Initial Study/Mitigated Negative Declaration for the Camp San Luis Obispo Range Roads Repair Project, San Luis Obispo County, California

JUNE 2024

PREPARED FOR

Camp San Luis Obispo

California Army National Guard

PREPARED BY

SWCA Environmental Consultants

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THE CAMP SAN LUIS OBISPO RANGE ROADS REPAIR PROJECT, SAN LUIS OBISPO COUNTY, CALIFORNIA

Prepared for

Attn: Major Brian D. Woods, PE

Prepared by

Cassidy Bewley, B.S.

SWCA Environmental Consultants
4111 Broad Street, Suite 210
San Luis Obispo, CA 93401

SWCA Project No. 77830

June 2024

CONTENTS

Appendices

1 INTRODUCTION

Project Title:	Camp San Luis Obispo Range Roads Repair Project
Lead Agency:	California Army National Guard 9800 Goethe Road Sacramento, CA 95827
Lead Agency Staff Contact:	Major Brian Woods, PE Camp San Luis Obispo 10 Sonoma Avenue San Luis Obispo, CA 93405
Project Applicant:	California Army National Guard

1.1 Project Location

The Camp San Luis Obispo Range Roads Repair Project (project) would be located within Camp San Luis Obispo California Army National Guard Base (Camp SLO) north of California State Route 1 (SR 1), approximately 2.25 miles northwest of the city of San Luis Obispo, San Luis Obispo County, California (Figure 1). The project includes roadway and culvert improvements along approximately 13,967 linear feet (2.65 miles) of roadway along San Benito Road and Range Road, located on an approximately 160-acre property (Assessor Parcel Numbers [APNs] 073-231-003, 073-231-004, and 073-231-006). The total proposed project disturbance area is estimated to be approximately 779,000 square feet (17.88 acres). The proposed disturbance area and immediately surrounding areas constitute the 57.65-acre project site (see Figure 2). The project site is approximately 3.6 miles west of the intersection of SR 1 and Highland Drive. Surrounding land uses include El Chorro Regional Park and Dairy Creek Golf Course to the west, the Los Padres National Forest to the north, Cuesta Conservation Camp #24 and California Men's Colony to the east, and SR 1 and Camp SLO facilities to the south.

1.2 Environmental Setting

Topography within the project site ranges between nearly flat to moderately sloping. Elevations within the project area range from approximately 345 to 886 feet (105–270 meters). The project property generally supports a range of habitats including oak woodland, chaparral, scrub, grassland, and riparian/wetland with a mix of military base developments. According to USGS topographic maps and other available resources, twelve drainages run through the project site, as well as three ponds, and eleven swales. The hydrological features flow in a southerly direction towards Chorro Creek.

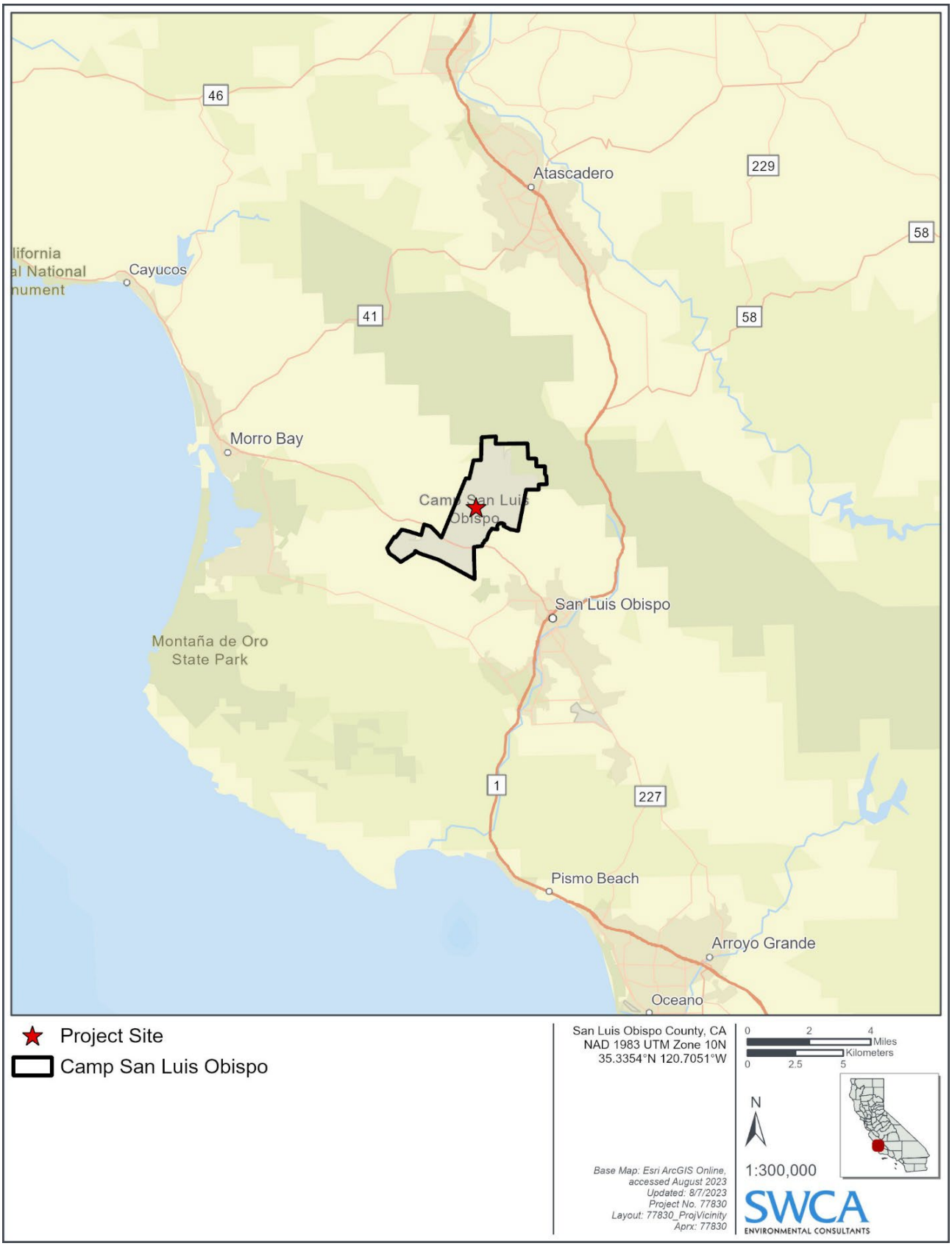


Figure 1. Project Vicinity Map

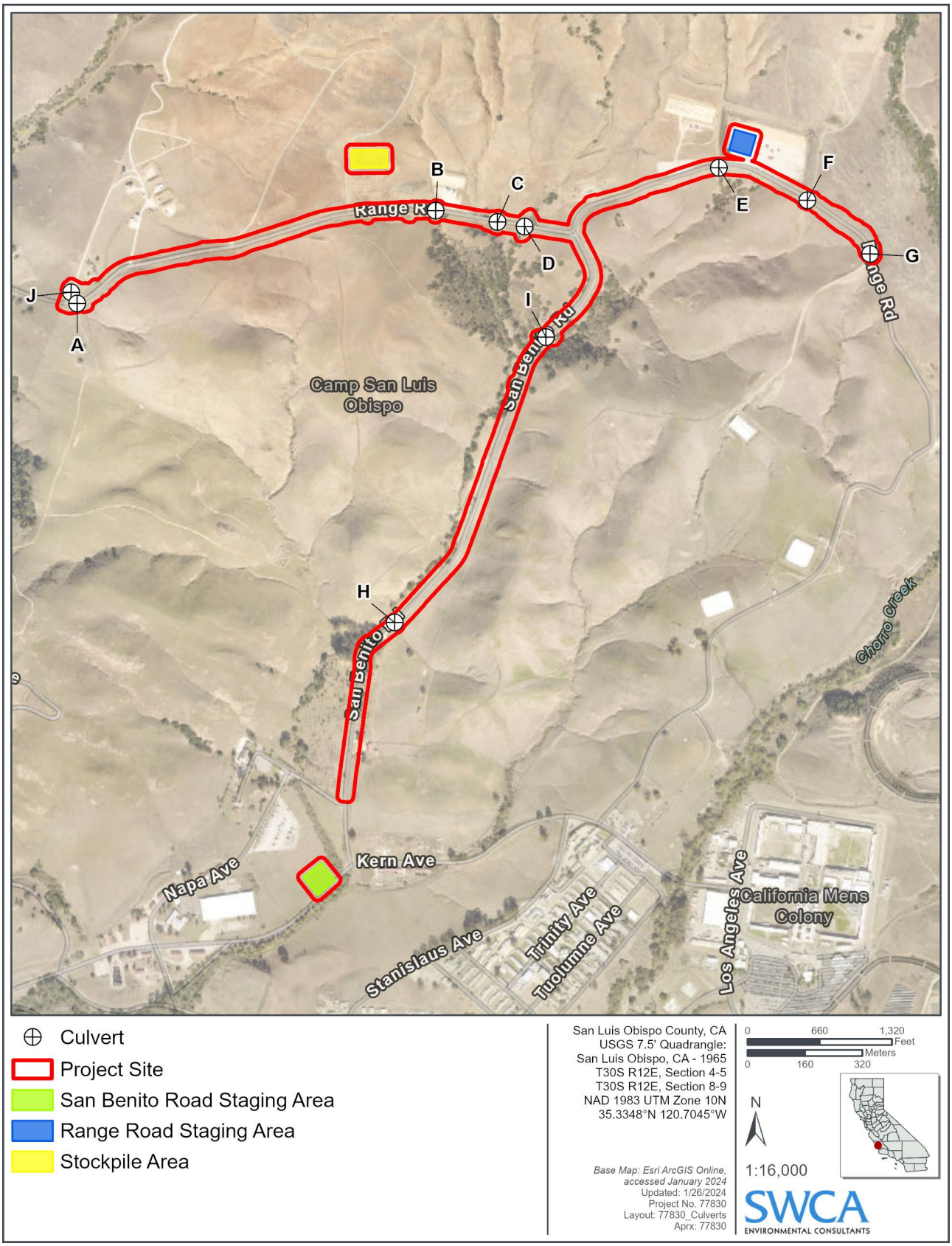


Figure 2. Project Location Map

1.3 Project Description

The California Army National Guard is proposing roadway improvements and replacement and/or extension of existing roadway culverts along approximately 2.65 miles of roadway along San Benito and Range Roads within the Camp SLO property.

The purpose of the project is to improve the degraded roadways so that they can continue to safely provide access for regular transport of heavy machinery and other vehicles as needed to support current and near future Camp SLO operations over the estimated 25-year lifespan of the improvements, as well as to improve existing drainage through the area through improvements and replacements of culverts in the roadways. Improvements along San Benito Road would generally occur between the San Benito Road/Santa Clara Avenue intersection to the San Benito Road/Range Road intersection (approximately 5,873 linear feet). Improvements along Range Road would generally occur from 4,865 feet west of the San Benito Road/Range Road intersection to 3,230 feet east of the San Benito Road/Range Road intersection (approximately 8,094 linear feet).

1.3.1 *Camp SLO Background*

Established in 1928, Camp SLO was dedicated as a training site for the California National Guard. In 1934, the camp was named in honor of Governor Frank Merriam and became known as “Camp Merriam.” The name was changed to “Camp San Luis Obispo” when it was occupied by the Army in 1940 (California State Military History and Museums Program 2020).

Currently, Camp SLO provides operational, training, and logistical support to a wide variety of civilian and military agencies at the federal, state, and local levels. Camp SLO also supports Grizzly Youth Academy, which is a highly structured educational facility established in 1998 managed by a partnership between the California National Guard and the Grizzly Challenge Charter School for youth between the ages of 15 and 18 who have dropped out of high school or are at risk of dropping out (Grizzly Youth Academy 2023).

As required by the Sikes Act of 1960 and the Sikes Act Improvement Act of 1997, the California Army National Guard (CA ARNG) has prepared an Integrated Natural Resources Management Plan (INRMP) Update to provide Camp SLO with a long-term viable framework for managing natural resources on its lands. The INRMP establishes planning and management strategies and guidelines, identifies natural resources constraints and opportunities, supports the resolution of land use conflicts, provides baseline descriptions of natural resources necessary for the development of conservation strategies and environmental assessment, service as the principal information source for the preparation of future environmental documents for proposed Camp SLO actions, and provides guidance for annual natural resources management reviews (CA ARNG 2022).

1.3.2 *Existing Built Conditions*

San Benito Road is a north-south running roadway with a vehicle lane in each direction. Range Road is an east-west running roadway with a vehicle lane in each direction that is bisected by San Benito Road. San Benito Road currently provides vehicle access from the Camp SLO facilities located north of US 101 to Range Road, and Range Road provides vehicle access to each of the base’s six shooting ranges and the Urban Training Complex.

The roadways are both currently paved with asphalt and have a width varying between 18 and 23 feet. The roadways are assumed to have been paved in the 1940’s, and it is not known whether they have been improved since that time.

1.3.3 *Roadway and Culvert Improvements*

RANGE ROAD IMPROVEMENTS

The applicant proposes to widen and improve Range Road, which provides access to all six shooting ranges on Camp SLO, including the Alpha, Bravo, Charlie, Delta, Echo, and Foxtrot Ranges, as well as the Urban Training Complex. The project would include improvements to eight existing corrugated metal pipe (CMP) culverts within Range Road. Proposed improvements to existing culverts are summarized in Table 1 and generally would include replacement of CMP culverts with high-density polyethylene (HDPE) pipe culverts, installation of rip-rap materials,[1] and/or retaining or replacing existing concrete headwalls (see Table 1).

Table 1. Proposed Culvert Improvements

Culvert	Existing Conditions	Proposed Improvement(s)
Range Road Culvert A	18-inch-diameter CMP culvert; north side is silted over with no surface evidence	Protect in place. Expose currently buried end of culvert and install rip rap on north end. Retain existing concrete headwall and install rip rap on southern end.
Range Road Culvert B	36-inch-diameter CMP culvert	Replace existing culvert with 36-inch-diameter HDPE pipe culvert. Install rip rap on both ends of culvert. Remove existing concrete headwall and install new pre-cast concrete headwall on north end.
Range Road Culvert C	36-inch-diameter CMP culvert	Replace existing culvert with 36-inch-diameter HDPE pipe culvert. Install rip rap on both ends of culvert. Remove existing concrete headwall and install new pre-cast concrete headwall on north end.
Range Road Culvert D	48-inch-diameter CMP culvert	Replace existing culvert with 48-inch-diameter HDPE pipe culvert. Install rip rap on both ends of culvert. Remove existing concrete headwall and install new pre-cast concrete headwall on north end.
Range Road Culvert E	36- to 42-inch-diameter CMP culvert	Protect existing culvert in place. Trim brush and trees at culvert inlet.
Range Road Culvert F	18-inch-diameter CMP culvert	Replace existing culvert with 18-inch-diameter HDPE pipe culvert. Protect existing concrete headwall in place.
Range Road Culvert G	18-inch-diameter CMP culvert	Replace existing culvert with 18-inch-diameter HDPE pipe culvert. Replace concrete headwall with pre-cast concrete headwall on north side*
San Benito Road Culvert H	36-inch-diameter reinforced concrete pipe (RCP) that transitions into 48-inch-diameter CMP culvert	Replace existing 48-inch-diameter culvert with 48-inch-diameter HDPE pipe culvert. Overlap HDPE pipe with approximately 12 to 24 inches of the remaining RCP. Fill in upper void space between the two overlapping pipes with concrete. Protect existing concrete headwall in place. Install riprap at outlet.

[1] Rip-rap describes a range of rocky material used to protect structures from scour and erosion.

San Benito Road Culvert I	84-inch diameter CMP culvert	Protect existing culvert in place. Protect existing concrete headwall in place. Install riprap at outlet.
Range Road Culvert J	36-inch diameter CMP culvert	Replace existing culvert with 36-inch-diameter HDPE pipe culvert with flared-end sections at both ends. Install riprap on both ends of culvert.

*The existing concrete headwall will be protected in place if possible. For the purposes of this analysis, the assumption is that the headwall will be replaced in order to evaluate a reasonable worst-case scenario.

The project would include the reconstruction and widening of Range Road to include one 11-foot-wide vehicle travel lane in each direction with 1- to 2-foot-wide shoulders on each side of the roadway. Existing barbed-wire fencing along the edge of the roadway would be reconstructed outside of the new roadway edge following completion of roadway improvements. An existing cattle guard located within the roadway would be removed and reconstructed to match the new road width near the same location. Existing utility poles located within the project site would be protected in place during construction activities. The project would also include burial of empty conduit underneath Range Road at the entrances to each shooting range to accommodate potential future utility connections.

SAN BENITO ROAD IMPROVEMENTS

The project would include reconstruction and widening of San Benito Road to include one 11-foot-wide vehicle travel lane in each direction with 1- to 2-foot-wide shoulders on each side of the roadway. This would include improvements to two existing CMP culverts within San Benito Road, as summarized in Table 1. In addition, the roadway centerline would be offset by 1 to 2 feet at certain locations in order to avoid impacting existing utility poles and to minimize grading within the creek adjacent to the roadway, existing barbed-wire fence located along the sides of the existing roadway would be either protected in place or rebuilt following construction activities, and existing overhead utility poles located in close proximity to the existing roadway would be protected in place. The existing State of California 8-inch underground water pipeline that bisects the San Benito Road alignment would also be protected in place and would not be affected by project activities.

1.3.4 *Construction*

The project would result in 463,600 square feet (10.64 acres) of permanent site disturbance (including previously paved/disturbed areas) and 315,400 square feet (7.24 acres) of temporary site disturbance (e.g., graded areas to be revegetated, equipment staging areas, etc.), resulting in a total site disturbance area of 779,000 square feet (17.88 acres). Equipment staging areas and a designated material stockpile area have been identified near the project site and are shown on Figure 2. Project construction activities would result in approximately 4,998 cubic yards of cut materials and approximately 8,674 cubic yards of fill materials. Material import will be limited to that needed to fortify the road subgrade and the paving material, including approximately 174 tons of lime, 393 tons of cement, and 12,922 tons of asphalt. Project grading and excavation activities would have a maximum depth of 6 feet. The removal of herbaceous vegetation will be required, and approximately 14 coast live oak and 25 arroyo willow trees would be removed and/or impacted during roadway construction and to facilitate equipment access and grading, as summarized in Table 2, below.

Table 2. Estimated Tree Removals

Location	Number of Trees to be Removed	Species	Diameter at Breast Height (DBH)
Culvert D	8	Coast live oak	9 to 45 inches
	20	Arroyo willow	6 to 35 inches
Culvert H	3	Coast live oak	16 to 25 inches

	1	Arryo willow	12 inches
Culvert I	3	Coast live oak	20 to 40 inches
	4	Arryo willow	8 to 25 inches

Proposed improvements to San Benito and Range Roads are anticipated to take approximately 4.5 months to complete each, for a total combined construction period of approximately 9 months. Construction is planned to occur in two phases, with improvements to one roadway occurring between mid-June and early November 2024 and the second roadway being improved between mid-June and early November 2025. Construction activities would generally occur between 6:30 a.m. and 5:00 p.m. on weekdays and are anticipated to require an average of 12 to 15 construction workers to be on-site per day, with a maximum of 20 during paving activities. Following construction, the roadway improvements are anticipated to have a lifespan of 25 years.

1.4 Required Discretionary Approvals

The potential authorizations, permits, reviews, and approvals from federal, state, and local agencies that would be required for the project are listed in Table 3.

Table 3. Potential Authorizations, Permits, Reviews, and Approvals

Permit / Approval / Consultation	Authorizing Agency
Federal	
Clean Water Act Section 404 Compliance	U.S. Army Corps of Engineers
National Environmental Policy Act Compliance	California Army National Guard
State	
CEQA Environmental Compliance	California Army National Guard
Lake and Streambed Alteration Agreement	California Department of Fish and Wildlife
National Pollutant Discharge System Storm Water Permit for Construction Activities	Regional Water Quality Control Board
California Endangered Species Act Compliance	California Department of Fish and Wildlife
Regional	
Authority to Construct/Permit to Operate	San Luis Obispo County Air Pollution Control District

1.4.1 *National Environmental Policy Act Requirements*

The project is will require a permit from the U.S. Army Corps of Engineers and would therefore be subject to environmental review under the National Environmental Policy Act (NEPA). The California Army National Guard is the federal lead agency and has determined the project qualifies for a NEPA Categorical Exclusion. The Camp SLO Environmental Office has prepared NEPA documentation for the proposed project, see Appendix D.

2 ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The proposed project could have a "Potentially Significant Impact" for environmental factors checked below. Please refer to the attached pages for discussion on mitigation measures or project revisions to either reduce these impacts to less than significant levels or require further study.

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

ENVIRONMENTAL DETERMINATION

On the basis of this initial evaluation:

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

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

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: _____ **Signed:** _____

I. Aesthetics

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

Setting

Scenic Vista

A scenic vista is defined as a view that provides visual and aesthetic value to the surrounding community. CEQA outlines that it is California's duty to "provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom form excessive noise" Public Resources Code Section 21001(b)). A project is determined to have a significant impact on aesthetics if the degree to which the public can enjoy a scenic vista is hindered, which largely depends on how well the proposed project blends in with the existing natural setting.

California Scenic Highway Program

The California Scenic Highway Program was created by the State Legislature in 1963 to protect and enhance the natural scenic beauty of California highways and adjacent corridors. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. Scenic Highways within San Luis Obispo County include U.S. Highway 101 (US 101), State Route 46 (SR 46), portions of State Route 41 (SR 41), State Route 1 (SR 1), and Lake Nacimiento Drive. The distance from SR 1 to the nearest part of the project site is approximately 0.5 mile; SR 1 is designated as a State Scenic Highway at this location (California Department of Transportation [Caltrans] 2018).

Existing Conditions

The project site is located in a rural environment characterized by nearly flat to moderately sloping topography containing various habitats including oak woodland, chaparral, scrub, grassland, and riparian/wetland with a mix of military base developments. Twelve drainages, three ponds, and eleven swales run through the project site, all flowing in a southerly direction towards Chorro Creek.

a) Would the project have a substantial adverse effect on a scenic vista?

The project site is located near the foothills of the Santa Lucia Mountain Range and would be intermittently visible to viewers traveling in vehicles along SR 1 located approximately 0.5 mile south of the project site and viewers hiking the Eagle Rock trail, which is located approximately 0.8 mile southwest of the project site. Views of the project site are well-screened from SR 1 and the Eagle Rock hiking trail by existing topography and vegetation. Public views of the site and surrounding area are not expansive and do not constitute a scenic vista. In addition, the County of San Luis Obispo has not designated the site or surrounding area as having unique or high scenic value in its General Plan. Therefore, the project would not have a substantial adverse effect on a scenic vista and *no impacts would occur*.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project site is located approximately 0.5 miles north of SR 1 which is designated as a State Scenic Highway at this location (California Department of Transportation [Caltrans] 2018). The project site does not support significant scenic resources such as rock outcroppings or historic structures, and tree removals would be limited to those associated with the culvert improvements for culverts D, H, and I as summarized in Table 2. Views of the project site as seen from SR 1 are heavily screened by existing topography and vegetation. During construction, intermittent, temporary views of construction vehicles, equipment, and signage could be visible to viewers traveling along SR 1. However, construction-related views would be heavily screened by existing topography and vegetation that would not be altered by construction. In addition, construction-related views would be limited to the 9-month construction period and following construction, the site would not result in any long-term noticeable visual changes. Therefore, impacts would be *less than significant*.

c) In non-urbanized areas, would the project 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?

The project is located in a rural, non-urbanized area. During construction, intermittent, temporary views of construction vehicles, equipment, and signage could be visible to viewers traveling along SR 1 and viewers hiking the Eagle Rock trail. However, construction-related views would be heavily screened by existing topography and vegetation from both public viewing locations that would not be altered by construction. In addition, construction-related views would be limited to the 9-month construction period and following construction, the site would not result in noticeable visual changes. The project would include widening and re-paving existing roadways, replacement of existing culverts, and minor vegetation removal. No aboveground structures would be built. Therefore, completion of the project would not substantially degrade the existing visual character or quality of public views of the site. Impacts would be *less than significant*.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project construction is planned to occur in two phases, with improvements to one roadway (San Benito Road or Range Road) occurring between mid-June and early November the first year of construction and the second roadway being improved between mid-June and early November of the second year of construction. Construction activities would take place between 6:30 a.m. and 5:00 p.m. on weekdays. Accordingly, use of temporary artificial light would not be substantial and would be limited to relatively short timeframes throughout each construction phase. Following construction, the project would not establish any permanent sources of light or glare. Therefore, impacts associated with creation of a new source of substantial light or glare would be *less than significant*.

Conclusion

The project site is not located within a scenic vista. The project would not result in adverse impacts to scenic resources within the viewshed of a state scenic highway or substantially degrade the existing visual character of public views of the site and its surroundings. The project would not create a new source of substantial light or glare that would adversely affect nighttime views in the area. Therefore, impacts associated with aesthetics would be less than significant and no mitigation measures are necessary.

Mitigation Measures

Mitigation is not necessary.

II. Agriculture and Forestry Resources

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

Setting

The California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and current land use. According to the FMMP, the project site is located on land designated as Grazing Land and Farmland of Local Potential (California Department of Conservation [CDOC] 2022).

The Land Conservation Act of 1965, also known as the Williamson Act, enables local governments to form contracts with private landowners in order to restrict specific parcels of land to agriculture or related open space use. Landowners then receive lower property tax assessments because they are based upon farming and open space uses instead of full market value. The project site is not within lands subject to a Williamson Act contract.

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) *Soil Survey of San Luis Obispo County, California* and the NRCS Web Soil Survey, the project site is underlain by a number of soil types as shown in Figure 3 and described below (NRCS 2023):

- ***Soil Unit 109: Briones-Pismo loamy sands, 9 to 30 percent slopes***

  This soil unit consists of Briones and Pismo soils at 40 and 30 percent, respectively. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of loamy sand and weathered bedrock. This soil type occurs on mountains and hills at elevations between 300 and 2,000 feet (90 and 600 meters). This soil type is not considered prime farmland.

- ***Soil Unit 127: Cropley clay, 0 to 2 percent slopes, MRLA 14***

  This soil unit consists of Cropley soils at 85 percent. The drainage class of this soil type is moderately well drained, and it is composed primarily of clay and sandy clay loam. This soil type occurs on terraces and alluvial fans at elevations between 20 and 2,040 feet (5 and 620 meters). This soil type is considered prime farmland if irrigated.

- ***Soil Unit 129: Diablo clay, 5 to 9 percent slopes, MRLA 15***

  This soil unit consists of Diablo soils at 90 percent. The drainage class of this soil type is well drained, and it is composed primarily of clay. This soil type occurs on mountains and hills at elevations between 30 and 1,130 feet (10 and 350 meters). This soil type is considered prime farmland if irrigated.

- ***Soil Unit 130: Diablo and Cibo clays, 9 to 15 percent slopes***

  This soil unit consists of Diablo and Cibo soils at 50 and 45 percent, respectively. The drainage class of this soil type is well drained, and it is composed primarily of clay. This soil type occurs on hills at elevations between 200 and 600 feet (60 and 180 meters). This soil type is considered farmland of statewide importance.

- ***Soil Unit 131: Diablo and Cibo clays, 15 to 30 percent slopes***

  This soil unit consists of Diablo and Cibo soils at 50 and 45 percent, respectively. The drainage class of this soil type is well drained, and it is composed primarily of clay. This soil type occurs on mountains hills at elevations between 200 and 3,000 feet (60 and 920 meters). This soil type is not considered prime farmland.

- ***Soil Unit 147: Lodo clay loam, 5 to 15 percent slopes***

  This soil unit consists of Lodo soils at 85 percent. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of clay loam. This soil type occurs on mountains and hills at elevations between 300 and 3,000 feet (90 and 920 meters). This soil type is not considered prime farmland.

- ***Soil Unit 148: Lodo clay loam, 15 to 30 percent slopes***

  This soil unit consists of Lodo soils at 85 percent. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of clay loam. This soil type occurs on mountains and hills at elevations between 300 and 3,000 feet (90 and 920 meters). This soil type is not considered prime farmland.

- ***Soil Unit 149: Lodo clay loam, 30 to 50 percent slopes, MRLA 15***

  This soil unit consists of Lodo soils at 85 percent. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of clay loam. This soil type occurs on mountains and hills at elevations between 10 and 2,760 feet (5 and 850 meters). This soil type is not considered prime farmland.

- ***Soil Unit 158: Los Osos loam, 5 to 9 percent slopes***

  This soil unit consists of Los Osos soils at 85 percent. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 100 and 2,000 feet (30 and 610 meters). This soil type is considered farmland of statewide importance.

- ***Soil Unit 159: Los Osos loam, 9 to 15 percent slopes***

  This soil unit consists of Los Osos soils at 85 percent. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 100 and 2,000 feet (30 and 610 meters). This soil type is not considered prime farmland.

- ***Soil Unit 160: Los Osos loam, 15 to 30 percent slopes***

  This soil unit consists of Los Osos soils at 85 percent. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 140 and 910 feet (40 and 280 meters). This soil type is not considered prime farmland.

- ***Soils Unit 162: Los Osos – Diablo complex, 5 to 9 percent slopes***

  This soil unit consists of Los Osos and Diablo soils at 35 and 30 percent, respectively. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 200 and 1,500 feet (60 and 460 meters). This soil type is considered farmland of statewide importance.

- ***Soil Unit 168: Los Osos variant clay loam, 15 to 50 percent slopes***

  This soil unit consists of Los Osos soils at 85 percent. The drainage class of this soil type is well drained, and it is composed primarily of clay and clay loam. This soil type occurs on mountains and hills at elevations between 300 and 1,500 feet (90 and 460 meters). This soil type is not considered prime farmland.

- ***Soil Unit 195: Rock outcrop – Lithic Haploxerolls complex, 30 to 75 percent slopes***

  This soil unit consists of Rock outcrop and Lithic haploxerolls soils at 55 and 25 percent, respectively. The drainage class of this soil type is excessively drained, and it is composed primarily of unweathered bedrock. This soil type occurs on mountains at elevations between 20 and 4,000 feet (5 and 1220 meters). This soil type is not considered prime farmland.

- ***Soil Unit 197: Salinas silty clay loam, 0 to 2 percent slopes, MRLA 14***

  This soil unit consists of Salinas soils at 85 percent, respectively. The drainage class of this soil type is well drained, and it is composed primarily of very fine sandy loam and silty clay loam. This soil type occurs on flood plains, alluvial flats, and alluvial fans at elevations between 0 and 1,180 feet (0 and 360 meters). This soil type is considered prime farmland if irrigated.

- ***Soil Unit 198: Salinas silty clay loam, 2 to 9 percent slopes, MRLA 14***

  This soil unit consists of Salinas soils at 85 percent, respectively. The drainage class of this soil type is well drained, and it is composed primarily of silty clay loam. This soil type occurs on flood plains, terraces, and alluvial fans at elevations between 0 and 1,480 feet (0 and 450 meters). This soil type is considered prime farmland if irrigated.

- ***Soil Unit 221: Xererts – Xerolls – Urban land complex, 0 to 15 percent slopes***

  This soil unit consists of Xererts, Xerolls, and Urban soils at 40, 35, and 20 percent, respectively. The drainage class of this soil type is well drained, and it is composed primarily of variable soils and weathered bedrock. This soil type occurs on mountains and hills at elevations between 0 and 2,500 feet (0 and 760 meters). This soil type is not considered prime farmland.

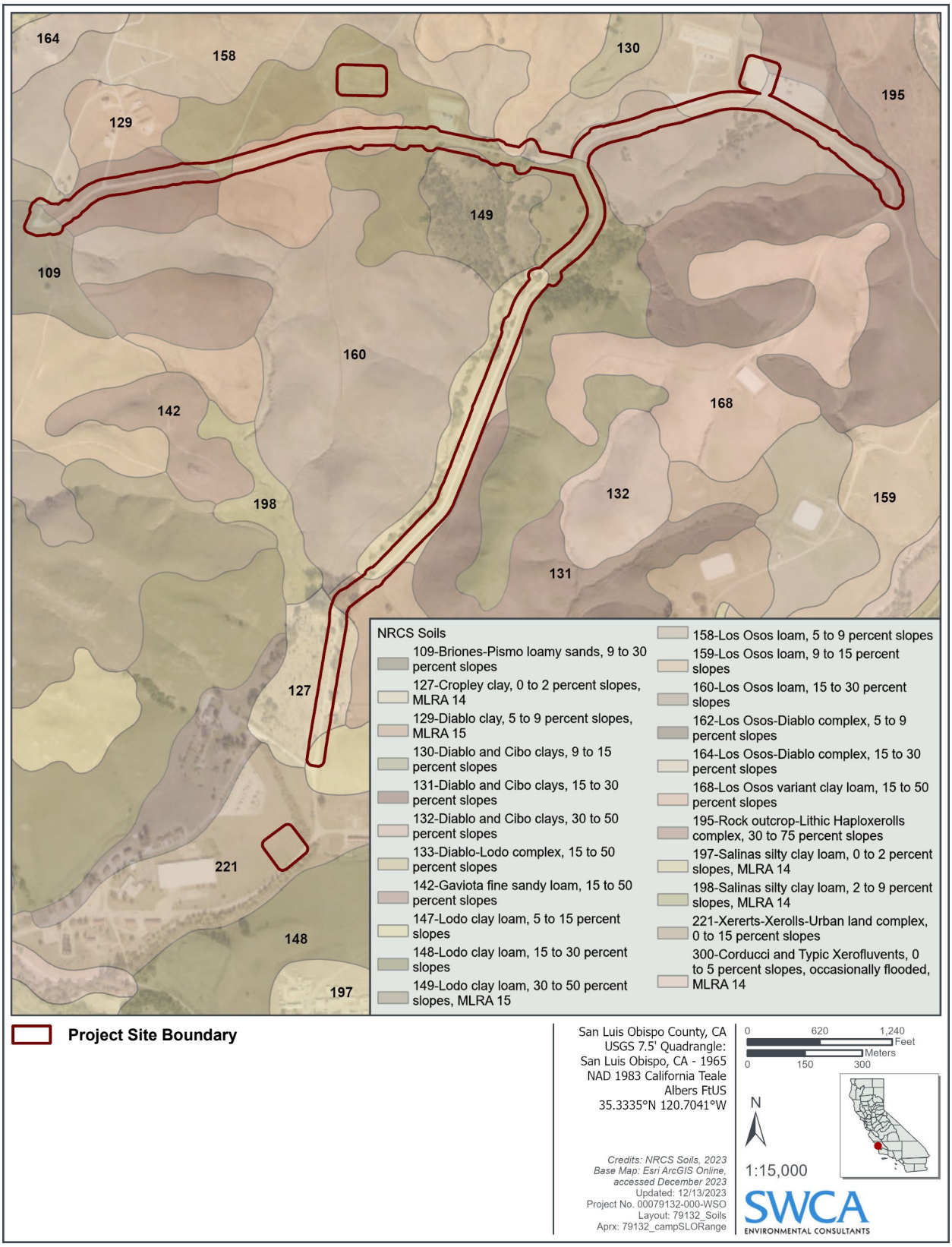


Figure 3. Project Site Soils Map

Forestland is defined in California Public Resources Code (PRC) Section 12220(g) as land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Timberland is defined in PRC Section 4526 as land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.

Environmental Evaluation

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

According to the Farmland Mapping and Monitoring Program of the California Resources Agency, the project site is located on Grazing Land and Farmland of Local Potential. The project site consists primarily of existing paved roadways and adjacent road shoulders, which have little to no potential to be used for agricultural purposes in the future due to the very limited square footage and thin shape of the area. Further, roadways are not mapped within the FMMP land designations, but if they were, these areas would be designated as Urban and Built-Up Land. The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, *no impacts would occur.*

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

This project site is not located within a Williamson Act contract (CDOC 2022). The project site is located within the Agriculture land use category designated by the County of San Luis Obispo. The project consists of minor widening and improvements to existing roadways and replacement of existing culverts and would not preclude the surrounding areas from future agricultural uses. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impacts would occur.

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

The project site and surrounding area is not within forest land, timberland, or timberland production land use or zoning designations; therefore, the project would not conflict with the existing zoning for, or cause rezoning of, forest land, timberland, or Timberland Production. *No impacts would occur.*

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Neither the project site nor the immediately surrounding area supports forest land uses or meets the definition of forest land established in PRC Section 12220(g). Implementation of the project would result in removal of approximately 14 coast live oak and 25 arroyo willow trees located within or directly adjacent to culvert improvement areas. Based on the location of these trees adjacent to existing roadways, and their scattered distribution across multiple areas of the project site, removal of these trees would not constitute loss or conversion of forestland. The project would not result in the loss of forest land or conversion of forest land to non-forest use; therefore, *no impacts would occur*.

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

The project includes improvements of existing roadways and culverts and does not include additional development of surrounding land. Surrounding land that Range Road and San Benito Road provide access to does not currently support any active agricultural activities or forest land. The project would not involve other changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use; therefore, *no impact would occur.*

Conclusion

The project would not directly or indirectly result in the conversion of farmland, forest land, or timber land to non-agricultural uses or non-forest uses and would not conflict with agricultural zoning or otherwise adversely affect agricultural resources or uses. Potential impacts to agricultural resources would be less than significant and no mitigation measures are necessary.

Mitigation Measures

Mitigation is not necessary.

III. Air Quality

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

Setting

Federal and State Air Quality Standards

San Luis Obispo County is part of the South Central Coast Air Basin (SCCAB), which also includes Santa Barbara and Ventura Counties. Air quality within the SCCAB is regulated by several jurisdictions, including the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and San Luis Obispo County Air Pollution Control District (SLOAPCD). Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The California Department of Public Health established California Ambient Air Quality Standards (CAAQS) in 1962 to define the maximum amount of a pollutant (averaged over a specified period of time) that can be present without any harmful effects on people or the environment. The CARB adopted the CAAQS developed by the California Department of Public Health in 1969, which had established CAAQS for 10 criteria pollutants: particulate matter (less than 10 microns in diameter [PM_{10}] and less than 2.5 microns in diameter [$PM_{2.5}$]), ozone (O_3), nitrogen dioxide (NO_2), sulfate, carbon monoxide (CO), sulfur dioxide (SO_2), visibility-reducing particles, lead (Pb), hydrogen sulfide (H_2S), and vinyl chloride.

The Federal Clean Air Act (FCAA) later required the U.S. EPA to establish National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment, and also set deadlines for their attainment. The U.S. EPA has established NAAQS for six criteria pollutants (all of which are also regulated by CAAQS): CO, lead, NO_2, ozone, PM_{10} and $PM_{2.5}$, and SO_2.

California law continues to mandate compliance with the CAAQS, which are often more stringent than national standards. However, California law does not require that CAAQS be met by specified dates as is the case with NAAQS. Rather, it requires incremental progress toward attainment. The SLOAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions within the county are maintained.

San Luis Obispo County Clean Air Plan

The San Luis Obispo County Air Pollution Control District (SLOAPCD) *San Luis Obispo County 2001 Clean Air Plan* (2001 CAP) is a comprehensive planning document intended to evaluate long-term air pollutant emissions and cumulative effects and provide guidance to the SLOAPCD and other local agencies on how to attain and maintain the state standards for ozone and particulate matter 10 micrometers or less in diameter (PM_{10}) (SLOAPCD 2001). The 2001 CAP presents a detailed description of the sources and pollutants that impact the jurisdiction's attainment of state standards, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality. In order to be considered consistent with the 2001 CAP, a project must be consistent with the land use planning and transportation control measures and strategies outlined in the 2001 CAP.

Sensitive Receptors

Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants, such as the elderly, children, people with asthma or other respiratory illnesses, and others who are at a heightened risk of negative health outcomes due to exposure to air pollution. Some land uses are considered more sensitive to changes in air quality than others due to the population that occupies the uses and the activities involved. Sensitive receptor locations include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residences. The nearest off-site sensitive receptor location is El Chorro Regional Park, located approximately 100 feet west of the project site.

Emissions Sources and Local Air District Emissions Thresholds

The SLOAPCD has developed and updated their CEQA Air Quality Handbook (most recently updated via a 2023 Administrative Update Version) to help local agencies evaluate project-specific impacts and determine if air quality mitigation measures are needed, or if potentially significant impacts could result. This handbook includes established thresholds for both short-term construction emissions and long-term operational emissions.

Use of heavy equipment and earth-moving operations during project construction can generate fugitive dust and engine combustion emissions that may have substantial temporary impacts on local air quality and climate change. Combustion emissions, such as nitrogen oxides (NO_x), reactive organic gases (ROG), greenhouse gases (GHGs), and diesel particulate matter (DPM), are most significant when using

large, diesel-fueled scrapers, loaders, bulldozers, haul trucks, compressors, generators, and other heavy equipment. The SLOAPCD has established thresholds of significance for each of these contaminants.

Operational impacts are focused primarily on the indirect emissions (i.e., motor vehicles) associated with residential, commercial, and industrial development. Certain types of projects can also include components that generate direct emissions, such as power plants, gasoline stations, dry cleaners, and refineries (referred to as stationary source emissions). Operational impacts associated with residential development consist primarily of indirect emissions (i.e., motor vehicles). Certain other types of projects can also include components that generate direct emissions, such as power plants, gasoline stations, dry cleaners, and refineries (referred to as stationary source emissions).

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) is identified as a toxic air contaminant by the California Air Resources Board (CARB). Serpentine and other ultramafic rocks are fairly common throughout San Luis Obispo County and may contain NOA. If these areas are disturbed during construction, NOA-containing particles can be released into the air and have an adverse impact on local air quality and human health. Based on the SLOAPCD NOA Screening map, the project site is located in an area identified as having known potential for NOA (San Luis Obispo County Air Pollution Control District [SLOAPCD] 2024).

Environmental Evaluation

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

In order to be considered consistent with the 2001 CAP, a project must be consistent with the land use planning and transportation control measures and strategies that are outlined in the 2001 CAP. If the project is consistent with these measures, the project is considered consistent with the CAP (SLOAPCD 2023).

The project consists of improvements to existing roadways and culverts. The project would not result in a change in land uses or facilitate future changes in land uses; therefore, the land use planning measures of the CAP, such as planning compact communities and balancing jobs and housing, would not be applicable to the project. The proposed roadway improvements would not increase vehicle capacity on either roadway and would not result in a significant increase in vehicle trips following construction activities. The project would not be inconsistent with the land use planning or transportation control measures of the CAP or otherwise obstruct the implementation of the CAP or other applicable air quality plans. Therefore, potential impacts would be *less than significant.*

b) Would the project 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?

San Luis Obispo County is currently designated as non-attainment for ozone and PM_{10} under state ambient air quality standards. Construction and operation of the project would result in emissions of ozone precursors, including ROG, NO_x, and fugitive dust emissions (PM_{10}), as analyzed below.

CONSTRUCTION EMISSIONS

The project would result in 10.64 acres of permanent site disturbance (including previously paved/disturbed areas) and 7.24 acres of temporary site disturbance (e.g., graded areas to be revegetated, equipment staging areas, etc.), resulting in a total site disturbance area of 17.88 acres. Project construction activities would result in approximately 4,998 cubic yards of cut materials and approximately 8,674 cubic yards of fill materials. Material import would be limited to that needed to fortify the road subgrade and the paving material, including approximately 174 tons of lime, 393 tons of cement, and 12,922 tons of asphalt. Proposed earthwork associated with the project construction activities would

result in the creation of construction dust as well as short-term construction equipment and vehicle emissions.

The California Emissions Estimator Model (CalEEMod) version 2022.1.1.2 computer program was used to estimate the project's construction-related and operational emissions (see Appendix B for CalEEMod reports). A summary of the project's estimated construction-related air pollutant emissions is provided in Table 4 and Table 5.

Table 4. Estimated Daily Construction Emissions of Criteria Pollutants

Pollutant	Maximum Daily Emissions (lbs/day)	SLOAPCD Daily Threshold (lbs/day)	Threshold Exceeded?
ROG + NO_x (combined)	18.4	137	No
Diesel Particulate Matter (DPM)	0.64	7 lbs	No

Note: The SLOAPCD does not have a significance threshold for daily PM_{10} emissions.

Source: AMBIENT 2023

Table 5. Estimated Quarterly Construction Emissions of Criteria Pollutants

Pollutant	Maximum Quarterly Emissions (tons/quarter)	SLOAPCD Quarterly Tier 1 Threshold (tons/quarter)	Threshold Exceeded?
ROG + NO_x (combined)	0.15	2.5	No
Fugitive Particulate Matter 10 micrometers or less in diameter (PM_{10})	0.08	2.5	No
Diesel Particulate Matter (DPM)	0.01	0.13	No

Source: AMBIENT 2023

As proposed, the project would not exceed SLOAPCD thresholds for daily or quarterly emissions of combined ROG and NO_x, DPM, or PM_{10}. In addition to the daily and quarterly emissions thresholds noted above, the SLOAPCD states that projects that disturb more than 4.0 acres of land have the potential to exceed the 2.5-ton PM_{10} quarterly threshold. The project would result in a total site disturbance of approximately 17.88 acres. Therefore, the project would have the potential to exceed the quarterly PM_{10} emissions threshold. Mitigation Measure AQ-1 has been identified to require implementation of SLOAPCD standard dust control measures. Implementation of these standard dust control measures would reduce fugitive dust emissions by approximately 50%, or more. These measures would ensure the project's compliance with SLOAPCD's 20% opacity limit (SLOAPCD Rule 401), nuisance rule (SLOAPCD Rule 402), and minimize potential nuisance impacts to nearby receptors. Therefore, potential impacts associated with construction-related emissions would be *less than significant with mitigation*.

OPERATIONAL EMISSIONS

After completion of project construction, the project would result in widened vehicle travel lanes and new culverts along the existing San Benito Road and Range Road roadways. During operation, Camp SLO would continue to use these roadways to access the shooting ranges and Urban Training Complex. The vehicle capacity of the roadways would not change from existing conditions and the project would not result in an increase in the frequency of use of these roadways. Therefore, air pollutant emissions

associated with operation of the project would be negligible and potential impacts would be *less than significant.*

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

The nearest off-site sensitive receptor location is El Chorro Regional Park, located approximately 100 feet west of the project site. As discussed in Section III. *Air Quality*, b), on-site construction equipment emissions would not exceed SLOAPCD daily or quarterly emissions thresholds for combined NO_x and ROG or Diesel PM. However, the project would have the potential to exceed SLOAPCD's quarterly threshold for PM_{10} and would include earthwork and construction activities within 1,000 feet of El Chorro Park during each 4 to 5-month construction period. Localized concentrations of air pollutant emissions may result in temporary exceedances of SLOAPCD daily emissions thresholds and adversely affect nearby sensitive receptors. Mitigation Measures AQ-1 and AQ-2 have been identified to require SLOAPCD standard fugitive dust control measures and equipment emissions control measures to be implemented and shown on project construction plans. With implementation of these measures, impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be *less than significant with mitigation*.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction activities generally have the potential to emit odors from diesel equipment, paints, solvents, fugitive dust, and adhesives. Any odors generated by construction activities would be intermittent and temporary, and generally would not extend beyond the construction area. Future residential uses would not include any components or operational activities that would generate substantial long-term adverse odors. Therefore, odors generated by the project would be short-term, intermittent, and primarily undetectable.

The SLOAPCD Naturally Occurring Asbestos Map indicates that the project site is located within an area identified as having a potential for Naturally Occurring Asbestos (NOA) to occur (SLOAPCD 2024). The project would include approximately 4,998 cubic yards of cut materials and approximately 8,674 cubic yards of fill materials , demolition of the existing roadway structure onsite, and construction of the new roadway. In addition, the existing roadway structures located within the project site were constructed prior to 1970 and may have the potential to include asbestos-containing materials. Demolition of existing roadway segments may have the potential to result in harmful emissions of these hazardous materials into the environment.

Section 93105 of the ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations identifies requirements for road construction and maintenance within areas located in a geographic ultramafic rock unit or an area that has NOA, serpentine, or ultramafic rock. Pursuant to SLOAPCD requirements and ARB Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (93105), the applicant may choose to conduct a geologic evaluation prior to any construction activities and if the results of this evaluation conclude that the property has no serpentine or ultramafic rock is likely to be found in the area to be disturbed, they may apply for an exception from ATCM standards. If an exception is not granted, then the project would be required to adhere to the requirements set forth in the ATCM, including, but not limited to, providing written notification to the SLOAPCD prior to beginning the associated work and implementation of specific dust control measures. Based on historical practices within Camp SLO, it is assumed that there is potential for NOA to occur within the project site. Mitigation Measure AQ-1 requires implementation of fugitive dust control measures including those specified as being required by the ATCM. In addition, Mitigation measure AQ-3 has been identified to detail the appropriate ATCM notification protocol and procedures for completing work within an area with potential for NOA. Based on compliance with identified mitigation measures and applicable regulations, potential impacts associated with other emissions would be *less than significant with mitigation*.

Conclusion

The project would be consistent with the SLOAPCD's Clean Air Plan. The project would have potential to result in cumulatively considerable emissions of PM_{10} for which the County is in non-attainment and would have the potential to expose sensitive receptors to substantial pollutant concentrations. The project would also have the potential to result in adverse impacts associated with emissions of NOA. Mitigation measures have been identified that would reduce these potential impacts to less than significant levels. Therefore, potential impacts to air quality would be less than significant with mitigation.

Mitigation Measures

AQ-1 **Fugitive Dust Control Measures**. The following measures shall be implemented to reduce construction generated fugitive dust and ensure that equipment and operations do not cause the emission of any dust that is visible crossing the project boundaries. These measures shall be shown on grading and building plans:

a. Reduce the amount of disturbed areas where possible.

b. Use water trucks, SLOAPCD approved dust suppressants (see Section 4.3 in the CEQA Air Quality Handbook), or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the District's limit of 20% opacity for greater than 3 minutes in any 60-minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible. Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of a SLOAPCD-approved dust suppressant where feasible to reduce the amount of water used for dust control. For a list of suppressants, see Section 4.3 of the CEQA Air Quality Handbook.

c. All dirt stockpile areas should be sprayed daily as needed.

d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.

e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established.

f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the SLOAPCD.

g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site unless the road surface and surrounding area is sufficiently stabilized to prevent vehicle and equipment traveling more than 15 miles per hour from emitting dust that is visible crossing the project boundaries.

i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between the top of load and top of trailer) in accordance with CVC Section 23114.

j. Activities must be conducted so that no track-out is visible on any paved roadway open to the public. Install wheel washers at the construction site entrance/exit, wash off the tires or tracks of all trucks and equipment leaving the site, or

implement other SLOAPCD-approved track-out prevention devices sufficient to eliminate the track-out of soil onto paved roadways.

k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.

l. The burning of vegetative material shall be prohibited. Effective February 25, 2000, the SLOAPCD prohibited developmental burning of vegetative material within the County. If you have any questions regarding these requirements, contact the SLOAPCD Engineering & Compliance Division at (805) 781-5912.

m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20% opacity, and prevent the transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the SLOAPCD Compliance Division prior to the start of any grading or earthwork.

AQ-2 **Construction Equipment Emissions Control Measures and Idling Restrictions.** The following measures shall be implemented to reduce construction equipment emissions. These measures shall be shown on grading and building plans:

a. Maintain all construction equipment in proper tune according to manufacturer's specifications;

b. Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);

c. Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner offroad heavy-duty diesel engines, and comply with the State off-Road Regulation;

d. Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;

e. Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance;

f. All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit;

g. Diesel idling within 1,000 feet of sensitive receptors is not permitted;

h. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;

i. Electrify equipment when feasible;

j. Substitute gasoline-powered in place of diesel-powered equipment, where feasible;

k. Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel;

l. The following idling restrictions near sensitive receptors for both on- and off-road equipment shall be implemented:

i. Staging and queuing areas shall be located at the greatest distance feasible from sensitive receptor locations;

ii. Diesel idling when equipment is not in use is not permitted;

iii. Use of alternative fueled equipment is recommended whenever possible; and,

iv. Signs that specify the no-idling requirements must be posted and enforced at the construction site.

m. On-road vehicle operations shall comply with Section 2485 of Title 13, the California Code of Regulations limits diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicular weight ratings of greater than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:

i. Shall not idle the vehicle's primary diesel engine when vehicle is not in use, except as noted in Subsection (d) of the regulation; and,

ii. Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 100 feet of a restricted area, except as noted in Subsection (d) of the regulation.

iii. Signs must be posted in the designated queuing areas and job sites to remind drivers of the 5-minute idling limit. The specific requirements and exceptions in the regulation can be reviewed at the following website: www.arb.ca.gov/msprog/truck-idling/2485.pdf.

n. Off-road diesel equipment shall comply with the 5-minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board's In-Use Off-Road Diesel regulation available at: www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf.

o. Signs shall be posted in the designated queuing areas and job sites to remind on-road and off-road equipment operators of the idling restrictions.

AQ-3 **Asbestos Containing Materials – Removal and Disposal.** Proposed earthwork, demolition, and construction activities shall be conducted in full compliance with the various regulatory jurisdictions regarding asbestos containing materials, including the ARB Asbestos Air Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations (93105) and requirements stipulated in the National Emission Standards for Hazardous Air Pollutants (40 CFR 61, Subpart M – Asbestos; NESHAP). These requirements include, but are not limited to, the following:

1. Written notification, within at least 10 business days of activities commencing, to the SLOAPCD;
2. Preparation of an Asbestos Dust Mitigation Plan to be reviewed and approved by SLOAPCD prior to commencement of ground disturbing activities; and,
3. Implementation of applicable removal and disposal protocol and requirements for identified ACM.

IV. Biological Resources

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or 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?	☐	☒	☐	☐
(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?	☐	☐	☐	☒

Setting

Federal and State Endangered Species Acts

The Federal Endangered Species Act of 1973 (FESA) provides legislation to protect federally listed plant and animal species. The California Endangered Species Act of 1984 (CESA) ensures legal protection for plants listed as rare or endangered, and wildlife species formally listed as endangered or threatened, and also maintains a list of California Species of Special Concern (SSC). SSC status is assigned to species that have limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, the CDFW has the authority to review projects for their potential to impact special-status species and their habitats. CDFW also maintains a Watch List (WL) for species that were previously SSC but no longer merit SSC status, or which do not meet SSC criteria but for which there is concern and a need for additional information to clarify status.

In addition, the California Native Plant Society (CNPS) maintains a list of plant species ranging from presumed extinct to limited distribution, based on the following:

- California Rare Plant Ranks (CRPR)
    - 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

  - 1B: Plants rare, threatened, or endangered in California and elsewhere
  - 2A: Plants presumed extirpated in California, but common elsewhere
  - 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
  - 4: Plants of limited distribution – a watch list
- California Rare Plant Threat Ranks
  - 0.1: Seriously threatened in California
  - 0.2: Moderately threatened in California
  - 0.3: Not very threatened in California

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, which was popular in the latter part of the 1800s. The MBTA is enforced by the U.S. Fish and Wildlife Service (USFWS), and potential impacts to species protected under the MBTA are evaluated by the USFWS in consultation with other federal agencies and are required to be evaluated under CEQA.

California Fish and Game Code

California Fish and Game Code Sections 3511, 4700, 5050 and 5515 identify a Fully Protected Species (FPS) classification to identify and provide additional protection to those wildlife species that were rare or faced possible extinction. FPS may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for scientific research, for relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

County of San Luis Obispo Conservation and Open Space Element

The County of San Luis Obispo also identifies goals, policies, and objectives pertaining to the protection of biological resources in the County of San Luis Obispo General Plan, Conservation and Open Space Element. While the project site is owned by the California National Guard and these policies do not apply directly to the Camp SLO property, these policies provide helpful context for the evaluation of the project's potential to result in impacts to biological resources.

The COSE identifies several key goals pertaining to biological resources within the county:

- Goal BR 1: Native habitat and biodiversity will be protected, restored, and enhanced.
- Goal BR 2: Threatened, rare, endangered, and sensitive species will be protected.
- Goal BR 3: Maintain the acreage of native woodlands, forests, and trees at 2008 levels.
- Goal BR 4: The natural structure and function of streams and riparian habitat will be protected and restored.
- Goal BR 5: Wetlands will be preserved, enhanced, and restored.
- Goal BR 6: The County's fisheries and aquatic habitats will be preserved and improved.

- Goal BR 7: Significant marine resources will be protected.

Camp San Luis Obispo Integrated Natural Resources Management Plan

As required by the Sikes Act of 1960 and the Sikes Act Improvement Act of 1997, the California Army National Guard (CA ARNG) has prepared an Integrated Natural Resources Management Plan (INRMP) Update to provide Camp SLO with a long-term viable framework for managing natural resources on its lands. The INRMP establishes planning and management strategies and guidelines, identifies natural resources constraints and opportunities, supports the resolution of land use conflicts, provides baseline descriptions of natural resources necessary for the development of conservation strategies and environmental assessment, service as the principal information source for the preparation of future environmental documents for proposed Camp SLO actions, and provides guidance for annual natural resources management reviews (CA ARNG 2022).

The INRMP includes descriptions of Camp SLO's current approaches to ecosystem health and current management strategies for natural resources and natural phenomena including soil resources, wildland fires, watershed and water resources, vegetation and wildlife habitat, common fish and wildlife, threatened, endangered, and other special status species, and climate change. INRMP Goals, Objectives, and Implementation strategies associated with biological resources that are relevant to the project are detailed below:

Goal: *Ensure a reliable, safe, and sustainable water supply. Protect surface and groundwater resources and enhance as practicable.*

- ***Objective 2****: Reduce pollutant and sediment loading in to wetlands and waterways.*
    - *Implement BMPs to eliminate or minimize nonpoint sources of water pollution.*
    - *Promote use of rolling dips and outsloping during trail maintenance to reduce erosion potential.*

Goal: *Protect native trees to preserve both the ecological and mission-critical benefits they provide to Camp SLO.*

- ***Objective:*** *Ensure replacement and protection of existing native trees.*
    - *Install exclusionary fencing around native trees in need of protection during military training or construction activities.*
    - *Restrict hand digging, mechanical digging, and blade work under the drip line of native trees.*
    - *To the greatest extent possible, native tree removal should not occur during peak breeding bird season and bat pupping season (generally Feb-March to July-August). If trees are to be removed during this timeframe, bird and bat surveys must be completed prior to tree removal.*
    - *Removal of oak trees with a diameter at breast height (DBH) of eight inches or greater or removal of any size riparian tree will be mitigated per the following:*
        1. *Any native trees removed for purposes other than disease or safety concerns shall be replaced at a ratio of 3:1 with a monitoring program.*
        2. *Trees/seedlings/acorns shall be watered at a frequency to ensure survival.*

3. *Plantings shall occur during the appropriate season (i.e. oak acorns should be planted in January or February) within one year of tree removal.*

4. *If possible, acorns to be planted as mitigation should be collected from the area where trees are to be removed during October and November.*

5. *Trees planted should be monitored for a minimum of five years.*

6. *If a 3:1 survivorship ratio (i.e. three surviving trees or seedlings for each tree removed) is not attained by the end of each year, sufficient numbers of additional trees, seedlings, or acorns shall be planted and monitored until the desired success ratio is attained.*

7. *As part of the monitoring program, the project proponent shall supply an annual monitoring report, which describes actions taken, the number of trees/seedlings/acorns planted, and the number of trees/seedlings/acorns remaining alive at the end of the season.*

Goal: *Promote the recovery, long-term health, and resilience of the California red-legged frog on CSLO.*

- ***Objective 1****: Protect California red-legged frogs and their habitat.*
    - *Prohibit portable latrines within 100 ft (30 m) of the edge of surface water or streambeds.*
    - *Limit off-road vehicle traffic during the wet season when CRLF are dispersing to breeding sites.*
    - *Prohibit the use of any herbicide or pesticide within 300 ft (90 m) of the edge of wetland or aquatic habitat.*
    - *Schedule activities involving work in riparian and aquatic sites outside of the California red-legged frog breeding season (November through April).*
    - *Ensure survey materials and equipment are decontaminated prior to use in CRLF habitat to eliminate spread of chytrid fungus.*
    - *Per USFWS recommendation, test any dead CRLF for amphibian disease.*
    - *Conduct environmental awareness training for users of the installation.*

Goal: *Provide for the conservation, enhancement, and protection of special status species as a proactive strategy to prevent federal and state listings.*

- ***Objective 1****: Determine special status species distribution and abundance on CSLO to aid in future management.*
    - *Conduct pre-activity surveys for any activity that may impact sensitive species and work with the project proponent to alter the activity or establish appropriate mitigation measures.*
- ***Objective 2****: Protect existing special status species and their habitat on CSLO.*
    - *Conduct environmental awareness briefings to installation users that describe special status species and their habitat on the installation.*

Biological Resources Assessment and Methodology

A Biological Resources Assessment was prepared for the Camp San Luis Obispo Range Roads Repair Project to identify sensitive biological resources that occur, or have potential to occur, within the proposed project site and surrounding areas and identify recommended avoidance and mitigation measures to reduce potential impacts to sensitive resources to the extent feasible (SWCA Environmental Consultants [SWCA] 2024; Appendix C). Prior to conducting field surveys, SWCA staff completed a background review of relevant literature and resources pertaining to sensitive biological resources known to occur within the project site and in the project vicinity including aerial photographs, USGS topographic map of the San Luis Obispo 7.5-minute quadrangle, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), and other literature sources. Following the background review, SWCA botanists Amy Golub and Kyle Suchy and SWCA biologist Sara Snyder completed field surveys of the property on April 6 and 7, 2023; July 29 and 30, 2023; and August 30, 2023. The surveys consisted of a botanical and wildlife species inventory, jurisdictional analysis, wetland delineation, and an assessment of the potential for special-status species to occur on site (SWCA 2024).

Information provided below summarizing on-site vegetation communities, hydrologic features, and potential for sensitive species is based on the results of both the literature review and on-site surveys.

On-site Vegetation Communities

Natural vegetation communities identified in the project site included annual grasslands, oak woodland, wetland and riparian habitats, and needlegrass grassland. Other land cover types identified in the project site included agriculture, ruderal, and disturbed. Annual grassland habitat is the most prevalent vegetation community within the project site, comprising approximately 61.8% of the site. A summary of the vegetation communities identified within the project site and their relative distribution is provided in Table 6, below.

Table 6. On-site Vegetation Communities

Vegetation Community	Acres within the Project Site	Percent of the Project Site
Annual grassland	35.62	61.8%
Riparian woodland	2.65	4.6%
Coast live oak woodland	0.09	0.2%
Eucalyptus groves	2.09	3.6%
Iris-leaved juncus flats	0.50	0.9%
Purple needle grassland	0.93	1.6%
Serpentine rock outcrop	0.20	0.3%
Agriculture	1.77	3.1%
Ruderal	4.95	8.6%
Developed	8.87	15.4%

On-site Hydrologic Features

There are a total of 12 drainages, 11 swales, 3 ponds, and 3 wetlands occur within or transect the project site and all of which are direct or indirect tributaries to Chorro Creek. These features are considered waters of the U.S. and/or waters of the State under the jurisdiction of the CDFW, Regional Water Quality Control Board, and/or U.S. Army of Engineers, respectively (SWCA 2024).

Special-Status Plants and Wildlife

The results of the background research indicated that nine sensitive natural communities, 71 special-status plant species, and 50 special-status wildlife species occur regionally. The habitat requirements for each of these species were compared to the type and quality of habitat documented during the field surveys. Following this assessment, it was determined that suitable habitat is present on site for 22 of the regionally occurring special-status plant species and 21 of the regionally occurring special-status wildlife species, in addition to nesting birds (SWCA 2024). These species are listed below.

Special-status plants with potential to occur within the project site include the following:

- Carlotta Hall's lace fern (*Aspidotis carlotta-halliae*; California Rare Plant Rank [CRPR] 4.2)
- Miles' milkvetch (*Astragalus didymocarpus* var. *milesianus*; CRPR 1B.2)\
- Club haired mariposa lily (*Calochortus clavatus* ssp. *clavatus*; CRPR 4.3)
- San Luis mariposa lily (*Calochortus obispoensis*; CRPR 1B.2)
- Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*; CRPR 4.2)
- San Luis Obispo owl's-clover (*Castilleja densiflora* ssp. *obispoensis*; CRPR 1B.2)
- Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*; CRPR 1B.1)
- Palmer's spineflower (*Chorizanthe palmeri*; CRPR 4.2)
- Chorro Creek bog thistle (*Cirsium fontinale* var. *obispoense*; CRPR 1B.2)
- Cuesta Ridge thistle (*Cirsium occidentale* var. *lucianum*; CRPR 1B.2)
- Paniculate tarplant *(Deinandra paniculate*; CRPR 4.2)
- Eastwood's larkspur (*Delphinium parryi* ssp. *eastwoodiae*; CRPR 1B.2)
- Betty's dudleya (*Dudleya abramsii* ssp. *bettinae*; CRPR 1B.2)
- Mouse-gray dudleya (*Dudleya abramsii* ssp. *murina*; CRPR 1B.3)
- Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*; CRPR 1B.1)
- Stinkbells (*Fritillaria agrestis*; CRPR 4.2)
- Jones' layia (*Layia jonesii*; CRPR 1B.2)
- Small-leaved lomatium (*Lomatium parvifolium*; CRPR 4.2)
- Woodland woollythreads (*Monolopia gracilens*; CRPR 1B.2)
- Adobe yampah (*Perideridia pringlei*; CRPR 4.3)
- Hoffman's sanicle (*Sanicula hoffmannii*; CRPR 4.3)
- Adobe sanicle (*Sanicula maritima*; State Rare, CRPR 1B.1)

Special-status wildlife species with potential to occur within the project site include the following:

- Townsend's big-eared bat (*Corynorhinus townsendii*; SSC)

- Monterey dusky-footed woodrat (*Neotoma macrotis luciana*; SSC)
- Mountain lion (*Puma concolor*; Southern California/Central Coast Evolutionary Significant Unit [ESU]; State Candidate Endangered)
- American badger (*Taxidea taxus*; SSC)
- California red-legged frog (*Rana draytonii*; Federal Threatened; SSC)
- California newt (*Taricha torosa*; SSC)
- Southwestern pond turtle (*Actinemys pallida*; SSC)
- Coast horned lizards (*Phrynosoma blainvillii*; SSC)
- Two-striped gartersnake (*Thamnophis hammondii*; SSC)
- Crotch bumble bee (*Bombus crotchii*; State Candidate Endangered)
- Monarch butterflies (*Danaus plexippus*; Federal Candidate)
- Cooper's hawk (*Accipiter cooperii*; SSC, State Watch List [Nesting])
- Grasshopper sparrow (*Ammodramus savannarum*; SSC)
- Golden eagle (*Aquila chrysaetos*; CDFW Fully Protected)
- Burrowing owl (*Athene cunicularia*; SSC)
- Northern harrier (*Circus hudsonius*; SSC)
- The white-tailed kite (*Elanus leucurus*; CDFW Fully Protected)
- California horned lark (*Eremophila alpestris actia*; CDFW Watch List)
- Loggerhead shrike (*Lanius ludovicianus*; SSC)
- Yellow warbler (*Setophaga petechia*; SSC)
- Least Bell's vireo (LBVI) (*Vireo bellii pusillus*; Federal Endangered, State Endangered)

It is also important to note that the project site supports suitable nesting habitat for migratory nongame native bird species protected under the federal MBTA and California Fish and Game Code.

Environmental Evaluation

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

The project's potential impacts to special-status plant and wildlife species are provided below.

SPECIAL-STATUS PLANT SPECIES

The project site provides suitable habitat for 22 regionally occurring special-status plant species, as listed above under Section IV. *Biological Resources* setting and described in Appendix C. Upon conducting seasonally timed botanical surveys of the project site, seven special-status plant species were observed within the project site: Cambria morning-glory, San Luis Obispo owl's clover, Palmer's spine flower, mouse-gray dudleya, club-haired mariposa lily, Eastwood's larkspur, and Blochman's Dydleya, as described below.

- **Cambria morning-glory** (*Calystegia subacaulis ssp. episcopalis*; CRPR 4.2) is a perennial herb that is endemic to central California. Its known range is concentrated along the coastal ridges and foothills of the outer South Coast Ranges of San Luis Obispo County. This species typically occurs in clay soils in association with various vegetation communities including grassland, chaparral, and woodland at elevations below 1,640 feet (500 meters). The typical blooming period is from April to June. Documented threats to this species include development, alteration of fire regimes, and competition from non-native species (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is present within coastal scrub and grassland habitats on-site and it was observed during appropriately timed surveys. Although only point data was collected for this species within the project site, Cambria morning-glory is present throughout the grassland habitat in the project site and is considered a common grassland forb species throughout the project site.

- **San Luis Obispo owl's clover** (*Castilleja densiflora ssp. obispoensis*; CRPR 1B.2) is an annual herb that is known to occur in coastal areas along the outer South Coast Ranges from just south of Ragged Point to Avila Beach, with several populations occurring in the Irish Hills. This species typically occurs in coastal grasslands at elevations below 1,312 feet (400 meters). The typical blooming period is from March to June. Documented threats to this species include development and grazing (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is present within coastal scrub, grassland, and woodland habitats on-site and it was observed during appropriately timed surveys. Dense patches of this species were present in the project site (see Appendix C).

- **Palmer's spine flower** (*Chorizanthe palmeri*; CRPR 4.2) is an annual herb that is endemic to California. This species typically occurs on rocky serpentine outcrops in the South Coast Ranges at elevations ranging from 180 to 3,100 feet (55–945 meters). The typical blooming period for this species is from April to August. Potential threats to this species are not well documented (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is present on serpentine rock outcrops identified on-site and it was observed during appropriately timed surveys. This species was observed along the eastern end of Range Road west of Culvert G within the project footprint (see Appendix C).

