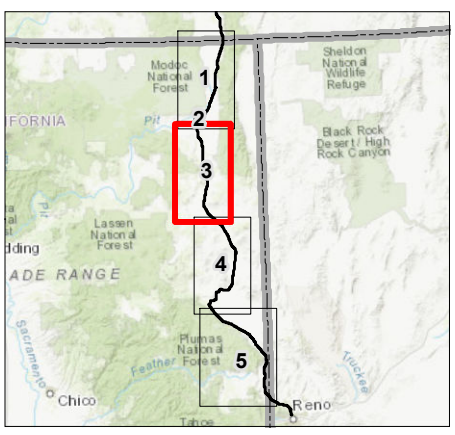


- Fire Station
- Public Building
- Cemetery
- Populated Place
- Post Office
- Range
- Reservoir
- School
- Summit
- California National Historic Trail
- Alignment
- 1-mile Buffer

Land Ownership
- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles

1:230,000 (At Original document size of 11x17)

N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011
Prepared by JC on 2020-05-19
Technical Review by DA on 2020-05-19
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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.15-1**



Title
**Public Services within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**
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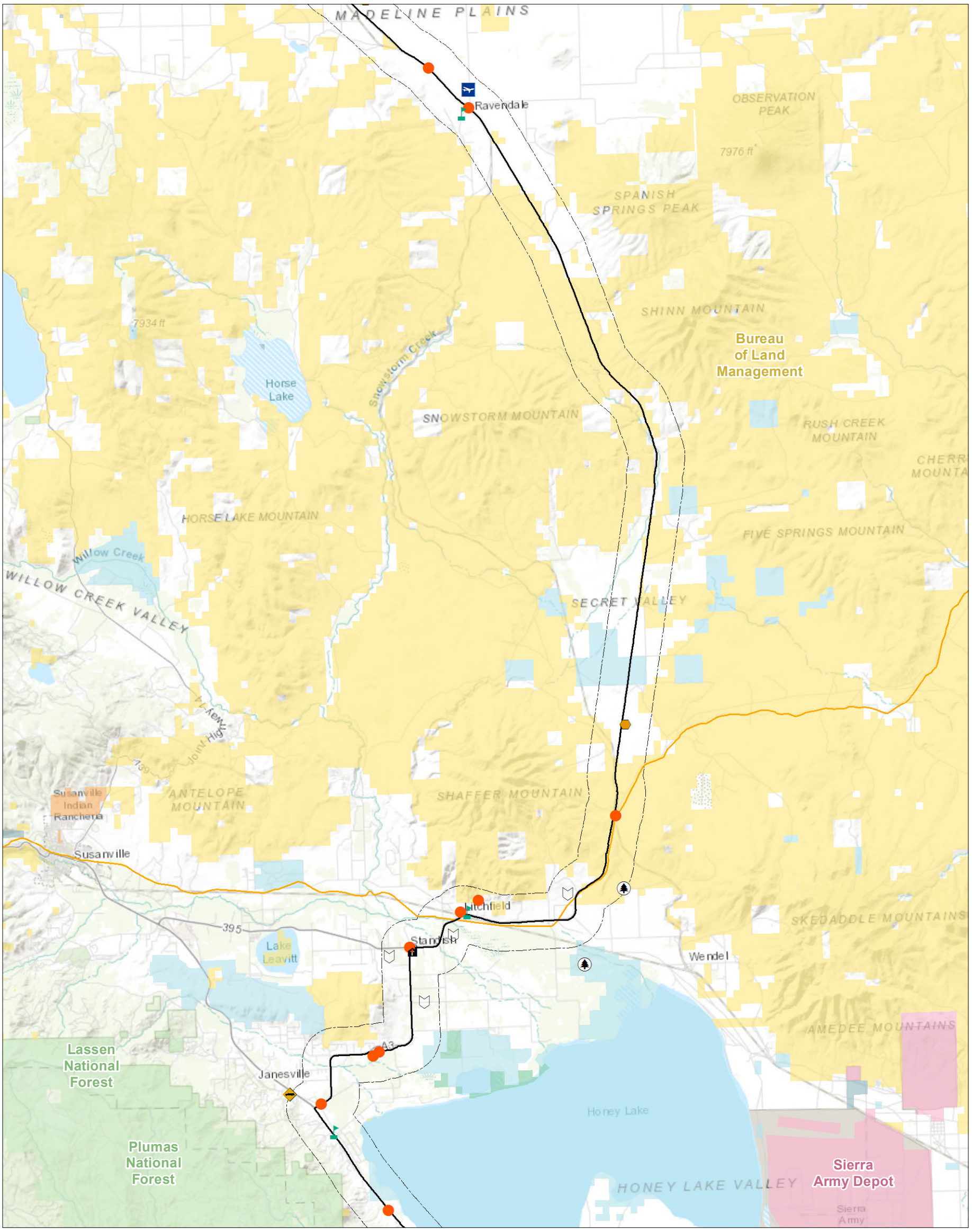


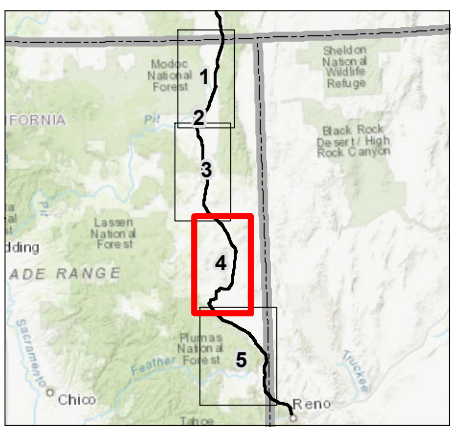


- Fire Station
- Airport
- Canal
- Populated Place
- Church
- Range
- School
- California National Historic Trail
- Alignment
- 1-mile Buffer

Land Ownership
- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- Department Of Defense (DOD)
- US Fish and Wildlife (USFW)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles
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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.15-1**



Title
**Public Services within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**
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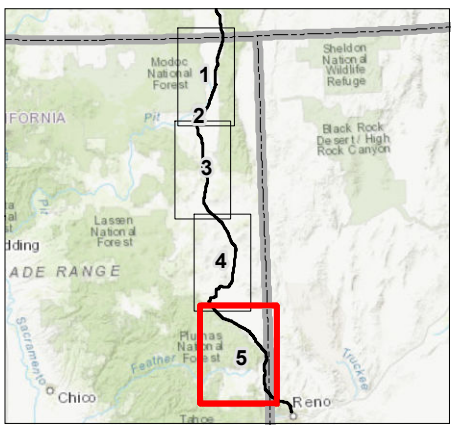
HONEY LAKE VALLEY
Sierra Army Depot
Sierra Army Depot
CALIFORNIA
NEVADA
Herlong
Milford
LASSEN
PLUMAS
FORT SAGE MOUNTAINS
Doyle
Plumas National Forest
7752 ft
RED CLOVER VALLEY
DIAMOND MOUNTAINS
SEVEN LAKES MOUNTAIN
Lake Davis
Long Valley Creek
Bureau of Land Management
Portola
Beckwourth
State Route 70
70
Vinton
Chilcoot
PETERSEN MOUNTAIN
SIERRA VALLEY
49
Clio
89
Tahoe National Forest
LASSEN
Toiyabe National Forest
Loyalton
Calpine
White Lake




- Public Building
- Populated Place
- Mine
- Range
- School
- California National Historic Trail
- Alignment
- 1-mile Buffer

Land Ownership
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- Bureau of Land Management (BLM)
- Department Of Defense (DOD)
- US Forest Service (USFS)
- State
- Local
- Private or Unknown

0 2.5 5 Miles
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Stantec

**Notes**
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Project Location
Prineville, OR to Reno, NV

2272020011
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Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.15-1**



Title
**Public Services within One Mile of Proposed Prineville to Reno Fiber Optic Line**

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Public Services

Fire

As discussed in Section 5.20, Wildfire, the project falls within FRAs, LRAs (incorporated and unincorporated), and SRAs. Areas mapped as FRAs, SRAs, or LRAs are the responsibility of the federal, state, or local fire departments, respectively. The project crosses land mapped by the CPUC as either moderate or high fire threat districts, as well as areas mapped by CAL FIRE as the following Fire Hazard Severity Zones (FHSZs): Moderate FHSZs, High FHSZs, and Very High FHSZs (CAL FIRE 2007). Wildland fire protection within SRAs is provided through a mutual aid agreement between CAL FIRE and USFS, and the project is within the CAL FIRE Lassen-Modoc Unit (LMU). The Lassen-Modoc-Plumas Unit of CAL FIRE works closely with other agencies including BLM, Lassen National Forest, Modoc National Forest, Plumas National Forest, CDFW, Caltrans, the California Highway Patrol, and county and city agencies (CPUC 2020; CAL FIRE 2020). In addition, fire protection services are provided by Modoc, Lassen, and Sierra Counties; the City of Alturas Fire Department; and other volunteer fire districts such as Sierraville, Davis Creek, Doyle, and Standish-Litchfield. Fire stations within 1 mile of the project are listed in Table 5.15-2 by distance from the project.

Medical Aid and Emergency Fire Dispatch in Modoc County is handled by the Modoc County Sheriff's department. The fire response time guideline established by the Center for Public Safety Excellence (formerly the Commission on Fire Accreditation International) is 5 minutes and 50 seconds at least 90 percent of the time. Rural fire departments may not meet these standards due to the distance from the fire department to the area where service is needed. The Alturas City Fire Department's response time within the city is approximately 5 minutes. The Alturas City Fire Department maintains mutual aid agreements with USFS, the Alturas Rancheria, and the Modoc County Hospital. (Modoc LAFCo 2010). Lassen County emergency response data was unavailable.

Sierra County uses the guideline established by the National Fire Protection Association (NFPA) for fire response times, which is 6 minutes at least 90 percent of the time, with response time measured from the 911 call time to the arrival time of the first-responder at the scene. Sierra County Fire Department response time is usually 10 to 15 minutes. Sierra County Fire Department does not meet suggested NFPA guidelines, as Sierra County contains several rural settings where homes are not accessible in the winter and have a greater than 45-minute response time in the summer (Jackson Meadows/Webber Lake/Independence Lake/Ground Hog Rock). The Sierra County Fire Department does provide service to areas outside the boundaries only by Mutual Aid, such as Truckee, Sierra City, Loyalton, Beckwourth, Sierra Valley, and Loyalton (Sierra LAFCo 2018).

### Table 5.15-2: Fire Facilities within 1 Mile of the Project

| Name | County | Distance from Project (miles) |
|---|---|---|
| US Fire Control Office Fire station | Lassen County | 0.02 |
| Davis Creek Volunteer Fire Department | Modoc County | 0.07 |
| Milford Volunteer Fire Station | Lassen County | 0.10 |
| Alturas Fire Department Fire Station | Modoc County | 0.14 |

| Name | County | Distance from Project (miles) |
|---|---|---|
| Doyle Fire Department Volunteer Fire Station | Lassen County | 0.22 |
| Alturas Cal Fire Station | Modoc County | 0.25 |
| Likely West Valley Fire Station | Modoc County | 0.48 |
| Likely Fire Department | Modoc County | 0.48 |
| Alturas Rural Fire Hall Fire Station | Modoc County | 0.51 |
| Janesville Fire District Fire Station | Lassen County | 0.99 |

## Schools

The Modoc County Office of Education oversees public education in Modoc County. There are three school districts within Modoc County: Modoc Joint Unified School District (MJUSD), Surprise Valley Joint Unified School District, and Tulelake Basin Joint Unified School District (Modoc County Office of Education 2018). The project area is within the MJUSD boundary. MJUSD serves approximately 870 students from Alturas, Cedarville, Canby, Likely, Davis Creek, New Pine Creek, Madeline, and the surrounding areas. There are six schools in MJUSD: one traditional high school, one middle school, one continuation high school, one community day school, and two elementary schools. (MJUSD 2019).

The Lassen County Office of Education oversees public education in Lassen County. The project is within Ravendale-Termo Elementary School District, Lassen Union High School District, and Fort Sage Unified School District boundaries. The Ravendale-Termo Elementary School District is a kindergarten through eighth grade district with one kindergarten through eighth grade school, Juniper Ridge Elementary School, and serves approximately nine students in Transitional Kindergarten (TK) through eighth grade (Ravendale-Termo Elementary School District 2019). The Lassen Union High School District encompasses a large geographic area, which includes the following elementary districts; Janesville Union Elementary School District, Johnstonville Elementary School District, Richmond Elementary School District, Shaffer Union Elementary School District, and Susanville School District. The Lassen Union High School District serves approximately 787 students grades 9 through 12 (Lassen-Union High School District 2019). The Fort Sage Unified School District is a TK through grade 12 school district. The district consists of three schools and a charter school: Mt. Lassen Charter School, Sierra Primary (grades TK through 6), Herlong Jr. High (grades 7 and 8), and Herlong High School (grades 9 through 12). The middle school and comprehensive high school are located on the same campus (Fort Sage Unified School District 2019)

The Sierra County Office of Education oversees public education in Sierra County. The Sierra-Plumas Joint Unified School District and Sierra County Office of Education serves all of Sierra County and the eastern quarter of Plumas County. The Sierra-Plumas Joint Unified School District it serves approximately 428 students and has two high schools, one elementary school, and one K–12 school. (Sierra County Office of Education 2019).

Schools within 1 mile of the project are listed in Table 5.15-3 by distance from the project.

Public Services

### Table 5.15-3: Schools within 1 Mile of the Project

| School | County | Distance from Project (mile) |
|---|---|---|
| Modoc Early Head Start | Modoc | Adjacent |
| Modoc Child Care Council | Modoc | 0.01 |
| Alturas State Pre-School | Modoc | 0.02 |
| South Fork Elementary School | Modoc | 0.02 |
| Long Valley Elementary School | Lassen | 0.03 |
| Bird Flat School | Lassen | 0.05 |
| Madeline School | Lassen | 0.06 |
| State Line Elementary School | Modoc | 0.07 |
| Modoc County Office Of Education | Modoc | 0.09 |
| Lake School | Lassen | 0.09 |
| Shaffer Elementary School | Lassen | 0.09 |
| Modoc High School | Modoc | 0.12 |
| University Of California Cooperative Extension | Modoc | 0.15 |
| Modoc County Office Of Education | Modoc | 0.16 |
| Modoc Charter School | Modoc | 0.19 |
| Ravendale Elementary School | Lassen | 0.28 |
| Modoc Joint Unified School District | Modoc | 0.69 |
| Modoc Joint Unified School District | Modoc | 0.73 |
| Warner High School | Modoc | 0.75 |
| Alturas Elementary School | Modoc | 0.77 |
| Modoc Middle School | Modoc | 0.81 |

## Parks

There are multiple federal, state, and local parks within 1 mile of the project area, as identified in Table 5.16-1 in Section 5.16, Recreation, and depicted in Figure 5.15-1. Additional information about recreation facilities is provided in Section 5.16, Recreation.

## Hospitals

There is one hospital located within 1 mile of the project, as identified in Table 5.15-4. Modoc Medical Center is a 16-bed, critical access hospital providing emergency services, family practice medicine, retail

pharmacy and operating a 51-bed skilled nursing facility in addition to other ancillary services such as radiology, laboratory, physical therapy, and day surgery services (Modoc Medical Center 2018).

### Other

Other public service facilities, including medical facilities, churches, and libraries, within 1 mile of the project are listed in Table 5.15-4 by distance from the project.

**Table 5.15-4: Other Public Services within 1 Mile of the Project**

| Name | County | Distance from Project |
|---|---|---|
| Modoc County Museum | Modoc | 0.01 |
| Church of the Nazarene | Modoc | 0.02 |
| Federated Community Church | Modoc | 0.03 |
| Likely Cemetery | Modoc | 0.05 |
| Modoc County Veterans Services Office | Modoc | 0.06 |
| Modoc Medical Center – Warnerview Skilled Nursing Facility | Modoc | 0.07 |
| Mercy Modoc Medical Centers | Modoc | 0.07 |
| Standish Bible Church | Lassen | 0.08 |
| T.E.A.C.H. – Training Employment & Community Help Inc | Modoc | 0.09 |
| Davis Creek Library | Modoc | 0.12 |
| Faith Baha'I Church | Modoc | 0.12 |
| Modoc County Watermaster Department | Modoc | 0.13 |
| Sacred Heart Catholic Church | Modoc | 0.15 |
| Modoc County Library | Modoc | 0.16 |
| Modoc Medical Center | Modoc | 0.17 |
| St Michaels Episcopal Church | Modoc | 0.19 |
| Modoc Medical Center | Modoc | 0.20 |
| Cedarville Rancheria Headquarters | Modoc | 0.21 |
| Modoc County Road Department | Modoc | 0.34 |
| Alturas Baptist Church Southern | Modoc | 0.37 |
| Christian Life Assembly Church | Modoc | 0.38 |
| Alturas Seventh Day Adventist Church | Modoc | 0.46 |
| Ravendale Airport | Lassen | 0.48 |
| Faith Baptist Church | Modoc | 0.61 |

Public Services

## 5.15.2 Regulatory Setting

No regulatory background information for public services is relevant to the project.

## 5.15.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | ☐ | ☐ | ☐ | ☒ |
| Fire protection? | ☐ | ☐ | ☒ | ☐ |
| Police protection? | ☐ | ☐ | ☒ | ☐ |
| Schools? | ☐ | ☐ | ☐ | ☒ |
| Parks? | ☐ | ☐ | ☒ | ☐ |
| Other public facilities? | ☐ | ☐ | ☐ | ☒ |

## 5.15.4 Impact Analysis

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

**Fire protection?**

**Police protection?**

**Schools?**

**Parks?**

**Other public facilities?**

The project would not result in substantial adverse physical impacts that could cause significant environmental impacts to maintain public services. Project construction would result in a temporary, short-term increase of up to approximately 48 construction workers at various locations onsite at any time when work activities are conducted concurrently; however, the project would not create permanent employment in the area. Although construction workers traveling to the project area may use existing public services or amenities, this potential increase in demand would be minimal and temporary and would not require new or altered government facilities. Additionally, construction activities are not expected to result in the need for new or physically altered governmental facilities or to increase population, and the project would mostly occur within public right-of-way and would not displace any people or housing. As described in Section 5.14, Population and Housing, the project would not include development of new residential units that would increase population; therefore, no permanent increase in the demand for public services in the area would occur.

### Fire and Police Protection

As described in Section 5.7, Hazards, Hazardous Materials, and Public Safety; Section 5.17, Transportation; and Section 5.20, Wildfire, the project would not conflict with any adopted emergency response plans or evacuation plans. Although not officially designated as an evacuation route, US 395 is a major highway that would likely be used during an evacuation if there was a large fire or other emergency in the area that required mass evacuations in either Modoc, Lassen, or Sierra Counties. Access for emergency vehicles and public evacuation would be maintained throughout construction, and no full roadway closures would be required. As described in Section 3.0, Proposed Project Description, emergency access routes, including ingress and egress, would be maintained throughout project construction. Construction vehicles and equipment are anticipated to access project construction areas by using existing roadways and work would generally occur within the roadway right-of-way. Construction

vehicles and equipment are expected to be staged or parked within or immediately adjacent to the project area rights-of-way. During and after construction, roads would continue to operate at the same acceptable LOS, with similar travel speeds and no capacity deficiencies. Therefore, the project would not affect service ratios, response times, or other performance objectives for any public services, and impacts would be less than significant.

## Schools

The project would not include developing new residential units or services that would generate a new residential population in the area. Therefore, the project would not cause an increase in the demand on existing schools that would affect school enrollment or performance objectives. While the project is within 0.25 mile of 15 schools, the project's construction-related activity is temporary and short-term and would be spread out over the entire project alignment, with differing activities occurring in focused areas at any given time. As discussed in Section 5.17, Transportation, the access to adjoining facilities, such as schools, would be maintained throughout the duration of construction activities. Once construction is completed, construction-related traffic and activity would cease. Therefore, construction would not delay access to schools or increase a demand on existing schools. No impact would occur.

## Parks

Multiple public parks and trails are located within 1 mile of the project. As described in Section 5.16, Recreation, construction activities may result in short-term, temporary closures of trail access. Any closures that are required for public safety during project construction would be temporary and short-term and would not require the construction of a new replacement trail (APM REC-1). The project would not include developing new residential units or services that would generate a new daytime or residential population in the area that would increase the demand on parks. Construction workers traveling to the area may use existing public services or amenities such as parks; however, this potential increase in demand would be minimal and temporary and would not exacerbate the need for or deterioration of existing park facilities or result in the need for new facilities. Given the limited duration of construction and the availability of other recreational facilities in the vicinity of the project, any resulting increase in the use of nearby recreational facilities would be brief and temporary and would have a negligible effect on the condition of the nearby parks. The project would not include construction of new recreational facilities or require the construction or expansion of recreational facilities. The project would not change the character of any of the spanned or adjacent parks and recreation facilities; construction impacts would be temporary, and the project running line would be placed within existing Caltrans- and county-maintained roadway rights-of-way, with the exception of some ancillary facilities that would be placed immediately adjacent to the existing roadway in several locations. The surrounding land would remain accessible for open access. Therefore, impacts would be less than significant.

## Other Public Facilities

The project is located within 1 mile of multiple other public facilities, including museums, medical facilities, and churches; however, the project would not directly or indirectly induce growth or create need for additional public services, and access to these facilities would be maintained during construction of the

project. Construction of the project would not increase local population growth, nor would it result in the need for new public services or expansion of public facilities. Therefore, no impact would occur.

### 5.15.5 Draft Environmental Measures

There are no applicable environmental measures for public services.

# 5.16 RECREATION

This section describes existing conditions and potential impacts on recreation as a result of construction, operation, and maintenance of the project. The analysis concludes that impacts would be less than significant.

## 5.16.1 Environmental Setting

### 5.16.1.1 Recreational Setting

The lands underlying the Caltrans right-of-way are owned or administered by various state, federal, and private entities in Modoc, Lassen, and Sierra Counties, including BLM, USFS, USFWS, California State Lands Commission, and several tribal entities. Details regarding the land ownership underlying the running line are provided in Section 3.0, Proposed Project Description. An 8-mile segment of the running line would deviate from US 395 and run along Standish Buntingville Road (Lassen County Road A3) and Cummings Road between the communities of Standish and Buntingville in Lassen County, California. In this location, the underlying land is owned by Lassen County.

In Modoc County, the project would traverse adjacent to lands designated as very-low- and low-density residential, agricultural, open space and public lands, urban reserve (in the City of Alturas and the community of Likely). The Modoc National Forest borders the project site on both the east and west and covers the majority of Modoc County, and the Modoc National Wildlife Refuge is located directly east of US 395 near the City of Alturas. Additionally, the project would pass adjacent to Goose Lake. In Lassen County, the northern portion of Lassen County also contains some of the Modoc National Forest lands that borders US 395 on both the east and the west, and the Plumas National Forest borders Lassen County in the south starting near the community of Janesville. Similarly, the portion of the project within Sierra County is relatively undeveloped and adjacent to lands that are designated as open space and public lands Public recreational facilities adjacent to and within 1 mile of the running line include national forests, BLM land, local city or regional parks, wildlife areas, and campgrounds/recreational vehicle parks. These facilities are listed by jurisdiction and described further in Table 5.16-1. Refer to Figure 5.15-1 in Section 5.15, Public Services, for a map of parks and recreational facilities within 1 mile of the project. Additionally, there are off-highway vehicle (OHV) and hiking trails that are accessed via US 395 and crossed by the project area within these managed areas.

Recreation

## Table 5.16-1: Parks and Recreational Areas Within 1 Mile of the Project

| Facility | Jurisdiction | Facilities/Activities | Size of Park/ Recreational Area | Annual Visits |
|---|---|---|---|---|
| Modoc National Forest | USFS | Camping, fishing, hiking, nature viewing, picnicking, rockhounding, scenic driving, water activities, winter sports | 1,654,392 acres | 146,000 |
| BLM land | BLM Northern California District | Biking, camping, hunting, off-highway vehicles, rockhounding, target shooting | 3.5 million acres (Northern California District) | N/A |
| CSLC land | CSLC | State Resource Management Area | 1,086.6 acres | N/A |
| Alturas City Park | City of Alturas | Playground, lawn/field, picnic | 2.4 acres | N/A |
| Alturas Rotary Fields | City of Alturas | Athletic fields | 24 acres | N/A |
| Warner Street Park | City of Alturas | Athletic fields, Disc Golf | 18.5 acres | N/A |
| Modoc National Wildlife Refuge | USFWS | Hunting, fishing, wildlife viewing and photography | 7,000 acres | 20,850 |
| Hallelujah Junction Wildlife Area | CDFW | Hiking, wildlife viewing, birdwatching, nature photography, and hunting<br>Area is closed to public entry from February 1 through June 30. | 13,200 acres | N/A |
| Likely Place Golf & RV Resort | Private | RV Park, campground, golf, playground, clubhouse, restaurant | 3 acres | N/A |
| Plumas National Forest | USFS | Bicycling, camping, climbing, fishing, hiking, horse riding, hunting, nature viewing, OHV riding, outdoor learning, picnicking, rockhounding, scenic driving, water activities, winter sports | 1,146,000 acres | 357,000 |
| Honey Lake Campground | Private | Campground, general store | 35 acres | N/A |
| Honey Lake Wildlife Area | CDFW | Bird watching, picnicking, hiking, camping, warm-water fishing, and waterfowl hunting. | 7,600 acres | N/A |
| Devil's Garden Ranger District Office | USFS | Ranger station | -- | N/A |
| Sully's RV Park | Private | RV and Mobile Home Park | 4 acres | N/A |
| Nifty RV & Mobile Home Park | Private | RV and Mobile Home Park | 3.5 acres | N/A |

Recreation

| Facility | Jurisdiction | Facilities/Activities | Size of Park/ Recreational Area | Annual Visits |
|---|---|---|---|---|
| California Historic Trail | BLM/National Park Service | National Scenic and Historic Trail - auto touring, educational programs and visitor centers to present-day gold seekers and explorers. | 1,498 miles | N/A |
| Shaffer Mountain Trail | BLM | Hiking, walking, trail running | 13.7 miles | N/A |
| Belfast Petroglyphs OHV Trail | BLM | Off road driving | 15.7 miles | N/A |
| Buckhorn Backcountry Byway | BLM | Fishing, backcountry camping | 48.4 miles | N/A |

Notes:
BLM = Bureau of Land Management
CDFW = California Department of Fish and Wildlife
CSLC = California State Lands Commission
USFS = U.S. Forest Service
USFWS = U.S. Fish and Wildlife Service
N/A = Not Applicable. Data was unavailable.
Source: AllTrails 2020a, 2020b; BLM 2020; CDFW 2020a, 2020b; Honey Lake Campground 2020; Likely Place Golf & RV Resort 2020; Massey et al. 2006; Modoc National Wildlife Refuge 2020; National Park Service 2020; USFS 2020a, 2020b; USFWS 2013.