- **Mouse-gray dudleya** (*Dudleya abramsii ssp. murina*; CRPR 1B.3) is a perennial herb that is only known to occur along the Outer South Coast Ranges in San Luis Obispo County. This species typically occurs on serpentine outcrops in chaparral, cismontane woodland, and valley and foothill grassland habitat at elevations ranging from 394 to 984 feet (120–300 meters). The typical blooming period for this species is from May to June. Documented threats to this species include grazing, and potential threats include pipeline construction and competition from non-native plants (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is present on serpentine rock outcrops identified on-site and it was observed during appropriately timed

surveys on the road cut rock outcrop west of Culvert G within the proposed project footprint (see Appendix C).

- **Club-haired mariposa Lily** (*Calochortus clavatus ssp. clavatus*; CRPR 4.3) is a perennial bulbiferous herb that is endemic to California. It is known to occur along the outer South Coast Ranges within San Luis Obispo County. This species typically grows in rocky (often serpentine) soils in grassland, chapparal, and coastal scrub. It has been documented at elevations ranging from 246 to 4,265 (75–1,300 meters). The typical blooming period is March to June. Documented threats to this species are not well documented (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is present within chaparral and grassland habitat identified on-site and it was observed during appropriately timed surveys. This species was observed in grassland habitat just outside of the proposed project disturbance footprint (see Appendix C).

- **Eastwood's larkspur** (*Delphinium parryi ssp. eastwoodiae*; CRPR 1B.2) is an annual herb endemic to California. This species is only found in the South Coast Ranges in chaparral openings and in grasslands on serpentine soils at elevations ranging from 245 to 1,640 feet (75–500 meters). The typical blooming period for this species is from February to April. Potential threats to this species are not well documented (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is within the grassland habitats present on-site. This species was observed within grassland habitats on clay serpentine derived soils outside of the proposed project disturbance footprint (see Appendix C).

- **Blochman's Dudleya** (*Dudleya blochmaniae ssp. blochmaniae*; CRPR 1B.1) is a perennial herb that is endemic to the Central Coast and South Coast of California, as well as disjunct populations occupying the northern Channel Islands. This species typically occurs on open, rocky slopes, often on serpentine or clay-dominated soils in coastal bluff, coastal scrub, and grassland habitats at elevations below 1,500 feet (450 meters). The typical blooming period for this species is from April to June. Documented threats to this species include grazing, trampling, development, erosion, and competition from non-native plants (SWCA 2024).

  This species has been documented at Camp SLO. Suitable habitat for this species is present on serpentine rock outcrops identified on-site, and it was observed during appropriately timed surveys on several rock outcrops outside of the proposed project footprint (see Appendix C).

As described above, club-haired mariposa lily, Eastwood's larkspur, and Blochman's Dudleya were observed within the project site but located outside of the proposed disturbance areas. Therefore, no impacts to club-haired mariposa lily, Eastwood's larkspur, or Blochman's Dudleya are expected as a result of the project.

Cambria morning-glory, San Luis Obispo owl's clover, Palmer's spine flower, and mouse-gray dudleya were identified as being located within the project's proposed disturbance areas and would have the potential to be impacted during project construction activities. Direct impacts to these species could include removal of individual plants and intact seed banks that occur within and immediately adjacent to work areas, as well as permanent conversion of occupied habitat. Indirect impacts to special-status plants in adjacent areas may result from dust emissions during construction, altered hydrology, or the spread of non-native and invasive plant species to areas not previously impacted. Mitigation Measures BIO-1 through BIO-3 have been identified to require implementation of an environmental awareness training for all project construction workers, general site maintenance and operational protection measures, and development and implementation of a special-status plant species and sensitive natural communities mitigation plan. The mitigation plan shall identify each special-status plant species located on-site and implementation of species-specific measures, including, but not limited to, top soil salvage, seed collection, and locations and methods or restoration, replanting, and/or reseeding. If federal- or state-listed plant species are identified on-site and cannot be avoided, appropriate agencies shall be contacted

for further guidance and to obtain take permits, as applicable, prior to the start of the project. With implementation of these measures, potential impacts to special-status plant species would be *less than significant with mitigation*.

Additionally, individual oak trees (Quercus spp.) and oak woodlands are considered a sensitive resource by the State of California and the County. The project would result in the removal of approximately 14 Coast live oak trees. Mitigation Measure BIO-4 has been identified to require minimization of impacts to oak trees to the extent feasible and implementation of in-kind replacement plantings for impacted oak trees, including a 4:1 replacement planting ratio for tree removals and a 2:1 replacement planting ratio for trees that are impacted (e.g., trimmed, experience soil compaction within the dripline, etc.). With implementation of this measure, impacts to oak trees and oak woodland would be *less than significant with mitigation*.

SPECIAL-STATUS WILDLIFE SPECIES

As described above, approximately 21 special-status wildlife species were identified as having potential to occur within the project site based on suitable habitat conditions. Potential impacts to these species is described below.

Special-Status Mammals

Direct impacts to Townsend's big-eared bat are not expected to occur because potential roost sites are not expected to be impacted by the project. Indirect impacts may occur due to short-term construction activities in the vicinity of roosts which may temporarily deter use of the area by bats. Mitigation Measure BIO-5 has been identified to require preconstruction surveys and avoidance measures for Townsend's big-eared bat. With implementation of these measures, impacts to Townsend's big-eared bat would be reduced to less than significant.

Monterey dusky-footed woodrat, mountain lion, and American badger may be impacted directly or indirectly during construction. Construction poses several direct risks, such as vehicle strikes and destruction of resources, like middens or dens. Further, construction may impact or deter use of valuable habitat, yielding it unsuitable for these species. Indirect impacts may occur by deterring movement patterns of wildlife caused by construction disturbances. Mitigation Measure BIO-5 has been identified to require implementation of preconstruction surveys and avoidance measures to ensure that project activities avoid impacts to American badger, Mountain lion, and Monterey dusky-footed woodrat. With implementation of these measures, impacts to Monterey dusky-footed woodrat, mountain lion, and American badger would be reduced to less than significant.

Special-Status Amphibians

If California red-legged frog or California newt are utilizing the aquatic habitats adjacent to the project site at the time of project implementation, juveniles and adults may disperse through the project site, particularly during the rainy season. If individual California red-legged frog or California newt are present onsite during construction, they could be crushed or trampled by vehicles and equipment. In addition, there is potential for California red-legged frog and California newt to use small mammal burrows for refuge and cover. As such, excavation or crushing of any burrows during construction may result in direct impacts to these species.

Mitigation Measure BIO-5 has been identified to require implementation of a pre-activity survey immediately prior to the start of work to ensure these species are not present within proposed work areas. In addition, construction monitoring has been identified as required as well as protocol for letting the individual leave on its own volition if found, and, as appropriate, the resource agencies shall be contacted to capture and relocate special-status species to suitable habitat outside of the area of impact. With implementation of these measures, impacts to California red-legged frog or California newt would be reduced to less than significant.

Special-Status Reptiles

The project site may provide suitable habitat for coast horned lizard, southwestern pond turtle, and two-striped gartersnake; and construction activities pose risks for direct and indirect impacts to special-status reptiles if present. For example, reptiles basking on or crossing roadways will be especially vulnerable to vehicle strikes. Reptiles can be slow-moving, both because of behavioral adaptations to be camouflaged from predators and because of their ectothermic nature. This trait presents crushing hazards in the presence of relatively fast-moving equipment or even foot traffic. Removal of vegetation during project activities may indirectly impact special-status reptiles because reptiles rely on vegetative cover for temperature regulation. Mitigation Measure BIO-5 has been identified to require preconstruction surveys and avoidance measures for coast horned lizard, southwestern pond turtle, and two-striped gartersnake. With implementation of these measures, impacts to these species would be reduced to less than significant.

Special-Status Invertebrate Species

The project site may provide suitable foraging, nesting, and overwintering habitat for Crotch bumble bee. Direct impacts to nesting Crotch bumble bees are most likely to occur during the flight season, generally March 1 to September 30, and to overwintering queens from October 1 through February 28. Direct and indirect impacts may occur if grading and vegetation removal occur during the flight season. These actions can destroy nests or overwintering queens and remove foraging habitat that may lead to nest destruction or failure. Mitigation Measure BIO-5 has been identified to require implementation of a survey for Crotch bumble bee within two weeks prior to start of initial ground disturbance if work is planned to occur during the period of March 1 through September 1. If Crotch bumble bee is observed during the active spring or summer or presence is unknown (e.g., if a survey during the active period was not completed) and work is planned between October and February, potential overwintering habitat shall be avoided. With implementation of these measures, impacts to Crotch bumble bee would be reduced to less than significant.

Special-Status and Nesting Birds

Direct impacts to avian species are most likely to occur if construction activities take place during the typical avian nesting season, generally February 1 through August 31, but as early as January 1 for golden eagles. In addition, direct impacts to burrowing owls may occur between October 16 and March 31 if they are overwintering within the project area. Construction-related activities can destroy nests and/or burrows, remove nesting or overwintering habitat, or cause disturbance that may lead to nest failure or otherwise harass nesting, resident, transient, or overwintering birds. Indirect impacts may occur due to habitat loss, such as through removal of suitable nesting substrates or overwintering burrows. Mitigation Measure BIO-5 has been identified to include preconstruction surveys for special-status bird species and nesting birds and establishment of avoidance buffers if nesting birds are observed. With implementation of these measures, impacts to golden eagles, burrowing owls, and other nesting birds would be reduced to less than significant.

Based on the analysis provided above, potential impacts to special-status species and their habitats would be *less than significant with mitigation*.

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

The project is expected to include permanent and temporary impacts to four sensitive natural communities mapped within the project site. Table 7 below provides a summary of proposed impacts to sensitive natural communities. No impacts to USFWS-designated Critical Habitat are anticipated (SWCA 2024).

Table 7. Summary of Proposed Impacts to Sensitive Natural Communities

Vegetation Type	Permanent Impacts	Temporary Impacts
Riparian woodland[1]	0.12 acre	0.57 acre
Coast live oak woodland	0	0
Iris-leaved juncus flats[1]	0.13 acre	0.14 acre
Purple needlegrass grassland[1]	0.02 acre	0.33 acre
Serpentine rock outcrop[1]	0.14 acre	0.002 acre

[1] CDFW Sensitive Natural Communities.
Source: SWCA 2024

Mitigation Measure BIO-3 has been identified to require the boundaries of sensitive natural communities to be flagged prior to the start of project activities and if natural communities cannot be avoided, a mitigation plan for impacts to these resources shall be developed and include a minimum 1:1 mitigation ratio based on area of impact. Mitigation strategies for sensitive natural communities may include, but are not limited to, salvation of topsoil, seed collection and storage, identification of full-time avoidance areas, restoration, replating, or reseeding, and short- and/or long-term monitoring protocols and vegetative growth success criteria for mitigation and restoration. With implementation of these measures, potential impacts to sensitive natural communities would be *less than significant with mitigation*.

c) Would the project 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?

The proposed project is expected to include repair/replacement activities at 6 jurisdictional culverts along Range Road (Culvert A – D, Culvert G, and Culvert J) and 2 culverts along San Benito Road (Culvert H – I). Only minor vegetation work is proposed upstream of one culvert along Range Road (Culvert E). One culvert (Culvert F) is not located within jurisdictional waters. The proposed work will require temporary and permanent impacts to waters of the United States and waters of the state and wetlands. No ponds are expected to be impacted by the proposed project. Table 8 below provides a summary of proposed impacts to jurisdictional waters by aquatic resource type (SWCA 2024).

Table 8. Summary of Proposed Impacts to Jurisdictional Waters and Wetlands

Aquatic Resource Type	Permanent Impacts (acre/linear feet)	Temporary Impacts (acre/linear feet)
Riparian[1]	0.184 acre / 480 LF	0.501 acre / 290 LF
Streambed	0.053 acre / 480 LF	0.160acre / 290 LF
Wetland	0.018 acre	0.010 acre
Total	**0.255 acre /480 LF**	**0.671 acre / 290 LF**

Note: LF = linear feet

[1] Riparian and Streambed overlap.

Mitigation Measure BIO-2 has been identified to require implementation of site maintenance measures during construction operations such as requiring equipment and material staging areas to be clearly defined and to be located beyond 100 feet of sensitive habitat areas and identifying procedures for equipment inspections and secondary containment to avoid spills or other releases of hazardous materials. In addition to Mitigation Measure BIO-2, Mitigation Measure BIO-6 has been identified to require preparation and implementation of an erosion and sedimentation control plan, implementation of Best Management Practices (BMPs) to protect aquatic features from indirect impacts, limiting construction activities within jurisdictional areas to occur only during the dry season when stream flows are at annual

lows, and to ensure that all applicable agency permits with jurisdiction over the project area be obtained and any additional mitigation measures required by agencies be implemented throughout the project. With implementation of these measures, potential impacts to state and federally protected wetlands would be *less than significant with mitigation*.

d) Would the project 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?

Drainages within the project area do not provide suitable flows or pool habitat to support steelhead or other fish species (SWCA 2024). The project site is located along existing roadways and all project-related improvements would be at -grade upon completion. While project activities may inhibit wildlife movement through the project site during each of the 4.5-month construction periods, these barriers would be temporary and limited to the areas of disturbance. Therefore, potential impacts would be *less than significant.*

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The local policies pertinent to biological resources in the area include the policies set forth in the Camp SLO INRMP. The project would result in the removal of approximately 14 coast live oak trees during roadway construction and culvert improvements. Mitigation has been identified to require replacement plantings in accordance with the Camp SLO INRMP. The INRMP also includes implementation strategies to conserve and protect California red-legged frog and other special-status species. Mitigation measures have been identified to avoid and minimize all project-related impacts to CRLF and other special status species, as described in detail under question *a)*, above.

The County of San Luis Obispo also identifies goals, policies, and objectives pertaining to the protection of biological resources in the County of San Luis Obispo General Plan, Conservation and Open Space Element. While the project site is owned by the California National Guard and these policies do not apply directly to the Camp SLO property, these policies provide helpful context for the evaluation of the project's potential to result in impacts to biological resources. As described under Section IV. *Biological Resources* thresholds a, b, and c, above, the project would not result in any significant impacts associated with special-status plant and wildlife species, sensitive natural communities, and wetlands with implementation of mitigation measures identified below. Therefore, potential impacts associated with conflicting with a local policy or ordinance protecting biological resources would be *less than significant with mitigation*.

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

There are no adopted habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans applicable to or near the project site; therefore, *no impacts* would occur.

Conclusion

The project would result in potentially significant impacts associated with adverse effects on special-status species and their habitats, riparian habitats and other sensitive natural communities, state and federally protected wetlands, and consistency with local policies pertaining to protection of biological resources. Mitigation measures have been identified below and upon implementation of these measures, impacts would be reduced to less than significant. Therefore, potential impacts associated with biological resources would be less than significant with mitigation.

Mitigation Measures

BIO-1 **Environmental Awareness Training.** An environmental awareness training shall be presented to all construction personnel by a qualified biologist prior to the start of any project activities. The training shall include color photographs and a description of the ecology of all special-status species known or with potential to occur, as well as other sensitive resources requiring avoidance during construction. The training shall also include a description of protection measures required by discretionary permits, an overview of the federal and California Endangered Species Acts, and implications of noncompliance with these regulations. This will include an overview of the required avoidance, minimization, and mitigation measures. A sign-in sheet with the name and signature of the qualified biologist who presented the training, and the names and signatures of the environmental awareness trainees shall be kept. A fact sheet conveying the information provided in the environmental awareness training shall be provided to all project personnel.

BIO-2 **Site Maintenance and General Operations.** The following general measures are recommended to minimize impacts during active construction:

1. The use of heavy equipment and vehicles shall stay within the project limits and defined staging areas/access points. The boundaries of each work area shall be clearly defined and marked with high visibility fencing. No work shall occur outside these limits.
2. Project plans, drawings, and specifications shall show the boundaries of all sensitive resource areas and the location of erosion and sediment controls, delineation of construction limits, and other pertinent measures to ensure the protection of sensitive habitats and resources.
3. Staging of equipment and materials shall occur in designated areas with appropriate demarcation and perimeter controls. No staging areas shall be located within 100 feet of sensitive habitat.
4. Secondary containment, such as drip pans, shall be used to prevent leaks and spills of potential contaminants.
5. Washing of concrete, paint, or equipment, and refueling and maintenance of equipment shall occur only in designated staging areas. These activities will occur at a minimum of 100 feet from sensitive habitat. Sandbags and/or absorbent pads and spill control kits shall always be available on-site to clean up and contain fuel spills and other contaminants.
6. Construction equipment shall be inspected by the operator daily to ensure that equipment is in good working order and no fuel or lubricant leaks are present.
7. Plastic monofilament netting (erosion control matting) or similar material will not be used on-site due to the potential to entangle special-status wildlife. Acceptable substitutes are coconut coir matting, biodegradable fiber rolls, or tackified hydroseeding compounds.
8. The use of pesticides (including rodenticides) and herbicides on the property shall be in compliance with all local, state, and federal regulations to avoid primary and secondary poisoning of sensitive species that may be using the project site.
9. After completion of the project's construction, all protective fencing/flagging used to delineate sensitive biological resources shall be removed from the project area and disposed of in appropriate waste receptacles or reused.

BIO-3 **Special-status Plant Species and Sensitive Natural Communities Mitigation Plan.** The boundaries of special-status plant populations and sensitive natural communities identified within the project site shall be flagged in the field using data collected prior to the start of the

project. If special-status plant species or sensitive natural communities cannot be avoided during construction (i.e., if avoidance is deemed infeasible), a mitigation plan for impacts to these resources shall be developed prior to the onset of construction and implementation during construction and include a minimum 1:1 mitigation ratio based on area of impact. At a minimum, the mitigation plan shall:

1. Discuss the proposed construction methods, construction schedule, and the implementation schedule of activities proposed as part of the Plan.
2. Quantify the anticipated acreage of impacts to special-status plants and sensitive natural communities.
3. Include a requirement for photographic documentation and a post-implementation report.
4. Identify each special-status species and sensitive natural communities observed on-site, including a description of the mitigation activities proposed for each. As appropriate, the species-specific measures shall include:
    a. A detailed description of topsoil salvage procedures and soil stockpile storage methods;
    b. Methods and timing of any proposed seed collection and storage;
    c. Locations and demarcation of full-time avoidance areas during construction;
    d. Location and methods for restoration, replanting and/or reseeding (e.g., decompaction, recontouring, scarification, mulching, hand broadcasting, hydroseeding, etc.); and
    e. Short- and/or long-term monitoring protocols and/or vegetative growth success criteria for mitigation and restoration.

The Plan shall be submitted for approval to the CSLO Environmental Coordinator prior to the onset of site disturbance. If other special-status plant species or sensitive natural communities are discovered during construction that were not previously identified during initial survey efforts, the same protocol for avoidance and minimization shall apply. If they cannot be avoided, they shall be included in the Plan.

If federal- or state-listed plant species are identified on-site and cannot be avoided, appropriate agencies shall be contacted for further guidance and to obtain take permits, as feasible, prior to the start of the project.

BIO-4 **Oak Tree Protection and Mitigation.** To the maximum extent feasible, impacts to oak trees shall be avoided and minimized. The following avoidance and minimization measures shall be implemented to address potential impacts to oak trees:

1. The canopy edge and trunk location of oak trees located within 50 feet of proposed construction shall be surveyed and placed on all plan sets. The tree map shall be used to protect oak trees during project implementation.
2. Impacts to oak tree canopies or sensitive root zones should be avoided to the extent feasible. Impacts may include pruning, ground disturbance or placement of impervious surfaces (e.g., asphalt, permanent structures) within the sensitive root zone, installation of year-round irrigation or other supplemental water within the sensitive root zone, and trunk damage.
3. Prior to ground-breaking, tree protection fencing shall be installed as close to the outer limit of the sensitive root zone as practicable for construction operations to protect trees located within 50 feet of construction that will be preserved. The fencing

shall be in place throughout the duration of construction. Demarcation such as t-posts and a minimum of two strands of yellow rope are adequate.

4. All construction activity shall remain outside delineation fencing installed for protection of oak trees.
5. A licensed arborist or qualified botanist will be hired to oversee all removal or trimming of existing roots and necessary branch trimming.
6. Care shall be taken to avoid surface roots within the top 18 inches of soil. If any roots are exposed during construction, they shall be covered with a layer of soil to match existing topography.
7. Impacts to oak trees shall be assessed by a licensed arborist or qualified botanist prior to final inspection and reported to the County.

For oak tree removals or impacts during project implementation, the CAARNG shall provide in-kind mitigation (on site if feasible), 3:1 for removals and 2:1 for impacted trees (i.e., trees that have grading, vegetation removal, compaction, or other impacts occur within their dripline). Plantings shall occur during the appropriate season (i.e., oak acorns should be planted in January or February) within one year of tree removal. Planted trees shall be monitored for a minimum of 5 years, and if a 3:1 survivorship ratio (i.e., three surviving trees or seedlings for each tree removed) is not attained by the end of each year, sufficient numbers of additional trees, seedlings, or acorns shall be planted and monitored until the desired success ratio is attained. As all oak tree impacts are associated with riparian habitat, additional details regarding oak tree mitigation is provided in BIO-7 Riparian and Wetland Mitigation Plan.

BIO-5 **Surveys, Avoidance, and Monitoring for Special-Status Wildlife.** A qualified biologist shall conduct surveys prior to the start of initial project activities to ensure special-status wildlife species are not present within proposed work areas. If special-status wildlife species are found, they shall be allowed to leave the area on their own volition or be relocated (as permitted) to suitable habitat areas outside the work area(s). If necessary, resource agencies will be contacted for further guidance. Pre-activity surveys and/or monitoring shall be conducted as follows:

1. **Preconstruction Survey and Avoidance Measures for Townsend's Big-Eared Bat.** Prior to the start of work, a qualified biologist shall conduct an emergence survey of existing structures and trees within and adjacent to the project site to determine if roosting bats are present. If a colony of bats is found roosting, further surveys shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.). If Townsend's big-eared bat is determined to be roosting on or adjacent to the project site, the following shall be implemented as appropriate:
    a. If a day or night roosting site is located on-site or within 50 feet of the project site, avoidance buffers shall be established/developed as determined by a qualified biologist dependent upon the species as well as the location of the roost in relation to the type of project activities occurring. If the day or night roost is within the area of impact, and the bats are not part of an active maternity colony, exclusion measures may be implemented, in close coordination with a qualified biologist and CDFW. A plan shall be developed that includes the methodology for excluding roosting bats.
    b. If an active maternity roost for Townsend's big-eared bat is found in the buildings on-site or within 100-feet of the project site, an avoidance buffer shall be established as determined by a qualified biologist. No construction activities (including parking and staging) shall be permitted within the avoidance buffer during the rearing season (typically March through September).

c. To avoid impacts to foraging bats, construction shall be limited to daylight hours.

2. **Preconstruction Survey and Avoidance Measures for Monterey Dusky-footed Woodrat.** Prior to the start of work within 50 feet of suitable woodrat habitat, a survey shall be conducted by a qualified biologist to identify and flag woodrat middens for avoidance. A minimum 10-foot buffer area shall be clearly delineated around any woodrat middens that are discovered during the survey. Due to the likelihood of woodrats fleeing the midden as a result of nearby construction activity, a biologist shall monitor initial vegetation clearing and ground disturbance within 25 feet of woodrat middens. If woodrats are observed fleeing middens, work shall be temporarily halted until woodrats are outside the area of impact. Woodrat middens that are deemed unavoidable shall be carefully dismantled mechanically (e.g., excavator with thumb) or with hand tools from the top down, allowing woodrats to escape unharmed. A biological monitor shall be present for dismantling.

3. **Avoidance Measures for Mountain Lion.** The following measures shall be implemented to avoid impacts to mountain lion.
    a. A maximum 25-mile-per-hour speed limit shall be required at the project site during construction activities.
    b. All construction activities shall cease at dusk and not start before dawn.
    c. All construction related trash and debris shall be contained in appropriately sealed trash receptacles during all construction activities.

4. **Preconstruction Survey and Avoidance Measures for American Badger.** A qualified biologist shall conduct a preconstruction survey within 30 days prior to the start of initial project activities to ensure American badger are not present within proposed work areas or within 200 feet of work areas. If potential dens are discovered, they shall be monitored with a remote camera or tracking medium for at least 3 days to determine if they are occupied. If the qualified biologist determines that a den may be active during the non-reproductive season (July 1–January 31), a no-entry exclusion buffer shall be established within 50 feet of the den. If active dens are found during the reproductive season (February 1–June 30), no activity shall occur within 200 feet of the den. Exclusion buffers shall be prominently flagged and encircle the den. Exclusion zones shall be maintained until all project-related disturbances have been terminated or it has been determined by a qualified biologist that the den is no longer in use. If an exclusion buffer is not feasible, the applicant will contact the CSLO Environmental Coordinator for further guidance. The results of the survey shall be provided to the CSLO Environmental Coordinator prior to initial project activities. If construction lapses beyond 30 days from the survey, an additional survey will be required.

5. **Preconstruction Surveys and Monitoring for Southwestern Pond Turtle, California Red-legged Frog, California Newt, and Two-striped Gartersnake.** A qualified biologist shall conduct a pre-activity survey immediately prior to the start of work to ensure southwestern pond turtle, California red-legged frog, California newt, and two-striped gartersnake are not present within proposed work areas. Preconstruction surveys for California red-legged frog shall be conducted the night before commencement of project ground-disturbance activities.

   Construction monitoring shall be conducted by a qualified biologist during all initial ground disturbing and vegetation removal activities (e.g., grading, grubbing, vegetation trimming) within suitable habitat. If these species are found during pre-construction surveys or monitoring, they shall be allowed to leave the work area on their own volition or be hand captured and relocated to suitable habitat outside of the area of impact, with appropriate resource agency approval.

To minimize the potential for impacts to dispersing amphibians, work within 100 feet of aquatic habitat shall occur during dry conditions, as feasible. If work within 100 feet of aquatic habitat is scheduled to start during the typical rainy season (October through April), when California red-legged frogs and California newts are most likely to be dispersing through upland habitat, a follow up survey shall be conducted following any rain event of 0.25 inch or greater prior to the start of work for the day. During this survey all vehicles, equipment, and materials staged on-site overnight shall be inspected. If special-status wildlife is found within the work area, it shall be allowed to leave on its own volition and, as appropriate, the resource agencies shall be contacted to capture and relocate special-status species to suitable habitat outside of the area of impact.

6. **Preconstruction Surveys and Monitoring for Coast Horned Lizard.** A qualified biologist shall conduct a pre-activity survey immediately prior to the start of initial ground disturbance within 50 feet of suitable habitat for coast horned lizard. Construction monitoring shall also be conducted by a qualified biologist during all initial ground-disturbing and vegetation removal activities (e.g., grading, grubbing, vegetation trimming, vegetation removal, including tree removal) within suitable habitat. If coast horned lizard is discovered during surveys or monitoring, the species will be allowed to leave the area on their own volition, or be hand captured and relocated to suitable habitat outside the area of impact.

7. **Preconstruction Survey for Crotch Bumble Bee.** If work is planned to occur during the flying period of March 1 to September 1, a qualified biologist shall survey for Crotch bumble bee within the work area two weeks prior to the start of initial ground disturbance. If a Crotch bumble bee nest is observed, no work shall occur within 25 feet of the nest until it is no longer active. If an exclusion buffer is not feasible, the applicant shall contact the CSLO Environmental Coordinator for further guidance. If Crotch bumble bee is found during the active spring and summer period, or presence is unknown (e.g., if a survey during the active period was not completed) and work is planned between October and February, potential overwintering habitat shall be avoided by a minimum of 50 feet. If potential overwintering habitat cannot be avoided, the CSLO Environmental Coordinator shall be contacted. The CSLO Environmental Coordinator will coordinate with appropriate resource agencies for guidance to implement project activities and avoid take or proceed with an Incidental Take Permit. The results of the survey shall be provided to the CSLO Environmental Coordinator prior to initial project activities.

8. **Preconstruction Survey for Special-status and Nesting Birds/Raptors.** If work is planned to occur between February 1 and August 31, a qualified biologist shall survey the area for nesting birds within one week prior to activity beginning on-site. In addition, if work is planned to occur as early as January 1, a qualified biologist shall complete a focused survey for nesting golden eagles within one-quarter mile of the project site, as feasible based on access. If nesting birds are located on or near the proposed project site, they shall be avoided until they have successfully fledged, or the nest is no longer deemed active. A non-disturbance buffer of 50 feet will be placed around non-listed, passerine species, and a 250-foot buffer will be implemented for all non-listed raptor species. All activity will remain outside of the buffer until a qualified biologist has determined that the nest is no longer active (e.g., young have fledged, or the nest failed) or that proposed construction activities would not cause adverse impacts to the nest, adults, eggs, or young. If special-status avian species are identified and nesting within the work area, no work will begin until an appropriate buffer is determined in consultation with the CSLO Environmental Coordinator, CDFW, and/or the USFWS.

9. **Preconstruction Survey for Overwintering Burrowing Owl.** If work is planned to occur between October 16 and March 31, a qualified biologist shall survey the area for overwintering burrowing owl within one week prior to activity beginning on-site. If

overwintering burrowing owls are located on or near the proposed project site, occupied burrows shall be avoided until a qualified biologist determines the burrow is no longer occupied. A site-specific, non-disturbance buffer shall be established and maintained between the project activities and occupied burrows, using the distances recommended in the CDFW 2012 Staff Report. Refer to Table below for these site-specific, no-disturbance buffer zones. The appropriateness of using reduced buffer distances or burrow-specific buffer distances shall be established on a case-by-case basis by a qualified biologist in consultation with CDFW, and shall depend on existing conditions (e.g., vegetation/topographic screening and current distance regimes). If necessary, buffer distances shall be carefully reassessed and relaxed or modified, based on future development plans (e.g., increased or intensified construction activities) by a qualified biologist who may consult with CDFW. The buffer zones shall be clearly delineated by using highly visible methods, such as stakes and rope, which shall be maintained in good condition through construction of the project or until construction activities are no longer occurring in the vicinity of the burrow.

Site-Specific No-Disturbance Buffer Zones

Level of Disturbance (October 16–March 31)		
Low (feet)	**Mid (feet)**	**High (feet)**
164	328	1,640

BIO-6 **Avoidance of Federal and State Waters and Wetlands** In addition to BIO-2, the following recommendations have been provided to protect drainages and aquatic resources on-site:

1. Prior to project impact of these areas, all applicable agency permits with jurisdiction over the project area (e.g., CDFW, RWQCB, and/or USACE) shall be obtained. Additional mitigation measures may be required by these agencies and shall be implemented as necessary throughout the project.

2. To prevent erosion and sedimentation into drainages during construction, an erosion and sedimentation control plan shall be developed and implemented. It shall outline Best Management Practices (BMPs) for short-term, temporary stabilization. Acceptable stabilization methods include the use of weed-free, natural fiber (i.e., non-monofilament) rolls, jute or coir netting, and/or other industry standards. Erosion control devices shall be installed and maintained for the duration of the project. BMPs shall be installed and maintained for the duration of the project.

3. Construction activity within 100 feet of drainages shall only occur when appropriate BMPs are in place to protect aquatic features from indirect impacts.

4. Construction activities within jurisdictional areas shall be conducted during the dry season when stream flows shall be at annual lows (June 1 through October 31) in any given year, or as otherwise directed by the regulatory agencies. Deviations from this work window can be made with permission from the relevant regulatory agencies.

BIO-7 **Riparian and Wetland Habitat Mitigation Plan.** Prior to construction, a comprehensive Compensatory Mitigation and Monitoring Plan that provides at least 3:1 mitigation ratio for all permanent impacts to jurisdictional waters and wetlands and 1:1 mitigation ratio for all temporary impacts to jurisdictional waters and wetlands, unless otherwise directed by regulatory agencies, shall be submitted to the CDFW, RWQCB, and USACE. The plan shall include details on the location and design of areas proposed for enhancement and rehabilitation within the Chorro Creek watershed. The plan shall also outline planting

specifications, including mitigation ratios for impacts to oak trees (i.e., 2:1 and 3:1 for impacts/removals, respectively), an appropriate planting palette, installation methods and techniques, and maintenance, monitoring, and performance criteria consistent with standard mitigation requirements from applicable regulatory agencies. The total mitigation acreage needed to meet the 1:1 mitigation ratio for temporary impacts is approximately 0.671 acre and 290 linear feet and the 3:1 mitigation ratio for permanent impacts to jurisdictional waters is approximately 0.765 acre and 960 linear feet. Proposed mitigation shall include comparable mitigation for wetland habitat affected by the proposed project. The quantity of mitigation is subject to change as project plans are refined and resource agencies are consulted.

V. Cultural Resources

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

Setting

San Luis Obispo County possesses a rich and diverse cultural heritage and has an abundance of historic and prehistoric cultural resources dating as far back as 9,000 B.C.

As defined by CEQA, a historical resource includes:

1. A resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR).
2. Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant. The architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural records of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence.

The following information is based on the Cultural Resources Survey Report for the Camp San Luis Obispo Range Roads Repair Project (SWCA 2023).

Camp SLO Historical Background

Camp Merriam was established in 1928 to serve as the first permanent training site for the California Army National Guard. It occupied much of what is Camp SLO today, north of Highway 1, until the United States engagement in WWII. In 1940, the U.S. Army took over the training lands and expanded it west and south, more than tripling its original size. CSLO became a primary training and processing location for troops bound for the Pacific Theater. At its height, approximately 20,000 troops were permanently stationed at this training site (SWCA 2023).

The camp was briefly returned to state control in 1946, after the end of WWII, but was quickly returned to the U.S. Army at the outbreak of the Korean War in 1950. Following that conflict, CSLO was placed on inactive status in 1953 and returned to the State of California in 1964. During this time and continuing to this day, large portions of the training site have been divided and deeded off to local and state agencies. Today these lands are operated by diverse entities including the San Luis Obispo County of Education, Cuesta College, California Polytechnic University-San Luis Obispo (Cal Poly), San Luis Obispo County Government, California Men's Colony (California Department of Corrections) and the San Luis Obispo County Parks Department (SWCA 2023).

Camp SLO Ethnographic Background

The Chorro Valley, where Camp SLO is located, falls within territory claimed by the Northern Chumash. The Northern Chumash are a linguistic branch of a group of speakers of Chumashan languages found from San Luis Obispo County south to the fringes of the Los Angeles Basin and the Northern Channel Islands. These cultural designations today are anthropological constructs based on linguistic associations and shared cultural traditions. Prior to colonization, these peoples maintained and emphasized social affiliations within communities and kin groups rather than tribal linguistic groups predominant in federal and state laws and policies today (SWCA 2023).

After colonization, the Chorro Valley became home to several different migrant ethnic communities. By the later nineteenth century, Portuguese (Azorean), Scotts-Irish and Swiss-Italian families developed homesteads and farms where their cultural traditions, beliefs and languages were preserved into the twentieth century. During this time, communities of Native American descent, predominantly Chumash and Salinan, survived and provided much of the labor on these agricultural lands. By the early twentieth century, migrants from Japan and the Philippines also established cohesive communities in the area (SWCA 2023).

Environmental Evaluation

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Over sixty cultural resource studies have been completed at Camp SLO. The entire project site was surveyed for cultural resources in 1998 with supplemental, project specific, inventories continuing to this day. Built environment studies were recently completed with all buildings and infrastructure greater than 50 years in age evaluated for National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR) eligibility. The determinations found no built environment resources at Camp SLO to be eligible with State Historic Preservation Officer (SHPO) concurrence (SWCA 2023). Therefore, the project would not result in an adverse change in the significance of a historical resource and *no impacts* would occur.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

The entirety of the project disturbance area has been subject to prior cultural resources study. Three previously documented resources are located within or adjacent to the project site, CA-SLO-1743, CA-SLO-1856, and CA-SLO-2994. All three of these resources are treated as NRHP/CRHR-eligible. Project activities proposed to occur within proximity to documented archaeological resource sites would include the removal of the existing road prism and the development of a new roadway. Project excavations would be limited to the existing road prism in these areas and as proposed, project activities would avoid direct impacts to CA-SLO-2994. In addition, no equipment staging, or vehicle traffic will occur within this site's boundaries (SWCA 2023).

With planned work adjacent to the other two documented archaeological sites, the portion of the existing road prism that bisects these sites would be repaired. As documented by Camp SLO archaeologist Ethan Bertrando, the original construction of Range and San Benito Roads destroyed the portion of these sites

in the roadways. As such, repair of the existing road prism will not result in direct impacts to the sites (SWCA 2023). Therefore, as designed, the project will not result in any direct impacts to previously documented archaeological resources. However, due to the close proximity of documented resources and archaeological sensitivity of the area, Mitigation Measures CR-1 through CR-4 have been identified to ensure that sensitive archaeological resources are avoided during project construction activities. With implementation of these measures, potential impacts associated with adverse changes in the significance of an archaeological resource would be *less than significant with mitigation*.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Based on existing conditions, buried human remains are not expected to be present in the project area. In the event of an accidental discovery or recognition of any human remains, California Health and Safety Code Section 7050.5 requires that no further disturbances shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. With adherence to State Health and Safety Code Section 7050.5, impacts related to the unanticipated disturbance of human remains would be *less than significant.*

Conclusion

The project would not result in any substantial adverse changes to significant historical resources. Potential impacts associated with adverse impacts to archaeological resources would be reduced to less than significant through implementation of identified mitigation measures, and potential impacts associated with disturbance of any human remains would be less than significant with compliance with applicable regulatory requirements. Therefore, impacts to cultural resources would be less than significant with mitigation.

Mitigation Measures

CR-1 **Worker Awareness Training.** Prior to any ground disturbing activities, a qualified archaeologist shall conduct cultural resource awareness training for all construction personnel, which shall include the following:

1. Review the types of archaeological artifacts that may be uncovered;
2. Provide examples of common archaeological artifacts to examine;
3. Review what makes an archaeological resource significant to archaeologists and local native Americans;
4. Describe procedures for notifying involved or interested parties in case of a new discovery;
5. Describe reporting requirements and responsibilities of construction personnel;
6. Review procedures that shall be used to record, evaluate, and mitigate new discoveries; and
7. Describe procedures that would be followed in the case of discovery of disturbed as well as intact human burials and burial-associated artifacts.

CR-2 **Archaeological Monitoring.** During all initial ground disturbing construction activities within native soil, Camp SLO shall retain a qualified archaeologist and a California Native American tribal monitor to monitor all initial earth disturbing activities, per the approved Archaeological Monitoring Plan (see Mitigation Measure CR-3, below). If any significant archaeological resources or human remains are found during monitoring, work shall stop

within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated and recorded by an archaeologist and any other appropriate individuals. Disposition of artifacts may be accomplished in accordance with state and federal law.

CR-3 **Archaeological Monitoring Plan.** Prior to any ground disturbing activities, an Archaeological Monitoring Plan (Plan) shall be developed. The Plan shall include, but not be limited to:

a. List of personnel involved in the monitoring activities;

b. Description of Native American involvement;

c. Description of how the monitoring shall occur;

d. Description of frequency of monitoring (e.g., full time, part time, spot checking);

e. Description of what resources are expected to be encountered;

f. Description of circumstances that would result in the halting of work at the project site;

g. Description of procedures for halting work on the site and notification procedures; Description of monitoring reporting procedures;

h. Specific, detailed protocols for what to do in the event of the discovery of human remains; and

i. Provide thresholds for reducing and or discontinuing monitoring in the event that resources are not present and/or the potential to encounter resources is negligible.

CR-4 **Designation of Environmentally Sensitive Areas.** Resources CA-SLO-1743, CA-SLO-1856, and CA-SLO-2994 shall be identified and labeled as Environmentally Sensitive Areas on construction plans. Highly visible temporary construction fencing or flagging should be installed along the boundaries of these sites (as it relates to the project) and shall remain in place during project activities. No ground disturbance, construction worker foot traffic, storage of materials, or storage or use of equipment shall occur within the Environmentally Sensitive Areas.

VI. Energy

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

Setting

Local Energy Services

Pacific Gas and Electric Company (PG&E) is the primary electricity provider for urban and rural communities within San Luis Obispo County. The 2021 PG&E electric power mix consists of 50% renewable energy sources (biomass and waste, geothermal, small hydroelectric, solar, and wind), 43% GHG-free energy sources (large hydroelectric sources and nuclear sources), and 7% from natural gas sources (Pacific Gas and Electric Company [PG&E] 2021a).

Since 2020, Camp SLO has transitioned toward reliance on renewable energy through initiatives such as installation of rooftop solar arrays, electric vehicles and charging stations, and light-emitting diode (LED) lighting. Some of these efforts have occurred through a partnership with PG&E (Association of Defense Communities [ADC] 2020).

State Building Code Requirements

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC includes mandatory green building standards for residential and nonresidential structures, the most recent version of which are referred to as the 2022 Building Energy Efficiency Standards. These standards focus on four key areas: smart residential photovoltaic systems, updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa), residential and nonresidential ventilation requirements, and nonresidential lighting requirements.

Vehicle Fuel Economy Standards

In October 2012, the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHSTA), on behalf of the U.S. Department of Transportation (USDOT), issued final rules to further reduce GHG emissions and improve corporate average fuel economy (I) standards for light-duty vehicles for model years 2017 and beyond. NHTSA's I standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg), limiting vehicle emissions to 163 grams of carbon dioxide (CO2) per mile for the fleet of cars and light-duty trucks by the model year 2025.

In January 2017, USEPA Administrator Gina McCarthy signed a Final Determination to maintain the current GHG emissions standards for the model year 2022 through 2025 vehicles. However, on March 15, 2017, USEPA Administrator Scott Pruitt and USDOT Secretary Elaine Chao announced that the USEPA intends to reconsider the Final Determination. On April 2, 2018, USEPA Administrator Pruitt officially withdrew the January 2017 Final Determination, citing information that suggests that these current standards may be too stringent due to changes in key assumptions since the January 2017 Determination. According to the USEPA, these key assumptions include gasoline prices and overly optimistic consumer acceptance of advanced technology vehicles. The April 2nd notice is not USEPA's final agency action, and the USEPA intends to initiate rulemaking to adopt new standards. Until that rulemaking has been completed, the current standards remain in effect.

As part of California's overall approach to reducing pollution from all vehicles, the California Air Resources Board (CARB) has established standards for clean gasoline and diesel fuels and fuel economies of new vehicles. CARB has also put in place innovative programs to drive the development of low-carbon, renewable, and alternative fuels, such as their Low Carbon Fuel Standard (LCFS) Program pursuant to California Assembly Bill (AB) 32 and the Governor's Executive Order S-01-07.

In January 2012, the CARB approved the Advanced Clean Cars Program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle regulation requires a battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15% of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34% fewer global warming gases and 75% fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2022).

All self-propelled off-road diesel vehicles 25 horsepower (hp) or greater used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the CARB Regulation for In-Use Off-Road Diesel Fueled Fleets (Off-Road regulation). This includes vehicles that are rented or leased (rental or leased fleets). The overall purpose of the Off-Road regulation is to reduce emissions of NOx and particulate matter from off-road diesel vehicles operating within California through the implementation of standards including, but not limited to, limits on idling, reporting and labeling of off-road vehicles, limitations on use of old engines, and performance requirements.

Environmental Evaluation

a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

During construction, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. Proposed energy use during construction would be short term and limited in scale and would be required to comply with state and local diesel idling restrictions, which would reduce the potential for wasteful, inefficient, or unnecessary energy consumption during construction activities.

The project includes improvements to existing roadways and culverts. The project does not include the permanent installation of lighting or other components that would require additional energy use and would not result in increased vehicle traffic along the roadways. The project would not result in wasteful, inefficient, or unnecessary energy consumptions and potential impacts would be *less than significant*.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project would include improvements to existing roadways and culverts and does not include the construction of new buildings or other infrastructure that would be subject to energy efficiency standards or renewable energy requirements. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would *be less than significant*.

Conclusion

The project would not result in a significant energy demand during short-term construction or long-term operations and would not conflict with state or local renewable energy or energy efficiency plans. Therefore, potential impacts related to energy would be less than significant and no mitigation measures are necessary.

Mitigation Measures

No mitigation is necessary.

VII. Geology and Soils

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

Setting

Earthquake Hazards

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) is a California law that was developed to regulate development near active faults and mitigate the surface fault rupture potential and other hazards. The Alquist-Priolo Act identifies active earthquake fault zones and restricts the construction of habitable structures over known active or potentially active faults. San Luis Obispo County is located in a geologically complex and seismically active region. The *County of San Luis Obispo General Plan Safety Element* identifies three active faults that traverse through the county and are currently zoned under the Alquist-Priolo Act: the San Andreas, the Hosgri-San Simeon, and the Los Osos. The San Andreas Fault zone is located along the eastern border of San Luis Obispo County and has a length of over 600 miles. The Hosgri-San Simeon Fault system generally consists of two fault zones: the Hosgri Fault zone, which is mapped off the San Luis Obispo County coast, and the San Simeon Fault zone, which appears to be

associated with the Hosgri, and comes onshore near the pier at San Simeon Point. Lastly, the Los Osos Fault zone has been mapped generally in an east/west orientation along the northern flank of the Irish Hills (County of San Luis Obispo 1999).

Ground shaking refers to the motion that occurs in response to regional and local earthquakes. Seismic ground shaking is influenced by the proximity of the site to an earthquake fault, the intensity of the seismic event, and the underlying soil composition. Ground shaking can endanger life and safety due to damage or collapse of structures or lifeline facilities. Liquefaction is the sudden loss of soil strength due to a rapid increase in soil pore water pressure resulting from ground shaking during an earthquake. Landslides and slope instability can occur as a result of wet weather, weak soils, improper grading, improper drainage, steep slopes, adverse geologic structure, earthquakes, or a combination of these factors.

The project site is not underlain by a fault line. The nearest potentially capable fault to the project site is the Oceanic Fault, which is located approximately 508 feet southeast of the project site. (CDOC 2015b; County of San Luis Obispo 2023).

Soil Hazards

Highly erodible soils are those that are easily carried by water and, to a lesser extent, by wind. Surface erosion is more commonly visible, but subsurface erosion can lead to damage to pipes, roads, foundations, and other structural elements. Expansive soils are largely comprised of clays, which expand in volume when water is absorbed and shrink as the soil dries. Expansion is measured by shrink-swell potential, which is the volume change in soil with a gain in moisture. If the shrink-swell potential is rated moderate to high, then damage to buildings, roads, structural foundations, and pipes can occur. In the northern portion of the city, there are some areas of expansive clay soil that require special construction standards for foundations and infrastructure. Expansive clay problems can be surmounted by appropriate engineering design and construction techniques.

Paleontological Resources

Paleontological sensitivity is the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Occurrences of paleontological resources are closely related to the geologic units in which they are contained, and the potential for finding scientifically important paleontological resources can be broadly predicted by the presence of the pertinent geologic units at or near the surface (SWCA Environmental Consultants 2017).

The project site is underlain by three geologic units, as described below (United States Geological Survey [USGS] 2013):

- **Young alluvial flood-plain deposits, undivided (Qya).** This unit consists of Holocene to late Pleistocene-age materials composed of unconsolidated sand, silt, and clay-bearing alluvium deposited on floodplains and along valley floors. These sediments are generally considered too young to contain fossils; therefore, the paleontological sensitivity of this unit is considered to be low to high, increasing with depth.

- **Metavolcanic rocks, Franciscan Complex (KJfmv).** This unit consists of Cretaceous to Jurassic-age materials composed of primarily greenstone, metamorphosed from basalt. Includes massive to pillowed basalt flows, breccia, tuff, and diabase. Commonly deeply weathered. This unit is considered to have very low paleontological sensitivity.

- **Mélange, Franciscan Complex (KJfm).** This unit consists of Cretaceous to Jurassic-age materials composed of a chaotic mixture of fragmented rock masses embedded in a penetrative sheared matrix of argillite and crushed metasandstone. This rock unit could be “low” or “high” paleontological sensitivity depending on the specific rock types that are present.

Environmental Evaluation

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a-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.

The project site is not located within an Alquist-Priolo Special Fault Study Zone or other mapped active or potentially active fault zone (CDOC 2015b). Therefore, *no impacts would occur.*

a-ii) Strong seismic ground shaking?

The nearest potentially capable fault to the project site is the Oceanic Fault, which is located approximately 508 feet southeast of the project site (CDOC 2015b; County of San Luis Obispo 2023). SLO County is a seismically active region, and the project would be expected to experience strong seismic ground shaking at some point within the estimated 30-year lifespan of the project. The proposed project components would be constructed in accordance with CBC design standards, which include seismic design standards. The project does not include any bridges or habitable structures that could result in risk of loss, injury, or death due to a significant seismic event. Therefore, impacts would be *less than significant.*

a-iii) Seismic-related ground failure, including liquefaction?

As described above, the project is located in a seismically active region but is not underlain by any known fault lines. The majority of the project site is located in an area with low liquefaction potential with a small portion of the site's southwest area in the high potential range (County of San Luis Obispo 2023). All proposed road expansion would be designed and constructed in compliance with applicable CBC standards. The project would not cause substantial adverse effects through risk of loss, injury, or death in the event of seismic-related ground failure; therefore, impacts would be *less than significant*.

a-iv) Landslides?

According to the County Safety Element, the project site is located in a region with low to moderate potential for landslides, with a small southeast portion of the site being located in an area with high potential (County of San Luis Obispo 2023). The project would not result in substantial changes to the existing topography of the project site or otherwise exacerbate the potential for landslides to occur on- or off-site. All site grading and potential road expansion would be constructed in compliance with applicable CBC standards, which include measures to safeguard against slope instability and on-site land sliding. In addition, the project does not propose habitable structures that would put people at risk in the event of a landslide. Therefore, potential impacts associated with landslides would be *less than significant*.

b) Result in substantial soil erosion or the loss of topsoil?

The project would result in 10.64 acres of permanent site disturbance (including previously paved/disturbed areas) and 7.24 acres of temporary site disturbance (e.g., graded areas to be revegetated, equipment staging areas, etc.), resulting in a total site disturbance area of 17.88 acres. Project construction activities would result in approximately 4,998 cubic yards of cut materials and approximately 8,674 cubic yards of fill materials. Based on the extent and quantity of proposed site disturbance and earthwork, the project would have the potential to result in potentially significant impacts associated with soil erosion and/or the loss of topsoil. Mitigation Measure BIO-6 has been identified to require preparation and implementation of an erosion and sedimentation control plan, and implementation

of Best Management Practices (BMPs) to reduce soil erosion and loss of topsoil. Upon implementation of Mitigation Measure BIO-6, impacts would be *less than significant*.

c) Would the project 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?

According to the County Safety Element, the project site is located in a region with low potential for liquefaction and, according to the U.S. Geological Survey (USGS) Areas of Land Subsidence in California map, the project site is not located in an area of known subsidence (USGS 2022). All site grading and construction activities would be designed and conducted in compliance with applicable CBC standards, which include measures to safeguard against slope instability, liquefaction, and on-site land sliding. The project would not result in substantial changes to the existing topography of the project site or otherwise exacerbate the potential for landslides, lateral spreading, subsidence, liquefaction, collapse, or other geologic hazards to occur on- or off-site. Therefore, potential impacts would be *less than significant*.

d) Would the project 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?

As detailed in Section II. Agriculture and Forestry Resources, the project site is underlain by a number of different soil types, some of which are primarily composed of clay minerals. Soil units with high clay content are known to have high shrink-swell potential and may meet the criteria to be defined as expansive soil by the Uniform Building Code. The project would be required to comply with Section 18 of the CBC, which requires geotechnical investigations to be conducted by a qualified engineer prior to development to determine soil conditions at the site and provide design recommendations to be implemented in final design and construction plans. Based on existing site conditions and required compliance with the CBC, the project would not result in the risk to life or property as a result of development on expansive soils; therefore, impacts would be *less than significant.*

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The project would not include the construction of a new restroom or other need for a wastewater treatment system on-site. Therefore, *no impacts would occur.*

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed project site is underlain by three geologic units, as described below (USGS 2013):

- Young alluvial flood-plain deposits, undivided (Qya). This unit consists of Holocene to late Pleistocene-age materials composed of unconsolidated sand, silt, and clay-bearing alluvium deposited on floodplains and along valley floors. These sediments are generally considered too young to contain fossils; therefore, the paleontological sensitivity of this unit is considered to be low to high, increasing with depth.

- Metavolcanic rocks, Franciscan Complex (KJfmv). This unit consists of Cretaceous to Jurassic-age materials composed of primarily greenstone, metamorphosed from basalt. Includes massive to pillowed basalt flows, breccia, tuff, and diabase. Commonly deeply weathered. This unit is considered to have very low paleontological sensitivity.

- Mélange, Franciscan Complex (KJfm). This unit consists of Cretaceous to Jurassic-age materials composed of a chaotic mixture of fragmented rock masses embedded in a penetrative sheared

matrix of argillite and crushed metasandstone. This rock unit could be “low” or “high” paleontological sensitivity depending on the specific rock types that are present.

The project would involve excavation and grading activities with a maximum depth of 6 feet within the project site. Throughout the proposed roadway alignment, the maximum depth of excavation would occur within a few specific areas, with the majority of the alignment requiring less deep excavation. In addition, in areas where bedrock is encountered, no further excavation or blasting of dense bedrock is proposed. Based on the sensitivity of underlying geologic units and extent of proposed project ground-disturbing activities, disturbance of potentially significant paleontological resources is not expected. However, there is a marginal potential for paleontological resources to be encountered during project activities. Mitigation Measure GEO-1 has been identified to require a worker awareness training be conducted and to require work to stop in the event of discovery of a paleontological resource during project site disturbance activities and evaluation of the resource prior to work recommencing. With implementation of GEO-1, impacts associated with paleontological resources would be *less than significant with mitigation*.

Conclusion

The project site is not within the GSA combining designation or an area of high risk of landslide, liquefaction, subsidence, or other unstable geologic conditions. The project would be required to comply with CBC and standard LUO requirements which have been developed to properly safeguard against seismic and geologic hazards. Mitigation has been identified to address potential impacts associated with inadvertent discovery of paleontological resources. Therefore, impacts associated with geology and soils would be less than significant with mitigation.

Mitigation Measures

GEO-1 **Paleontological Awareness Training and Avoidance.** Prior to the Initiation of project ground-disturbing activities, all construction personnel conducting earthwork activities shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during improvement grading and earthwork activities. The training shall be developed and conducted by a qualified paleontologist who has a master’s degree or Ph.D. in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques. Training shall be completed by all applicable personnel. Training shall inform all applicable personnel of the procedures to be followed upon the discovery of paleontological materials.

a. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on- or off-site by the applicant, its representatives, or employees will not be allowed. Violators shall be subject to prosecution under the appropriate federal and state laws. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training:

b. All construction contracts shall include clauses that require grading personnel to attend training so that they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources.

c. The qualified paleontologist shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential paleontological resources, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils.

d. In the event that fossils are encountered during construction, construction activities shall be prohibited within 50 feet of the find, and a professional paleontologist shall be notified to document the discovery as needed, to evaluate the potential resource, and to assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the material, if it is determined that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices. Any fossils collected from the area shall then be deposited in an accredited and permanent scientific institution where they would be properly curated and preserved.

a. Prior to conclusion of project construction activities, the paleontologist shall prepare a final report to be submitted Camp SLO that summarizes impacts to paleontological resources, describes impact minimization efforts, and provides the results of all data recovery efforts, as applicable.

VIII. Greenhouse Gas Emissions

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

Setting

Greenhouse gases (GHG) are any gases that absorb infrared radiation in the atmosphere, and are different from the criteria pollutants discussed in Section III, Air Quality, above. The primary GHGs that are emitted into the atmosphere as a result of human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. These are most commonly emitted through the burning of fossil fuels (oil, natural gas, and coal), agricultural practices, decay of organic waste in landfills, and a variety of other chemical reactions and industrial processes (e.g., the manufacturing of cement).

Carbon dioxide is the most abundant GHG and is estimated to represent approximately 80-90% of the principal GHGs that are currently affecting the earth's climate. According to the ARB, transportation (vehicle exhaust) and electricity generation are the main sources of GHGs in the state.

State Regulatory Setting

In October 2008, the CARB published the *Climate Change Proposed Scoping Plan*, which is the state's plan to achieve GHG reductions in California required by Assembly Bill (AB) 32. The Scoping Plan included CARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations were associated with improving emissions standards for light-duty vehicles, implementing the Low Carbon Fuel Standard program, implementation

of energy efficiency measures in buildings and appliances, the widespread development of combined heat and power systems, and developing a renewable portfolio standard for electricity production.

Senate Bill (SB) 32 and Executive Order (EO) S-3-05 extended the state's GHG reduction goals and require CARB to regulate sources of GHGs to meet the following goals:

- Reduce GHG emissions to 1990 levels by 2020;
- Reduce GHG emissions to 40% below 1990 levels by 2030; and
- Reduce GHG emissions to 80% below 1990 levels by 2050.

Assembly Bill 1279 (the California Climate Crisis Act) was signed into law in September 2022. This law established the revised GHG reduction goals including the following (California Legislative Information 2022):

- Achieve net zero GHG emissions as soon as possible, but no later than 2045;
- Maintain net negative GHG emissions thereafter (following 2045); and
- Reduce statewide anthropogenic GHG to at least 85% below 1990 levels by 2045.

The initial Scoping Plan was first approved by CARB on December 11, 2008, and is updated every 5 years. The first update of the Scoping Plan was approved by the CARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030–2035) toward reaching the 2050 goals. The most recent update released by CARB is the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), which as finalized and adopted in December 2022. The 2022 Scoping Plan lays out the strategies for achieving carbon neutrality and reduce anthropogenic (i.e., human-caused) GHG emissions by 85% below 1990 levels no later than 2045, as directed by Assembly Bill 1279 (California Air Resources Board [CARB] 2023).

Regional Regulatory Setting

The SLOAPCD is a local public agency with the primary mission of realizing and preserving clean air for all county residents and businesses. Responsibilities of the SLOAPCD include but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by federal and State regulatory requirements.

As a Commenting Agency under CEQA, the SLOAPCD has developed the *CEQA Air Quality Handbook* to assist lead agencies, planning consultants, and project proponents in assessing the potential air quality and GHG impacts from residential, commercial, and industrial development. SLOAPCD recently developed and published the 2023 Administrative Update Version of the CEQA Air Quality Handbook, which included updated thresholds of significance for GHG emissions. These thresholds have been established through the year 2045, the last year specified in AB 1279 and the CARB 2022 Scoping Plan Update for California to achieve its net zero GHG emissions target (SLOAPCD 2023).

For projects with an initial operational year of 2030 or earlier, if emissions are at or below an applicable threshold for that operational year, then the project is considered to be doing its fair share toward the state's SB 32 GHG reduction target.

Environmental Evaluation

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

When assessing the significance of potential impacts for CEQA compliance, an individual project's GHG emissions will generally not result in direct significant impacts because the climate change issue is global in nature. However, an individual project could be found to contribute to a potentially significant

cumulative impact. Projects that have GHG emissions above applicable GHG significance thresholds may be considered cumulatively considerable and require mitigation.

During construction, fossil fuels and natural gas would be used by construction vehicles and equipment. Each of the project alternatives would result in site grading, construction of proposed facilities, and importing and exporting construction materials. Importing and exporting materials off-site would require use of haul trucks that would result in the consumption of fuel, as discussed in Section VI, *Energy*. GHG emissions associated with site preparation and construction associated with any of the project alternatives would be temporary in nature. Federal and state regulations in place require use of fuel-efficient equipment and vehicles and prohibit wasteful activities, such as diesel idling. In addition, while not required to reduce GHG impacts to less than significant, Mitigation Measure AQ-2 would further reduce construction GHG emissions through additional idling restrictions. Based on the temporary nature and limited scope of project construction activities, construction GHG emissions would not result in cumulatively considerable GHG emissions.

Following construction activities, the project would consist of improved roadways and culverts and would not increase the vehicle capacity of the roadways above existing conditions. The project would not result in increased vehicle traffic or other sources of GHG emissions; therefore impacts would be *less than significant*.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would be required to comply with existing state regulations, which include increased energy conservation measures, reduced potable water use, increased waste diversion, and other actions adopted to achieve the overall GHG emissions reduction goals identified in SB 32 and EO S-3-05. The project would not conflict with the control measures identified in the SLOAPCD CAP or other state and local regulations related to GHG emissions. The project would be consistent with the property's existing land uses and would be designed to comply with the California Green Building Code standards. Therefore, the project would be consistent with applicable plans and programs designed to reduce GHG emissions and potential impacts would be *less than significant*.

Conclusion

The project would not generate significant GHG emissions above existing levels and would contribute considerably to cumulatively significant GHG emissions or conflict with plans adopted to reduce GHG emissions. Therefore, potential impacts related to greenhouse gas emissions would be less than significant and no mitigation measures are necessary.

Mitigation Measures

No mitigation is necessary.

IX. Hazards and Hazardous Materials

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

Setting

The Hazardous Waste and Substances Site (Cortese) List is a planning tool used by the state, local agencies, and developers to comply with CEQA requirements related to the disclosure of information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. Various state and local government agencies are required to track and document hazardous material release information for the Cortese List. The California Department of Toxic Substance Control (DTSC) EnviroStor database tracks DTSC cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination, such as federal superfund sites, state response sites, voluntary cleanup sites, school cleanup sites, school investigation sites, and military evaluation sites (DTSC 2024). The SWRCB GeoTracker database contains records for sites that impact, or have the potential to impact, water in California, such as Leaking Underground Storage Tank (LUST) sites, U.S. Department of Defense sites, and Cleanup Program Sites (SWRCB 2023). The remaining data regarding facilities or sites identified as meeting the “Cortese List” requirements can be located on the CalEPA website: https://calepa.ca.gov/sitecleanup/corteselist/.

According to the DTSC EnviroStor and SWRCB GeoTracker databases, the project site is located within a documented Formerly Used Defense Site (FUDS). Active as of December 2005, this site record is generally documented on the historic 14,959.16-acre Department of Defense Camp San Luis Obispo

Property and the property is known or suspected to contain military munitions and explosives of concern (e.g., unexploded ordnance) and therefore may present an explosive hazard (DTSC 2024).

Environmental Evaluation

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The project does not propose the routine transport, use or disposal of hazardous substances. Project construction activities would require use of commonly used hazardous substances within the project site such as fuel, oils, and paints and these substances would be transported, stored, and used according to applicable federal and state regulatory requirements and existing procedures for the handling of hazardous materials. Therefore, potential impacts would be *less than significant*.

b) Would the project 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?

The project does not include the handling or use of hazardous materials or volatile substances that would result in a significant risk of upset or accidental release conditions. As previously evaluated, construction of the proposed project is anticipated to require use of limited quantities of hazardous substances, and construction contractors would be required to comply with applicable state and local regulations, such as 22 CCR Division 4.5, to reduce the potential for accidental hazardous material release during construction. Although not required to reduce impacts, implementation of Mitigation Measure BIO-6 would further reduce the potential for accidental construction-related spills to enter the on-site drainages and nearby waterways.

The project does not require soil disturbance within or adjacent to existing major highways (i.e., US 1) that could release aerially deposited lead (ADL) if present within the soil. However, as described under Section 1. III. *Air Quality*, the project site has potential for NOA. In addition, the existing roadway structures located within the project site were constructed prior to 1970 and may have the potential to include asbestos-containing materials, lead-based paint, creosote, and deposited oils, lubricants, and other heavy metals. Demolition of existing roadway segments may have the potential to result in harmful emissions of these hazardous materials into the environment. Mitigation measure AQ-3 has been identified to ensure compliance with applicable regulatory requirements for removal and disposal of these toxic contaminants if present on-site, including notification of the SLOAPCD prior to demolition of the existing roadway/ground disturbance. In addition, Mitigation Measure HAZ-1 has been identified to require evaluation of paint from demolished roadway segments if it is separated from the existing infrastructure for hazardous materials (including, but not limited to lead based paint) and that the paint be handled and disposed of in accordance with local, state, and federal regulations. Therefore, potential impacts related to release of hazardous materials into the environment through reasonably foreseeable upset and accident conditions would be *less than significant with mitigation incorporated.*

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The nearest school facility to the project site would be Grizzly Youth Academy, which is located approximately 1.4 miles southwest of the project site. The project site is not located within 0.25 mile of an existing or proposed school facility; therefore, *no impacts* would occur.

d) Would the project 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?

According to the DTSC EnviroStor and SWRCB GeoTracker databases, the project site is located within a documented Formerly Used Defense Site (FUDS). Active as of December 2005, this site record is generally documented on the historic 14,959.16-acre Department of Defense Camp San Luis Obispo Property and the property is known or suspected to contain military munitions and explosives of concern (e.g., unexploded ordnance) and therefore may present an explosive hazard (DTSC 2024). However, according to U.S. Army Correspondence from 1964, all of the range areas were cleared by Explosive Ordnance Disposal personnel and items disposed of in 1946 (GHD 2023). The potential explosion hazard associated with unexploded ordnance at the project site is considered extremely low. No other documented hazardous materials sites are located within 0.5 mile of the project site. Therefore, potential impacts would be *less than significant*.

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?

The project site is not located within an airport land use plan or within 2 miles of a public airport or private airstrip; therefore, *no impacts* would occur.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project would result in temporary closure of Range Road and San Benito Road during construction. These roadways provide access to the shooting ranges and Urban Training Complex and proposed roadway closures would not impede or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, potential impacts would be *less than significant*.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project does not propose the construction of any new residences or other habitable structures. Based on the County Safety Element, the project is not located within a high or very high FHSZ (County of San Luis Obispo 2023). The project would be required to comply with all applicable fire safety rules and regulations including the California Fire Code and PRC during all demolition and construction activities; therefore, potential impacts would be *less than significant.*

Conclusion

Potential impacts associated with asbestos, lead-based paint, and other potential hazardous materials within the project site would be reduced to less than significant upon implementation of Mitigation Measures identified below. No other potentially significant impacts associated with hazards or hazardous materials would occur. Therefore, project impacts associated with hazards and hazardous materials would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measure AQ-3.

HAZ-1 **Hazardous Paint Materials Evaluation, Handling, and Disposal.** If during construction activities, paint is separated from existing infrastructure (e.g., chemically or physically), the paint waste shall be evaluated independently from the building material by a qualified

hazardous materials inspector to determine proper management. All hazardous materials (e.g., lead based paint, etc.) shall be handled and disposed of in accordance with local, state, and federal regulations. If required, all lead work plans shall be submitted to the San Luis Obispo County Air Pollution Control District at least 10 days prior to the start of demolition. Camp SLO shall document proof that paint waste has been evaluated by a qualified hazardous waste materials inspector and handled according to local, state, and federal regulations.

X. Hydrology and Water Quality

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
(c) Substantially alter the existing drainage pattern of 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 off-site;	☐	☐	☒	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) Impede or redirect flood flows?	☐	☐	☐	☒
(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Setting

The RWQCB Water Quality Control Plan for the Central Coast Basin (Basin Plan; RWQCB 2019) describes how the quality of surface water and groundwater in the Central Coast Region should be managed to provide the highest water quality reasonably possible. The Basin Plan outlines the beneficial uses of streams, lakes, and other waterbodies for humans and other life. There are 24 categories of beneficial uses, including, but not limited to, municipal water supply, water contact recreation, non-water contact recreation, and cold freshwater habitat. Water quality objectives are then established to protect

the beneficial uses of those water resources. The RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements to individuals, communities, or businesses whose discharges can affect water quality.

For planning purposes, the flood event most often used to delineate areas subject to flooding is the 100-year flood. The County Safety Element establishes policies to reduce flood hazards and flood damage, including, but not limited to, prohibition of development in areas of high flood hazard potential, discouragement of single-road access into remote areas that could be closed during floods, and review of plans for construction in low-lying areas. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) 06079C1055F (effective date August 27, 2008), the project site is located within Zone D, an area with possible but undetermined flood hazards (FEMA 2023). The project site is not located in the County's Flood Hazard combining designation (County of San Luis Obispo 2023).

Environmental Evaluation

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Twelve drainages, 11 swales, three ponds, and three wetlands were identified within the project site; all of the drainages are direct or indirect tributaries to Chorro Creek (SWCA 2024). The project includes roadway and culvert improvements along approximately 13,967 linear feet (2.65 miles) of roadway along San Benito Road and Range Road. The project would result in a total site disturbance area of 17.88 acres, including approximately 4,998 cubic yards of cut materials and approximately 8,674 cubic yards of fill materials. Based on the area of ground disturbance, quantity of proposed earthwork, use of construction equipment, and proximity to surface water features, the project would have the potential to result in adverse impacts to surface or groundwater quality associated with stormwater runoff, erosion and sedimentation, and accidental leaks or spills of hazardous materials during project construction activities.

The project would disturb more than 1 acre of area and would be required to comply with the Central Coast RWQCB General Construction Permit requirements, which requires the preparation of a SWPPP. The SWPPP would include BMPs to control and reduce the discharge of pollutants, including sediment and erosion, into local surface water drainages. In addition, Mitigation Measure BIO-2 has been identified to require implementation of site maintenance measures during construction operations such as requiring equipment and material staging areas to be clearly defined and to be located beyond 100 feet of sensitive habitat areas (including surface water features) and identifying procedures for equipment inspections and secondary containment to avoid spills or other releases of hazardous materials. In addition to Mitigation Measure BIO-2, Mitigation Measure BIO-6 has been identified to require preparation and implementation of an erosion and sedimentation control plan, implementation of stormwater Best Management Practices (BMPs) to protect aquatic features from indirect impacts, limiting construction activities within jurisdictional areas to occur only during the dry season when stream flows are at annual lows, and to ensure that all applicable agency permits with jurisdiction over the project area be obtained and any additional mitigation measures required by agencies be implemented throughout the project. With implementation of these measures, project impacts related to violation of water quality standards or otherwise substantial degradation of surface or ground water quality would be *less than significant with mitigation*.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The project includes roadway and culvert improvements along two existing roadways and would not result in any new long-term demand of groundwater resources. Therefore, *no impacts* would occur.

c) Would the project 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:

c-i) Result in substantial erosion or siltation on- or off-site?