## 5.16.2 Regulatory Setting

No federal, state, or local regulations related to recreation are applicable to the project.

## 5.16.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |
| c) Reduce or prevent access to a designated recreation facility or area? | ☐ | ☐ | ☒ | ☐ |

Recreation

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| d) Substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas? | ☐ | ☐ | ☒ | ☐ |
| e) Damage recreational trails or facilities? | ☐ | ☐ | ☒ | ☐ |

## 5.16.4 Impact Analysis

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

**No Impact.** As described in Section 5.14, Population and Housing, no new homes or businesses are proposed as part of the project, and the project is not anticipated to induce population growth either directly or indirectly. The population in the surrounding area in each of the counties is anticipated to decrease from 2020 to 2040, and the project would not affect the change in population, nor would it remove obstacles to population growth. Accordingly, the project would not include development of land uses that would result in increased use of existing neighborhood or regional parks or other recreational facilities. Workers may use nearby park and recreation facilities during project construction, but any increase associated with such use would be temporary and minimal, and would not substantially contribute to the physical deterioration of existing facilities. Therefore, no impact would occur.

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

**No Impact.** As described in response to question a, the project would not include recreational facilities nor would it require the construction or expansion of recreational facilities because no growth is projected as a result of the project. Therefore, no impact would occur.

**c) Reduce or prevent access to a designated recreation facility or area?**

**Less Than Significant Impact.** The running line would be placed within existing Caltrans- and county-maintained roadway rights-of-way, with the exception of some ancillary facilities that would be placed immediately adjacent to the existing roadway in several locations. Parks and recreational facilities spanned by or adjacent to the project may be temporarily affected by construction-generated noise, traffic congestion, or access limitations. Multiple trails cross or are accessed via US 395, including Shaffer Mountain Trail near Litchfield (Post Mile 77.3), Belfast Petroglyphs OHV Trail near Litchfield (Post Mile

93.4), Buckhorn Backcountry Byway (Post Mile 115.2) and the California Historic Trail (Post Miles 21.9, 29.2, 29.5, 30.2, 31.1, 34, 42.8, 42.9, 43.1, 43.9, 50.6, 72.5, 76.4, 77.6); however, it is unlikely that construction activities would impact access. Any closures that are required for public safety during project construction would be temporary and short-term. APM REC-1, which requires coordination with BLM and notification of planned closures, would further reduce the project's less-than-significant impacts. Additionally, the recreational facilities that are spanned or adjacent to the project would not be physically or permanently altered by the project. The project would not permanently alter the availability of trail space within the pedestrian corridor nor would it permanently alter or modify trail facilities. Therefore, the impact on these facilities would be less than significant.

**d) Substantially change the character of a recreational area by reducing the scenic, biological, cultural, geologic, or other important characteristics that contribute to the value of recreational facilities or areas?**

**Less Than Significant Impact.** The project would not change the character of any of the spanned or adjacent parks and recreation facilities, construction impacts would be temporary, and the project running line would be placed within existing Caltrans- and county-maintained roadway rights-of-way, with the exception of some ancillary facilities that would be placed immediately adjacent to the existing roadway in several locations. Detailed analyses of visual impacts resulting from project construction are provided in Section 5.1, Aesthetics, which indicated that the project would not result in impacts to visual character during construction. Section 5.4, Biological Resources, also determined that the project would not impact biological resources within the recreational areas. Since the project would be located in roadway right-of-way and along existing roadways that have been previously graded, compacted, and backfilled, the project would not impact cultural or geologic resources that would reduce the value of recreational facilities. Construction noise from the project would have a short-term impact on ambient noise levels; although construction noise levels could temporarily exceed ambient noise conditions, the rise in noise levels would be temporary, lasting approximately 1 day at any given receptor and therefore would have less than significant impacts to recreational visitors.

**e) Damage recreational trails or facilities?**

**Less Than Significant.** The running line and associated ancillary equipment would be placed within existing Caltrans- and county-maintained roadway rights-of-way, with the exception of some ancillary facilities that would be placed immediately adjacent to the existing roadway in several locations. The project would not permanently affect recreational trails or facilities, as described in response to question c. Once construction is complete, the area would be inspected to ensure that backfill is restored to the permitting entity's specifications. At work areas, final grading would restore contours and natural drainage patterns in keeping with those of the surrounding area. Any damaged facilities would be repaired or replaced in accordance with APM REC-1, which requires preconstruction documentation of trail conditions and repair or replacement of damaged facilities. Disturbed areas would be restored to original conditions. Project construction would not result in permanent damage to recreational trails or facilities, and impacts would be less than significant.

## 5.16.5 Draft Environmental Measures

### Applicant Proposed Measures

#### APM REC-1: Coordination with BLM

The Applicant will coordinate closely with the BLM Northern California District Office to communicate potential disruptions of trail access during project construction activities, including Shaffer Mountain Trail near Litchfield (Post Mile 77.3), Belfast Petroglyphs OHV Trail near Litchfield (Post Mile 93.4), Buckhorn Backcountry Byway (Post Mile 115.2), and California Historic Trail (Post Miles 21.9, 29.2, 29.5, 30.2, 31.1, 34, 42.8, 42.9, 43.1, 43.9, 50.6, 72.5, 76.4, 77.6). Signs advising recreational facility users of construction activities and potential trail closures will be posted at access points to trails identified by BLM. Information on trail closures and any temporary displacement will be made available on the project website. The Applicant will document preconstruction conditions at the trail locations and will repair or replace facilities inadvertently damaged during construction activities.

# 5.17 TRANSPORTATION

This section describes the affected environment for transportation and traffic for the portion of the project that crosses California.

## 5.17.1 Environmental Setting

### 5.17.1.1 Circulation System

Most of the 193.9 miles of the project area is parallel to US 395, which extends across portions of Modoc, Lassen, and Sierra Counties, except for 7.35 miles along Standish Buntingville Road (Lassen County Road A3) and 1.15 miles along Cummings Road, which are county roads between communities of Standish and Buntingville in Lassen County, California. Ancillary equipment such as ILAs, vaults, and line markers are also proposed. Staging areas used for vehicle parking and/or short-term placement of equipment, conduit, and cable would be located within or close to the right-of-way in previously disturbed areas such as the shoulder of a spur road. Offsite materials storage yards would be located at existing, leased industrial or commercial space in Summer Lake, Lakeview, Alturas, Termo, and/or Standish.

In Lassen County, US 395 is mostly a two-lane north-south principal arterial that connects the county to Reno, Nevada (139 miles). In Modoc County, US 395 is a two-lane paved route that runs in a north-south direction and connects the Lassen County line to the Oregon border (61 miles). In Sierra County, US 395 runs through the northeastern corner of the county (3 miles) and is functionally equivalent to the Lassen segment. The project is located in a largely rural area that is served by transit in specific routes but is mostly dependent on personal vehicles. It has limited pedestrian and bicycle facilities.

### 5.17.1.2 Existing Roadways and Circulation

The project would be accessible using existing roadways and local arterials, generally limited to US 395 and along small portions of Standish Buntingville Road and Cummings Road, mentioned in the previous section. Construction would generally occur within the roadway right-of-way. Construction vehicles and equipment are expected to be staged or parked within project area rights-of-way, approved temporary construction easements, or along the access roads.

LOS is a qualitative measure of the performance of a transportation system element. The LOS for traffic is designated A through F, with LOS A representing free-flowing conditions and LOS F representing severe traffic congestion.

Table 5.17-1 provides the average annual daily traffic (AADT) and other operating conditions of the affected road segments in the project area obtained from the Caltrans Traffic Census Program for the most recent available year (Caltrans 2017a, 2017b). As shown in Table 5.17-1, all the road segments currently operate at LOS B, C, and D under existing conditions, which is generally considered acceptable.

### Table 5.17-1: Existing Level of Service

| Roadway Segment | Jurisdiction | Lanes | Facility Type | Average Annual Daily Traffic | Peak Hour Volume | Level of Service | Target LOS Threshold |
|---|---|---|---|---|---|---|---|
| US 395 MP 3.059 - Sierra/Lassen County Line | Sierra | 4 | Four-Lane Rural Highway | 9,000 | 660 | B | D |
| US 395 MP 4.615 - Junction SR 70 West | Lassen | 2 | Two-Lane Rural Highway | 9,900 | 730 | D | D |
| US 395 MP 29.840 - Garnier Road | Lassen | 2 | Two-Lane Rural Highway | 6,800 | 560 | C | D |
| US 395 MP 51.870 - Standish Road | Lassen | 2 | Two-Lane Rural Highway | 6,200 | 430 | C | D |
| US 395 MP 70.120 - Standish, County Road A-3 | Lassen | 2 | Two-Lane Rural Highway | 1,650 | 110 | B | D |
| US 395 MP 3.216 - Likely, Jess Valley Road | Modoc | 2 | Two-Lane Rural Highway | 1,150 | 260 | B | D |
| US 395 MP 22.070 - Alturas, First Street | Modoc | 2 | Two-Lane Rural Highway | 5,900 | 440 | C | D |
| US 395 MP 28.285 - Junction SR 299 East | Modoc | 2 | Two-Lane Rural Highway | 1,650 | 660 | B | D |

Source: Caltrans 2017a, b
MP = mile post
SR = state route
US 395 = U.S. Highway 395

### 5.17.1.3 Transit and Rail Services

Lassen Transit Service Agency provides the public transit system for Lassen County. It provides commuter route services operated by Lassen Rural Bus. The East and South County Bus Route use US 395. Modoc Transportation Agency Sage Stage uses US 395 to provide public transit services both within Modoc County and to nearby regional centers. No passenger rail service is available in Lassen and Modoc Counties. Sierra County has no public transit service within the project area.

### 5.17.1.4 Bicycle Facilities

According to the *Lassen Regional Transportation Plan* (Lassen County 2017) and *Lassen County Bikeway Master Plan* (Lassen County 2011), there are few designated bikeways in Lassen County. US 395 is classified as a Class III bike route, providing for shared use with pedestrian and motor vehicle

traffic, with Share the Road signage placed along the highway. Many communities in Lassen County lack appropriate bicycle facilities and need improvements for gap closures, connectivity, and for Americans with Disabilities Act compliance. Similarly, according to the Modoc Regional Transportation Plan (Modoc County 2019) there is limited shoulder area to ride bicycles along most roadways in Modoc County. Roads within rural Modoc County communities are generally narrow and lack sidewalks. According to Draft US 395 Transportation Concept Report (Caltrans 2017c), the Modoc Line Trail located along US 395 is open to bicycles, pedestrians, equestrians, and off-highway vehicles, although portions of the trail are not yet complete. As noted in the Sierra County Regional Transportation Plan (Sierra County 2020), there are no designated bicycle routes in Sierra County, and the state highways have little to no shoulders.

### 5.17.1.5 Pedestrian Facilities

According to the Lassen Regional Transportation Plan (Lassen County 2017) and Lassen County Bikeway Master Plan (Lassen County 2011), US 395 is classified as a Class III bike route that provides for shared use with pedestrian and motor vehicle traffic, with Share the Road signage placed along the highway. Many communities in Lassen County lack appropriate pedestrian facilities, including sidewalks, signage and crosswalks. Similarly, according to the Modoc Regional Transportation Plan (Modoc County 2019) there is limited shoulder area to walk along most roadways in the Modoc County region. Roadways within rural Modoc communities are generally narrow and lack sidewalks. According to Draft US 395 Transportation Concept Report (Caltrans 2017c), the Modoc Line Trail located along US 395 is open to bicycles, pedestrians, equestrians, and off-highway vehicles, although portions of trail are not yet complete. As noted in the Sierra County Regional Transportation Plan (Sierra County 2020), the existing pedestrian circulation is a non-continuous network of limited sidewalks.

### 5.17.1.6 Vehicle Miles Traveled

Vehicle miles travelled (VMT) is a measure of vehicle activity that is annually reported as part of the Federal Highway Performance Monitoring System. California Public Road Data provides daily VMT estimates derived from these data. The most recent available year (Caltrans 2018) estimates of the daily VMT on the state highway system for Lassen, Modoc, and Sierra Counties is provided in Table 5.17-2.

**Table 5.17-2: State Highway Vehicle Miles Travelled Estimates by County**

| County | Daily Vehicle Miles Travelled (1,000) |
|---|---|
| Lassen | 793.72 |
| Modoc | 214.99 |
| Sierra | 243.18 |

Source: Caltrans 2018

## 5.17.2 Regulatory Setting

### 5.17.2.1 Federal

#### Title 23, Code of Federal Regulations, Highways

The USDOT sets policy regarding the placement of utility facilities within highway rights-of-way. Federal statutes specify requirements for facilities that receive federal assistance, including interstate freeways and U.S. highways, most state routes, and certain local roads. FHWA regulations require that each state develop its own policy regarding the accommodation of utility facilities within highway rights-of-way. Once FHWA has approved a state's policy, the state can approve any proposed utility installation without referral to FHWA unless it does not conform to the federally approved policy. Federal law does not directly control how states accommodate utilities within highway rights-of-way, but in determining whether a right-of-way on a federally aided highway should be used for accommodating a utility facility, the Secretary of Transportation must do the following: 1) ascertain the effect that accommodation of utilities would have on highway and traffic safety since no such use may be authorized or permitted that would adversely affect safety; 2) evaluate the direct and indirect environmental and economic effects of any loss of productive agricultural land or any impairment of its productivity that would result from disapproving accommodation of the utility facility; and 3) consider the environmental and economic effects together with any interference with or impairment of the use of the highway that would result from accommodation of the utility facility (23 USC Section 109[l]). In addition, 23 USC Section 116 requires that state transportation agencies ensure proper maintenance of highway facilities, which implies adequate control over non-freeway facilities such as utility facilities. Finally, 23 USC Section 123 specifies when federal funds can be used to pay for the costs of relocating utility facilities in connection with highway construction projects (McCarthy 2004).

#### Title 49, Code of Federal Regulations, Sections 171-177

Title 49 governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of vehicles carrying hazardous material. The administering agencies for Title 49 in California are the California Highway Patrol and the USDOT, Pipeline and Hazardous Materials Safety Administration. The project would conform to Title 49 by requiring vehicles that are used to transport any construction-related hazardous materials must use the required markings.

### 5.17.2.2 State

#### California Department of Transportation

Caltrans is one of several departments in California's Business, Transportation and Housing Agency. Caltrans' Right-of-Way and Asset Management Program, administered through Caltrans' district offices, is primarily responsible for acquisition and management of property required for state transportation purposes. Transportation purposes may include roads, mass transit and related facilities, airports, shops, maintenance stations, storage yards, material sites, and any other purpose that may be necessary for Caltrans operations (Caltrans 2008a). The responsibilities of the Right of Way and Asset Management Program include managing Caltrans' real property for transportation purposes, reducing the costs of

operations, disposing of property no longer needed, and monitoring right-of-way activities on federally assisted local facilities.

As defined in Streets and Highways Code Section 660, an encroachment can be any tower, pole, pole line, pipe, pipeline, fence, billboard, stand, or building, or any structure or object of any kind or character that is within the right-of-way but not a part of the Caltrans facility. The authority for Caltrans to control encroachments within the state roadway is contained in the Streets and Highways Code beginning with Section 660.

Encroachments allow temporary or permanent use of roadway rights-of-way by a utility, a public entity, or a private party. Encroachments include all public and private utilities within state rights-of-way, such as communication, electric power, water, gas, oil, petroleum products, steam, sewer, drainage, irrigation, and similar facilities. Encroachments also include any temporary or permanent break in access or use of the roadway rights-of-way for grading, excavating, or filling or removing materials by public agencies, developers, or private individuals (Caltrans 2008b).

Encroachment permits are issued by Caltrans to other agencies or parties that perform construction activities within its rights-of-way. Typical projects performed by other agencies or parties that require encroachment permits include construction of roadway improvements and utility work. Under an encroachment permit, Caltrans requires the agency or party to implement an appropriate SWPPP. Caltrans retains ultimate responsibility for ensuring that the portion of the project within the Caltrans right-of-way is in compliance with federal, state, and local stormwater protection regulations.

Caltrans specifically has interest in projects that may structurally modify deck slabs (not including raised sidewalks or utility attachments), girders (not including utility attachments), bottom slabs of superstructures, columns and supporting foundations, and abutments and supporting foundations.

### California Vehicle Code, Sections 13369, 15275, 15278

The California Vehicle Code addresses the licensing of drivers and the classification of license required for the operation of particular types of vehicles, requires a commercial driver's license to operate commercial vehicles, and requires an endorsement issued by the Department of Motor Vehicles to drive any commercial vehicle identified in Section 15278 of the California Vehicle Code. The administering agency for these statutes is the Department of Motor Vehicles. The project would comply with these Code Sections 13369, 15275, and 15278 by requiring that contractors and employees be properly licensed and endorsed when operating relevant vehicles.

### California Vehicle Code, Section 35550

California Vehicle Code Section 35551 imposes weight guidelines and restrictions on vehicles traveling on freeways and highways. The section holds that "a single axle load shall not exceed 20,000 pounds. The load on any one wheel or wheels supporting one end of an axle is limited to 10,500 pounds. The front steering axle load is limited to 12,500 pounds." Furthermore, Section 35551 defines the maximum overall gross weight as 80,000 pounds and adds that, "the gross weight of each set of tandem axles shall not exceed 34,000 pounds." The administering agency for this statute is Caltrans. The project would comply

with this Code Section by requiring compliance with weight restrictions and by requiring heavy haulers to obtain required permits prior to delivery of any heavy haul load.

#### California Vehicle Code, Section 35780

California Vehicle Code Section 35780 requires a Single-Trip Transportation Permit to transport oversized or excessive loads over state highways. The permit can be acquired through Caltrans. The project would comply with this Section 35780 by requiring that heavy haulers obtain a Single-Trip Transportation Permit for oversized loads for each vehicle prior to delivery of any oversized load.

#### California Streets and Highways Code, Section 117

Unless otherwise specified, the acquisition of any right-of-way over any real property for state highway purposes includes the right of Caltrans to issue, under Chapter 3 (commencing with Section 660), permits for any structures or fixtures necessary for telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures located in the public rights-of-way. The administering agency for this statute is Caltrans. Project proponents would coordinate with Caltrans with regard to use of public rights-of-way.

#### California Streets and Highways Code, Sections 660, 670, 672, 1450, 1460, 1470, 1480 et seq.

This code defines highways and encroachments and requires encroachment permits for projects involving excavation in state highways and county and city streets. This law is generally enforced at the local level. The administering agencies for this regulation are Caltrans and Lassen, Modoc, and Sierra Counties. Project proponents or the construction contractor would apply for encroachment permits for any excavation in state and county roadways prior to construction.

#### California Manual on Uniform Traffic Control Devices, Part 6

This regulation requires a temporary traffic control plan be provided for, "continuity of function (movement of traffic, pedestrians, bicyclists, transit operations) and access to property/utilities" during any time that the normal function of a roadway is suspended. The administering agencies for this regulation are Caltrans and Lassen, Modoc, and Sierra counties. If applicable, a Traffic Control Plan would be prepared prior to the start of construction.

### 5.17.2.3 Local

The Lassen County Regional Transportation Plan (RTP) is developed by the Lassen County Transportation Commission which is the designated Regional Transportation Planning Agency (RTPA) for Lassen County. The Lassen County RTP guides transportation investments in Lassen County involving local, state and federal funding over the next 20 years. Lassen County's RTP must be updated every 4 years to be compliant with Caltrans' guidelines and to be eligible for many sources of funding.

The Modoc County RTP is a 20-year planning document developed by Modoc County Transportation Commission, which is the RTPA for the Modoc region. The goal of the Modoc County RTP is to provide a

safe, balanced, coordinated, and cost-effective transportation system that conserves energy, preserves air quality, serves the needs of the region, and is consistent with local, state, and federal plans and programs. Modoc County's RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances.

As Sierra County's RTPA, the Sierra County Transportation Commission is required by California law to adopt and submit an updated RTP to the California Transportation Commission and to Caltrans every 5 years. The purpose of the RTP is to provide a transportation vision for the region by identifying transportation related needs and issues with goals for the 10- and 20-year planning horizons.

### 5.17.2.4 Significance Criteria

Caltrans is in the process of finalizing their updated guidelines to be used for analysis of projects on the state highway system. The new guidelines will go into effect for most state highway projects on September 15, 2020. The draft guidelines are currently out for public review and comment. For projects on the state highway system, Caltrans would be using "Induced Travel" to determine impacts, and this is only applicable to projects which increase the roadway's capacity. Therefore, evaluation of Induced Travel is not applicable to the proposed project. The new guidelines also refer to provision of a qualitative assessment of construction impacts.

Caltrans' Guide for the Preparation of Traffic Impact Studies (Caltrans 2002), which will be superseded upon adoption of the updated guidelines noted above, indicates that Caltrans generally endeavors to maintain the LOS of a state highway facility at the cusp of LOS C and D (Caltrans 2002). Lassen County uses a threshold of LOS D for minimum acceptable operation of its transportation facilities (Lassen County 1999). Sierra County and Modoc Counties do not have specified thresholds for state highway facilities within their counties.

Due to the current transition period between LOS and VMT as the measure of significance for impact analysis, for the purpose of this analysis, a target LOS threshold of D is also used to determine the significance of project impacts on traffic and transportation. The project would be considered to have a significant impact on traffic and transportation capacity and LOS if it would cause the operation of a transportation facility to worsen from LOS D or better to LOS E or F, or to substantially worsen conditions for facilities already operating at LOS E or F without the project.

#### Roadway Segment Analysis

Highway Capacity Manual, Sixth Edition (Transportation Research Board 2016) is a standard reference published by the Transportation Research Board; it defines LOS as a qualitative measure of the performance of an element of a transportation system. Traffic LOS is designated A through F, with LOS A representing free flow conditions and LOS F representing severe traffic congestion. LOS characteristics for roadway segments are presented in Table 5.17-3.

### Table 5.17-3: Roadway Level of Service Descriptions

| Level of Service | Traffic Flow Description |
|---|---|
| A | Minimal or no vehicle delay |
| B | Slight delay to vehicles |
| C | Moderate vehicle delays, traffic flow remains stable |
| D | More extensive delays at intersections |
| E | Long queues create lengthy delays |
| F | Severe delays and congestion |

Source: HCM 2016, Sixth Edition

Table 5.17-4 provides LOS and AADT volume thresholds for uninterrupted flow on rural highways. Since Caltrans and the Counties of Lassen, Modoc and Sierra do not specify AADT volume thresholds for uninterrupted flow on rural highways, the volume thresholds noted here are based on the Florida Department of Transportation Generalized Annual Average Daily Volumes for Florida's Rural Undeveloped Area and Developed Areas with less than 5,000 population (FDOT 2012), a source commonly used by traffic engineers for analyses of this type. This is a modified Highway Capacity Manual based LOS table that was used in the analysis.

### Table 5.17-4: Roadway Level of Service for Uninterrupted Flow Highways

| Lanes | Median | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| 2 | Undivided | - | ≤ 4,700 | 8,400 | 14,300 | 28,600 | > 28,600 |
| 4 | Divided | - | ≤ 25,700 | 40,300 | 51,000 | 57,900 | > 57,900 |

Source: FDOT 2012

## 5.17.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? | ☐ | ☐ | ☒ | ☐ |

Transportation

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | ☐ | ☐ | ☒ | ☐ |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ |
| d) Result in inadequate emergency access? | ☐ | ☐ | ☒ | ☐ |
| e) Create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations? | ☐ | ☐ | ☒ | ☐ |
| f) Interfere with walking or bicycling accessibility? | ☐ | ☐ | ☒ | ☐ |
| g) Substantially delay public transit? | ☐ | ☐ | ☒ | ☐ |

## 5.17.4 Impact Analysis

This section describes the approach for evaluating transportation and traffic impacts. The analysis of transportation- and traffic-related impacts of the project during construction is based on the project characteristics, including type, location, trip generation, trip distribution, and duration of activities. The project would result in temporary construction activity with no ongoing operational changes to traffic generation or traffic patterns.

**a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?**

**Less Than Significant Impact.** The analysis of construction trip generation for the project is based on the project-generated average daily traffic (ADT) during construction on a typical day. Heavy-vehicle trips are converted to passenger car equivalents (PCEs) for this impact analysis.

The project is expected to generate a total PCE volume of approximately 688 ADT during the entire period of construction based on the construction activity, vehicle trips, and schedule data provided by the applicant. Although the temporary traffic volume increases would be spread out over the entire project alignment, to present a conservative estimate of the potential impacts, the analysis considers a maximum of 700 PCE ADT during construction and considers the worst-case scenario for the impacts of construction traffic on each roadway segment based on 100 percent of construction impacts at any given location. Table 5.17-5 summarizes the results of the roadway segment analysis for the project.

### Table 5.17-5: Existing Plus Construction Traffic Level of Service

| Roadway Segment | Jurisdiction | Lanes | Facility Type | Annual Average Daily Traffic | Peak Hour Volume | LOS | Target LOS Threshold |
|---|---|---|---|---|---|---|---|
| US 395 MP 3.059 - Sierra/Lassen County Line | Sierra | 4 | Four-Lane Rural Highway | 9,700 | 660 | A | D |
| US 395 MP 4.615 - Junction SR 70 West | Lassen | 2 | Two-Lane Rural Highway | 10,600 | 730 | D | D |
| US 395 MP 29.840 - Garnier Road | Lassen | 2 | Two-Lane Rural Highway | 7,500 | 560 | C | D |
| US 395 MP 51.870 - Standish Road | Lassen | 2 | Two-Lane Rural Highway | 6,900 | 430 | C | D |
| US 395 MP 70.120 - Standish, County Road A-3 | Lassen | 2 | Two-Lane Rural Highway | 2,350 | 110 | B | D |
| US 395 MP 3.216 - Likely, Jess Valley Road | Modoc | 2 | Two-Lane Rural Highway | 1,850 | 260 | B | D |
| US 395 MP 22.070 - Alturas, First Street | Modoc | 2 | Two-Lane Rural Highway | 6,600 | 440 | C | D |
| US 395 MP 28.285 - Junction SR 299 East | Modoc | 2 | Two-Lane Rural Highway | 2,350 | 660 | B | D |

Notes:
LOS = Level of Service
MP = mile post
SR = State Route
US 395 = U.S. Interstate 395

As noted above, construction vehicles associated with the project would cause a temporary and short-term increase in traffic due to the additional number of vehicles on the roads. This temporary traffic volume increase would be spread out over the entire project alignment, and the increased traffic levels during peak construction would remain within acceptable limits in the context of road capacities and LOS as shown in Table 5.17-5.

There are only a limited number of pedestrian and bicycle facilities in the project area and these would not be affected by the construction activity except for limited circumstances. The project would follow Caltrans' guidelines for work area traffic control, which includes providing accommodations for pedestrians and bicyclists when applicable. Implementation of APM TRA-1 will ensure that traffic controls and other traffic safety measures are in place to maintain proper traffic flow during temporary construction

activities. Therefore, the project construction would not cause a conflict with a program plan, ordinance, or policy related to the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and the impact would be less than significant.

**b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?**

**Less Than Significant Impact.** The project does not propose new housing, businesses, or other land use changes that would induce population growth in the area or result in a permanent increase of VMT. The project also would not add capacity to an existing or proposed new roadway. Construction of the project could result in a temporary increase in local traffic as a result of construction-related workforce traffic and material deliveries and construction activities occurring within the public right-of-way; however, these short-term construction related changes in VMT are not the subject of CEQA Guidelines Section 15064.3, subdivision (b). The primary impacts from the movement of construction trucks would include localized, short-term, and intermittent effects on traffic operations because of slower movements and the larger turning radii of the trucks compared to passenger vehicles. Potential increases in vehicle-trip generation as a result of project construction would vary based on the construction activity, location, equipment needs, and other factors as discussed above. However, once construction is completed, construction-related traffic would cease, and vehicle miles traveled levels would return to pre-project conditions. The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Therefore, impacts would be less than significant.

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

**No Impact.** There are no proposed changes or modifications to any geometric design features to alter any public roadways or intersections during the construction. The project would follow Caltrans guidelines for work area traffic control, which include providing for standard geometric design of any necessary temporary traffic control features. Also, there would be no incompatible uses introduced to the project area. Therefore, the project would not increase hazards due to geometric design features of roadways or incompatible uses. No impact would occur.

**d) Result in inadequate emergency access?**

**Less Than Significant Impact.** Emergency access routes would be maintained throughout project construction. Construction vehicles and equipment are anticipated to access project construction areas by using existing roadways, and work would generally occur within the roadway right-of-way. Construction vehicles and equipment are expected to be staged or parked within project area rights-of-way, approved temporary construction easements, or alongside access roads. During and after construction, roads would continue to operate at the same acceptable LOS as the pre-project condition, with similar travel speeds and no capacity deficiencies. Therefore, the impact would be less than significant.

**e) Create potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations?**

**Less Than Significant Impact.** The project's construction related activity would be temporary and short-term and would be spread out over the entire project alignment, with differing activity occurring in localized and small areas at any given time. The construction activities would occur within the public right-of-way. The primary impacts from the movement of construction trucks would include short-term and intermittent effects on traffic operations because of slower movements and larger turning radii of the trucks compared to passenger vehicles. However, once construction is completed, construction-related traffic and activity would cease. As noted above, there are only a limited number of pedestrian and bicycle facilities in the project area and these would not be affected by the construction activity except for localized and brief circumstances. The project would follow Caltrans guidelines for work area traffic control, which include providing accommodations for pedestrians and bicyclists when applicable. The project construction, therefore, would not create any potentially hazardous conditions for people walking, bicycling, or driving or for public transit operations, and the impact would be less than significant.

**f) Interfere with walking or bicycling accessibility?**

**Less Than Significant Impact.** Many communities in the project area lack appropriate bicycle and pedestrian facilities, including sidewalks, signage and crosswalks. There is limited shoulder area to walk or ride a bicycle along most segments of the project area roadways. The construction related activity would be temporary and short-term and would be spread out over the entire project alignment. The project construction activity would, therefore, not interfere with walking or bicycling accessibility, and the impact would be less than significant.

**g) Substantially delay public transit?**

**Less Than Significant Impact.** The project's construction-related activity would be temporary and short-term and would be spread out over the entire project alignment, with differing activity occurring in localized and small areas at any given time. The primary impacts from the movement of construction trucks would include short-term and intermittent effects on traffic operations because of slower movements and the larger turning radii of the trucks compared to passenger vehicles. Access to adjoining properties would be maintained throughout the duration of construction activities. However, once construction is completed, construction-related traffic and activity would cease. The project construction would, therefore, not delay public transit, and the impact would be less than significant.

## 5.17.5 Draft Environmental Measures

### Applicant Proposed Measures

#### APM TRA-1: Traffic Management Plan

The applicant will obtain any necessary transportation and encroachment permits from Caltrans and the local jurisdictions, as required, and will implement temporary traffic controls as required to prevent

congestion or traffic hazards during construction. Construction activities that are in, along, or cross local roadways will follow best management practices (BMPs) and local jurisdictional encroachment permit requirements, such as traffic controls in the form of signs, cones, and flaggers, to minimize impacts on traffic and transportation in the project area. When working on state highways, Zayo will follow traffic control guidelines outlined in the California Manual on Uniform Traffic Control Devices.

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# 5.18 TRIBAL CULTURAL RESOURCES

This section describes existing conditions and potential impacts on TCRs as a result of construction, operation, and maintenance of the project. It presents the methods and results of cultural resources studies of the project area and of preliminary coordination and discussions with California tribes.

## 5.18.1 Environmental Setting

### 5.18.1.1 Outreach to Tribes

On October 11, 2019, Pacific Legacy contacted the NAHC on behalf of the applicant to request a search of the Sacred Lands File for the full length of the proposed project right-of-way in California. The NAHC responded on October 29, 2019, to report positive findings and urged contact with the Alturas Rancheria of Pit River Indians for further information (Appendix E). The NAHC also suggested contact with the following tribal representatives:

- Vi Riley, Cultural Resources Coordinator, Alturas Rancheria of Pit River Indians
- Alturas Rancheria, Tribal Administrator/Environmental, Alturas Rancheria of Pit River Indians
- Bernold Pollard, Chairperson, Fort Bidwell Indian Community of Paiute
- Kyle Self, Chairperson, Greenville Rancheria of Maidu Indians
- Paul Garcia, Chairperson, Honey Lake Maidu
- Ron Morales, Chairperson, Honey Lake Maidu
- Charles White, Tribal Administrator, Pit River Tribe of California
- Natalie Forrest-Perez, Tribal Historic Preservation Officer, Pit River Tribe of California
- Agnes Gonzalez, Chairperson, Pit River Tribe of California
- Deana Bovee, Chairperson, Susanville Indian Rancheria
- Grayson Coney, Cultural Director, Tsi Akim Maidu
- Gene Whitehouse, Chairperson, United Auburn Indian Community of the Auburn Rancheria
- Darrel Cruz, Cultural Resources Department, Washoe Tribe of Nevada and California

On behalf of the applicant, Stantec has reached out to the tribes listed in Table 5.18-1 regarding the proposed project. The proposed project's state lead agency, CPUC, will conduct consultation efforts consistent with Assembly Bill 52, and the proposed project's federal lead agency will conduct consultation efforts consistent with implementing regulation for Section 106 of the NHPA (36 CFR Part 800.3[c]).

## Table 5.18-1 Consultation with Regional Tribes

| Tribe | Date Mailed | Emailed | Date Emailed | Response | Follow-Up |
|---|---|---|---|---|---|
| Confederated Tribes of Warm Springs | 3/25/2020 | X | 3/27/2020 | C. Nauer responded to Robley Lason via email on April 7, 2020, and wants to consult. Expressed concern about potential effects to historic properties or cultural resources within the APE. | Keep notified. Wants to participate in site identification efforts. |
| Confederated Tribes of the Umatilla | 3/25/2020 | X | 3/27/2020 | - | - |
| Burns Paiute Tribe | 3/25/2020 | X | 3/27/2020 | Daine Teeman sent a response email to Robley Lawson on March 27, 2020, with attached documents. Stated that the Project's path in Oregon is entirely within their aboriginal lands. Wanted to arrange a time to speak about the Project. Email was forwarded to Shelly Tiley the same day for follow up. suggests also contacting warm springs, Fort Bidwell, Klamath Tribes | Suggested tribes were already contacted. |
| Washoe Tribe of Nevada and California | 3/25/2020 | | n/a | Shelly received a phone call from the Washoe Tribe on March 31, 2020, saying that they received the letter for Neil Mortimer but he is no longer Chair. The letter was forwarded to the new Chair, Serrel Smokey. | - |
| Washoe Tribe of Nevada and California | 3/25/2020 | X | 3/27/2020 | Darrel Cruz (THPO) sent an email to Shelly Tiley on April 10, 2020 and attached a formal response letter that states that he is not aware of cultural resources within the Project area but wants to maintain consultation and wants to review the archaeological report. | - |
| Reno-Sparks Indian Colony | 3/25/2020 | X | 3/27/2020 | - | - |
| Reno-Sparks Indian Colony | 3/25/2020 | X | 3/27/2020 | - | - |
| Fort Bidwell Indian Community of Paiute | 3/25/2020 | X | 3/27/2020 | - | - |

Tribal Cultural Resources

| Tribe | Date Mailed | Emailed | Date Emailed | Response | Follow-Up |
|---|---|---|---|---|---|
| Pit River Tribe of California | 3/25/2020 | | 3/30/2020 | Meeting with Pit River and Shelly Tiley held in person on February 28, 2020. Follow up letters and emails sent on March 25, 2020. Email sent to Shelly Tiley on April 21, 2020, from Raymond Lee Alvarez requesting tribal monitors, TERO, and free fiber optics. Tiley also received letter via email from Kyle Desautel (Pit River Tribal Administrator) on March 31, 2020 who sent documents. Sarah L. is going to contact Zayo for them to issue response | Wants to consult; also see important information on employment of tribal members etc. on tribal lands (TERO). Add this email to contact list: kdesautel@pitrivertribe.org. |
| Susanville Indian Rancheria | 3/25/2020 | X | 3/27/2020 | - | - |
| Honey Lake Maidu | 3/25/2020 | | n/a | - | - |
| Honey Lake Maidu | 3/25/2020 | X | 3/27/2020 | - | - |
| Greenville Rancheria of Maidu Indians | 3/25/2020 | X | 3/27/2020 | - | - |
| Cedarville Rancheria of Northern Paiute | 3/25/2020 | X | 3/27/2020 | - | - |
| Alturas Rancheria of Pit River Indians | 3/25/2020 | X | 3/27/2020 | - | - |
| Klamath Tribes | 5/4/2020 | X | 5/5/2020 | Virtual meeting held by the BLM with Klamath on April 24, 2020. | Need to follow up with mailed and emailed letters. |
| Klamath Tribes | 5/4/2020 | X | 5/5/2020 | Email response received from Anderson on May 13, 2020. Notes that a meeting between Zayo and the Klamath Tribes Tribal Council in the future once the right-of-way is defined. Request sharing maps, and construction plans. | - |

Notes:

APE = Area of Potential Effects

BLM = Bureau of Land Management

TERO = Tribal Employment Rights Office

THPO = Tribal Historic Preservation Officer

Zayo = Zayo Group, LLC

### 5.18.1.2 Tribal Cultural Resources

Stantec's background research and intensive pedestrian field survey of the APE resulted in the identification of three potential TCRs. However, formal consultation has not yet confirmed nor identified these resources.

### 5.18.1.3 Ethnographic Study

The following sections present an overview of the ethnography of each region (i.e., Modoc Uplands, Madeline Plains, Honey Lake Basin, and Long Valley) traversed by the project alignment.

#### Modoc Uplands Ethnography and Ethnohistory

The most notable ethnohistoric reports for the Modoc Uplands related to Modoc/Achumawi and Euro-American (Indian-Anglo) relations during the 1800s include Milliken (2000), Ray (1963), Riddle (1914), Theodoratus Cultural Research (1981), and Woods and Raven (1985, 1992). These and other sources describe accounts of Indian-Anglo interaction, conflict, and social adjustment throughout Modoc and Pit River territory beginning during the early 1800s, as well as how Native Americans responded to these changes and how they continue to do so today. The Modoc and Pit River people still live in and near their ethnographic territories.

Early historical accounts of the Modoc and Pit River Indians come from the journals of John Work during his journeys in Pit River territory from 1831 to 1833. Other histories are based on early expeditions to establish trails and routes through Pit River territory, like the Klamath Falls-to-Sacramento Valley trail set by the Hudson Bay Company in 1829. Throughout the early 1800s, a great animosity prevailed between the Modoc and Pit River Indians and Euro-American explorers and settlers. The 1848 Gold Rush exacerbated these tensions, as thousands of Euro-Americans poured into California. Newspapers reported raids and further acts of retribution (Milliken 2000:16).

#### *Language and Territory*

The Modoc language is classified as a member of the Sahaptin-Chinook branch of the Penutian linguistic stock (Barrett 1910; Kroeber 1925). Although considered linguistically isolated (Ray 1963), the Modoc and their neighbors to the north, the Klamath *(?ewksiknii*, People of the Lake), share an almost identical dialect. The cultural position of the Modoc has been debated anthropologically. Kroeber (1925) originally associated them with the California culture area, but later found a Great Basin affiliation to be more accurate. Others place the Modoc culturally with the Plateau groups (WIRTH 1988).

Ethnographically, the Modoc occupied 5,000 square miles east of the Cascades in southern Oregon and Northern California. Formally, Modoc territory included Little Klamath Lake, Modoc Lake, Tule Lake, Lost River Valley, and Clear Lake, and ranged as far south as Goose Lake. Modoc tribal territory was divided into three areas: the Gumbatwas, "people of the west;" Kokiwas, "people of the far out country;" and Paskanwas, "river people" (Ray 1963). These divisions were purely geographical, not ethnic or political. The territorial boundaries between Modoc bands were quite fluid; however, the outer boundaries were

well-defined, and for other tribes to encroach these boundaries would certainly result in warfare (Ray 1963:201-211).

The 11 bands or tribelets that occupied the Pit River and its lesser drainages at the time of Euro-American contact are collectively designated the Pit River Indians and are divided into two linguistically related groups: the Achumawi and the Atsugewi. The Achumawi consist of nine mutually intelligible bands (Hammawi, Kosalektawi, Hewisedawi, Astariwawi, Atwamsini, Ajumawi, Illmawi, Itsatawi, and Madesi). Ethnographically, they held the northern part of Pit River territory (Merriam 1926:5). The Atsugewi comprised two bands, Atsuge and Aporige, and their ethnographic territory centered around Hat Creek and Eagle Lake (Kniffen 1928:303). Together, the Achumawi and Atsugewi languages make up the Palaihnihan branch of the Hokan linguistic superfamily (Olmsted 1966).

Ethnographic Pit River territory encompassed a relatively large area in northeastern California extending from Mount Shasta and Goose Lake near the Oregon border in the north to Mount Lassen and the Madeline Plains to the south, and from the Warner Mountains in the east to Montgomery Creek in the west (Kniffen 1928:300; Kroeber 1925:305; Merriam 1926:3). This vast region exhibits diverse environments and considerable differences in topography and habitat. North of the Pit River is high, dry lava country with marshy meadows, springs, and abundant pine and fir timber. Kniffen (1928:301) and Kroeber (1925:305) concluded that the region was not occupied permanently but was visited and used seasonally, such as for forays to Glass Mountain to obtain obsidian. Within the Pit River territory, Hewisedawi territory stretched from the southern portion of Goose Lake in the north to include Big Sage Reservoir in the southwest and the western slopes of the Warner Mountains in the east between Cedar and Fandango Peaks. Kosalektawi territory stretched from the area around the confluence of the north and south forks of the Pit River (the site of the present-day City of Alturas) to include Warren Peak to the southeast and Cedar Peak to the northeast (Bevill and Nilsson 2005). The main Kosalektawi village, identified by Kniffen as *Kosale'kta* and by Merriam as *Ko'se-al-lek'-tah*, was located at the site of the present-day City of Alturas (Kniffen 1928; Merriam 1926).

Northern Paiute territory stretched from present-day eastern Oregon and southwestern Idaho through northeastern California and northern Nevada—some 78,000 square miles. The Northern Paiute language is a Western Numic language of the Uto-Aztecan family. Twenty-one autonomous bands make up the Northern Paiute. The Surprise Valley area was inhabited by one of these bands, the Kidutokado, whose 5,000-square-mile territory spanned from the eastern slopes of the Warner Mountains across the present-day California–Oregon border to the northern end of Goose Lake, east to the border between Lane and Harney counties in Oregon, then southwest through the northwest corner of Nevada, and west to the Warner Mountains just south of Lower Alkali Lake (Stewart 1939).

### *Subsistence and Settlement Patterns*

Modoc and Achumawi subsistence regimes reflected a strong riverine orientation, and fishing provided the staple food (Kniffen 1928:302; Woods and Raven 1992:7). The early spring sucker run was an important component of the Modoc "seasonal round." Trout, tui chub, minnows, and freshwater mussels were plentiful for the Modoc along Lost River and for the Achumawi along Pit River and Goose and Eagle Lakes. The Achumawi kept salmon dried in slabs or ground into meal for year-round consumption

(Kroeber 1925:309). Voegelin (1942:180) reports that fishing places more than hunting grounds were owned and guarded by the Achumawi.

The Pacific Flyway migration route for waterfowl meant that lakes and marshes always held multiple species of waterfowl, regardless of the season. Ducks, geese, and swans were present in the winter, while pelicans, loons, and gulls were in residence year-round, making the latter group a reliable resource at any time. Terrestrial faunal resources included deer and small game, such as quail and squirrels, and occasionally elk and bear. Game was captured using various strategies including nets, blinds, and drives, and game capture represented both individual and communal pursuits (Woods and Raven 1985:6).

Both groups exploited a variety of plants for food, medicine, cordage, and basket-making. Camas bulbs were collected from the bottomlands, water lily seeds were found around the lakes, and various grass seeds, nuts, and fruits were collected in the hills and mountains. Tule was a plentiful and reliable resource. Plants were used for dietary, medicinal, clothing, and basketry uses. Tobacco was the only cultivated crop among the Achumawi and was smoked in both tubular pipes and two-piece wood and stone pipes (Voegelin 1942:92).

Well-watered areas were important to both groups. The Modoc made their permanent winter villages mainly near the shores of Tule, Lower Klamath, and Clear lakes, as well as along the Lost River (Kroeber 1925; Ray 1963). For the Achumawi, plentiful resources were found near water courses, namely the Pit River and marshy tules and areas around Goose and Eagle lakes. Kniffen (1928:302) called these areas "centers of attention" because they supported the largest indigenous populations. Winter villages for both groups comprised between three and seven permanent, semi-subterranean, earth-covered structures. The smoke hole doubled as rooftop-entrance, and each house was typically inhabited by an average of five members of a single family.

Fishing forays began from the villages in March (WIRTH 1988). Fishing camps were semi-permanent with less elaborate mat-covered structures built in shallow pits or temporary tule structures (Kroeber 1925:328). The oldest type of Modoc structure is the summer dome-shaped house made from tule mats covering a frame of willow poles (Ray 1963:156-157).

At the conclusion of the fish runs, groups moved to epos harvesting areas, and by June or July, the family groups scattered into smaller camps to collect camas roots (WIRTH 1988). Temporary sun shelters were constructed by covering poles with tule mats, weeds, or grasses. Circular windbreaks made from sagebrush were temporary shelters that could be constructed in a hurry to provide shelter from the elements. Other structures included utility huts, sun shelters, windbreaks, and sweat lodges. Utility huts were separate cooking areas adjacent to the main dwelling that were also used for storage, women's work areas, and menstrual and birthing huts (Ray 1963).

This seasonal round of movement for the Modoc and the Achumawi resulted in the formation of numerous sites where different recurrent activities took place. Seasonal base camps may have been occupied for several weeks or months, with temporary resource procurement camps occupied anywhere from one to several nights. These small camps may have been surrounded by numerous task-specific sites such as butchering or stone tool manufacturing areas, hunting blinds, or milling sites. At each of

these locations, evidence was left behind that forms the foundation of many ethnographic period archaeological deposits (Gates 2007).

In the case of the Northern Paiute, including the Kidutokado, subsistence followed seasonal and geographic patterns, but the approach was more dispersed and dedicated to foraging. The spring brought spawning fish and bird eggs; the summer, seeds; and the fall, pine nuts. Hunting contributed to the diet year-round, though to a lesser extent than gathering and fishing. Small game and deer were hunted throughout the year (Delacorte et al. 1997). Early ethnographic studies by Stewart (1939, 1941) identified distinct bands within Northern Paiute territory, each of which was typically named for a prominent food source in the area. The Kidutokado were named for the woodchuck on which their diet relied (Stewart 1939).

### *Technology and Material Culture*

The technology and material cultures of the Modoc and the Achumawi were very similar, with only minor differences, often resulting from the preference for locally available raw materials, particularly obsidian. This correspondence is not unexpected given the interaction of the groups and the general similarity of their economic pursuits. Similar technological elements between these groups may represent similar adaptive strategies and are useful to examine as ethnographic analogies when attempting to understand regional prehistory.

The Modoc and the Achumawi employed a diverse range of implements used for hunting large and small game; gathering plants, roots, bulbs, seeds, and fruits; fishing; and processing food. The hunting toolkit included bone and antler tools; flaked stone knives, scrapers, and projectile points; and bows and arrows. Bones and antlers from large animals were important for making tools for cutting and scraping. Sections of antlers were used to flake obsidian to make projectile points. Knives, scrapers, and projectile points were made from obsidian, basalt, and chert. Hunting bows were made from either yew or juniper, and arrows were formed from willow and worked with pumice stone.

Gill-nets with attached tule floats, dip nets, two-pronged spears, hooks and lines, and clubs were used for fishing. Nets enabled them to catch large amounts of suckers at once, and points were attached to shafts to spear individual fish. Chubs, minnows, trout, and eels were caught using gorgets, a bone sharpened on both ends and hung by string tied in the middle. Spears with two prongs were also used for spearing fish from banks, and spears with multiple prongs were used from canoes and rafts. The spear points were made from split pieces of deer leg bone or worked pieces of mountain mahogany. The fish were split, hung on pine racks, and dried for winter storage.

Simple rafts were the main mode of transportation for the Modoc. The Modoc and Achumawi constructed rafts of pine, juniper, and willow-bark planks lashed onto pine frames using tule rope. Canoes made from cedar, pine, or fur were burned and carved using stone tool adzes. Paddles were usually long and narrow, serving as both paddle and oar (Heizer and Whipple 1971; Olmsted and Stewart 1978). Canoes were an expensive item for the Modoc because suitable trees were only present in the extreme eastern part of Modoc territory.

Baskets, moccasins, and house mats were made from tule reeds, cattails, or cattail rushes. Bone awls were used for weaving these baskets and mats. The strong and water-resistant fiber of the nettle plant was used to make the bottom of baskets and for stringing beads. Mortars and pestles were used to process dried meat and cattail roots. Large mortars were made of vesicular lava, and smaller ones were made from lighter, porous volcanic material.

### *Intergroup Relations*

Modoc trade networks may have been in place as early as 5,000 BC. They traded with the Shasta tribe for *Olivella* and dentalium shells, and later traded for colored sandstone and clay, jade, soapstone, and serpentine from the Klamath River. Slaves captured during warfare with neighboring tribes were traded with the Klamath, and the Modoc likely reciprocated with animal skins and basketry. Obsidian quarried from Glass Mountain was traded throughout Northern California (Raven 1984).

The Achumawi were geographically positioned to serve as a trade conduit between peoples to the west and east. Even groups with whom there was conflict, such as the Modoc, were part of the trade network (Milliken 2000:16). Oak trees were abundant along the Pit River, and dried acorn mash was a traded commodity. Objects that indicated wealth among the Achumawi included magnesite cylinders, dentalia, and clamshell beads. Clamshell disk beads were regularly used for currency (Kroeber 1925:311, Woods and Raven 1992:10).

## Madeline Plains Ethnography and Ethnohistory

### *Language and Territory*

In addition to the Kosalektawi, whose territory included the area around the present-day City of Alturas, the Hammawi band of Achumawi also inhabited the Madeline Plains area. Hammawi territory spread out from the valley of the south fork of the Pit River, centered around the present-day town of Likely, including Grouse Mountain to the northwest, Scheffer Mountain and Signal Butte to the north, Warren Peak in the northeast, and the Jess and West Creek valleys in the east (Bevill and Nilsson 2005; McGuire and Nelson 2002).