As described above under Section X. *Hydrology and Water Quality* question *a*, the project would result in a total site disturbance area of 17.88 acres and would have the potential to result in adverse impacts associated with erosion. Mitigation Measure BIO-6 has been identified to require preparation and implementation of an erosion and sedimentation control plan and implementation of stormwater BMPs. With implementation of Mitigation Measure BIO-6, potential impacts associated with substantial erosion or siltation on- or off-site would be *less than significant with mitigation*.

c-ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

The project includes improvements to existing roadways and replacement of existing culverts along San Benito Road and Range Road. Roadway improvements would include widening of the existing roadway alignment but would not add any additional vehicle lanes beyond existing conditions. Based on current design plans, the project would result in approximately 8,480 square feet of new impervious surface within the San Benito Road portion of the project site, and approximately 13,290 square feet of new impervious surface within the Range Road portion of the project site, for a total of 21,770 square feet (0.5 acre). This new impervious area would be distributed along the edges of the existing roadway alignments and would not have the potential to result in a substantial increase in the rate or amount of surface runoff. Therefore, potential impacts would be *less than significant*.

c-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?

As described above, the project would result in the creation of approximately 0.5-acre of new impervious surfaces within the project site. The project includes improvements to existing culverts to improve drainage of stormwater flows through the project area and the project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. The project would disturb more than 1 acre of area and would be required to comply with the Central Coast RWQCB General Construction Permit requirements, which requires the preparation of a SWPPP. The SWPPP would include BMPs to control and reduce the discharge of pollutants, including sediment and erosion, into local surface water drainages. Based on compliance with existing regulations, the project would not provide substantial additional sources of polluted runoff and impacts would be *less than significant*.

c-iv) Impede or redirect flood flows?

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) 06079C1055F (effective date August 27, 2008), the project site is located within Zone D, an area with possible but undetermined flood hazards (FEMA 2023). The project site is not located in the County's Flood Hazard combining designation (County of San Luis Obispo 2023). The project site is not located within a mapped flood hazard area; therefore, *no impacts* would occur.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

The project site is not located in an area with mapped flood hazards (FEMA 2023) or risk of tsunami inundation (CDOC 2024). The project site is not located in proximity to an impounded or standing body of

water with potential for a seiche to occur. Therefore, the project would not risk the release of pollutants due to inundation, and *no impacts* would occur.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed under the thresholds above, the project would be required to prepare a SWPPP and implement stormwater BMPs in accordance with SWRCB Construction General Permit Order 2009 0009-DWQ. The SWPPP would be prepared by a qualified engineer to ensure effective erosion and sedimentation control measures are implemented prior to, during, and following project construction. Project site stormwater runoff would be captured and directed to the proposed on-site drainage basin designed to capture and retain stormwater flows on-site in accordance with RWQCB standards. The project would not result in a significant new source of polluted runoff, substantially deplete groundwater resources, or otherwise conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan; therefore, potential impacts would be *less than significant.*

Conclusion

Project construction activities would result in potential impacts associated with adverse effects to water quality and erosion and sedimentation. Upon implementation of mitigation measures identified below, impacts would be reduced to less than significant. The project would not result in a significant new source of polluted runoff, substantially deplete groundwater resources, or otherwise conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Therefore, project impacts associated with hydrology and water quality would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures BIO-2 and BIO-6.

XI. Land Use and Planning

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

Setting

The project is located on a parcel within the Agriculture land use designation in the San Luis Obispo Inland Sub Area of the San Luis Obispo County Planning Area. The project site is located on land owned by the California National Guard and does not require a discretionary permit from the County of San Luis Obispo, therefore, land use plans and policies adopted by the County are not directly applicable to the project.

The project would be subject to compliance with several applicable land use plans and policies adopted for the purpose of addressing environmental effects, including the SLOAPCD CAP and the 2023 Regional Transportation Plan (RTP), discussed below.

The SLOAPCD 2001 CAP is a comprehensive planning document intended to evaluate long-term air pollutant emissions and cumulative effects and provide guidance to the SLOAPCD and other local agencies on how to attain and maintain the state standards for ozone and PM_{10} (SLOAPCD 2001). The 2001 CAP presents a detailed description of the sources and pollutants that impact the jurisdiction's attainment of state standards, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality.

The 2023 RTP is the region's blueprint for a transportation system that enhances quality of life and meets the short- and long-term mobility needs of the region's residents and visitors (SLOCOG 2023). The 2023 RTP also includes policies to coordinate land use, housing, and transportation planning efforts to reduce VMT and greenhouse gas emissions.

Environmental Evaluation

a) Would the project physically divide an established community?

The project does not propose project elements or components that would physically divide the site from surrounding areas and uses. The project would be consistent with the general level of development within the project vicinity and would not create, close, or impede any existing public or private roads, or create any other barriers to movement or accessibility within the community. Therefore, the proposed project would not physically divide an established community and *no impacts* would occur.

b) Would the project 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?

As detailed in Section III, *Air Quality*, the project would not conflict with the 2001 CAP, but would have the potential to exceed local emissions thresholds set forth by SLOAPCD during construction period. Mitigation Measures AQ-1 and AQ-2 have been identified to reduce project construction emissions to ensure consistency with SLOAPCD and state air quality plans and policies pertaining to air pollutant emissions and attainment status.

As described under Section XVII, *Transportation*, the project would not result in a conflict with the policies set froth in the San Luis Obispo County Regional Transportation Plan. The project would result in the widening and improvements to existing roadways and would not increase vehicle capacity of these roadways. The project would have a negligible effect on regional vehicle miles travelled and would not otherwise result in a conflict with the goals and policies set forth in the 2023 RTP.

Based on the analysis provided above, project impacts would be *less than significant with mitigation*.

Conclusion

The project would not divide an established community and with implementation of mitigation identified below, would not result in a potentially significant impact associated with a conflict with a land use plan adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, potential impacts related to land use and planning would be less than significant with mitigation.

Mitigation Measures

Implement Mitigation Measures AQ-1 and AQ-2.

XII. Mineral Resources

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

Setting

The California Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Geologist classify land into mineral resource zones (MRZ) according to the known or inferred mineral potential of the land (Public Resources Code Sections 2710–2796).

The three MRZs used in the SMARA classification-designation process in the San Luis Obispo-Santa Barbara Production-Consumption Region are defined below (California Geological Survey 2024):

- **MRZ-1:** Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.
- **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. This zone shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic-geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.
- **MRZ-3:** Areas containing known or inferred aggregate resources of undetermined significance.

The County LUO provides regulations for development in delineated Energy and Extractive Resource Areas (EX) and Extractive Resource Areas (EX1). The EX combining designation is used to identify areas of the county where:

- Mineral or petroleum extraction occurs or is proposed to occur;
- The state geologist has designated a mineral resource area of statewide or regional significance pursuant to PRC Sections 2710 et seq. (SMARA); and,
- Major public utility electric generation facilities exist or are proposed.

The purpose of this combining designation is to protect significant resource extraction and energy production areas identified by the County LUE from encroachment by incompatible land uses that could hinder resource extraction or energy production operations, or land uses that would be adversely affected by extraction or energy production. The project site is not located within in an Energy and Extractive Resource Area (EX) or Extractive Resource Area (EX1) (County of San Luis Obispo 2023).

Environmental Evaluation

a) Would the project 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?

The project is not located within a designated mineral resource zone or within an Extractive Resource Area combining designation. There are no known mineral resources in the project area. Therefore, *no impacts would occur.*

b) Would the project 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?

There are no known or mapped mineral resources in the project area and the likelihood of future mining of important resources within the project area is very low. Therefore, *no impacts would occur.*

Conclusion

No impacts to mineral resources would occur and no mitigation measures are necessary.

Mitigation Measures

No mitigation is necessary.

XIII. Noise

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
(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?	☐	☐	☐	☒

Setting

The San Luis Obispo County Noise Element of the General Plan provides a policy framework for addressing potential noise impacts in the planning process. The purpose of the Noise Element is to minimize future noise conflicts. The Noise Element identifies the major noise sources in the county (highways and freeways, primary arterial roadways and major local streets, railroad operations, aircraft and airport operations, local industrial facilities, and other stationary sources) and includes goals, policies,

and implementation programs to reduce future noise impacts. Among the most significant polices of the Noise Element are numerical noise standards that limit noise exposure within noise-sensitive land uses, and performance standards for new commercial and industrial uses that might adversely impact noise-sensitive land uses.

Noise sensitive uses that have been identified by the County include the following:

- Residential development, except temporary dwellings
- Schools – preschool to secondary, college and university, specialized education and training
- Health care services (e.g., hospitals, clinics, etc.)
- Nursing and personal care
- Churches
- Public assembly and entertainment
- Libraries and museums
- Hotels and motels
- Bed and breakfast facilities
- Outdoor sports and recreation
- Offices

Proximate sensitive receptor locations to the project site include El Chorro Park, located approximately 100 feet from the nearest portion of the project site, and Grizzly Youth Academy, which is located approximately 1.4 miles southwest of the project site.

All sound levels referred to in the Noise Element are expressed in A-weighted decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear.

While Camp SLO facilities are not subject to the County Land Use Ordinance, noise standards set forth in the LUO are provided here to provide context for evaluating noise impacts (Table 9). The County LUO establishes acceptable standards for exterior and interior noise levels and describe how noise shall be measured. Exterior noise level standards are applicable when a land use affected by noise is one of the sensitive uses listed in the County Noise Element. Exterior noise levels are measured from the property line of the affected noise-sensitive land use.

Table 9. Maximum Allowable Exterior Noise Level Standards[1]

Sound Levels	Daytime 7 a.m. to 10 p.m.	Nighttime[2]
Hourly Equivalent Sound Level (L_{eq}, dB)	50	45
Maximum level (dB)	70	65

Note: L_{eq} = equivalent continuous sound level

[1] When the receiving noise-sensitive land use is outdoor sports and recreation, the noise level standards are increased by 10 dB.

[2] Applies only to uses that operate or are occupied during nighttime hours.

Some types of noise are exempt from the above County LUO noise standards, including noise sources associated with construction, provided such activities do not take place before 7:00 a.m. or after 9:00 p.m. on weekdays, or before 8:00 a.m. or after 5:00 p.m. on Saturday or Sunday.

Environmental Evaluation

a) Would the project result in 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?

The nearest noise sensitive receptor location to the project site is El Chorro Regional Park, located approximately 100 feet from the nearest portion of the project site.

Project construction would result in a temporary increase in ambient noise levels associated with site preparation, demolition of existing roadway segments, equipment use, and vehicle trips. Construction noise would be variable, temporary, and limited in nature and duration. While specific equipment to be used during construction is not known at this time, it is assumed that the project would require use of equipment that would generate noise levels between 80 and 85 dBA at 50 feet, as detailed in Table 10.

Table 10. Construction Equipment Noise Emission Levels

Equipment Type	Typical Noise Level (dBA) 50 Feet From Source
Backhoe	80
Compactor	80
Concrete Mixer	85
Concrete Pump	82
Dozer	85
Excavator	85
Heavy Truck	84
Paver	85
Scraper	85

Source: Federal Highway Administration (FHWA) 2017

With the nearest sensitive receptor location being located approximately 100 feet from the project site, noise levels would be expected to dissipate at a rate of approximately 6 dB for every doubling of distance. Therefore, maximum noise levels of 85 dBA at 50 feet from the source would result in noise levels of approximately 79 dBA at 100 feet from the source. Therefore, project noise levels during construction would have the potential to result in exceedances of the County Maximum Allowable Exterior Noise Standards.

The County LUO requires that construction activities be conducted during daytime hours to be able to utilize County construction noise exception standards and that construction equipment be equipped with appropriate mufflers recommended by the manufacturer. Mitigation Measures N-1 and N-2 have been identified to require compliance with these standards to reduce short-term construction noise impacts on surrounding sensitive receptor locations.

During operation, noise levels would be consistent with existing noise levels, as the proposed roadway improvements would not result in an increased vehicle capacity of the roads or otherwise result in an increase in vehicle trips. Therefore, potential impacts would be *less than significant with mitigation*.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

The project does not propose pile driving or other high impact activities that would generate substantial groundborne noise or groundborne vibration during construction. Construction equipment and proposed demolition and grading activities would have the potential to generate minor groundborne noise and/or vibration, but these activities would be limited in duration and are not likely to be perceptible from adjacent areas. The project does not propose a use that would generate long-term operational groundborne noise or vibration. Therefore, impacts related to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels would be *less than significant.*

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?

The project site is not located within or adjacent to an airport land use plan or within two miles of a public airport or private airstrip. Therefore, *no impacts would occur.*

Conclusion

Short-term construction activities would have the potential to exceed local County LUO noise standards. Mitigation measures have been identified to reduce impacts to a less than significant level. No long-term operational noise or ground vibration would occur as a result of the project. Therefore, potential impacts related to noise would be less than significant with mitigation measures.

Mitigation Measures

N-1 **Construction Hours.** Unless specifically required for roadway construction and treatment processes, construction activities shall be limited to the daytime hours of 7:00 a.m. to 9:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturday or Sunday.

N-2 **Installation of Equipment Mufflers.** Internal combustion engines shall be equipped with the muffler recommended by the manufacturer. Internal combustion engines shall not be operated on the job site without the appropriate muffler.

XIV. Population and Housing

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

Setting

No existing housing or residential communities are located within or directly adjacent to the project site. No plans to develop housing on or adjacent to the project site have been proposed.

Environmental Evaluation

a) Would the project 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 does not include the construction of new homes or businesses or the extension or establishment of roads, utilities, or other infrastructure that would induce development and population growth in new areas. The project would not generate a substantial number of new employment opportunities that would encourage population growth in the area. Therefore, the project would not directly or indirectly induce substantial growth and *no impacts* would occur.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project would not displace existing housing or necessitate the construction of replacement housing elsewhere; therefore, *no impacts* would occur.

Conclusion

No impacts to population and housing would occur and no mitigation measures are necessary.

Mitigation Measures

No mitigation is necessary.

XV. Public Services

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
(a) 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?	☐	☐	☐	☒

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Other public facilities?	☐	☐	☐	☒

Setting

Fire protection services in unincorporated San Luis Obispo County are provided by the California Department of Forestry and Fire Protection (CAL FIRE), which has been under contract with the County of San Luis Obispo to provide full-service fire protection since 1930. Approximately 180 full-time state employees operate the County Fire Department, supplemented by as many as 100 state seasonal fire fighters, 300 County paid-call and reserve fire fighters, and 120 state inmate fire fighters. CAL FIRE responds to emergencies and other requests for assistance, plans for and takes action to prevent emergencies and to reduce their impact, coordinates regional emergency response efforts, and provides public education and training in local communities. CAL FIRE has 24 fire stations located throughout the county.

Police protection and emergency services in the unincorporated portions of the county are provided by the San Luis Obispo County Sheriff's Office. The Sheriff's Office Patrol Division responds to calls for service, conducts proactive law enforcement activities, and performs initial investigations of crimes. Patrol personnel are deployed from three stations throughout the county, the Coast Station in Los Osos, the North Station in Templeton, and the South Station in Oceano.

San Luis Obispo County has a total of 10 school districts that currently enroll approximately 34,000 students in over 75 schools (County of San Luis Obispo Office of Education 2024). The project site is located within the San Luis Obispo Coastal Unified School District.

Environmental Evaluation

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?

The project would not generate long-term increases in demand for fire protection or other emergency services. Response times within the project area are currently between 5 and 10 minutes and would not be substantially affected by project construction or operations. The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities; therefore, potential impacts would be *less than significant*.

Police protection?

The project would be located on a military base and would not generate any long-term increases in demand for police protection. The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities; therefore, potential impacts would be *less than significant*.

Schools?

As described in Section XIV, *Population and Housing*, the project would not result in substantial population growth or remove a barrier to growth in the area. The project would not result in a significant new source of employment or otherwise trigger an increase in school-age children within the project vicinity. The project would not directly impact nearby schools and would not result in the generation of additional school children or create an increase in demand for additional school capacity; therefore, *no impacts would occur.*

Parks?

The project does not extend through any public parks or recreational areas and would not directly impact recreational resources. As described in Section XIV, *Population and Housing*, the project would not result in substantial population growth or remove a barrier to growth in the area. The project would not result in an increase in population and would not place any new or increased demand on existing local or regional park or other recreational facilities. Construction of the project would not displace any existing or known proposed recreational facilities. Therefore, *no impacts would occur.*

Other public facilities?

The project would not directly or indirectly affect other public facilities in the project vicinity. The proposed project would not directly or indirectly induce population growth in the area and would not increase demand on public facilities as a result of the project. No expansion of County facilities or emergency services would be required. Therefore, *no impacts would occur.*

Conclusion

The proposed project would not result in significant adverse impacts related to public services; therefore, mitigation measures are not necessary.

Mitigation Measures

No mitigation is necessary.

XVI. Recreation

	Environmental Issues	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☐	☒

Setting

The County of San Luis Obispo Parks and Recreation Element (Recreation Element) establishes goals, policies, and implementation measures for the management, renovation, and expansion of existing, and the development of new, parks and recreation facilities in order to meet existing and projected needs and to assure an equitable distribution of parks throughout the county.

Public facilities fees, Quimby fees, and developer conditions are several ways the County currently funds public parks and recreational facilities. Public facility fees are collected upon construction of new residential units and currently provide funding for new community-serving recreation facilities. Quimby Fees are collected when new residential lots are created and can be used to expand, acquire, rehabilitate, or develop community-serving parks. Finally, a discretionary permit issued by the County may condition a project to provide land, amenities, or facilities consistent with the Recreation Element.

The County Bikeways Plan identifies and prioritizes bikeway facilities throughout the unincorporated area of the county, including bikeways, parking, connections with public transportation, educational programs, and funding. The Bikeways Plan is updated every 5 years and was last updated in 2016. The plan identifies goals, policies, and procedures geared towards realizing significant bicycle use as a key component of the transportation options for San Luis Obispo County residents. The plan also includes descriptions of bikeway design and improvement standards, an inventory of the current bicycle circulation network, and a list of current and future bikeway projects within the county.

Environmental Evaluation

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?

The project would result in temporary employment opportunities for construction workers during each of the 4-month construction periods. However, as described in Section XIV, Population and Housing, the project would not result in any increase in population through construction of residential uses or indirect means through extension of access or utility capacity where there was none before. Therefore, the project would not increase the use of existing neighborhood or regional parks or other recreational facility such that substantial deterioration of the facility would occur or be accelerated; therefore, *no impacts 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?

The project does not include construction of new or improved recreational facilities or require construction or expansion of recreational facilities. Therefore, *no impacts would occur.*

Conclusion

The project would not result in a significant increase in use, construction, or expansion of parks or recreational facilities. Therefore, *no impacts would occur,* and mitigation measures are not necessary.

Mitigation Measures

Mitigation is not necessary.

XVII. Transportation

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

Setting

Senate Bill 743 and VMT

In 2013 SB 743 was signed into California State law with the intent to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions" and required the Governor's Office of Planning and Research (OPR) to identify new metrics for identifying and mitigating transportation impacts within CEQA. As a result, in December 2018, the California Natural Resources Agency certified and adopted updates to the State CEQA Guidelines. The revisions included new requirements related to the implementation of SB 743 and identified VMT per capita, VMT per employee, and net VMT as new metrics for transportation analysis under CEQA (as detailed in Section 15064.3[b]).

Regional Transportation Planning

The San Luis Obispo Council of Governments (SLOCOG) holds several key roles in transportation planning within the county. As the Regional Transportation Planning Agency (RTPA), SLOCOG is responsible for conducting a comprehensive, coordinated transportation program, preparing an RTP, allocating state funds for transportation projects, and administering and allocating transportation development act funds required by state statutes. SLOCOG represents and works with the County as well as the local City governments within the county in facilitating the development of the RTP and the Regional Housing Needs Allocation.

The current RTP, adopted June 7, 2023, is a long-term blueprint of San Luis Obispo County's transportation system. The RTP identifies and analyzes the transportation needs of the region and creates a framework for project priorities. The RTP also establishes goals and recommendations to develop, promote, and invest in the public transit systems, rail systems, air transportation services, harbor improvements, and commodity movements within the county in order to meet the needs of transit-dependent individuals and encourage the increasing use of alternative modes by all travelers that choose public transportation.

Environmental Evaluation

a) Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Camp SLO does not have established standards for circulation performance as the installation accommodates extremely low traffic levels. The project includes widening and improvements to existing segments of San Benito Road and Range Road to meet current State and Local safety standards and to provide continued access to the Urban Training Center and shooting ranges on the Camp SLO property. The project does not propose uses that would interfere or conflict with applicable policies related to circulation, transit, roadway, bicycle, or pedestrian systems or facilities. Therefore, potential impacts would be *less than significant*.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The majority of VMT generated by the project would occur during each 4.5-month construction period. Vehicle and haul truck traffic trips associated with demolition and reconstruction of each roadway segment and culvert improvements would be temporary. Based on the Technical Advisory on Evaluating Transportation Impacts in CEQA prepared by the OPR, there is no current guidance from the state regarding the significance of VMT generated during construction activities or VMT generated by heavy-duty trucks, such as haul trucks (OPR 2018). Therefore, due to the temporary nature of proposed construction and haul truck trips, VMT generated by the project during construction would be less than significant.

Operational traffic trips would be consistent with existing operations. Based on the nature of the project, the project would not generate a significant increase in operational traffic trips or VMT. Therefore, potential impacts would be *less than significant*.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project includes widening and improvements to existing segments of San Benito Road and Range Road to meet current State and Local safety standards and to provide continued access to the Urban Training Center and shooting ranges on the Camp SLO property. The proposed road improvements would not include geometric design features that would create new hazards or an incompatible use; therefore, *no impacts* would occur.

d) Would the project result in inadequate emergency access?

Proposed road closures along San Benito Road and Range Road would not affect access to any residential or commercial land uses. Project implementation would not affect long-term access through the project area. The project would be designed to accommodate emergency service vehicles in accordance with the California Fire Code and the CBC. Therefore, the project would not adversely affect existing emergency access and *no impacts* would occur.

Conclusion

The project would not conflict with an applicable circulation plan or policy or result in an increase in regional VMT. Proposed roadway improvements would be designed in accordance with applicable State and local design and safety standards and would be designed to accommodate emergency service vehicles in accordance with the California Fire Code and CBC. Therefore, potential impacts related to transportation would be less than significant and mitigation measures are not necessary.

Mitigation Measures

No mitigation is necessary.

XVIII. Tribal Cultural Resources

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) 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:				
(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
(ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Setting

Approved in 2014, AB 52 added tribal cultural resources to the categories of resources that must be evaluated under CEQA. Tribal cultural resources are defined as either of the following:

1. Sites, features, 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 CRHR; or
    b. Included in a local register of historical resources as defined in PRC Section 5020.1(k).
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 PRC Section 5024.1(c). In applying these criteria for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe.

Recognizing that tribes have expertise with regard to their tribal history and practices, AB 52 requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. If the tribe requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe regarding the potential for adverse impacts on tribal cultural resources as a result of a project. Consultation may include discussing the type of environmental review necessary, the presence and/or significance of tribal cultural resources, the level of significance of a project's impacts on the tribal cultural resources, and available project alternatives and mitigation measures recommended by the tribe to avoid

or lessen potential impacts on tribal cultural resources. No California Native American tribes have requested to be notified of projects within the Camp SLO area.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of projects they carry out, license, or financially assist on historic properties and requires that federal agencies consult with any federally recognized Native American tribe that has cultural or religious affiliation with the historic properties that may be affected by the agencies' undertakings. In accordance with Section 106 of the NHPA, Camp SLO reached out to all federally recognized tribes with cultural affiliation with the project area. The results of this consultation are noted under the environmental evaluation section below.

Environmental Evaluation

a) 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-i) 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)?

Camp SLO archaeologist E. Bertrando contacted the federally recognized Santa Ynez Band of Chumash Indians (SYBCI) on January 29, 2024. They responded on February 5, 2024, and recommended a tribal monitor be present during work within known resources. The SYCBI also requested that all Native American tribal monitoring work be carried out by the yak tit^{y}u tit^{y}u yak tiłhini Northern Chumash Tribe. Mitigation Measures CR-1, CR-2, and CR-3 require preparation and implementation of a cultural resource awareness training, archeological monitoring by both a qualified archeologist and a Native American tribal monitor, and designation of environmentally sensitive areas. With implementation of Mitigation Measures CR-1 through CR-4, potential impacts would be *less than significant with mitigation*.

a-ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Camp SLO archaeologist E. Bertrando contacted the federally recognized Santa Ynez Band of Chumash Indians on January 29, 2024. They responded on February 5, 2024, and recommended a tribal monitor be present during work within known resources. Mitigation Measure CR-2 includes development of a cultural resource monitoring plan including involvement of a Native American tribal monitor. In addition, Mitigation Measures CR-1 and CR-2 require preparation and implementation of cultural resource awareness training and designation of environmentally sensitive areas. With implementation of Mitigation Measures CR-1 through CR-3, potential impacts would be *less than significant with mitigation*.

Conclusion

With implementation of identified mitigation measures, potential impacts associated with tribal cultural resources would be less than significant.

Mitigation Measures

Implement Mitigation Measures CR-1 through CR-4.

XIX. Utilities and Service Systems

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
(c) Result in a determination by the wastewater treatment provider 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?	☐	☐	☒	☐

Setting

There are three landfills in San Luis Obispo County: Cold Canyon Landfill, located near the city of San Luis Obispo; Chicago Grade Landfill, located near the community of Templeton; and Paso Robles Landfill, located east of the city of Paso Robles.

Environmental Evaluation

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The project would include protection of existing utility poles located within the project site during construction activities. The project would also include burial of empty electrical conduit underneath Range Road at the entrances to each shooting range to accommodate potential future utility connections. The existing State of California 8-inch underground water pipeline that bisects the San Benito Road alignment would also be protected in place and would not be affected by project activities. None of these project components would result in the potential for significant environmental effects beyond what has been evaluated in other issue areas of this document. The project would not result in a substantial increase in demand on water, wastewater, or stormwater collection, treatment, or disposal facilities and would not require the construction of new or expanded water, wastewater, or stormwater facilities. Therefore, *no impacts* would occur.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project would not result in a long-term increased demand for domestic water service. The project is anticipated to require use of relatively small quantities of water during the construction phase for dust control and concrete/asphalt applications. The project's water demands would not be temporary and would be met by existing entitlements and resources. As described in Section XIV, Population and Housing, the project would not induce population growth, and the project would not otherwise result in establishment of new land uses that would increase demand for water. Therefore, potential impacts would be *less than significant*.

c) Would the project 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?

The project would not include new connections or increased flows to wastewater treatment facilities; therefore, *no impacts* would occur.

d) Would the project 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?

Solid waste disposal services are currently provided to the Camp SLO facilities by San Luis Garbage. No significant long-term increase in solid waste would occur.

Project construction activities would result in the generation of solid waste materials associated with the demolition of the existing roadway segments, excess soils and road base, and other construction materials. Excess materials would be stockpiled within the designated stockpile areas on-site, and following the completion of project construction activities these materials would be hauled off-site by the construction contractor for re-use, recycling, or dispoal at Cold Canyon Landfill. Cold Canyon Landfill has a maximum permitted capacity of 23,900,000 cubic yards. As of August 31, 2020, Cold Canyon Landfill had a remaining capacity of 13,000,000 cubic yards (approximately 54.4%) and the landfill currently has an expected close date of December 31, 2040 (CalRecycle 2020). Therefore, Cold Canyon landfill has enough permitted capacity to accommodate the project's construction-related waste, and impacts would be *less than significant*.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would not result in a substantial increase in waste generation during project construction or operation. Construction waste disposal would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, potential impacts would be *less than significant*.

Conclusion

The project would not result in significant increased demands on water, wastewater, or stormwater infrastructure and facilities. No substantial increase in solid waste generation would occur. Therefore, potential impacts to utilities and service systems would be less than significant and no mitigation measures are necessary.

Mitigation Measures

No mitigation is necessary.

XX. Wildfire

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
(a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of 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?	☐	☐	☐	☒
(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?	☐	☐	☐	☒

Setting

In central California, the fire season usually extends from roughly May through October; however, recent events indicate that wildfire behavior, frequency, and duration of the fire season are changing in California. FHSZs are defined by CAL FIRE based on the presence of fire-prone vegetation, climate, topography, assets at risk (e.g., high population centers), and a fire protection agency's ability to provide service to the area (CAL FIRE 2007). FHSZs throughout the county have been designated as "Very High," "High," or "Moderate." In San Luis Obispo County, most of the area that has been designated as a Very High FHSZ is located in the Santa Lucia Mountains, which extend parallel to the coast along the entire length of San Luis Obispo County. The project site is located within a Moderate FHSZ (County of San Luis Obispo 2023). The Moderate FHSZ designation does not mean the area cannot experience a damaging fire; rather, it indicates that the probability is reduced, generally because the number of days a year that the area has "fire weather" is less than in High or Very High FHSZs.

The California Fire Code provides minimum standards for many aspects of fire prevention and suppression activities. These standards include provisions for emergency vehicle access, water supply, fire protection systems, and the use of fire-resistant building materials.

Environmental Evaluation

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Implementation of the proposed project would not have a permanent impact on any adopted emergency response plans or emergency evacuation plans. Temporary construction activities and staging would temporarily alter existing circulation patterns or trips through the area, but access to critical facilities would be maintained throughout the project construction duration. Access to adjacent areas would be maintained throughout the duration of the project. There are adequate alternative routes available to accommodate any rerouted trips through the project area for the short-term construction period.

Therefore, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Potential impacts would be *less than significant*.

b) Due to slope, prevailing winds, and other factors, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Project roadway improvements and culvert improvements would not significantly increase or exacerbate potential fire risks and the project does not propose any design elements that would exacerbate risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Therefore, potential impacts would be *less than significant*.

c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?

The project would not require the installation or maintenance of utilities or wildfire protection infrastructure and would not exacerbate fire risk or result in temporary or ongoing impacts to the environment as a result of the development of wildfire prevention, protection, and/or management techniques. Therefore, potential impacts would be *less than significant*.

d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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?

The project site is not in a high or very high wildfire risk area and does not include any design elements that would 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. Therefore, impacts would be *less than significant*.

Conclusion

The project would not expose people or structures to new or exacerbated wildfire risks and would not require the development of new or expanded infrastructure or maintenance to reduce wildfire risks. Therefore, potential impacts associated with wildfire would be less than significant and mitigation measures are not necessary.

Mitigation Measures

No mitigation is necessary.

XXI. Mandatory Findings of Significance

	Environmental Issues	Potentially Significant Impact	Less Than Significant 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?	☐	☐	☒	☐

Environmental Evaluation

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?

As discussed in each resource section above, the proposed project would have the potential to result in significant impacts to biological resources, cultural resources, tribal cultural resources, and paleontological resources during project construction activities. Mitigation measures have been identified to address these potential impacts and, with implementation of these measures, impacts would be reduced to less than significant. Therefore, impacts associated with degradation of the quality of the environment, fish and wildlife species and populations, plant and animal communities, and examples of major periods of California history or prehistory would be *less than significant with mitigation*.

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)?

Evaluation of cumulative impacts has been incorporated into each resource section above. Cumulatively considerable impacts have been identified associated with air quality, energy, and GHG emissions. The proposed project does not have impacts that are individually limited, but cumulatively considerable. Therefore, potential cumulative impacts 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?

The project has the potential to result in significant impacts associated with air quality, cultural resources, hazards and hazardous emissions, land use and planning, noise, tribal cultural resources that could result in substantial adverse effects on human beings. Mitigation measures have been identified to reduce these potential impacts to less than significant, including, but not limited to, standard idling restrictions, use of electric or alternative fuel equipment, limiting construction work to daytime hours, and installation of mufflers on construction equipment. Therefore, potential impacts would be *less than significant with mitigation.*

Conclusion

Implement Mitigation Measures AQ-1 through AQ-3, BIO-1 through BIO-7, CR-1 through CR-4, GEO-1, HAZ-1, N-1, and N-2.

3 REFERENCES

Association of Defense Communities (ADC). 2020. Available at: https://defensecommunities.org/2020/08/camp-san-luis-obispo-works-with-partners-to-achieve-carbon-neutrality/. Accessed September 2023.

California Air Resources Board (CARB). 2022. Maps of State and Federal Area Designations. Available at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Accessed September 2022.

California Army National Guard (CA ARNG). 2022. Camp San Luis Obispo Integrated Natural Resources Management Plan. Sacramento, California.

California Department of Conservation (CDOC). 2015a. Geologic Map of California. Available at: https://maps.conservation.ca.gov/cgs/gmc/. Accessed September 2023.

———. 2015b. Fault Activity Map of California. Available at: https://maps.conservation.ca.gov/cgs/fam/. Accessed February 2023.

———. 2022. California Important Farmland Finder. Available at: https://maps.conservation.ca.gov/dlrp/ciff/p. Accessed September 2023.

———. 2024. San Luis Obispo County Tsunami Hazard Areas. Available at: https://www.conservation.ca.gov/cgs/tsunami/maps/san-luis-obispo. Accessed January 2024.

California Department of Forestry and Fire Protection (CAL FIRE). 2007. Draft Fire Hazard Severity Zones in Local Responsibility Areas. Online map. Available at: http://frap.fire.ca.gov/webdata/maps/san_luis_obispo/fhszl06_1_map.40.pdf. Accessed December 2023.

California Department of Resources Recycling and Recovery (CalRecycle). 2020. SWIS Facility/Site Activity Details; Cold Canyon Landfill, Inc. (40-AA-0004). Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1509?siteID=3171. Accessed November 2023.

California Department of Toxic Substances Control (DTSC). 2024. EnviroStor. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed January 2024.

California Department of Transportation (Caltrans). 2018. California State Scenic Highway System Map. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed September 2023.

California Geological Survey. 2024. SMARA Mineral Land Classification. Available at: https://www.conservation.ca.gov/cgs/minerals/mineral-land-classification-smara#maps-and-reports. Accessed January 2024.

California Governor's Office of Planning and Research (OPR). 2018. *Technical Advisory on Evaluation Transportation Impacts in CEQA*. December. Available at: https://www.opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed December 2021.

California State Military History and Museums Program. 2020. Historic California Posts, Camps, Stations, and Airfields: Camp San Luis Obispo Including National Guard Training Camp, Camp Merriam, and Baywood Park Training Area. Available at: https://www.militarymuseum.org/CSLO%20History.html. Accessed August 2023.

County of San Luis Obispo. 1999. San Luis Obispo County General Plan Safety Element. Available at: https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Plans-and-Elements/Elements/Safety-Element.pdf. Accessed September 2023.

———. 2010. San Luis Obispo County General Plan Conservation and Open Space Element. Available at: https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Plans-and-Elements/Elements/Conservation-and-Open-Space-Element-(1)/Conservation-and-Open-Space-Element.pdf. Accessed September 2023.

———. 2023. Land Use View. Available at: https://gis.slocounty.ca.gov/Html5Viewer/Index.html?configBase=https://gis.slocounty.ca.gov/Geocortex/Essentials/REST/sites/PL_LandUseView/viewers/PL_LandUseView/virtualdirectory/Resources/Config/Default. Accessed September 2023.

Federal Emergency Management Agency (FEMA). 2023. FEMA's National Flood Hazard Layer (NFHL) Viewer. Available at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd. Accessed August 2023.

GHD. 2023. Final IS/MND Camp San Luis Obispo Vehicular Bridge 3 Replacement Project.

Grizzly Youth Academy. 2023. Mission and History. Available at: https://www.grizzlyyouthacademy.org/about/mission-history/. Accessed August 2023.

Pacific Gas and Electric Company (PG&E). 2021. Exploring Clean Energy Solutions. Available at: https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page. Accessed September 2023.

San Luis Obispo Council of Governments (SLOCOG). 2023. 2023-2045 Regional Transportation Plan. Available at: https://www.dropbox.com/s/2zp8vhil9q4n9l5/00-%202023%20RTP%20Final%20Adopted.pdf?dl=0. Accessed October 2023.

San Luis Obispo County Air Pollution Control District (SLOAPCD). 2001. *2001 Clean Air Plan*. December. Available at: https://storage.googleapis.com/slocleanairorg/images/cms/upload/files/business/pdf/CAP.pdf. Accessed October 2023.

———. 2023. CEQA Air Quality Handbook; 2023 Administrative Update Version to APCD Board Adopted April 2012 Version. Available at: https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/CEQA%20Handbook%202023_Final.pdf. Accessed December 2023.

———. 2024. SLOAPCD NOA Screening Buffers Map. Available at: https://www.google.com/maps/d/viewer?mid=1YAKjBzVkwi1bZ4rQ1p6b2OMyvIM&ll=35.335083 15414863%2C-120.6755877993914&z=14. Accessed January 2024.

San Luis Obispo County Office of Education. 2024. Our Mission and Values. Available at: https://www.slocoe.org/about/our-mission-and-values/. Accessed January 2024.

SWCA Environmental Consultants. 2017. Estrella Substation and Paso Robles Area Reinforcement Project Paleontological Resources Technical Report for the Creston Route. Available at: Paleontological Resources Technical Report Estrella Substation Creston Route_2017.pdf. Accessed September 2023.

———. 2023. Cultural Resources Survey Report for the Camp San Luis Obispo Range Roads Repair Project, SanLuis Obispo County, California.

———. 2024. Biological Resources Assessment for the Camp San Luis Obispo Range Roads Repair Project, San Luis Obispo County, California.

U.S. Geological Survey (USGS). Land Subsidence in California. 2022 Available at: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html . Accessed October 2023.

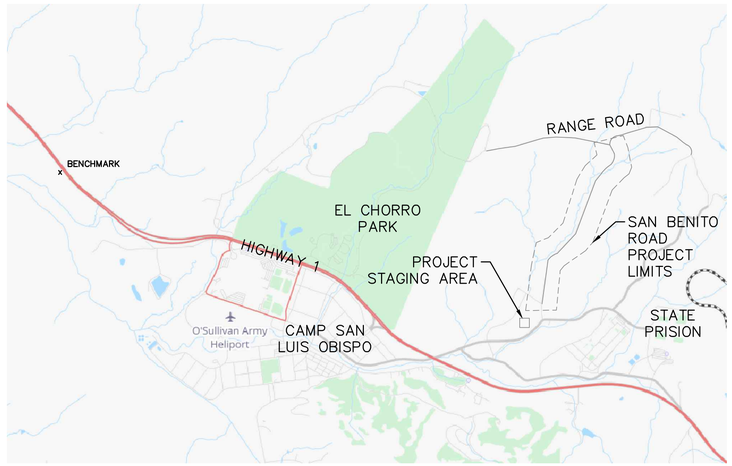
This page intentionally left blank.

APPENDIX A

Project Plan Set

SAN BENITO ROAD REHABILITATION

CAMP SAN LUIS OBISPO, CALIFORNIA



VICINITY MAP

NOT TO SCALE

GENERAL SITE NOTES

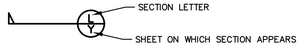
1. EXISTING FEATURES WITHIN THIS PLAN SET ARE TAKEN FROM A FIELD SURVEY PREPARED BY CANNON.
2. WORK WILL BE PERFORMED TO CONFORM WITH THE FOLLOWING SPECIFICATIONS. WHERE CONFLICTS EXIST BETWEEN ANY OF THESE, THE ENGINEER WILL CLARIFY WHICH SPECIFICATION GOVERNS.
   A. THE STANDARDS OF THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND THE RULES OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
   B. THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (HEREINAFTER REFERRED TO AS "CALTRANS").
   C. THE APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STATE OF CALIFORNIA BUILDING STANDARDS CODE AND THE CALIFORNIA ACCESS COMPLIANCE ADVISORY REFERENCE MANUAL.
   D. THE REQUIREMENTS OF ALL PERMITS ISSUED FOR WORK BY THE STATE OF CALIFORNIA MILITARY DEPARTMENT.
   E. THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS NOTED IN THE PROJECT SOILS REPORT PREPARED BY EARTH SYSTEMS TITLED "XXX" AND DATED XXX, 2023, AND ALL ADDENDUMS THERETO.
   F. THE UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS) PREPARED FOR THIS PROJECT.
   G. THESE APPROVED PLANS AND DETAILS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL THE PERMITS NECESSARY TO PERFORM WORK PRIOR TO COMMENCING WORK, INCLUDING BUT NOT LIMITED TO GRADING, TREE REMOVAL, AND UTILITY MODIFICATIONS.
4. THE CONTRACTOR MUST SUPPLY ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO PERFORM THE WORK AS SHOWN ON THE APPROVED PLANS.
5. IT IS THE RESPONSIBILITY OF THE VARIOUS CONTRACTORS TO COORDINATE THEIR WORK SO AS TO ELIMINATE CONFLICTS AND WORK TOWARD THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT.
6. ALL CONSTRUCTION ACTIVITY THAT DISRUPTS THE SMOOTH FLOW OF TRAFFIC OVER PUBLIC ROADS WILL REQUIRE A TRAFFIC CONTROL PLAN AS SPECIFIED IN THE PROJECT SPECIFICATIONS. TRAFFIC CONTROL MUST CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLAN MUST BE SUBMITTED FIVE WORKING DAYS PRIOR TO IMPLEMENTATION FOR APPROVAL BY THE STATE MILITARY DEPARTMENT.
7. ALL WORKMANSHIP AND MATERIALS FURNISHED BY THE CONTRACTOR MUST BE THE KIND AND QUALITY DESCRIBED IN THE SPECIFICATIONS AND FIRST CLASS THROUGHOUT. NEITHER FINAL ACCEPTANCE NOR FINAL PAYMENT BY THE STATE MILITARY DEPARTMENT WILL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP.
8. THE CONTRACTOR MUST NOTIFY BOTH THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER IN WRITING UPON DISCOVERING ANYTHING ON THE APPROVED PLANS THAT WOULD CONFLICT WITH A CONSISTENT AND FUNCTIONAL PRODUCT. UPON SUCH NOTICE, THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER WILL AGREE UPON A RESOLUTION TO THE CONFLICT AND ISSUE SUCH VIA A WRITTEN ORDER AND/OR REVISED PLANS. THE CONTRACTOR WILL BEAR THE FULL COST AND RESPONSIBILITY FOR WORK AFFECTED BY SUCH CONFLICTS THAT IS PERFORMED PRIOR TO SUCH NOTICE AND THE ISSUANCE OF THE RESOLUTION.
9. THE CONTRACTOR MUST MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN, AND SANITARY CONDITION AT ALL TIMES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. STREETS MUST BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL MEASURES AS WELL AS FOR ANY CLEANUP ON ADJACENT STREETS THAT ARE AFFECTED BY CONSTRUCTION. THE CONTRACTOR WILL PERIODICALLY OPERATE STREET SWEEPERS ON PAVED AREAS ADJACENT TO THE SITE.
10. WATER MUST BE APPLIED TO THE SITE TWICE DAILY DURING GRADING OPERATIONS.
11. THE CONTRACTOR MUST EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, SURFACE IMPROVEMENTS, DRAINAGE STRUCTURES, WATER STRUCTURES, SEWER CLEANOUTS, MANHOLES, OR JUNCTION BOXES FOR UNDERGROUND ELECTRIC, GAS, TELEPHONE, CABLE, STORM, SANITARY, WATER, OR OTHER UTILITIES WHICH ARE TO REMAIN IN PLACE, AND WILL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
12. THE UTILITIES INDICATED ON THESE PLANS ARE COMPILED FROM EXISTING PLANS AND FIELD OBSERVATIONS. THE CONTRACTOR MUST CONTACT UNDERGROUND SERVICE ALERT (811) AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK TO REQUEST AND OBTAIN MARKINGS OF EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR WILL COMPARE THESE MARKINGS WITH THE INFORMATION SHOWN ON THE PLANS AND MUST IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES (SIZE, MATERIAL, OR ALIGNMENT) OR OF EVIDENCE OF A PREVIOUSLY UNKNOWN FACILITY. FAILURE TO NOTIFY THE ENGINEER WILL PROHIBIT THE CONTRACTOR FROM CLAIMING EXTRA WORK ASSOCIATED WITH THE FACILITY.
13. SOME EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS, AND THEIR LOCATIONS WHEN SHOWN ARE APPROXIMATE. THE CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR LOCATING ALL UNDERGROUND UTILITIES AND OTHER FACILITIES AND FOR PROTECTING THEM DURING CONSTRUCTION, WHETHER OR NOT SUCH FACILITIES APPEAR ON THE APPROVED PLANS. ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS MUST BE RECONSTRUCTED, REPAIRED, AND/OR RECONNECTED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
14. EXISTING IRRIGATION LATERALS AND WIRING FOR LIGHTS, SIGNALS, AND MECHANICAL EQUIPMENT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR WILL DETERMINE THE LOCATIONS OF THE AFOREMENTIONED PRIOR TO COMMENCING WORK AND MUST REPAIR OR REPLACE DAMAGED ITEMS IMMEDIATELY.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OR PROPER RESETTING OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. ANY SURVEY MONUMENTS DESTROYED BY THE CONTRACTOR MUST BE REPLACED IN ACCORDANCE WITH THE STATE LAND SURVEYORS' ACT.
16. THE CONTRACTOR MUST HIRE A LICENSED LAND SURVEYOR TO PROVIDE CONSTRUCTION STAKING IN ORDER TO ENSURE THE PROJECT IS CONSTRUCTED TO THE LINES AND GRADES INDICATED ON THE APPROVED PLANS.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ANY REQUIRED INSPECTIONS WITH THE APPROPRIATE AGENCIES.
18. IN CONFORMANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT APPLIES CONTINUOUSLY AND IS NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS BOTH THE STATE AND THE ENGINEER OF RECORD FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STATE OR THE ENGINEER.
19. THE CONTRACTOR MUST HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ONSITE AT ALL TIMES. THE CONTRACTOR MUST MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL CHANGES WHICH DEVIATE FROM THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE AS-BUILT INFORMATION, INCLUDING THE EXACT LOCATIONS OF CHANGES, FOR THE PURPOSE OF PROVIDING THE ENGINEER WITH A BASIS FOR RECORD DRAWINGS. CHANGES MAY NOT BE MADE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND THE STATE MILITARY DEPARTMENT.
20. CONSTRUCTION MAY NOT START WITHOUT PLANS AND PERMITS APPROVED BY THE REGULATORY AGENCIES HOLDING JURISDICTION OVER THE PROJECT WORK. ALL AGENCIES MUST BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO STARTING CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS AND PERMITS AND PRIOR NOTIFICATION WILL BE REJECTED AT THE CONTRACTOR'S RISK AND EXPENSE.
21. DEBRIS CREATED BY DEMOLITION AND REMOVAL OPERATIONS WILL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND MUST BE DISPOSED OF AWAY FROM THE JOBSITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL RELEVANT AGENCIES.
22. UNLESS OTHERWISE NOTED, THE CONTRACTOR MUST ADJUST ALL STORM DRAIN INLETS, VALVE BOXES, MANHOLE RIMS, CLEANOUTS, AND OTHER UTILITY BOXES TO MATCH THE NEW FINISH SURFACE.
23. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN A MINIMUM SURFACE GRADE FOR POSITIVE DRAINAGE IN ALL PROPOSED PAVED AREAS. THE MINIMUM GRADE FOR ASPHALT IS 1.0% AND THE MINIMUM GRADE FOR CONCRETE IS 0.5%, UNLESS NOTED OTHERWISE.
24. SAW-CUT LINES FOR CONCRETE ARE APPROXIMATE; THE CONTRACTOR WILL REMOVE CONCRETE TO THE NEAREST EXPANSION JOINT.
25. ALL PROPOSED PAVEMENT AND CONCRETE JOINING EXISTING MUST BE FLUSH AT TRANSITIONS, WITH NO VERTICAL EDGES, UNLESS NOTED OTHERWISE ON THE PLANS.
26. THE CONTRACTOR MUST PRESERVE ALL EXISTING SIGNS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES NOT IDENTIFIED FOR REMOVAL. IN THE EVENT THAT THEY ARE DAMAGED BY CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE "IN KIND" SAID DEVICES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. IF WORD, SYMBOL, OR ARROW MARKINGS ARE PARTIALLY DAMAGED, THE ENTIRE MARKING MUST BE REPLACED.
27. THE CONTRACTOR MUST RECYCLE MATERIALS AS FEASIBLE AND IN ACCORDANCE WITH THE CONSTRUCTION ACTIVITIES MANAGEMENT PLAN AND THE LOCAL GOVERNING AGENCY.
28. THESE PLANS DO NOT AUTHORIZE SITE DISTURBANCE BEYOND THE LIMITS OF CONSTRUCTION SHOWN.

GENERAL GRADING NOTES

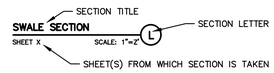
1. THE CONTRACTOR MUST NOTIFY THE PROJECT GEOTECHNICAL ENGINEER AND THE STATE MILITARY DEPARTMENT INSPECTOR AT LEAST THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CLEARING OR GRADING OPERATIONS ONSITE.
2. A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER MUST BE ONSITE DURING GRADING OPERATIONS AND WILL PERFORM SUCH TESTING AS DEEMED NECESSARY. THE REPRESENTATIVE WILL OBSERVE THE GRADING OPERATIONS FOR CONDITIONS WHICH SHOULD BE CORRECTED, AND IDENTIFY SUCH WITH RECOMMENDED CORRECTIVE MEASURES TO THE CONTRACTOR.
3. THE CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS OF MATCH POINTS BEFORE GRADING TO ENSURE PROPER DRAINAGE AND SLOPES.
4. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE PROJECT GEOTECHNICAL ENGINEER MUST BE IMMEDIATELY NOTIFIED FOR DIRECTIONS. THE CONTRACTOR MUST PROVIDE COPIES OF ALL CORRESPONDENCE WITH THE GEOTECHNICAL ENGINEER TO THE CIVIL ENGINEER.
5. WORK WILL CONSIST OF ALL CLEARING (INCLUDING TREE REMOVAL), GRUBBING, STRIPPING, PREPARATION OF AREAS TO RECEIVE FILL MATERIAL, EXCAVATION, SPREADING, COMPACTION AND CONTROL OF THE FILL MATERIAL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING, AND SLOPES AS SHOWN ON THESE PLANS AND TO THE SATISFACTION OF THE PROJECT GEOTECHNICAL ENGINEER REVIEWING THE WORK.
6. ALL EXISTING TRASH, DEBRIS, ROOTS, TREE REMAINS, AND OTHER RUBBISH MUST BE REMOVED FROM THE SITE AND DISPOSED OF, SO AS TO LEAVE THE AREAS THAT HAVE BEEN DISTURBED WITH A NEAT AND FINISHED APPEARANCE FREE FROM UNSIGHTLY DEBRIS. NO BURNING IS PERMITTED.
7. ALL MATERIALS, HANDLING, AND PLACEMENT OF CEMENT CONCRETE AND AGGREGATE BASE MUST BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE PROJECT SOILS REPORT, AND THESE PLANS AND DETAILS. AGGREGATE BASE MATERIAL MUST BE CLASS II.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE GRADING QUANTITIES FOR THE ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR WILL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
9. THE CONTRACTOR MUST COORDINATE SPOILS DISPOSAL WITH THE CAMP SAN LUIS OBISPO REPRESENTATIVE.

SECTION AND DETAIL NUMBERING SYSTEM

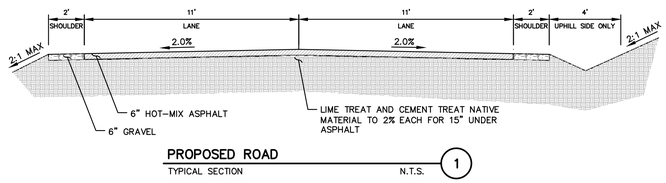
(1) SECTION CUT ON PLAN SHEET X:



(2) ON SHEET Y, THIS SECTION IS IDENTIFIED AS:



(3) DETAILS ARE CROSS-REFERENCED IN A SIMILAR MANNER.



PROPOSED ROAD
TYPICAL SECTION N.T.S. 1

OWNER

CALIFORNIA MILITARY DEPARTMENT
PROJECT MANAGER: MAJOR BRIAN D. WOODS, PROFESSIONAL ENGINEER
916-854-3319
CAMP SAN LUIS OBISPO REPRESENTATIVE: DAVID GONZALES
805-594-6577

ENGINEER/SURVEYOR

CANNON
PROJECT MANAGER: JOHN EVANS, PROFESSIONAL ENGINEER
1050 SOUTHWOOD DRIVE
SAN LUIS OBISPO, CALIFORNIA 93401
805-544-7407

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE NAD83 CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 5, EPOCH 2010.00, AS DETERMINED FROM GPS OBSERVATIONS OBTAINED IN AUGUST OF 2020. COORDINATES CONSTRAINED TO HPGN A 1315, PID# FV1095, HAVING PUBLISHED COORDINATES OF N: 2,321,142.44 AND E: 5,738,196.24.

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS A HPGN A 1315, PID# FV1095, HAVING A NAVD88 PUBLISHED ELEVATION OF 176.7 FEET.

SHEET LIST TABLE

Sheet Number	Sheet Title
1	TITLE SHEET
2	KEY MAP
3	PLAN STATIONS 0+00 to 12+50
4	PLAN STATIONS 12+50 to 25+00
5	PLAN STATIONS 25+00 to 37+50
6	PLAN STATIONS 37+50 to 50+00
7	PLAN STATIONS 50+00 to 59+77
8	CULVERT SECTIONS
9	AERIAL STATIONS 0+00 to 25+00
10	AERIAL STATIONS 25+00 to 50+00
11	AERIAL STATIONS 50+00 to 59+77

LEGEND

EXISTING ASPHALT EDGE
SAWCUT LINE
BLUE-LINE STREAM
PROPOSED DRAINAGE SWALE
EXISTING UNDERGROUND WATER LINE — W —
EXISTING UNDERGROUND SANITARY SEWER — SS —
EXISTING CULVERT
EXISTING OVERHEAD WIRES — OH —
EXISTING FENCE — X — X —
EXISTING UTILITY POLE
EXISTING SEWER MANHOLE
EXISTING FIRE HYDRANT
PROPOSED CONCRETE
PROPOSED HOT-MIX ASPHALT
PROPOSED RIPRAP PAD

ABBREVIATIONS

CMP	CORRUGATED METAL PIPE
EX	EXISTING
FG	FINISHED GRADE
FL	FLOWLINE
FS	FINISHED SURFACE
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
PVC	POLYVINYL CHLORIDE

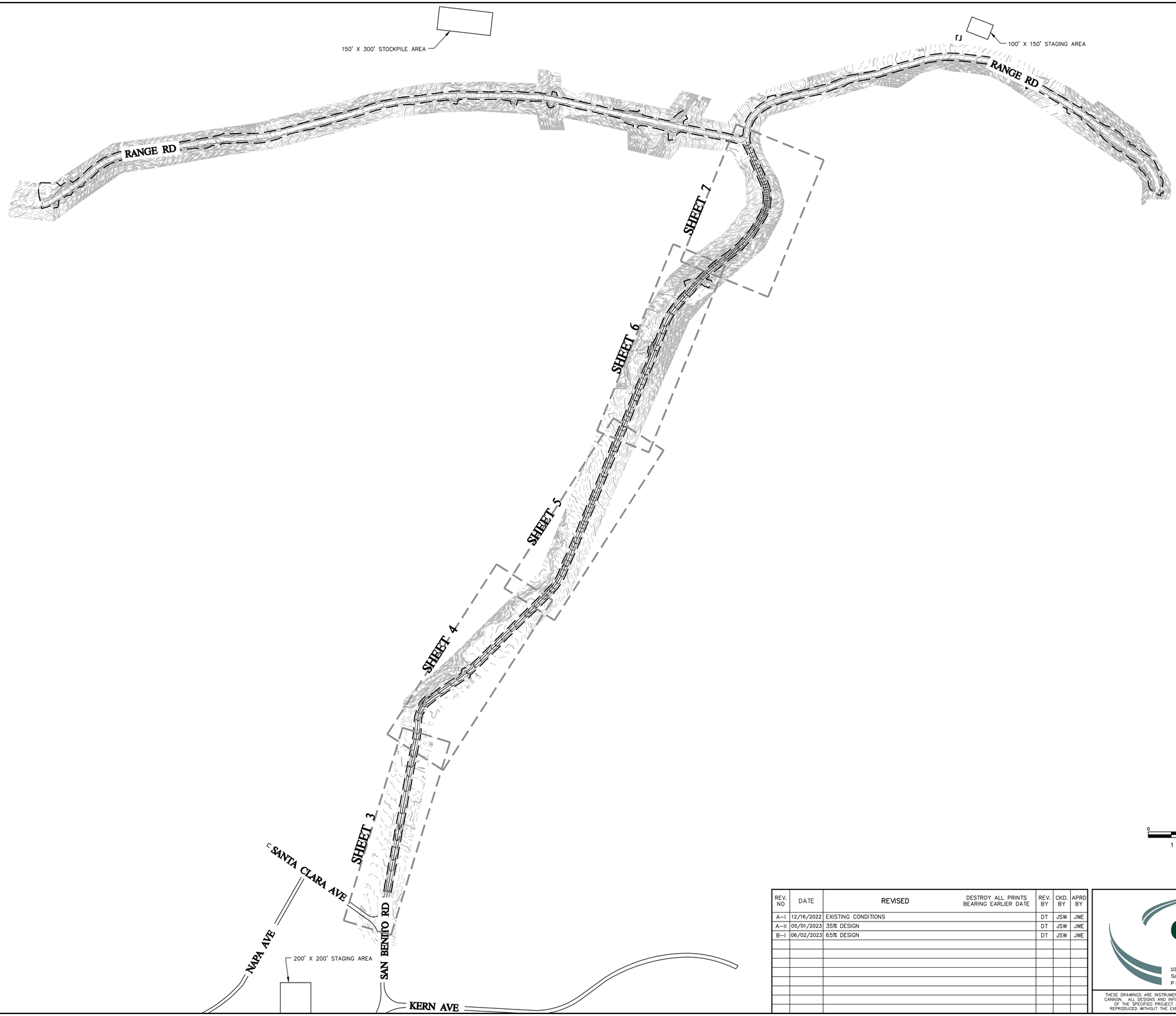
REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRO BY
A-I	12/16/2022	EXISTING CONDITIONS		DT	JSW	JWE
A-II	05/01/2023	35% DESIGN		DT	JSW	JWE
B-I	06/02/2023	65% DESIGN		DT	JSW	JWE

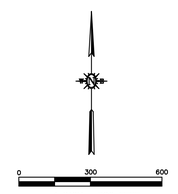
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION
TITLE SHEET
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	NOT TO SCALE	1 OF 11

F:\proj\2020\200325\200325.10_Camp SLO_Range Rd\4 Production and Drafting\Const Dwgs\Civil\San Benito Road\CE200325-02AA001.dwg 9-13-23 11:00:26 AM jeffreyw





REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

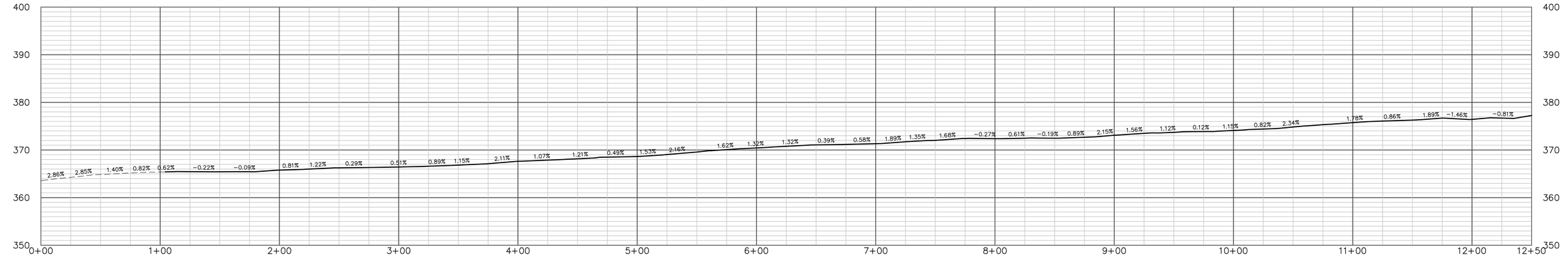
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

KEY MAP

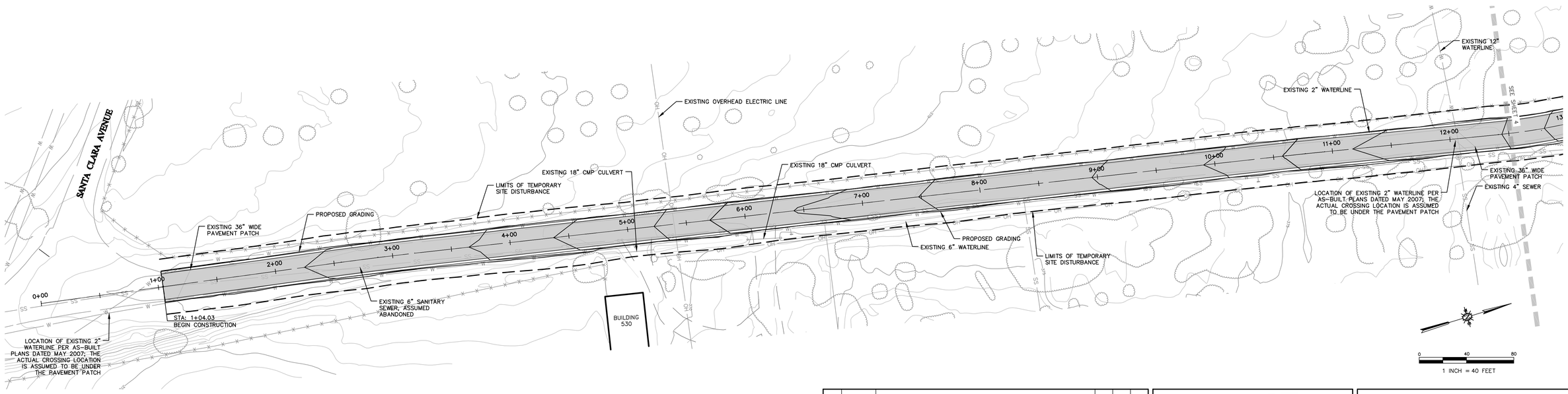
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY: JSW	DATE: 07/21/2023	CA JOB NO.: 200325.10
CHECKED BY:	SCALE: 1" = 300'	SHEET: 2 OF 11



SAN BENITO ROAD PLAN STATIONS 0+00 to 12+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

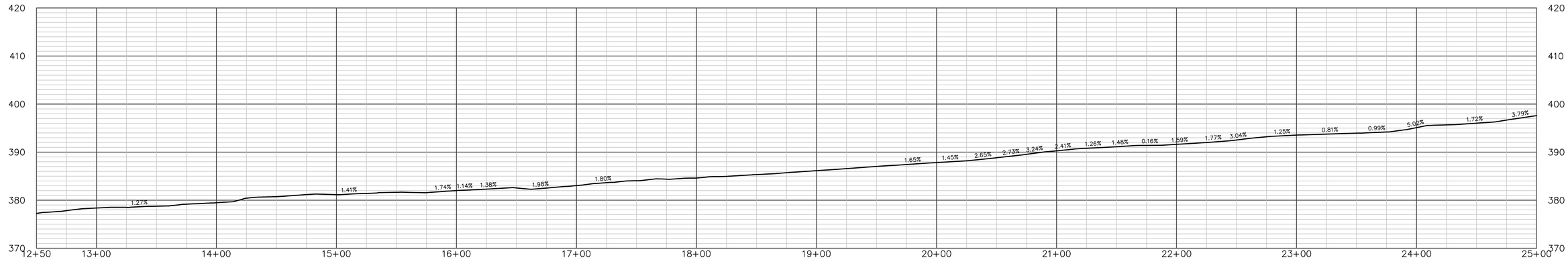
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 0+00 TO 12+50

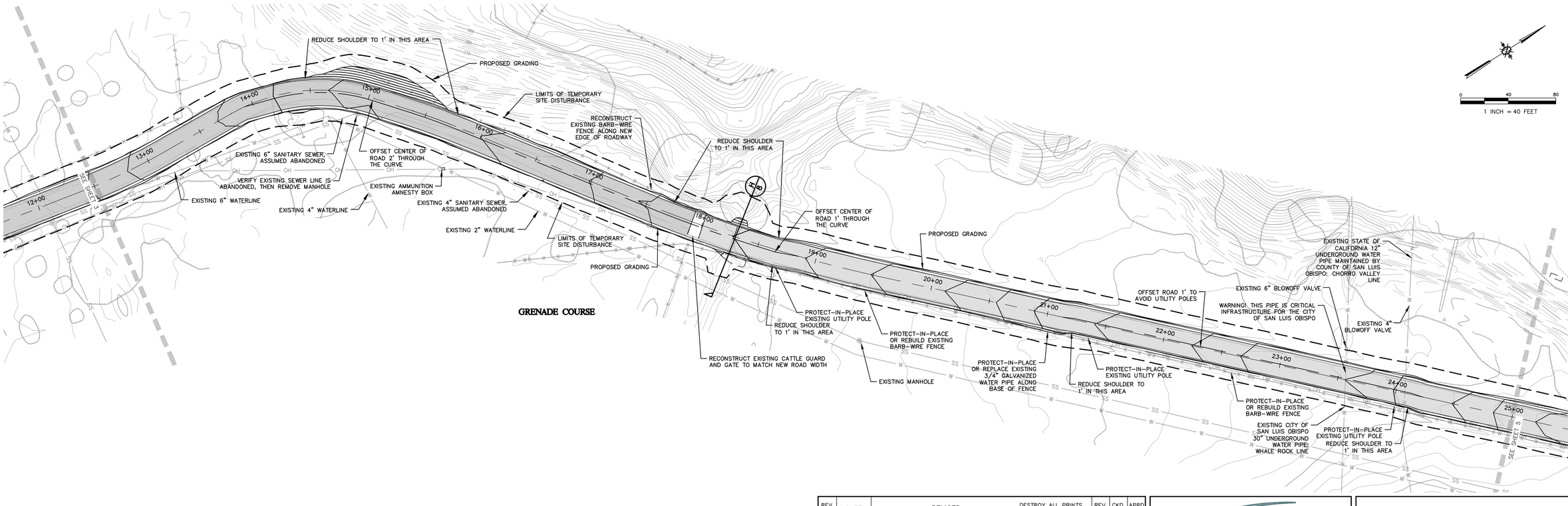
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	3 OF 11



SAN BENITO ROAD PLAN STATIONS 12+50 to 25+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

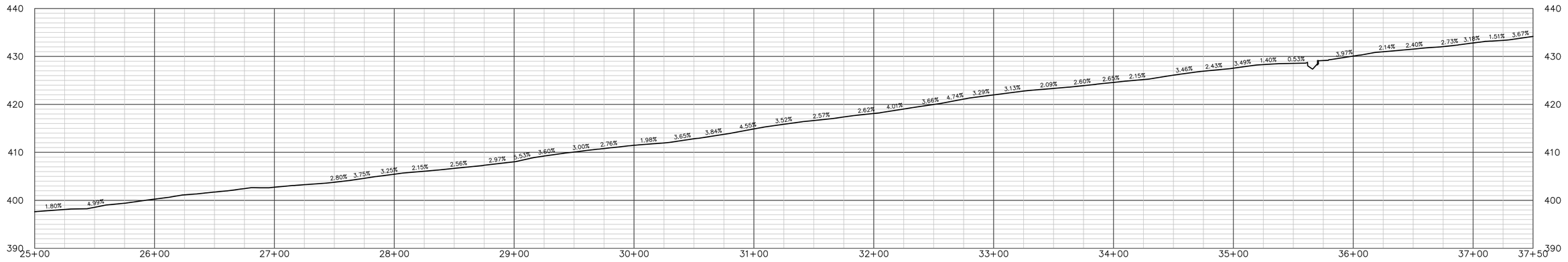
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 12+50 TO 25+00

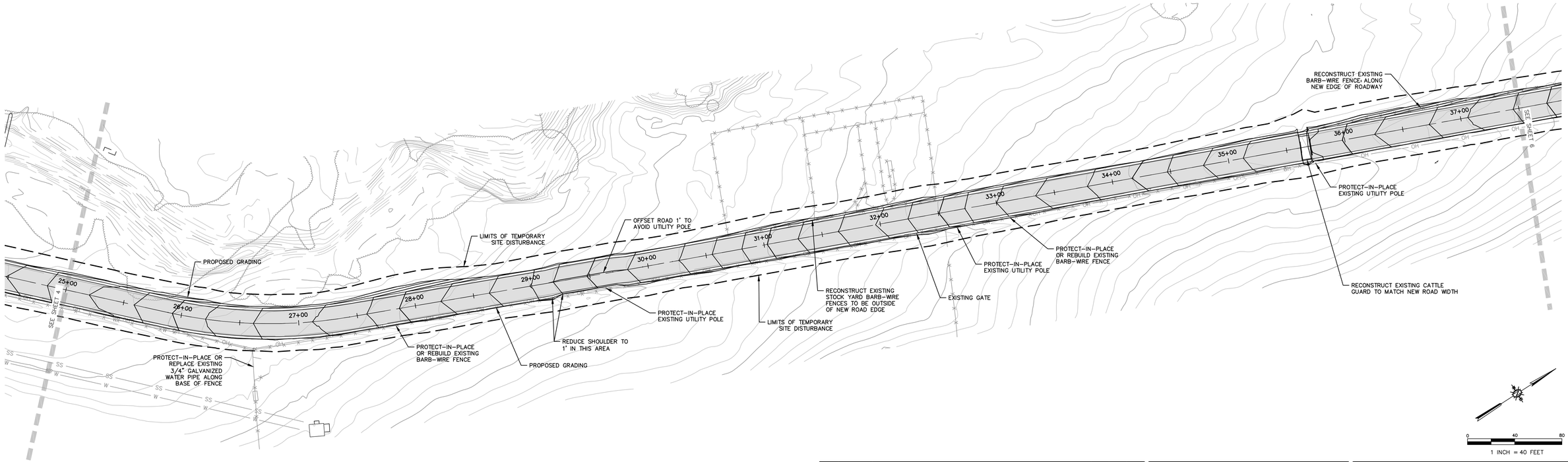
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	4 OF 11