Ethnographic Mountain Maidu territory spanned an area that stretched from Mount Lassen in the west to the Honey Lake Basin in the east, and south along the Diamond Mountains to the Sierra Buttes, including the area around Lake Almanor. This land includes rugged uplands, rivers, marshes, and open flats. The Mountain Maidu were one of three groups—the Nisenan or Southern Maidu, the Northeastern or Mountain Maidu, and the Konkow—that made up the Maiduan language family, which was related to fellow Penutian languages such as Miwok, Ohlone, Wintun, and Yokuts (McGuire 2007).

The Madeline Plains and Honey Lake area was also inhabited by the smallest of the Northern Paiute bands, the Wadatkuht, whose territory ran from the present-day California–Nevada border along the eastern edge, through the present-day town of Doyle and the Diamond Mountains, then northwards to Horse Lake and McDonald Peak and eastwards to the state line (Delacorte et al. 1997; Riddell 1960).

## *Subsistence and Settlement Patterns*

Hammawi and Mountain Maidu subsistence patterns resembled those of the Modoc and the Achumawi (Section 5.18.1.3, Ethnographic Study). The Maidu gathered numerous fruits, nuts, and roots, including wild plums, strawberries, serviceberries, manzanita, elderberries, pine nuts, walnuts, acorns, yarrow, wild onions, and carrots. The Maidu also hunted waterfowl and collected crabs and duck and goose eggs in wetland areas and around Honey Lake (Shapiro et al. 2005). In particular, Maidu men used dogs to help them in hunting bears for meat and for hides to use in rituals (Delacorte et al. 1997; McGuire 2007; Shapiro et al. 2005).

Maidu villages contained around seven semi-subterranean multifamily houses from 20 to 40 feet in diameter, each holding up to 35 people; during the summer months, when families sallied from the winter villages, they built open-sided pole-and-brush structures (Delacorte et al. 1997). The large houses were built in a conical shape around five structural poles covered with slabs of cedar bark (Evans 1978; Shapiro et al. 2005).

As mentioned previously, Northern Paiute subsistence was more dispersed and dedicated to foraging while still following geographic and seasonal patterns. The spring brought spawning suckers up Long Valley Creek and into Paiute nets; it also brought duck eggs. The summer brought roots and seeds, while acorns (particularly in the Diamon Mountains) and pine nuts were plentiful in the fall. The hunting of deer and small game contributed to the diet year-round, though to a lesser extent than gathering and fishing; a communal antelope drive took place in the spring (Riddell 1960). As mentioned previously, Stewart (1939, 1941) identified the Northern Paiute bands, each of which was typically named for the salient source of food in its area. The wada-seeds of the plants of genus *Suaeda* (including seepweeds and sea-blites) gave the Wadatkuht ("wada-eaters") their name. Wadatkuht winter villages comprised a small number of houses, often fewer than 10, located near water. The conical pole framework was covered by mats of tule or other kinds of brush. During the summer, families constructed simple temporary shelters and windbreaks when they dispersed from the village.

## *Technology and Material Culture*

The technology of the Hammawi and Mountain Maidu resembles that of the Modoc and the Achumawi (Section 5.18.1.3, Ethnographic Study). The Mountain Maidu and the Northern Paiute both used stone projectile points for hunting game and knives and scrapers for processing. They used spears, hooks, nets, and poisons for fishing in lakes and rivers. For processing plant resources, they used groundstone tools, including bedrock mortars and pestles, as well as handstones and milling slabs. The Maidu made nets for fishing, traps for hunting game, and mats from tule. They used willow to make twined conical baskets, seed beaters, children's cradles, and hopper baskets (Shapiro et al. 2005).

The Northern Paiute used bows and arrows, corrals, traps, and other enclosures made of brush, branches, and rocks when hunting game such as deer, antelope, and desert bighorn sheep (Fowler and Liljeblad 1986). They also hunted grouse, waterfowl, marmots, rabbits, porcupines, ground squirrels, and insects using stone projectile points, knives, and scrapers during the process (Stewart 1941). Their approaches to fishing depended on the locale—lake fishing called for hooks and lines, spears, and gill nets, while river fishing required platforms, weirs, and basket traps in addition to nets and spears. Tule

was used in various applications from rafts and fishing nets to mats, roofing material, bags, and clothing. Willow bark and branches went into making baskets, hats, and children's cradles (Fowler and Liljeblad 1986; Stewart 1941; Steward and Wheeler-Voegelin 1974).

## Honey Lake Ethnography and Ethnohistory

The Honey Lake Basin falls within the ethnographic territory of the Mountain Maidu and the Wadatkuht (Section 5.18.3, Ethnographic Study).

### *Honey Lake Basin in the Historic Period*

The Honey Lake Basin has a colorful and storied history. Located in southeastern Lassen County, it was first settled by pioneer Isaac Roop in 1854. Roop had visited the area in 1853 and returned the following year to build a log cabin and a store on the newly opened Nobles Emigrant Trail, an offshoot of the California Trail (Hoover et al. 2002:149). In 1855, Peter Lassen and his traveling companions also built a cabin in the Honey Lake Basin, which was occupied until it burned down in 1896 (Stoll 2004:68). Geographic isolation and the ambiguous, as-yet-unsurveyed border area between California and the Utah Territory contributed to 20 of the original settlers, including Roop and Lassen, forming the "Territory of Nataqua" in 1856 (Davis 1942; Hoover et al. 2002). The territory was 240 miles long and 155 miles wide and included residents of the Carson, Eagle, and Washoe Valleys in present-day Nevada. Ironically, the territory failed to include the Honey Lake Basin, which led to a great deal of ridicule for the founders (Davis 1942:225). In 1857, Nataqua Territory residents petitioned Congress for separation from Utah and official recognition as a territory, and in 1858, while awaiting a decision on their petition, formed a local government, electing Roop as the territory's governor in 1859 (Hoover et al. 2002:149). In 1861, when Congress created the Nevada Territory, the Honey Lake Basin became embroiled in a territorial dispute between Nevada's newly formed Lake County and California's Plumas County that resulted in both counties holding elections in the basin. Territorial tensions escalated in 1863, resulting in a skirmish between Honey Lake residents and Plumas County officials, known as the Sagebrush War. A truce was called after two men were wounded, and in 1864 Lassen County was created, at last settling the issue (Hoover et al. 2002:149).

Early economic and population growth in the Honey Lake Basin was slow, with few permanent settlers outside of the upper end of the valley near Susanville until the late nineteenth century. Susanville (formerly Rooptown), was named after Isaac Roop's daughter and is the Lassen County seat. The Susanville Post Office was established in 1860, and the city was incorporated in 1900 (Durham 1998). Susanville is where Roop and his party first settled upon arrival to the area, and Roop's original log cabin still stands in Susanville's city park (Hoover et al. 2002:149). Slow growth in the area was caused in part by its remote location, severe wet/dry weather cycles that affected water levels in Honey Lake and impacted the raising of livestock and crops, and by violent clashes between settlers and local Native American groups who resisted the arrival of newcomers to their native lands (Stoll 2004:69-71).

While ranching and agriculture, timber, and railroads played a significant economic role in the development of the Honey Lake Basin, much like the Modoc Uplands and Madeline Plains regions discussed above, water management also played a central role and was crucial to the success of those other industries.

### Long Valley Ethnography and Ethnohistory

#### *Language and Territory*

The Washoe language is a member of the Hokan linguistic stock, which includes Pomo, Yuman, and Palaihnihan (d'Azevedo 1986; Downs 1966; Kroeber 1925). The Washoe were thus distinguished from other tribes of the Great Basin, all of whom spoke Numic languages. Ethnographically, Washoe territory centered on Lake Tahoe, from Antelope Valley on the present-day California-Nevada border to Long Valley in the south and the Honey Lake area in the north. Outside of central settlement areas, the Washoe shared resources in their territory with other neighboring groups, including the Wadatkuht of the Honey Lake Basin (d'Azevedo 1986).

#### *Subsistence and Settlement Patterns*

Washoe subsistence regimes incorporated a seasonal round of hunting and gathering, making use of resources available in both the Sierra Nevada Range and the Great Basin (Moratto 1984). Numerous streams and lakes offered access to trout, suckers, and mountain whitefish in great numbers. Early spring brought roots and bulbs, such as bitterroot, camas, and wild onion. Spring also marked the arrival of migratory waterfowl such as ducks, which were hunted and their eggs collected. Seeds and nuts were gathered through the summer and into the fall, with particular emphasis on acorns for groups living near the Diamond Mountains, such as those in Long Valley, or pine nuts for those living in more arid areas to the east (Delacorte et al. 1997). Supplemental foods came from hunting, as single hunters or small groups pursued game like antelope, deer, rabbits, and mountain sheep (Moratto 1984; Delacorte 1997).

Permanent settlements were generally located on high ground in the vicinity of large valleys with access to a wide array of resources. Conical houses 12 to 15 feet in diameter were constructed of a cedar bark covering over a framework of wooden poles; each might hold seven people or more. During parts of the year, small groups or entire families might establish temporary dome-shaped structures of brush while away from the permanent settlement in search of resources. Washoe groups at times ranged as far as Mono Lake in the Sacramento Valley (Barrett 1917; Delacorte et al. 1997; Moratto 1984).

#### *Technology and Material Culture*

Not unlike other groups in northeastern California, the Washoe used a variety of implements in their fishing, hunting, and gathering activities. They employed hook and line, nets, spears, and traps to catch fish. They used flaked stone arrows and bows for hunting. Groundstone implements, including handstones, milling stones, mortars, and pestles, were used to process botanic materials. Willow provided fiber for cordage and basket weaving (Barrett 1917).

## 5.18.2 Regulatory Setting

Approximately 42.6 miles of the proposed alignment pass through federal lands (40.75 miles of BLM lands, 1.76 miles of USFWS lands, and 0.09 miles of Modoc National Forest lands); 5.4 miles are on California state lands (including 2.7 miles of California Department of Fish and Game lands, 2.7 miles of State Lands Commission holdings, and 0.01 mile of other state lands); and the remaining 145.7 miles pass through private or local municipal landholdings.

### 5.18.2.1 Federal

#### National Environmental Policy Act

Encroachment onto federal lands would require discretionary authorization from the respective administering agencies. These encroachment authorizations would likely be in the form of "special use permits." BLM is the NEPA lead agency for the project, with BIA and U.S. Forest Service acting as NEPA cooperating agencies.

NEPA (40 CFR 1500-508) requires that federal projects take into account effects on historic and cultural resources. NEPA Section 1500.1 states the following:

> *(a) The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out the policy. Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of section 101.*
>
> *(b) NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.*
>
> *(c) Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork--even excellent paperwork--but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. These regulations provide the direction to achieve this purpose.*

Following NEPA Section 1500.2:

> *Federal agencies shall to the fullest extent possible:*
>
> *(a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations.*
>
> *(b) Implement procedures to make the NEPA process more useful to decision makers and the public; to reduce paperwork and the accumulation of extraneous background data; and to emphasize real environmental issues and alternatives. Environmental impact*

> *statements shall be concise, clear, and to the point, and shall be supported by evidence that agencies have made the necessary environmental analyses.*
>
> *(c) Integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.*
>
> *(d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment.*
>
> *(e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.*
>
> *(f) Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.*

## National Historic Preservation Act

The project would cross lands managed by federal agencies. Zayo must obtain permits to construct and operate the project through lands managed by these agencies, and the issuance permits are considered federal undertakings subject to the provisions of Section 106 (54 USC Section 306108) of the NHPA and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800). Section 106 of the NHPA requires federal agencies to consider the effects of their proposed actions (undertakings) on historic properties and provides the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Because the project would cross lands under the direct jurisdiction of several federal land-managing agencies, these agencies must be consulted and must comply with Section 106 requirements. The federal lead agency and cooperating agencies would require that Zayo provides the information that they deem necessary to meet their Section 106 obligations.

Regulations at 36 CFR Part 800 provide a process for satisfying the requirements of Section 106 that involves identifying historic properties, determining the effects of an undertaking on historic properties, and resolving adverse effects on historic properties. These activities occur within a consultation process involving the federal agency or agencies, SHPO, and other participants as defined at 36 CFR Part 800.2. BLM is identified as the lead agency for Section 106 compliance for the project.

## National Register of Historic Places

Regulations listed in 36 CFR Part 800.16 define a "historic property" as any prehistoric or historic period district, site, building, structure, or object listed in or eligible for listing in the NRHP. Cultural resources that cannot be avoided by a project must be evaluated according to NRHP criteria listed under 36 CFR Part 60.4, which states the following:

> *The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and*
>
> *(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or*
>
> *(b) that are associated with the lives of persons significant in our past; or*
>
> *(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
>
> *(d) that have yielded, or may be likely to yield, information important in prehistory or history.*
>
> *A cultural resource that meets one or more of the above criteria and retains integrity sufficient to convey its significance may be determined to be eligible for listing in the NRHP.*

A property of traditional or Native American religious and cultural importance, known as TCP per Section 101(d)(6)(A) of the NHPA, can also be evaluated for eligibility and listed in the NRHP. The TCP must be a physical property or place, must retain integrity, and must meet one of the four basic NRHP criteria per 36 CFR Part 60.4. Such properties are usually found to be NRHP-eligible under 36 CFR 60.4(a) or for their association with important events that have made contributions to the broad patterns of local or regional Native American history. The identification and evaluation of TCPs involves obtaining information from contemporary tribes regarding traditional values that are represented by cultural resources. The TCP concept is presented in National Register Bulletin 38 (Parker and King 1990). A TCP is defined as property eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are noted in that community's history, and (b) are important in maintaining the continuity of the community (Parker and King 1990:1).

A cultural landscape is a geographic area, including both cultural and natural resources, associated with an historic event, activity, or person or exhibiting other cultural or aesthetic values (Birnbaum 1993). One of the types of cultural landscapes is an ethnographic landscape, which Birnbaum (1996:5) describes as a landscape containing a variety of natural and cultural resources that associated people define as heritage resources. Examples are contemporary settlements, sacred religious sites, and massive geological features. Small plant communities, animals, subsistence and ceremonial grounds are often components of heritage resources.

The evidence of human activity associated with cultural landscapes is examined through eleven landscape characteristics, which are land uses and activities, patterns of spatial organization, response to the natural environment, cultural traditions, circulation networks, boundary demarcations, vegetation related to land use, buildings/structures/objects, clusters, archaeological sites, and small scale elements.

Consultation is a significant part of the Section 106 process, and regulations under 36 CFR Part 800.2(c)(2) outline the steps that federal lead agencies must take in consulting with federally recognized tribes on tribal and other lands. Non-federally recognized tribes with concerns about an undertaking's effects on historic properties are often invited to participate as "additional consulting parties" under 36 CFR Part 800.2(c)(5).

### 5.18.2.2 State

#### California Environmental Quality Act

For projects financed or approved by public agencies, CEQA requires that the effects of a project on historical resources be assessed. "Historical resources" are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance.

Under CEQA guidelines, an impact is considered significant if a project will have an effect that may change the significance of a resource (PRC Section 21084.1). Actions that would change the significance of a historical resource include demolition, replacement, substantial alteration and/or relocation of historical properties. Before the significance of impacts can be determined and mitigation measures developed, the significance of cultural resources must be determined.

PRC Subsection 21074 defines TCRs as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion on the CRHR or included in a local register of historical resources. Examples of TCRs include a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world; and a location where Native American religious practitioners have historically gone and are known or thought to go today to perform ceremonial activities in accordance with traditional cultural rules of practice.

TCR is a term defined at PRC Section 21074.

> *(a) "Tribal cultural resources" are either of the following:*
>
> > *(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:*
> >
> > > *(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.*
> > >
> > > *(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.*
> >
> > *(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.*

> *(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.*
>
> *(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).*

"Effects on tribal cultural resources" are described at PRC Section 21084.2. A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. Therefore, Section 21084.3 states the following:

> *(a) Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.*
>
> *(b) If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in Section 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:*
>
> > *(1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.*
> >
> > *(2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:*
>
> *(A) Protecting the cultural character and integrity of the resource.*
>
> *(B) Protecting the traditional use of the resource.*
>
> *(C) Protecting the confidentiality of the resource.*
>
> > *(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.*
>
> *(4) Protecting the resource.*

A basis for defining the significance of historical resources under CEQA may be found in PRC 5024.1, Title 14 CCR Section 4850.3. CRHR was established "to identify the state's historical resources and indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Historical resources may be listed in the CRHR if they meet the eligibility criteria for listing in the

register as defined at PRC 5024.1, Title 14 CCR Section 4850.3. According to CEQA Guidelines Section 15064.5(a) (3), "a resource shall be considered by the lead agency to be 'historically significant' if the resource has integrity and meets at least one of the criteria for listing in the California Register of Historic Resources."

Integrity describes the degree to which a resource's defining characteristics persist, and it is assessed in terms of retention of location, design, setting, materials, workmanship, feeling, and association. To maintain integrity, a resource must possess at least some of these aspects. A historical resource may have lost sufficient integrity to be eligible for listing in the NRHP and yet still be eligible for listing on the CRHR. A resource may have lost its historic character and yet still be eligible for listing on the CRHR if it has the potential to yield significant scientific or historical information or specific data.

A project that may cause a substantial adverse change to the significance of a historical resource is considered to have a significant adverse impact on the environment (CEQA Guidelines Section 15064.5[4][b]). A substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5[4][b][1]).

## California Register of Historical Resources

CEQA requires lead agencies to consider the potential impacts of a project on historical resources. "Historical resources" may include but are not limited to any object, building, structure, site, area, place, record, or manuscript that is considered historically or archaeologically significant (PRC Section 5020.1). Generally, a resource would be considered historically significant if it is listed or is eligible for listing in the CRHR. Per PRC Section 5024.1, a resource may be listed as a historical resource in the CRHR if it meets any of the following criteria:

(1) It is associated with events that have made a contribution to the broad patterns of California history;

(2) It is associated with the lives of persons important in our past;

(3) It embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important individual or possesses high artistic values; or

(4) The resource has yielded, or may be likely to yield, important information in prehistory or history.

These criteria mirror those NRHP criteria found under 36 CFR Part 60.4. The CRHR was created to identify important cultural resources and to indicate what properties would be subject to protection from substantial adverse change to the extent prudent and feasible. Certain resources are automatically included in the CRHR, including California properties listed or determined to be eligible for listing in the NRHP, California Historical Landmarks numbers 770 and above, and California Points of Historical Interest.

Tribal Cultural Resources

Per CEQA Guidelines Section 15064.5[b], project activities may have a significant impact on the environment if they would cause a substantial adverse change in the significance of a historical resource. Activities that could result in a substantial adverse change include demolition, replacement, substantial alteration, or relocation of the resource. Steps that must be implemented to comply with CEQA Guidelines include the identification of cultural resources that may be impacted by a project; the evaluation of cultural resources that cannot be avoided by a project based on established thresholds of historical, architectural, archaeological, cultural, or scientific importance; the evaluation of the effects of a project on historical resources; and the development and implementation of measures to mitigate the effects of the project on historical resources or unique archaeological resources as defined under PRC Section 21083.2.

The State Office of Historic Preservation (OHP) has broad authority under federal and state law regarding the implementation of historic preservation programs within California. The SHPO comments on effect determinations and the eligibility of cultural resources for listing in the NRHP and CRHR.

The California Governor's Office of Planning and Research offers guidance on procedures to identify historical resources, evaluate their importance and potential for listing in the CRHR, and estimate potential impacts on historical resources. The advice series strongly recommends that Native American concerns and the concerns of other interested parties be solicited as part of the cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains.

### 5.18.2.3 Local

#### Lassen County General Plan

Lassen County's General Plan does not discuss cultural resources (Lassen County 1999, as amended).

#### Modoc County General Plan

*Historic and Cultural Resources*

Prehistoric and historic archaeological sites of the Native American Modoc and Achumawi are central to the understanding and interpretation of the Native American cultural heritage of Modoc County. Early settler-Indian battle sites, many of which are registered as State Historical landmarks, give testimony to the historical interactions and conflicts between Native American culture and Euro-American culture (Modoc County 1988, as amended).

#### Sierra County General Plan

**Cultural Resources Goal:** Identify and protect the cultural, historical and archaeological resources of Sierra County recognizing that the historic structures, archaeological sites, and cultural resources centered upon the County's agricultural, mineral and forest setting is the link to the County's past and should continue to define the future.

Since all of the County's cultural resources have not been (and may never be) located, it is important to recognize areas with potential sensitivity for cultural resources (Sierra County 1996, as amended).

## 5.18.3 Impact Questions

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

Note:

TBD = To Be Determined: The CPUC will conduct outreach with eligible tribes under Public Resources Code Section 21080.3.1 once the application is complete.

## 5.18.4 Impact Analysis

**a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

**Impact to be determined by CPUC.** The CPUC will consult with eligible tribes under PRC Section 21080.3.1 once the application is complete. Impacts on TCRs are not addressed in this PEA because under AB 52, the CPUC must identify these resources during consultation. However, the applicant conducted outreach and informal coordination with Native American tribes requesting information regarding the potential for sensitive Native American resources, including TCRs. Federal and state

registers were also reviewed to identify any TCRs that are already formally listed. Results of the records searches indicate that Native American cultural resources that there might be TCRs that are known within or in the immediate vicinity of the project area. A potential impact would occur if an TCR is located within the ADI. The applicant would avoid known TCRs to the greatest extent possible with APM CR-1 and APM CR-2. Possible avoidance measures include rerouting the alignment in or near the US 395 road shoulder in areas of fill or prior disturbance or directionally boring and placing the fiber optic line conduit under sites to a minimum depth of 2 meters below surface or 1 meter below maximum depth of known resource.

Where resources cannot be avoided per APM CR-1 and APM CR-2, archeological test excavations and data recovery limited to areas of impact may be implemented. While informal consultation with the tribes did not identify any potential TCRs, CPUC will conduct formal consultation under AB 52 to determine potential TCRs within the project area (APM TCR-1). If necessary, the applicant will retain a professional ethnographic consultant to undertake a detailed recordation of any locations considered important to the tribe (APM TCR-2). As outlined in Section 5.5, Cultural Resources, APMs CR-1 through CR-8 and APM TCR-1 through TCR-2 would avoid impacts to potential TCRs.

**b) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

**Impact to be determined by CPUC.** The CPUC would consult with eligible tribes under PRC Section 21080.3.1 once the application is complete. Impacts on TCRs are not addressed in this PEA because under AB 52, the CPUC must identify these resources during consultation. However, the applicant conducted outreach and informal coordination with Native American tribes requesting information regarding the potential for sensitive Native American resources, including TCRs. Federal and state registers were also reviewed to identify any TCRs that are already formally listed. Results of the records searches indicate that Native American cultural resources that might be TCRs are known within or in the immediate vicinity of the project area. However, the lead agency has not yet conducted formal consultation under AB 52, and thus, no TCRs have been identified per Section 5024.1: the lead agency shall consider the significance of the resource to a California Native American tribe. A potential impact would occur if an TCR is located within the ADI. The applicant would avoid known TCRs to the greatest extent possible with APM CR 1 and APM CR 2. Possible avoidance measures include rerouting the alignment in or near the US 395 road shoulder in areas of fill or prior disturbance or directionally boring and placing the fiber optic line conduit under sites to a minimum depth of 2 meters below surface or 1 meter below maximum depth of known resource.

Where resources cannot be avoided per APM CR 1 and APM CR 2, archeological test excavations and data recovery limited to areas of impact may be implemented. While informal consultation with the tribes did not identify any potential TCRs, CPUC will conduct formal consultation under AB 52 to determine potential TCRs within the project area (APM TCR-1). If necessary, the applicant will retain a professional ethnographic consultant to undertake a detailed recordation of any locations considered important to the tribe (APM TCR-2). As outlined in Section 5.5, Cultural Resources, APMs CR-1 through CR-8 and APM TCR-1 through TCR-2 would avoid impacts to potential TCRs.

## 5.18.5 Draft Environmental Measures

### Applicant Proposed Measures

**APM TCR-1: Consultation**

If necessary, the applicant will assist the California Public Utilities Commission CPUC in Assembly Bill (AB) 52 consultation with Native Americans regarding traditional cultural values that may be associated with archaeological resources. Archaeological or other cultural resources associated with the project may have cultural values ascribed to them by Native Americans. The applicant will assist the CPUC during consultation with Native Americans regarding evaluations of resources with Native American cultural remains.

**APM TCR 2: Prepare Ethnographic Study on TCR**

If necessary, the applicant will retain a professional ethnographic consultant to undertake a detailed recordation of any locations considered important to the tribe. The recordation will commence prior to construction and will include photographic documentation of pre- and post-construction conditions of any identified culturally sensitive location.

The information gathered as a result of field, interview, and research tasks will be compiled into a report that will be transmitted to the Tribe. The Tribe will have the right to submit the report to the California Historical Resources Information System. Detailed recordation of any ethnographic location in this manner will create a photographic and written record of the cultural resource prior to construction of the proposed project, resulting in partial compensation for project impacts.

**APM CR-1**: **Avoid and Minimize Impacts to Significant or Potentially Significant Cultural Resources.**

See Section 5.5, Cultural Resources.

**APM CR-2: Design Avoidance.**

See Section 5.5, Cultural Resources.

**APM CR-3: Conduct a Pre-Construction Worker Education Awareness Program**.

See Section 5.5, Cultural Resources.

Tribal Cultural Resources

**APM CR-4: Evaluate the Significance of All Cultural Resources That Cannot Be Avoided**.

See Section 5.5, Cultural Resources.

**APM CR-5: Implement Measures to Minimize Impacts to Significant Archaeological Sites.**

See Section 5.5, Cultural Resources.

**APM CR-7: Prepare and Implement a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan**

See Section 5.5, Cultural Resources.

**APM CR-8: Inadvertent Discovery of Human Remains Unanticipated Discovery.**

See Section 5.5, Cultural Resources.

# 5.19 UTILITIES AND SERVICE SYSTEMS

This section describes the existing utilities and service systems in the vicinity of the project and analyzes potential utilities and service system impacts associated with the construction, operation, and decommissioning of the project. This section also describes environmental and regulatory settings. The project would not result in significant impacts to water, wastewater, telecommunications, electrical power, or solid waste capacity or infrastructure and would not increase the rate of corrosion of adjacent utilities lines.

## 5.19.1 Environmental Setting

### 5.19.1.1 Utility Providers

Utility providers serving the project area are summarized in each subsection below.

#### Electrical Power

Electrical power in Modoc and Lassen Counties is largely provided by Surprise Valley Electric (and energy co-op). In addition, Lassen Municipal Utility District provides electricity to Lassen County. Additionally, Pacific Power and Light, which is an Oregon-based company, serves portions of Modoc County, including the City of Alturas. Electricity within the portion of the project area within Sierra County is provided by Plus-Sierra Rural Electric Cooperative (Lassen Municipal Utility District 2020).

#### Natural Gas

Natural gas in Modoc, Lassen, and Sierra Counties is provided by a variety of private and public sources. Natural gas in Modoc County is largely provided by Bethel's. Natural gas in Lassen County is provided by Lassen Plus Gas Service, Ferrellgas, Susanville Gas Department, West Coast Gas, and others. Natural gas in Sierra County is provided by High Sierra Gas, Southwest Gas Corporation, Suburban Propane, and others.

#### Wastewater

Much of the Modoc, Lassen, and Sierra County areas along the project consist of rural landscapes that do not have existing public wastewater collection systems but rather rely on septic systems to treat and discharge wastewater at individual residences. The more developed communities along the project have established wastewater and sewer collection and treatment services. The City of Alturas Public Works Sewer Department collects and treats water for approximately 3,000 people within the city with 22.9 miles of gravity pipelines that collects and the wastewater and ultimately treats it at the Alturas Wastewater Treatment Plant (City of Alturas 2019).

### 5.19.1.2 Utility Lines

A number of existing utilities and planned utility projects are located within the US 395 right-of-way. Table 7.1-1 in Section 7.1, Cumulative Impacts, summarizes these projects and utilities. The exact locations of

existing, buried utilities, including GIS data and as-builts, could not be obtained because of privacy and security reasons. However, prior to mobilization, the construction contractor would call in a DigAlert in compliance with utility regulations to confirm the locations of existing utilities that may be within work areas. Prior to conduit installation, the contractor would locate existing utilities using a vacuum truck or via hand tools to safely expose their location.

### 5.19.1.3 Approved Utility Projects

As discussed further in Section 7.0, Cumulative and Other CEQA Considerations, there are several other current and future utility projects anticipated to occur within two miles of the project. Table 7.1-1 in Section 7.1, Cumulative Impacts, contains the full list of these projects as well as the descriptions of each project and the approximate locations and distance to the project. The majority of these projects are related to transportation infrastructure, with one development project. There are no other electrical power line or telecommunication projects anticipated in the project area.

### 5.19.1.4 Water Supplies

Water suppliers in Modoc, Lassen, and Sierra Counties vary based on location and number of people served. Most residences use private water wells, especially in more remote areas of each of these counties. Water systems and suppliers in each county is provided in further detail below.

#### Modoc County

According to the Modoc County General Plan, Modoc County has approximately 248 square miles of water area in the county, which is the second highest water coverage in California. There are six major lakes in the county and 31 reservoirs with a greater than 1,000-acre feet capacity (Modoc County 1988, as amended).

Water supplies to many residents in Modoc County is provided through private wells. Other organized water supplies in Modoc County include the following (Environmental Working Group 2020a):

- City of Alturas (serves 3,231 people)
- Cedarville County Water District (serves 800 people)
- California Pines (serves 450 people)
- Newell County Water District (serves 300 people)
- I'sot Well #3 and #15 (serves 135 people)
- Butte Creek Trailer Park (serves 25 people)
- Cedarville Trailer Park (serves 25 people)

#### Lassen County

According to the Lassen County General Plan, much of Lassen County is arid and receives and average of less than five inches or rain per year, thus water is a critical resource in the County (Lassen County 1999, as amended). Agricultural uses have further put a strain on water supplies in the county.

Water supplies to many residents in Lassen County is provided through private wells, however, other organized water supplies in Lassen County include the following (Environmental Working Group 2020b):

- City of Susanville (serves 8,892 people)
- High Desert State Prison (serves 4,924 people)
- Lake Almanor County Club (serves 3,000 people)
- Westwood Community Services District (serves 2,000 people)
- Hamilton Branch Community Services District (serves 1,425 people)
- Leavitt Lake Community Services District (serves 950 people)
- Lake Forest Mutual Water Company (serves 850 people)
- Clear Creek Community Services District (serves 400 people)
- Lassen County Water District #1 (serves 350 people)
- Susan Hills Estates Water Company (serves 250 people)
- Spaulding Hills Estates Water Company (serves 120 people)
- Pineview Mobile Home Park (serves 100 people)
- Herlong Mobile Home Park (serves 100 people)
- Little Valley Community Services District (serves 50 people)
- Lassen Mobile Home Park (serves 30 people)
- Susan River Park Water Company (serves 26 people)

### Sierra County

Due to the location and diversity of topography and landscape in Sierra County, water resources and supplies vary throughout the county with higher water supplies located in the mountainous and sierra environments and lower water supplies available in the foothill environments. Water supplies to many residents in Sierra County is provided through private wells; however, other organized water supplies in Sierra County include the following (Environmental Working Group 2020c):

- City of Loyalton (serves 930 people)
- Sierra Brooks Public Services District (serves 465 people)
- Sierraville Public utilities District (serves 350 people)
- Downieville Public Utilities District (serves 325 people)
- Sierra Company #1 (serves 200 people)
- R.R. Lewis Small Water Company (serves 200 people)
- Alleghany County Water District (serves 125 people)
- Sierra City Water Works Inc. (serves 60 people)
- Mountain View Mobile (serves 45 people)
- Greene Acres Prop (serves 35 people)
- Central Town Water System (serves 22 people)

## 5.19.1.5 Landfills and Recycling

Table 5.19-1 shows the active landfills near the project site (i.e., within 20 miles) that would be able to accept construction debris and materials. In addition to the below landfills there are also several transfer

stations directly adjacent to US 395 in Modoc and Lassen Counties and one transfer station, the Loyalton Transfer Station, in Sierra County near the project.

### Table 5.19-1: Active Landfills Near Project Area

| Landfill Name | Distance to Project | Maximum Permitted Capacity (cy) | Capacity Remaining (cy) |
|---|---|---|---|
| **Modoc County** | | | |
| Alturas Sanitary Landfill | 0.77-mile | 1,600,000 | 176,931 |
| **Lassen County** | | | |
| Bass Hill Landfill | 600 feet | 2,150,000 | 603,404 |
| Westwood Landfill | 20 miles | 89,369 | 62,207 |
| **Sierra County** | | | |
| None | - | - | - |

Note:
cy = cubic yards
Sources: CalRecycle 2020a, b, c

In addition to the above landfills and transfer stations, there are also several recycling centers that occur adjacent to the project that could be used to dispose of certain construction debris. These recycling centers include the following:

- Holdorff's Recycling Center (Alturas, California)
- Bigfoot Recycling (Susanville, California)
- Bullseye Recycling (Susanville, California)

## 5.19.2 Regulatory Setting

### 5.19.2.1 Federal

There are no federal regulations pertaining to utilities and service systems that are relevant to the project.

### 5.19.2.2 State

#### California Government Code

California Government Code Sections 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Anyone seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for Northern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

### California Constitution, Article X

Article X (10), Section 2, of the California Constitution recognizes the need to put the state's water resources to maximum beneficial use:

> *It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.*

### California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50-percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. They must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to $10,000 per day fines.

## 5.19.2.3 Local

Because CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local utilities and service system regulations or discretionary permits. This section identifies local utilities regulations for informational purposes and to assist with CEQA review.

### Modoc County General Plan

The Modoc County General Plan was adopted in September 1988; however, it does not contain any utilities and services system goals or policies that are relevant to the project (Modoc County 1988, as amended).

### Lassen County General Plan

The Lassen County General Plan was adopted in September of 1999 and includes the following goals related to utilities and service systems that are relevant to the project (Lassen County 1999, as amended):

- **Goal N-3**: Water Supplies of sufficient quality and quantity to serve the needs of Lassen County, now and in the future.
    - **Policy NR-13:** The County recognizes the critical importance and future value of its water resources and shall support the conservation of water supplies and protection of water quality.

### Sierra County General Plan

The Sierra County General Plan was first adopted in 1996 and includes the following goals and policies related to utilities and service systems that are relevant to the project (Sierra County 1996, as amended):

- **Goal 1:** It is the County's goal to protect and maintain its water resources for the benefit of County residents and natural habitats and to assure protection of its watersheds as a primary land use constraint.

### City of Alturas

The City of Alturas General Plan was first adopted in June 1987 (City of Alturas 1987, as amended). There are no utilities or service systems goals or policies in the City of Alturas General Plan that are relevant to the project.

## 5.19.3 Impact Questions

| Would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | ☐ | ☐ | ☒ | ☐ |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the Provider's existing commitments? | ☐ | ☐ | ☒ | ☐ |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | ☐ | ☐ | ☒ | ☐ |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ |
| f) Would the project increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts? | ☐ | ☐ | ☐ | ☒ |

## 5.19.4 Impact Analysis

**a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

**Less Than Significant Impact.** Implementation of the project would result in the construction and operation of a new fiber optic line to improve the quality of rural broadband in underserved communities. The project would not require the construction of new or expanded water, stormwater drainage, electrical power, or natural gas facilities. Although project construction would require the use of water and wastewater facilities by construction workers, this use would be temporary and short-term. The project would not require relocation or construction of new or expanded electric utility facilities. Zayo would implement APM UTL-1, which would require Zayo to notify other utility companies to locate and mark existing underground structures at proposed work areas prior to any excavation activities. Therefore, implementation of the project would result in a less than significant impact.

**b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

**Less Than Significant Impact**. Construction of the project would require water for dust control, clean-up, and soil compaction along the running line. As discussed in Section 3.0, Proposed Project Description, approximately 18,000 gallons of water would be used each day during construction for dust control and fire response, with the assumption of three construction crews working concurrently along the project alignment. Therefore, the total water needed over the approximately 6-month construction period would equate to approximately 2.7 million gallons of water. Water would be obtained from local municipal sources via existing water rights and would be trucked to the project sites. As discussed in Section 5.19.1, Environmental Setting, there are a number of public water systems and suppliers in Modoc, Lassen, and Sierra Counties from which water could be purchased and used onsite during construction activities. The chosen contractor would likely choose the closest water supplier that has adequate capacity and availability of water to serve the project's needs, depending on the location along the running line. Water requirements for construction would be temporary, lasting approximately 6 months, and would result in a total of 2.7 million gallons of water (i.e., roughly the size of four Olympic sized swimming pools). Therefore, construction activities would purchase water from water suppliers with adequate capacity, and use of water would be temporary and finite, resulting in a less than significant impact related to water supplies during normal, dry, and multiple dry years.

Once constructed, the project would not require any operational water use and would not result in any long-term impacts related to water consumption. Therefore, there would be no operational impact related to water supplies during normal, dry, and multiple dry years.

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

**Less Than Significant Impact.** Wastewater produced as a result of the project would be limited to construction activities associated with the placement or the new fiber optic cable. As discussed in Section 5.19.1, Environmental Setting, there are limited wastewater treatment providers in the project area because of the rural nature of most of the project area. Most of the liquid waste associated with construction of the project would occur in the form of bentonite (clay-based) drilling fluid, which is not considered a hazardous material and would not require special disposal procedures. At each bore location, any excess drilling fluid that seeps from the bore hole would be captured in exit pits and siphoned into a holding tank to be reused or properly disposed of. It is anticipated that the majority of this wastewater could be reused onsite; if not, it could be disposed of at one of the landfill locations listed in Table 5.19-1. Additionally, portable toilets would be provided for construction workers during construction. All sanitary waste from these portable toilets would be disposed of at appropriately licensed facilities that contract these portable toilets and would not result in noticeable capacity increases at any wastewater facility. Therefore, construction of the project would result in a less than significant impact related to wastewater treatment capacity.

Once constructed, the project would largely be located underground and would not include uses that could generate wastewater. Therefore, operation of the project would result in no impact to wastewater treatment capacity.

**d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

**Less Than Significant Impact.** Construction activities related to the project would generate a certain amount of waste, including environmentally non-hazardous materials. Items such as cable trimmings, package materials, etc. would necessitate proper handling and disposal methods. Additionally, the project would also generate solid waste from the food, glass, paper, plastic, and packing materials consumed by the up to 48 construction workers (approximately eight crews of six people) who would be onsite during periods of peak construction activity. The volume of waste generated is expected to be minimal for the project due to the type of construction activities and the linear nature of the project.

All construction-related waste materials would be properly disposed of in one of the landfills or recycling centers nearby the project, and dumpsters for construction waste would be provided at materials storage yards for temporary storage prior to transport to a licensed local waste management or recycling facility. Table 5.19-1 lists the currently active landfills in close proximity (i.e., within 20 miles) of the project site. These landfills have adequate capacity remaining to serve the minimal construction waste anticipated for the project. Due to the linear nature of the project, the construction crews would likely choose the closest landfill to construction activities to limit travel time and consumption of other resources, such as gasoline and diesel fuel. However, to be in compliance with state solid waste reduction goals, specifically AB 939,

25-percent of all solid waste should be diverted from landfill facilities. Therefore, to ensure that the project is consistent with this state waste reduction goal, APM UTL-2 would be required to divert recyclable construction waste from local landfills to recycling facilities, where possible. APM UTL-2 would require specific bins be placed within each construction work area and would require signage for workers to identify where recyclable materials should be placed. Therefore, with the implementation of APM UTL-2, impacts associated with short-term waste disposal during construction would be reduced to a less than significant level.

Once constructed, the project would in involve the operation of the fiber optic line and would not involve any ongoing waste producing activities. Therefore, there would be no operational impact related to generation of solid waste in excess of standards or capacities of local landfills.

**e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

**Less than Significant Impact.** As discussed under impact criterion 'd,' the project would result in minor amounts of waste from construction activities. Construction debris could possibly include glass, metal, wood and cardboard packaging, and HDPE conduit remnants. Once in operation, potential solid waste generated may consist of replaced parts and equipment and plants and planting materials cleared during routine maintenance, which would be removed and taken offsite for disposal. Waste from construction activities is expected to be minimal due to the type of project; however, to be in compliance with state reduction goals such as AB 939, 25 percent of all waste should be diverted from landfills. The project would comply with this reduction goal through implementation of APM UTL-2, which would require collecting recycling onsite and disposing of it at a recycling facility rather than at the landfills. Therefore, with implementation of APM UTL-2, the Applicant and chosen contractor would comply with all federal, state, and local statutes and regulations related to solid waste, and the impact would be considered less than significant.

Once constructed, the project would involve the operation of the fiber optic line and would not involve any ongoing waste-producing activities. Therefore, there would be no operational impacts related to compliance with federal. state, and local solid waste management and reduction regulations.

**f) Would the project increase the rate of corrosion of adjacent utility lines as a result of alternating current impacts?**

**No Impact.** Since the project itself includes the placement of a fiber optic line underground within existing roadway right-of-way, it would not provide a source of alternating current. The placement of the fiber optic line would be located away from any utility lines, if present, and would not cause corrosion. Additionally, the fiber optic line would be shielded with three 3.2-centimeter-diameter HDPE, which would prevent the cable from interacting with any nearby metallic objects. Therefore, the project would result in no impact related to corrosion of adjacent utility lines.

## 5.19.5 Draft Environmental Measures

### Applicant Proposed Measures

#### APM UTL-1: Utility Company Coordination

The applicant shall notify all utility companies with utilities located within or crossing the project right-of-way to locate and mark existing underground utilities along the entire length of the project at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.

#### APM UTL-2: Recycling of Construction Materials

During construction activities, the contractor shall use recycling centers for materials that can be recycled, rather than hauling all materials to landfills. Materials that could be recycled may include plastics, paper, and cans and bottles. At each construction site, a designated container or vessel shall be set up at the beginning of construction activities with appropriate signage indicating where construction workers should place recyclable materials.

# 5.20 WILDFIRE

This section describes the existing wildfire conditions in the vicinity of the project and analyzes potential wildfire impacts associated with the construction, operation, and maintenance of the project. This section also describes environmental and regulatory settings.

## 5.20.1 Environmental Setting

### 5.20.1.1 High Fire Risk Areas and State Responsibility Areas

Table 5.20-1 and Figure 5.20-1 identifies the mapped linear miles of high fire risk or SRAs that fall within the running line of the project. Areas mapped as FRAs, SRAs, or LRAs are the responsibility of the federal, state, or local fire departments, respectively. These areas constitute land where the various entities (federal, state, or local district) are financially responsible for the prevention and suppression of wildfires. This table also indicates areas mapped by the CPUC as either moderate or high fire threat districts, as well as areas mapped by the CAL FIRE as FHSZs. The applicant has not independently mapped any areas as high FHSZ.

**Table 5.20-1: Linear Miles of Wildfire Designations Intersecting with Running Line**

| Type | Lassen County | Modoc County | Sierra County | Total |
|---|---|---|---|---|
| Jurisdiction | | | | |
| Local Responsibility Area | 32.43 | 18.88 | 0 | 51.31 |
| State Responsibility Area | 64.98 | 32.36 | 3.10 | 100.44 |
| Federal Responsibility Area | 32.14 | 10.04 | 0 | 42.18 |
| **Grand Total** | **129.55** | **61.28** | **3.10** | **193.93** |
| CPUC Fire Threat District | | | | |
| CPUC Fire Threat District | 55.60 | 6.54 | 3.06 | **65.2** |
| CalFire Fire Severity Zones | | | | |
| CalFire Very High FHSZ | 0 | 0.16 | 0 | 0.16 |
| CalFire High FHSZ | 0 | 12.30 | 0 | 12.30 |
| CalFire Moderate FHSZ | 63.22 | 15.41 | 3.13 | 81.76 |
| **Grand Total** | **63.22** | **27.87** | **3.13** | **94.22** |

CPUC = California Public Utilities Commission

Source: CPUC 2020; CAL FIRE 2007, 2018, 2020

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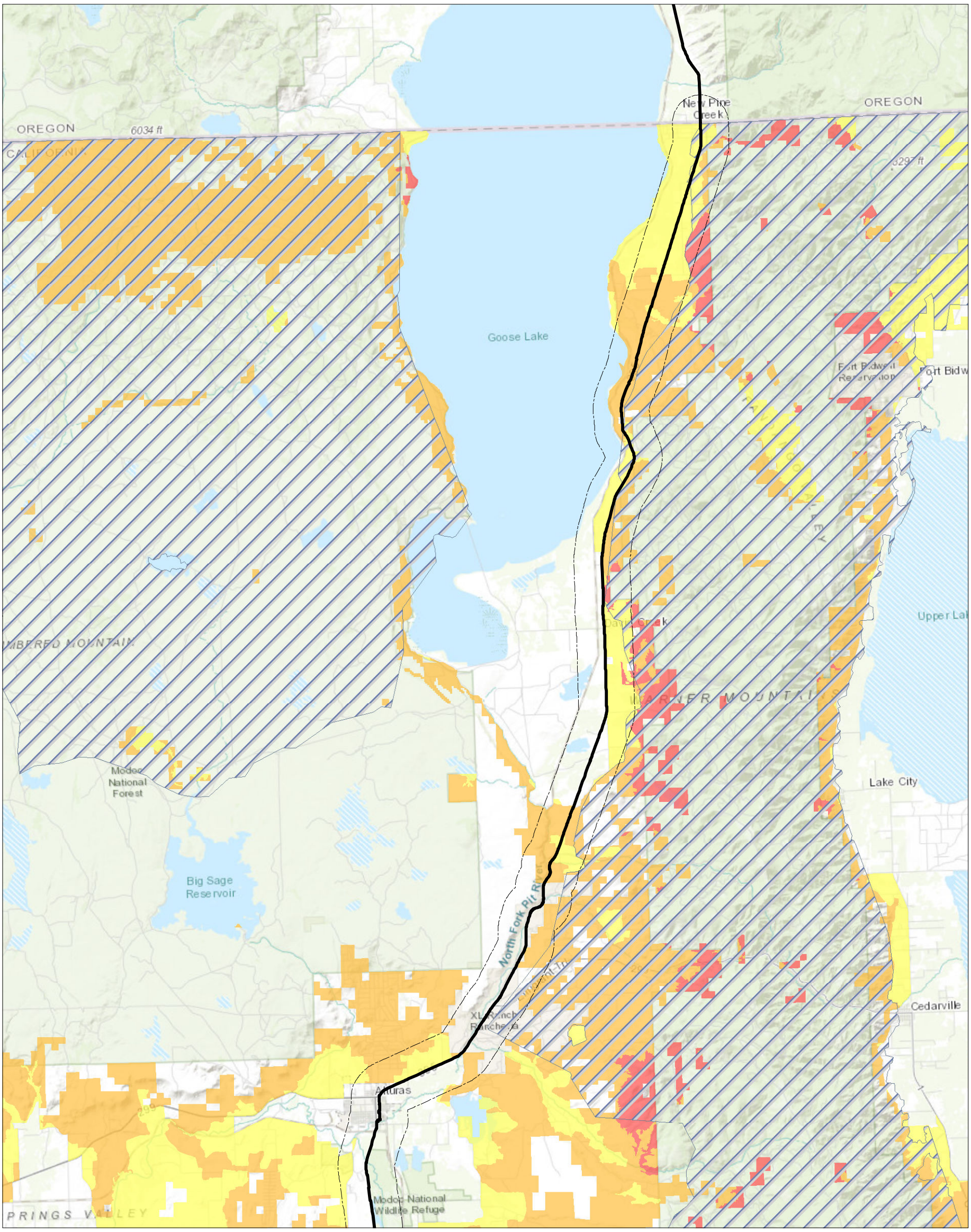


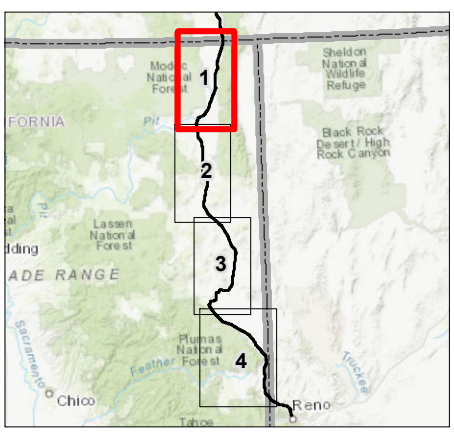


CPUC Fire Threat

Tier 2

FIRE HAZARD SEVERITY ZONES in State Responsibility Area (SRA)

- Moderate
- High
- Very High
- Alignment
- 1-mile Buffer

0 2.5 5 Miles

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N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011
Prepared by JC on 2020-05-20
Technical Review by PM on 2020-05-20
Independent Review by CS on 2020-05-20

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**5.20-1**

Title
**Wildfire Hazards within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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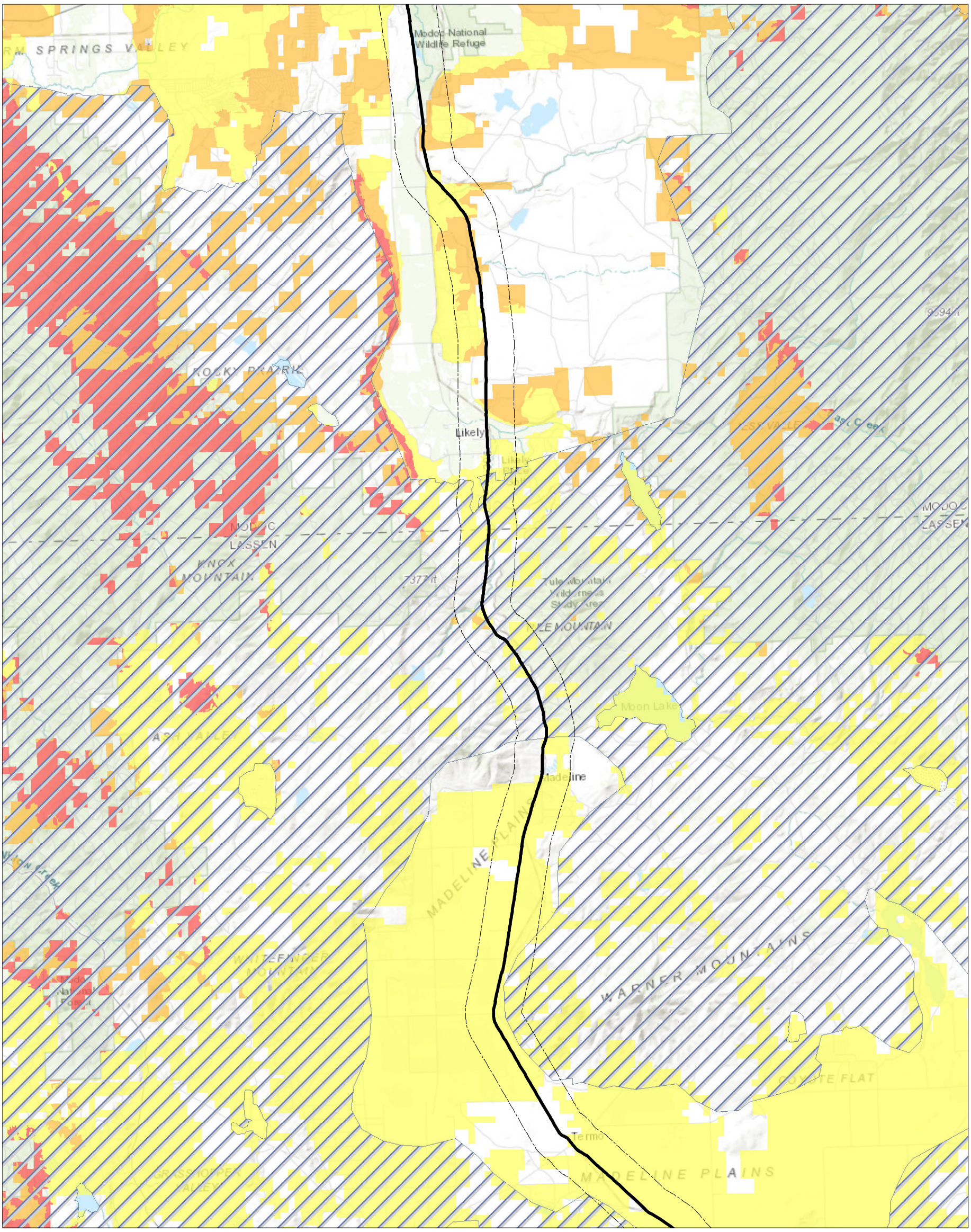