SAN BENITO ROAD PLAN STATIONS 25+00 to 37+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

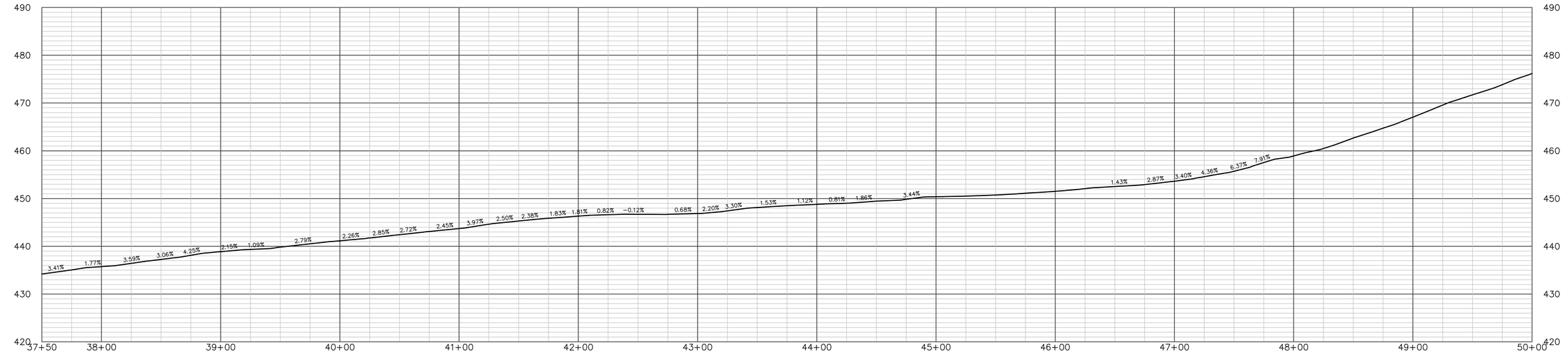
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

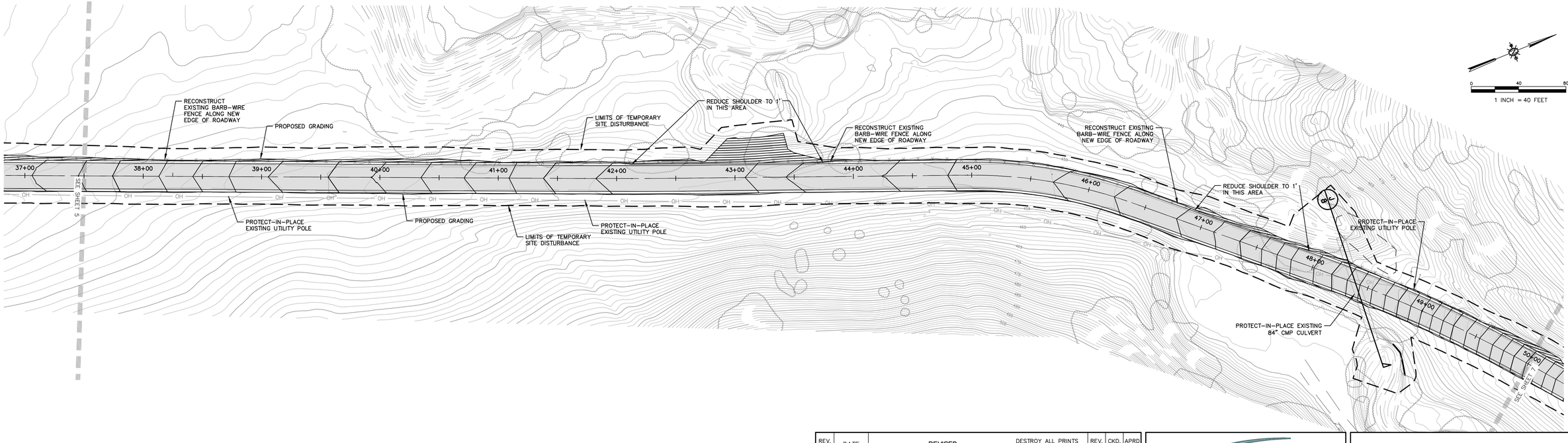
PLAN STATIONS 25+00 TO 37+50

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	5 OF 11



SAN BENITO ROAD PLAN STATIONS 37+50 to 50+00



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

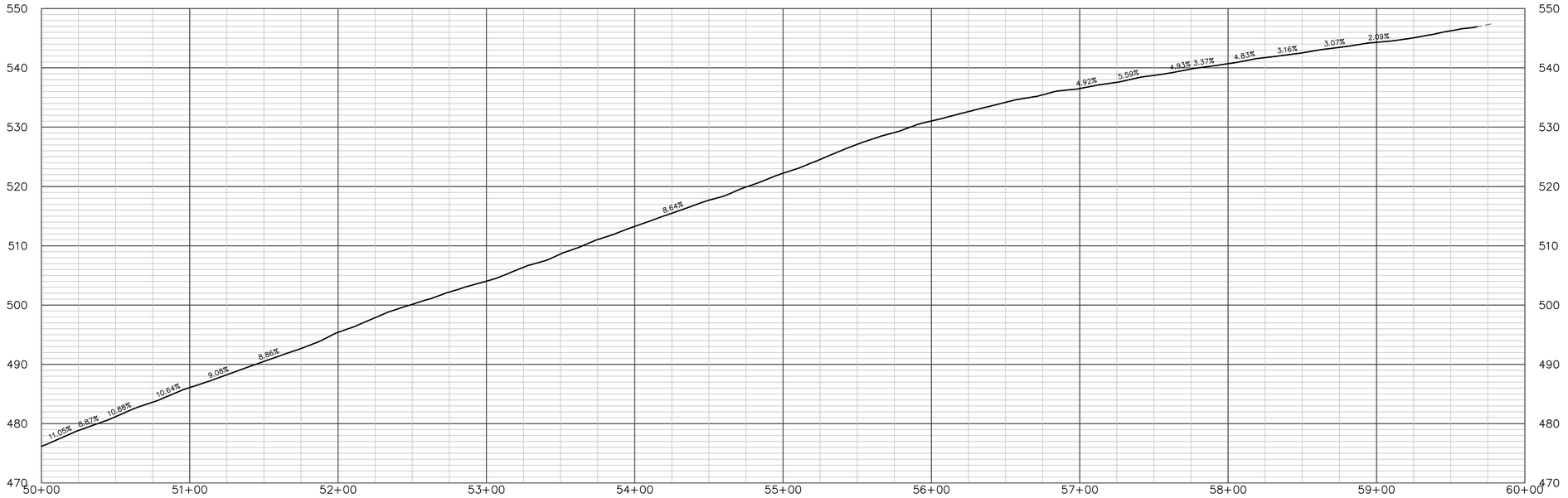
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 37+50 TO 50+00

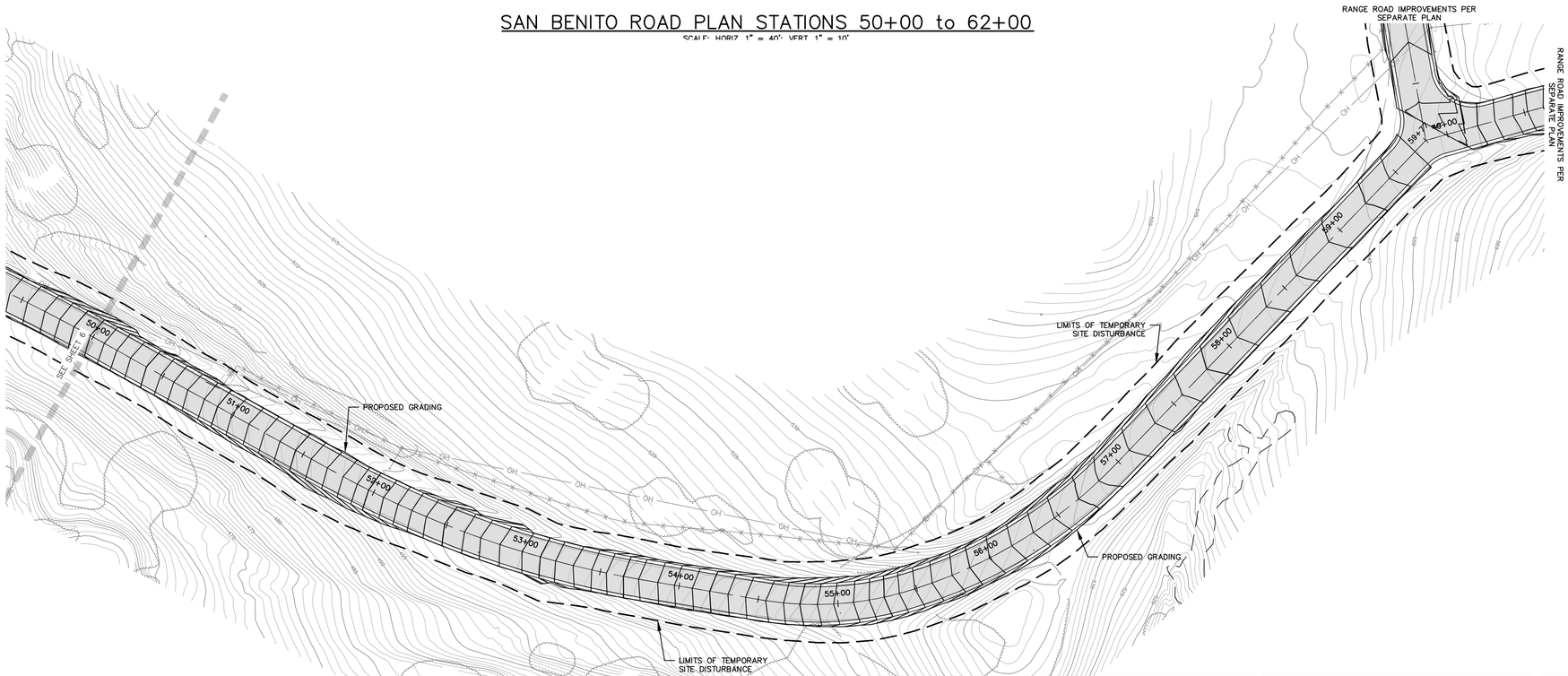
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	6 OF 11



SAN BENITO ROAD PLAN STATIONS 50+00 to 62+00

SCALE: HORIZ. 1" = 40', VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

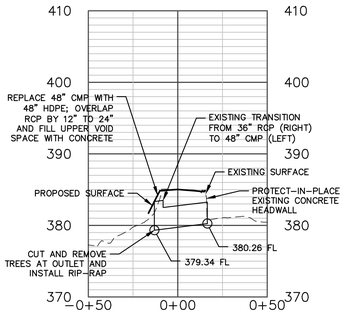
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 50+00 TO 59+77

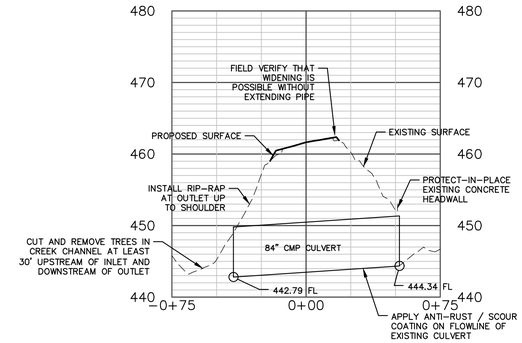
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	7 OF 11



SAN BENITO ROAD CULVERT H

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



SAN BENITO ROAD CULVERT J

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	06/02/2023	65% DESIGN	DT	JSW	JWE

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

CULVERT SECTIONS

CAMP SAN LUIS OBISPO, CALIFORNIA

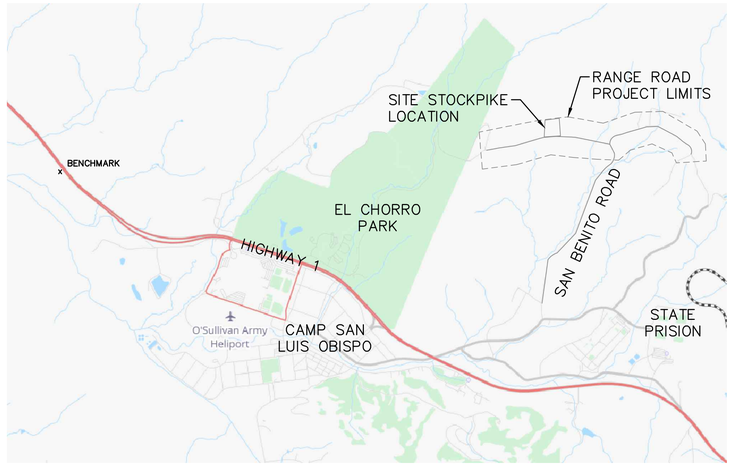
DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	8 OF 11

RANGE ROAD REHABILITATION

CAMP SAN LUIS OBISPO, CALIFORNIA

GENERAL SITE NOTES

1. EXISTING FEATURES WITHIN THIS PLAN SET ARE TAKEN FROM A FIELD SURVEY PREPARED BY CANNON.
2. WORK WILL BE PERFORMED TO CONFORM WITH THE FOLLOWING SPECIFICATIONS. WHERE CONFLICTS EXIST BETWEEN ANY OF THESE, THE ENGINEER WILL CLARIFY WHICH SPECIFICATION GOVERNS.
   A. THE STANDARDS OF THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND THE RULES OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
   B. THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (HEREINAFTER REFERRED TO AS "CALTRANS").
   C. THE APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STATE OF CALIFORNIA BUILDING STANDARDS CODE AND THE CALIFORNIA ACCESS COMPLIANCE ADVISORY REFERENCE MANUAL.
   D. THE REQUIREMENTS OF ALL PERMITS ISSUED FOR WORK BY THE STATE OF CALIFORNIA MILITARY DEPARTMENT.
   E. THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS NOTED IN THE PROJECT SOILS REPORT PREPARED BY EARTH SYSTEMS TITLED "XXX" AND DATED XXX, 2023, AND ALL ADDENDUMS THERETO.
   F. THE UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS) PREPARED FOR THIS PROJECT.
   G. THESE APPROVED PLANS AND DETAILS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL THE PERMITS NECESSARY TO PERFORM WORK PRIOR TO COMMENCING WORK, INCLUDING BUT NOT LIMITED TO GRADING, TREE REMOVAL, AND UTILITY MODIFICATIONS.
4. THE CONTRACTOR MUST SUPPLY ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO PERFORM THE WORK AS SHOWN ON THE APPROVED PLANS.
5. IT IS THE RESPONSIBILITY OF THE VARIOUS CONTRACTORS TO COORDINATE THEIR WORK SO AS TO ELIMINATE CONFLICTS AND WORK TOWARD THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT.
6. ALL CONSTRUCTION ACTIVITY THAT DISRUPTS THE SMOOTH FLOW OF TRAFFIC OVER PUBLIC ROADS WILL REQUIRE A TRAFFIC CONTROL PLAN AS SPECIFIED IN THE PROJECT SPECIFICATIONS. TRAFFIC CONTROL MUST CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLAN MUST BE SUBMITTED FIVE WORKING DAYS PRIOR TO IMPLEMENTATION FOR APPROVAL BY THE STATE MILITARY DEPARTMENT.
7. ALL WORKMANSHIP AND MATERIALS FURNISHED BY THE CONTRACTOR MUST BE THE KIND AND QUALITY DESCRIBED IN THE SPECIFICATIONS AND FIRST CLASS THROUGHOUT. NEITHER FINAL ACCEPTANCE NOR FINAL PAYMENT BY THE STATE MILITARY DEPARTMENT WILL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP.
8. THE CONTRACTOR MUST NOTIFY BOTH THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER IN WRITING UPON DISCOVERING ANYTHING ON THE APPROVED PLANS THAT WOULD CONFLICT WITH A CONSISTENT AND FUNCTIONAL PRODUCT. UPON SUCH NOTICE, THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER WILL AGREE UPON A RESOLUTION TO THE CONFLICT AND ISSUE SUCH VIA A WRITTEN ORDER AND/OR REVISED PLANS. THE CONTRACTOR WILL BEAR THE FULL COST AND RESPONSIBILITY FOR WORK AFFECTED BY SUCH CONFLICTS THAT IS PERFORMED PRIOR TO SUCH NOTICE AND THE ISSUANCE OF THE RESOLUTION.
9. THE CONTRACTOR MUST MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN, AND SANITARY CONDITION AT ALL TIMES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. STREETS MUST BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL MEASURES AS WELL AS FOR ANY CLEANUP ON ADJACENT STREETS THAT ARE AFFECTED BY CONSTRUCTION. THE CONTRACTOR WILL PERIODICALLY OPERATE STREET SWEEPERS ON PAVED AREAS ADJACENT TO THE SITE.
10. WATER MUST BE APPLIED TO THE SITE TWICE DAILY DURING GRADING OPERATIONS.
11. THE CONTRACTOR MUST EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, SURFACE IMPROVEMENTS, DRAINAGE STRUCTURES, WATER STRUCTURES, SEWER CLEANOUTS, MANHOLES, OR JUNCTION BOXES FOR UNDERGROUND ELECTRIC, GAS, TELEPHONE, CABLE, STORM, SANITARY, WATER, OR OTHER UTILITIES WHICH ARE TO REMAIN IN PLACE, AND WILL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
12. THE UTILITIES INDICATED ON THESE PLANS ARE COMPILED FROM EXISTING PLANS AND FIELD OBSERVATIONS. THE CONTRACTOR MUST CONTACT UNDERGROUND SERVICE ALERT (811) AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK TO REQUEST AND OBTAIN MARKINGS OF EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR WILL COMPARE THESE MARKINGS WITH THE INFORMATION SHOWN ON THE PLANS AND MUST IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES (SIZE, MATERIAL, OR ALIGNMENT) OR OF EVIDENCE OF A PREVIOUSLY UNKNOWN FACILITY. FAILURE TO NOTIFY THE ENGINEER WILL PROHIBIT THE CONTRACTOR FROM CLAIMING EXTRA WORK ASSOCIATED WITH THE FACILITY.
13. SOME EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS, AND THEIR LOCATIONS WHEN SHOWN ARE APPROXIMATE. THE CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR LOCATING ALL UNDERGROUND UTILITIES AND OTHER FACILITIES AND FOR PROTECTING THEM DURING CONSTRUCTION, WHETHER OR NOT SUCH FACILITIES APPEAR ON THE APPROVED PLANS. ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS MUST BE RECONSTRUCTED, REPAIRED, AND/OR RECONNECTED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
14. EXISTING IRRIGATION LATERALS AND WIRING FOR LIGHTS, SIGNALS, AND MECHANICAL EQUIPMENT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR WILL DETERMINE THE LOCATIONS OF THE AFOREMENTIONED PRIOR TO COMMENCING WORK AND MUST REPAIR OR REPLACE DAMAGED ITEMS IMMEDIATELY.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OR PROPER RESETTING OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. ANY SURVEY MONUMENTS DESTROYED BY THE CONTRACTOR MUST BE REPLACED IN ACCORDANCE WITH THE STATE LAND SURVEYORS' ACT.
16. THE CONTRACTOR MUST HIRE A LICENSED LAND SURVEYOR TO PROVIDE CONSTRUCTION STAKING IN ORDER TO ENSURE THE PROJECT IS CONSTRUCTED TO THE LINES AND GRADES INDICATED ON THE APPROVED PLANS.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ANY REQUIRED INSPECTIONS WITH THE APPROPRIATE AGENCIES.
18. IN CONFORMANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT APPLIES CONTINUOUSLY AND IS NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS BOTH THE STATE AND THE ENGINEER OF RECORD FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STATE OR THE ENGINEER.
19. THE CONTRACTOR MUST HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ONSITE AT ALL TIMES. THE CONTRACTOR MUST MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL CHANGES WHICH DEVIATE FROM THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE AS-BUILT INFORMATION, INCLUDING THE EXACT LOCATIONS OF CHANGES, FOR THE PURPOSE OF PROVIDING THE ENGINEER WITH A BASIS FOR RECORD DRAWINGS. CHANGES MAY NOT BE MADE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND THE STATE MILITARY DEPARTMENT.
20. CONSTRUCTION MAY NOT START WITHOUT PLANS AND PERMITS APPROVED BY THE REGULATORY AGENCIES HOLDING JURISDICTION OVER THE PROJECT WORK. ALL AGENCIES MUST BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO STARTING CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS AND PERMITS AND PRIOR NOTIFICATION WILL BE REJECTED AT THE CONTRACTOR'S RISK AND EXPENSE.
21. DEBRIS CREATED BY DEMOLITION AND REMOVAL OPERATIONS WILL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND MUST BE DISPOSED OF AWAY FROM THE JOBSITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL RELEVANT AGENCIES.
22. UNLESS OTHERWISE NOTED, THE CONTRACTOR MUST ADJUST ALL STORM DRAIN INLETS, VALVE BOXES, MANHOLE RIMS, CLEANOUTS, AND OTHER UTILITY BOXES TO MATCH THE NEW FINISH SURFACE.
23. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN A MINIMUM SURFACE GRADE FOR POSITIVE DRAINAGE IN ALL PROPOSED PAVED AREAS. THE MINIMUM GRADE FOR ASPHALT IS 1.0% AND THE MINIMUM GRADE FOR CONCRETE IS 0.5%, UNLESS NOTED OTHERWISE.
24. SAW-CUT LINES FOR CONCRETE ARE APPROXIMATE; THE CONTRACTOR WILL REMOVE CONCRETE TO THE NEAREST EXPANSION JOINT.
25. ALL PROPOSED PAVEMENT AND CONCRETE JOINING EXISTING MUST BE FLUSH AT TRANSITIONS, WITH NO VERTICAL EDGES, UNLESS NOTED OTHERWISE ON THE PLANS.
26. THE CONTRACTOR MUST PRESERVE ALL EXISTING SIGNS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES NOT IDENTIFIED FOR REMOVAL. IN THE EVENT THAT THEY ARE DAMAGED BY CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE "IN KIND" SAID DEVICES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. IF WORD, SYMBOL, OR ARROW MARKINGS ARE PARTIALLY DAMAGED, THE ENTIRE MARKING MUST BE REPLACED.
27. THE CONTRACTOR MUST RECYCLE MATERIALS AS FEASIBLE AND IN ACCORDANCE WITH THE CONSTRUCTION ACTIVITIES MANAGEMENT PLAN AND THE LOCAL GOVERNING AGENCY.
28. THESE PLANS DO NOT AUTHORIZE SITE DISTURBANCE BEYOND THE LIMITS OF CONSTRUCTION SHOWN.



VICINITY MAP

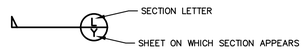
NOT TO SCALE

GENERAL GRADING NOTES

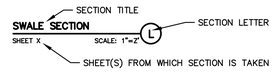
1. THE CONTRACTOR MUST NOTIFY THE PROJECT GEOTECHNICAL ENGINEER AND THE STATE MILITARY DEPARTMENT INSPECTOR AT LEAST THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CLEARING OR GRADING OPERATIONS ONSITE.
2. A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER MUST BE ONSITE DURING GRADING OPERATIONS AND WILL PERFORM SUCH TESTING AS DEEMED NECESSARY. THE REPRESENTATIVE WILL OBSERVE THE GRADING OPERATIONS FOR CONDITIONS WHICH SHOULD BE CORRECTED, AND IDENTIFY SUCH WITH RECOMMENDED CORRECTIVE MEASURES TO THE CONTRACTOR.
3. THE CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS OF MATCH POINTS BEFORE GRADING TO ENSURE PROPER DRAINAGE AND SLOPES.
4. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE PROJECT GEOTECHNICAL ENGINEER MUST BE IMMEDIATELY NOTIFIED FOR DIRECTIONS. THE CONTRACTOR MUST PROVIDE COPIES OF ALL CORRESPONDENCE WITH THE GEOTECHNICAL ENGINEER TO THE CIVIL ENGINEER.
5. WORK WILL CONSIST OF ALL CLEARING (INCLUDING TREE REMOVAL), GRUBBING, STRIPPING, PREPARATION OF AREAS TO RECEIVE FILL MATERIAL, EXCAVATION, SPREADING, COMPACTION AND CONTROL OF THE FILL MATERIAL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING, AND SLOPES AS SHOWN ON THESE PLANS AND TO THE SATISFACTION OF THE PROJECT GEOTECHNICAL ENGINEER REVIEWING THE WORK.
6. ALL EXISTING TRASH, DEBRIS, ROOTS, TREE REMAINS, AND OTHER RUBBISH MUST BE REMOVED FROM THE SITE AND DISPOSED OF, SO AS TO LEAVE THE AREAS THAT HAVE BEEN DISTURBED WITH A NEAT AND FINISHED APPEARANCE FREE FROM UNSIGHTLY DEBRIS. NO BURNING IS PERMITTED.
7. ALL MATERIALS, HANDLING, AND PLACEMENT OF CEMENT CONCRETE AND AGGREGATE BASE MUST BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE PROJECT SOILS REPORT, AND THESE PLANS AND DETAILS. AGGREGATE BASE MATERIAL MUST BE CLASS II.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE GRADING QUANTITIES FOR THE ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR WILL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
9. THE CONTRACTOR MUST COORDINATE SPOILS DISPOSAL WITH THE CAMP SAN LUIS OBISPO REPRESENTATIVE.

SECTION AND DETAIL NUMBERING SYSTEM

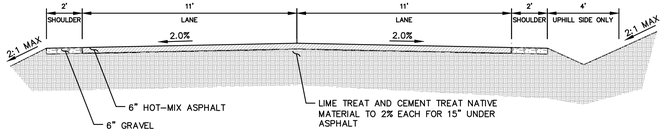
(1) SECTION CUT ON PLAN SHEET X:



(2) ON SHEET Y, THIS SECTION IS IDENTIFIED AS:



(3) DETAILS ARE CROSS-REFERENCED IN A SIMILAR MANNER.



PROPOSED ROAD
TYPICAL SECTION — N.T.S. — 1

OWNER

CALIFORNIA MILITARY DEPARTMENT
PROJECT MANAGER: MAJOR BRIAN D. WOODS, PROFESSIONAL ENGINEER
916-854-3319
CAMP SAN LUIS OBISPO REPRESENTATIVE: DAVID GONZALES
805-594-6577

ENGINEER/SURVEYOR

CANNON
PROJECT MANAGER: JOHN EVANS, PROFESSIONAL ENGINEER
1050 SOUTHWOOD DRIVE
SAN LUIS OBISPO, CALIFORNIA 93401
805-544-7407

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE NAD83 CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 5, EPOCH 2010.00, AS DETERMINED FROM GPS OBSERVATIONS OBTAINED IN AUGUST OF 2020. COORDINATES CONSTRAINED TO HPGN A 1315, PID# FV1095, HAVING PUBLISHED COORDINATES OF N: 2,321,142.44 AND E: 5,738,196.24.

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS A HPGN A 1315, PID# FV1095, HAVING A NAVD88 PUBLISHED ELEVATION OF 176.7 FEET.

SHEET LIST TABLE

Sheet Number	Sheet Title
1	TITLE SHEET
2	KEY MAP
3	PLAN STATIONS 0+00 to 12+50
4	PLAN STATIONS 12+50 to 25+00
5	PLAN STATIONS 25+00 to 37+50
6	PLAN STATIONS 37+50 to 50+00
7	PLAN STATIONS 50+00 to 62+50
8	PLAN STATIONS 62+50 to 74+00
9	PLAN STATIONS 74+00 to 82+00
10	CULVERT SECTIONS
11	AERIAL STATIONS 0+00 to 25+00
12	AERIAL STATIONS 25+00 to 50+00
13	AERIAL STATIONS 50+00 to 74+00
14	AERIAL STATIONS 74+00 to 82+00

LEGEND

EXISTING ASPHALT EDGE
SAWCUT LINE
BLUE-LINE STREAM
PROPOSED DRAINAGE SWALE
EXISTING UNDERGROUND WATER LINE — W
EXISTING UNDERGROUND SANITARY SEWER — SS
EXISTING CULVERT
EXISTING OVERHEAD WIRES — OH
EXISTING FENCE — X — X
EXISTING UTILITY POLE
EXISTING SEWER MANHOLE
EXISTING FIRE HYDRANT
PROPOSED CONCRETE
PROPOSED HOT-MIX ASPHALT
PROPOSED RIPRAP PAD

ABBREVIATIONS

CMP	CORRUGATED METAL PIPE
EX	EXISTING
FG	FINISHED GRADE
FL	FLOWLINE
FS	FINISHED SURFACE
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
PVC	POLYVINYL CHLORIDE

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	06/02/2023	65% DESIGN	DT	JSW	JWE

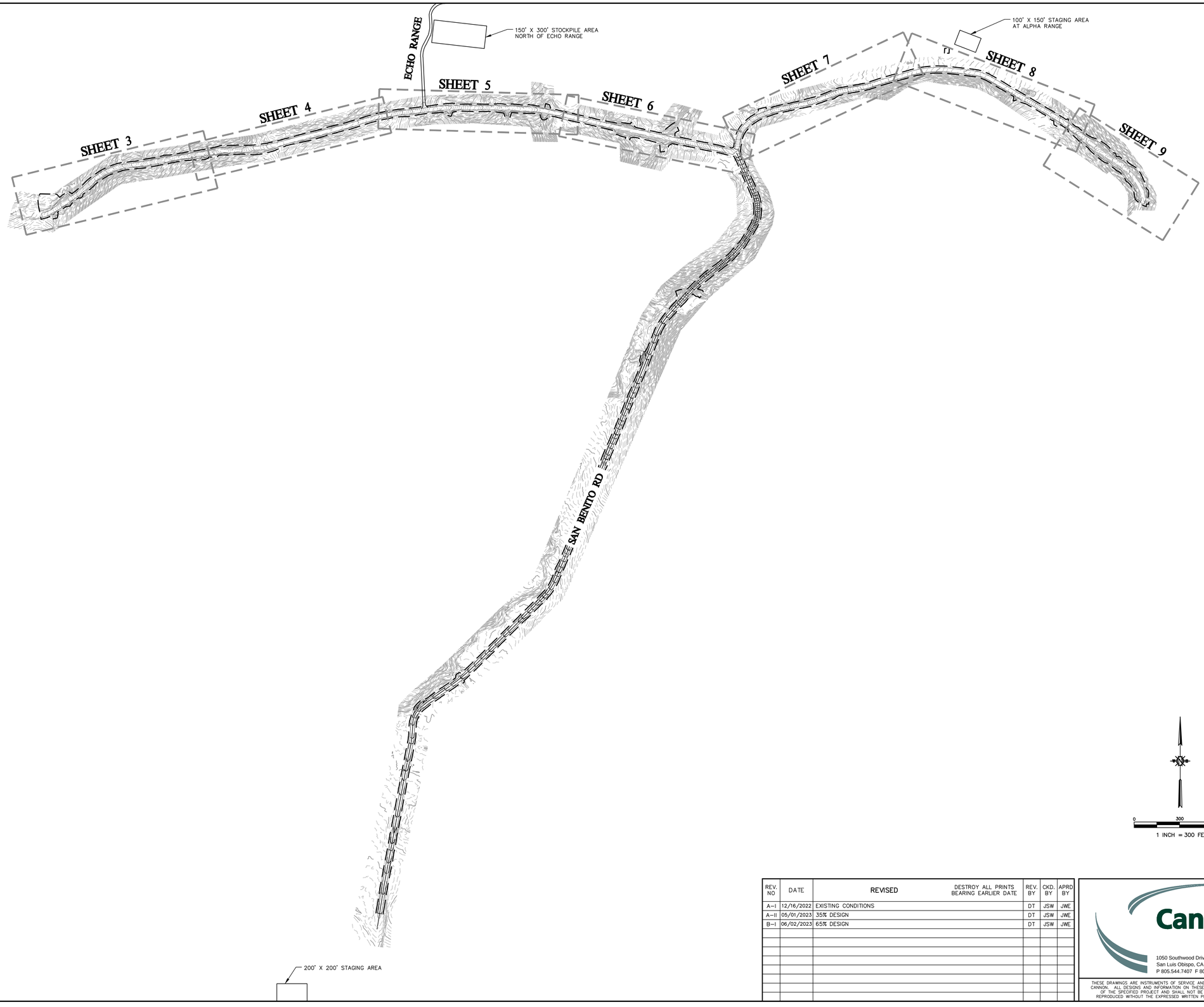
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

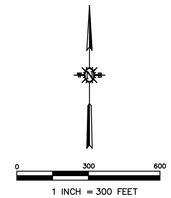
RANGE ROAD REHABILITATION

TITLE SHEET

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	NOT TO SCALE	1 OF 14





REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

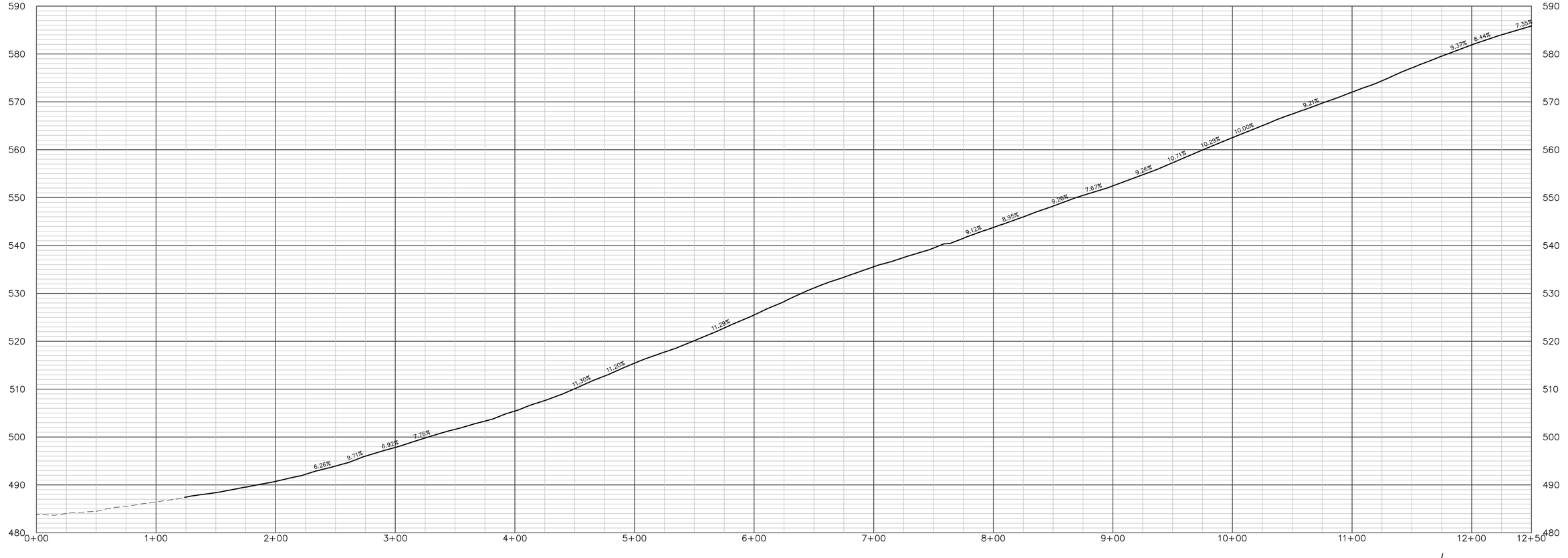
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

KEY MAP

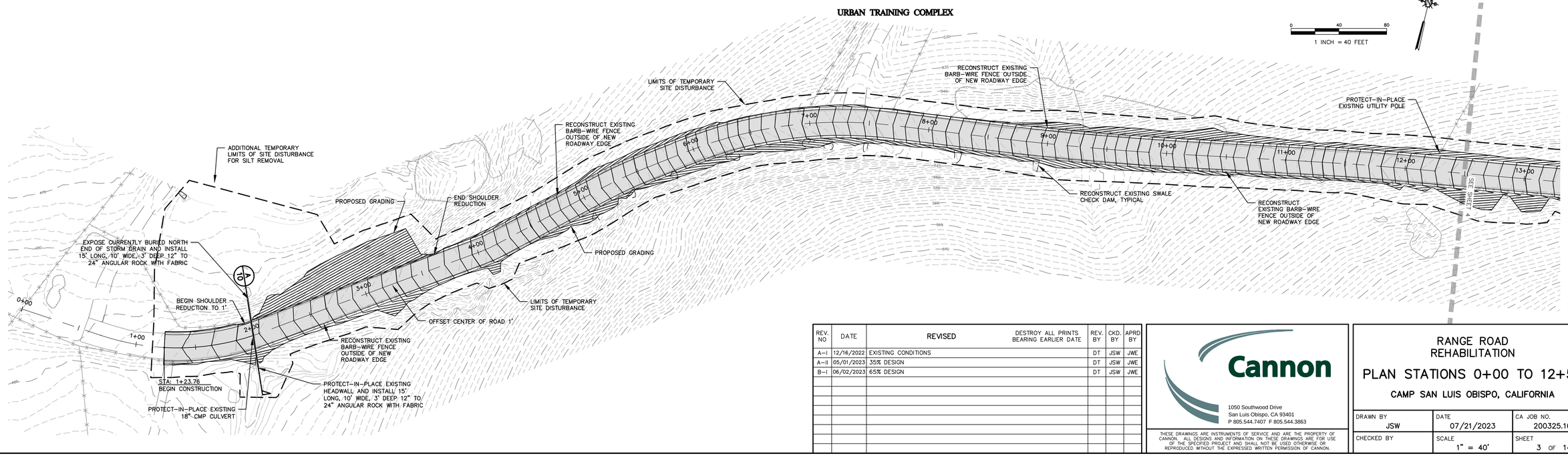
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	NOT TO SCALE	2 OF 14



RANGE ROAD PLAN STATIONS 0+00 to 12+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

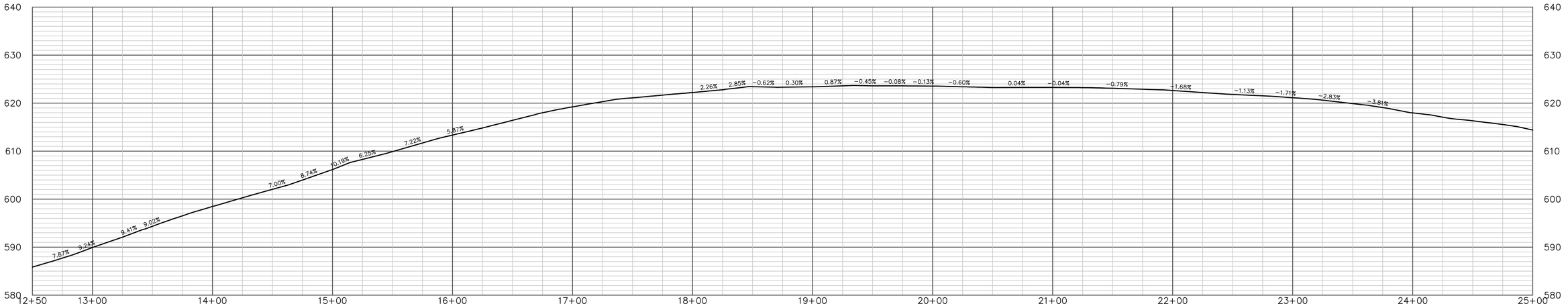
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 0+00 TO 12+50

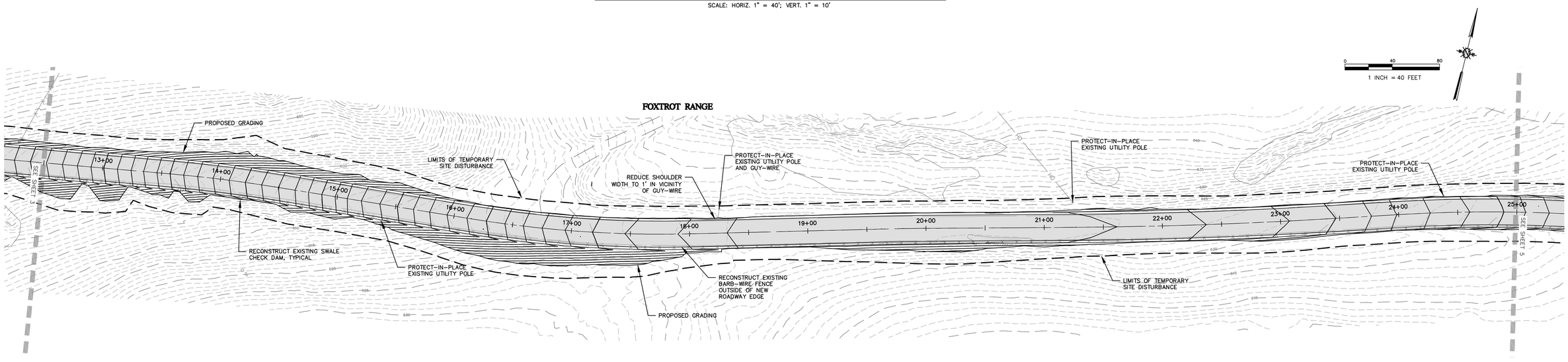
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	3 OF 14



RANGE ROAD PLAN STATIONS 12+50 to 25+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

Cannon

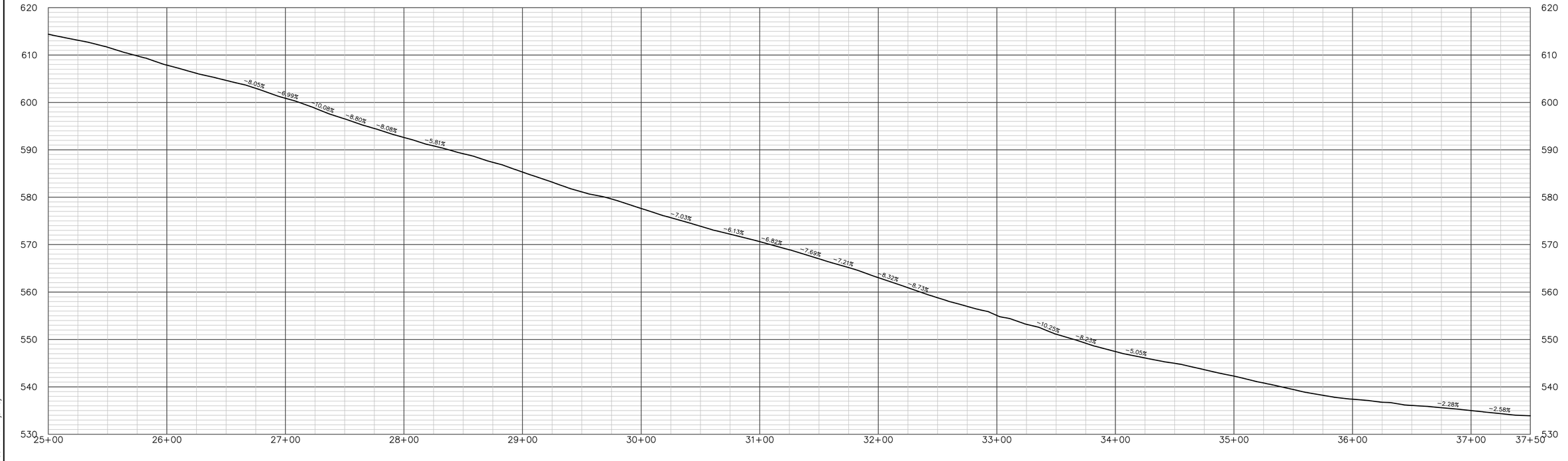
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 12+50 TO 25+00

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	4 OF 14

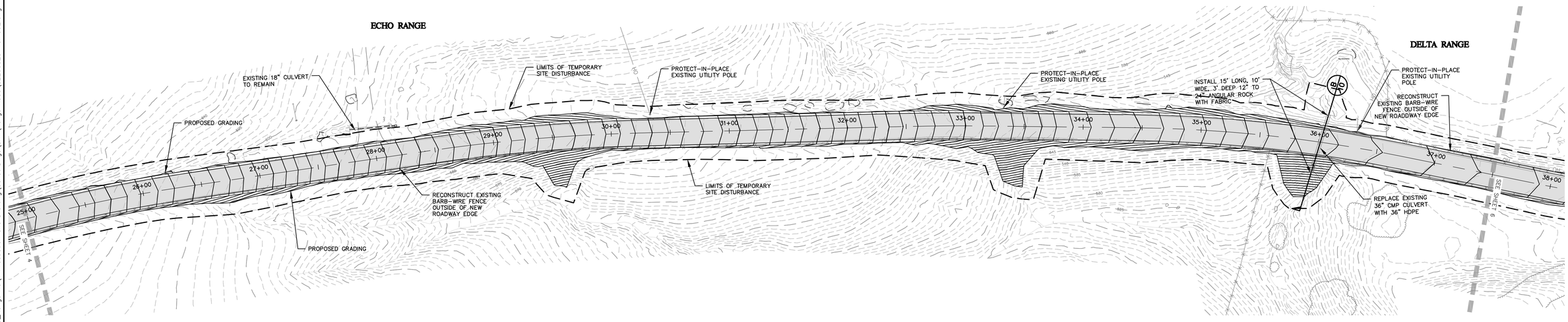


RANGE ROAD PLAN STATIONS 25+00 to 37+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

0 40 80

1 INCH = 40 FEET



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	06/02/2023	65% DESIGN	DT	JSW	JWE

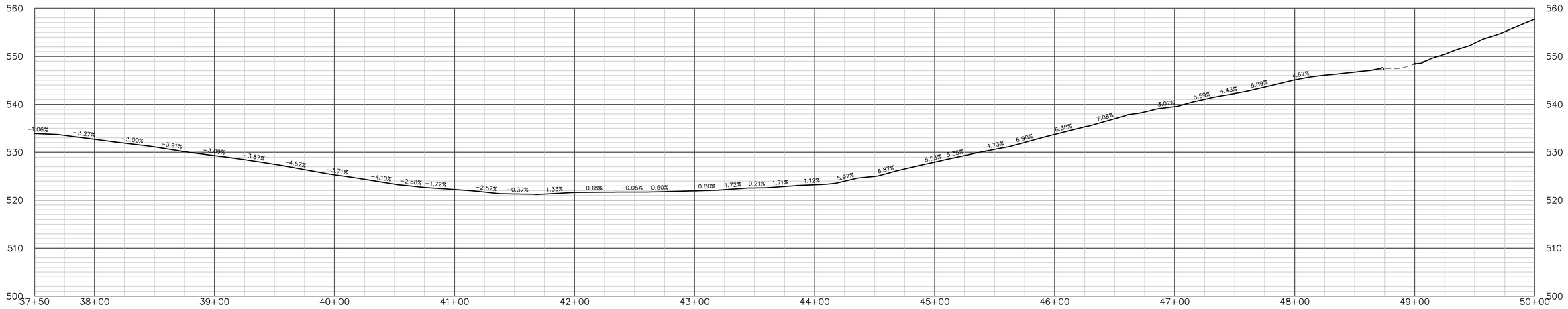
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 25+00 TO 37+50

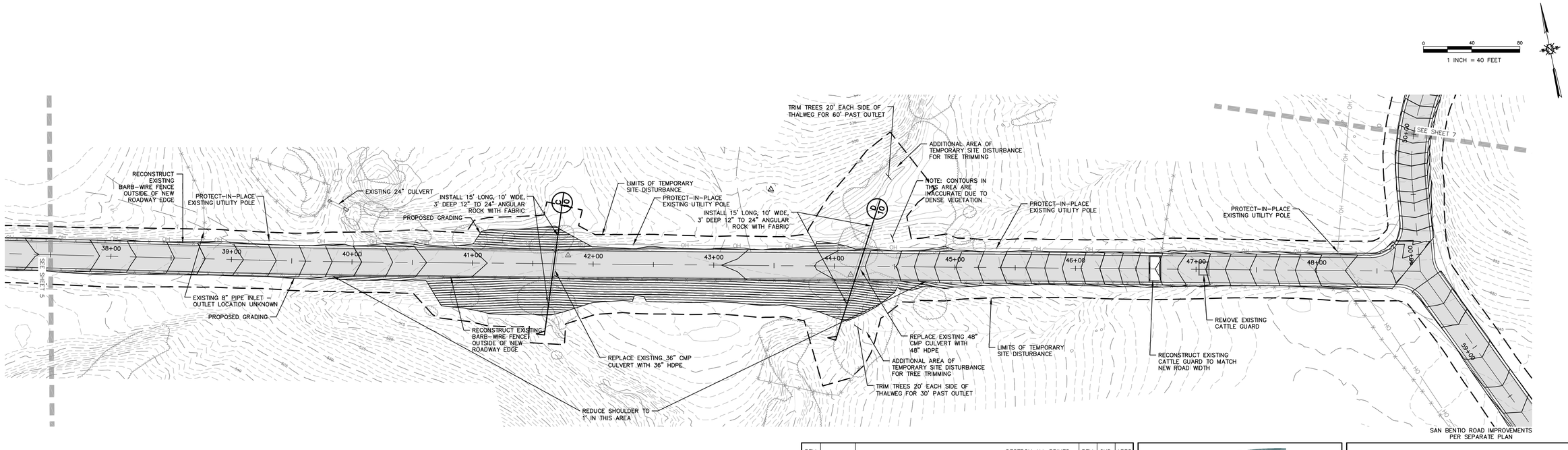
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	5 OF 14



RANGE ROAD PLAN STATIONS 37+50 to 50+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO.	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	06/02/2023	65% DESIGN	DT	JSW	JWE

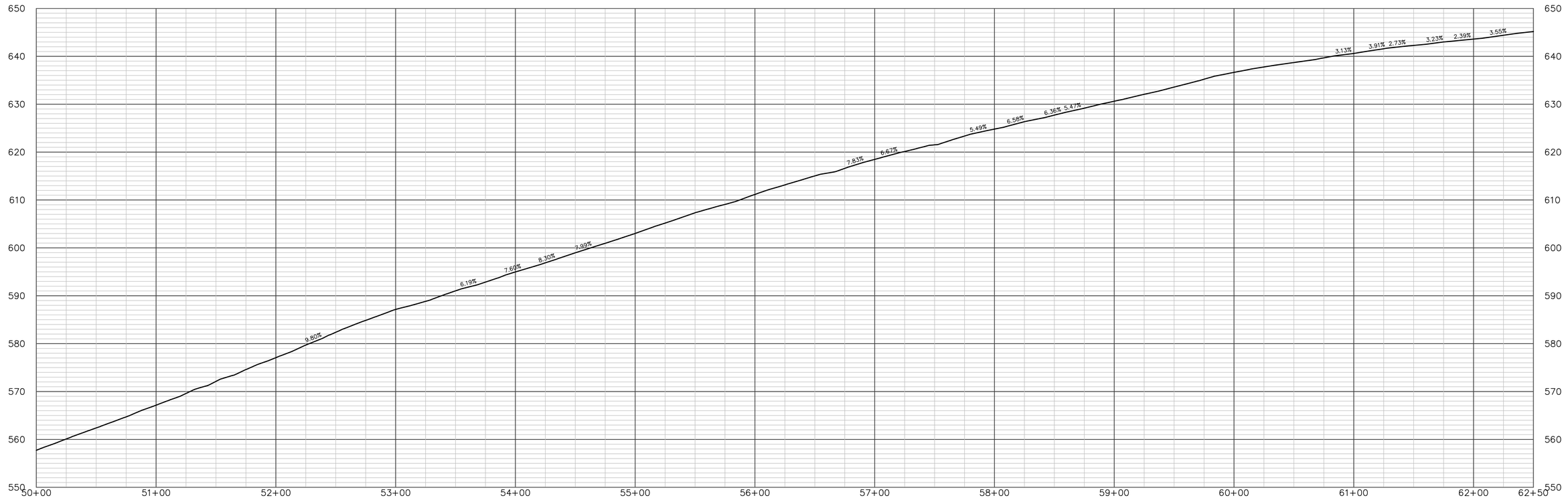
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 37+50 TO 50+00

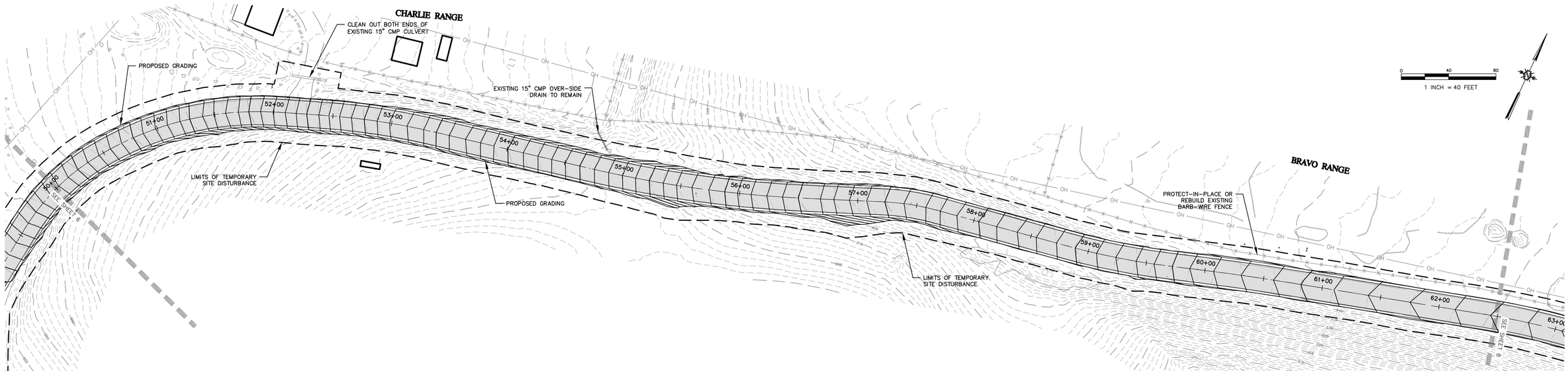
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	6 OF 14



RANGE ROAD PLAN STATIONS 50+00 to 62+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

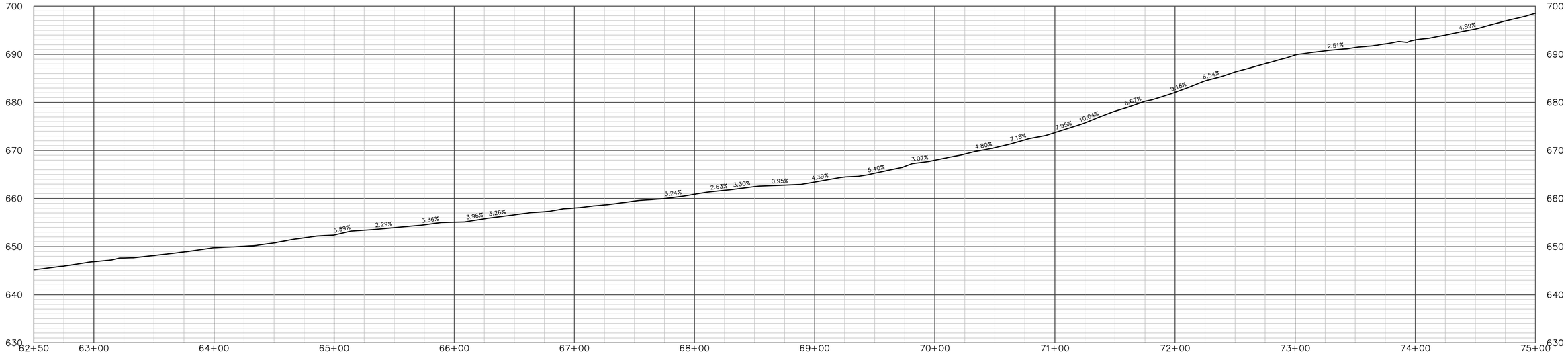
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 50+00 TO 62+50

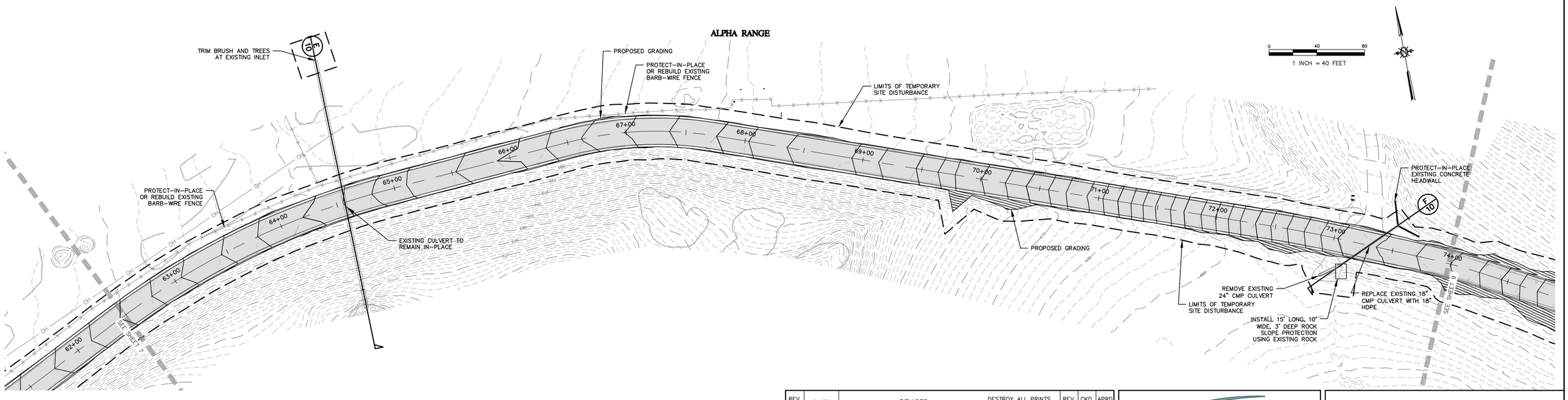
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	7 OF 14



RANGE ROAD PLAN STATIONS 62+50 to 74+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	06/02/2023	65% DESIGN	DT	JSW	JWE

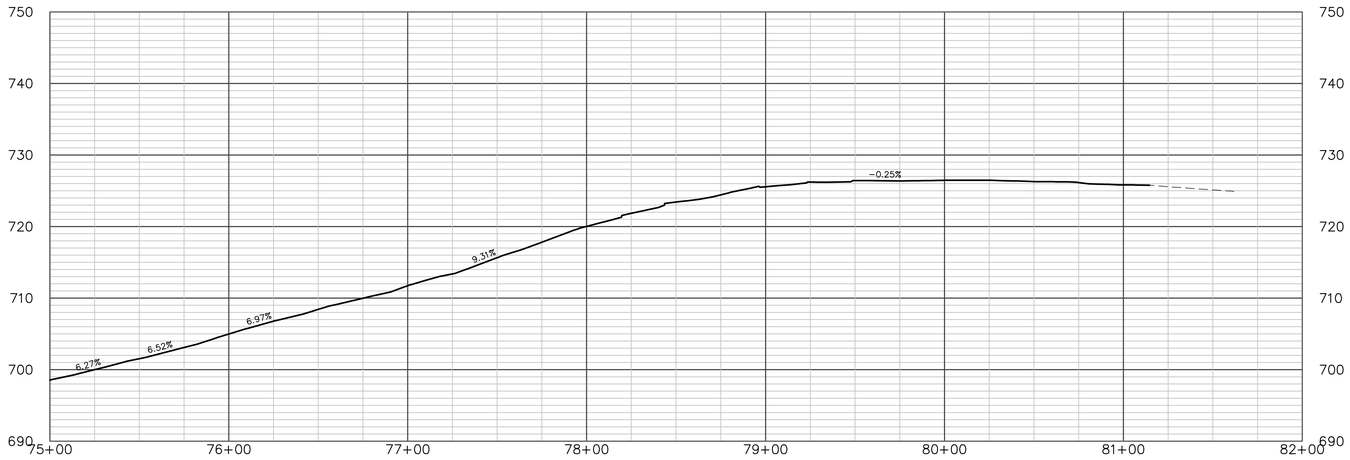
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 62+50 TO 74+00

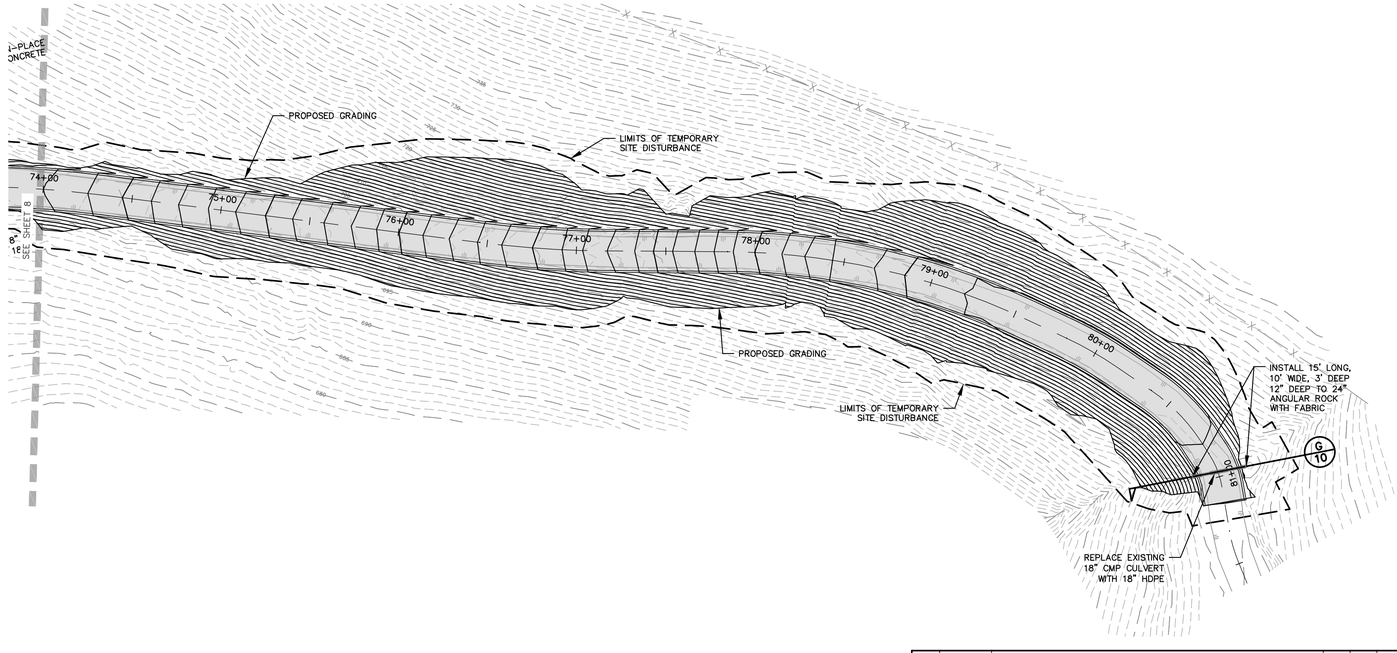
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	8 OF 14



RANGE ROAD PLAN STATIONS 74+00 to 82+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



0 40 80

1 INCH = 40 FEET

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	06/02/2023	65% DESIGN	DT	JSW	JWE

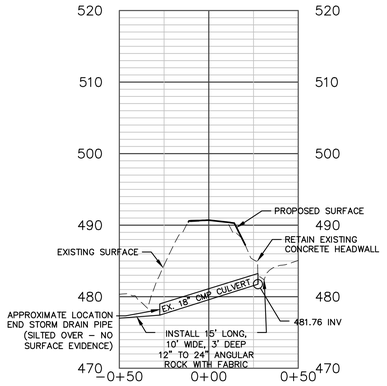
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 74+00 TO 82+00

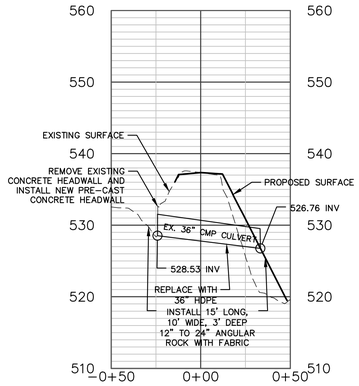
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	9 OF 14



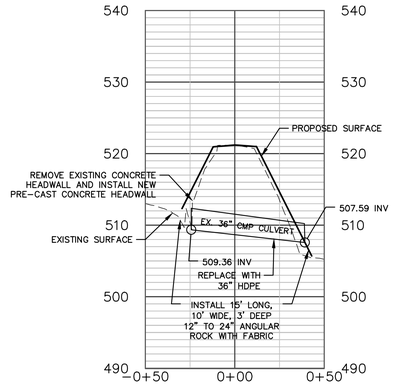
RANGE ROAD CULVERT A

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



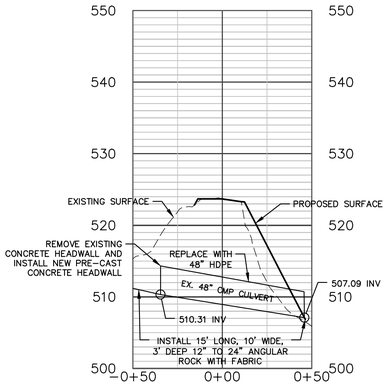
RANGE ROAD CULVERT B

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



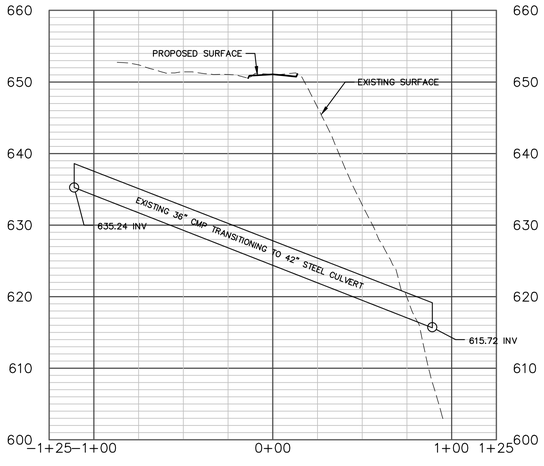
RANGE ROAD CULVERT C

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



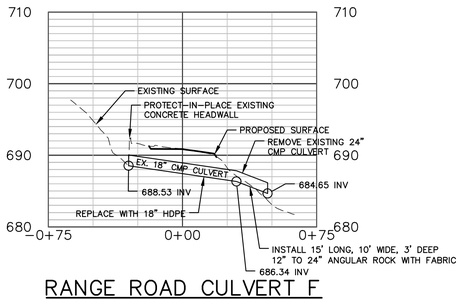
RANGE ROAD CULVERT D

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



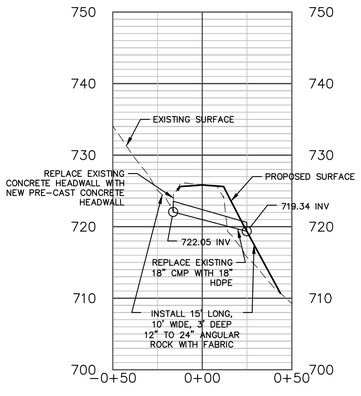
RANGE ROAD CULVERT E

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



RANGE ROAD CULVERT F

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



RANGE ROAD CULVERT G

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	06/02/2023	65% DESIGN	DT	JSW	JWE

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

CULVERT SECTIONS

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	07/21/2023	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	10 OF 14

APPENDIX B

CalEEMod Reports

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> San Benito Road Rehab				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	0.41	2.70	4.35	5.19	0.19	5.00	1.20	0.16	1.04	0.01	1,091.21	0.25	0.03	1,107.69
Grading/Excavation	0.88	7.98	7.05	5.35	0.35	5.00	1.33	0.29	1.04	0.02	2,072.17	0.29	0.05	2,093.36
Drainage/Utilities/Sub-Grade	0.86	8.23	7.63	5.36	0.36	5.00	1.33	0.29	1.04	0.03	2,490.53	0.61	0.06	2,522.26
Paving	0.84	9.98	8.36	0.39	0.39	0.00	0.32	0.32	0.00	0.02	2,316.36	0.57	0.06	2,348.44
Maximum (pounds/day)	2.58	26.19	23.04	15.90	1.10	15.00	3.86	0.90	3.12	0.07	6,879.06	1.47	0.16	6,964.06
Total (tons/construction project)	0.04	0.42	0.37	0.18	0.02	0.16	0.05	0.01	0.03	0.00	112.89	0.03	0.00	114.35

Notes:

Project Start Year ->	2025
Project Length (months) ->	5
Total Project Area (acres) ->	7
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	280	40
Grading/Excavation	0	0	0	0	760	40
Drainage/Utilities/Sub-Grade	145	0	8	0	680	40
Paving	0	11	0	22	520	40

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

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

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

Total Emission Estimates by Phase for -> San Benito Road Rehab				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	**ROG (tons/phase)**	**CO (tons/phase)**	**NOx (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**SOx (tons/phase)**	**CO2 (tons/phase)**	**CH4 (tons/phase)**	**N2O (tons/phase)**	**CO2e (MT/phase)**
Grubbing/Land Clearing	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.00	0.00	0.00	2.76
Grading/Excavation	0.00	0.04	0.04	0.03	0.00	0.03	0.01	0.00	0.01	0.00	11.40	0.00	0.00	10.44
Drainage/Utilities/Sub-Grade	0.02	0.20	0.18	0.13	0.01	0.12	0.03	0.01	0.03	0.00	60.27	0.01	0.00	55.37
Paving	0.01	0.16	0.14	0.01	0.01	0.00	0.01	0.01	0.00	0.00	38.22	0.01	0.00	35.15
Maximum (tons/phase)	0.02	0.20	0.18	0.13	0.01	0.12	0.03	0.01	0.03	0.00	60.27	0.01	0.00	55.37
Total (tons/construction project)	0.04	0.42	0.37	0.18	0.02	0.16	0.05	0.01	0.03	0.00	112.89	0.03	0.00	103.74

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

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

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

The CO2e emissions are reported as metric tons per phase.