CPUC Fire Threat

- Tier 2

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Fiber Optic Line--Prineville to Reno

Figure No.
**5.20-1**

Title
**Wildfire Hazards within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
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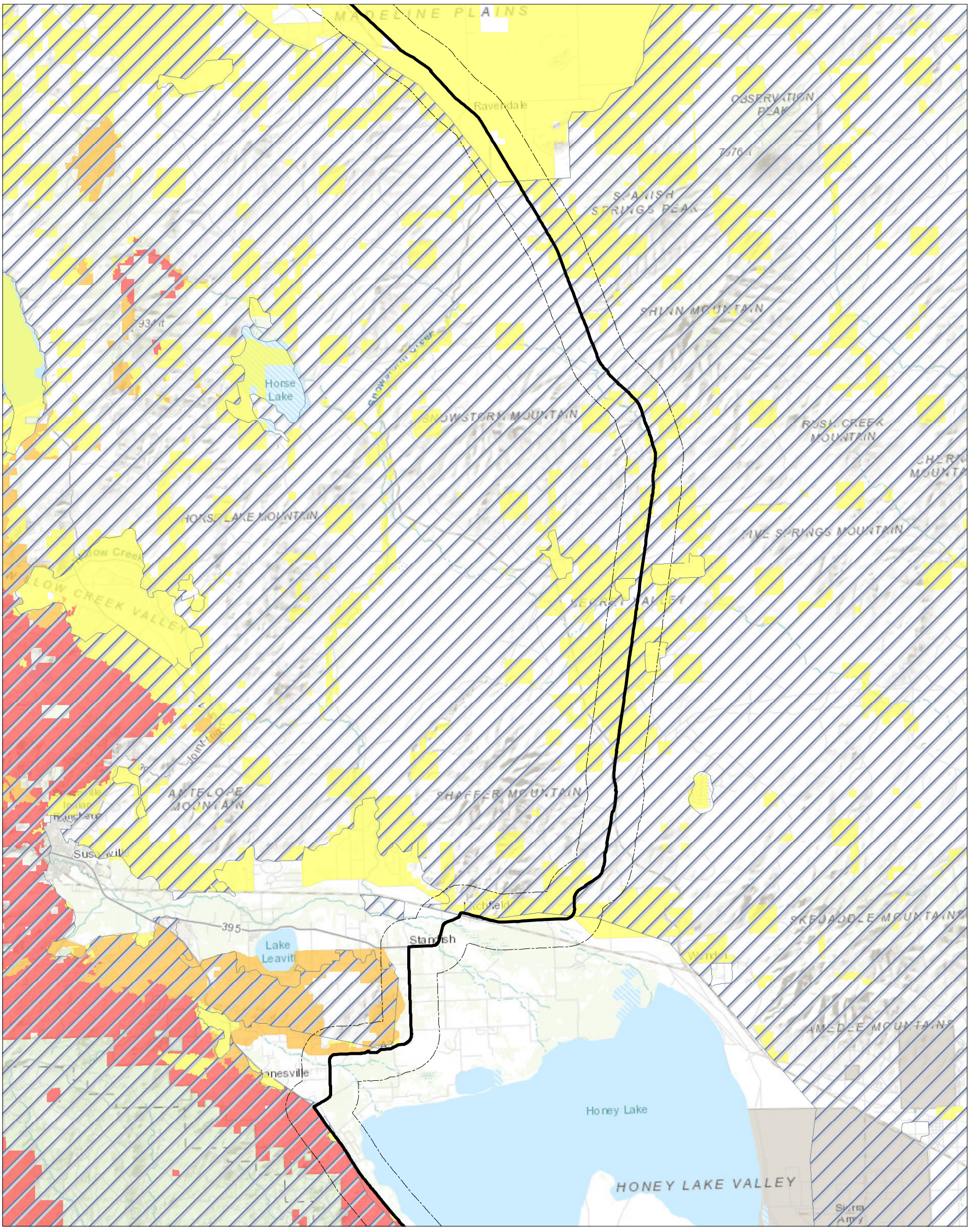


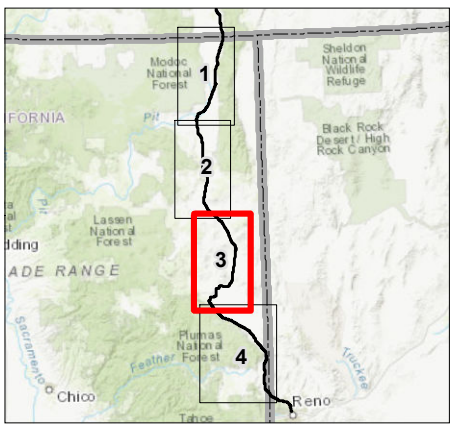


CPUC Fire Threat

Tier 2

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Client/Project

Zayo
Fiber Optic Line--Prineville to Reno

Figure No.

**5.20-1**

Title

**Wildfire Hazards within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020; USGS 2020; BLM 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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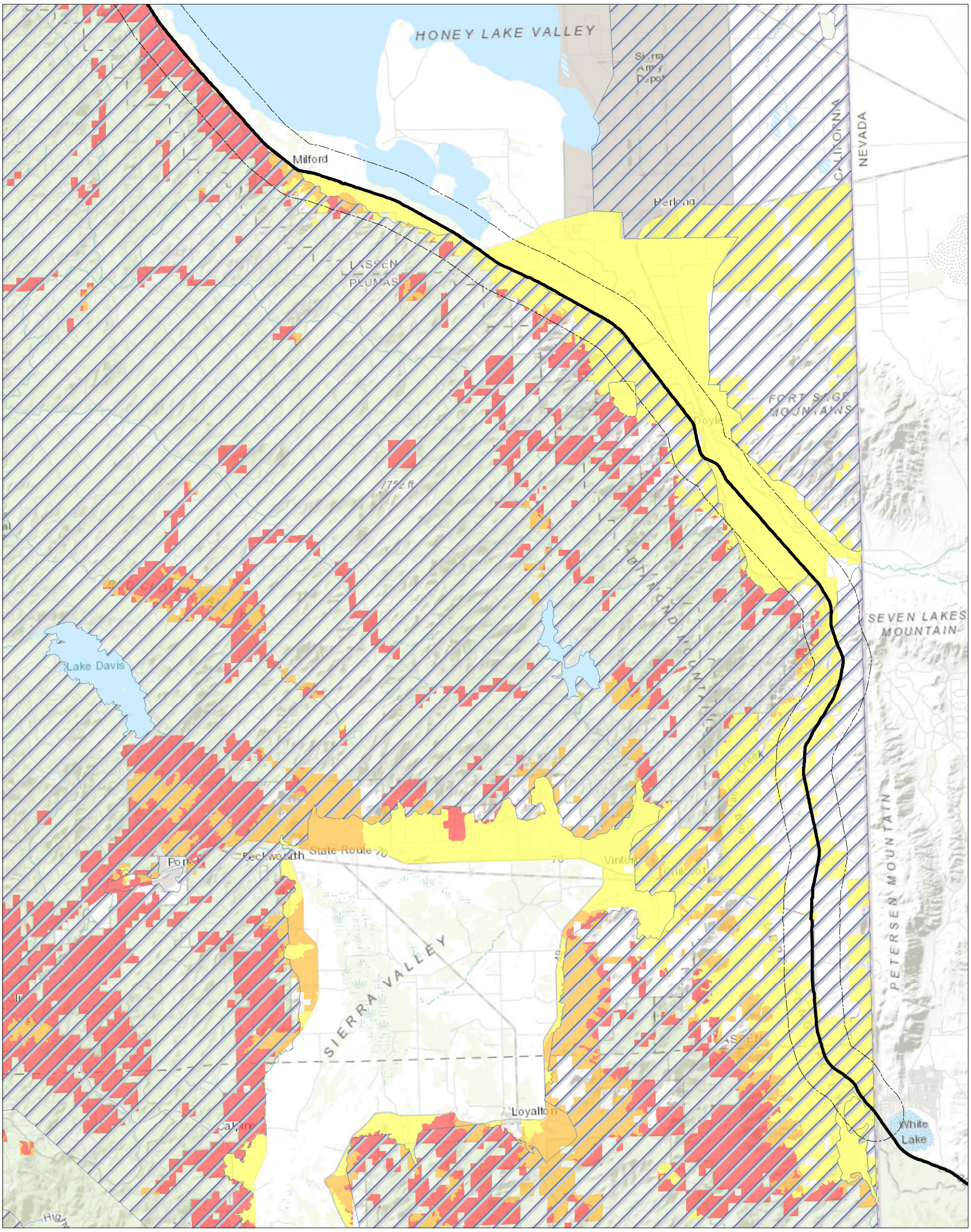


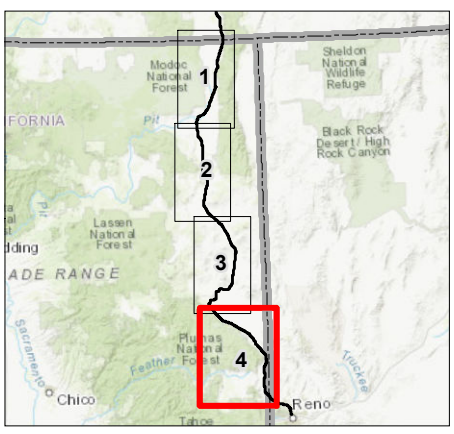


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Title
**Wildfire Hazards within One Mile of Proposed Prineville to Reno Fiber Optic Line**

**Notes**

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2. Data source: Esri 2020; USGS 2020; BLM 2020
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### 5.20.1.2 Fire Occurrence

There is a history of wildfire occurrences within the running line of the project, with 1,123 fires mapped by CAL FIRE from 2010 to 2018. In general, the majority of these fires are started by lightning (501 reported fires) or other unknown (272 reported fires) or miscellaneous sources (222 reported fires). Equipment use accounted for 36 known fires, with 22 being started by debris. Other sources, such as smoking, campfires, arson, or playing with fire, accounted for less than 20 fires. The majority of the fires were located within Modoc County (556 reported fires), followed by Lassen County (369 reported fires) and then Sierra County (185 reported fires). Thirteen of the reported fires spanned multiple counties. Table 5.20-2 describes the distribution of responding agencies for mapped fires.

**Table 5.20-1: Fire History and Responding Agency Along the Running Line (2010-2018)**

| Agency | Lassen County | Modoc County | Sierra County | More than One County | Total |
|---|---|---|---|---|---|
| BLM | 118 | 37 | 1 | 3 | 159 |
| CAL FIRE | 87 | 27 | 1 | 2 | 117 |
| NPS | 5 | -- | -- | -- | 5 |
| USFS | 159 | 490 | 183 | 8 | 840 |
| CDFW | -- | 2 | -- | -- | 2 |
| **Total** | **369** | **556** | **185** | **13** | **1,123** |

Notes:
BLM= Bureau of Land Management
CAL FIRE= California Department of Forestry and Fire Protection
NPS = National Park Service
USFS = United States Forest Service
CDFW = California Department of Fish and Wildfire
Source: CAL FIRE 2020

### 5.20.1.3 Fire Risk

The weather station located in Alturas, California, has been tracking wind direction and speed, relative humidity, and temperature on an hourly basis for the last 10 years. Average temperatures reported from the Alturas station in the project area ranged from below zero to more than 100 degrees Fahrenheit (°F) , with an average air temperature of approximately 50°F. Average reported relative humidity was approximately 60 percent, and an average windspeed of 5 miles per hour (mph). Maximum windspeed was approximately 40 mph. Winds typically blow southwest.

Because the vast majority of this project would be underground and/or contained within a preexisting right-of-way that both serves as a fire break and is regularly maintained for fire safety, digital elevation models were not included.

### 5.20.1.4 Values at Risk

A variety of valuable public services, sensitive habitats, and biological resource management areas are located within 5 miles of the project running line and have the potential to be directly impacted by a wildfire ignited during construction. The project's running line is located near schools, churches, libraries, medical centers, and other public services, structures, and utilities that could be at risk in the event of a wildfire. Table 5.15-3 in Section 5.15, Public Services, lists schools within one mile of the running line. Table 5.15-4 in Section 5.15 lists churches, libraries, medical centers, and other public services within one mile of the running line. Table 5.13-4 in Section 5.13, Noise, lists a total of 1,361 sensitive receptors (e.g., residences, hospitals, places of worship, libraries, performance spaces, offices, and schools, as well as nature and wildlife preserves, recreational areas, and parks) within 1,000 feet of the running line.

Table 5.4-1 in Section 5.4, Biological Resources, details the sensitive natural vegetation communities located within the BRSA, which roughly corresponds to the Hwy 395 right-of-way. Though no federally designated or proposed critical habitat occurs within the BRSA, one critical habitat polygon for Webber's ivesia (listed as federally threatened) abuts the BRSA between Lassen County MP 0.7 and 1.0 (Figure A3, Attachment 2), and five others are located within 5 miles of the BRSA . Biological resource management areas that occur within 5 miles of the BRSA include USFWS' Modoc National Wildlife Refuge; CDFW's Bass Hill Wildlife Area, Biscar Wildlife Area, Doyle Wildlife Area, Hallelujah Junction Wildlife Area, and Honey Lake Wildlife Area; and The Nature Conservancy's Matley Ranch.

Primary fire risk would occur during the construction and installation of the fiber optic line. Use of machinery or "hot work" (e.g., welding) during high wind conditions, personnel smoking at a worksite, heated mufflers of vehicles or equipment, or mishandling of flammable materials could result in the ignition of a wildfire. However, the project is located along an existing transportation right-of-way that is maintained clear of vegetation and other fire hazards, creating an intrinsic fuel break. Equipment usage during construction would be temporary, and work areas would be constantly shifting. In addition, the majority of this project would be underground, leaving very few aboveground structures with the capacity to ignite a wildfire. Therefore, the risk of wildfire ignition as a result of this project is considered low.

### 5.20.1.5 Vegetation Fuels

The potential for wildfire ignition varies substantially based on seasonal factors such as vegetation density and type, prescribed burning regimes, temperature, precipitation, and vegetation assemblage. For example, species such as lichens and grasses will burn more readily due to their low moisture content but will burn quickly and at a lower temperature. Other vegetation assemblages such as spruce or pine forest will burn slower and more intensely but take longer to ignite. Some species such as quaking aspen act as natural firebreaks, reducing the potential intensity of ignitions in their vicinity. Other species such as juniper woodland or chaparral rely on fires to maintain a healthy vegetation community and ignite readily.

Section 5.4, Biological Resources, discusses vegetation types along the project. A total of 61 vegetation communities were mapped along the project, which are included in Appendix C. Vegetation types along the project generally include pines, junipers, aspens, montane riparian communities, brushes, chaparral,

scrubs, grasslands, and meadows. Because there is such variance in the vegetation types along the project alignment, the wildfire potential also varies depending on location near these vegetation types.

#### 5.20.1.6 Evacuation Routes

No evacuation routes have been formally designated in the general plans or municipal ordinances for the Counties of Lassen, Modoc, or Sierra, or the City of Alturas.

### 5.20.2 Regulatory Setting

The following subsections identify federal, state, and local laws, policies, and standards for wildfire impact assessment that may be applicable to the project.

#### 5.20.2.1 Federal

##### National Fire Protection Association

The National Fire Protection Association provides codes and standards (including the National Electrical Code), research, trainings, and education for fire protection. The National Fire Protection Association publishes more than 300 codes and standards that are intended to minimize the possibility and effects of fire and other risks.

#### 5.20.2.2 State

##### Assembly Bill 337 – The Bates Bill

The Bates Bill (AB 337 enacted September 29, 1992) was a direct result of the great loss of lives and homes in the Oakland Hills Tunnel Fire of 1991. The Bates Bill requires CAL FIRE, in cooperation with local fire authorities, to identify very high FHSZs in LRAs throughout California. Local jurisdictions that do not follow the Bates system are required to follow, at a minimum, the model ordinance developed by the State Fire Marshal for mitigation purposes.

##### Assembly Bill 3819 – The Brown Bill

The Brown Bill (AB 3819 enacted September 25, 1994) expands the roof covering requirements of the Bates Bill. The Brown Bill requires a Class A roof for all new buildings, all roof repairs and replacements, for existing buildings where 50 percent or more of the roof area is re-roofed, and for buildings located within very high FHSZs. Class A roofs provide the highest resistance to fire and include coverings such as concrete, metal, or clay roof tiles.

##### California Department of Forestry and Fire Protection Wildland Hazard/Building Codes

Included as part of the 2007 California Building Code (CBC), CAL FIRE has established the Wildland-Urban Fire Area Building Standards, which are applicable to all structures located within an LRA very high FHSZ. These requirements establish minimum standards for materials and material assemblies and provide a reasonable level of exterior wildfire exposure protection for buildings in Wildland-Urban

Interface Fire Areas. The use of ignition-resistant materials and design to resist the intrusion of flames or burning embers projected by a vegetation fire (wildfire exposure) will prove to be the most prudent effort California has made to try and mitigate the losses resulting from our repeating cycle of interface fire disasters.

### California Building Code

The CBC contains applicable fire safety standards and the California Fire Code (CFC). The CBC follows standards recommended by the California Building Standards Commission and the latest International Fire Code. The CBC sets buildings standards, ensuring that all structures are designed to provide the required emergency access. Additionally, the CBC contains guidance on design features, including fire sprinklers, fire flow standards, emergency access roads standards, and storage of flammable materials, which comply with fire department minimum requirements.

### California Fire Code (California Code of Regulations Title 24, Part 9)

Based on the 2015 International Fire Code, and as published by the California Building Standards Commission, the CFC regulates minimum fire safety requirements for new and existing buildings, facilities, storage, and processes. The CFC addresses fire prevention and protection, life safety, safe storage, and use of hazardous materials. The CFC is a design document that sets forth the minimum requirements for hazards and contains the requirements for maintaining life safety of building occupants, protecting emergency responders, and limiting damage to a building and its contents as a result a fire, explosion, or unauthorized hazardous materials discharge.

### California Public Resources Codes

A number of PRC sections are applicable to the project, as listed below:

- Code 4119: Authorizes agencies to inspect all properties except a dwelling's interior to ascertain compliance with state forest and fire laws, regulations, or use permits.
- Code 4290: Contains regulations for implementing minimum fire safety standards related to defensible space that are applicable to lands designated as very high FHSZ.
- Code 4291: Requires 100 feet of defensible space around all structures.

## 5.20.2.3 Local

Because CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local land use and zoning regulations or discretionary permits. This section identifies local land use plans for informational purposes and to assist with CEQA review.

### Lassen County General Plan

The Lassen County General Plan was adopted in September of 1999 and includes the following goals related to wildfires that are relevant to the project (Lassen County 1999, as amended):

Wildfire

- OS20 Policy: The County shall continue to make protection from fire hazards a consideration in planning, land use and zoning decisions, environmental review, and project review with special concern for areas of "high" and "extreme" fire hazard.
    - Implementation Measure: OS-K The County will continue to work with the California Department of Forestry and Fire Protection or other agencies of jurisdiction in identifying and mapping areas of special fire hazard, and in adopting development criteria to assist in the protection of the public from such fire hazards.

### Modoc County General Plan

The Modoc County General Plan was adopted in September 1988 and includes the following policies related to wildfires that are relevant to the project (Modoc County 1988, as amended):

- Policy 3: New development should demonstrate the availability of adequate fire protection and suppression facilities.

### Sierra County General Plan Safety Element

The Sierra County General Plan was first adopted in 1996 and includes the following goals and policies related to wildfires that are relevant to the project (Sierra County 1996, as amended):

- Policy 19: Land use patterns and development standards shall minimize fire hazards.
- Policy 20: Encourage maintenance of high fire protection standards for all public and private development.

### City of Alturas General Plan

The City of Alturas General Plan was first adopted in June 1987 (City of Alturas 1987, as amended). There are no wildfire goals or policies in the City of Alturas General Plan that are relevant to the project.

### Modoc County Community Wildfire Protection Plan

The Modoc County Community Wildfire Protection Plan (CWPP) was developed in September of 2005 by the Modoc County Fire Safe Council in cooperation with CAL FIRE, USDA, Modoc County Rural Fire Departments, North Cal-Neva Resource Conservation and Development Council, Modoc County Office of Emergency Services, and BLM to mitigate losses from wildland fires. The Modoc County CWPP is used as a planning tool to assess the threat level and to identify measures that may be taken to reduce the danger that wildland fires pose to the communities in Modoc County. Although the Modoc County CWPP does not contain any specific goals or policies that are relevant to the project, it does discuss the use of US 395 as one of the major highways in the county that could be used as an evacuation route in the event of a fire (Modoc County 2005).

Wildfire

### Lassen County Community Wildfire Protection Plan

The latest Lassen County CWPP was developed in December of 2019 by the Lassen County Fire Safe Council in cooperation with CAL FIRE, the U.S. Forest Service, BLM, and Sierra Pacific Industries to develop and monitor activities necessary to protect the communities of Lassen County from risk of wildfires. Several fuel treatment projects are identified in the CWPP, however none of the projects identified would involve US 395 (Lassen County 2019).

### Sierra County Community Wildfire Protection Plan

The latest Sierra County CWPP was developed in December of 2014 by the Sierra County fire safe council in coordination with CalFire, local fire districts, and the U.S. Forest Service to provide a comprehensive assessment of the wildfire hazards and risks and provide potential projects to mitigate those hazards within the Sierra County. US 395 only passes through a small portion of Sierra County, and the Sierra County CWPP does not contain any specific goals or policies that are relevant to the project (Sierra County 2014).

#### 5.20.2.4 CPUC Standards

No additional CPUC standards were identified which would apply to wildfire management of this project.

## 5.20.3 CEQA Impact Criteria

| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | ☐ | ☐ | ☐ | ☒ |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | ☐ | ☐ | ☒ | ☐ |

Wildfire

| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | Potentially Significant Impact | Less-than-Significant Impact with Mitigation Incorporated | Less-than-Significant Impact | No Impact |
|---|---|---|---|---|
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | ☐ | ☐ | ☐ | ☒ |

## 5.20.4 Impact Analysis

**a) Substantially impair an adopted emergency response plan or emergency evacuation plan?**

**No Impact**. As described in Section 3.0, Proposed Project Description, and Section 5.9, Hazards, Hazardous Materials, and Public Safety, the project would not conflict with any adopted emergency response or evacuations plans. Although not officially designated as an evacuation route, US 395 is a major highway that would likely be used during an evacuation if there was a large fire or other emergency in the area that required mass evacuations in either Modoc, Lassen, or Sierra Counties. Emergency access for emergency vehicles and public evacuation would be maintained throughout construction, and no full roadway closures would be required. In addition, the applicant would prepare a traffic management plan per APM TRA-1 that would coordinate traffic control procedures associated with construction. As access would be preserved during all construction activities, the project would not impair an adopted emergency response or emergency evacuation plan. Once constructed, the project would be located underground and would not result in any long-term impacts to emergency response or evacuation. Therefore, no impact would occur.

**b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

**No Impact.** The project would involve the installation of fiber optic conduit within existing transportation right-of-way. The project would primarily be installed underground and managed remotely and does not include the installation or operation of any residential housing units, commercial or retail businesses, or any industrial or manufacturing facilities. Therefore, there would be no occupants as a result of the project that would be potentially affected by wildfire-mobilized pollutant concentrations or the uncontrolled spread of a wildfire. Therefore, no impact would occur.

**c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

**Less Than Significant Impact**. Primary fire risk would occur during the construction and installation of the fiber optic line. The line would be installed using a variety of techniques including trenching, plowing,

and horizontal directional boring. The construction activities associated with these installation activities would involve the use of vehicles and other heavy machinery, depending on the activity. Use of machinery or "hot work" (e.g., welding) during high wind conditions or personnel smoking at a worksite could result in the ignition of a wildfire. Heavy equipment or passenger vehicles could drive through vegetated areas, which could result in the increased risk of fire. Heated mufflers or improper disposal of cigarettes or bottles with solar magnifying properties (such as glass) could potentially ignite surrounding vegetation. Additionally, mowers or plows have the potential to ignite wildfires if the equipment blades strike rocks or metal objects.

Additionally, as detailed in Section 5.9, Hazards, Hazardous Materials, and Public Safety, the construction and operation of the project would involve the use of flammable materials including fuels such as gasoline or diesel, hydraulic oils, paints, solvents, or other industrial chemicals necessary for maintaining vehicles and equipment. The risk of fire associated with these materials is generally related to improper use or storage. These flammable materials could further exacerbate the spread of a wildfire or ignite a fire quicker if a spark were to occur in the vicinity of these materials.

The project crosses 81.76 miles of moderate FHSZ, 12.30 miles of high FHSZ, and 0.16 mile of very high FHSZ and 61 vegetation communities possessing varying wildfire potential. If a fire were to ignite as a result of construction activities, it could be swept offsite by prevailing winds. Such a wildfire could, if not immediately extinguished, pose a risk to life and property adjacent to the running line. However, the project is located along an existing transportation right-of-way that is maintained clear of vegetation and other fire hazards, creating an intrinsic fuel break. Equipment usage during construction would be temporary, and work areas would be constantly shifting. However, any fire that would escape control or spread into the surrounding area could result in damage to the environment, and therefore, the risk of fire as a result of project construction is considered potentially significant.

In accordance with existing regulatory requirements, all construction equipment is required to be equipped with fire suppression equipment (such as a fire extinguisher). Additionally, APM FIRE-1, Fire Protection Plan, would require the applicant to prepare a Fire Protection Plan prior to construction, which would outline fire prevention and response measures. APM FIRE-1 would include a Worker Environmental Awareness Program to train personnel on the fire hazards associated with the project and would provide workers with fire extinguishers and other necessary firefighting equipment to put out small fires. APM FIRE-1 would ensure that the risk from wildfires is reduced during construction activities. Therefore, the impact would be less than significant.

During operations, management of the telecommunications infrastructure would generally occur remotely, with onsite maintenance only as necessary (as detailed in Section 3.8, Operations and Maintenance). Access vaults would be accessed periodically for routine maintenance via US 395 and other existing and maintained roads. All periodic maintenance activities would comply with local and state regulations governing wildfire prevention. Maintenance crews would park on unvegetated areas, and vehicles would be equipped with standard safety gear, including fire extinguishers that could put out small fires, if necessary. No maintenance that would exacerbate fire risk or result in temporary or ongoing impacts to the environment is anticipated to be required. Therefore, operation of the project would result in a less

than significant impact related to installation or maintenance of infrastructure that may exacerbate the risk of wildfires.

**d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

**No Impact**. The project would primarily be installed underground within existing roadway right-of-way. The proposed construction area is relatively flat, and in instances where topography precludes burial of the conduit, it would be strung on existing bridges (e.g., riverbanks). Thus, project installation would not permanently affect drainage or topography in the project area. Therefore, the project would not affect the potential for people or structures to be exposed to significant risks or changes in baseline risk including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes should a wildfire occur in the vicinity of the project. No impact would occur as a result of project installation or operations under this criterion.

## 5.20.5 Draft Environmental Measures

### Applicant Proposed Measures

#### APM FIRE-1: Construction Fire Prevention Plan

A project-specific Construction Fire Prevention Plan for construction of the project shall be submitted for review to the CPUC and state and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall also include federal, state, or local agencies with jurisdiction over areas where the project is located. The final Plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The Plan shall be fully implemented throughout the construction period and include the following at a minimum:

- The purpose and applicability of the Plan
- Responsibilities and duties
- Preparedness training and drills
- Procedures for fire reporting, response, and prevention that include:
  - Identification of daily site-specific risk conditions
  - The tools and equipment needed on vehicles and to be on hand at sites
  - Reiteration of fire prevention and safety considerations during tailboard meetings
  - Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity

Wildfire

- Coordination procedures with federal and local fire officials
- Crew training, including fire safety practices and restrictions
- Method(s) for verifying that all Plan protocols and requirements are being followed

A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the Plan.

# 5.21 MANDATORY FINDINGS OF SIGNIFICANCE

This section discusses mandatory findings of significance related to the project.

## 5.21.1 Impact Questions

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

## 5.21.2 Impact Analysis

**a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**Less Than Significant Impact.** The project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

As summarized in Section 5.4, Biological Resources, numerous wildlife species are known to occur within the project area, including reptiles, amphibians, birds, and mammal species. Construction work

associated with the project could directly or indirectly affect sensitive wildlife and fish species (through habitat modification) but would not have a substantial direct or indirect adverse effect on such species. The majority of project impacts on biological resources would be temporary and associated with site preparation and construction activities.

While the project would avoid impacts on the majority of the wetlands, sensitive natural communities, and special status plant populations through micrositing and directional boring efforts, some indirect impacts on these resources may be unavoidable. The project design would avoid direct impacts on wetlands, sensitive natural communities, and special status plant populations as much as possible, and site restoration would help minimize any long-term temporary impacts after construction is complete. Additional construction-related factors could result in habitat loss or modification. Sensory disturbances associated with equipment noise and the increased presence of personnel could cause displacement or avoidance of wildlife species. During operation, habitat removal or modification would be unnecessary, except in the unlikely event that repairs are required, and conduit must be excavated. As discussed in Section 5.4, Biological Resources, all potential impacts related to biological resources would be reduced to a less than significant impact with implementation of APMs.

As detailed in Section 5.5, Cultural Resources, many cultural resources have been identified in the project survey area. It is Zayo's aim to avoid cultural resources to the greatest extent possible. If necessary, additional avoidance measures would be implemented to either reroute the alignment in or near the US 395 road shoulder in areas of fill or prior disturbance or directionally bore and place the fiber optic line conduit under archaeological sites to a minimum depth of 2 meters or 1 meter below known maximum depth of cultural resources. However, where avoidance measures are not feasible, archeological test excavations may be required to obtain information sufficient to evaluate the eligibility of sites for inclusion in the NRHP and the CRHR.

As a result, with implementation of biological resources and cultural resources APMs, the project would have a less-than-significant impact.

**b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

**No Impact.** The project would not achieve short-term environmental goals to the disadvantage of long-term environmental goals. The project would result in either no impact or less than significant impacts in both the short- and long-term. The project would be compatible with local environmental goals and would not conflict with federal or state environmental policies and regulations. Therefore, no impact would occur.

The project would not have possible environmental effects that are individually limited but cumulatively considerable. A cumulative impact analysis for each resource area is presented in Section 7.0, Cumulative Impacts. The project would contribute incrementally to cumulative impacts in the project area related to aesthetics, air quality, biological resources, cultural resources, tribal cultural resources, energy resources, geology, soils, and paleontological resources, GHG, hazards and hazardous materials,

hydrology and water quality, noise, recreation, transportation, utilities, and wildfire; however, the project would not contribute substantially to those cumulative impacts. The project, in combination with other reasonably foreseeable projects, would not have environmental effects that are individually limited but cumulatively considerable. The impact would be less than significant.

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

**No Impact.** The project would not adversely affect human beings either directly or indirectly. Potential construction impacts associated with human health include the presence of hazards, hazardous materials use, and temporary air quality impacts. As discussed previously, construction impacts associated with air quality and with hazards and hazardous materials would be less than significant. APMs would further reduce the potential for adverse effects. Therefore, there would be no impact.

### 5.21.3 Draft Environmental Measures

There are no applicable environmental measures for the mandatory findings of significance.

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# 6.0 COMPARISON OF ALTERNATIVES

## 6.1 ALTERNATIVES COMPARISON

As described in Section 4.0, Description of Alternatives, the applicant considered the following list of criteria in designing the "best fit" running line:

- Does the alternative meet the project objectives to:
  - improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada
  - make affordable broadband internet services available to currently underserved communities in these areas.
- Is the alternative mostly within the existing roadway right-of-way?
- Would the alternative reduce or avoid potential conflicts with environmental resources?

Proposed alignments that did not meet the screening criteria were rejected.

### 6.1.1 Best Fit Running Line (Project Alternative)

Project impacts under the "best fit" running line are primarily construction related, and the project has been planned and engineered to avoid or minimize the largely temporary environmental impacts. APMs would be implemented to further avoid or minimize impacts on environmental resources, ensuring that any remaining impacts would be less than significant. These APMs are identified in the respective resource sections within Section 5.0 and are summarized in Table 3-8.

### 6.1.2 No Project Alternative

Under the No Project Alternative, the project would not be constructed and operated. As a result, the No Project Alternative would not impact known cultural resources, tribal cultural resources, paleontological resources, hydrological features, or biological resources. In addition, temporary visual impacts, noise impacts, energy impacts, and air quality and greenhouse gas emissions associated with project construction would not occur. Existing traffic conditions, land uses, and agricultural operations adjacent to the right-of-way would remain unchanged, and potential hazardous sites would not be encountered. Even if constructed, the project would have no impacts on public services, recreational facilities, or utilities, and would not induce growth. Under the No Project Alternative, expansion of fiber optic capacity and services would not occur. Potential construction-related impacts associated with solid waste and water for dust control, clean-up, and soil compaction would not occur, and there would be no change to wildfire risk within the area.

While the No Project Alternative would have fewer impacts on resources than the proposed project, the No Project Alternative would also not meet the objective of improving fiber optic capacity within these rural communities. Therefore, the project objectives would not be realized.

## 6.2 ALTERNATIVES RANKING

The project as proposed in Section 3.0, Proposed Project Description, would be the "best fit" running line because it was designed to maximize avoidance of sensitive environmental resources, particularly cultural and biological resources, while still meeting the project objectives. In instances where the running line would potentially intersect with a sensitive resource, the applicant had several design options that it will utilize to avoid and minimize impacts(e.g., to reroute to the other side of the right-of-way; choose an alternative construction method, such as boring underneath the resource; or place the running line in a less sensitive area closer to the edge of pavement). Furthermore, the project would meet the proposed objectives because it would provide connectivity between the network hub in Prineville and the communities of Bend and La Pine in Oregon; Alturas, Lakeview, and Susanville in California; and the greater Reno/Sparks metropolitan area in Nevada. In addition, the project would improve the poor reliability of current telecom services to these communities.

# 7.0 CUMULATIVE AND OTHER CEQA CONSIDERATIONS

## 7.1 CUMULATIVE IMPACTS

This section identifies and evaluates whether the construction and operation of the project would contribute to a cumulative impact. The analysis considered the potential cumulative impacts that could result when impacts of the proposed project are considered in combination with impacts of other past, present, and reasonably foreseeable future projects. Some reasonably foreseeable future projects listed in Table 7.1-1 might not be approved or could be modified prior to approval; however, for the purpose of this analysis, approval and construction of identified projects was assumed. This section supports the conclusion that implementation of the project in combination with other reasonably foreseeable projects would not result in a significant cumulative environmental impact in any resource area.

### 7.1.1 List of Cumulative Projects

Projects included in the cumulative impact assessment were identified by using a list approach (CEQA Guidelines Section 15130[b][1][A]). The projects listed in Table 7-1 are located within 2 miles of a component of the project and may overlap with its construction timeline. Figure 7-1 includes a graphic indicating the location of these projects in proximity to the project. To identify reasonably foreseeable, probable future projects, the primary research method was local planning departments' and state agencies' websites. The websites of the following organizations were reviewed and/or these agencies contacted regarding development projects:

- Modoc County, Lassen County, Sierra County
- City of Alturas
- Modoc National Forest, Plumas National Forest, or Humboldt-Toiyabe National Forest
- CPUC
- CEC
- CAISO
- Caltrans
- Modoc County Transportation Commission
- OPR CEQAnet Web Portal

There are no past, present, or reasonably foreseeable CEC, CAISO, or CPUC projects within 2 miles of the project (CEC 2020; CAISO 2020; CPUC 2020). In addition to the above resources, the portions of the Zayo Prineville to Reno Fiber Optic Project within Nevada and Oregon are also considered to analyze the project as a whole and whether it would result in any cumulatively considerable impacts.

### 7.1.2 Geographic Scope

Projects within a radius of 2 miles around the project were reviewed to identify any projects that could cause a cumulatively considerable impact. A 2-mile radius is appropriate because the effects of the

project under the applicable environmental topics would be local and would likely be less than 2 miles (i.e., within the immediate visual landscape for aesthetics, within hearing distance due to rapid attenuation for noise, etc.).

### Table 7-1: Past, Present, and Reasonably Foreseeable Projects within Two Miles of the Project

| Project Name | Planning Agency or Jurisdiction | Approximate Location | Approximate Distance from the Project | Project Description | Project Status |
|---|---|---|---|---|---|
| Zayo Prineville-Reno Fiber Optic Project (portion within Oregon) | Oregon Department of Transportation | 225.3 miles of the Zayo fiber optic line that runs through Oregon from Prineville to the California state line within the US 395 right-of-way. | Within US 395 right-of-way | Zayo is proposing to construct and operate an underground fiber optic network from Prineville, Oregon, to Reno, Nevada, spanning a total of 433.8 miles. The fiber optic cable would improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada. The project is spilt into three segments: the Oregon running line, the California running line, and the Nevada running line. The Oregon running line portion of the project would extend from Prineville, Oregon to the California State line and is approximately 225.3 total miles. | Planning phase |
| Zayo Prineville-Reno Fiber Optic Project (portion within Nevada) | Nevada Department of Transportation | 14.6 miles of the Zayo fiber optic line that runs through Nevada from the California state line to Reno within the US 395 right-of-way. | Within US 395 right-of-way | Zayo is proposing to construct and operate an underground fiber optic network from Prineville, Oregon, to Reno, Nevada, spanning a total of 433.8 miles. The fiber optic cable would improve the quality of rural broadband in south-central Oregon, northeast California, and northwest Nevada. The project is spilt into three segments: the Oregon running line, the California running line, and the Nevada running line. The Nevada running line portion of the project would extend from the California State line to Reno, Nevada and is approximately 14.6 total miles. | Planning phase |
| Alturas Central Business District | Modoc County Transportation Commission | City of Alturas: Carlos Street, Modoc Street, North Street, 1st Street, 2nd Street, and 4th Street from Howard Street to US 395. | 200 feet | The project includes improvements to pedestrian facilities along the Central Business District in the City of Alturas. | Planning phase |
| US 365 Transportation Concept Report | Caltrans | US 395 from Oregon State line to Nevada State line | Adjacent; Within US 395 right-of-way | The US 395 Transportation Concept Report is a Caltrans planning document that establishes a 20-year consensus-based concept for how California State Highways should operate and broadly identifies the nature and extent of improvements needed to attain operating conditions. Two major possible improvements identified in this report for US 395 include the following:<br>• Upgrading the existing two-lane conventional highway to a four lane divided expressway from Hallelujah Junction to the SR 36 junction<br>• Implement traffic calming measures in the City of Alturas | Planning phase |
| Eastside Mud Tubs | Caltrans | US 395 at PM 50.1, 129.7, 6.8, 34.9, 35.48, 7.9 | Adjacent; Within US 395 right-of-way | Caltrans, using state funds, is proposing to add a decanting site to an existing Caltrans disposal site on US 395 in Modoc County at PM 50.1 and in Lassen County at PM 129.7, 6.8, 34.9, 35.48, and 7.9. A decanting site is used to deposit water and mud routinely collected when cleaning culverts along state highways. The current use of each of these sites is described below:<br>• The disposal site on Modoc US 395 PM 50.1 is currently used for disposal activities and the staging of equipment and supplies.<br>• The Borrow Pit on Lassen US 395 PM 129.7 is currently used for borrow and staging of equipment and materials.<br>• The right-of-way on Modoc US 395 PM 6.8 is currently used by the motoring public and for maintenance activities.<br>• The disposal site on Modoc US 395 PM 34.9 is currently used for disposal activities and the staging of equipment and supplies.<br>• The pullout on Lassen US 395 PM 35.48 is currently used for staging of equipment and materials.<br>• The pullout on Lassen US 395 PM 7.9 is currently used for staging of equipment and materials.<br>Decanting sites of a similar/compatible use to the current operations of this sites. | Planning phase |
| Class II and III Bikeway Improvements on US 395 | Lassen County | US 395 in Lassen County from Modoc County line to Sierra County line | Adjacent; Within US 395 right-of-way | The Lassen County Bikeway Master Plan includes a proposed Class III bikeway facility from the Modoc County line to the Sierra County line as a regional and multi-modal bikeway connection. Improvements along US 395 would include improved signage and minor to moderate roadway improvements (i.e., widening) | Planning phase |

Cumulative and Other CEQA Considerations

| Project Name | Planning Agency or Jurisdiction | Approximate Location | Approximate Distance from the Project | Project Description | Project Status |
|---|---|---|---|---|---|
| Woodcrest Real Estate Ventures | Lassen County | US 395 and Old Highway Road (also known as Carol Drive) | 100 feet from US 395 | Proposal to construct a 9,100-square-foot retail store off of Old Highway Road near Doyle. The subject parcels are zoned A-1 (General Agricultural District) and have "Extensive Agriculture" and "Scenic Corridor" land use designations in the Lassen County General Plan, 2000. The Technical Advisory Committee conditionally approved Merger #2019- 008 on January 2, 2020, to merge the subject parcels. If this use permit is ultimately approved, the applicant will cause a Certificate of Merger to be recorded in the Official Records of Lassen County in order to finalize the merger. | Planning phase |
| Janesville Main Street | Lassen County Transportation Commission | Janesville Main Street, County Road 235 from the intersection of US 395 to the intersection of SR 36 | 1 mile | In Janesville, along Main Street from the intersection of US 395 to the intersection of SR 36:<br>• Construct class 1 bike path<br>• Capital rehabilitation and overlay Main Street | Planning phase |

Notes:
Caltrans = California Department of Transportation
PM = post mile
SR = State Route
US 395 = U.S. Highway 395
Zayo = Zayo Group, LLC
Sources: Caltrans 2017, 2020; Lassen County 2020; Lassen County Transportation Commission 2011, 2017; Modoc County Transportation Commission 2020

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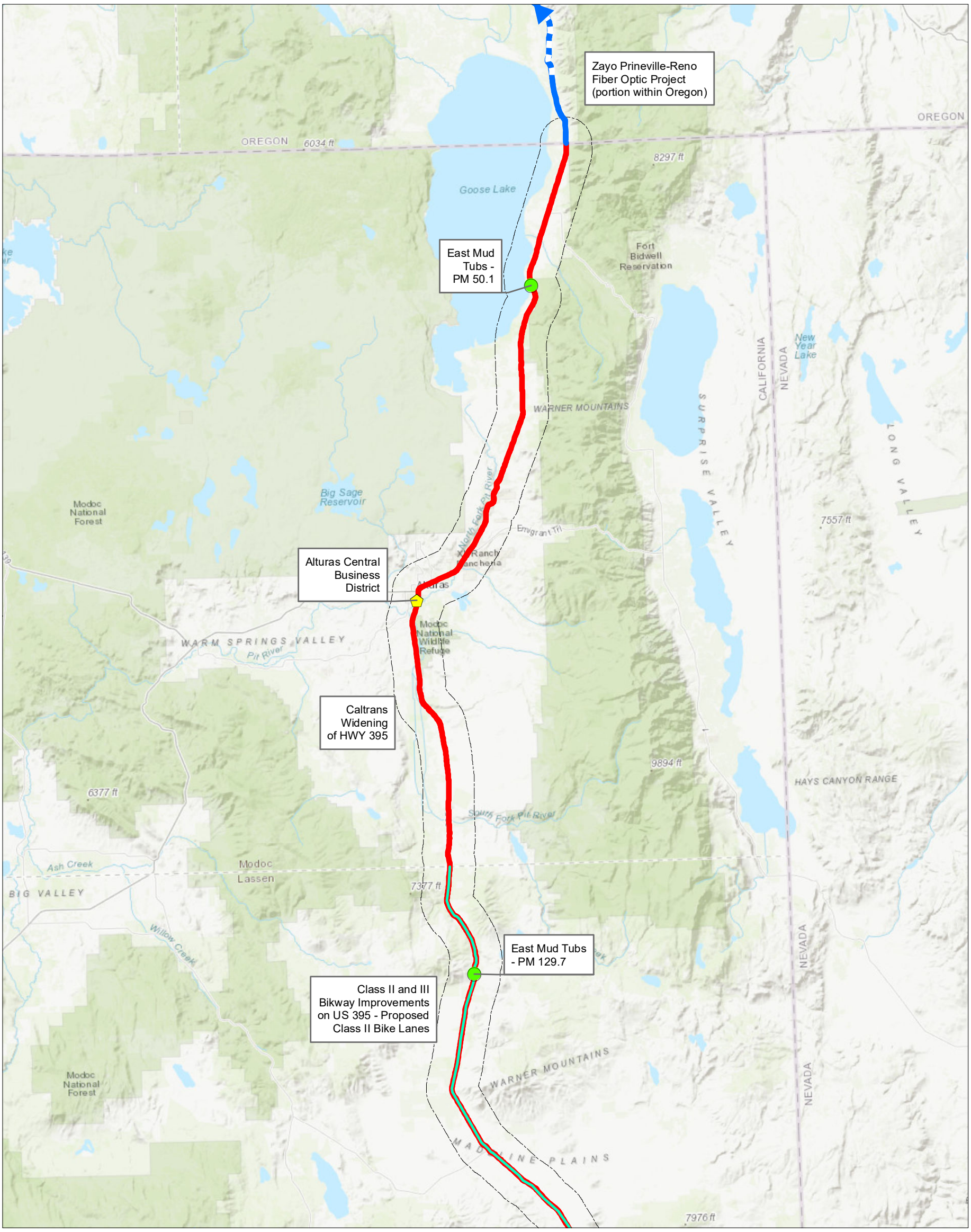


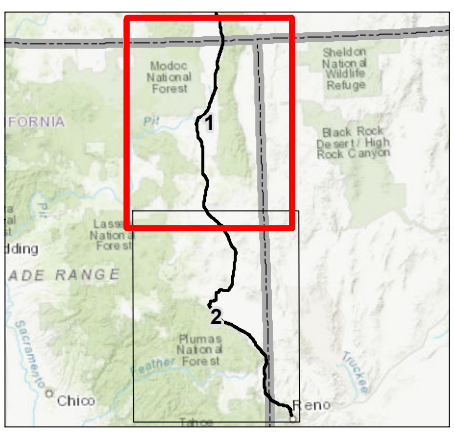


2-mile Buffer

Cumulative Projects

- Alturas Central Business District
- East Mud Tubs
- Class II and III Bikeway Improvements on US 395 - Proposed Class II Bike Lanes
- Caltrans Widening of HWY 395
- Zayo Prineville-Reno Fiber Optic Project (portion within Oregon)

0 5.5 11 Miles

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Stantec

Project Location

Prineville, OR to Reno, NV

2272020011

Prepared by JC on 2020-05-20
Technical Review by PM on 2020-05-20
Independent Review by CS on 2020-05-20

Client/Project

Zayo
Fiber Optic Line--Prineville to Reno

Figure No.

**7-1**

Title

**Cumulative Projects within Two Miles of Proposed Prineville to Reno Fiber Optic Line**

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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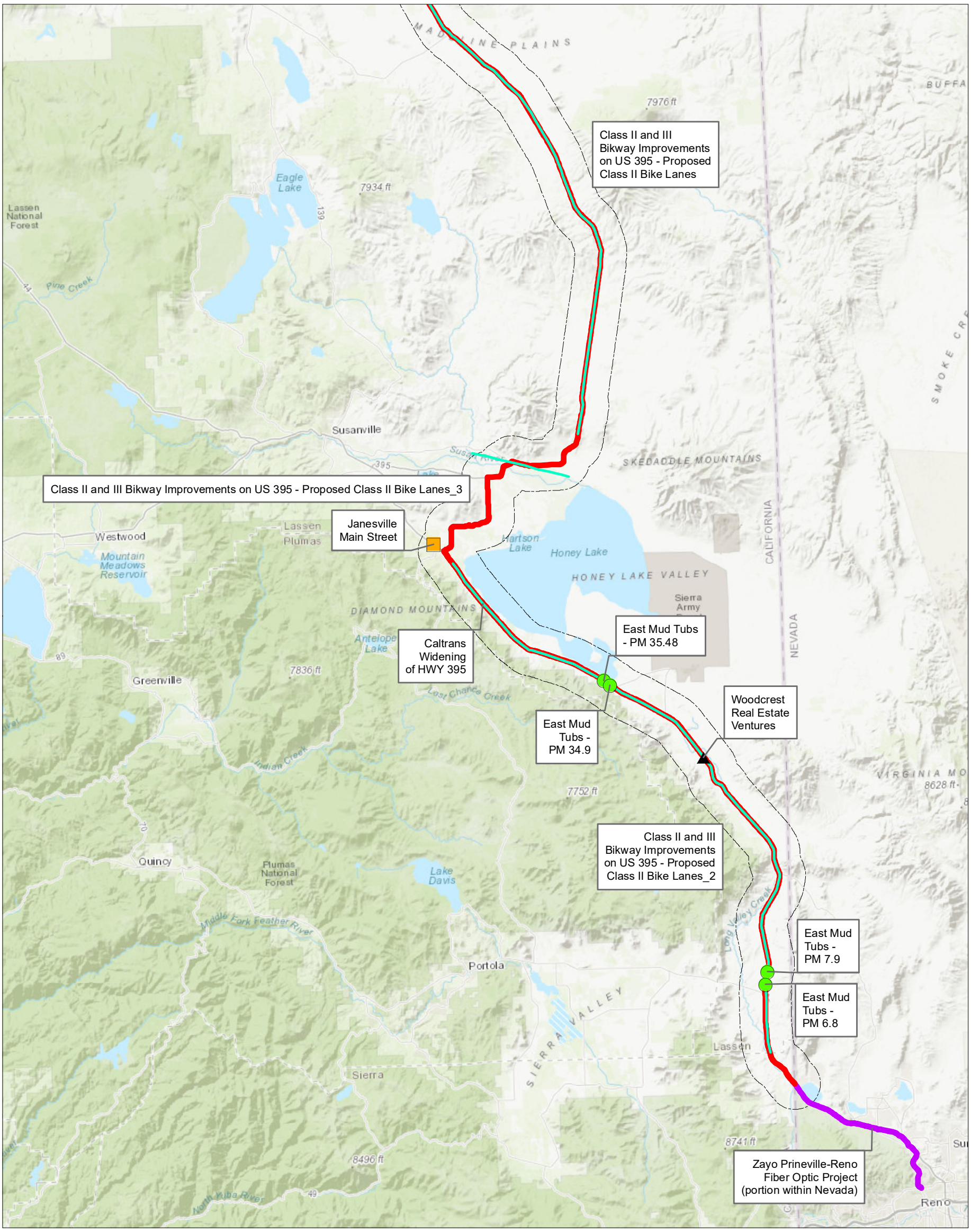


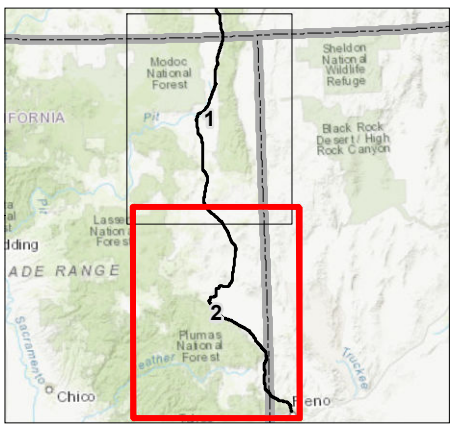


2-mile Buffer

Cumulative Projects

- East Mud Tubs
- Janesville Main Street
- Woodcrest Real Estate Ventures
- Class II and III Bikeway Improvements on US 395 - Proposed Class II Bike Lanes
- Caltrans Widening of HWY 395
- Zayo Prineville-Reno Fiber Optic Project (portion within Nevada)

0 5.5 11 Miles

1:500,000 (At Original document size of 11x17)

N

Stantec

Project Location
Prineville, OR to Reno, NV

2272020011
Prepared by JC on 2020-05-20
Technical Review by PM on 2020-05-20
Independent Review by CS on 2020-05-20

Client/Project
Zayo
Fiber Optic Line--Prineville to Reno

Figure No.
**7-1**

Title
**Cumulative Projects within Two Miles of Proposed Prineville to Reno Fiber Optic Line**

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data source: Esri 2020
3. Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

## 7.1.3 Cumulative Impact Analysis

The intent of this project is to provide increased broadband internet service to currently underserved populations. No long-term impacts have been identified, and implementation of APMs would further minimize less than significant impacts. As described in Section 5.0, Environmental Analysis, for agricultural and forest resources, land use and planning, mineral resources, population and housing, public services, and utilities, either the project would have no impacts, or the impacts would be so minor that they would have no contribution to cumulative impacts in the project area.