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Range Road Rehab				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Pounds)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**SOx (lbs/day)**	**CO2 (lbs/day)**	**CH4 (lbs/day)**	**N2O (lbs/day)**	**CO2e (lbs/day)**
Grubbing/Land Clearing	0.41	2.70	4.35	5.19	0.19	5.00	1.20	0.16	1.04	0.01	1,091.21	0.25	0.03	1,107.69
Grading/Excavation	0.88	7.98	7.05	5.35	0.35	5.00	1.33	0.29	1.04	0.02	2,072.17	0.29	0.05	2,093.36
Drainage/Utilities/Sub-Grade	0.86	8.25	7.97	5.36	0.36	5.00	1.33	0.29	1.04	0.03	2,561.00	0.61	0.07	2,596.03
Paving	0.84	9.98	8.36	0.39	0.39	0.00	0.32	0.32	0.00	0.02	2,316.36	0.57	0.06	2,348.44
Maximum (pounds/day)	2.58	26.20	23.38	15.91	1.11	15.00	3.86	0.90	3.12	0.07	6,949.52	1.47	0.17	7,037.83
Total (tons/construction project)	0.04	0.42	0.38	0.18	0.02	0.16	0.05	0.01	0.03	0.00	114.59	0.03	0.00	116.13

Notes:

Project Start Year ->	2025
Project Length (months) ->	5
Total Project Area (acres) ->	10
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	280	40
Grading/Excavation	0	0	0	0	760	40
Drainage/Utilities/Sub-Grade	530	0	27	0	680	40
Paving	0	16	0	22	520	40

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

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

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

Total Emission Estimates by Phase for -> Range Road Rehab				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust					
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	**ROG (tons/phase)**	**CO (tons/phase)**	**NOx (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM10 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**PM2.5 (tons/phase)**	**SOx (tons/phase)**	**CO2 (tons/phase)**	**CH4 (tons/phase)**	**N2O (tons/phase)**	**CO2e (MT/phase)**
Grubbing/Land Clearing	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.00	0.00	0.00	2.76
Grading/Excavation	0.00	0.04	0.04	0.03	0.00	0.03	0.01	0.00	0.01	0.00	11.40	0.00	0.00	10.44
Drainage/Utilities/Sub-Grade	0.02	0.20	0.19	0.13	0.01	0.12	0.03	0.01	0.03	0.00	61.98	0.01	0.00	56.99
Paving	0.01	0.16	0.14	0.01	0.01	0.00	0.01	0.01	0.00	0.00	38.22	0.01	0.00	35.15
Maximum (tons/phase)	0.02	0.20	0.19	0.13	0.01	0.12	0.03	0.01	0.03	0.00	61.98	0.01	0.00	56.99
Total (tons/construction project)	0.04	0.42	0.38	0.18	0.02	0.16	0.05	0.01	0.03	0.00	114.59	0.03	0.00	105.36

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

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

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

The CO2e emissions are reported as metric tons per phase.

APPENDIX C

Biological Resources Assessment

Biological Resources Assessment for the Camp San Luis Obispo Range Roads Repair Project, San Luis Obispo County, California

FEBRUARY 2024

PREPARED FOR

Camp San Luis Obispo
California Army National Guard

PREPARED BY

SWCA Environmental Consultants

BIOLOGICAL RESOURCES ASSESSMENT FOR THE CAMP SAN LUIS OBISPO RANGE ROADS REPAIR PROJECT, SAN LUIS OBISPO COUNTY, CALIFORNIA

Prepared for

California Army National Guard
Camp San Luis Obispo
San Luis Obispo, CA 93405
Attn: Major Brian D. Woods, PE.

Prepared by

SWCA Environmental Consultants
3426 Empresa Drive, Suite 100
San Luis Obispo, CA 93401
(805) 543-7095
www.swca.com

SWCA Project No. 79132

February 2024

Reporting Biologist: Amy Golub, SWCA Environmental Consultants

"As a County-approved biologist, I hereby certify that this Biological Resources Assessment was prepared according to the Guidelines established by the County of San Luis Obispo Department of Planning and Building and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief; and I further certify that I was present throughout the site visit(s) associated with this report."

February 9, 2024

ABSTRACT / EXECUTIVE SUMMARY

This Biological Resources Assessment (BRA) was prepared by SWCA Environmental Consultants (SWCA) at the request of the California Army National Guard (CAARNG; applicant) in support of the proposed improvement of range roads on Camp San Luis Obispo CAARNG Base (CSLO) in San Luis Obispo County, California (Assessor's Parcel Numbers [APNs] 073-132-003, 073-231-004, and 073-231-006). The proposed Camp San Luis Obispo Range Roads Repair Project (project) is located on an approximately 5,600-acre property and includes widening Range Road and San Benito Road to improve safe access for regular transport of heavy machinery and other vehicles as needed to support current and near-future CSLO operations.

SWCA staff conducted field surveys on April 6 and 7, June 29 and 30, and August 30, 2023. The 57.65-acre biological study area (BSA) consisted of the proposed project site and the surrounding areas within view. The survey consisted of a habitat assessment and vegetation community classification, a botanical and wildlife species inventory, a jurisdictional and wetland assessment, and an analysis of the potential for special-status botanical and wildlife species to occur on the project site.

The BSA consisted of the existing Range Road and San Benito Road as well as adjacent grassland, woodland, and aquatic resources. SWCA identified suitable habitat in the BSA for 21 special-status botanical species and 21 special-status wildlife species. During appropriately timed spring surveys, seven special-status plant species were observed within the BSA, including club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*; California Rare Plant Rank [CRPR] 4.3), Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*; CRPR 4.3), San Luis Obispo owl's clover (*Castilleja densiflora* ssp. *obispoensis*; CRPR 1B.2), Palmer's spineflower (*Chorizanthe palmeri*; CRPR 4.2), Eastwood's larkspur (*Delphinium parryi* ssp. *eastwoodiae*; CRPR 1B.2), Mouse-gray dudleya (*Dudleya abramsii* ssp. *murina*; CRPR 1B.3), and Blochman's dudleya (*Dudleya blochmaniae*; CRPR 1B.1). In addition, four California Department of Fish and Wildlife (CDFW) Sensitive Natural Communities were identified within the BSA, including valley needlegrass grassland, riparian woodland, iris-leaved juncus flats, and serpentinite rock outcrops. Further, the BSA supported native oak trees (*Quercus* spp.), which are protected under Senate Bill 1334/Kuehl Bill, under California Public Resources Code 21083.4, and by the County of San Luis Obispo as a sensitive resource. One special-status wildlife species—golden eagle (*Aquila chrysaetos*; CDFW Fully Protected)—was observed within the BSA.

Twelve drainages, 11 swales, three ponds, and three wetlands occur within or transect the BSA, all of which are direct or indirect tributaries to Chorro Creek. These features are considered waters of the United States and/or waters of the state under the jurisdiction of the CDFW, Regional Water Quality Control Board (RWQCB), and/or U.S. Army of Engineers (USACE), respectively. The proposed project will result in approximately 0.671 acre and 290 linear feet of temporary impacts and 0.255 acre and 480 linear feet of permanent impacts to jurisdictional waters and wetlands.

As the project is currently designed, the potential for impacts to biological resources is low. A majority of project impacts are expected to be immediately within and/or adjacent to existing infrastructure and disturbed road shoulders. However, the project is expected to result in direct and indirect impacts to special-status plant species, wildlife species, sensitive habitats, and jurisdictional features. A series of avoidance, minimization, and mitigation measures have been recommended to reduce potential impacts to a less-than-significant level.

This page intentionally left blank.

CONTENTS

Appendices

Tables

1 INTRODUCTION

This Biological Resources Assessment (BRA) was prepared by SWCA Environmental Consultants (SWCA) at the request of the California Army National Guard (CAARNG) in support of the proposed Camp San Luis Obispo Range Roads Repair Project (project), which includes the extension and improvement of range roads on the Camp San Luis Obispo CAARNG Base (CSLO) in San Luis Obispo County, California (Assessor's Parcel Numbers [APNs] 073-132-003, 073-231-004, and 073-231-006) (Appendix A: Figure A-1). The purpose of the project is to improve the degraded roadways so that they can continue to safely provide access for regular transport of heavy machinery and other vehicles as needed to support current and near future CSLO operations.

The project includes roadway and culvert improvements along approximately 2.5 miles of roadway along Range Road and San Benito Road on CSLO. As proposed, Range Road and San Benito Road would be reconstructed and widened to include one 11-foot-wide vehicle travel lane in each direction with 1- to 2-foot-wide shoulders on each side of the roadway. Existing cattle guards located within the roadway would be removed and reconstructed to match the new road width near the same location. Existing utility poles located within the project site would be protected in place during construction activities. Existing barb-wire fence located along the sides of the existing roadway would be either protected in place or rebuilt following construction activities.

The proposed project will include replacing and/or protecting in place up to 10 culverts (Culverts A–J). Waters on the project site consist of intermittent and ephemeral flows that either directly or indirectly connect to Chorro Creek. Table 1 provides a summary of proposed improvements at each culvert location.

Table 1. Proposed Culvert Improvements

Culvert	Existing Conditions	Proposed Improvement(s)
A	18-inch-diameter corrugated metal pipe (CMP) culvert; north side is silted over with no surface evidence	• Protect existing culvert in place. • Expose currently buried end of culvert. • Remove accumulated sediment from 70 linear feet beyond culvert outlet. • Protect-in-place existing concrete headwall. • Install rip rap at inlet and outlet.
B	36-inch-diameter CMP culvert	• Replace existing culvert with a 36-inch-high density polyethylene (HDPE) pipe culvert. • Remove existing concrete headwall and install new precast concrete headwall on the north end. • Install rip rap at inlet and outlet.
C	36-inch-diameter CMP culvert	• Replace existing culvert with a 36-inch HDPE pipe culvert. • Remove existing concrete headwall and install new precast concrete headwall on the north end. • Install rip rap at inlet and outlet.
D	48-inch-diameter CMP culvert	• Replace existing culvert with a 48-inch-diameter HDPE pipe culvert. • Remove existing concrete headwall and install new precast concrete headwall on north end. • Install rip rap at inlet and outlet.
E	36- to 42-inch-diameter CMP culvert	• Protect existing culvert in place. • Trim tree branches less than 4 inches in diameter at breast height (DBH) around inlet.

Culvert	Existing Conditions	Proposed Improvement(s)
F	18-inch-diameter CMP culvert	• Replace existing culvert with an 18-inch HDPE pipe culvert. • Protect-in-place existing concrete headwall.
G	18-inch-diameter CMP culvert	• Replace existing culvert with 18-inch HDPE pipe culvert. • Replace concrete headwall with precast concrete headwall on north side. • Install rip rap at outlet.
H	36-inch CMP connected to 48-inch-diameter CMP culvert	• Replace existing 48-inch culvert with a 48-inch diameter HDPE pipe culvert. • Overlap HDPE pipe with a 12-inch to 24-inch reinforced concrete pipe. • Fill in upper void space with concrete. • Protect-in-place existing concrete headwall. • Install rip rap at outlet. • Remove trees 10 feet downstream past outlet.
I	Existing 84-inch diameter CMP culvert	• Protect existing culvert in place. • Protect-in-place existing concrete headwall. • Install rip rap at outlet. • Remove trees 30 feet upstream and downstream past inlet and outlet.
J	Existing 48-inch diameter CMP culvert	• Replace existing culvert with a 48-inch HDPE pipe culvert. • Install rip rap at inlet and outlet.

The total proposed project disturbance area is estimated to be approximately 779,000 square feet (17.88 acres) of permanent site disturbance. Proposed improvements to Range Road and San Benito Road are anticipated to take approximately 4.5 months to complete each, for a total combined construction period of approximately 9 months. Construction is planned to occur in two phases, with improvements to one roadway occurring between mid-June and early November 2024 and the second roadway being improved between mid-June and early November 2025.

1.1 Purpose of the Biological Resources Assessment

The purpose of this BRA is to identify sensitive biological resources that occur, or have potential to occur, within the proposed project site and surrounding areas. Sensitive resources are defined here as wildlife, plants, aquatic features, or habitats that are of management concern to federal, state, county, and/or local resource agencies. Recommended avoidance, minimization, and mitigation measures, which are included in Section 5.2, *Recommended Avoidance, Minimization, and Mitigation Measures*, will reduce potential impacts to sensitive resources to the extent feasible. As necessary, this BRA may be used to support the County of San Luis Obispo (County) environmental review process and future project permitting.

1.2 Existing Conditions

The project site is located within the San Luis Obispo, California U.S. Geological Survey (USGS) 7.5-minute quadrangle (USGS 2023). The project site is approximately 3.6 miles west of the intersection of California Highway 1 and Highland Drive. The 57.65-acre biological study area (BSA) consisted of the proposed project site and the surrounding areas within view (Appendix A: Figure A-2). Elevations within the BSA range from approximately 345 to 886 feet (105–270 meters). The property supports a range of habitats, including oak woodland, chaparral, scrub, grassland, and riparian/wetland with a mix of existing

military base operational facilities. According to USGS topographic maps and other available resources, 12 drainages run through the BSA, as well as three ponds and 11 swales with in-stream and adjacent wetland features. The hydrological features flow in a southerly direction towards Chorro Creek.

2 METHODOLOGY

Prior to conducting field surveys, SWCA staff completed a background review of relevant literature and resources pertaining to sensitive biological resources known to occur within the BSA and in the project vicinity, which included the following:

- Aerial photographs (Google Earth Pro 1994–2023) and preliminary site plans (Appendix B)
- USGS topographic map of the San Luis Obispo, California 7.5-minute quadrangle (USGS 2023)
- Online Soil Survey of San Luis Obispo County, California (Natural Resources Conservation Service [NRCS] 2023)
- Consortium of California Herbaria (CCH) online database of plant collections (CCH 2023)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for the San Luis Obispo 7.5-minute quadrangle and the surrounding quadrangles (Santa Margarita, Pismo Beach, Arroyo Grande NE, Lopez Mtn., Atascadero, Port San Luis, Morro Bay North, and Morro Bay South) (CNPS 2023a)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) list of federally and state-listed special-status species documented within the San Luis Obispo, California 7.5-minute quadrangle and the eight surrounding quadrangles (CDFW 2023a)
- CNDDB map of special-status species that have been documented within a 5-mile radius of the project site (CDFW 2023a) (Appendix A: Figures A-3a and A-3b)
- U.S. Fish and Wildlife Service (USFWS) Threatened & Endangered Species Active Critical Habitat Report (USFWS 2023d) (Appendix A: Figure A-3c)
- USFWS National Wetland Inventory (NWI) Wetlands Mapper (USFWS 2023c)
- *Camp San Luis Obispo Integrated Natural Resources Management Plan* (INRMP) (CAARNG 2022)

A list of regionally occurring special-status species was compiled based on records reported in the scientific database queries (Appendix C). This species list was used to inform the field survey effort and determine an appropriate survey period for special-status botanical species with potential to occur on-site.

Following the background review, SWCA botanists Amy Golub and Kyle Suchy and SWCA biologist Sara Snyder completed field surveys of the property on April 6 and 7, July 29 and 30, and August 30, 2023. The surveys consisted of a botanical and wildlife species inventory, a jurisdictional analysis, a wetland delineation, and an assessment of the potential for special-status species to occur on the project site. The BSA included the proposed project site and a visual scan of the surrounding habitat features (see Appendix A: Figure A-2).

The surveys were conducted on foot to ensure complete visual coverage of the BSA. During the survey, all botanical and wildlife species observed, including those detected by indirect sign (i.e., tracks, scat, skeletal remains, dens, burrows, or vocalizations), were documented (Appendix D).

Botanical species identifications and taxonomic nomenclature followed *The Jepson Manual: Vascular Plants of California, 2nd edition* (Baldwin et al. 2012), as well as taxonomic updates provided in the

Jepson eFlora (Jepson Flora Project 2023). Vegetation communities and land cover types were characterized and natural communities were classified using the second edition of *A Manual of California Vegetation* (MCV) classification system (Sawyer et al. 2009), as well as updates included in the MCV Online (CNPS 2023b). Protocols for identifying CDFW Sensitive Natural Communities followed the CDFW-CNPS Combined Vegetation Rapid Assessment and Relevé Field Form (CDFW 2023b).

The habitat requirements for each regionally occurring special-status species identified in the scientific database queries were analyzed and compared to the type and quality of habitats observed on-site during the field survey. The potential for many species to occur within the project site was eliminated due to lack of suitable habitat, inappropriate elevation, inappropriate soils/substrate, and/or known distribution of the species. Special-status species for which suitable habitat was identified are discussed in-depth in the following section, and those determined to have no potential to occur based upon a lack of suitable habitat are not discussed. A complete list of regionally occurring species that were evaluated is included in Appendix C.

2.1 Sufficiency of Biological Data

The field surveys were conducted with sufficient detail by SWCA staff with relevant biological expertise to identify potentially occurring special-status botanical and wildlife species and assess habitats and site conditions for the presence of sensitive resources and/or the potential to support special-status species. The surveys were appropriately timed to detect the presence of special-status plant species with potential to occur.

During the surveys, visibility and conditions were suitable for the detection of wildlife species and their sign. However, migratory and transient wildlife species, such as birds and large mammals, may only be seasonally present within the BSA. Further, some species are highly transient, nocturnal, scarce, or otherwise cryptic, and therefore may not have been detected during the survey effort. As such, recommendations are provided for the avoidance of special-status species deemed to have potential to occur based on an assessment of habitat on-site.

3 RESULTS

This section provides a summary and analysis of the results of the background research and field surveys. The discussion includes a description of soils, terrestrial habitat types, hydrology, and direct and indirect observations of wildlife and botanical species and a discussion of the potential for special-status species to occur. Anticipated impacts to existing wildlife corridors and habitat connectivity are also considered.

3.1 Habitats and Resources Observed

3.1.1 Soils

The NRCS online soil report revealed 17 soil units within the BSA (Appendix A: Figure A-4). The primary characteristics of these soil units are described below:

- **Soil Unit 109: Briones-Pismo loamy sands, 9 to 30 percent slopes.** This soil unit consists of Briones and Pismo soils at 40% and 30%, respectively. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of loamy sand and weathered bedrock. This soil type occurs on mountains and hills at elevations between 300 and 2,000 feet (90 and 600 meters). This soil type is not considered prime farmland.

- **Soil Unit 127: Cropley clay, 0 to 2%Z slopes, Major Land Resource Area (MLRA) 14.** This soil unit consists of Cropley soils at 85%. The drainage class of this soil type is moderately well drained, and it is composed primarily of clay and sandy clay loam. This soil type occurs on terraces and alluvial fans at elevations between 20 and 2,040 feet (5 and 620 meters). This soil type is considered prime farmland if irrigated.
- **Soil Unit 129: Diablo clay, 5 to 9 percent slopes, MRLA 15.** This soil unit consists of Diablo soils at 90%. The drainage class of this soil type is well drained, and it is composed primarily of clay. This soil type occurs on mountains and hills at elevations between 30 and 1,130 feet (10 and 350 meters). This soil type is considered prime farmland if irrigated.
- **Soil Unit 130: Diablo and Cibo clays, 9 to 15 percent slopes.** This soil unit consists of Diablo and Cibo soils at 50% and 45%, respectively. The drainage class of this soil type is well drained, and it is composed primarily of clay. This soil type occurs on hills at elevations between 200 and 600 feet (60 and 180 meters). This soil type is considered farmland of statewide importance.
- **Soil Unit 131: Diablo and Cibo clays, 15 to 30 percent slopes.** This soil unit consists of Diablo and Cibo soils at 50% and 45%, respectively. The drainage class of this soil type is well drained, and it is composed primarily of clay. This soil type occurs on mountains hills at elevations between 200 and 3,000 feet (60 and 920 meters). This soil type is not considered prime farmland.
- **Soil Unit 147: Lodo clay loam, 5 to 15 percent slopes.** This soil unit consists of Lodo soils at 85%. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of clay loam. This soil type occurs on mountains and hills at elevations between 300 and 3,000 feet (90 and 920 meters). This soil type is not considered prime farmland.
- **Soil Unit 148: Lodo clay loam, 15 to 30 percent slopes.** This soil unit consists of Lodo soils at 85%. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of clay loam. This soil type occurs on mountains and hills at elevations between 300 and 3,000 feet (90 and 920 meters). This soil type is not considered prime farmland.
- **Soil Unit 149: Lodo clay loam, 30 to 50 percent slopes, MRLA 15.** This soil unit consists of Lodo soils at 85%. The drainage class of this soil type is somewhat excessively drained, and it is composed primarily of clay loam. This soil type occurs on mountains and hills at elevations between 10 and 2,760 feet (5 and 850 meters). This soil type is not considered prime farmland.
- **Soil Unit 158: Los Osos loam, 5 to 9 percent slopes.** This soil unit consists of Los Osos soils at 85%. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 100 and 2,000 feet (30 and 610 meters). This soil type is considered farmland of statewide importance.
- **Soil Unit 159: Los Osos loam, 9 to 15 percent slopes.** This soil unit consists of Los Osos soils at 85%. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 100 and 2,000 feet (30 and 610 meters). This soil type is not considered prime farmland.
- **Soil Unit 160: Los Osos loam, 15 to 30 percent slopes.** This soil unit consists of Los Osos soils at 85%. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 140 and 910 feet (40 and 280 meters). This soil type is not considered prime farmland.
- **Soils Unit 162: Los Osos – Diablo complex, 5 to 9 percent slopes.** This soil unit consists of Los Osos and Diablo soils at 35% and 30%, respectively. The drainage class of this soil type is well drained, and it is composed primarily of loam, clay, and sandy loam. This soil type occurs on hills and ridges at elevations between 200 and 1,500 feet (60 and 460 meters). This soil type is considered farmland of statewide importance.

- **Soil Unit 168: Los Osos variant clay loam, 15 to 50 percent slopes.** This soil unit consists of Los Osos soils at 85%. The drainage class of this soil type is well drained, and it is composed primarily of clay and clay loam. This soil type occurs on mountains and hills at elevations between 300 and 1,500 feet (90 and 460 meters). This soil type is not considered prime farmland.
- **Soil Unit 195: Rock outcrop – Lithic Haploxerolls complex, 30 to 75 percent slopes.** This soil unit consists of Rock outcrop and Lithic haploxerolls soils at 55% and 25%, respectively. The drainage class of this soil type is excessively drained, and it is composed primarily of unweathered bedrock. This soil type occurs on mountains at elevations between 20 and 4,000 feet (5 and 1220 meters). This soil type is not considered prime farmland.
- **Soil Unit 197: Salinas silty clay loam, 0 to 2 percent slopes, MRLA 14.** This soil unit consists of Salinas soils at 85%. The drainage class of this soil type is well drained, and it is composed primarily of very fine sandy loam and silty clay loam. This soil type occurs on floodplains, alluvial flats, and alluvial fans at elevations between 0 and 1,180 feet (0 and 360 meters). This soil type is considered prime farmland if irrigated.
- **Soil Unit 198: Salinas silty clay loam, 2 to 9 percent slopes, MRLA 14.** This soil unit consists of Salinas soils at 85%. The drainage class of this soil type is well drained, and it is composed primarily of silty clay loam. This soil type occurs on floodplains, terraces, and alluvial fans at elevations between 0 and 1,480 feet (0 and 450 meters). This soil type is considered prime farmland if irrigated.
- **Soil Unit 221: Xererts – Xerolls – Urban land complex, 0 to 15 percent slopes.** This soil unit consists of Xererts, Xerolls, and Urban soils at 40%, 35%, and 20%, respectively. The drainage class of this soil type is well drained, and it is composed primarily of variable soils and weathered bedrock. This soil type occurs on mountains and hills at elevations between 0 and 2,500 feet (0 and 760 meters). This soil type is not considered prime farmland.

3.1.2 Vegetation Communities

Vegetation communities and land cover types were assessed, classified, and mapped based on vegetation composition, structure, and density, with consideration of known land management practices (Appendix A: Figure A-5). Natural vegetation communities identified in the approximately 57.65-acre BSA included annual grasslands, oak woodland, wetland and riparian habitats, and needlegrass grassland. Other land cover types identified in the BSA included agriculture, ruderal, and disturbed. Those natural vegetation communities that meet the VegCamp and CNPS Vegetation Program State Rarity Rank of S1 through S3 are considered CDFW Sensitive Natural Communities and should be addressed in the environmental review process.

A total of 197 vascular plant species were identified in the BSA, of which 71 (36%) were non-native or considered ornamental. The natural vegetation communities are described below and illustrated in Figure A-5 (see Appendix A).

3.1.2.1 ANNUAL GRASSLAND (35.62 ACRES)

Annual grassland habitat is the most prevalent vegetation community within the BSA (see Appendix A: Figure A-5; Appendix E: Photo E-1). This community varies in species composition throughout, though it is primarily dominated by wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), and soft chess brome (*Bromus hordeaceus*) with Crete weed (*Hedypnois rhagadioloides*), silver puffs *(Uropappus lindleyi*), and Italian thistle (*Carduus pycnocephalus*) scattered throughout. This community also integrates closely with the purple needlegrass grassland patches and supports rare plants, including Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*), San Luis Obispo owl's clover (*Castilleja densiflora* ssp.

obispoensis), and club-haired mariposa lily (*Calochortus clavatus* ssp. *clavatus*). A discussion of rare plants observed within this community is described in further detail in Section 3.2, *Sensitive Resources*.

This species composition was used to determine the community classification, which most closely corresponds with the *Avena* spp. – *Bromus* spp. Semi Natural Herbaceous Alliance (Wild oats and annual brome grasslands) in the MCV classification system. This community is widespread and may occur in any topographic setting in foothills, waste places, rangelands, and openings in woodlands at elevations below 7,200 feet (2,200 meters). This community provides habitat for nesting birds, burrowing mammals and their predators, herbivores, and other wildlife.

3.1.2.2 RIPARIAN WOODLAND (2.65 ACRES)

This community occurs primarily along Drainage 9 and San Benito Road (see Appendix A: Figure A-5). It is dominated by coast live oak (*Quercus agrifolia*) and California sycamore (*Platanus racemosa*) with scattered Arroyo willow (*Salix lasiolepis*) and tall cyperus (*Cyperus eragrostis*), iris-leaved rush (*Juncus xiphioides*), and Italian rye grass (*Festuca perennis*) in the understory.

This species composition most closely corresponds with the *Platanus racemosa – Quercus agrifolia* Woodland Alliance (California sycamore – coast live oak riparian woodland) in the MCV classification system. This community occurs in gullies, intermittent streams, springs, seeps, stream banks, and terraces adjacent to floodplains at elevations below 8,000 feet (2,400 meters). Soils are rocky or cobbly alluvium with permanent moisture at depth. This community provides habitat for nesting birds, small and large mammals, and other wildlife. This community also has a State Rarity rank of S3, making it a CDFW sensitive natural community.

3.1.2.3 COAST LIVE OAK WOODLAND (0.09 ACRE)

This community occurs along portions of San Benito Road within and outside of riparian areas (see Appendix A: Figure A-5; Appendix E: Photo E-4). It is dominated by coast live oak in the overstory. The midstory is dominated by toyon (*Heteromeles arbutifolia*) with hummingbird sage (*Salvia spathacea*), California bedstraw (*Galium californicum* ssp. *californicum*), and a thick layer of annual grasses in the understory.

This species composition most closely corresponds with the *Quercus agrifolia* Forest and Woodland Alliance (Coast live oak woodland and forest) in the MCV classification system. This community occurs in canyon bottoms, slopes, and flats. Soils are deep and are sandy or loamy with high organic matter at elevations below 4,000 feet (1,200 meters). This community provides habitat for nesting birds, small and large mammals, and other wildlife.

3.1.2.4 EUCALYPTUS GROVES (2.09 ACRES)

This community occurs along the northwest side of San Benito Road south of the Drainage 12 culvert crossing (see Appendix A: Figure A-5; Appendix E: Photo E-5). It is dominated by blue gum (*Eucalyptus globulus*) in the overstory with sparse poison oak (*Toxicodendron diversilobum*) in the midstory and upright veldt grass (*Ehrharta erecta*) in the understory.

This species composition most closely corresponds with the *Eucalyptus* spp. Woodland Semi-Natural Alliance (Eucalyptus groves) in the MCV classification system. This community occurs in uplands or bottomlands and adjacent to stream courses, lakes, or levees. Soils are variable at elevations below 6,200 feet (1,900 meters). This community provides marginally suitable habitat for nesting birds, small mammals, and other wildlife.

3.1.2.5 IRIS-LEAVED JUNCUS FLATS (0.50 ACRE)

This community occurs within and adjacent to most of the drainages on-site (see Appendix A: Figure A-5; Appendix E: Photo E-7). It is dominated by iris-leaved rush, spikerush (*Eleocharis macrostachya*), and rabbit's foot grass (*Polypogon monspeliensis*) as an associate.

This species composition most closely corresponds with the *Juncus* (*Oxymeris, xiphioides*) Provisional Herbaceous Alliance (Iris-leaved rush seeps) in the MCV classification system. This community occurs in seeps and streams. Soils are mainly metamorphic, serpentine, or volcanically derived at elevations below 5,250 feet (1,600 meters). This community provides habitat for nesting birds, small and large mammals, and other wildlife. This community also has a State Rarity rank of S2, making it a CDFW sensitive natural community.

3.1.2.6 PURPLE NEEDLEGRASS GRASSLAND (0.93 ACRE)

This community occurs in patches along Range Road and San Benito Road (see Appendix A: Figure A-5; Appendix E: Photo E-3). This community is dominated by annual grasses, but with at least 10% or more cover of purple needlegrass (*Stipa pulchra*) in the herbaceous layer.

This species composition most closely corresponds with the *Nasella* spp. – *Melica* spp. Herbaceous Alliance (Needlegrass – Melic grass grassland) in the MCV classification system. This community occurs in all topographic locations on a variety of substrates, including those of high clay content, loamy, sandy, or those derived from mudstone, sandstone, or serpentine substrates at elevations below 5,500 feet (1,700 meters). This community provides habitat for nesting birds, small mammals, and other wildlife. This community also has a State Rarity rank of S3, making it a CDFW sensitive natural community.

3.1.2.7 SERPENTINITE ROCK OUTCROP (0.20 ACRE)

This community occurs along portions of Range Road, primarily just west of Culvert G and south of Culvert D (see Appendix A: Figure A-5; Appendix E: Photo E-2). Vegetation cover in this community is limited, though where it is present is dominated by various native herbaceous species such as narrow leaved onion (*Allium amplectans*), San Luis Obispo dudleya (*Dudleya abramsii* ssp. *murina*), chaparral yucca (*Hesperoyucca whippleyi*), and Palmer's spineflower (*Chorizanthe palmeri*), with scattered Blochman's dudleya (*Dudleya blochmaniae*).

This species composition most closely corresponds with the *Allium* spp. Serpentinite Sparsely Vegetated Alliance (Onion serpentinite rock outcrop) in the MCV classification system. This community occurs on rocky serpentine slopes, ridges, and outcrops. Soils are poorly developed with a coarse sandy texture at elevations below 5,250 feet (1,600 meters). This community provides habitat for small mammals, reptiles, and other wildlife. This community also has a State Rarity rank of S2S3, making it a CDFW sensitive natural community.

3.1.2.8 AGRICULTURE (1.77 ACRES)

This land cover type is characterized by agricultural row crops or orchards that experience disturbance by vehicles, crop maintenance, and harvesting (see Appendix A: Figure A-5). This land cover type occurs along the southwestern side of San Benito Road and is comprised of a remanent walnut orchard. The orchard is primarily fallow with annual grasses in the understory.

This land cover type does not classify as a vegetation community in the MCV classification system and provides only marginal habitat for nesting birds, small mammals, and other wildlife.

3.1.2.9 RUDERAL (4.95 ACRES)

This land cover type is characterized by dirt roads, roadside ditches, and infrastructure that experience disturbance by vehicles and vegetation maintenance such as areas adjacent to existing shooting ranges (see Appendix A: Figure A-5; Appendix E: Photo E-6). Herbaceous vegetation, where present, is sparse to intermittent and consists of species that are tolerant of disturbance, including non-native annual grasses and forbs such as perennial mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*), and tocalote (*Centaurea melitensis*). Where dirt access roads or recent ground disturbance is present, vegetation is absent. The proposed stockpile area is located within a ruderal area.

This land cover type does not classify as a vegetation community in the MCV classification system and provides only marginal habitat for nesting birds, small mammals, and other wildlife.

3.1.2.10 DEVELOPED (8.87 ACRES)

This land cover type includes Range Road and San Benito Road as well as the ranges adjacent to Range Road. Vegetation cover in this area is limited primarily to ornamental plantings and roadside weeds.

This land cover type does not classify as a vegetation community in the MCV classification system and provides only marginal habitat for nesting birds, small mammals, and other wildlife.

3.1.3 Wildlife

The habitat within and adjacent to the BSA is suitable for a variety of common and special-status wildlife species. Mixed oak woodland, riparian woodland, and coastal sagebrush scrub habitats in the BSA provide nesting opportunities for various raptor and passerine bird species, refugia and food resources for mammals and reptiles, and browsing opportunities for herbivores. Grassland habitat on-site is suitable for ground-nesting birds; transient, foraging wildlife; and burrowing mammals.

One special-status wildlife species was observed during the field survey—golden eagle (*Aquila chrysaetos*; CDFW Fully Protected)—which is described in further detail in Section 3.2.2, *Special-Status Wildlife Species*. Other numerous avian species, as well as other terrestrial wildlife and their sign, were observed throughout the BSA. A comprehensive list of all wildlife species observed during the survey is included in Appendix D.

3.1.4 Hydrologic Features

Twelve drainages, 11 swales, three ponds, and three wetlands were identified within the BSA; all of the drainages are direct or indirect tributaries to Chorro Creek (see Appendix A: Figures A-6a–A-6f). Each of the hydrologic features and their associated jurisdiction under the CDFW, Regional Water Quality Control Board (RWQCB), and/or U.S. Army Corps of Engineers (USACE) are described in further detail below. A formal jurisdictional determination and a wetland delineation were performed as a part of the assessment, and Table 2 includes a summary of jurisdictional aquatic features.

Table 2. Summary of Jurisdictional Aquatic Features

Feature ID	Feature Type	Feature Designation	Agency Jurisdiction
Drainage 1	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 2	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 3	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 4	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 5	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 6	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 7	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 8	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 9	USGS blue line, Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 10	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 11	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Drainage 12	Intermittent	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Swale 1	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 2	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 3	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 4	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 5	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 6	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 7	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 8	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 9	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 10	Ephemeral	Waters of the state	CDFW, RWQCB
Swale 11	Ephemeral	Waters of the state	CDFW, RWQCB
Pond 1	In-channel feature	Waters of the state, Waters of the United States	CDFW, RWQCB, USACE
Pond 2	In-channel feature	Waters of the state	CDFW, RWQCB
Pond 3	In-channel feature	Waters of the state	CDFW, RWQCB
Wetland 1	In-channel feature	Wetland	CDFW, RWQCB, USACE
Wetland 2	Adjacent wetland	Wetland	CDFW, RWQCB, USACE
Wetland 3	In-channel feature	Wetland	CDFW, RWQCB, USACE

Drainages 1 through 12 are characterized as intermittent drainages that originate in the upper reaches of the Chorro Creek watershed. They generally flow north to south across the landscape passing through Culverts A through E and Culvert G before eventually making their way south to either directly or indirectly connect with Chorro Creek through overland flow. All of these features exhibited a well-defined bed and bank and clear evidence of an ordinary high water mark (OHWM) indicators, including flowing water, debris wracking, shelving, change in sediment texture and size, and change in vegetation. These features flow through open grassland habitat, riparian corridors comprised of oak and/or willow and sycamore canopies, and/or bedrock with limited vegetation present. Where the overstory canopy is limited, the channel is typically dominated by wetland vegetation comprised of iris-leaved rush with a transition to annual grassland habitat as you move farther away from the channel. See Photos E-7 through E-14 in Appendix E for representative photos of the drainages within the BSA.

Swales 1 through 11 are comprised of ephemeral features that exhibit a well-defined bed and bank, but, based on a lack of OHWM indicators (e.g., no difference in sediment texture or vegetation from channel to banks), likely only flow in direct response to precipitation and are ephemeral in nature. See Photo E-5 in Appendix E for a representative photo of the swales within the BSA.

Ponds 1 through 3 are human-made in-stream features that are impoundments of drainages and swales within the BSA. Pond 1 is an in-stream feature of Drainage 7, and Ponds 2 and 3 are in-stream features of Swale 9. See Photo E-20 in Appendix E for a representative photo of the ponds within the BSA.

Wetlands 1 through 3 were identified during the wetland delineation effort, which focused on areas that exhibited at least two wetland indicators (i.e., hydrology and hydrophytic vegetation) and may be affected by the proposed project. Wetlands 1 and 3 are in-stream features and Wetland 2 is an adjacent wetland with a continued surface connection to waters assumed to be waters of the United States based on intermittent flows. See Photo E-7 in Appendix E for representative photos of the wetlands within the BSA.

3.2 Sensitive Resources

The results of the background research indicated that nine sensitive natural communities, 71 special-status plant species, and 50 special-status wildlife species occur regionally. The habitat requirements for each of these species were compared to the type and quality of habitat documented during the field survey. Following this assessment, suitable habitat was determined to be present on-site for 21 of the regionally occurring special-status plant species and 21 of the regionally occurring special-status wildlife species, in addition to nesting birds. Mature valley oak (*Quercus lobata*) and coast live oak (> 5-inch diameter at breast height [DBH]) are also located in the BSA. These sensitive resources are discussed in the following sections.

3.2.1 Special-Status Plant Species

For the purposes of this section, special-status plant species are defined as the following:

- Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (FESA) (50 Code of Federal Regulations [CFR] 17.12 for listed plants and various notices in the *Federal Register* for proposed species).
- Plants that are candidates for possible future listing as threatened or endangered under the FESA.
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (State CEQA Guidelines Section 15380).

- Plants considered by the CNPS to be "rare, threatened, or endangered" in California (Ranks 1B and 2 in CNPS 2023a).
- Plants listed by CNPS as plants about which we need more information and plants of limited distribution (Ranks 3 and 4 in CNPS 2023a).
- Plants listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5).
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).
- Plants considered sensitive by other federal agencies (i.e., United States Forest Service, Bureau of Land Management), state and local agencies, or jurisdictions.

SWCA determined that there is suitable habitat in the BSA for 21 regionally occurring special-status plant species. Additionally, individual oak trees (*Quercus* spp.) and oak woodlands are considered a sensitive resource by the State of California and the County. A description of the life history, range, and conservation status for each special-status species with potential to occur is included below, and a list of plant species observed within the BSA during surveys is included in Appendix C.

3.2.1.1 CARLOTTA HALL'S LACE FERN

Carlotta Hall's lace fern (*Aspidotis carlotta-halliae*; California Rare Plant Rank [CRPR] 4.2) is a rhizomatous fern that is endemic to the Coast Ranges from Santa Barbara to San Francisco. This species occurs on serpentine slopes and crevices. It has been documented at elevations ranging from 330 to 5,250 feet (100–1,600 meters). This species produces spores year-round (Jepson Flora Project 2023). Documented threats to this species are not well known (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.2 MILES' MILKVETCH

Miles' milkvetch (*Astragalus didymocarpus* var. *milesianus*; CRPR 1B.2) is an annual herb that is endemic to the central and southern coast of California. Its known range is concentrated along the outer South Coast Ranges of San Luis Obispo and Santa Barbara Counties. This species typically occurs in clay soils in association with grassy areas and scrub near the coast at elevations below 1,312 feet (400 meters). The typical blooming period is from March to May (Jepson Flora Project 2023). Documented threats to this species include development (CNPS 2023a).

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is approximately 2.52 miles south of the project site. Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.3 CLUB HAIRED MARIPOSA LILY

Club haired mariposa lily (*Calochortus clavatus* ssp. *clavatus*; CRPR 4.3) is a perennial bulbiferous herb that is endemic to California. It is known to occur along the outer South Coast Ranges within San Luis Obispo County. This species typically grows in rocky (often serpentine) soils in grassland, chapparal, and coastal scrub. It has been documented at elevations ranging from 246 to 4,265 (75–1,300 meters). The

typical blooming period is March to June (Jepson Flora Project 2023). Documented threats to this species are not well documented (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is present within chaparral and grassland habitat identified on-site and it was observed during appropriately timed surveys. This species was observed in grassland habitat just outside of the proposed project footprint (see Appendix A: Figure A-7; Appendix E: Photo E-23b; Appendix F).

3.2.1.4 SAN LUIS MARIPOSA LILY

San Luis mariposa lily (*Calochortus obispoensis*; CRPR 1B.2) is a perennial bulbiferous herb that is endemic to California. It is known to occur along the outer South Coast Ranges from southern Monterey County through San Luis Obispo County. This species typically grows in rocky serpentine soils in grassland, chaparral, and coastal scrub communities. It has been documented at elevations ranging from 330 to 1,640 feet (100–500 meters). The typical blooming period of this species is from May to July (Jepson Flora Project 2023). Documented threats to this species are not well known (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on serpentine rock outcrops identified on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.5 CAMBRIA MORNING-GLORY

Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*; CRPR 4.2) is a perennial herb that is endemic to central California. Its known range is concentrated along the coastal ridges and foothills of the outer South Coast Ranges of San Luis Obispo County. This species typically occurs in clay soils in association with various vegetation communities including grassland, chaparral, and woodland at elevations below 1,640 feet (500 meters). The typical blooming period is from April to June (Jepson Flora Project 2023). Documented threats to this species include development, alteration of fire regimes, and competition from non-native species (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is present within coastal scrub and grassland habitats on-site and it was observed during appropriately timed surveys. Although only point data was collected for this species within the BSA, Cambria morning-glory is present throughout the grassland habitat in the BSA and is considered a common grassland forb species throughout the project site (see Appendix A: Figure A-7; Appendix E: Photo E-22a; Appendix F).

3.2.1.6 SAN LUIS OBISPO OWL'S-CLOVER

San Luis Obispo owl's-clover (*Castilleja densiflora* ssp. *obispoensis*; CRPR 1B.2) is an annual herb that is known to occur in coastal areas along the outer South Coast Ranges from just south of Ragged Point to Avila Beach, with several populations occurring in the Irish Hills. This species typically occurs in coastal grasslands at elevations below 1,312 feet (400 meters). The typical blooming period is from March to June (Jepson Flora Project 2023). Documented threats to this species include development and grazing (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is present within coastal scrub, grassland, and woodland habitats on-site and it was observed during appropriately timed surveys. Dense patches of this species were present in the BSA (see Appendix A: Figure A-7; Appendix E: Photo E-21; Appendix F).

3.2.1.7 CONGDON'S TARPLANT

Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*; CRPR 1B.1) is an annual or perennial herb that is endemic to the central coast of California. It is known to occur in three isolated regions—around San Francisco Bay, Monterey Bay, and along the topographic corridor of the Los Osos and Edna Valleys in San Luis Obispo County. This species occurs in swales and floodplains in association with grassland habitat at elevations below 984 feet (300 meters). The typical blooming period is from June to October (Jepson Flora Project 2023). Documented threats to this species include development, grazing, and competition with non-native species (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed within the BSA during appropriately timed surveys. As such, this species is not expected to occur within the project area.

3.2.1.8 PALMER'S SPINEFLOWER

Palmer's spineflower (*Chorizanthe palmeri*; CRPR 4.2) is an annual herb that is endemic to California. This species typically occurs on rocky serpentine outcrops in the South Coast Ranges at elevations ranging from 180 to 3,100 feet (55–945 meters). The typical blooming period for this species is from April to August (Jepson Flora Project 2023). Potential threats to this species are not well documented (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is present on serpentine rock outcrops identified on-site and it was observed during appropriately timed surveys. This species was observed along the eastern end of Range Road west of Culvert G within the project footprint (see Appendix A: Figure A-7; Appendix E: Photo E-22b; Appendix F).

3.2.1.9 CHORRO CREEK BOG THISTLE

Chorro Creek bog thistle (*Cirsium fontinale* var. *obispoense*; CRPR 1B.2) is a biennial to perennial herb endemic to San Luis Obispo County. This species typically occurs on perennially wet serpentine soils at elevations ranging from 115 to 1,265 feet (35–385 meters). The typical blooming period for this species is from February to September (Jepson Flora Project 2023). Potential threats to this species include foot traffic, non-native plant impacts, grazing, development, and agriculture (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed within the BSA during appropriately timed surveys. As such, this species is not expected to occur in the project area.

3.2.1.10 CUESTA RIDGE THISTLE

Cuesta Ridge thistle (*Cirsium occidentale* var. *lucianum*; CRPR 1B.2) is a biennial herb that is only known to occur along the Cuesta Ridge of central San Luis Obispo County. This species typically grows in serpentine soils in openings of chaparral, woodland, and forest habitats at elevations ranging from 1,640 to 2,460 feet (500–750 meters). The typical blooming period is from April to July (Jepson Flora Project 2023). Documented threats to this species include fire suppression (CNPS 2023a).

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is approximately 3 miles east of the project site. Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.11 PANICULATE TARPLANT

Paniculate tarplant *(Deinandra paniculate*; CRPR 4.2) is an annual herb that is endemic to California and northern Baja California. Known populations are concentrated along the central and southern coastal ranges of California between San Luis Obispo and Baja, with an isolated occurrence along the eastern edge of the San Francisco Bay. This species typically occurs in sandy soils in grassland, open chaparral, and woodland communities at elevations below 4,331 feet (1,320 meters). It is known to tolerate some disturbance. The typical blooming period is from May to November (Jepson Flora Project 2023). Documented threats to this species include development, with some historical occurrences known to be extirpated by urbanization (CNPS 2023a).

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is approximately 2.75 miles southwest of the project site. Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.12 EASTWOOD'S LARKSPUR

Eastwood's larkspur (*Delphinium parryi* ssp. *eastwoodiae*; CRPR 1B.2) is an annual herb endemic to California. This species is only found in the South Coast Ranges in chaparral openings and in grasslands on serpentine soils at elevations ranging from 245 to 1,640 feet (75–500 meters). The typical blooming period for this species is from February to April (Jepson Flora Project 2023). Potential threats to this species are not well documented (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is within the grassland habitats present on-site. This species was observed within grassland habitats on clay serpentine derived soils adjacent to Drainage 8 in the BSA, but outside of the proposed project footprint (see Appendix A: Figure A-7; Appendix F).

3.2.1.13 BETTY'S DUDLEYA

Betty's dudleya (*Dudleya abramsii* ssp. *bettinae*; CRPR 1B.2) is a perennial herb that is known to occur only in the Central Coast and Outer South Coast Ranges of California. This species typically occurs on rocky outcrops in serpentine grassland habitat at elevations ranging from 164 to 591 feet (50–180 meters). The typical blooming period for this species is from May to June (Jepson Flora Project 2023). Potential threats to this species include road construction (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on serpentine rock outcrops identified on-site, it was not observed within the BSA during appropriately timed surveys. As such, this species is not expected to occur in the project area.

3.2.1.14 MOUSE-GRAY DUDLEYA

Mouse-gray dudleya (*Dudleya abramsii* ssp. *murina*; CRPR 1B.3) is a perennial herb that is only known to occur along the Outer South Coast Ranges in San Luis Obispo County. This species typically occurs on serpentine outcrops in chaparral, cismontane woodland, and valley and foothill grassland habitat at elevations ranging from 394 to 984 feet (120–300 meters). The typical blooming period for this species is from May to June (CNPS 2023a; Jepson Flora Project 2023). Documented threats to this species include grazing, and potential threats include pipeline construction and competition from non-native plants (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is present on serpentine rock outcrops identified on-site and it was observed during appropriately timed surveys on the road cut rock outcrop west of Culvert G within the proposed project footprint (see Appendix A: Figure A-7; Appendix E: Photo E-22b; Appendix F).

3.2.1.15 BLOCHMAN'S DUDLEYA

Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*; CRPR 1B.1) is a perennial herb that is endemic to the Central Coast and South Coast of California, as well as disjunct populations occupying the northern Channel Islands. This species typically occurs on open, rocky slopes, often on serpentine or clay-dominated soils in coastal bluff, coastal scrub, and grassland habitats at elevations below 1,500 feet (450 meters). The typical blooming period for this species is from April to June (Jepson Flora Project 2023). Documented threats to this species include grazing, trampling, development, erosion, and competition from non-native plants (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Suitable habitat for this species is present on serpentine rock outcrops identified on-site, and it was observed during appropriately timed surveys on several rock outcrops along Drainages 7 and 8 outside of the proposed project footprint (see Appendix A: Figure A-7; Appendix E: Photo E-23a; Appendix F).

3.2.1.16 STINKBELLS

Stinkbells (*Fritillaria agrestis*; CRPR 4.2) is a perennial herb that is native to California. This species is known to occur in the coast ranges, San Joaquin Valley, Sacramento Valley, and Sierra Nevada foothills. The species occurs in association with foothill woodland, chaparral, grassland, and wetland communities at elevations below 1,640 feet (500 meters). The typical blooming period is from March to June (Jepson Flora Project 2023). Documented threats to this species include development, grazing, and vehicles (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.17 JONES' LAYIA

Jones' layia (*Layia jonesii*; CRPR 1B.2) is an annual herb that is endemic to San Luis Obispo County. This species typically occurs on open serpentine or clayey slopes at elevations below 984 feet (300 meters). The typical blooming period is from March to May (Jepson Flora Project 2023). Documented threats to this species include grazing, non-native plants, military activities, feral pigs, frequent wildfires, and trampling (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed within the BSA during appropriately timed surveys. As such, this species is not expected to occur in the project area.

3.2.1.18 SMALL-LEAVED LOMATIUM

Small-leaved lomatium (*Lomatium parvifolium*; CRPR 4.2) is a perennial herb endemic to the South Coast Ranges of California. This species typically occurs in chaparral, closed-cone coniferous forests, and coastal scrub communities on serpentine soils at elevations ranging from 65 to 2295 feet (20–700 meters). The typical blooming period for this species is from January to June (Jepson Flora Project 2023). Potential threats to this species are not well documented (CNPS 2023a).

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed within the BSA during appropriately timed surveys. As such, this species is not expected to occur in the project area.

3.2.1.19 WOODLAND WOOLLYTHREADS

Woodland woollythreads (*Monolopia gracilens*; CRPR 1B.2) is an annual herb that is endemic to the San Francisco Bay Area with limited occurrences documented in the Inner and Outer South Coast Ranges of California. This species typically occurs on serpentine substrates in openings of broad-leafed upland forests, chaparral, cismontane woodland, North Coast coniferous forests, and valley and foothill grasslands at elevations ranging from 328 to 3,934 feet (100–1,200 meters). The typical blooming period is from March to July (Jepson Flora Project 2023). Documented threats to this species include development, road maintenance, and road widening (CNPS 2023a).

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is approximately 9.55 miles southwest of the project site. Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.20 ADOBE YAMPAH

Adobe yampah (*Perideridia pringlei*; CRPR 4.3) is a perennial endemic to California occurring throughout most of the Transverse Ranges as well as north along the South Coast Ranges to southern Monterey County. This species typically occurs in chaparral and cismontane woodland often on clay soils but also on serpentine soils at elevations ranging from 985 to 5,905 feet (300–1,800 meters). The typical blooming period for this species is from April to July (Jepson Flora Project 2023). Potential threats to this species are not well documented.

This species has been documented at CSLO (CAARNG 2022). Although suitable habitat for this species is present on-site, it was not observed within the BSA during appropriately timed surveys. As such, this species is not expected to occur in the project area.

3.2.1.21 ADOBE SANICLE

Adobe sanicle (*Sanicula maritima*; State Rare, CRPR 1B.1) is a perennial herb that is known from limited, disjunct populations along the immediate coast of San Francisco, Alameda, San Luis Obispo, and northern Santa Barbara Counties. This species occurs in open, wet meadows, grasslands, and ravines at elevations below 492 feet (150 meters). The typical blooming period is from April to May (Jepson Flora Project 2023). Documented threats to this species include foot traffic, competition from non-native plants, recreational activities, and urbanization (CNPS 2023a).

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is approximately 2.63 miles southwest of the project site. Although suitable habitat for this species is present on-site, it was not observed during appropriately timed surveys. As such, this species is not expected to occur on-site.

3.2.1.22 NATIVE AND MATURE TREES, PROTECTED UNDER SENATE BILL 1334/KUEHL BILL, CALIFORNIA PUBLIC RESOURCES CODE 21083.4, AND LOCAL ORDINANCE

Coast live oak trees are present throughout the BSA, typically in association with either woodland and/or riparian woodland habitats. Impacts to or removal of any mature trees on the project site are regulated under California Public Resources Code (PRC) 21083.4 and the County Inland Land Use Ordinance (Title 22, Section 22.52.100; County of San Luis Obispo 2019); proposed or incidental impacts to or removal of both native and non-native trees may be subject to review for trees that are: (1) at least 8 inches in diameter at 4 feet above grade and located within the coastal zone, or (2) at least 5 inches in diameter at 4.5 feet above grade and outside the coastal zone. Impacts to or removal of oak trees would require mitigation in the form of on-site plantings and/or off-site protection of existing oak woodland habitat areas. As such, recommendations for avoidance, minimization, and mitigation of impacts to native oak trees are included in Section 5.2, *Recommended Avoidance, Minimization, and Mitigation Measures*.

3.2.2 Special-Status Wildlife Species

For the purposes of this section, special-status animal species are defined as the following:

- Animals listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.11 for listed animals and various notices in the *Federal Register* for proposed species).
- Animals that are candidates for possible future listing as threatened or endangered under the FESA.
- Animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines Section 15380).
- Animals listed or proposed for listing by the State of California as threatened and endangered under the CESA (14 CCR 670.5).
- Animal Species of Special Concern (SSC) to CDFW.
- Animal species that are fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

SWCA determined that there is suitable habitat within the BSA for 21 special-status wildlife species in addition to nesting birds. The following sections provide a description of the special-status wildlife species for which suitable habitat was identified on-site.

3.2.2.1 SPECIAL-STATUS MAMMAL SPECIES

3.2.2.1.1 Townsend's Big-Eared Bat

Townsend's big-eared bat (*Corynorhinus townsendii*; SSC) ranges throughout western North America from British Columbia to central Mexico, with isolated populations as far east as the Ozarks and Appalachia. In California, this species has been found in numerous habitats except for subalpine and alpine regions. This species requires forage and drinking sites in close proximity to its roost. Mating occurs mainly in early fall but is possible through winter and, after hibernation when delayed fertilization takes place, one young is born in early spring. Townsend's big-eared bat only roosts in the open, hanging from walls and ceilings, where it is relatively easily detected and particularly vulnerable to disturbance (Gruver and Keinath 2006; Pierson and Rainey 1998). The primary cause for population declines is human disturbance of roosting sites (Pierson and Rainey 1998).

According to CNDDB records (CDFW 2023a), there is a record of Townsend's big-eared bat within the BSA, and this species may roost within buildings adjacent to the project site. As such, there is potential for this species to occur within the BSA.

3.2.2.1.2 Monterey Dusky-Footed Woodrat

The range of the Monterey dusky-footed woodrat (*Neotoma macrotis luciana*; SSC) extends from the Santa Lucia Coast Range in southeastern Monterey County, south through Los Osos, San Luis Obispo County, California (Koenig 2015). This species typically occurs in dense chaparral, hardwood and conifer mixed forests, and riparian woodlands. Specific information regarding the diet and reproduction of Monterey dusky-footed woodrat is not well documented, but this species generally eats plant material and can reproduce year-round, with peak reproduction occurring in the winter and spring. This species constructs elaborate middens, which are used for nesting, caching food, and predator escape, that can reach 6 feet tall and consist of twigs, sticks, rocks, and a variety of other natural and human-made materials.

Monterey dusky-footed woodrat has been documented at CSLO (CAARNG 2022), and there is suitable habitat present for this species within the riparian habitat within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.1.3 Mountain Lion

Mountain lion (*Puma concolor*; Southern California/Central Coast Evolutionary Significant Unit [ESU]; State Candidate Endangered) ranges throughout most of California from sea level up to alpine meadows, with the exception of xeric regions of the Mojave and Colorado Deserts in southeastern California. This species is primarily a predator of small to large mammals but will also feed on birds, fish, insects, grass, and berries. This species is typically active at night and during dusk and dawn. Timing of reproduction can vary but, in California, most births occur in spring. Litter size is usually two to four young, which remain with the mother until they are about 2 years old. Individual home ranges can be between 3 to 15 square miles, and male home ranges are typically larger than those of females. Habitat fragmentation due to human development and associated roads and power transmission corridors restricts movement and increases proximity and encounter rates with humans, which can be detrimental to mountain lion populations (Zeiner et al. 1988–1990g).

Mountain lion has been documented at CSLO (CAARNG 2022), and there is suitable habitat present for this species within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.1.4 American Badger

The range of American badger (*Taxidea taxus*; SSC) covers most of North America and throughout California, except the North Coast region (Del Norte, Humboldt, Mendocino, Sonoma, and Marin Counties). This species prefers open and arid habitats such as grasslands, meadows, savannahs, open-canopy desert scrub, and open chaparral. American badger is a predator of fossorial rodents and adept at excavating deep burrows to access prey. As such, where badgers are present, the landscape is dotted with large soil tailings, which are normally half-moon shaped. American badger shelters in burrows it has excavated and, while known to traverse a relatively small home range (up to 2.5 acres), moves among burrows frequently. This species can be active at all times of day but is primarily nocturnal. American badger occurs at elevations up to 12,000 feet (3,650 meters). Mating typically occurs from May through September but, because of delayed implantation, cubs are not born until early spring. Habitat conversion is a threat to this species (Zeiner et al. 1988–1990a).

American badger has been documented at CSLO (CAARNG 2022), and there is suitable grassland habitat present for this species within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.2 SPECIAL-STATUS AMPHIBIAN SPECIES

3.2.2.2.1 California Red-Legged Frog

California red-legged frog (*Rana draytonii*; Federal Threatened; SSC) is known to occur from Mendocino County to Northern Baja California and eastward through the Northern Sacramento Valley and Sierra Nevada foothills at elevations below 1,525 meters (5,000 feet). This species requires permanent or semi-permanent waterbodies such as lakes, streams, and ponds with plant cover for foraging and breeding. Reproduction occurs in aquatic habitat from late November to early April. Egg masses are laid in the water following breeding, often on emergent vegetation. Following metamorphosis, juvenile frogs may remain in the breeding ponds or disperse into uplands regardless of topography. California red-legged frog has been documented dispersing over 2 miles from aquatic habitat. Dispersing frogs may seek refuge in small mammal burrows or soil fractures. Current threats include nonnative predators, such as bullfrogs and fishes, urban and agricultural development, and pesticide pollution (Nafis 2023).

According to CNDDB records (CDFW 2023a), there are two records of California red-legged frog within the project site, and there is suitable habitat present for this species within the drainages and surrounding habitat areas throughout the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.2.2 California Newt

California newt (*Taricha torosa*; SSC) is found along the coast and Coast Range mountains in California from Mendocino County south to San Diego County at elevations below 4,200 feet. A disjunct population resides in the southern Sierra Nevada. This species may be found in habitats such as wet forests, oak woodlands, chaparral, and rolling grasslands. Newts are terrestrial species that enter slow-moving streams, side channels, or pools for aquatic breeding. Breeding may occur from late December through April. Females attach egg masses to submerged branches, vegetation, or rocks just below the surface of the water. Larvae metamorphosis and begin to live on land at the end of summer or early fall (Thompson et al. 2016). California newt has suffered declines from human-caused habitat loss and degradation, including breeding ponds, and the introduction of nonnative predators, such as bullfrog (*Lithobates catesbeianus*), mosquito fish (*Gambusia affinis*), and crayfish (Nafis 2023).

California newt has been documented at CSLO (CAARNG 2022), and there is suitable habitat present for this species within the drainages and surrounding habitat areas within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.3 SPECIAL-STATUS REPTILE SPECIES

3.2.2.3.1 Southwestern Pond Turtle

Western pond turtles historically ranged from Baja California north to British Columbia, generally west of the Sierra Nevada and Cascade Range. This genus has been divided into two proposed new species—southwestern pond turtle (*Actinemys pallida*; SSC) and northwestern pond turtle (*Actinemys marmorata*), with the division occurring roughly near the Bay Area of California (Stebbins and McGinnis 2018). This species inhabits many types of permanent and ephemeral aquatic habitats, including sloughs, rivers, ponds, lakes, vernal pools, and marshes, as well as human-constructed waterbodies such as irrigation ditches and impoundments that provide adequate basking sites (e.g., logs, rocks, mats of floating vegetation, open mud banks), emergent vegetation, and underwater refugia (e.g., rocks, submerged

vegetation) (Spinks et al. 2003). This species also spends significant time on land, frequently moving between aquatic and upland habitats to nest, aestivate, and overwinter. Nests are usually partially or completely concealed beneath soil, moss, detritus, and leaf and needle litter and located within 165 feet of the water's edge. Though females have been observed moving overland more than 1,300 feet to find suitable nesting sites. Substantial population declines, largely due to habitat loss, streambed alteration, and fragmentation of aquatic and nesting habitats, have been observed throughout most of the species' range (Stebbins and McGinnis 2018; Bury and Germano 2008). The release of the more fecund pet red-eared sliders (*Trachemys scripta elegans*) into aquatic environments is another perpetual threat to the species.

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of southwestern pond turtle is adjacent to the project site to the north, and there is suitable habitat present for this species within the drainages present within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.3.2 Coast Horned Lizard

Coast horned lizard (*Phrynosoma blainvillii*; SSC) occurs in semi-arid mountains of western and southern California at elevations up to 8,000 feet. This species inhabits grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose, sandy soil and is frequently found near native ant hills, which are its preferred food source. This species may also forage on beetles, wasps, grasshoppers, flies, and caterpillars. The breeding season is from May to September, and nests are constructed in loose soil (Zeiner et al. 1988–1990c). Habitat conversion to housing and agriculture and the spread of nonnative ants (e.g., Argentine ants) have caused this species to decline. Historically, this lizard was extensively exploited by the pet trade (Nafis 2023).

According to CNDDB records (CDFW 2023a), the nearest occurrence of coast horned lizard is approximately 1 mile west of the project site. There is suitable habitat in the annual grassland within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.3.3 Two-Striped Gartersnake

Two-striped gartersnake (*Thamnophis hammondii*; SSC) is known to occur in coastal areas from Monterey County to Baja California at elevations below 2,130 meters (Nafis 2023). This species primarily inhabits aquatic habitats and forages under water. Forage consists of tadpoles, newt larvae, small frogs, fish, and occasionally fish eggs. Generally, this species is found around pools, creeks, cattle tanks, and other water sources, often in rocky areas.

Two-striped gartersnake has been documented at CSLO (CAARNG 2022), and there is suitable habitat present for this species within the drainages present within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.4 SPECIAL-STATUS INVERTEBRATE SPECIES

3.2.2.4.1 Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*; State Candidate Endangered) inhabits open grassland and scrub habitats primarily in California, from Sacramento south into Mexico, and from the coast east into Nevada. Bumble bee colonies are annual, with the queen mating in the fall before overwintering alone starting in October. In the spring, the queen emerges and establishes a new colony by producing female workers and male drones. Not much is known about Crotch's bumble bee overwintering sites (Hatfield et al. 2020). Generally, bumble bee overwinters in soft, disturbed soil (Goulson 2010) or under leaf litter or other debris (Williams et al. 2014). Queens emerge between February and April (Thorp et al. 2010) and

establish a colony. Colonies are usually underground in abandoned holes made by ground squirrels, mice, and rats, or occasionally abandoned bird nests (Osborne et al. 2008). However, bumble bee may also nest aboveground in tufts of grass or cavities in downed wood, rock walls, or brush piles. Crotch's bumble bee is a generalist forager, feeding on a variety of flowering plants (Hatfield et al. 2020). Like other bumble bees, this species feeds on both the nectar and pollen. Select food plant genera include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Hatfield et al. 2020). Threats to this species include loss of habitat due to agriculture and development and degradation of habitat due to invasive species, livestock grazing, herbicide use, and decreases in small mammal population due to poisoning.

According to CNDDB records (CDFW 2023a), the nearest occurrence of Crotch's bumble bee is greater than 4 miles southeast of the project site, and there is suitable habitat in the annual grassland within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.4.2 Monarch Butterfly

Monarch butterfly (*Danaus plexippus*; Federal Candidate) begins migrating in early November to overwintering sites in southern California and Mexico and flies north for breeding as milkweeds (*Asclepias* spp.) come into bloom in the spring. Wintering monarch butterfly has very specific habitat requirements for overwintering sites, including dappled sunlight, high humidity, fresh water, and an absence of freezing temperature or high winds (Sakai and Calvert 1991). Overwintering sites are typically located within 1.5 miles of the Pacific Ocean, in areas with moderate temperatures. In central and southern California, this species typically aggregates on Monterey pine (*Pinus radiata*) and blue gums (Xerces Society 2017).

Focused monarch butterfly surveys were completed in 2020 and 2021 and no overwintering monarchs or breeding monarchs were observed (CAARNG 2022). As such, this species is not expected to occur despite the presence of narrow-leaved milkweed within the BSA.

3.2.2.5 MIGRATORY NESTING BIRDS AND SPECIAL-STATUS BIRD SPECIES

3.2.2.5.1 Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*; SSC, State Watch List [Nesting]) occurs throughout the southern United States and Mexico. Nesting habitat for this hawk is primarily dense stands of coast live oak and riparian forests. Cooper's hawk nests and forages in close proximity to open water or riparian vegetation (Zeiner et al. 1988–1990d). Prey for Cooper's hawk consists of birds, small mammals, amphibians, and reptiles. This species is tolerant of human activity and will nest relatively close to developed and suburban areas. Declines in California populations can be attributed to loss of habitat through urbanization and development (Reeser 2006).

Cooper's hawk has been documented at CSLO (CAARNG 2022), and there is suitable nesting habitat present in the woodland and riparian habitat within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.2 Grasshopper Sparrow

Grasshopper sparrow (*Ammodramus savannarum*; SSC) typically inhabits moderately open grasslands with scattered shrubs. Nests are typically domed with grasses and are well concealed at the base of grass clumps. The current range of this species spans most of North America, with seasonal summer residency in California. Nesting typically occurs between March and August (Zeiner et al. 1988–1990e).

Grasshopper sparrow has been documented at CSLO (CAARNG 2022), and there is suitable habitat in the annual grassland within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.3 Golden Eagle

Golden eagle (*Aquila chrysaetos*; CDFW Fully Protected) is designated by the CDFW as a Fully Protected species (i.e., no permitted take or possession at any time) and is protected under the federal Bald and Golden Eagle Protection Act (USFWS 2023a). Golden eagles typically occur in open and semi-open habitats, most commonly in mountainous areas with hunting grounds where prey is abundant. Golden eagle typically feeds on small mammals and will nest in trees or on transmission towers, cliffs, or other steep escarpments (Cornell Lab of Ornithology 2023). The typical nesting period for golden eagle is from January 1 through September 15. This species is threatened by loss of forage and nesting habitat, secondary pesticide poisoning, and collisions with human-made structures.

Two golden eagles were observed during surveys on June 29, 2023, and there is suitable nesting habitat for this species present within the oak woodlands adjacent to the project site and suitable foraging habitat within the annual grassland within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.4 Western Burrowing Owl

Burrowing owl (*Athene cunicularia*; SSC) generally inhabits open grasslands, prairies, and fields with short-stature vegetation, but may also occupy agricultural and developed areas (Shuford and Gardali 2008a). This species typically uses the burrows of ground squirrels and other small mammals for shelter, protection from predators, and rearing of chicks. Burrowing owl is active day and night and can be seen roosting outside of burrow entrances during the day. Courtship and mating may begin as early as late December in California and continue into early spring. Incubation lasts 28 to 30 days and young disperse to nearby burrows by early fall. The primary threats to burrowing owl are the elimination of burrowing mammals through control programs and habitat loss (Klute et al. 2003).

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is adjacent to the project site to the north, and there is suitable habitat present for this species within the grassland habitat present within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.5 Northern Harrier

Northern harrier (*Circus hudsonius*; SSC) inhabits a range of habitats with low vegetation, including meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands. This species builds nests on the ground near marshes or in grasslands, usually near dense vegetation. Northern harrier feeds on a variety of animals, such as small mammals, reptiles, amphibians, and birds. This species occurs year-round in California and at least some breeding populations may be resident. However, northern harrier can be found in much greater numbers more broadly during migration and winter than during the breeding season, which extends from March through August (Shuford and Gardali 2008b). The primary threats to northern harrier are loss of habitat due to urban development and agriculture and disturbance of nesting habitat during the breeding season from agricultural practices such as plowing (Zeiner et al. 1988–1990h).

Northern harrier has been documented at CSLO (CAARNG 2022), and there is suitable nesting habitat present in the grassland habitat within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.6 White-Tailed kite

White-tailed kite (*Elanus leucurus*; CDFW Fully Protected) is a resident of coastal valleys and lowlands of California where it inhabits herbaceous and open stands of various habitats near agricultural operations. Nest sites are typically placed on the top of a tall tree near or within riparian areas, with adjacent grasslands for foraging. Typical prey items include voles and other small diurnal mammals, but it will occasionally feed on birds, insects, reptiles, and amphibians (Zeiner et al. 1988–1990i). Nesting occurs within thick, upper canopies of oaks, willows, or other tree stands near open foraging area.

White-tailed kite has been documented at CSLO (CAARNG 2022), and there is suitable nesting habitat within the woodlands and riparian habitat within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.7 California Horned Lark

California horned lark (*Eremophila alpestris actia*; CDFW Watch List) inhabits open areas such as grasslands and agricultural areas. Horned lark breeds between March and August, during which two broods are common. Nests are typically built on the ground in shallow depressions made of roots, grass, and hair. Incubation is approximately 10 to 14 days and young leave the nest at 9 to 12 days. This species is a year-long resident in California and becomes gregarious following breeding, forming large flocks that forage and roost together (Zeiner et al. 1988–1990b). Loss of habitat and destruction of nests through earth-moving activities are major threats; therefore, horned lark is on the California watch list.

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is adjacent to the project site to the east, and there is suitable habitat present for this species within the grassland habitat present within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.8 Loggerhead Shrike

Loggerhead shrike (*Lanius ludovicianus*; SSC) is a common resident of lowlands and foothills throughout California, occupying open habitats with scattered shrubs, trees, fence posts, and poles for perching opportunities. This species typically forages on insects but may also hunt for small reptiles, amphibians, and mammals, sometimes impaling them on sharp objects like barbed wire. Loggerhead shrike builds nests on stable branches in well-concealed dense shrubs or trees (Zeiner et al. 1988–1990f). This species has declined by as much as 76% since 1966, according to the North American Breeding Bird Survey (Cornell Lab of Ornithology 2023). The decline coincides with the introduction and increased use of chemical pesticides between the 1940s and the 1970s that may have resulted in indirect poisoning from prey. Conversion of habitat for anthropogenic uses is another likely threat, as it reduces or eliminates potential nesting habitat as well as prey base.

According to CNDDB records (CDFW 2023a), the nearest documented occurrence of this species is greater than 5 miles to the southeast, and there is suitable habitat present for this species within the woodland and grassland habitats present within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.9 Yellow Warbler

Yellow warbler (*Setophaga petechia*; SSC) breeds throughout northern and coastal California and within and east of the Sierra Nevada. This species breeds in riparian woodlands from coastal to desert lowlands and montane chaparral, open ponderosa pine and mixed conifer habitats with substantial amounts of brush. Yellow warbler feeds primarily on insects and spiders by gleaning and hovering in upper canopy of

deciduous trees and shrubs (Zeiner et al. 1988–1990j). This species was once one of the most numerous warblers in North America, but their populations have been slowly declining with a cumulative decline of about 20% between 1966 and 2019, according to the North American Breeding Bird Survey (Cornell Lab of Ornithology 2023). Degradation of riparian habitat, nest parasitism by brown-headed cowbird (*Molothrus ater*), and collision with brightly lighted structures, including large buildings, during nighttime migration likely have contributed to the decline of this species (Cornell Lab of Ornithology 2023).

Yellow warbler has been documented at CSLO (CAARNG 2022), and there is suitable nesting habitat within the riparian habitat within the BSA. As such, there is potential for this species to occur within the BSA.

3.2.2.5.10 Least Bell's Vireo

Least Bell's vireo (*Vireo bellii pusillus*; Federal Endangered, State Endangered) is a small, migratory songbird that nests and forages almost exclusively in riparian woodland. It is one of four subspecies (American Ornithologist's Union 1957), and each is isolated from another throughout the year (Hamilton 1962; USFWS 1998). This species is an obligate riparian breeder, typically inhabiting structurally diverse woodlands along watercourses (USFWS 1998). Riparian habitat characterized by dense shrub cover and a structurally diverse canopy for foraging is preferred by least Bell's vireo for nesting (Goldwasser 1981; Gray and Greaves 1984; Salata 1983; USFWS 1998). Plant species composition does not appear to be as important a determinant of nesting site selection as habitat structure (USFWS 1998), although least Bell's vireo typically nest in willow-dominated areas. Adjacent upland habitats may be utilized by foraging adults and adults foraging with fledglings (USFWS 1998). The breeding distribution of least Bell's vireo is currently restricted to eight counties in southern California (San Diego, Orange, Los Angeles, San Bernardino, Ventura, Santa Barbara, Riverside, and San Luis Obispo) and a portion of Baja California, Mexico. Population declines have occurred due to loss of or modification of habitat, such as removal or thinning of riparian vegetation, removal of adjacent upland habitats for foraging, and increase in human-associated disturbances (USFWS 1998). Specific actions that have adversely affected least Bell's vireo critical habitat include stream channelization, water impoundment or extraction, water diversion, intensive recreation, and development (USFWS 1998).

Least Bell's vireo has not been documented at CSLO since 1995 despite the completion of USFWS protocol surveys in 2020 (CAARNG 2023). There is suitable nesting habitat present within the riparian areas of the BSA. However, due to the lack of recent documented occurrences on the installation, least Bell's vireo is not expected to nest within the BSA.

3.2.2.5.11 Migratory Nesting Birds

In addition to bird species protected by the federal or state government, all native avian species are protected by federal and state legislation, most notably the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Collectively, these and other international regulations make it unlawful to collect, sell, pursue, hunt, or kill native migratory birds, their eggs, nests, or any parts thereof.

Avian species can be expected to occur within the project area during all seasons and throughout construction of the proposed project. The potential to encounter and disrupt avian species is highest during their nesting season (generally February 1–August 31), when nests are likely to be active and eggs and young are present. The oak trees on-site present the highest-quality habitat for nesting, but open fields and structures on-site may also provide nesting habitat for various species. Raptors are particularly drawn to large trees and structures, and they are less tolerant of disturbances than other species.

Recommended avoidance and minimization measures for the protection of migratory nesting birds are provided in Section 5.2, *Recommended Avoidance, Minimization, and Mitigation Measures*.

3.2.3 Sensitive Habitats

3.2.3.1 WATERS AND WETLANDS

The BSA supports a number of well-defined drainages, swales, pond features, and wetlands. These aquatic resources are considered sensitive habitats.

Those identified as drainages (Drainages 1–12) exhibited a well-defined bed and bank, evidence of OHWM, and relatively permanent flow. For the purposes of this assessment, relatively permanent flow was assumed to be any feature that continuously flowed for at least 3 months of the year. Based on the above, Drainages 1 through 12 would likely be considered waters of the United States and waters of the state.

Those features that were identified as swales (Swales 1–11) supported evidence of a defined bed and bank; however, they lacked OHWM indicators and relatively permanent flow. Based on a lack of OHWM indicators, Swales 1 through 11 would likely be considered waters of the state.

Three pond features were identified on-site; however, due to a lack of continual surface connection, these ponds do not all classify as non-wetland waters of the United States. Specifically, Pond 1 is an in-stream feature of Drainage 7 and would likely be considered waters of the United States and waters of the state. Ponds 2 and 3 appear isolated in the landscape, only having brief connectivity with roadside ditches (Swale 10). Based on the above, Ponds 2 and 3 are likely only considered waters of the state.

Up to three wetland features (Wetlands 1–3) were identified within the BSA. All features identified as wetlands were confirmed to support all three parameters of a federal wetland (hydrology, hydrophytic vegetation, and hydric soils). It should be noted that Wetlands 1 and 2 are in-stream features and Wetland 3 is in-stream and adjacent (outside of the OHWM).

Based on the above, Drainages 1 through 12, Pond 1, and Wetlands 1 through 3 would be under the jurisdiction of the USACE, CDFW, and RWQCB. Swales 1 through 11 and Ponds 2 and 3 would be under the jurisdiction of the CDFW and RWQCB.

3.2.3.2 CNDDB SENSITIVE NATURAL COMMUNITIES

Natural vegetation communities that have a State Rarity Rank of S1 through S3 are considered CDFW Sensitive Natural Communities. A number of rare MCV plant communities and alliances are present within the BSA, including the California sycamore – coast live oak riparian woodland alliance, iris-leaved juncus flats, serpentine rock outcrops, and purple needlegrass grassland. These communities represent those sensitive natural communities with a S2 or S3 ranking, meaning they are considered rare to uncommon within the state.

3.2.3.3 USFWS-DESIGNATED CRITICAL HABITATS

No USFWS-designated Critical Habitat is present within the BSA.

3.3 Habitat Connectivity

Maintaining connectivity between areas of suitable habitat is critical for the survival and reproduction of plants and wildlife. Intact habitats benefit plants by ensuring proper dispersal of pollen and seeds, which sustains or grows the population and contributes to the genetic health of the species. Wildlife species need contiguous habitats to attain sufficient food resources for their energetic demands; to locate proper resting, burrowing, and/or nesting sites; to facilitate long-distance travel or migration to seek out mates or resources; and for the safe and successful dispersal of young. The project site is in a rural area of central San Luis Obispo County, in the foothills of the Santa Lucia Range. Land cover within and adjacent to the property is a mix of natural sloped woodland with patches of active agriculture. Agricultural land use practices in the project area have modified natural habitats or created barriers for natural movement, but habitat connectivity within the property overall remains relatively intact. The project as planned may reduce the quality of natural habitat on-site but is not expected to substantially increase the current level of habitat fragmentation in the region nor is it expected to create a significant barrier to wildlife movement.

4 REGULATORY OVERVIEW

4.1 Federal Policies and Regulations

4.1.1 Federal Endangered Species Act of 1973

The FESA provides legislation to protect federally listed plant and animal species. Impacts to listed species resulting from the implementation of a project would require the responsible agency or individual to formally consult with the USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) to determine the extent of impact to a particular species. If the USFWS or NOAA Fisheries determines that impacts to a federally listed species would likely occur, alternatives and measures to avoid or reduce impacts must be identified. The USFWS and NOAA Fisheries also regulate activities conducted in federal critical habitat, which are geographic units designated as areas that support primary habitat constituent elements for listed species.

No FESA-listed species were observed during surveys of the BSA.

4.1.2 Migratory Bird Treaty Act of 1918

The MBTA protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers, popular in the latter part of the 1800s. The MBTA is enforced by the USFWS, and potential impacts to species protected under the MBTA are evaluated by the USFWS in consultation with other federal agencies.

No nesting migratory birds or vacant nests were observed during surveys of the BSA. However, the BSA supports suitable nesting habitat, and the proposed project must comply with the MBTA.

4.1.3 Clean Water Act of 1977

4.1.3.1 SECTION 404

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and non-wetland waterbodies that meet specific criteria. USACE regulatory jurisdiction, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 United States Code [USC] 403), regulates almost all work in, over, and under waters listed as "navigable waters of the United States" that results in a discharge of dredged or fill material within USACE regulatory jurisdiction, pursuant to Section 404 of the Clean Water Act (CWA) and in conformance with the *Revised Definition of "Waters of the United States"; Conforming* that became effective on September 8, 2023, per the Supreme Court's decision in the case of *Sackett v. Environmental Protection Agency*. Under Section 404, the USACE regulates the following waters of the United States features:

- Traditional Navigable Waters (a)(1): Large rivers and lakes that could be used in interstate or foreign commerce, as well as waterbodies affected by tides.
- Territorial Seas (a)(1): Territorial seas that extend 3 miles out to sea from the coast.
- Interstate Waters(a)(1): Includes waters like streams, lakes, or wetlands that cross or form part of state boundaries.
- Impoundments (a)(2): Impounded waterbodies created in or from "waters of the United States," like reservoirs and beaver ponds.
- Tributaries(a)(3): Includes natural, man-altered, or man-made waterbodies that flow directly into (a)(1) waters or (a)(2) impoundments that are relatively permanent, standing or continuously flowing bodies of water.
- Adjacent Wetlands (a)(4): These wetlands can be next to, abutting, or separated by certain natural or constructed features. Adjacent wetlands are jurisdictional if they maintain a continuous surface connection to paragraph (a)(2) impoundments or (a)(3) jurisdictional tributaries.
- Additional Waters (a)(5): These lakes, ponds, streams, or wetlands do not fit into the above categories. They are jurisdictional if they meet the relatively permanent standard.

Drainages 1 through 12 and Pond 1 may be considered waters of the United States based on OHWM indicators and connectivity to a paragraph (a)(1) water through Chorro Creek. Further, Wetlands 2 and 3 may be considered federal (adjacent) wetlands. It should be noted that the relatively permanent standard was assumed to be met if the feature seasonally flowed for at least 3 months a year.

4.1.3.2 SECTION 401

Section 401 of the CWA and its provisions ensure that federally permitted activities comply with the CWA and state water quality laws. Section 401 is implemented through a review process that is conducted by the RWQCB and triggered by the Section 404 permitting process (see above). The RWQCB certifies, through the Section 401 process, that a proposed project complies with applicable effluent limitations, water quality standards, and other conditions of California law. Evaluating the effects of the proposed project on both water quality and quantity (runoff) falls under the jurisdiction of the RWQCB.

All water and wetland features identified within the BSA are likely considered waters of the state and the resources therein under the jurisdiction of the RWQCB.

4.2 State Policies and Regulations

4.2.1 California Endangered Species Act of 1973

The CESA ensures legal protection for plants listed as rare or endangered and wildlife species formally listed as endangered or threatened. The state also maintains a list of California SSC. SSC status is assigned to species that have limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. Under state law, the CDFW is empowered to review projects for their potential to impact special-status species and their habitats. Under the CESA, the CDFW reserves the right to request the replacement of lost habitat that is considered important to the continued existence of CESA-protected species.

No CESA-listed species or SSC were observed within the BSA during surveys.

4.2.2 California Fish and Game Code

California Fish and Game Code Section 3511 includes provisions to protect Fully Protected species, such as: (1) prohibiting take or possession "at any time" of the species listed in the statute, with few exceptions; (2) stating that no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" the species; and (3) stating that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession. The CDFW is unable to authorize incidental take of "fully protected" species when activities are proposed in areas inhabited by those species. California Fish and Game Code Sections 3503 and 3503.5 state that it is unlawful to take, possess, or destroy the nest or eggs of any bird, with occasional exceptions. In addition, Section 3513 states that it is unlawful to take or possess any migratory bird as designated in the MBTA or any part of such migratory birds except as provided by rules and regulations under provisions of the MBTA.

No nesting migratory birds or vacant nests were observed during surveys of the BSA. However, the proposed project must comply with the California Fish and Game Code.

4.2.2.1 SECTIONS 1600 THROUGH 1602

Pursuant to Division 2, Chapter 6, Sections 1600 through 1602 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. The CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." The CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." CDFW jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

If the CDFW determines that a project may adversely affect existing fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) is required. An LSAA lists the CDFW conditions of approval relative to the proposed project and serves as an agreement between an applicant and the CDFW for a term of not more than 5 years for the performance of activities subject to this section.

All water and wetland features identified within the BSA are likely considered waters of the state and resources therein under the jurisdiction of CDFW.

4.2.3 State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board (SWRCB) and nine RWQCBs regulate discharge of fill and dredged material in California, under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), through the State Water Quality Certification Program. State Water Quality Certification is necessary for all projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the state. Waters of the state are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state."

In order for a Section 404 permit to be valid, Section 401 of the CWA requires a Water Quality Certification or waiver to be obtained. The Water Quality Certification (or waiver) determines that the permitted activities will not violate water quality standards individually or cumulatively over the term of the action. Water quality certification must be consistent with the requirements of the CWA, CEQA, CESA, and Porter-Cologne Act.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for the Discharge of Dredged or Fill Material to Waters of the State*. Those activities that will result in the discharge of dredged or fill material are required to comply with the procedures unless an exclusion applies, or the discharge qualifies for coverage under a General Order.

All water and wetland features identified within the BSA are likely considered waters of the state and the resources therein under the jurisdiction of the RWQCB via Section 401 of the CWA and/or the Porter-Cologne Act.

5 IMPACT ASSESSMENT

5.1 Summary of Potential Impacts

The proposed project has the potential to directly and/or indirectly impact oak trees, special-status plant species, special-status wildlife species, and migratory nesting birds. An assessment of anticipated impacts to sensitive biological resources caused by the proposed project is below.

5.1.1 Impacts to Special-Status Plant Species

5.1.1.1 Special-Status Plant Species

The proposed project has been designed to avoid impacts to special-status plant species to the extent feasible. Based on the limited amount of encroachment with proposed road improvements into native habitats, a majority of special-status plant species that have been identified within the BSA will be avoided.

Those special-status plant species that may be impacted by the proposed project include Cambria morning-glory, San Luis Obispo owl's clover, Palmer's spineflower, and mouse-gray dudleya. Direct impacts to these species could include removal of individual plants and intact seed banks that occur within and immediately adjacent to work areas, as well as permanent conversion of occupied habitat. Indirect impacts to special-status plant species in adjacent areas may result from dust emissions during construction, altered hydrology, or the spread of non-native and invasive plant species to areas not previously impacted.

No impacts to club-haired mariposa lily, Eastwood's larkspur, or Blochman's Dudleya are expected as a result of the project.

5.1.1.2 Oak Trees

The project, as proposed, is expected to result in the removal of individual oak trees. In addition, trimming and/or disturbance within the critical root zone of trees will be required. Impacts to and removal of individual oak trees and oak woodland habitat are regulated under CEQA through Senate Bill 1334 (Kuehl Bill) and California PRC 21083.4.

Based on preliminary estimates, up to 14 coast live oak trees may be removed to facilitate installation of the culverts.

5.1.2 Impacts to Special-Status Wildlife Species

5.1.2.1 Special-Status Mammals

Direct impacts to Townsend's big-eared bat are not expected to occur because potential roost sites are not expected to be impacted by the project. Indirect impacts may occur due to short-term construction activities in the vicinity of roosts, which may temporarily deter use of the area by bats.

Monterey dusky-footed woodrat, mountain lion, and American badger may be impacted directly or indirectly during construction. Construction poses several direct risks, such as vehicle strikes and destruction of resources, like middens or dens. Further, construction may impact or deter use of valuable habitat, yielding it unsuitable for these species. Indirect impacts may occur by deterring movement patterns of wildlife caused by construction disturbances. Avoidance and mitigation measures have been provided to ensure that project activities avoid impacts to American badger, mountain lion, and Monterey dusky-footed woodrat within the BSA (see Section 5.2, *Recommended Avoidance, Minimization, and Mitigation Measures*).

5.1.2.2 Special-Status Amphibians

If California red-legged frog or California newt are utilizing the aquatic habitats adjacent to the project site at the time of project implementation, juveniles and adults may disperse through the project site, particularly during the rainy season. If individual California red-legged frog or California newt are present on-site during construction, they could be crushed or trampled by vehicles and equipment. In addition, there is potential for California red-legged frog and California newt to use small mammal burrows for refuge and cover. As such, excavation or crushing of any burrows during construction may result in direct impacts to these species.

5.1.2.3 Special-Status Reptiles

The project site may provide suitable habitat for coast horned lizard, southwestern pond turtle, and two-striped gartersnake, and construction activities pose risks for direct and indirect impacts to special-status reptiles if present. For example, reptiles basking on or crossing roadways will be especially vulnerable to vehicle strikes. Reptiles can be slow-moving, both because of behavioral adaptations to be camouflaged from predators and because of their ectothermic nature. This trait presents crushing hazards in the presence of relatively fast-moving equipment or even foot traffic. Removal of vegetation during project activities may indirectly impact special-status reptiles because reptiles rely on vegetative cover for temperature regulation.

5.1.2.4 Special-Status Invertebrate Species

The project site may provide suitable foraging, nesting, and overwintering habitat for Crotch's bumble bee. Direct impacts to nesting Crotch's bumble bee are most likely to occur during the flight season, generally March 1 to September 30, and to overwintering queens, from October 1 through February 28. Direct and indirect impacts may occur if grading and vegetation removal occur during the flight season. These actions can destroy nests or overwintering queens and remove foraging habitat that may lead to nest destruction or failure.

5.1.2.5 Special-Status and Nesting Birds

Direct impacts to avian species are most likely to occur if construction activities take place during the typical avian nesting season, generally February 1 through August 31, but as early as January 1 for golden eagle. In addition, direct impacts to burrowing owl may occur between October 16 and March 31 if they are overwintering within the project area. Construction-related activities can destroy nests and/or burrows, remove nesting or overwintering habitat, or cause disturbance that may lead to nest failure or otherwise harass nesting, resident, transient, or overwintering birds. Indirect impacts may occur due to habitat loss, such as through removal of suitable nesting substrates or overwintering burrows.

5.1.3 Impacts to Sensitive Habitats

5.1.3.1 Sensitive Natural Communities

The proposed project is expected to include permanent and temporary impacts to four sensitive natural communities mapped within the BSA. Table 3 provides a summary of proposed impacts to sensitive natural communities.

Table 3. Summary of Proposed Impacts to Natural Communities

Vegetation Type	Permanent Impacts	Temporary Impacts
Annual grassland	1.94 acres	0.27 acre
Riparian woodland[1]	0.12 acre	0.57 acre
Coast live oak woodland	0	0
Eucalyptus groves	0.02 acre	0.32 acre
Iris-leaved juncus flats[1]	0.13 acre	0.14 acre
Purple needlegrass grassland[1]	0.02 acre	0.33 acre
Serpentine rock outcrop[1]	0.14 acre	0.002 acre
Agriculture	0.05 acre	0.27 acre
Ruderal	0.25 acre	2.39 acre
Developed	7.9 acres	0.69 acre
Total	**10.61 acres**	**13.68 acres**

[1] CDFW Sensitive Natural Communities.

5.1.3.2 Waters and Wetlands

The proposed project is expected to include repair/replacement activities at six jurisdictional culverts along Range Road (Culverts A–D, G, and J) and two culverts along San Benito Road (Culverts H–I). Only minor vegetation work is proposed upstream of one culvert along Range Road (Culvert E). One

culvert (Culvert F) is not located within jurisdictional waters. The proposed work will require temporary and permanent impacts to waters of the United States and waters of the state and wetlands. No ponds are expected to be impacted by the proposed project. Table 4 provides a summary of proposed impacts to jurisdictional waters by aquatic resource type.

Table 4. Summary of Proposed Impacts to Jurisdictional Waters and Wetlands

Aquatic Resource Type	Permanent Impacts	Temporary Impacts
Riparian[1]	0.184 acre / 480 LF	0.501 acre / 290 LF
Streambed	0.053 acre / 480 LF	0.160acre / 290 LF
Wetland	0.018 acre	0.01 acre
Total	**0.255 acre /480 LF**	**0.671 acre / 290 LF**

Note: LF = linear feet

[1] Riparian and Streambed linear feet overlap.

5.1.3.3 USFWS-Designated Critical Habitat

No impacts to USFWS-designated Critical Habitat anticipated.

5.2 Recommended Avoidance, Minimization, and Mitigation Measures

BIO-1 **Environmental Awareness Training.** An environmental awareness training shall be presented to all construction personnel by a qualified biologist prior to the start of any project activities. The training shall include color photographs and a description of the ecology of all special-status species known or with potential to occur, as well as other sensitive resources requiring avoidance during construction. The training shall also include a description of protection measures required by discretionary permits, an overview of the FESA and CESA, and implications of noncompliance with these regulations. This shall include an overview of the required avoidance, minimization, and mitigation measures. A sign-in sheet with the name and signature of the qualified biologist who presented the training and the names and signatures of the environmental awareness trainees shall be kept. A fact sheet conveying the information provided in the environmental awareness training shall be provided to all project personnel.

BIO-2 **Site Maintenance and General Operations.** The following general measures are recommended to minimize impacts during active construction:

1. The use of heavy equipment and vehicles shall stay within the project limits and defined staging areas/access points. The boundaries of each work area shall be clearly defined and marked with high-visibility fencing. No work shall occur outside these limits.
2. Project plans, drawings, and specifications shall show the boundaries of all sensitive resource areas and the location of erosion and sediment controls, delineation of construction limits, and other pertinent measures to ensure the protection of sensitive habitats and resources.
3. Staging of equipment and materials shall occur in designated areas with appropriate demarcation and perimeter controls. No staging areas shall be located within 100 feet of sensitive habitat.

4. Secondary containment, such as drip pans, shall be used to prevent leaks and spills of potential contaminants.
5. Washing of concrete, paint, or equipment and refueling and maintenance of equipment shall occur only in designated staging areas. These activities shall occur at a minimum of 100 feet from sensitive habitat. Sandbags and/or absorbent pads and spill control kits shall always be available on-site to clean up and contain fuel spills and other contaminants.
6. Construction equipment shall be inspected by the operator daily to ensure that equipment is in good working order and no fuel or lubricant leaks are present.
7. Plastic monofilament netting (erosion control matting) or similar material shall not be used on-site due to the potential to entangle special-status wildlife species. Acceptable substitutes are coconut coir matting, biodegradable fiber rolls, or tackified hydroseeding compounds.
8. The use of pesticides (including rodenticides) and herbicides on the property shall be in compliance with all federal, state, and local regulations to avoid primary and secondary poisoning of sensitive species that may be using the project site.
9. After completion of the project's construction, all protective fencing/flagging used to delineate sensitive biological resources shall be removed from the project area and disposed of in appropriate waste receptacles or reused.

BIO-3 **Special-Status Plant Species and Sensitive Natural Communities Mitigation Plan.** The boundaries of special-status plant populations and sensitive natural communities identified within the BSA shall be flagged in the field using data collected prior to the start of the project. If special-status plant species or sensitive natural communities cannot be avoided during construction (i.e., if avoidance is deemed infeasible), a mitigation plan for impacts to these resources shall be developed prior to the onset of construction and implementation during construction and include a minimum 1:1 mitigation ratio based on area of impact. At a minimum, the mitigation plan shall:

1. Discuss the proposed construction methods, construction schedule, and implementation schedule of activities proposed as part of the plan.
2. Quantify the anticipated acreage of impacts to special-status plant species and sensitive natural communities.
3. Include a requirement for photographic documentation and a post-implementation report.
4. Identify each special-status species and the sensitive natural communities observed on-site, including a description of the mitigation activities proposed for each. As appropriate, the species-specific measures shall include:
    a. A detailed description of topsoil salvage procedures and soil stockpile storage methods;
    b. Methods and timing of any proposed seed collection and storage;
    c. Locations and demarcation of full-time avoidance areas during construction;
    d. Location and methods for restoration, replanting, and/or reseeding (e.g., decompaction, recontouring, scarification, mulching, hand broadcasting, hydroseeding, etc.); and
    e. Short- and/or long-term monitoring protocols and/or vegetative growth success criteria for mitigation and restoration.

The mitigation plan shall be submitted for approval to the CSLO Environmental Coordinator prior to the onset of site disturbance. If other special-status plant species or sensitive natural communities are discovered during construction that were not previously identified during initial survey efforts, the same protocol for avoidance and minimization shall apply. If they cannot be avoided, they shall be included in the plan.

If federally or state-listed plant species are identified on-site and cannot be avoided, appropriate agencies shall be contacted for further guidance and to obtain take permits, as feasible, prior to the start of the project.

BIO-4 **Oak Tree Protection and Mitigation.** To the maximum extent feasible, impacts to oak trees shall be avoided and minimized. The following avoidance and minimization measures shall be implemented to address potential impacts to oak trees:

1. The canopy edge and trunk location of oak trees located within 50 feet of proposed construction shall be surveyed and placed on all plan sets. The tree map shall be used to protect oak trees during project implementation.
2. Impacts to oak tree canopies or sensitive root zones should be avoided to the extent feasible. Impacts may include pruning, ground disturbance or placement of impervious surfaces (e.g., asphalt, permanent structures) within the sensitive root zone, installation of year-round irrigation or other supplemental water within the sensitive root zone, and trunk damage.
3. Prior to ground-breaking, tree protection fencing shall be installed as close to the outer limit of the sensitive root zone as practicable for construction operations to protect trees located within 50 feet of construction that shall be preserved. The fencing shall be in place throughout the duration of construction. Demarcation such as t-posts and a minimum of two strands of yellow rope are adequate.
4. All construction activity shall remain outside delineation fencing installed for protection of oak trees.
5. A licensed arborist or qualified botanist shall be hired to oversee all removal or trimming of existing roots and necessary branch trimming.
6. Care shall be taken to avoid surface roots within the top 18 inches of soil. If any roots are exposed during construction, they shall be covered with a layer of soil to match existing topography.
7. Impacts to oak trees shall be assessed by a licensed arborist or qualified botanist prior to final inspection and reported to the County.

For oak tree removals or impacts during project implementation, the CAARNG shall provide in-kind mitigation (on-site if feasible), typically 4:1 for removals and 2:1 for impacted trees. As all oak tree impacts are associated with riparian habitat, all oak tree mitigation shall be addressed in BIO-7, *Riparian and Wetland Mitigation Plan*.

BIO-5 **Surveys, Avoidance, and Monitoring for Special-Status Wildlife Species.** A qualified biologist shall conduct surveys prior to the start of initial project activities to ensure special-status wildlife species are not present within proposed work areas. If special-status wildlife species are found, they shall be allowed to leave the area on their own volition or be relocated (as permitted) to suitable habitat areas outside the work area(s). If necessary, resource agencies shall be contacted for further guidance. Pre-activity surveys and/or monitoring shall be conducted as follows:

1. **Preconstruction Survey and Avoidance Measures for Townsend's Big-Eared Bat.** Prior to the start of work, a qualified biologist shall conduct an emergence survey of existing structures and trees within and adjacent to the project site to determine if roosting bats are present. If a colony of bats is found roosting, further surveys shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.). If Townsend's big-eared bat is determined to be roosting on or adjacent to the project site, the following shall be implemented as appropriate:
    a. If a day or night roosting site is located on-site or within 50 feet of the project site, avoidance buffers shall be established/developed as determined by a qualified biologist dependent on the species as well as the location of the roost in relation to the type of project activities occurring. If the day or night roost is within the area of impact, and the bats are not part of an active maternity colony, exclusion measures may be implemented, in close coordination with a qualified biologist and the CDFW. A plan shall be developed that includes the methodology for excluding roosting bats.
    b. If an active maternity roost for Townsend's big-eared bat is found in the buildings on-site or within 100 feet of the project site, an avoidance buffer shall be established as determined by a qualified biologist. No construction activities (including parking and staging) shall be permitted within the avoidance buffer during the rearing season (typically March–September).

    To avoid impacts to foraging bats, construction shall be limited to daylight hours.
2. **Preconstruction Survey and Avoidance Measures for Monterey Dusky-footed Woodrat.** Prior to the start of work within 50 feet of suitable woodrat habitat, a survey shall be conducted by a qualified biologist to identify and flag woodrat middens for avoidance. A minimum 10-foot buffer area shall be clearly delineated around any woodrat middens that are discovered during the survey. Due to the likelihood of woodrats fleeing the midden as a result of nearby construction activity, a biologist shall monitor initial vegetation clearing and ground disturbance within 25 feet of woodrat middens. If woodrats are observed fleeing middens, work shall be temporarily halted until woodrats are outside the area of impact. Woodrat middens that are deemed unavoidable shall be carefully dismantled mechanically (e.g., excavator with thumb) or with hand tools from the top down, allowing woodrats to escape unharmed. A biological monitor shall be present for dismantling.
3. **Avoidance Measures for Mountain Lion.** The following measures shall be implemented to avoid impacts to mountain lion:
    a. A maximum 25-mile-per-hour speed limit shall be required at the project site during construction activities.
    b. All construction activities shall cease at dusk and not start before dawn.
    c. All construction-related trash and debris shall be contained in appropriately sealed trash receptacles during all construction activities.
4. **Preconstruction Survey and Avoidance Measures for American Badger.** A qualified biologist shall conduct a preconstruction survey within 30 days prior to the start of initial project activities to ensure American badger are not present within proposed work areas or within 200 feet of work areas. If potential dens are discovered, they shall be monitored with a remote camera or tracking medium for at least 3 days to determine if they are occupied. If the qualified biologist determines that a den may be active during the non-reproductive season (July 1–January 31), a

no-entry exclusion buffer shall be established within 50 feet of the den. If active dens are found during the reproductive season (February 1–June 30), no activity shall occur within 200 feet of the den. Exclusion buffers shall be prominently flagged and encircle the den. Exclusion zones shall be maintained until all project-related disturbances have been terminated or it has been determined by a qualified biologist that the den is no longer in use. If an exclusion buffer is not feasible, the applicant shall contact the CSLO Environmental Coordinator for further guidance. The results of the survey shall be provided to the CSLO Environmental Coordinator prior to initial project activities. If construction lapses beyond 30 days from the survey, an additional survey shall be required.

5. **Preconstruction Surveys for Southwestern Pond Turtle, California Red-Legged Frog, California Newt, and Two-Striped Gartersnake.** A qualified biologist shall conduct a pre-activity survey immediately prior to the start of work to ensure southwestern pond turtle, California red-legged frog, California newt, and two-striped gartersnake are not present within proposed work areas. Construction monitoring shall be conducted by a qualified biologist during all initial ground-disturbing and vegetation removal activities (e.g., grading, grubbing, vegetation trimming) within suitable habitat. If these species are found during preconstruction surveys or monitoring, they shall be allowed to leave the work area on their own volition or be hand captured and relocated to suitable habitat outside of the area of impact, with appropriate resource agency approval. To minimize the potential for impacts to dispersing amphibians, work within 100 feet of aquatic habitat shall occur during dry conditions, as feasible. If work within 100 feet of aquatic habitat is scheduled to start during the typical rainy season (October–April), when California red-legged frog and California newt are most likely to be dispersing through upland habitat, a follow-up survey shall be conducted following any rain event of 0.25 inch or greater prior to the start of work for the day. During this survey, all vehicles, equipment, and materials staged on-site overnight shall be inspected. If a special-status wildlife species are found within the work area, it shall be allowed to leave on its own volition and, as appropriate, the resource agencies shall be contacted to capture and relocate special-status species to suitable habitat outside of the area of impact.

6. **Preconstruction Surveys and Monitoring for Coast Horned Lizard.** A qualified biologist shall conduct a pre-activity survey immediately prior to the start of initial ground disturbance within 50 feet of suitable habitat for coast horned lizard. Construction monitoring shall also be conducted by a qualified biologist during all initial ground-disturbing and vegetation removal activities (e.g., grading, grubbing, vegetation trimming, vegetation removal, including tree removal) within suitable habitat. If coast horned lizard is discovered during surveys or monitoring, the species shall be allowed to leave the area on their own volition or be hand captured and relocated to suitable habitat outside the area of impact.

7. **Preconstruction Survey for Crotch's Bumble Bee.** If work is planned to occur during the flying period of March 1 to September 1, a qualified biologist shall survey for Crotch's bumble bee within the work area 2 weeks prior to the start of initial ground disturbance. If a Crotch's bumble bee nest is observed, no work shall occur within 25 feet of the nest until it is no longer active. If an exclusion buffer is not feasible, the applicant shall contact the CSLO Environmental Coordinator for further guidance. If Crotch's bumble bee is found during the active spring and summer period, or presence is unknown (e.g., if a survey during the active period was not completed) and work is planned between October and February, potential

overwintering habitat shall be avoided by a minimum of 50 feet. If potential overwintering habitat cannot be avoided, the CSLO Environmental Coordinator shall be contacted. The CSLO Environmental Coordinator shall coordinate with appropriate resource agencies for guidance to implement project activities and avoid take or proceed with an Incidental Take Permit. The results of the survey shall be provided to the CSLO Environmental Coordinator prior to initial project activities.

8. **Preconstruction Survey for Special-status and Nesting Birds/Raptors.** If work is planned to occur between February 1 and August 31, a qualified biologist shall survey the area for nesting birds within one week prior to activity beginning on-site. In addition, if work is planned to occur as early as January 1, a qualified biologist shall complete a focused survey for nesting golden eagle within 0.25 mile of the project site, as feasible based on access. If nesting birds are located on or near the proposed project site, they shall be avoided until they have successfully fledged, or the nest is no longer deemed active. A non-disturbance buffer of 50 feet shall be placed around non-listed passerine species, and a 250-foot buffer shall be implemented for all non-listed raptor species. All activity shall remain outside of the buffer until a qualified biologist has determined that the nest is no longer active (e.g., young have fledged, or the nest failed) or that proposed construction activities would not cause adverse impacts to the nest, adults, eggs, or young. If special-status avian species are identified and nesting within the work area, no work shall begin until an appropriate buffer is determined in consultation with the CSLO Environmental Coordinator, CDFW, and/or USFWS.
9. **Preconstruction Survey for Overwintering Burrowing Owl.** If work is planned to occur between October 16 and March 31, a qualified biologist shall survey the area for overwintering burrowing owl within 1 week prior to activity beginning on-site. If overwintering burrowing owls are located on or near the proposed project site, occupied burrows shall be avoided until a qualified biologist determines the burrow is no longer occupied. A site-specific, non-disturbance buffer shall be established and maintained between the project activities and occupied burrows, using the distances recommended in the CDFW 2012 *Staff Report on Burrowing Owl Mitigation*. Refer to the table below for these site-specific, no-disturbance buffer zones. The appropriateness of using reduced buffer distances or burrow-specific buffer distances shall be established on a case-by-case basis by a qualified biologist in consultation with the CDFW and shall depend on existing conditions (e.g., vegetation/topographic screening and current distance regimes). If necessary, buffer distances shall be carefully reassessed and relaxed or modified, based on future development plans (e.g., increased or intensified construction activities) by a qualified biologist who may consult with the CDFW. The buffer zones shall be clearly delineated by using highly visible methods, such as stakes and rope, which shall be maintained in good condition through construction of the project or until construction activities are no longer occurring in the vicinity of the burrow.

Site-Specific No-Disturbance Buffer Zones

Level of Disturbance (October 16–March 31)		
Low (feet)	**Mid (feet)**	**High (feet)**
164	328	1,640

BIO-6 **Avoidance of Federal and State Waters and Wetlands** In addition to BIO-2, the following recommendations have been provided to protect drainages and aquatic resources on-site:

1. Prior to project impact of these areas, all applicable agency permits with jurisdiction over the project area (e.g., CDFW, RWQCB, and/or USACE) shall be obtained. Additional mitigation measures may be required by these agencies and shall be implemented as necessary throughout the project.
2. To prevent erosion and sedimentation into drainages during construction, an erosion and sedimentation control plan shall be developed and implemented. It shall outline Best Management Practices (BMPs) for short-term, temporary stabilization. Acceptable stabilization methods include the use of weed-free, natural fiber (i.e., non-monofilament) rolls, jute or coir netting, and/or other industry standards. Erosion control devices shall be installed and maintained for the duration of the project. BMPs shall be installed and maintained for the duration of the project.
3. Construction activity within 100 feet of drainages shall only occur when appropriate BMPs are in place to protect aquatic features from indirect impacts.
4. Construction activities within jurisdictional areas shall be conducted during the dry season when stream flows shall be at annual lows (June 1–October 31) in any given year, or as otherwise directed by the regulatory agencies. Deviations from this work window can be made with permission from the relevant regulatory agencies.

BIO-7 **Riparian and Wetland Habitat Mitigation Plan.** Prior to construction, a comprehensive Compensatory Mitigation and Monitoring Plan that provides at least 3:1 mitigation ratio for all permanent impacts to jurisdictional waters and wetlands and 1:1 mitigation ratio for all temporary impacts to jurisdictional waters and wetlands, unless otherwise directed by regulatory agencies, shall be submitted to the CDFW, RWQCB, and USACE. The plan shall include details on the location and design of areas proposed for enhancement and rehabilitation within the Chorro Creek watershed. The plan shall also outline planting specifications, including mitigation ratios for impacts to oak trees (i.e., 2:1 and 4:1 for impacts/removals, respectively), an appropriate planting palette, installation methods and techniques, and maintenance, monitoring, and performance criteria consistent with standard mitigation requirements from applicable regulatory agencies. The total mitigation acreage needed to meet the 1:1 mitigation ratio for temporary impacts is approximately 0.671 acre and 290 linear feet and the 3:1 mitigation ratio for permanent impacts to jurisdictional waters is approximately 0.765 acre and 1,440 linear feet. Proposed mitigation shall include comparable mitigation for wetland habitat affected by the proposed project. The quantity of mitigation is subject to change as project plans are refined and resource agencies are consulted.

6 CONCLUSION

As currently designed, the project is anticipated to result in potential impacts to four special-status botanical species, including Cambria morning-glory, San Luis Obispo owl's clover, Palmer's spineflower, and mouse-gray dudleya, and four CDFW sensitive natural communities. Additionally, 21 special-status wildlife species were determined to have a potential to occur within the project area. Direct and indirect impacts to special-status wildlife species may occur if they are present on-site at the time of construction. Direct and indirect impacts to jurisdictional waters and wetlands are expected as a result of culvert replacements and improvements. Further, impacts to and removal of individual oak trees may occur in association with roadway improvements.

Overall, the extent of potential impacts to sensitive biological resources as a result of proposed project implementation are expected to be minimal, and implementation of the recommended avoidance, minimization, and mitigation measures shall avoid and/or reduce impacts to sensitive resources to a less-than-significant level.

7 REFERENCES

American Ornithologists' Union. 1957. *Check-list of North American Birds*. Fifth edition. American Ornithologists' Union. Baltimore, Maryland: Lord Baltimore Press, Inc.

Baldwin, Bruce G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D.H. Wilken. 2012. *The Jepson Manual: Vascular Plants of California*. Second Edition. Berkeley, California: University of California Press.

Bleich, V. C., and O. A. Schwartz. 1975. Observations on the Home Range of the Desert Woodrat. *Journal of Mammalogy* 56:518–519.

Bury, R. B., and D. J. Germano. 2008. *Actinemys marmorata* (Baird and Girard 1852)—western Pond Turtle, Pacific Pond Turtle. In *Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group*, edited by G. J. Rhodin, C. H. Pritchard, P. P. van Dijk, R. A. Saumure, K. A. Buhlmann, and J. B. Iverson, pp. 1.1–1.9. Chelonian Research Monographs No. 5. Chelonian Research Foundation, Lunenberg, Massachusetts.

California Army National Guard (CAARNG). 2022. *Camp San Luis Obispo Integrated Natural Resources Management Plan*. September. Sacramento, California.

California Department of Fish and Wildlife. 2023a. California Natural Diversity Database: RareFind 5. Accessible with subscription at: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Accessed June–August 2023.

———. 2023b. *CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment and Relevé Field Form*. March 7. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18599. Most recently accessed December 2023.

California Native Plant Society (CNPS). 2023a. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). California Native Plant Society, Rare Plant Program. Available at: http://www.rareplants.cnps.org. Accessed June 2023.

———. 2023b. A Manual of California Vegetation, Online Edition. Sacramento, California: California Native Plant Society. Available at: http://www.cnps.org/vegetation. Accessed June–August 2023.

Consortium of California Herbaria (CCH). 2023. Consortium of California Herbaria Portal. Regents of the University of California. Available at: http://ucjeps.berkeley.edu/consortium/. Accessed June–August 2023.

Cornell Lab of Ornithology. 2023. All About Birds. Available at: https://www.allaboutbirds.org/. Accessed June–August 2023.

County of San Luis Obispo. 2019. County Inland Land Use Ordinance (Title 22 of the SLO County Code). Available online at: https://library.municode.com/ca/san_luis_obispo_county/codes/county_code?nodeId=TIT22LAUSOR. Accessed June – August 2023.

Goldwasser, S. 1981. *Habitat Requirements of the Least Bell's Vireo*. California Department of Fish and Game Final Report, Job IV-38.1.

Google Earth Pro. 1994–2023. San Luis Obispo County, California. 35.337200°, -120.704756°. DigitalGlobe. Google Earth Pro V 7.3.3.7786. Accessed June–August 2023.

Goulson, D. 2010. *Bumblebees: Behavior, Ecology, and Conservation.* Oxford University Press.

Gray, V., and J. Greaves. 1984. The riparian forest as habitat for the least Bell's vireo. In *California Riparian Systems: Ecology, Conservation, and Productive Management*, edited by R. Warner and K. Hendrix, pp. 605–611. Berkeley, California: University of California Press.

Gruver, J. C., and D. A. Keinath. 2006. *Townsend's Big-Eared Bat (*Corynorhinus townsendii*): A Technical Conservation Assessment*. Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project. October 25. Available: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5181908.pdf. Accessed June 2023.

Hamilton, T. H. 1962. Species Relationships and Adaptations for Sympatry in the Avian Genus Vireo. *The Condor* 64(1):40–68. https://doi.org/10.2307/1365441.

Hatfield, R., S. Jepsen, S. F. Jordan, M. Blackburn, and A. Code. 2020. *A Petition to the State of California Fish and Game Commission to List the Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and western bumble bee (*Bombus occidentalis occidentalis*) as Endangered under the California Endangered Species Act*. Submitted by The Xerces Society, Defenders of Wildlife, and Center for Food Safety. Available at: https://www.xerces.org/publications/policy-statements/california-esa-bumble-bee-petition-2020. Accessed August 2023.

Jepson Flora Project. 2023. Jepson eFlora. Regents of the University of California. Available at: http://ucjeps.berkeley.edu/eflora/. Accessed June–August 2023.

Klute, D. S., L. W. Ayers, M. T. Green, W. H. Howe, S. L. Jones, J. A. Shaffer, S. R. Sheffield, and T. S. Zimmerman. 2003. *Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States*. Biological Technical Publication FWS/BTP-R6001-2003. Washington, D.C.: U.S. Department of Interior, Fish and Wildlife Service.

Koenig, M. 2015. Morphological Response in Sister Taxa of Woodrats (Genus: *Neotoma*) Across a Zone of Secondary Contact. Thesis. California Polytechnic University, San Luis Obispo, California.

Nafis, G. 2023. California Herps: A Guide to the Amphibians and Reptiles of California. Available at: http://www.californiaherps.com. Accessed June–August 2023.

Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. U.S. Department of Agriculture Natural Resources Conservation Service. Available at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed June 2023.

Osborne, J. L., A. P. Martin, C. R. Shortall, A. D., Todd, D. Goulson, M. E. Knight, R. J. Hale, and R. A. Sanderson. 2008. Quantifying and comparing bumble bee nest densities in gardens and countryside habitats. *Journal of Applied Ecology* 45:784–792.

Pierson, E. D., and W. E. Rainey. 1998. *Distribution, Status, and Management of Townsend's Big-eared Bat (*Corynorhinus townsendii*) in California*. Final Report for Contract No. FG7129. Submitted to Wildlife Management Division Bird and Mammal Conservation Program, State of California Department of Fish and Game. BMCP Technical Report Number 96-7.

Reeser, Terry. 2006. *Sensitive Species of the Santa Ana Watershed: Cooper's Hawk (*Accipiter cooperii*)*. Santa Ana Watershed Association.

Sakai, W., and W. Calvert. 1991. *Statewide Monarch Butterfly Management Plan for the State of California Department of Parks and Recreation - Final Report*. Santa Monica College Life Sciences Department.

Salata, L. 1983. Status of the least Bell's vireo on Camp Pendleton, California. Unpublished report for U.S. Fish and Wildlife Service, Laguna Nigel, California. Contract No. 11100-0145-82.

Sawyer, John O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation, Second Edition.* Sacramento, California: California Native Plant Society Press.

Shuford, W. D., and T. Gardali, eds. 2008a. Burrowing Owl Account. From *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*. Studies of Western Birds No. I. Camarillo, California: Western Field Ornithologists and California Department of Fish and Game, Sacramento. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10405. Accessed June 2023.

———. 2008b. Northern Harrier Account. From *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*. Studies of Western Birds No. I. Camarillo, California: Western Field Ornithologists and California Department of Fish and Game, Sacramento. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=10393&inline. Accessed June 2023.

Spinks, P. Q., G. B. Pauly, J. J. Crayon, and H. B. Shaffer. 2003. Survival of the Western Pond Turtle (*Emys marmorata*) in an Urban California Environment. *Biological Conservation* 113(2):257–267.

Stebbins, R. C., S. M. McGinnis. 2020. *Peterson Field Guide to Western Reptiles and Amphibians*. Fourth Edition. New York: Houghton Mifflin Harcourt Company.

Thompson, R. C, A. N. Wright, and H. B Shaffer. 2016. *California Amphibian and Reptile Species of Special Concern*. University of California Press.

Thorp, R. W., S. Jepsen, S. F. Jordan, E. Evans, and S. H. Black. 2010. *Petition to List Franklin's Bumble Bee (*Bombus franklini*) as an Endangered Species under the U.S. Endangered Species Act*. The Xerces Society for Invertebrate Conservation and Dr. Robbin W. Thorp. Prepared by Dr. Robbin Thorp, Sarina Jepsen, Sarah Foltz Jordan, Elaine Evans, and Scott Hoffman Black. June 23. Available from: https://www.xerces.org/publications/policy-statements/petition-to-list-franklins-bumble-bee-under-esa-2010. Accessed August 2023.

U.S. Fish and Wildlife Service (USFWS). 1998.*Draft recovery plan for the Least Bell's Vireo.* USFWS, Portland, OR.

———. 2023a. Bald and Golden Eagle Protection Act. Available online at: https://www.fws.gov/law/bald-and-golden-eagle-protection-act. Accessed July 2023.

———. 2023b. ECOS: Environmental Conservation Online System. Available at: https://ecos.fws.gov/ecp/. Accessed June–August2023.

———. 2023c. National Wetland Inventory Wetlands Mapper. Available online at: https://www.fws.gov/wetlands/Data/Mapper.html. Accessed June–August 2023.

———. 2023d. USFWS Threatened & Endangered Species Active Critical Habitat Report. Available online at: http://crithab.fws.gov/ecp/report/table/critical-habitat.html. Accessed June–August 2023.

U.S. Geological Survey (USGS). 2023. The National Map. San Luis Obispo County, 35.647, -120.819. Available at: https://viewer.nationalmap.gov/advanced-viewer/. Accessed June 2023.

Williams, P. H., R. W. Thorp, L. L. Richardson, and S. R. Colla. 2014. *The Bumble Bees of North America: An Identification Guide*. Princeton, New Jersey: Princeton University Press.

Xerces Society. 2017. Monarch Butterfly Conservation. Available at: https://xerces.org/monarchs/#. Accessed August 2023.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988–1990a. Life History Account for American Badger. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990b. Life History Account for California Horned Lark. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990c. Life History Account for Coast Horned Lizard. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990d. Life History Account for Cooper's Hawk. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990e. Life History Account for Grasshopper Sparrow. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990f. Life History Account for Loggerhead Shrike. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990g. Life History Account for Mountain Lion. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990h. Life History Account for Northern Harrier. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990i. Life History Account for White-Tailed Kite. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

———. 1988–1990j. Life History Account for Yellow Warbler. In *California's Wildlife*. Vol. I-III. Sacramento, California: California Department of Fish and Game.

APPENDIX A

Figures

Figure A-1. Project Vicinity.

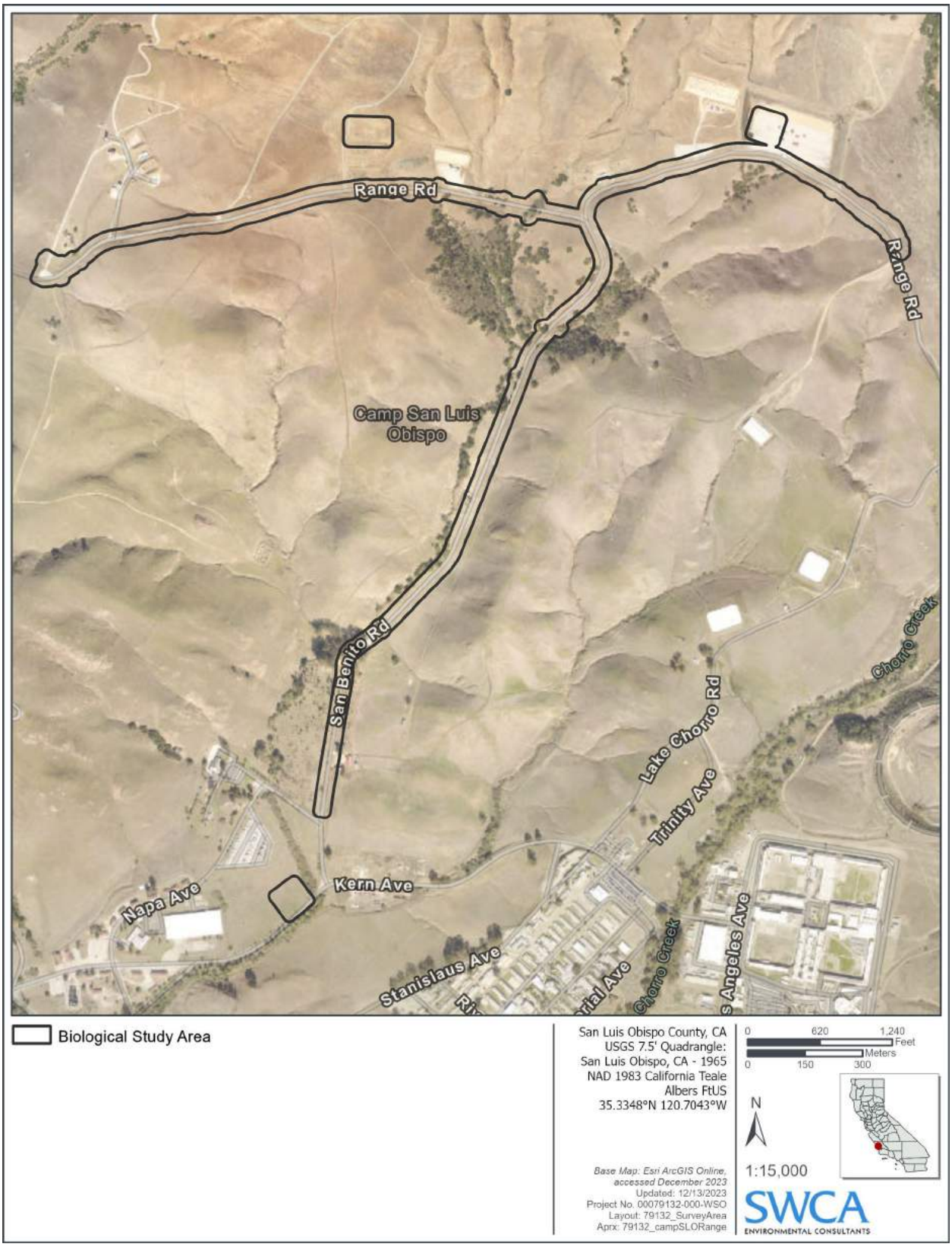


Figure A-2. Survey Area.

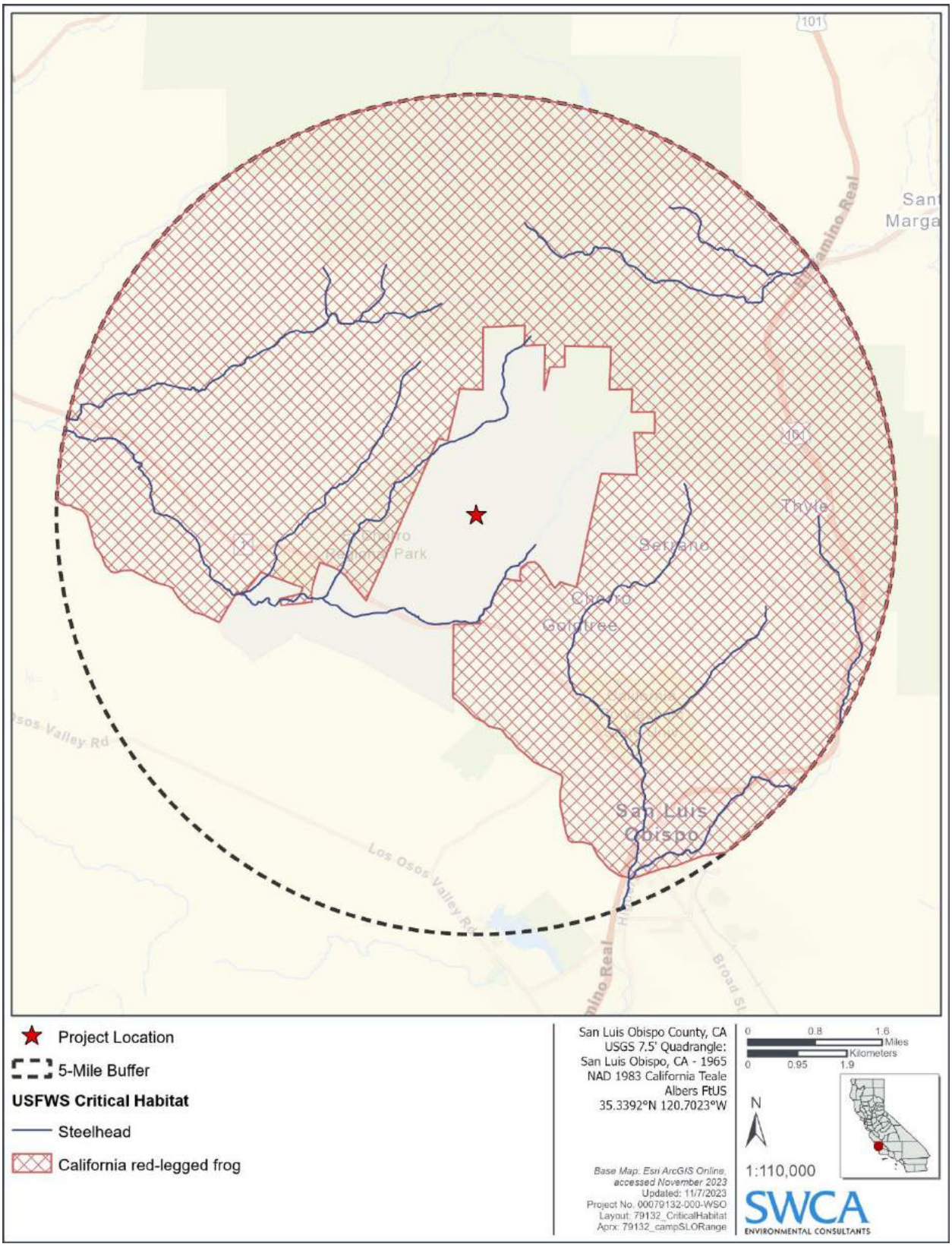


Figure A-3c. 5-mile Critical Habitat.

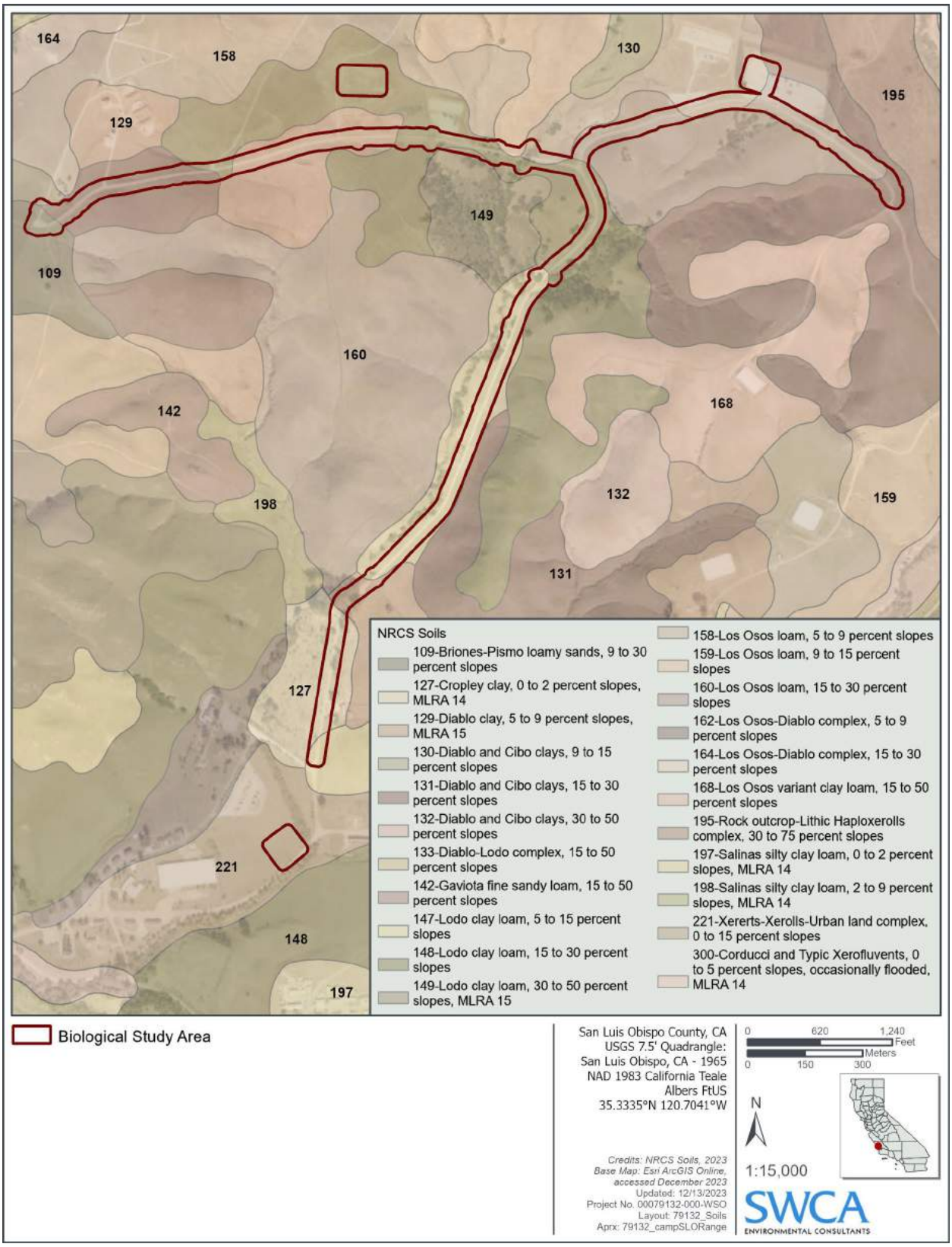


Figure A-4. Soils.

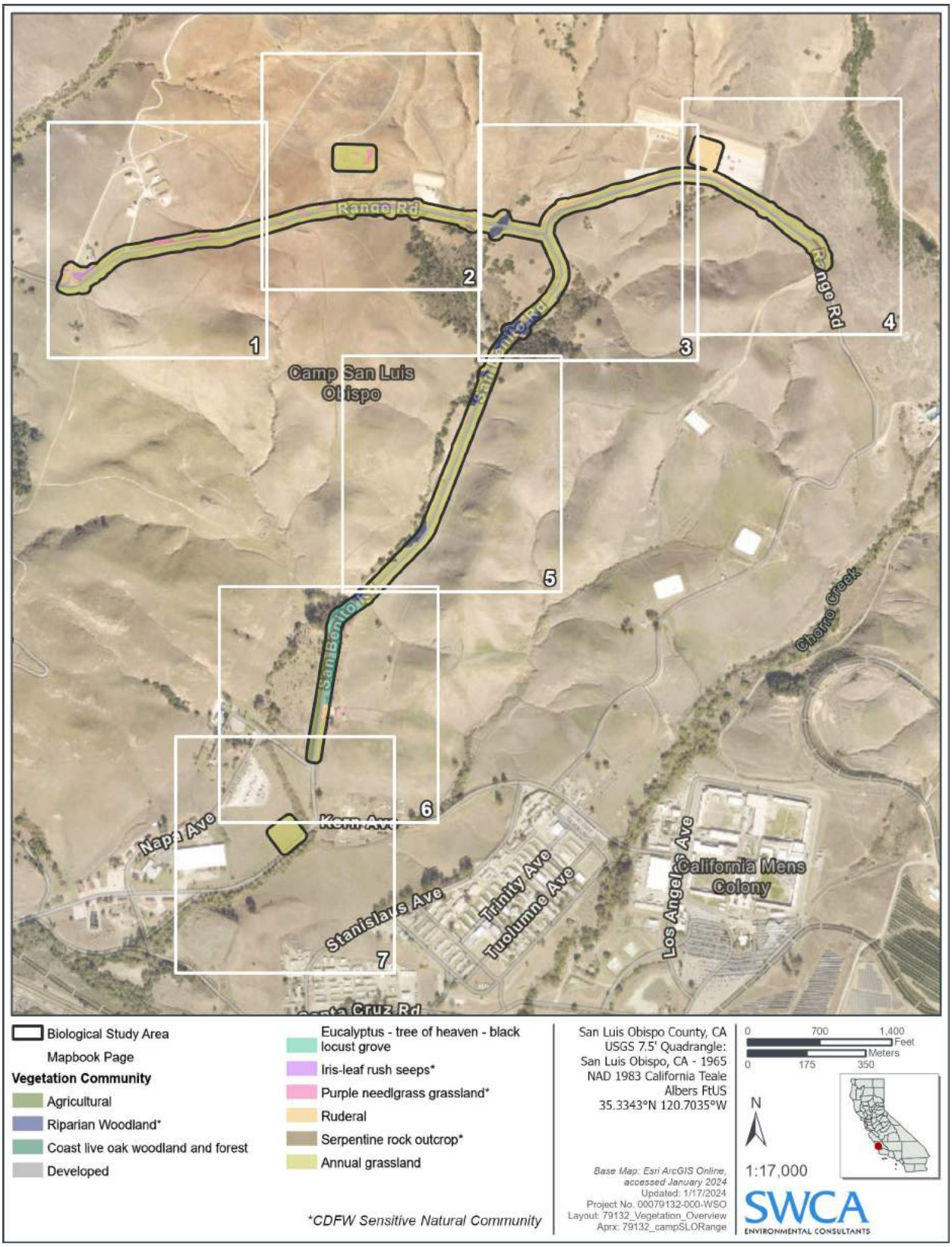


Figure A-5a. Vegetation Communities and Sensitive Habitats.

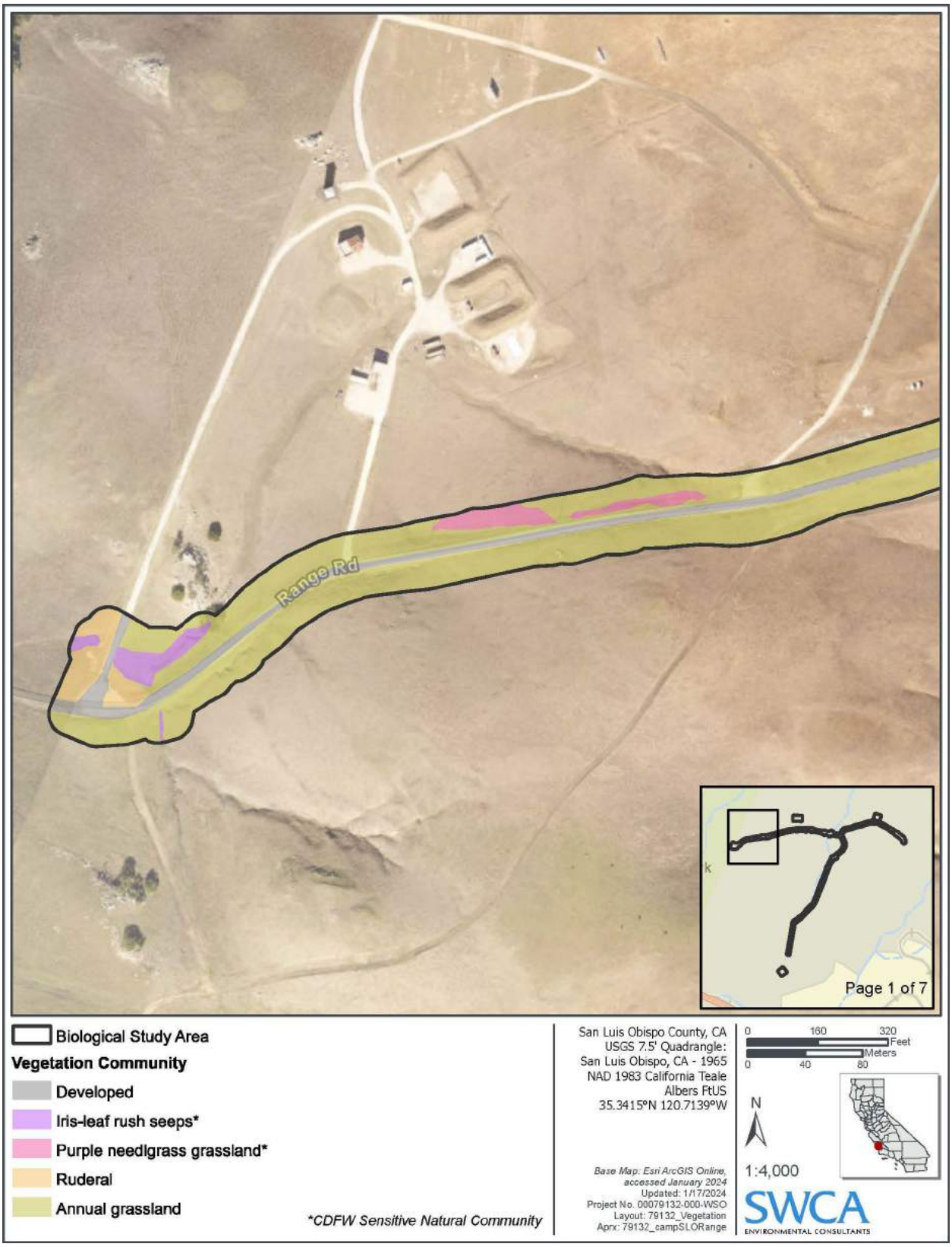


Figure A-5b. Vegetation Communities and Sensitive Habitats.