### 7.1.3.1 Aesthetics

The visual resources in the area primarily consist of varying natural landscape features. While not officially designated as a state scenic highway by Caltrans, US 395 provides intermittent views of these features and is identified as a local scenic roadway by Modoc, Lassen, and Sierra Counties. The project includes construction and operation of a new underground fiber optic line within the existing roadway right-of-way. Construction of the project would result in temporary changes in visual character of the area along the length of the project; however, because the project is linear, visual obstructions and changes in views would be temporary in any given location along the project alignment. Further, the majority of the project passes through rural areas that have little to no sensitive receptors that could be impacted by changes in views. Once constructed, the project would be located underground and would not result in any changes to views or the visual character of any portion of the project area.

Other cumulative projects in the area, as listed in Table 7.1-1, consist of linear transportation or infrastructure projects, and one smaller development project, which would have similar construction-related impacts as the project. Bicycle and pedestrian improvement projects proposed adjacent to US 395 along Janesville Main Street and within the Alturas Central Business District would likely result in changes to the visual environment. However, similar to the project, visual obstructions and changes in views would be temporary in any given location along the project alignment. In addition, the Nevada and Oregon running line portions of the Prineville to Reno fiber optic project would result in similar impacts as the project. These areas have very few sensitive receptors that could be impacted by views of project construction, and the presence of construction equipment and activities would be temporary given the transient nature of construction. Once construction is complete, the fiber optic cable would be underground and would not result in visual impacts. As a result, the project, in combination with other foreseeable projects, would not result in any operational or long-term visual changes to the area; therefore, the project would not contribute to this potential cumulative impact.

### 7.1.3.2 Air Quality

Air quality impacts resulting from implementation of the project would be limited to construction-related emissions because once constructed, the project would include operation of the fiber optic line and would not result in any long-term operational emissions. As described in Section 5.3, Air Quality, with implementation of APM AIR-1 and APM AIR-2, all criteria air pollutant emissions were found to not exceed significance thresholds for air quality, and therefore, impacts were found to be less than significant. Further, construction activities would be short-term in any one given location along the project

alignment, and the project would be required to limit heavy duty diesel motor idling to no more than 5 minutes at any given time.

Air pollution is largely a cumulative impact by its very nature and therefore, no single project is sufficient in its overall emissions in isolation to result in nonattainment of ambient air quality standards. As such, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The significance thresholds were developed to analyze whether a project's contribution to the cumulative impact is considerable. Therefore, if a project exceeds the identified significance thresholds, its emissions would also be cumulatively considerable, resulting in a significant cumulative air quality impact to the region's or air basin's existing air quality conditions. Because the project would result in emissions that are below the thresholds of significance with APMs incorporated, it would not result in a cumulatively considerable impact. Other projects in California are mostly related to infrastructure and transportation improvements, with one smaller development project, and would involve similar construction related air quality emissions and would be required to comply with similar rules and regulations as the project, including implementation of mitigation measures to reduce impacts related to emissions below the thresholds of significance. The Oregon and Nevada running line portions of the project are outside of California, and therefore, would be required to comply with the appropriate jurisdiction's regulations governing air quality emissions. Potential impacts and associated mitigation measures would be subject to review and up to the discretion by the applicable agencies. The project does not individually exceed the thresholds of significance, which in their very nature account for cumulative emissions in the region. The project would not result in a cumulatively considerable impact to air quality when considered with other projects in the region. Therefore, the project would not have a considerable contribution to a cumulative impact related to air quality.

#### 7.1.3.3 Biological Resources

Most areas along US 395 are sparsely populated and are surrounded by forested or wooded areas, grasslands, or sloped mixed-vegetation areas. Numerous wildlife species are known to occur within the project area including reptiles, amphibians, birds, and mammal species. Construction work associated with the project could directly or indirectly (through habitat modification) affect sensitive wildlife and fish species, but would not have a substantial direct or indirect adverse effect on such species. The majority of project impacts on biological resources would be temporary and associated with site preparation and construction activities.

While the project would avoid impacts on the majority of the wetlands, sensitive natural communities, and special status plant populations through micrositing and directional boring efforts, some indirect impacts on these resources may be unavoidable. The project design would avoid direct impacts on wetlands, sensitive natural communities, and special status plant populations as much as possible, and site restoration would help minimize any long-term temporary impacts after construction is complete. Additional construction-related factors could result in habitat loss or modification. Sensory disturbances associated with equipment noise and the increased presence of personnel could cause displacement or avoidance of wildlife species. During operation, habitat removal or modification would be unnecessary, except in the unlikely event that repairs are required, and conduit must be excavated. As discussed in

Section 5.4, Biological Resources, all potential impacts related to biological resources would be reduced to a less than significant impact with implementation of APMs.

The majority of the projects in Table 7.1-1 would either be constructed within the more populated areas along the project alignment (i.e., the City of Alturas or Janesville) or would be constructed along the US 395 right-of-way, similar to the project.

Construction of these projects, particularly linear improvements proposed along US 395, could affect riparian habitats or wetlands if water bodies are crossed. Construction and operation activities may also result in temporary impacts to habitat and changes in wildlife movement due to construction activities and human presence. However, the project and other projects in Table 7.1-1 would also be required to comply with applicable laws, regulations, and permit conditions.

To minimize potential impacts on special status species and other sensitive biological resources, the project would implement APMs. In addition, due to the physical distance between cumulative project construction sites and the short-term nature of construction activities, the project's contribution to cumulative impacts would not be cumulatively considerable.

### 7.1.3.4 Cultural and Tribal Resources

A project would have a cumulatively considerable impact on cultural or tribal resources if it would potentially disturb unidentified subsurface human remains or historic or archaeological resources through ground disturbance activities. As discussed in Section 5.5, Cultural Resources, and Section 5.18, Tribal Cultural Resources, there is the possibility that construction of the project could disturb known and unknown cultural or tribal cultural resources, and as such, APMs would be implemented to reduce potential impacts related to these resources. These APMs include compliance with federal, state, and local regulations governing the procedures to be taken if a cultural or tribal resource is discovered during construction activities.

Several other projects in the cumulative scenario could take place in the same location or directly adjacent to the new fiber optic line; therefore, there is some potential that the project and another project could affect the same unknown resource or result in cumulatively significant impacts on unknown resources. However, it is reasonable to assume that, similar to the project, potential impacts on unknown cultural or tribal cultural resources associated with other projects in the immediate vicinity, as well as with other projects in the area, would be appropriately mitigated by construction monitoring and other standard mitigation measures (including recordation, avoidance, and relocation), as appropriate. Numerous California laws and policies are in place that require measures to avoid, reduce, or minimize impacts to cultural and tribal resources. Therefore, the total impact of the project in conjuncture with other projects in the area related to unknown cultural resources would not be cumulatively considerable.

### 7.1.3.5 Energy Resources

As discussed in Section 5.6, Energy, the project would not result in substantial fuel usage when analyzed against the total fuel available in the area and would comply with the state's anti-idling and emissions regulations during construction activities. Other foreseeable projects in the region mostly consist of linear

transportation and infrastructure projects that would likely have similar construction-related impacts to energy resources as the project. Bicycle and pedestrian improvement projects proposed adjacent to US 395, along Janesville Main Street, and within the Alturas Central Business District would not result in long-term energy impacts once construction activities are complete. The Woodcrest Real Estate Ventures development project could result in operational increase in energy consumption. Similarly, the Nevada and Oregon running line portions of the Prineville to Reno fiber optic project would result in similar, construction-related fuel and energy consumption impacts as the project. Other foreseeable projects would be required to comply with their respective local or state energy efficiency regulations for construction, which would be subject to the review and discretion of the local jurisdictions in these areas. Therefore, because the project would result in a relatively minor use of fuel resources and would comply with the state's anti-idling and emissions regulations, it would not have a considerable contribution to a cumulative impact when combined with other projects listed in Table 7.1-1.

### 7.1.3.6 Geology, Soils, and Paleontological Resources

Impacts related to geology, soils, and minerals from implementation of the project are largely related to construction activities and movement of soil onsite. As discussed in Section 5.7, Geology, Soils, and Paleontological Resources, the project would not result in any significant impacts related to geology and soils with implementation of state and local regulations governing the protection of soils and related to structural stability or limiting the potential for erosion, such as implementation of an SWPPP. Additionally, there is a moderate potential for the presence of paleontological resources in the project area; however, because the project is located existing roadway right-of-way, it is likely that any paleontological resources in the area would have been discovered during placement of the roadway, and therefore, the risk of directly or indirectly destroying a unique paleontological resource or geologic feature is limited. Therefore, individually, the project would not result in a significant cumulative impact related to geology, soils, and paleontological resources.

Other foreseeable projects identified in Table 7.1-1 would consist of transportation- or infrastructure-related projects, with one smaller development project, all of which would likely involve similar impacts related to geology, soils, and paleontological resources. Construction of these projects would likely include vegetation removal, grading, staging, trenching, excavation, and other activities that would result in the temporary and short-term disturbance of soil and would expose disturbed areas to storm events. Related projects would also be required to comply with the federal, state, and local regulations governing excavations and erosion potential for construction activities and implement recommendations contained in project-specific geotechnical reports. Therefore, it is anticipated that any potential impacts associated with geologic and soil conditions would be mitigated within the respective sites of these projects. The Nevada and Oregon running line portions of the Prineville to Reno fiber optic project would likely result in similar impacts related to geology, soils, and paleontological resources since excavation, trenching, and restoration methods for these portions of the project would likely be the same when installing the fiber optic line. A SWPPP would still be implemented for the Nevada and Oregon running lines, since SWPPPs are required under the EPA's NPDES. Therefore, although each cumulative project site has its own unique geologic considerations, adherence to all relevant plans, codes, and regulations with respect to construction would avoid cumulative impacts related to exposure to geologic hazards. Therefore, no

additive effect would result from construction of the project, and the project would not contribute to any cumulative impacts related to geology, soils, or paleontological resources.

### 7.1.3.7 Greenhouse Gases

GHGs in their very nature are a cumulative impact and are discussed in Section 5.8, Greenhouse Gas Emissions. As discussed in Section 5.8, the project would not result in GHG emissions that would excess the thresholds of significance and would not conflict with the California's 2017 Climate Change Scoping Plan, and therefore, the project would result in a less than significant impact. Once the project is constructed, it would not result in any long-term GHG emissions or interfere with long-term GHG reduction goals. Therefore, the project individually would not substantially contribute to a significant cumulative impact related to GHGs.

Other foreseeable projects within or adjacent to the project area are related to infrastructure and transportation improvements, with the exception of the one smaller development project, and would involve similar types-of construction-related GHG-emissions. Some of the projects in Table 7.1-1 would result in operational GHG emissions through an increase in VMT. The Nevada and Oregon running line portions of the Prineville to Reno fiber optic project would result in similar construction-related GHG emissions as the project and would be subject to review by the local jurisdictions in these areas. Since constructions emissions would likely be similar to the project, it is not anticipated that any additional mitigation or GHG reduction methods would be needed. Therefore, the project, when combined with the cumulative projects in the area, would not have a considerable contribution to a cumulative impact related to GHG emissions.

### 7.1.3.8 Hazards and Hazardous Materials

Construction activities associated with the project have the potential to result in hazardous materials release through the use and transport of fuels, oils, and lubricants that would be used throughout construction activities or through accidental release of hazardous materials encountered during excavations. Additionally, the project would be located within 0.25 mile of several schools along the alignment and could have the potential to emit or release hazardous materials near these schools. As discussed in Section 5.9, Hazards, Hazardous Materials, and Public Safety, potential impacts would be minimized through compliance with federal, state, and local and through project APMs.

Cumulative impacts could occur if other reasonably foreseeable current or future projects in the area would have the potential to cause an accidental release or potentially expose sensitive receptors to additional hazards in combination with the project. Other cumulative projects in the area are related to infrastructure and transportation, with the exception of the one development project, all of which would involve similar types of construction-related impacts as the project. Similar to the project, these other projects would also be required to comply with federal, state, and local regulations governing these of hazardous materials during construction activities or the procedures taken in the event of a hazardous materials spill. All impacts related to hazardous materials would be temporary and would incorporate these standard hazardous materials safety measures to reduce potential impacts related to construction activities.

Therefore, the project, when combined with other projects in the area, would not have a considerable contribution to a cumulative impact.

### 7.1.3.9 Hydrology and Water Quality

Construction of the project could result in impacts to water quality from using fuels or other hazardous materials near waters or through increased erosion, sedimentation, or flooding impacts, as well as the frac-out from the use of directional boring equipment. As discussed in Section 5.10, Hydrology and Water Quality, hydrology and water quality impacts associated with the project would be reduced through implementation of a SWPPP. The SWPPP would include measures to reduce erosion, sediment runoff, and contain pollutants onsite, which would minimize or avoid impacts to waters and water quality. Additionally, the project would not result in any substantial additional impervious surfaces, be located in a flood zone, or substantially impact groundwater supplies. Therefore, the project would not individually result in a significant cumulative impact.

Cumulative impacts could occur if any other reasonably foreseeable current or future project would have the same or similar impacts to water quality, drainage patters, or groundwater supplies. Construction of the cumulative projects shown in Table 7.1-1 would also be required to comply with federal, state, and local regulations and standard permit conditions governing water quality, including implementation of a SWPPP, if the projects are more than 1 acre. The Nevada and Oregon running line portions of the Prineville to Reno fiber optic project would likely result in similar impacts related to water quality through erosion, sedimentation, and accidental spills. Compliance with the SWPPP would also be required for the Nevada and Oregon running line portions of the project because there is a federal requirement administered through the EPA NPDES program. Any additional mitigation related to the protection of water quality during construction would be subject to review and determination by the local jurisdictions in the respective areas. However, with implementation of the SWPPP, no additional significant water quality impacts would be anticipated for these areas.

Additionally, several of the projects identified in Table 7.1-1 would likely result in new impervious surfaces that could affect local hydrology and drainage; however, the project itself would not result in any additional impervious surfaces so it would not add to this potentially cumulative impact. Water used onsite for watering or other needs would not deplete or interfere with groundwater supplies or recharge or conflict with any water quality plans. Therefore, overall, the project would not have a considerable contribution to a cumulative impact related to hydrology or water quality when combined with other projects in the area.

### 7.1.3.10 Recreation

As discussed in Section 5.16, Recreation, because multiple trails cross over or are accessed via US 395, construction of the project could result in temporary impacts to parks and other recreational facilities through construction-related noise, traffic congestion, or access limitations. APM REC-1 would be implemented to coordinate with BLM, notify recreational users of disruptions to trail access, and document trail conditions prior to construction and reconstruct trails or facilities to original conditions. All

impacts to recreational resources would be temporary and would be restored upon completion of construction activities.

Other cumulative projects listed in Table 7.1-1 are related to infrastructure and transportation improvements with the exception of the one smaller development project. Foreseeable projects that would be located adjacent to US 395 within the same vicinity of the project would have the potential to involve similar types of construction-related impacts to recreational resources. A cumulative impact could occur if construction and operation of multiple projects would impact a recreational resource such as a trail or park through closure or prolonged construction noise or traffic congestion. Multiple trails cross or are accessed via US 395 along the project running line, including Shaffer Mountain Trail near Litchfield (Post Mile 77.3), Belfast Petroglyphs OHV Trail near Litchfield (Post Mile 93.4), Buckhorn Backcountry Byway (Post Mile 115.2) and the California Historic Trail (Post Miles 21.9, 29.2, 29.5, 30.2, 31.1, 34, 42.8, 42.9, 43.1, 43.9, 50.6, 72.5, 76.4, and 77.6); however, it is unlikely that construction activities would impact access. Any closures that are required for public safety during project construction would be temporary and require coordination with resource agencies and notification of planned closures, Because the project is linear, construction would be transient in nature and would not permanently alter recreational facilities as the project would not have a considerable contribution to a cumulative impact on recreational resources.

### 7.1.3.11 Noise

As discussed in Section 5.13, Noise, the project would not result in any permanent increases in noise or vibrations in the area. Construction noise and vibrations would occur along the length of the project, however, as discussed in Section 5.13, no one sensitive receptor would be substantially impacted by construction noise or vibration for more than a few days at any given receptor. Further, because noise impacts are normally localized and attenuated rapidly with distance, noise impacts past 500 feet and vibration impacts past 100 feet are generally not noticeable beyond ambient or existing conditions.

Cumulative noise impacts could occur if the projects listed in Table 7.1-1 would result in noise or vibration levels in excess of standards and would occur at the same time and in the same general location as the project. Other reasonably foreseeable projects within the nearby area are related to infrastructure and transportation improvements and would involve similar types of construction-related temporary noise impacts. Such projects that would be located adjacent to US 395 within the same vicinity of the project and would have the potential to impact the same sensitive receptors. However, none of the projects listed in Table 7.1-1 are anticipated to occur at the same time as the project and would be temporary given the linear nature of such projects. Therefore, the project when combined with other projects in the area would not have a considerable contribution to a cumulative impact related to noise or vibration.

### 7.1.3.12 Transportation

As discussed in Section 5.17, Transportation, construction activities associated with the project would cause a temporary and short-term increase in traffic due to the additional number of vehicles on the roads. This temporary traffic volume increase would be spread out over the entire project alignment, and the increased traffic levels during peak construction would remain within acceptable limits in the context

of road capacities. Temporary road closures may be required at various locations to ensure public safety; however, the majority of the project alignment traverses undeveloped areas with minimal vehicular traffic or bicycle and pedestrian facilities. Emergency access routes will be maintained throughout project construction (APM TRA-1). No long-term or permanent impacts would result from implementation of the project.

The project could have cumulatively considerable impacts related to transportation if the other projects listed in Table 7.1-1 were to overlap in location and result in increased trips, congestion, or service capacities on US 395 or surrounding roadways. The other projects listed in Table 7.1-1 mostly consist of transportation or infrastructure projects, with one small development project. These projects would likely have similar impacts as those described for the project and would potentially result in similar impacts as the project, including temporary delays along US 395 for construction activities. Therefore, because project construction would be temporary, linear, and would not be substantially increased with other cumulative projects in the area, the project would not have a considerable contribution to a cumulative impact.

### 7.1.3.13 Utilities and Service Systems

As discussed in Section 5.19, Utilities and Service Systems, impacts related to utilities could occur from construction-related water use and disposal of waste. Water would be required for dust control and other construction-related uses onsite; however, water would be trucked onsite and would not require use of any local municipal water supplies or result in any exceedances of capacities. Therefore, there would be a less than significant impact related to water supplies and infrastructure. Additionally, the project would not require the construction of any storm drain facilities or wastewater facilities. Construction activities would also result in construction waste and debris, which would be brought to nearby landfills. APMs would be implemented to divert recyclable construction waste from local landfills to recycling facilities.

The projects listed in Table 7.1-1 would consist of transportation and infrastructure projects, with the exception of the one smaller development project, and would likely have similar waste- and debris-producing potential as the project. The cumulative projects in California would likely require similar recycling plans in order to comply with state and local management reduction statutes. The Nevada and Oregon portions of the Prineville to Reno fiber optic line project would be required to comply with the respective local and state management and reduction statutes in each state. Any additional mitigation related to construction waste in the Nevada and Oregon would be subject to review and determination by the applicable jurisdictions. Overall, because the project itself would result in minimal waste as well as minor uses of water during construction activities, the project would not result in a considerable contribution to a cumulative impact when combined with other projects in the area to utilities and service systems.

### 7.1.3.14 Wildfires

As discussed in Section 5.20, Wildfires, impacts related to wildfires would be limited to construction activities along the length of the project. Construction of the project would involve the use of various flammable materials and potentially spark-producing equipment, which could potentially start a fire in the

various vegetated areas and areas that have a designation of "very high fire severity" along the project if not handled appropriately. Once construction is complete, management of the telecommunications infrastructure would generally occur remotely, with onsite maintenance only as necessary. Access vaults would be accessed periodically for routine maintenance via US 395 and other existing and maintained roads. All periodic maintenance activities would comply with local and state regulations governing wildfire prevention.

The project could have cumulatively considerable impact related to wildfires if other projects listed in Table 7.1-1 would occur in a similar or adjacent location and would also have the potential to start wildfires during construction activities, further exacerbating the risk of wildfires to occur or spread. The projects listed in Table 7.1-1 would mostly consist of transportation or infrastructure projects, with the exception of one smaller development project, all of which could have the potential to start a wildfire from the use of construction equipment or vehicles. The California projects would all be required to comply with local, state, and federal regulations governing wildfire protection and may also be required to develop and implement a fire protection plan, similar to the project. Any regulations or mitigation measures for the Nevada and Oregon portions of the Prineville to Reno fiber optic line project would be subject to review by the local and respective state jurisdictions' requirements for wildfire protection and care and maintenance of construction equipment and vehicles. The project would comply with existing regulatory requirements, and with implementation of Mitigation Measure FIRE-1, Construction Fire Protection Plan, potential impacts related to wildfires would be minimized. Therefore, the project, when combined with the other cumulative projects listed in Table 7.1-1, would not have a considerable contribution to a cumulative impact related to wildfires.

## 7.2 GROWTH-INDUCING IMPACTS

CEQA specifies that the growth-inducing impacts of a project must be addressed in an EIR (CCR Section 21100[b][5]). Specifically, Section 15126.2(e) of the State CEQA Guidelines states that the EIR shall do the following:

> Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result if a project would involve construction of new housing, which would facilitate new population to an area. Indirect growth inducement would result, for instance, if implementing a project would result in any of the following:

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- Any economic or population growth, in the surrounding environment that would directly or indirectly, result from the proposed project.
- Any increase in population that could further tax existing community service facilities (i.e., schools, hospitals, fire, police, etc.), that would directly or indirectly result from the proposed project.
- Any obstacles to population growth that the proposed project would remove.
- Any other activities directly or indirectly encouraged or facilitated by the proposed project that would cause population growth that could significantly affect the environment, either individually or cumulatively.

As discussed in Section 2.1, Project Background, the purpose of the project is to provide broadband service to currently undeserved residences along the project alignment through the installation of fiber optic broadband facility cable. The project would extend 193.9 miles of fiber optic cable within existing roadways across portions of Modoc, Lassen, and Sierra Counties. No new homes or businesses are proposed as part of the project, and the project is not anticipated to induce population growth either directly or indirectly. The surrounding area in each of the counties is anticipated to decrease from 2020 to 2040, and the project would not affect the change in population, nor would it remove obstacles to population growth. At the peak of construction, approximately 48 construction workers of about eight crews (six people per crew) would be located across various construction locations simultaneously. It is anticipated that construction workers would be drawn from existing staff in the local area. Because the construction duration is short (approximately 6 months), it is not anticipated that a construction workforce would permanently relocate to the area. The project area has adequate hotels and motels available to provide accommodations to any workers that may temporarily relocate to the area during construction. Although construction workers traveling to the project area may use existing public services or amenities, this potential increase in demand would be minimal and temporary and would not require new or altered government facilities. Thus, project construction activities would not directly or indirectly induce substantial population growth. Once the project is constructed, the system would be remotely monitored through networks in Tulsa, Oklahoma. Based on remote monitoring, the applicant would send out crews if the infrastructure needs to be repaired or if a mandated relocation is needed, and permanent workers would not be required in the project area for the operation and maintenance of the project; therefore, the project would not directly or indirectly induce population growth.

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