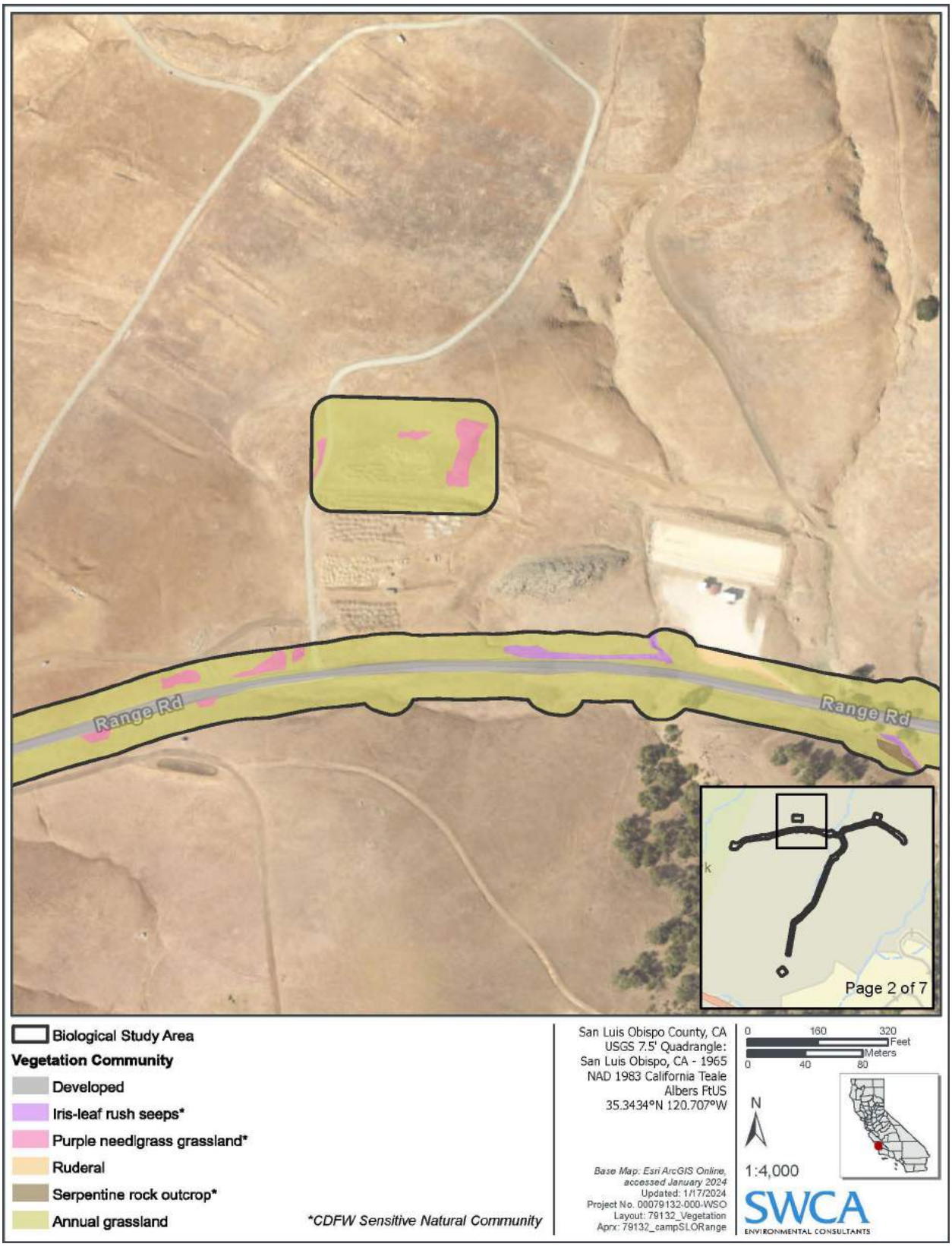


Figure A-5c. Vegetation Communities and Sensitive Habitats.

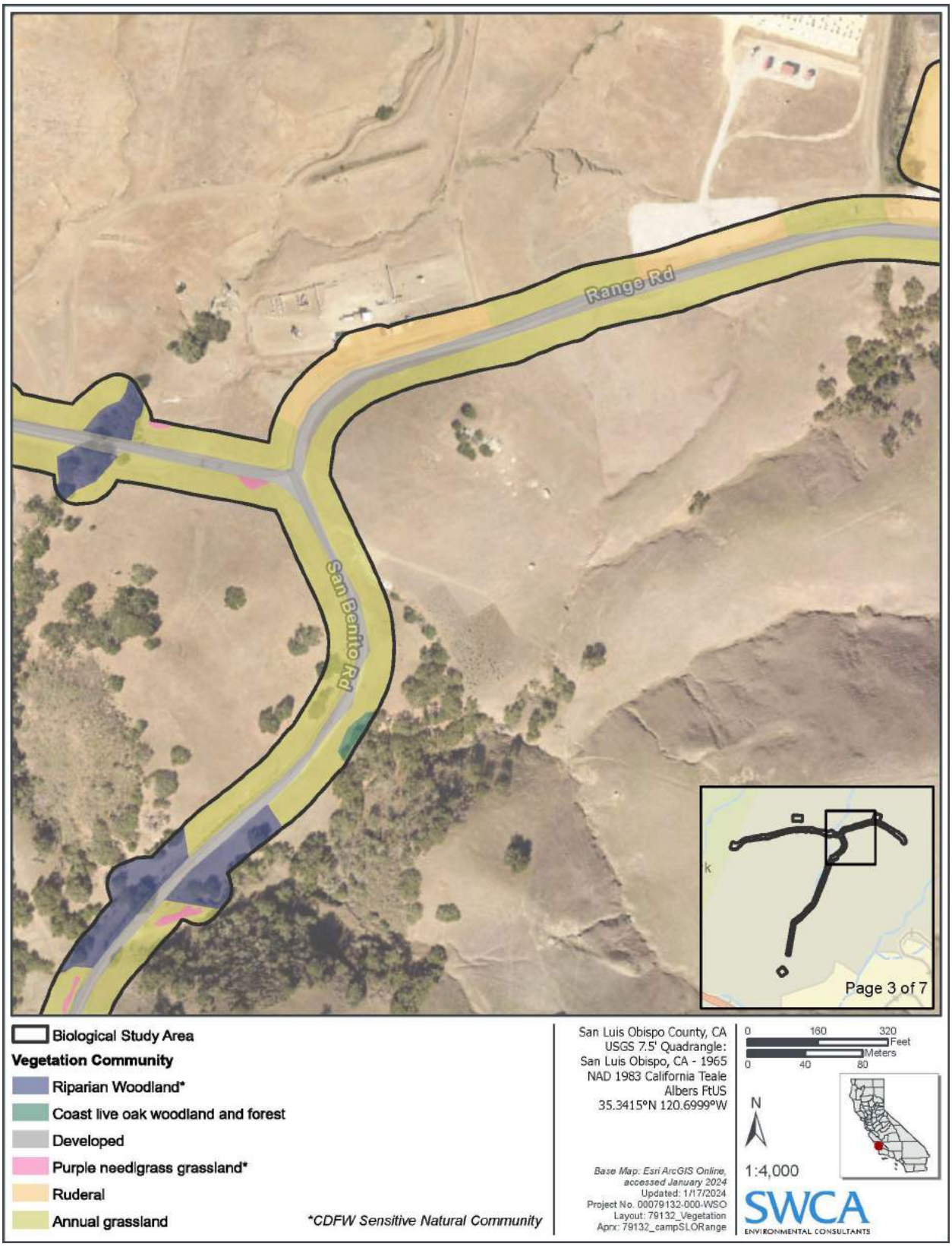


Figure A-5d. Vegetation Communities and Sensitive Habitats.

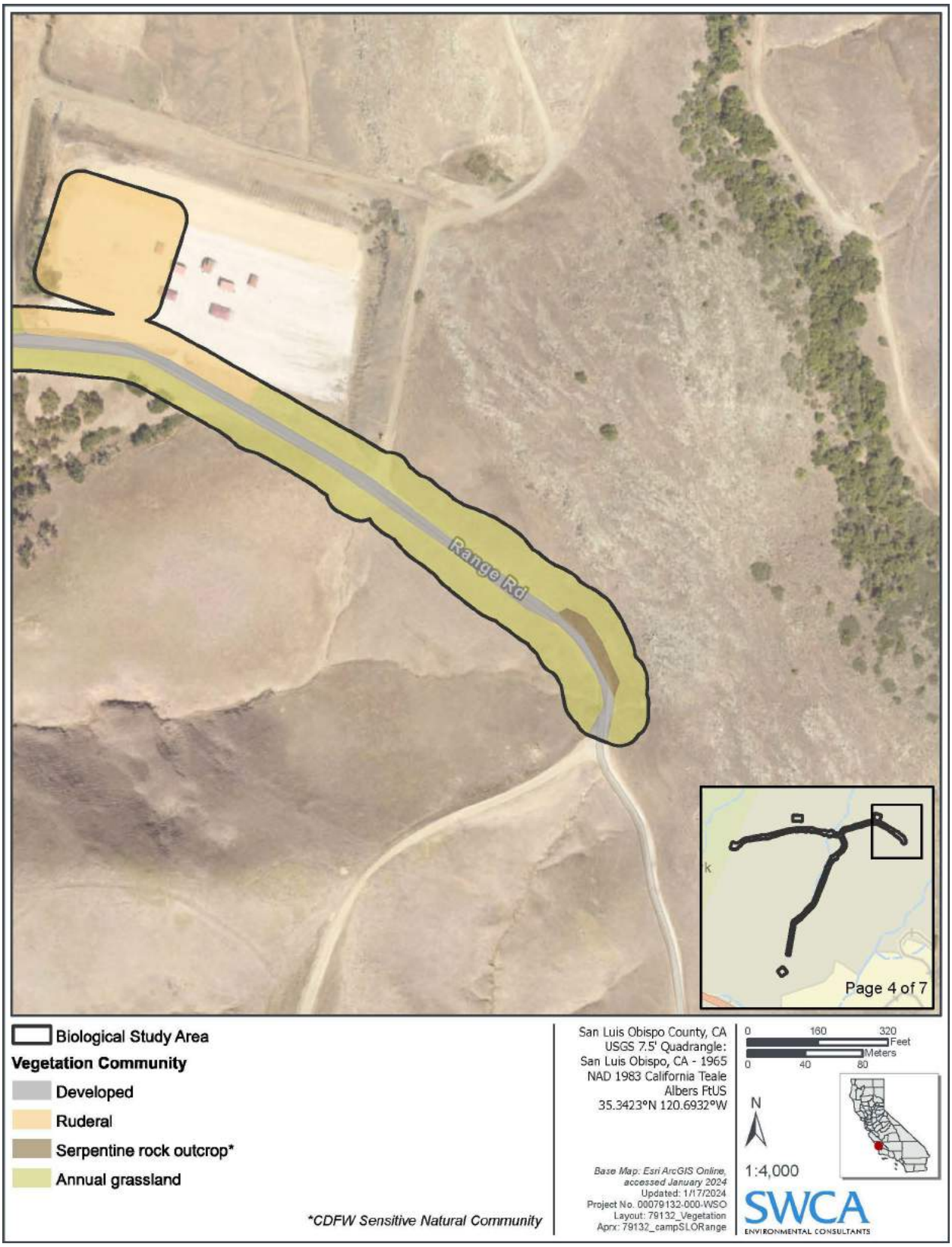


Figure A-5e. Vegetation Communities and Sensitive Habitats.

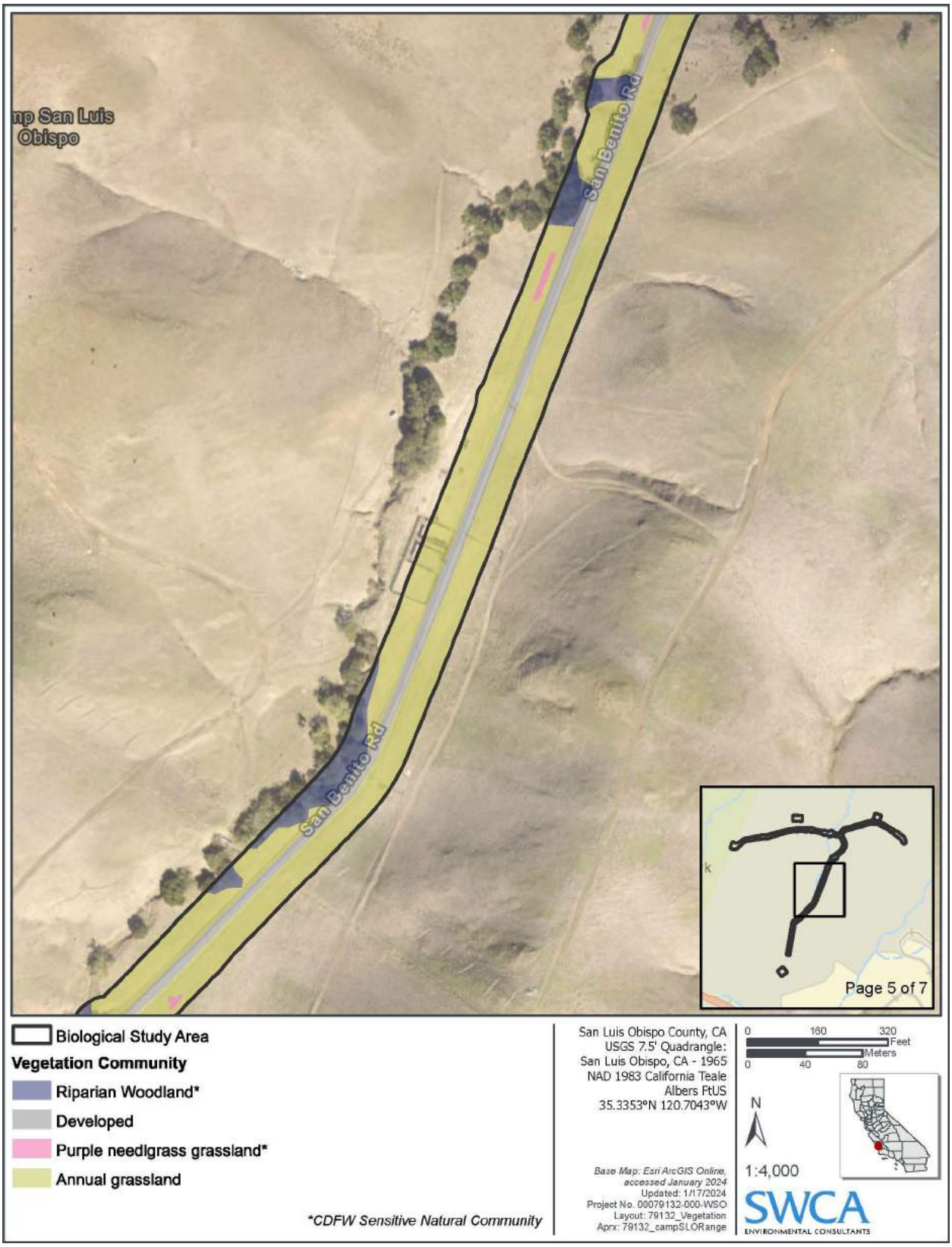


Figure A-5f. Vegetation Communities and Sensitive Habitats.

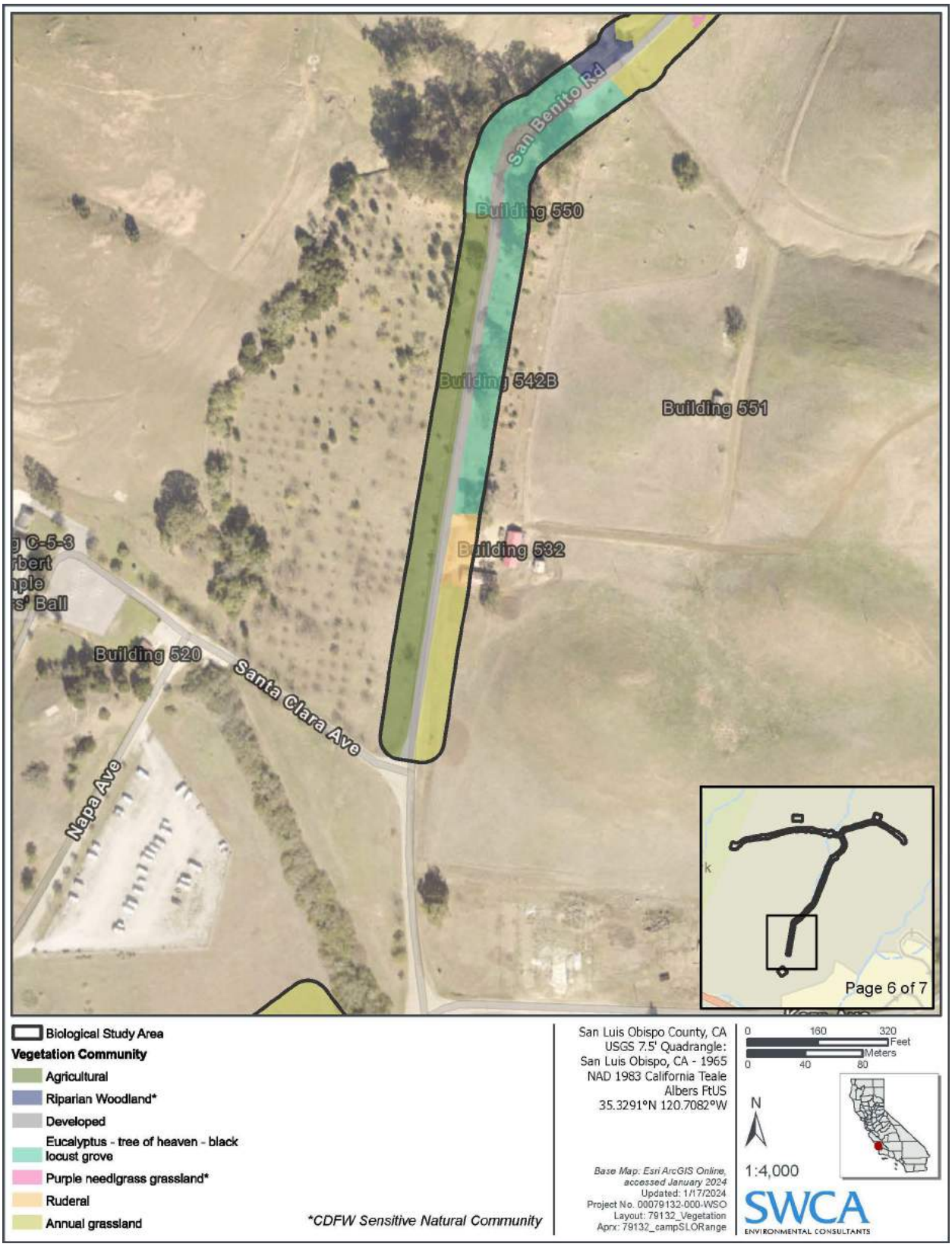


Figure A-5g. Vegetation Communities and Sensitive Habitats.

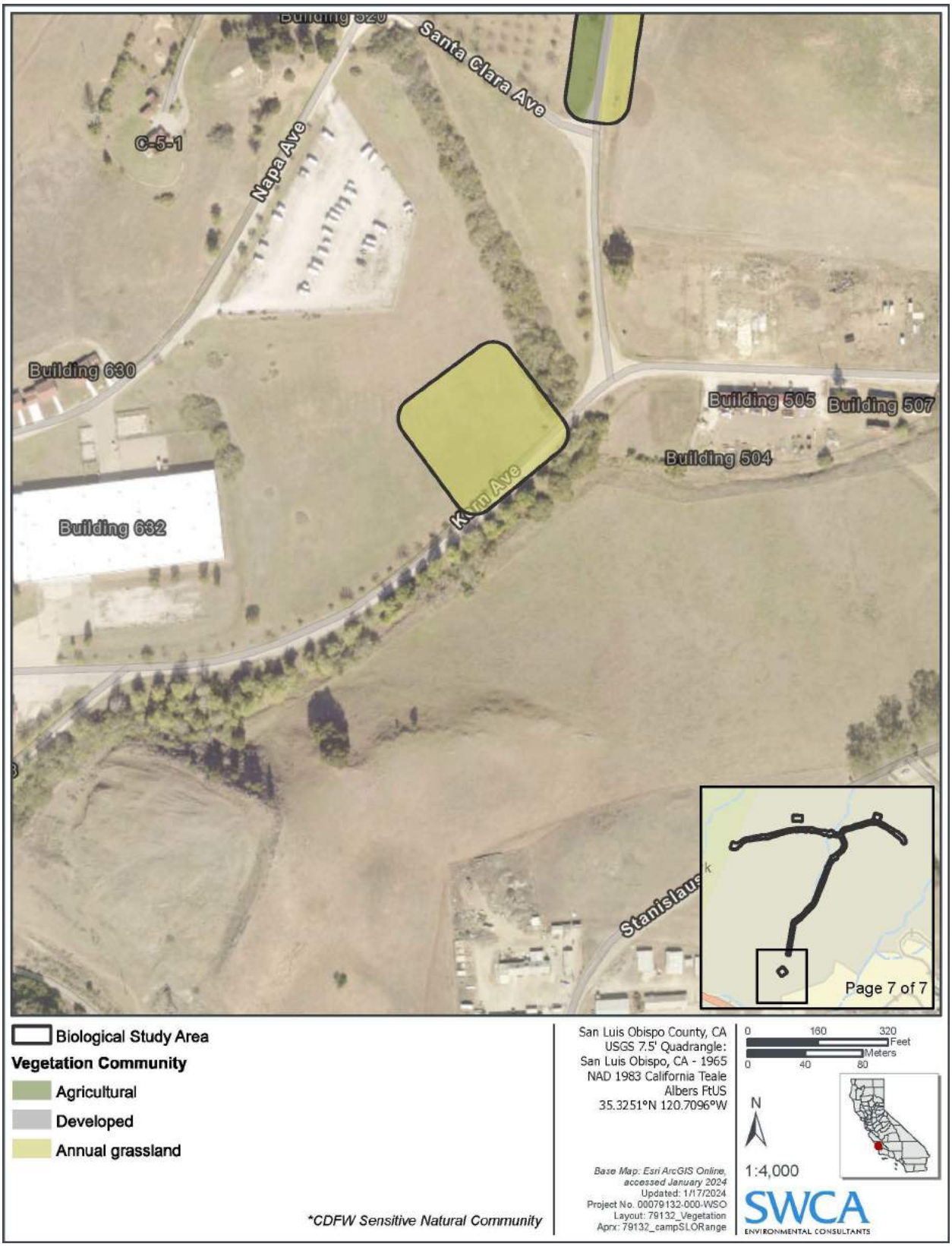


Figure A-5h. Vegetation Communities and Sensitive Habitats.

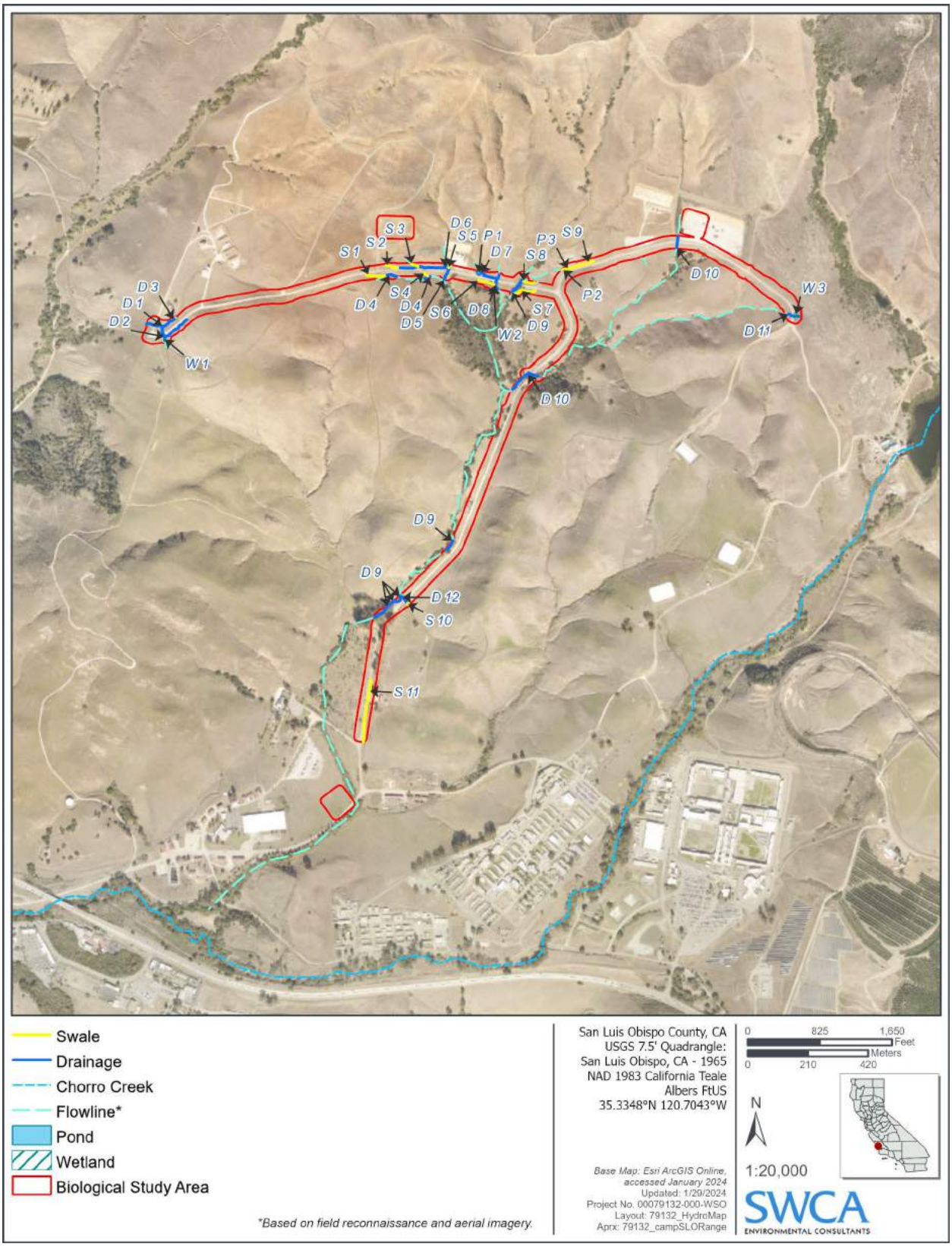


Figure A-6a. Hydrological Resources.

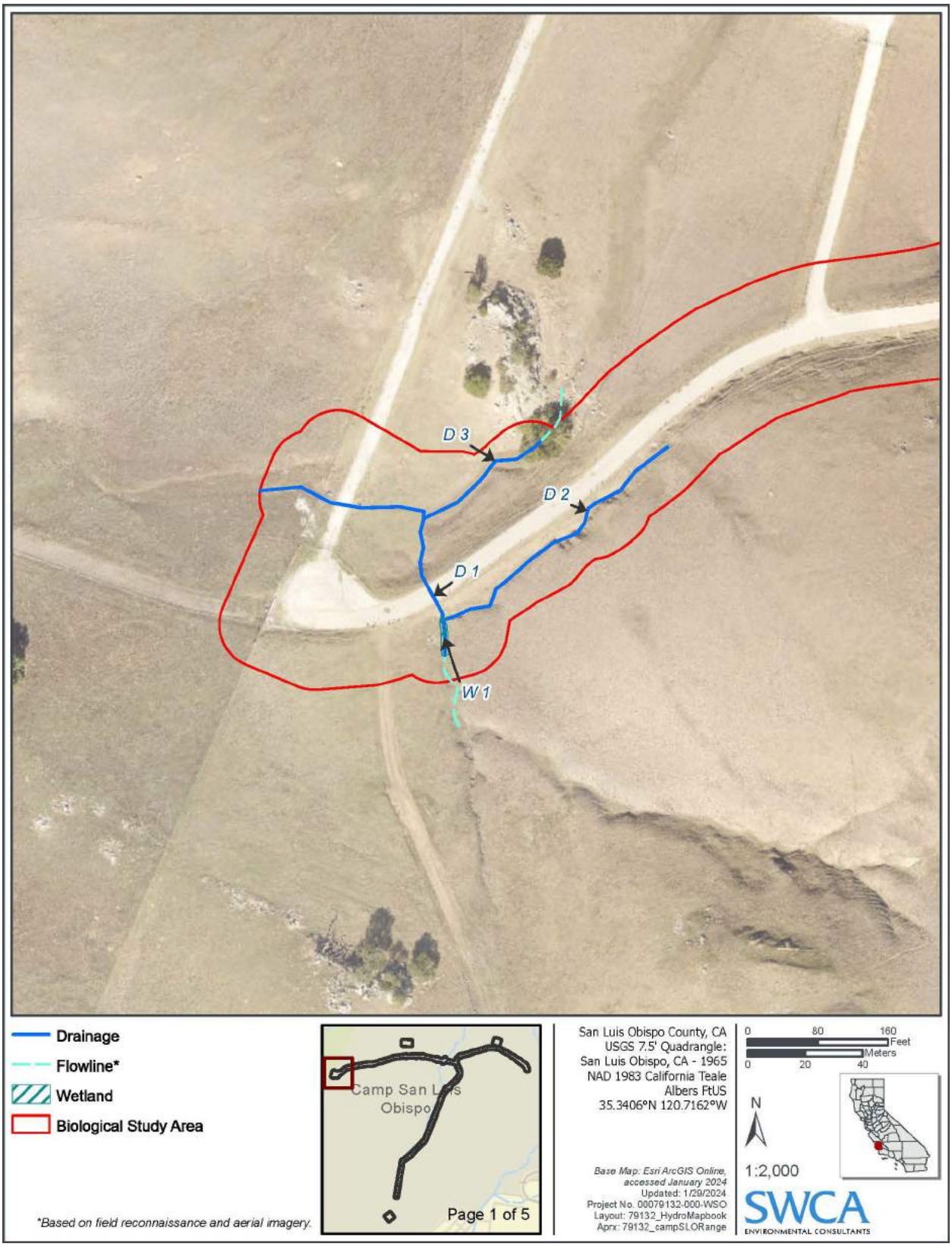


Figure A-6b. Hydrological Resources.

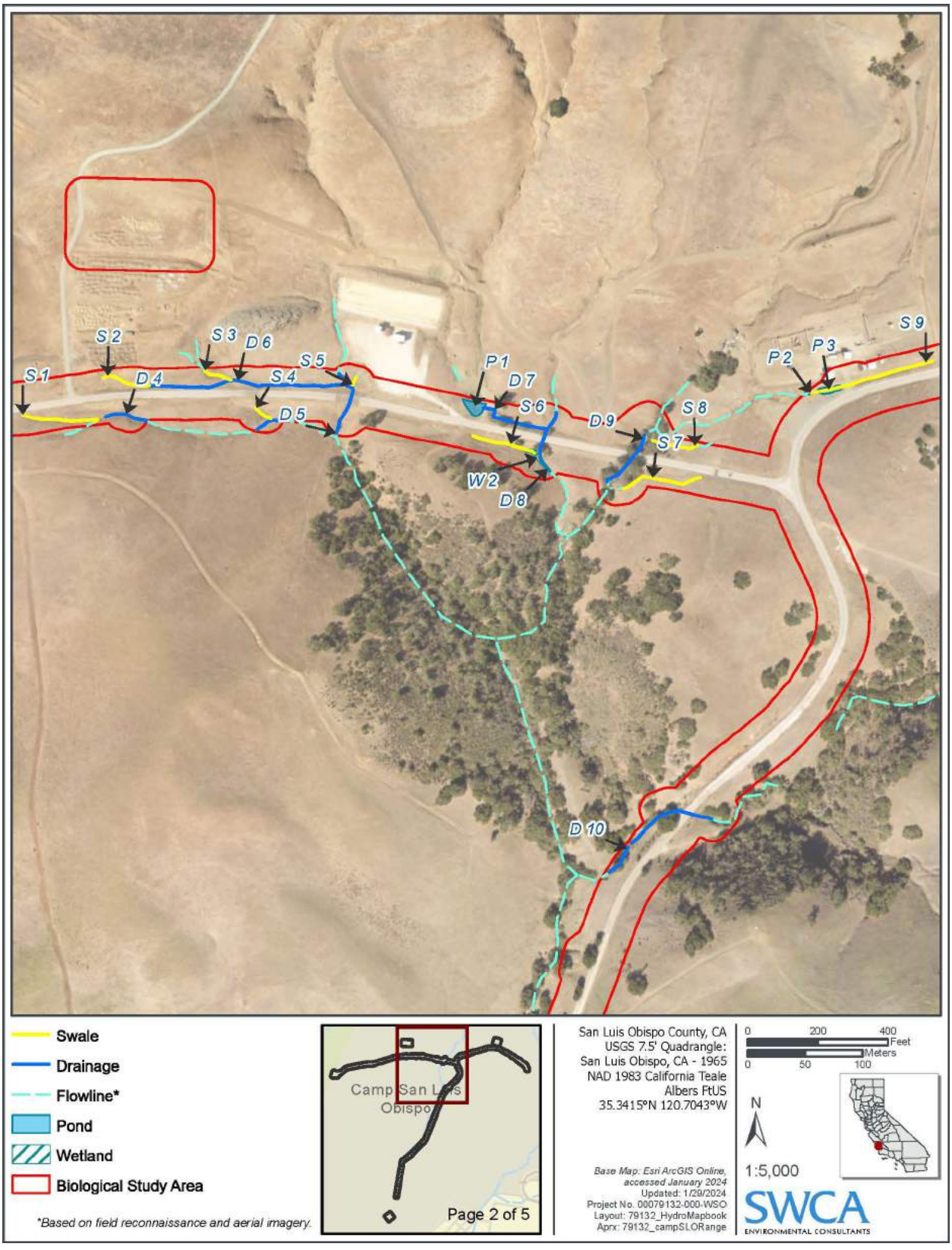


Figure A-6c. Hydrological Resources.

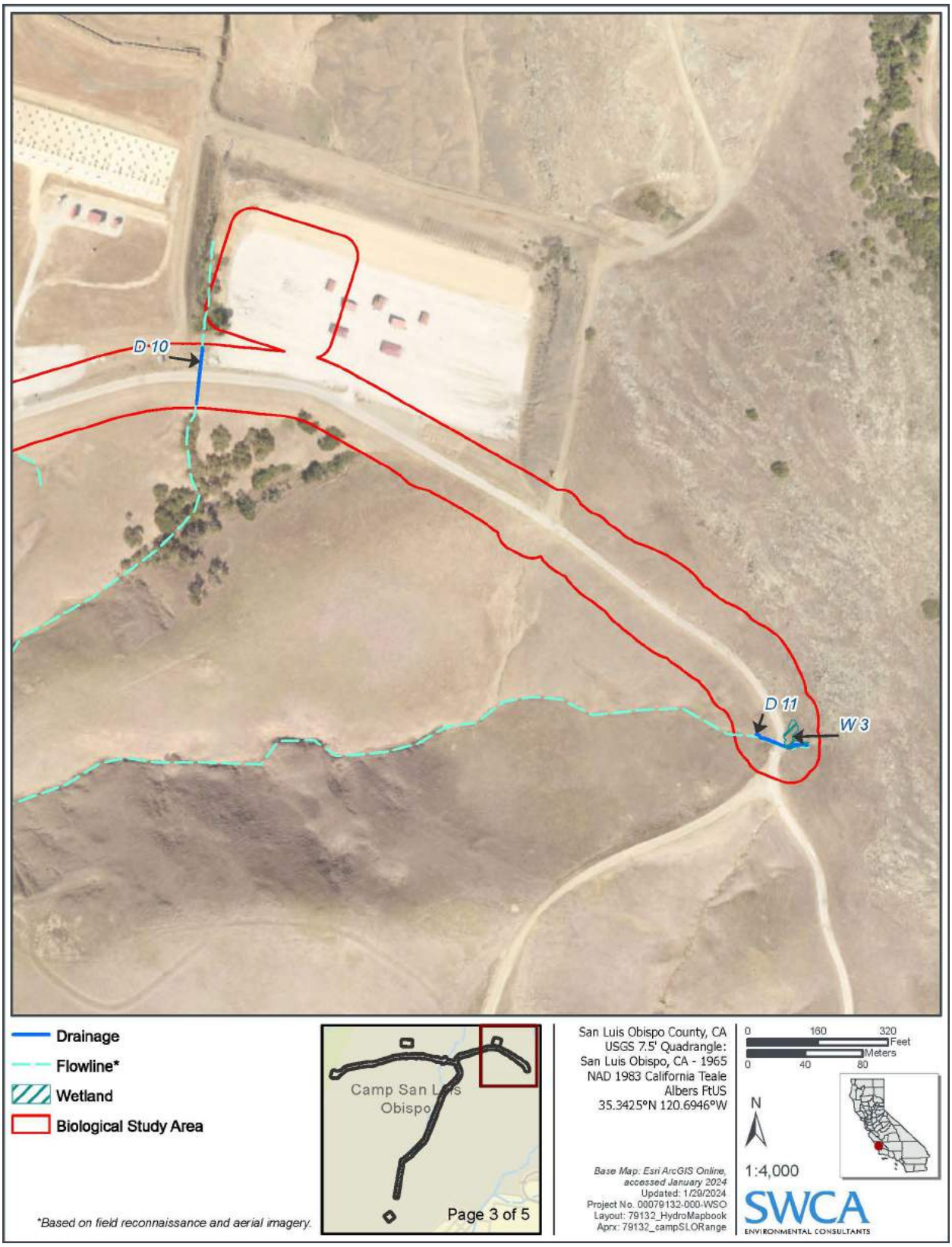


Figure A-6d. Hydrological Resources.

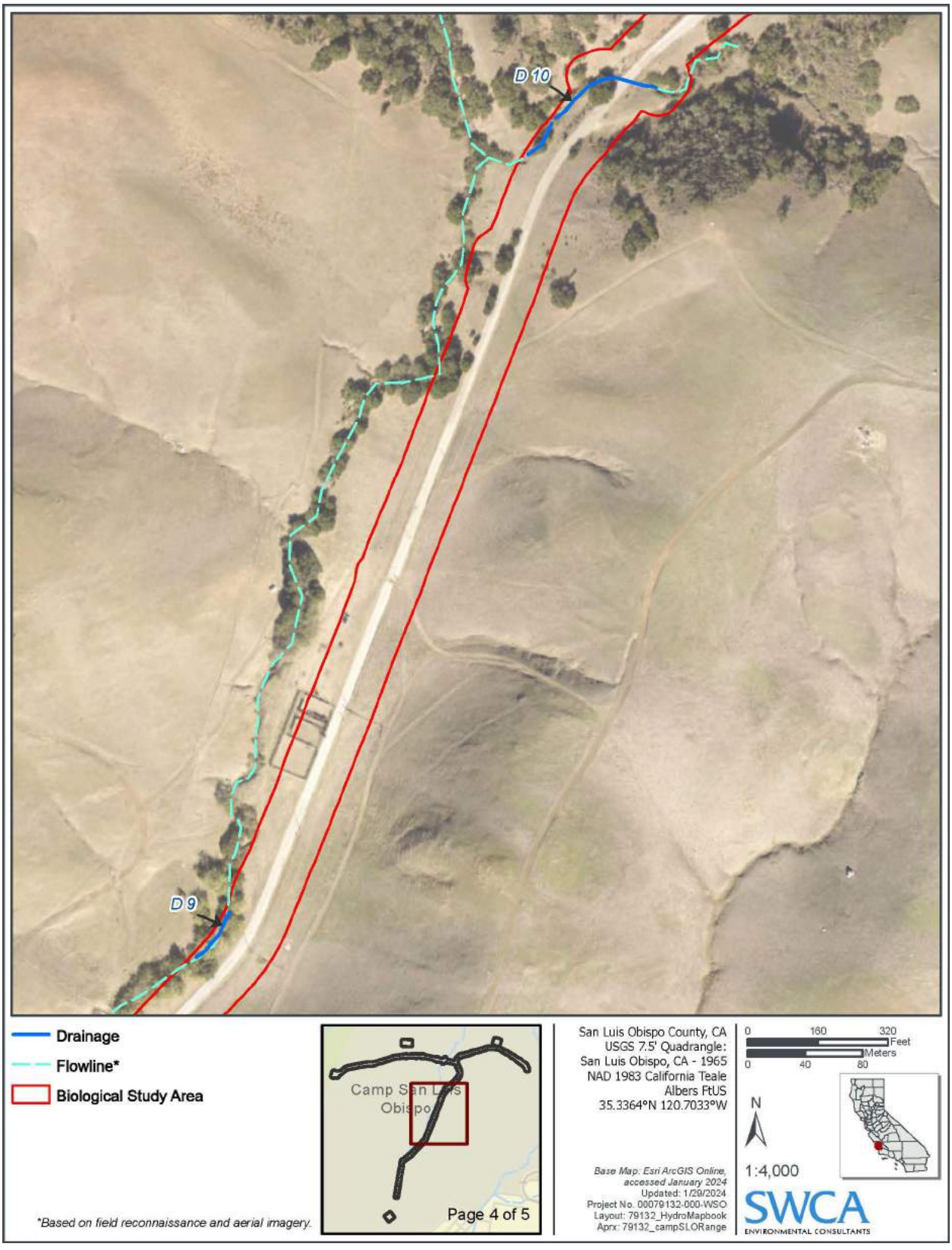


Figure A-6e. Hydrological Resources.

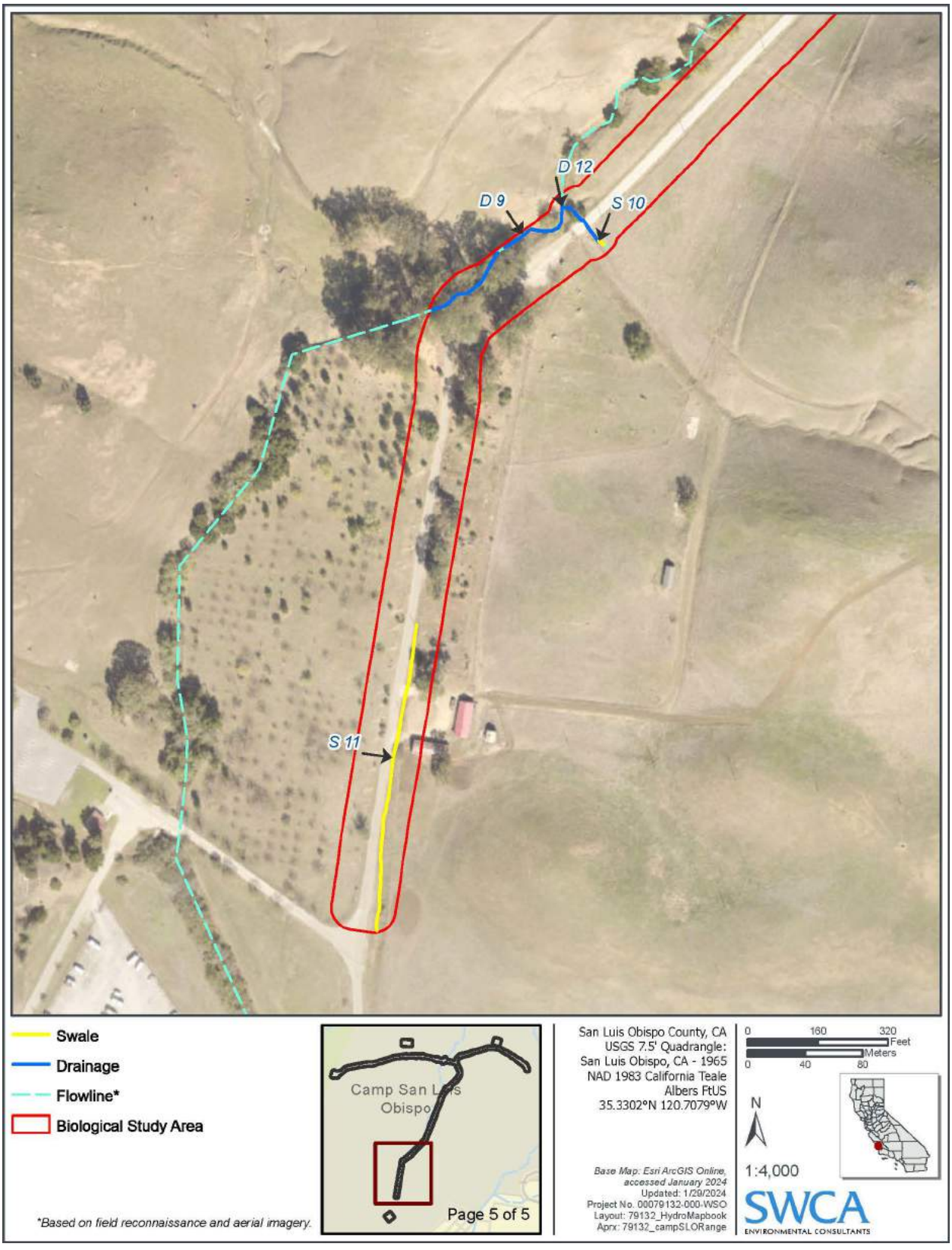


Figure A-6f. Hydrological Resources.

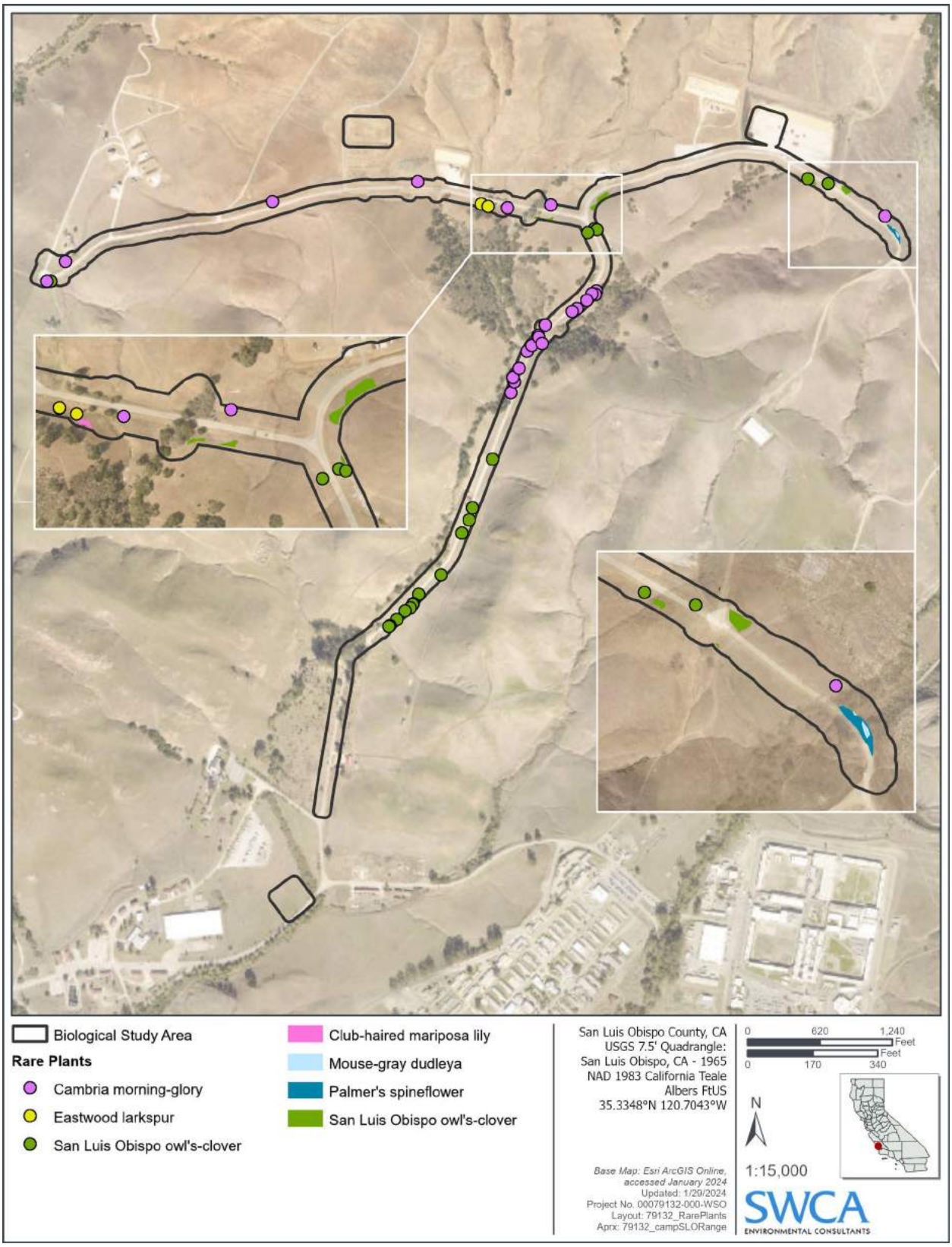


Figure A-7. Rare Plant Locations.

This page intentionally left blank.

APPENDIX B

Preliminary Site Plans
(Dated January 2024)

RANGE ROAD REHABILITATION

CAMP SAN LUIS OBISPO, CALIFORNIA

GENERAL SITE NOTES

1. EXISTING FEATURES WITHIN THIS PLAN SET ARE TAKEN FROM A FIELD SURVEY PREPARED BY CANNON.
2. WORK WILL BE PERFORMED TO CONFORM WITH THE FOLLOWING SPECIFICATIONS. WHERE CONFLICTS EXIST BETWEEN ANY OF THESE, THE ENGINEER WILL CLARIFY WHICH SPECIFICATION GOVERNS.
   A. THE STANDARDS OF THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND THE RULES OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
   B. THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (HEREINAFTER REFERRED TO AS "CALTRANS").
   C. THE APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STATE OF CALIFORNIA BUILDING STANDARDS CODE AND THE CALIFORNIA ACCESS COMPLIANCE ADVISORY REFERENCE MANUAL.
   D. THE REQUIREMENTS OF ALL PERMITS ISSUED FOR WORK BY THE STATE OF CALIFORNIA MILITARY DEPARTMENT.
   E. THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS NOTED IN THE PROJECT SOILS REPORT PREPARED BY EARTH SYSTEMS TITLED "GEOTECHNICAL RECOMMENDATIONS FOR ROADWAY REHABILITATION" AND DATED AUGUST 15, 2023, AND ALL ADDENDUMS THERETO.
   F. THE UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS) PREPARED FOR THIS PROJECT.
   G. THESE APPROVED PLANS AND DETAILS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL THE PERMITS NECESSARY TO PERFORM WORK PRIOR TO COMMENCING WORK, INCLUDING BUT NOT LIMITED TO GRADING, TREE REMOVAL, AND UTILITY MODIFICATIONS.
4. THE CONTRACTOR MUST SUPPLY ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO PERFORM THE WORK AS SHOWN ON THE APPROVED PLANS.
5. IT IS THE RESPONSIBILITY OF THE VARIOUS CONTRACTORS TO COORDINATE THEIR WORK SO AS TO ELIMINATE CONFLICTS AND WORK TOWARD THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT.
6. ALL CONSTRUCTION ACTIVITY THAT DISRUPTS THE SMOOTH FLOW OF TRAFFIC OVER PUBLIC ROADS WILL REQUIRE A TRAFFIC CONTROL PLAN AS SPECIFIED IN THE PROJECT SPECIFICATIONS. TRAFFIC CONTROL MUST CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLAN MUST BE SUBMITTED FIVE WORKING DAYS PRIOR TO IMPLEMENTATION FOR APPROVAL BY THE STATE MILITARY DEPARTMENT.
7. ALL WORKMANSHIP AND MATERIALS FURNISHED BY THE CONTRACTOR MUST BE THE KIND AND QUALITY DESCRIBED IN THE SPECIFICATIONS AND FIRST CLASS THROUGHOUT. NEITHER FINAL ACCEPTANCE NOR FINAL PAYMENT BY THE STATE MILITARY DEPARTMENT WILL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP.
8. THE CONTRACTOR MUST NOTIFY BOTH THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER IN WRITING UPON DISCOVERING ANYTHING ON THE APPROVED PLANS THAT WOULD CONFLICT WITH A CONSISTENT AND FUNCTIONAL PRODUCT. UPON SUCH NOTICE, THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER WILL AGREE UPON A RESOLUTION TO THE CONFLICT AND ISSUE SUCH VIA A WRITTEN ORDER AND/OR REVISED PLANS. THE CONTRACTOR WILL BEAR THE FULL COST AND RESPONSIBILITY FOR WORK AFFECTED BY SUCH CONFLICTS THAT IS PERFORMED PRIOR TO SUCH NOTICE AND THE ISSUANCE OF THE RESOLUTION.
9. THE CONTRACTOR MUST MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN, AND SANITARY CONDITION AT ALL TIMES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. STREETS MUST BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL MEASURES AS WELL AS FOR ANY CLEANUP ON ADJACENT STREETS THAT ARE AFFECTED BY CONSTRUCTION. THE CONTRACTOR WILL PERIODICALLY OPERATE STREET SWEEPERS ON PAVED AREAS ADJACENT TO THE SITE.
10. WATER MUST BE APPLIED TO THE SITE TWICE DAILY DURING GRADING OPERATIONS.
11. THE CONTRACTOR MUST EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, SURFACE IMPROVEMENTS, DRAINAGE STRUCTURES, WATER STRUCTURES, SEWER CLEANOUTS, MANHOLES, OR JUNCTION BOXES FOR UNDERGROUND ELECTRIC, GAS, TELEPHONE, CABLE, STORM, SANITARY, WATER, OR OTHER UTILITIES WHICH ARE TO REMAIN IN PLACE, AND WILL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
12. THE UTILITIES INDICATED ON THESE PLANS ARE COMPILED FROM EXISTING PLANS AND FIELD OBSERVATIONS. THE CONTRACTOR MUST CONTACT UNDERGROUND SERVICE ALERT (811) AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK TO REQUEST AND OBTAIN MARKINGS OF EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR WILL COMPARE THESE MARKINGS WITH THE INFORMATION SHOWN ON THE PLANS AND MUST IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES (SIZE, MATERIAL, OR ALIGNMENT) OR OF EVIDENCE OF A PREVIOUSLY UNKNOWN FACILITY. FAILURE TO NOTIFY THE ENGINEER WILL PROHIBIT THE CONTRACTOR FROM CLAIMING EXTRA WORK ASSOCIATED WITH THE FACILITY.
13. SOME EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS, AND THEIR LOCATIONS WHEN SHOWN ARE APPROXIMATE. THE CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR LOCATING ALL UNDERGROUND UTILITIES AND OTHER FACILITIES AND FOR PROTECTING THEM DURING CONSTRUCTION, WHETHER OR NOT SUCH FACILITIES APPEAR ON THE APPROVED PLANS. ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS MUST BE RECONSTRUCTED, REPAIRED, AND/OR RECONNECTED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
14. EXISTING IRRIGATION LATERALS AND WIRING FOR LIGHTS, SIGNALS, AND MECHANICAL EQUIPMENT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR WILL DETERMINE THE LOCATIONS OF THE AFOREMENTIONED PRIOR TO COMMENCING WORK AND MUST REPAIR OR REPLACE DAMAGED ITEMS IMMEDIATELY.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OR PROPER RESETTING OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. ANY SURVEY MONUMENTS DESTROYED BY THE CONTRACTOR MUST BE REPLACED IN ACCORDANCE WITH THE STATE LAND SURVEYORS' ACT.
16. THE CONTRACTOR MUST HIRE A LICENSED LAND SURVEYOR TO PROVIDE CONSTRUCTION STAKING IN ORDER TO ENSURE THE PROJECT IS CONSTRUCTED TO THE LINES AND GRADES INDICATED ON THE APPROVED PLANS.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ANY REQUIRED INSPECTIONS WITH THE APPROPRIATE AGENCIES.
18. IN CONFORMANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLIES CONTINUOUSLY AND IS NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS BOTH THE STATE AND THE ENGINEER OF RECORD FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STATE OR THE ENGINEER.
19. THE CONTRACTOR MUST HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ONSITE AT ALL TIMES. THE CONTRACTOR MUST MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL CHANGES WHICH DEVIATE FROM THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE AS-BUILT INFORMATION, INCLUDING THE EXACT LOCATIONS OF CHANGES, FOR THE PURPOSE OF PROVIDING THE ENGINEER WITH A BASIS FOR RECORD DRAWINGS. CHANGES MAY NOT BE MADE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND THE STATE MILITARY DEPARTMENT.
20. CONSTRUCTION MAY NOT START WITHOUT PLANS AND PERMITS APPROVED BY THE REGULATORY AGENCIES HOLDING JURISDICTION OVER THE PROJECT WORK. ALL AGENCIES MUST BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO STARTING CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS AND PERMITS AND PRIOR NOTIFICATION WILL BE REJECTED AT THE CONTRACTOR'S RISK AND EXPENSE.
21. DEBRIS CREATED BY DEMOLITION AND REMOVAL OPERATIONS WILL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND MUST BE DISPOSED OF AWAY FROM THE JOBSITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL RELEVANT AGENCIES.
22. UNLESS OTHERWISE NOTED, THE CONTRACTOR MUST ADJUST ALL STORM DRAIN INLETS, VALVE BOXES, MANHOLE RIMS, CLEANOUTS, AND OTHER UTILITY BOXES TO MATCH THE NEW FINISH SURFACE.
23. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN A MINIMUM SURFACE GRADE FOR POSITIVE DRAINAGE IN ALL PROPOSED PAVED AREAS. THE MINIMUM GRADE FOR ASPHALT IS 1.0% AND THE MINIMUM GRADE FOR CONCRETE IS 0.5% UNLESS NOTED OTHERWISE.
24. SAW-CUT LINES FOR CONCRETE ARE APPROXIMATE; THE CONTRACTOR WILL REMOVE CONCRETE TO THE NEAREST EXPANSION JOINT.
25. ALL PROPOSED PAVEMENT AND CONCRETE JOINING EXISTING MUST BE FLUSH AT TRANSITIONS, WITH NO VERTICAL EDGES, UNLESS NOTED OTHERWISE ON THE PLANS.
26. THE CONTRACTOR MUST PRESERVE ALL EXISTING SIGNS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES NOT IDENTIFIED FOR REMOVAL. IN THE EVENT THAT THEY ARE DAMAGED BY CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE "IN KIND" SAID DEVICES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. IF WORD, SYMBOL, OR ARROW MARKINGS ARE PARTIALLY DAMAGED, THE ENTIRE MARKING MUST BE REPLACED.
27. THE CONTRACTOR MUST RECYCLE MATERIALS AS FEASIBLE AND IN ACCORDANCE WITH THE CONSTRUCTION ACTIVITIES MANAGEMENT PLAN AND THE LOCAL GOVERNING AGENCY.
28. THESE PLANS DO NOT AUTHORIZE SITE DISTURBANCE BEYOND THE LIMITS OF CONSTRUCTION SHOWN.

VICINITY MAP

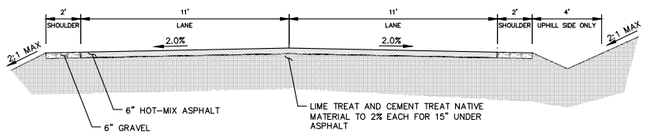
NOT TO SCALE

SECTION AND DETAIL NUMBERING SYSTEM

(1) SECTION CUT ON PLAN SHEET X:
- SECTION LETTER
- SHEET ON WHICH SECTION APPEARS

(2) ON SHEET Y, THIS SECTION IS IDENTIFIED AS:
- SECTION TITLE: SWALE SECTION
- SHEET X
- SCALE: 1"=2"
- SECTION LETTER
- SHEET(S) FROM WHICH SECTION IS TAKEN

(3) DETAILS ARE CROSS-REFERENCED IN A SIMILAR MANNER.



PROPOSED ROAD — 1

TYPICAL SECTION
NOT TO SCALE

GENERAL GRADING NOTES

1. THE CONTRACTOR MUST NOTIFY THE PROJECT GEOTECHNICAL ENGINEER AND THE STATE MILITARY DEPARTMENT INSPECTOR AT LEAST THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CLEARING OR GRADING OPERATIONS ONSITE.
2. A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER MUST BE ONSITE DURING GRADING OPERATIONS AND WILL PERFORM SUCH TESTING AS DEEMED NECESSARY. THE REPRESENTATIVE WILL OBSERVE THE GRADING OPERATIONS FOR CONDITIONS WHICH SHOULD BE CORRECTED, AND IDENTIFY SUCH WITH RECOMMENDED CORRECTIVE MEASURES TO THE CONTRACTOR.
3. THE CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS OF MATCH POINTS BEFORE GRADING TO ENSURE PROPER DRAINAGE AND SLOPES.
4. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE PROJECT GEOTECHNICAL ENGINEER MUST BE IMMEDIATELY NOTIFIED FOR DIRECTIONS. THE CONTRACTOR MUST PROVIDE COPIES OF ALL CORRESPONDENCE WITH THE GEOTECHNICAL ENGINEER TO THE CIVIL ENGINEER.
5. WORK WILL CONSIST OF ALL CLEARING (INCLUDING TREE REMOVAL), GRUBBING, STRIPPING, PREPARATION OF AREAS TO RECEIVE FILL MATERIAL, EXCAVATION, SPREADING, COMPACTION AND CONTROL OF THE FILL MATERIAL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING, AND SLOPES AS SHOWN ON THESE PLANS AND TO THE SATISFACTION OF THE PROJECT GEOTECHNICAL ENGINEER REVIEWING THE WORK.
6. ALL EXISTING TRASH, DEBRIS, ROOTS, TREE REMAINS, AND OTHER RUBBISH MUST BE REMOVED FROM THE SITE AND DISPOSED OF, SO AS TO LEAVE THE AREAS THAT HAVE BEEN DISTURBED WITH A NEAT AND FINISHED APPEARANCE FREE FROM UNSIGHTLY DEBRIS. NO BURNING IS PERMITTED.
7. ALL MATERIALS, HANDLING, AND PLACEMENT OF CEMENT CONCRETE AND AGGREGATE BASE MUST BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE PROJECT SOILS REPORT, AND THESE PLANS AND DETAILS. AGGREGATE BASE MATERIAL MUST BE CLASS II.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE GRADING QUANTITIES FOR THE ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR WILL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
9. THE CONTRACTOR MUST COORDINATE SPOILS DISPOSAL WITH THE CAMP SAN LUIS OBISPO REPRESENTATIVE.

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

OWNER

CALIFORNIA MILITARY DEPARTMENT
PROJECT MANAGER: MAJOR BRIAN D. WOODS, PROFESSIONAL ENGINEER
916-854-3319
CAMP SAN LUIS OBISPO REPRESENTATIVE: DAVID GONZALES
805-594-6577

ENGINEER/SURVEYOR

CANNON
PROJECT MANAGER: JOHN EVANS, PROFESSIONAL ENGINEER
1050 SOUTHWOOD DRIVE
SAN LUIS OBISPO, CALIFORNIA 93401
805-544-7407

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE NAD83 CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 5, EPOCH 2010.00, AS DETERMINED FROM GPS OBSERVATIONS OBTAINED IN AUGUST OF 2020. COORDINATES CONSTRAINED TO HPGN A 1315, PID# FV1095, HAVING PUBLISHED COORDINATES OF N:2,321,142.44 AND E:5,738,196.24.

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS A HPGN A 1315, PID# FV1095, HAVING A NAVD88 PUBLISHED ELEVATION OF 176.7 FEET.

SHEET LIST

LEGEND

- EXISTING ASPHALT EDGE
- SAWCUT LINE
- BLUE-LINE STREAM
- PROPOSED DRAINAGE SWALE
- EXISTING UNDERGROUND WATER LINE — W
- EXISTING UNDERGROUND SANITARY SEWER — SS
- EXISTING CULVERT
- EXISTING OVERHEAD WIRES — OH
- EXISTING FENCE — X — X
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED CONCRETE
- PROPOSED HOT-MIX ASPHALT
- PROPOSED RIPRAP

ABBREVIATIONS

BC	BEGIN CURVE	MAX	MAXIMUM
BVC	BEGINNING OF VERTICAL CURVE	MIN	MINIMUM
C	CURVE	N	NORTH
CMP	CORRUGATED METAL PIPE	PVC	POLYVINYL CHLORIDE
E	EAST	PVI	POINT OF VERTICAL INTERSECTION
EC	END CURVE	S	SOUTH
EVC	END OF VERTICAL CURVE	STA	ALIGNMENT STATION
FG	FINISHED GRADE	VC	VERTICAL CURVE
FL	FLOWLINE	VERT	VERTICAL
FS	FINISHED SURFACE	W	WEST
HDPE	HIGH DENSITY POLYETHYLENE		
HORIZ	HORIZONTAL		
INV	PIPE INVERT		
L	LINE		

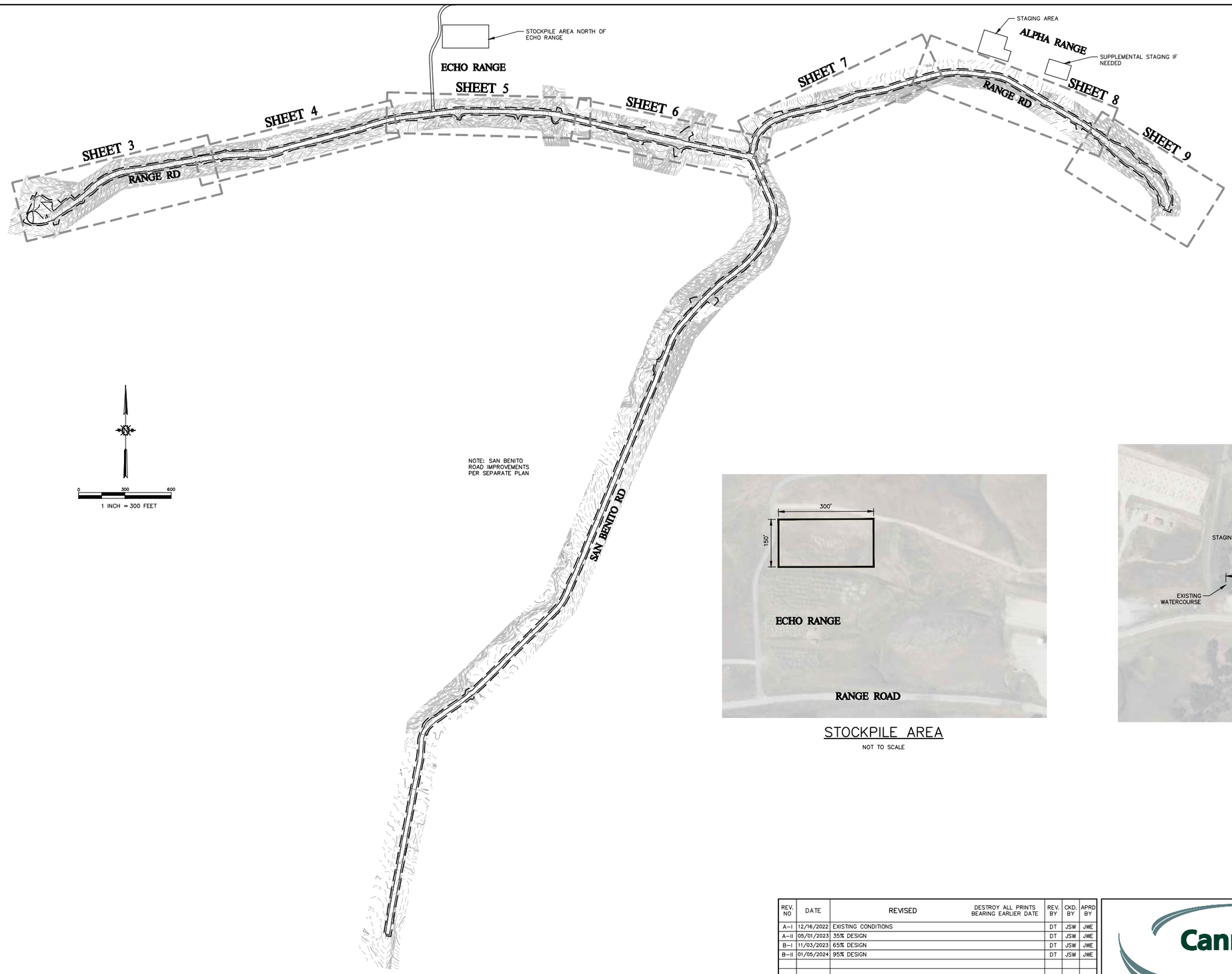
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

TITLE SHEET

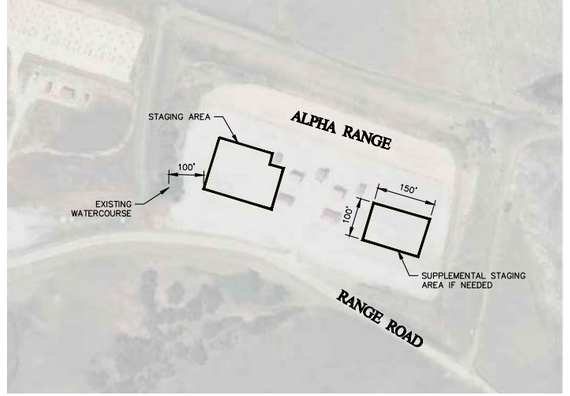
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	NOT TO SCALE	1 OF 20



STOCKPILE AREA

NOT TO SCALE



STAGING AREA

NOT TO SCALE

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

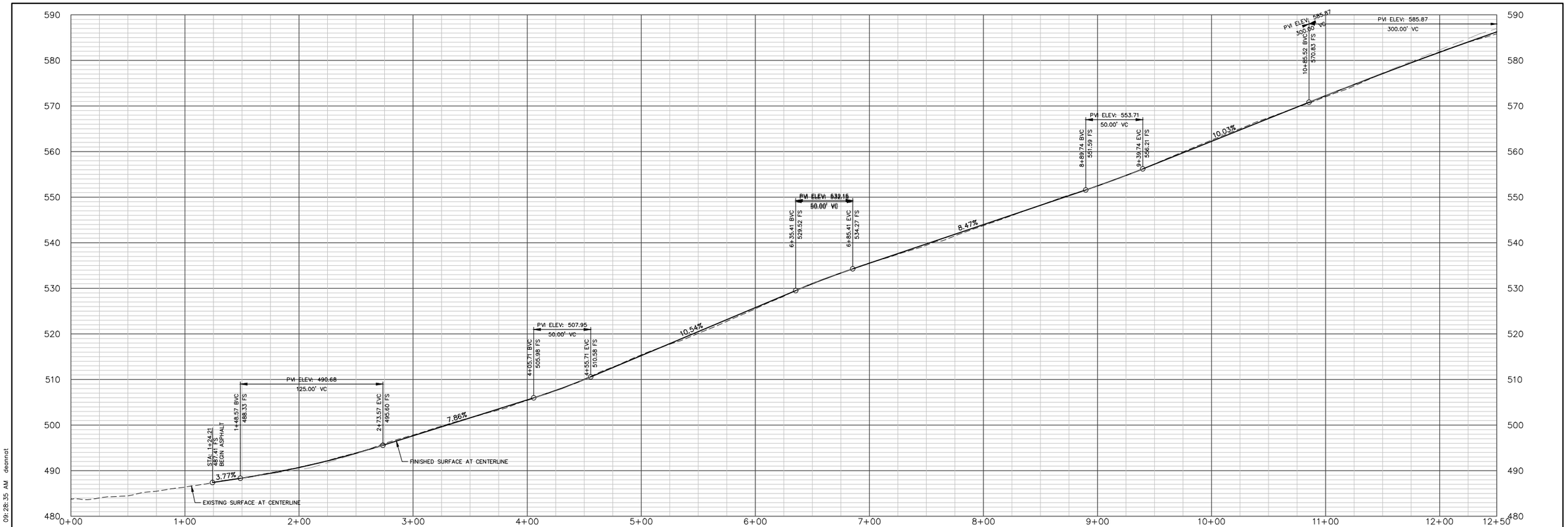
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

KEY MAP

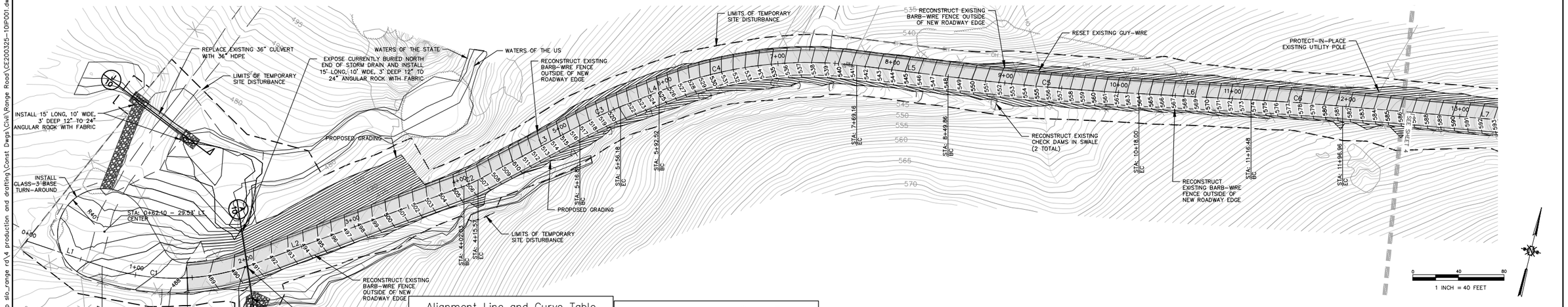
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY: JSW	DATE: 01/05/2024	CA JOB NO.: 200325.10
CHECKED BY:	SCALE: AS SHOWN	SHEET: 2 OF 20



RANGE ROAD PLAN STATIONS 0+00 TO 12+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L1	69.77	S85° 07' 45.12"E	
C1	135.73	38.88	200.00
L2	196.53	N55° 59' 09.25"E	
C2	13.53	7.75	100.00
L3	101.24	N48° 13' 58.14"E	
C3	39.37	6.45	350.00
L4	38.22	N54° 40' 42.22"E	

Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
C4	174.76	28.61	350.00
L5	80.69	N83° 17' 15.51"E	
C5	168.15	3.85	2500.00
L6	98.48	N79° 26' 02.52"E	
C6	80.48	1.84	2500.00
L7	160.63	N81° 16' 42.81"E	

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

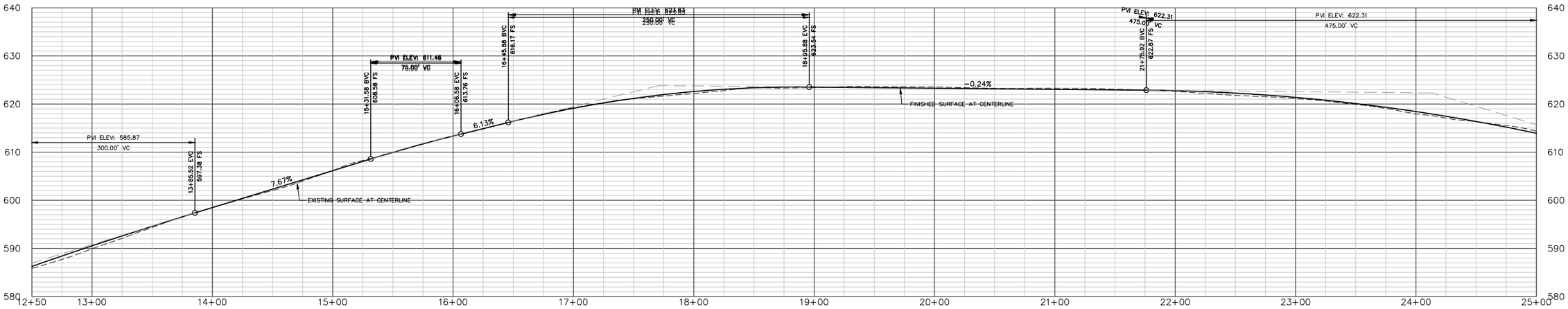
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 0+00 TO 12+50

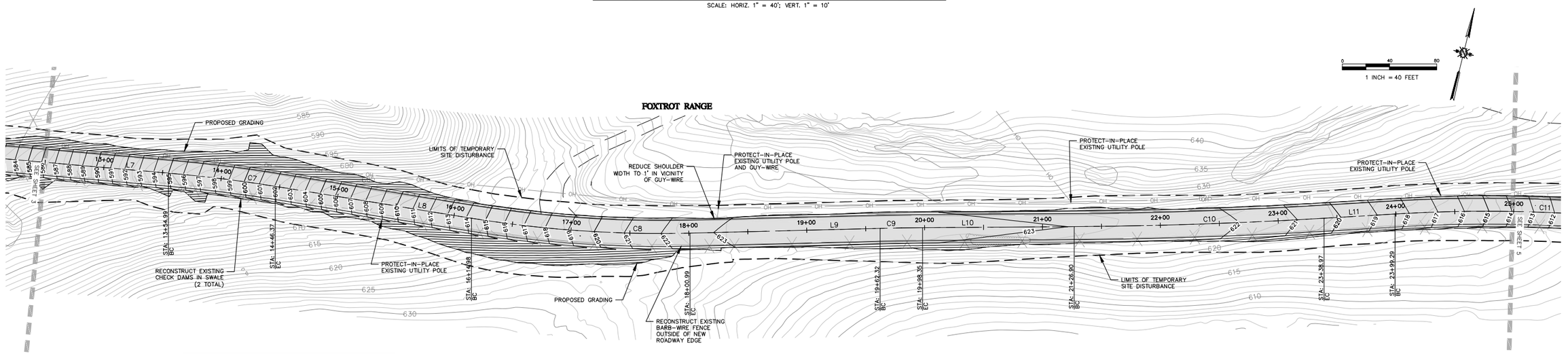
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	3 OF 20



RANGE ROAD PLAN STATIONS 12+50 TO 25+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L7	160.63	N81° 16' 42.81"E	
C7	88.78	4.24	1200.00
L8	168.61	N85° 31' 03.58"E	
C8	186.01	10.66	1000.00
L9	161.33	N74° 51' 35.55"E	
C9	36.03	1.03	2000.00
L10	128.56	N75° 53' 31.12"E	
C10	212.07	3.04	4000.00
L11	60.32	N72° 51' 15.60"E	
C11	237.94	10.49	1300.00

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

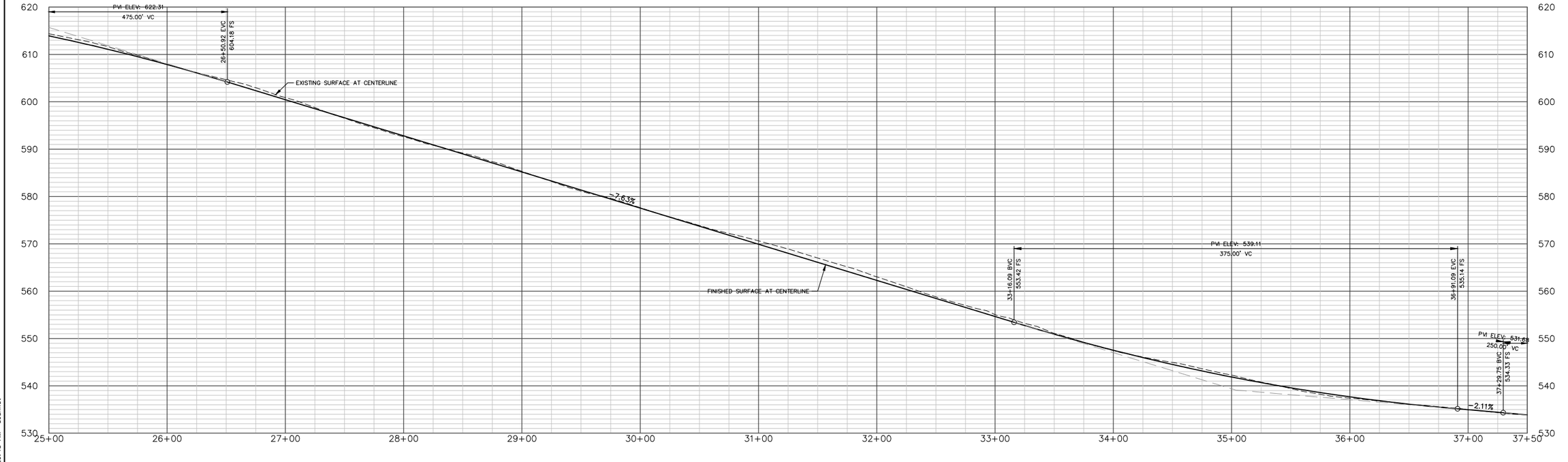
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 12+50 TO 25+00

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	4 OF 20

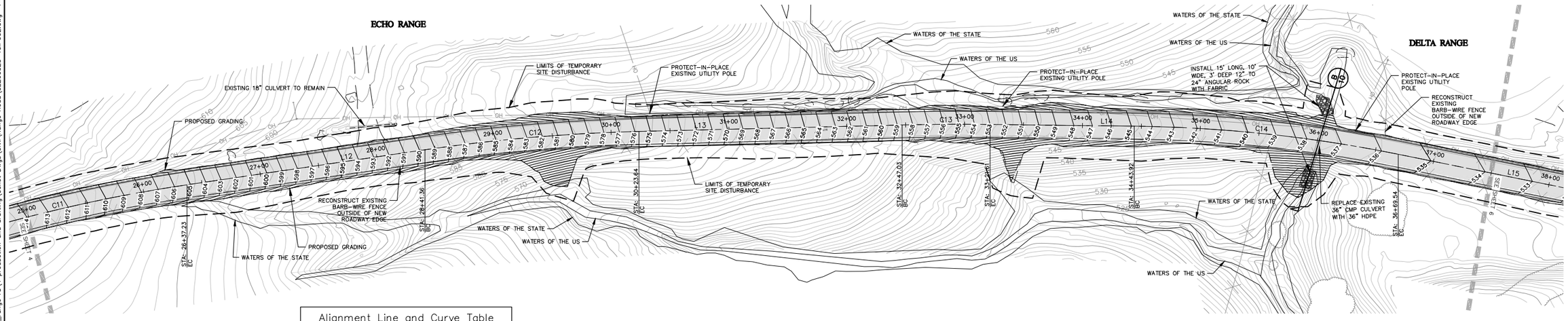


RANGE ROAD PLAN STATIONS 25+00 TO 37+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'

0 40 80

1 INCH = 40 FEET



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
C11	237.94	10.49	1300.00
L12	204.13	N83° 20' 28.68"E	
C12	182.28	6.96	1500.00
L13	223.39	S89° 41' 46.42"E	
C13	72.89	2.09	2000.00
L14	124.00	S87° 36' 28.97"E	
C14	225.62	10.77	1200.00
L15	253.81	S76° 50' 07.62"E	

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

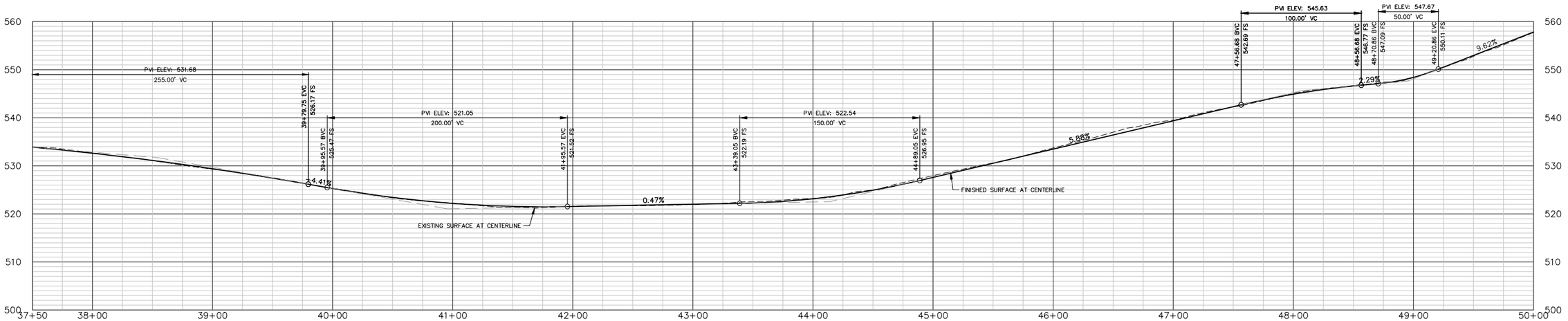
RANGE ROAD REHABILITATION

PLAN STATIONS 25+00 TO 37+50

CAMP SAN LUIS OBISPO, CALIFORNIA

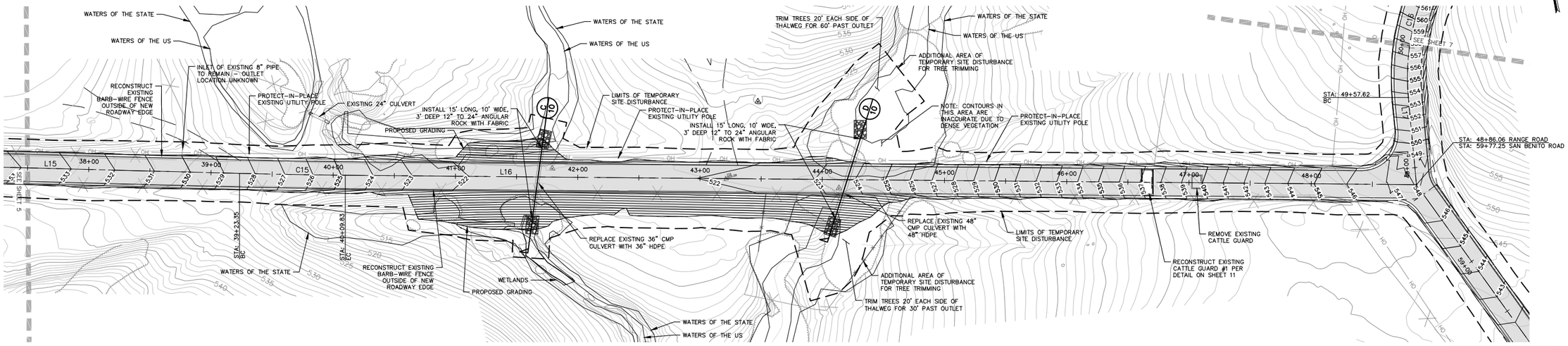
DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	5 OF 20

F:\pro\2020\200325\200325.10_camp slo_range rd\4 production and drafting\Const Dwgs\Civil\Range Road\CE200325-10P002.dwg 1-25-24 09:29:43 AM deannat



RANGE ROAD PLAN STATIONS 37+50 TO 50+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L15	253.81	S76° 50' 07.62"E	
C15	86.48	0.99	5000.00
L16	876.23	S77° 49' 35.08"E	
L17	71.56	N6° 20' 17.83"E	

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

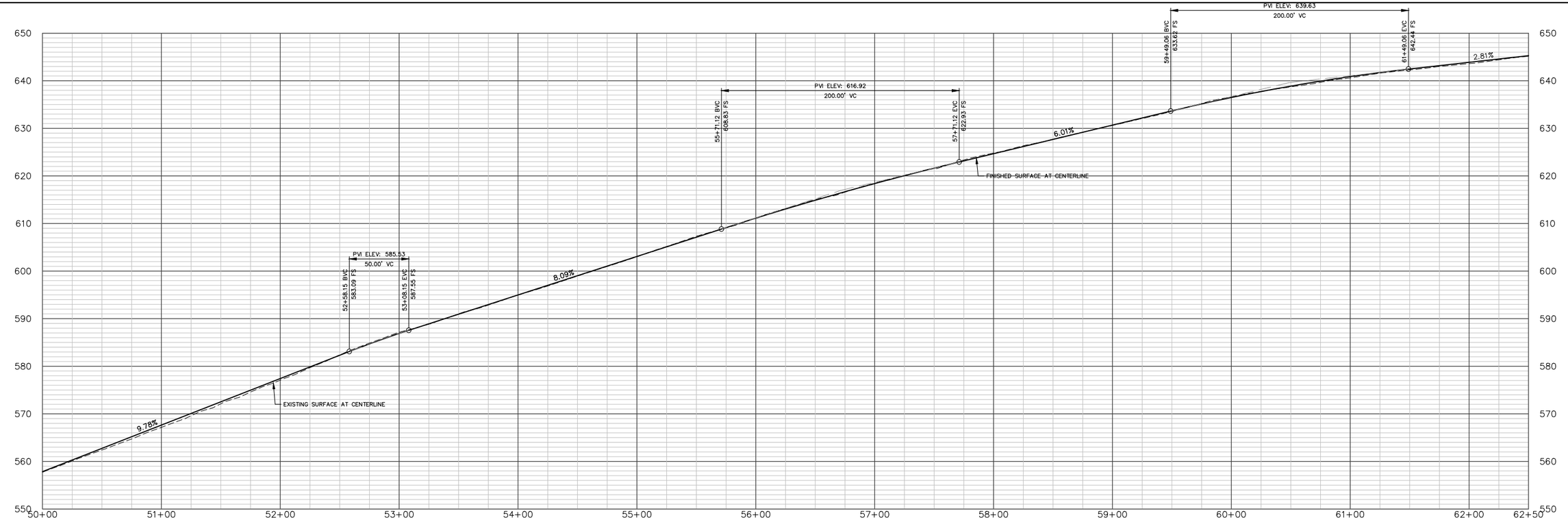
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

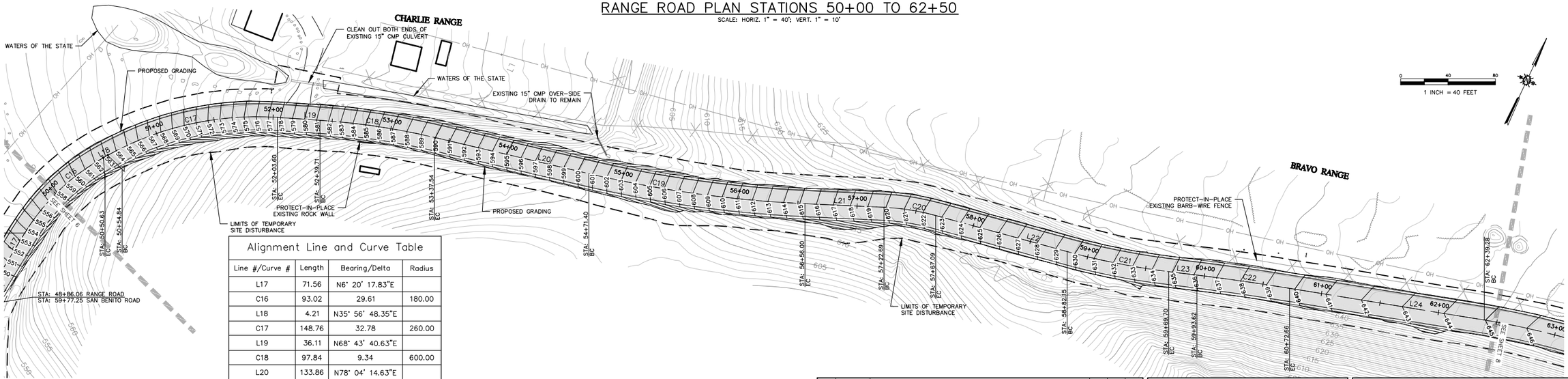
RANGE ROAD REHABILITATION

PLAN STATIONS 37+50 TO 50+00

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	6 OF 20





Alignment Line and Curve Table

Line #/Curve #	Length	Bearing/Delta	Radius
L17	71.56	N6° 20' 17.83"E	
C16	93.02	29.61	180.00
L18	4.21	N35° 56' 48.35"E	
C17	148.76	32.78	260.00
L19	36.11	N68° 43' 40.63"E	
C18	97.84	9.34	600.00
L20	133.86	N78° 04' 14.63"E	
C19	184.59	10.58	1000.00
L21	66.69	N67° 29' 39.95"E	
C20	44.41	12.72	200.00
L22	115.06	N80° 13' 00.42"E	
C21	87.55	8.36	600.00
L23	23.92	N71° 51' 23.30"E	
C22	79.05	2.26	2000.00
L24	166.62	N74° 07' 15.56"E	

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

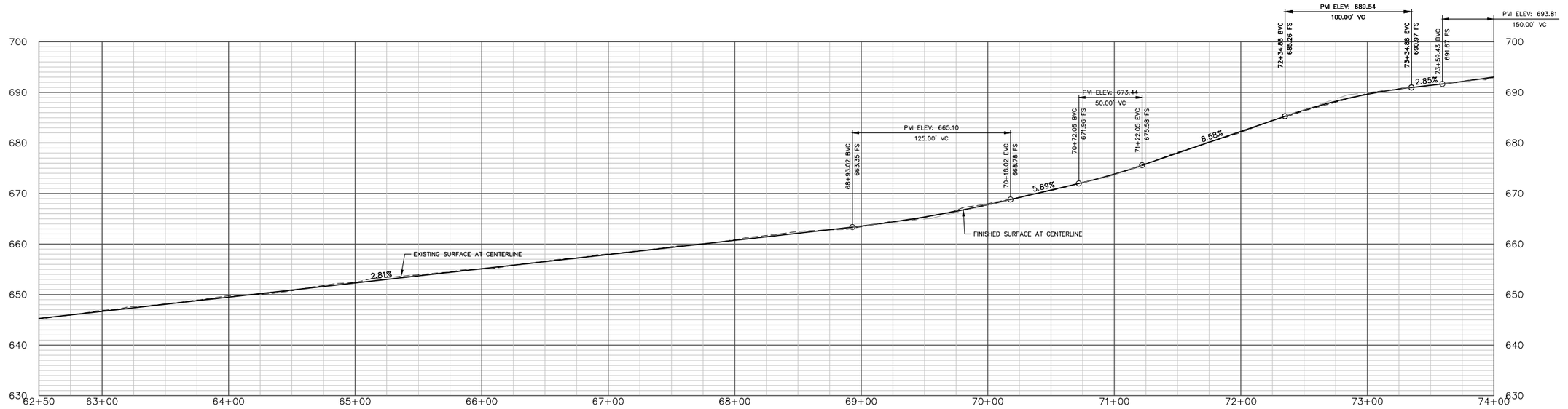
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 50+00 TO 62+50

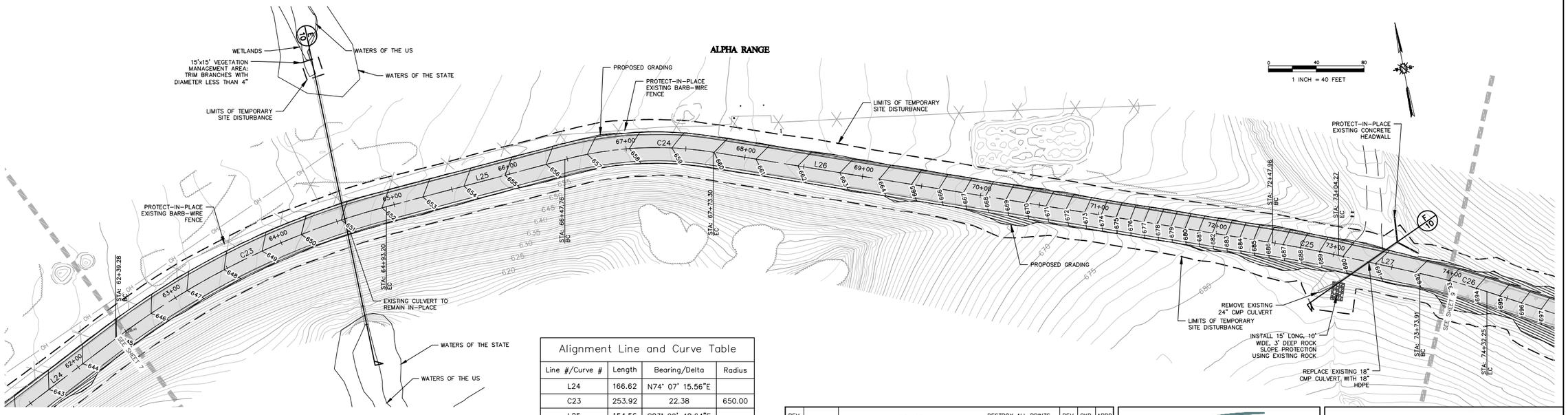
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	7 OF 20



RANGE ROAD PLAN STATIONS 62+50 TO 74+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L24	166.62	N74° 07' 15.56"E	
C23	253.92	22.38	650.00
L25	154.56	S83° 29' 48.64"E	
C24	125.55	23.98	300.00
L26	474.66	S59° 31' 10.12"E	
C25	56.30	3.23	1000.00
L27	69.64	S56° 17' 36.68"E	
C26	58.33	5.57	600.00

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

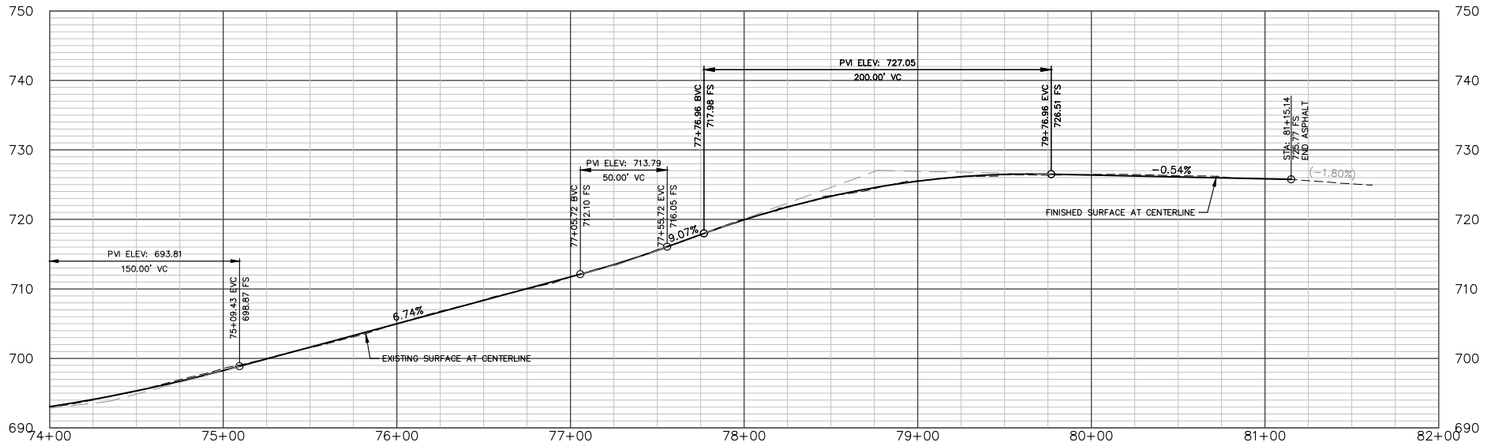
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

PLAN STATIONS 62+50 TO 74+00

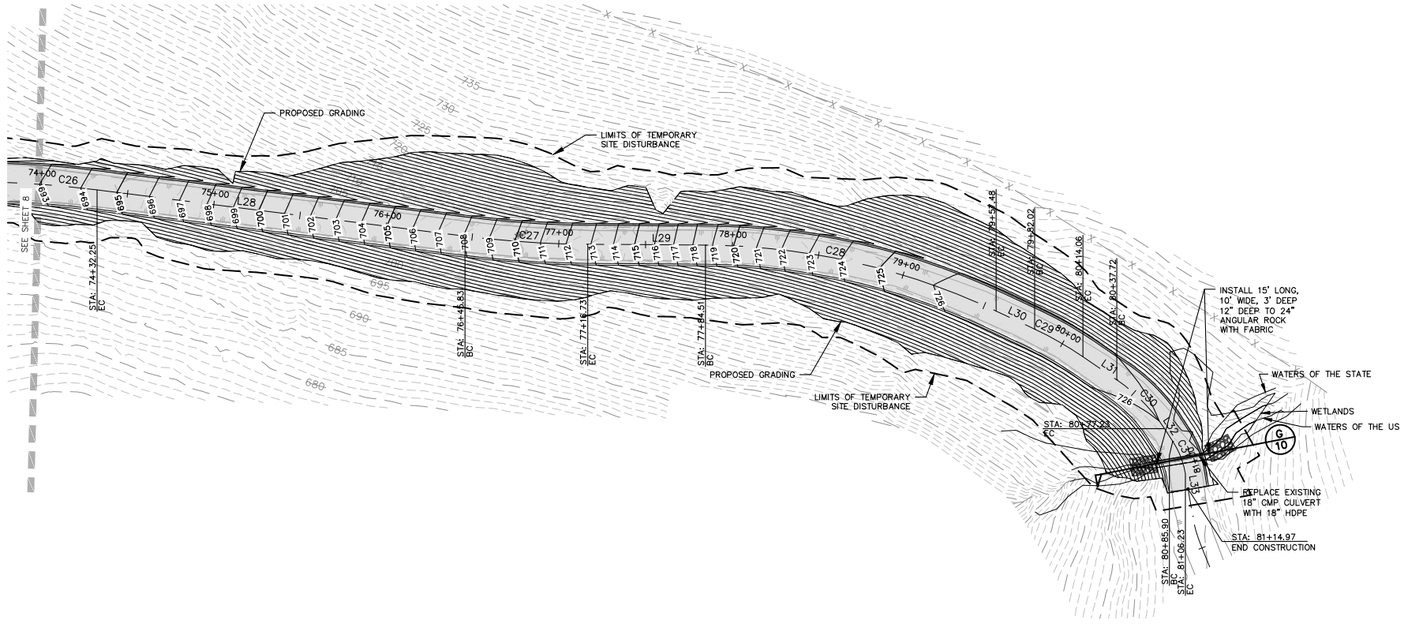
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	8 OF 20



RANGE ROAD PLAN STATIONS 74+00 TO 82+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
C26	58.33	5.57	600.00
L28	213.58	S50° 43' 22.69"E	
C27	70.90	6.77	600.00
L29	67.78	S57° 29' 35.83"E	
C28	172.98	24.78	400.00
L30	24.53	S32° 42' 57.50"E	
C29	32.04	9.18	200.00
L31	23.66	S23° 32' 10.33"E	
C30	39.51	22.64	100.00
L32	8.67	S0° 53' 47.37"E	
C31	20.33	23.30	50.00
L33	24.72	S22° 23' 55.35"W	

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

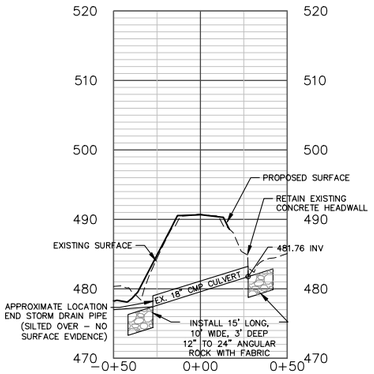
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

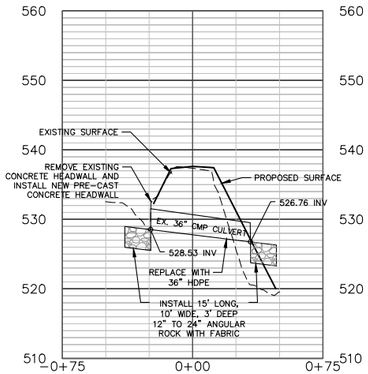
PLAN STATIONS 74+00 TO 82+00

CAMP SAN LUIS OBISPO, CALIFORNIA

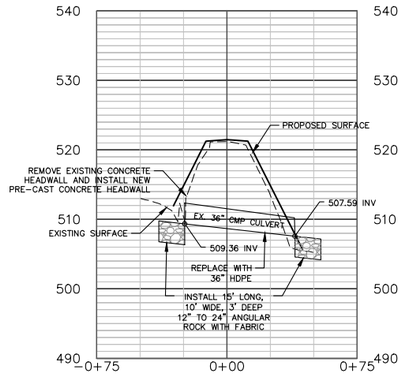
DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	9 OF 20



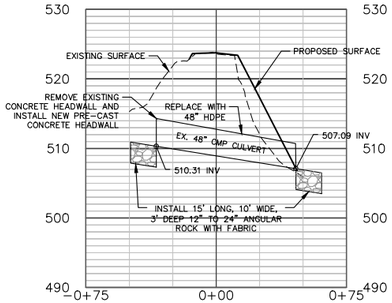
CULVERT A
SHEET 3
SCALE: H 1"=40', V 1"=10'



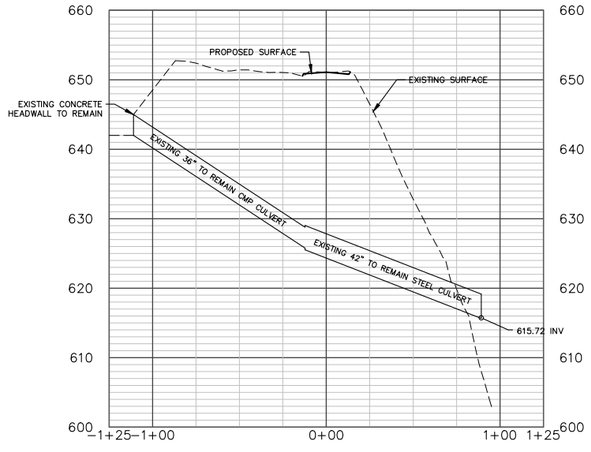
CULVERT B
SHEET 5
SCALE: H 1"=40', V 1"=10'



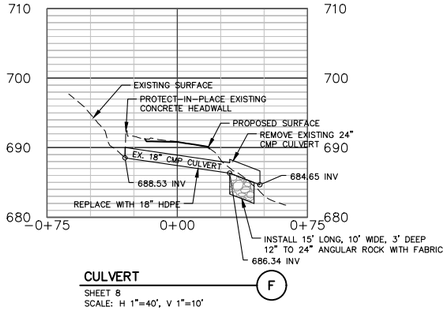
CULVERT C
SHEET 6
SCALE: H 1"=40', V 1"=10'



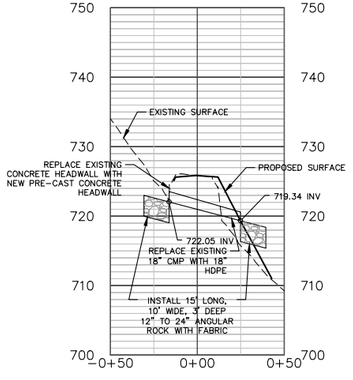
CULVERT D
SHEET 6
SCALE: H 1"=40', V 1"=10'



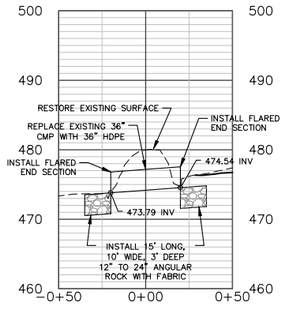
CULVERT E
SHEET 8
SCALE: H 1"=40', V 1"=10'



CULVERT F
SHEET 8
SCALE: H 1"=40', V 1"=10'



CULVERT G
SHEET 9
SCALE: H 1"=40', V 1"=10'



CULVERT J
SHEET 3
SCALE: H 1"=40', V 1"=10'

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

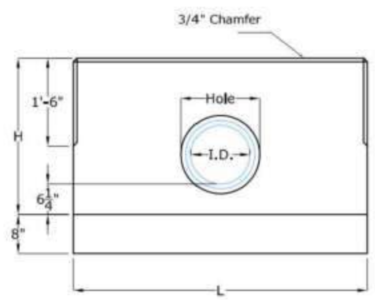
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

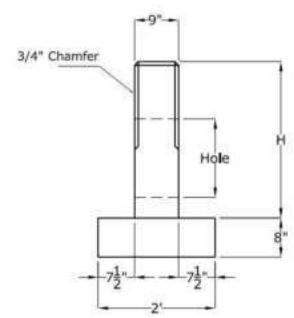
CULVERT SECTIONS

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	10 OF 20



FRONT ELEVATION
SINGLE HEADWALL



SECTION
SINGLE HEADWALL

PIPE (I.D.)	H	L	CU.YD.
12"	2'-8"	5'-0"	0.60
15"	2'-11"	6'-0"	0.75
18"	3'-2"	7'-0"	0.91
21"	3'-5"	7'-6"	1.02
24"	3'-8"	8'-6"	1.20
27"	3'-11"	9'-6"	1.39
30"	4'-2"	10'-0"	1.52
33"	4'-5"	11'-0"	1.73
36"	4'-8"	12'-0"	1.95
39"	4'-11"	12'-6"	2.09
42"	5'-2"	13'-6"	2.34
45"	5'-5"	14'-6"	2.60
48"	5'-8"	15'-0"	2.75
51"	5'-11"	16'-0"	3.03
54"	6'-2"	17'-0"	3.31

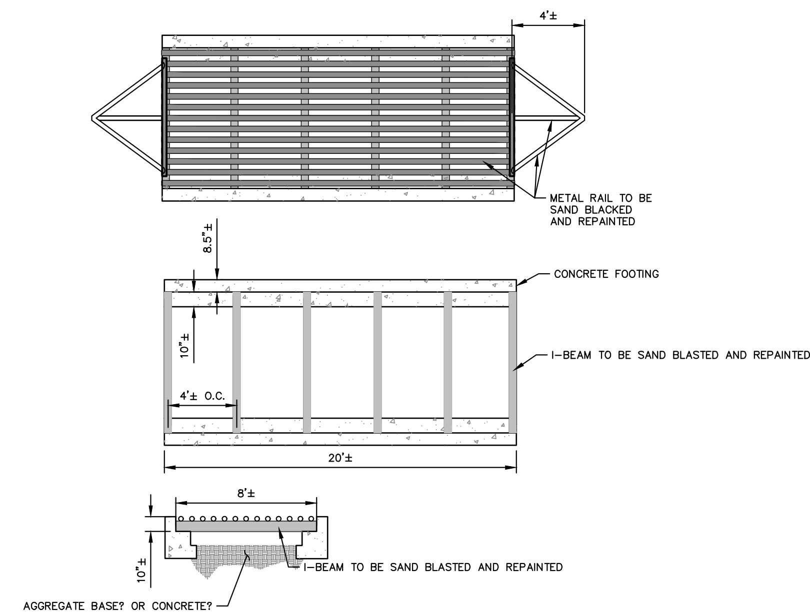
NOTES:

1. Straight Headwalls in compliance with 2006 Caltrans Standard Plan D89.

MID STATE Concrete Products Santa Maria, Ca

SINGLE STRAIGHT HEADWALLS

REV. 12/09



CATTLE GUARD DETAIL (1)
SHEET 6
SCALE: 1"=5'

REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS		DT	JSW	JWE
A-II	05/01/2023	35% DESIGN		DT	JSW	JWE
B-I	11/03/2023	65% DESIGN		DT	JSW	JWE
B-II	01/05/2024	95% DESIGN		DT	JSW	JWE

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

RANGE ROAD REHABILITATION

CONSTRUCTION DETAILS

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE 1" = 40'	SHEET 11 OF 20

SAN BENITO ROAD REHABILITATION

CAMP SAN LUIS OBISPO, CALIFORNIA

GENERAL SITE NOTES

1. EXISTING FEATURES WITHIN THIS PLAN SET ARE TAKEN FROM A FIELD SURVEY PREPARED BY CANNON.
2. WORK WILL BE PERFORMED TO CONFORM WITH THE FOLLOWING SPECIFICATIONS. WHERE CONFLICTS EXIST BETWEEN ANY OF THESE, THE ENGINEER WILL CLARIFY WHICH SPECIFICATION GOVERNS.
   A. THE STANDARDS OF THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND THE RULES OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
   B. THE APPLICABLE SECTIONS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (HEREINAFTER REFERRED TO AS "CALTRANS").
   C. THE APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STATE OF CALIFORNIA BUILDING STANDARDS CODE AND THE CALIFORNIA ACCESS COMPLIANCE ADVISORY REFERENCE MANUAL.
   D. THE REQUIREMENTS OF ALL PERMITS ISSUED FOR WORK BY THE STATE OF CALIFORNIA MILITARY DEPARTMENT.
   E. THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS NOTED IN THE PROJECT SOILS REPORT PREPARED BY EARTH SYSTEMS TITLED "GEOTECHNICAL RECOMMENDATIONS FOR ROADWAY REHABILITATION" AND DATED AUGUST 15, 2023, AND ALL ADDENDUMS THERETO.
   F. THE UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS) PREPARED FOR THIS PROJECT.
   G. THESE APPROVED PLANS AND DETAILS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL THE PERMITS NECESSARY TO PERFORM WORK PRIOR TO COMMENCING WORK, INCLUDING BUT NOT LIMITED TO GRADING, TREE REMOVAL, AND UTILITY MODIFICATIONS.
4. THE CONTRACTOR MUST SUPPLY ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO PERFORM THE WORK AS SHOWN ON THE APPROVED PLANS.
5. IT IS THE RESPONSIBILITY OF THE VARIOUS CONTRACTORS TO COORDINATE THEIR WORK SO AS TO ELIMINATE CONFLICTS AND WORK TOWARD THE GENERAL GOOD AND COMPLETION OF THE ENTIRE PROJECT.
6. ALL CONSTRUCTION ACTIVITY THAT DISRUPTS THE SMOOTH FLOW OF TRAFFIC OVER PUBLIC ROADS WILL REQUIRE A TRAFFIC CONTROL PLAN AS SPECIFIED IN THE PROJECT SPECIFICATIONS. TRAFFIC CONTROL MUST CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLAN MUST BE SUBMITTED FIVE WORKING DAYS PRIOR TO IMPLEMENTATION FOR APPROVAL BY THE STATE MILITARY DEPARTMENT.
7. ALL WORKMANSHIP AND MATERIALS FURNISHED BY THE CONTRACTOR MUST BE THE KIND AND QUALITY DESCRIBED IN THE SPECIFICATIONS AND FIRST CLASS THROUGHOUT. NEITHER FINAL ACCEPTANCE NOR FINAL PAYMENT BY THE STATE MILITARY DEPARTMENT WILL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP.
8. THE CONTRACTOR MUST NOTIFY BOTH THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER IN WRITING UPON DISCOVERING ANYTHING ON THE APPROVED PLANS THAT WOULD CONFLICT WITH A CONSISTENT AND FUNCTIONAL PRODUCT. UPON SUCH NOTICE, THE STATE MILITARY DEPARTMENT AND THE DESIGN ENGINEER WILL AGREE UPON A RESOLUTION TO THE CONFLICT AND ISSUE SUCH VIA A WRITTEN ORDER AND/OR REVISED PLANS. THE CONTRACTOR WILL BEAR THE FULL COST AND RESPONSIBILITY FOR WORK AFFECTED BY SUCH CONFLICTS THAT IS PERFORMED PRIOR TO SUCH NOTICE AND THE ISSUANCE OF THE RESOLUTION.
9. THE CONTRACTOR MUST MAINTAIN THE WORK AREA IN A NEAT, SAFE, CLEAN, AND SANITARY CONDITION AT ALL TIMES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. STREETS MUST BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL MEASURES AS WELL AS FOR ANY CLEANUP ON ADJACENT STREETS THAT ARE AFFECTED BY CONSTRUCTION. THE CONTRACTOR WILL PERIODICALLY OPERATE STREET SWEEPERS ON PAVED AREAS ADJACENT TO THE SITE.
10. WATER MUST BE APPLIED TO THE SITE TWICE DAILY DURING GRADING OPERATIONS.
11. THE CONTRACTOR MUST EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING TREES, SURFACE IMPROVEMENTS, DRAINAGE STRUCTURES, WATER STRUCTURES, SEWER CLEANOUTS, MANHOLES, OR JUNCTION BOXES FOR UNDERGROUND ELECTRIC, GAS, TELEPHONE, CABLE, STORM, SANITARY, WATER, OR OTHER UTILITIES WHICH ARE TO REMAIN IN PLACE, AND WILL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO.
12. THE UTILITIES INDICATED ON THESE PLANS ARE COMPILED FROM EXISTING PLANS AND FIELD OBSERVATIONS. THE CONTRACTOR MUST CONTACT UNDERGROUND SERVICE ALERT (811) AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK TO REQUEST AND OBTAIN MARKINGS OF EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR WILL COMPARE THESE MARKINGS WITH THE INFORMATION SHOWN ON THE PLANS AND MUST IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES (SIZE, MATERIAL, OR ALIGNMENT) OR OF EVIDENCE OF A PREVIOUSLY UNKNOWN FACILITY. FAILURE TO NOTIFY THE ENGINEER WILL PROHIBIT THE CONTRACTOR FROM CLAIMING EXTRA WORK ASSOCIATED WITH THE FACILITY.
13. SOME EXISTING UTILITIES AND OTHER UNDERGROUND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS, AND THEIR LOCATIONS WHEN SHOWN ARE APPROXIMATE. THE CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR LOCATING ALL UNDERGROUND UTILITIES AND OTHER FACILITIES AND FOR PROTECTING THEM DURING CONSTRUCTION, WHETHER OR NOT SUCH FACILITIES APPEAR ON THE APPROVED PLANS. ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS MUST BE RECONSTRUCTED, REPAIRED, AND/OR RECONNECTED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
14. EXISTING IRRIGATION LATERALS AND WIRING FOR LIGHTS, SIGNALS, AND MECHANICAL EQUIPMENT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR WILL DETERMINE THE LOCATIONS OF THE AFOREMENTIONED PRIOR TO COMMENCING WORK AND MUST REPAIR OR REPLACE DAMAGED ITEMS IMMEDIATELY.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OR PROPER RESETTING OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. ANY SURVEY MONUMENTS DESTROYED BY THE CONTRACTOR MUST BE REPLACED IN ACCORDANCE WITH THE STATE LAND SURVEYORS' ACT.
16. THE CONTRACTOR MUST HIRE A LICENSED LAND SURVEYOR TO PROVIDE CONSTRUCTION STAKING IN ORDER TO ENSURE THE PROJECT IS CONSTRUCTED TO THE LINES AND GRADES INDICATED ON THE APPROVED PLANS.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ANY REQUIRED INSPECTIONS WITH THE APPROPRIATE AGENCIES.
18. IN CONFORMANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT APPLIES CONTINUOUSLY AND IS NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS BOTH THE STATE AND THE ENGINEER OF RECORD FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STATE OR THE ENGINEER.
19. THE CONTRACTOR MUST HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ONSITE AT ALL TIMES. THE CONTRACTOR MUST MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL CHANGES WHICH DEVIATE FROM THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE AS-BUILT INFORMATION, INCLUDING THE EXACT LOCATIONS OF CHANGES, FOR THE PURPOSE OF PROVIDING THE ENGINEER WITH A BASIS FOR RECORD DRAWINGS. CHANGES MAY NOT BE MADE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND THE STATE MILITARY DEPARTMENT.
20. CONSTRUCTION MAY NOT START WITHOUT PLANS AND PERMITS APPROVED BY THE REGULATORY AGENCIES HOLDING JURISDICTION OVER THE PROJECT WORK. ALL AGENCIES MUST BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO STARTING CONSTRUCTION. ANY CONSTRUCTION DONE WITHOUT APPROVED PLANS AND PERMITS AND PRIOR NOTIFICATION WILL BE REJECTED AT THE CONTRACTOR'S RISK AND EXPENSE.
21. DEBRIS CREATED BY DEMOLITION AND REMOVAL OPERATIONS WILL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED, AND MUST BE DISPOSED OF AWAY FROM THE JOBSITE IN A MANNER AND AT A LOCATION ACCEPTABLE TO ALL RELEVANT AGENCIES.
22. UNLESS OTHERWISE NOTED, THE CONTRACTOR MUST ADJUST ALL STORM DRAIN INLETS, VALVE BOXES, MANHOLE RIMS, CLEANOUTS, AND OTHER UTILITY BOXES TO MATCH THE NEW FINISH SURFACE.
23. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN A MINIMUM SURFACE GRADE FOR POSITIVE DRAINAGE IN ALL PROPOSED PAVED AREAS. THE MINIMUM GRADE FOR ASPHALT IS 1.0% AND THE MINIMUM GRADE FOR CONCRETE IS 0.5%, UNLESS NOTED OTHERWISE.
24. SAW-CUT LINES FOR CONCRETE ARE APPROXIMATE; THE CONTRACTOR WILL REMOVE CONCRETE TO THE NEAREST EXPANSION JOINT.
25. ALL PROPOSED PAVEMENT AND CONCRETE JOINING EXISTING MUST BE FLUSH AT TRANSITIONS, WITH NO VERTICAL EDGES, UNLESS NOTED OTHERWISE ON THE PLANS.
26. THE CONTRACTOR MUST PRESERVE ALL EXISTING SIGNS, MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES NOT IDENTIFIED FOR REMOVAL. IN THE EVENT THAT THEY ARE DAMAGED BY CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE "IN KIND" SAID DEVICES TO THE SATISFACTION OF THE STATE MILITARY DEPARTMENT. IF WORD, SYMBOL, OR ARROW MARKINGS ARE PARTIALLY DAMAGED, THE ENTIRE MARKING MUST BE REPLACED.
27. THE CONTRACTOR MUST RECYCLE MATERIALS AS FEASIBLE AND IN ACCORDANCE WITH THE CONSTRUCTION ACTIVITIES MANAGEMENT PLAN AND THE LOCAL GOVERNING AGENCY.
28. THESE PLANS DO NOT AUTHORIZE SITE DISTURBANCE BEYOND THE LIMITS OF CONSTRUCTION SHOWN.

VICINITY MAP

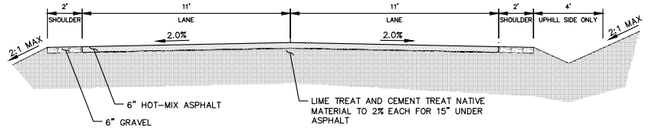
NOT TO SCALE

SECTION AND DETAIL NUMBERING SYSTEM

(1) SECTION CUT ON PLAN SHEET X: — SECTION LETTER / SHEET ON WHICH SECTION APPEARS

(2) ON SHEET Y, THIS SECTION IS IDENTIFIED AS: — SECTION TITLE: SWALE SECTION; SECTION LETTER; SHEET X; SCALE: 1"=2"; SHEET(S) FROM WHICH SECTION IS TAKEN

(3) DETAILS ARE CROSS-REFERENCED IN A SIMILAR MANNER.



PROPOSED ROAD — TYPICAL SECTION — NOT TO SCALE — 1

GENERAL GRADING NOTES

1. THE CONTRACTOR MUST NOTIFY THE PROJECT GEOTECHNICAL ENGINEER AND THE STATE MILITARY DEPARTMENT INSPECTOR AT LEAST THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CLEARING OR GRADING OPERATIONS ONSITE.
2. A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER MUST BE ONSITE DURING GRADING OPERATIONS AND WILL PERFORM SUCH TESTING AS DEEMED NECESSARY. THE REPRESENTATIVE WILL OBSERVE THE GRADING OPERATIONS FOR CONDITIONS WHICH SHOULD BE CORRECTED, AND IDENTIFY SUCH WITH RECOMMENDED CORRECTIVE MEASURES TO THE CONTRACTOR.
3. THE CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS OF MATCH POINTS BEFORE GRADING TO ENSURE PROPER DRAINAGE AND SLOPES.
4. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE PROJECT GEOTECHNICAL ENGINEER MUST BE IMMEDIATELY NOTIFIED FOR DIRECTIONS. THE CONTRACTOR MUST PROVIDE COPIES OF ALL CORRESPONDENCE WITH THE GEOTECHNICAL ENGINEER TO THE CIVIL ENGINEER.
5. WORK WILL CONSIST OF ALL CLEARING (INCLUDING TREE REMOVAL), GRUBBING, STRIPPING, PREPARATION OF AREAS TO RECEIVE FILL MATERIAL, EXCAVATION, SPREADING, COMPACTION AND CONTROL OF THE FILL MATERIAL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING, AND SLOPES AS SHOWN ON THESE PLANS AND TO THE SATISFACTION OF THE PROJECT GEOTECHNICAL ENGINEER REVIEWING THE WORK.
6. ALL EXISTING TRASH, DEBRIS, ROOTS, TREE REMAINS, AND OTHER RUBBISH MUST BE REMOVED FROM THE SITE AND DISPOSED OF, SO AS TO LEAVE THE AREAS THAT HAVE BEEN DISTURBED WITH A NEAT AND FINISHED APPEARANCE FREE FROM UNSIGHTLY DEBRIS. NO BURNING IS PERMITTED.
7. ALL MATERIALS, HANDLING, AND PLACEMENT OF CEMENT CONCRETE AND AGGREGATE BASE MUST BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE PROJECT SOILS REPORT, AND THESE PLANS AND DETAILS. AGGREGATE BASE MATERIAL MUST BE CLASS II.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE GRADING QUANTITIES FOR THE ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR WILL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
9. THE CONTRACTOR MUST COORDINATE SPOILS DISPOSAL WITH THE CAMP SAN LUIS OBISPO REPRESENTATIVE.

OWNER

CALIFORNIA MILITARY DEPARTMENT
PROJECT MANAGER: MAJOR BRIAN D. WOODS, PROFESSIONAL ENGINEER
916-854-3319
CAMP SAN LUIS OBISPO REPRESENTATIVE: DAVID GONZALES
805-594-6577

ENGINEER/SURVEYOR

CANNON
PROJECT MANAGER: JOHN EVANS, PROFESSIONAL ENGINEER
1050 SOUTHWOOD DRIVE
SAN LUIS OBISPO, CALIFORNIA 93401
805-544-7407

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE NAD83 CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 5, EPOCH 2010.00, AS DETERMINED FROM GPS OBSERVATIONS OBTAINED IN AUGUST OF 2020. COORDINATES CONSTRAINED TO HPGN A 1315, PID# FV1095, HAVING PUBLISHED COORDINATES OF N:2,321,142.44 AND E:5,738,196.24.

BENCHMARK

THE BENCHMARK FOR THIS SURVEY IS A HPGN A 1315, PID# FV1095, HAVING A NAVD88 PUBLISHED ELEVATION OF 176.7 FEET.

SHEET LIST

LEGEND

EXISTING ASPHALT EDGE
SAWCUT LINE
BLUE-LINE STREAM
PROPOSED DRAINAGE SWALE
EXISTING UNDERGROUND WATER LINE — W —
EXISTING UNDERGROUND SANITARY SEWER — SS —
EXISTING CULVERT
EXISTING OVERHEAD WIRES — OH —
EXISTING FENCE — X — X —
EXISTING UTILITY POLE
EXISTING SEWER MANHOLE
EXISTING FIRE HYDRANT
PROPOSED CONCRETE
PROPOSED HOT-MIX ASPHALT
PROPOSED RIPRAP

ABBREVIATIONS

BC	BEGIN CURVE	MAX	MAXIMUM
BVC	BEGINNING OF VERTICAL CURVE	MIN	MINIMUM
C	CURVE	N	NORTH
CMP	CORRUGATED METAL PIPE	PVC	POLYVINYL CHLORIDE
E	EAST	PVI	POINT OF VERTICAL INTERSECTION
EC	END CURVE	S	SOUTH
EVC	END OF VERTICAL CURVE	STA	ALIGNMENT STATION
FG	FINISHED GRADE	V	VERTICAL
FL	FLOWLINE	VC	VERTICAL CURVE
FS	FINISHED SURFACE	W	WEST
H	HORIZONTAL		
HDPE	HIGH DENSITY POLYETHYLENE		
INV	PIPE INVERT		
L	LINE		

REV. NO	DATE	REVISED	DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS		DT	JSW	JWE
A-II	05/01/2023	35% DESIGN		DT	JSW	JWE
B-I	11/03/2023	65% DESIGN		DT	JSW	JWE
B-II	01/05/2024	95% DESIGN		DT	JSW	JWE

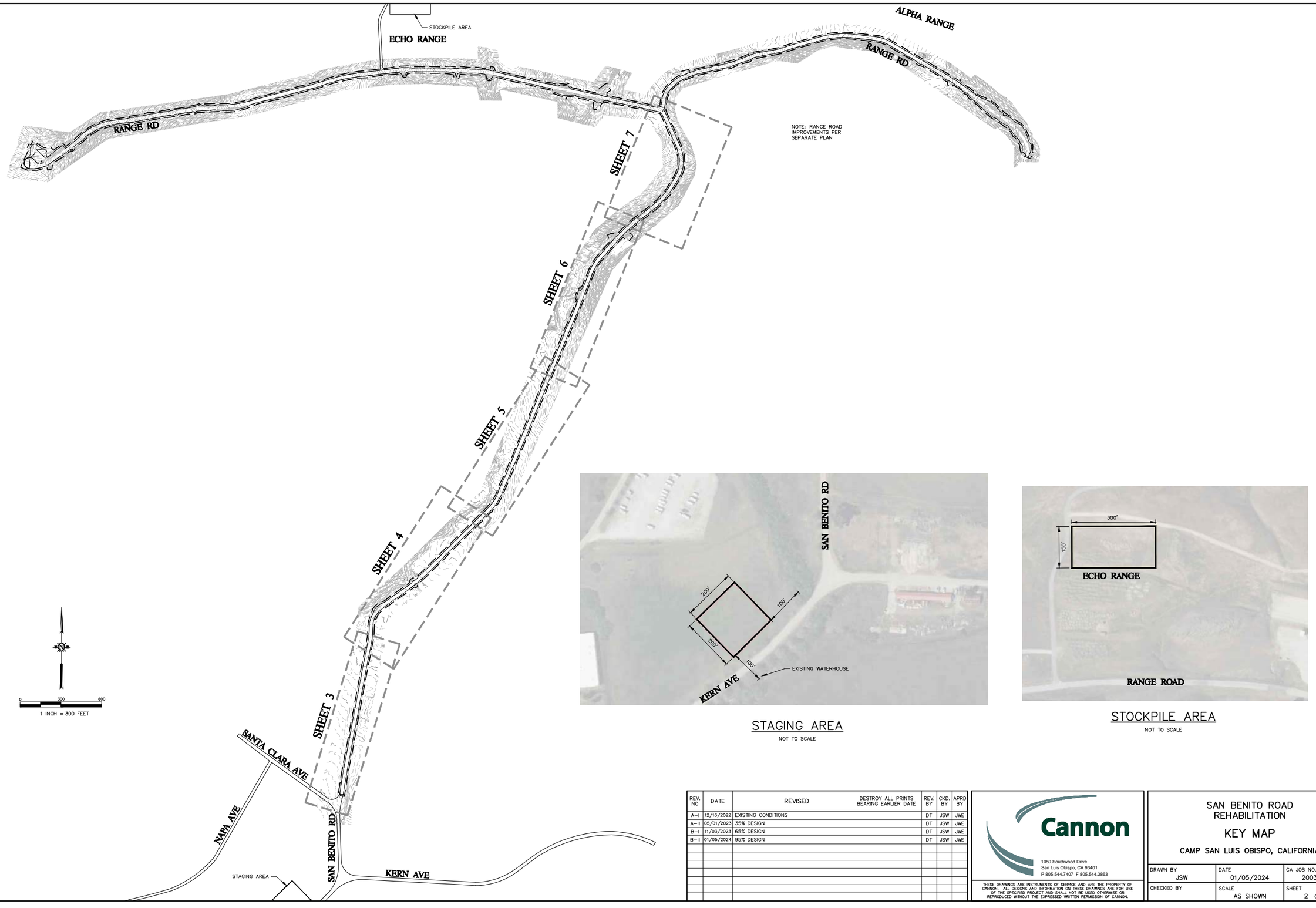
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

TITLE SHEET

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	NOT TO SCALE	1 OF 15



STAGING AREA

NOT TO SCALE

STOCKPILE AREA

NOT TO SCALE

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

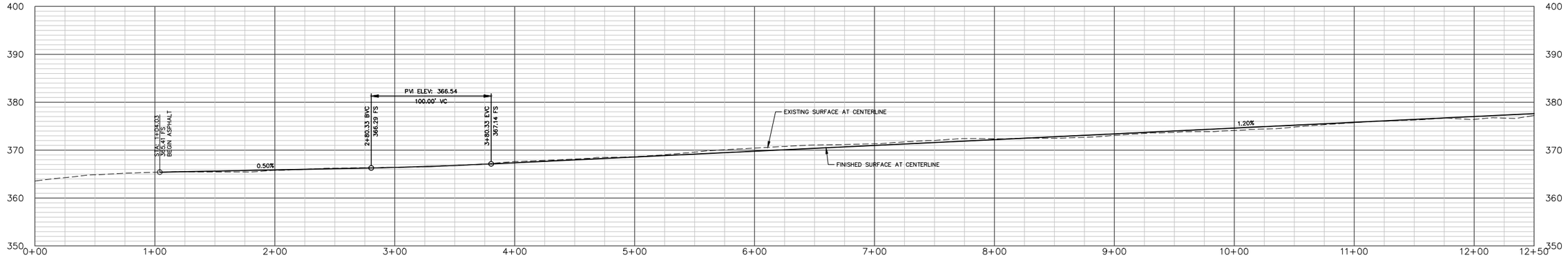
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

KEY MAP

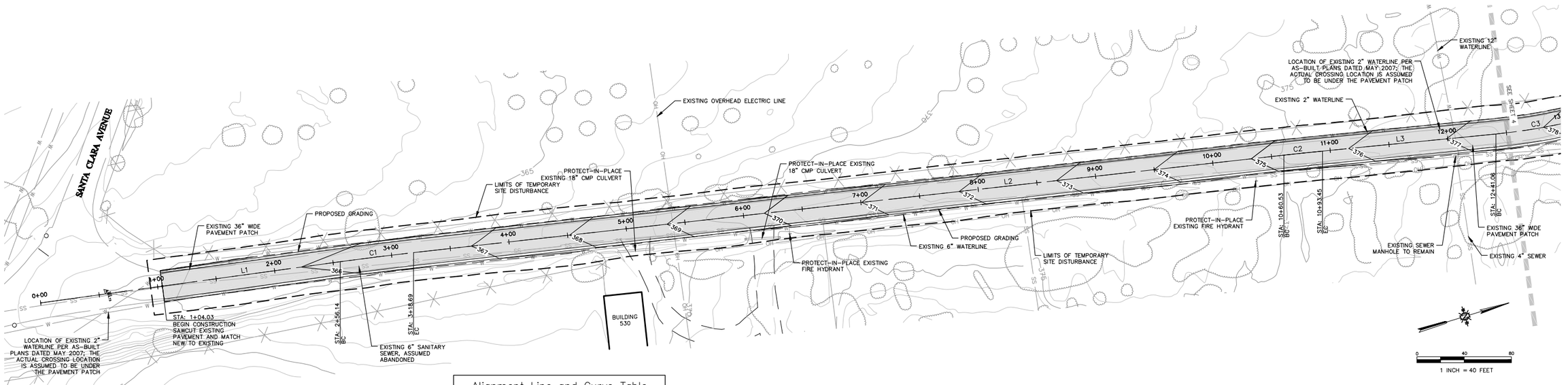
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY: JSW	DATE: 01/05/2024	CA JOB NO.: 200325.10
CHECKED BY:	SCALE: AS SHOWN	SHEET: 2 OF 15



SAN BENITO ROAD PLAN STATIONS 0+00 TO 12+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L1	256.14	N9° 11' 28.68"E	
C1	62.55	1.43	2500.00
L2	741.84	N10° 37' 29.08"E	
C2	32.93	0.75	2500.00
L3	147.61	N11° 22' 45.59"E	
C3	73.34	8.40	500.00

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

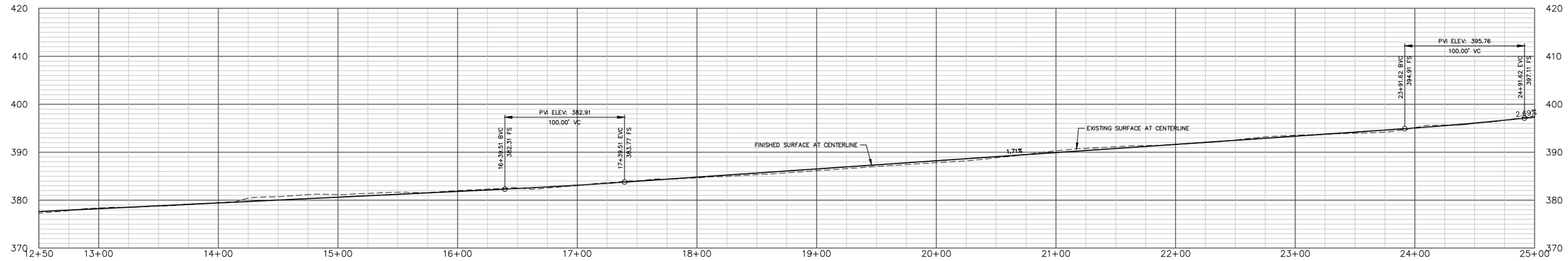
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 0+00 TO 12+50

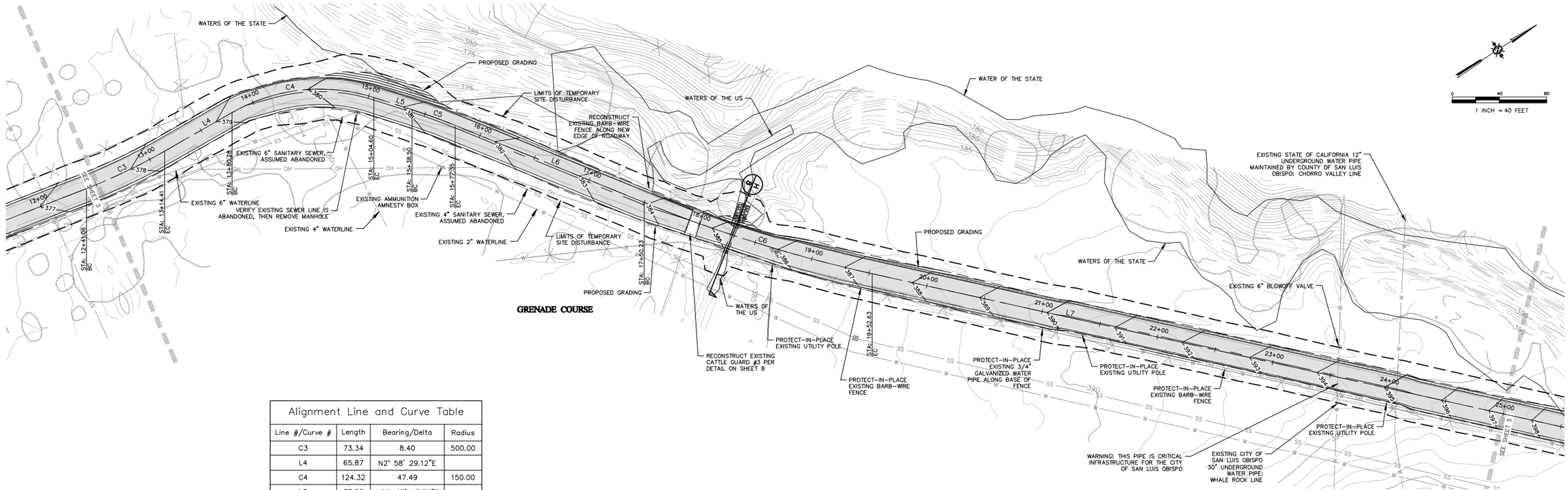
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	3 OF 15



SAN BENITO ROAD PLAN STATIONS 12+50 TO 25+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
C3	73.34	8.40	500.00
L4	65.87	N2° 58' 29.12"E	
C4	124.32	47.49	150.00
L5	33.90	N50° 27' 47.75"E	
C5	38.84	4.45	500.00
L6	172.89	N54° 54' 52.10"E	
C6	202.40	9.66	1200.00
L7	635.90	N45° 15' 02.62"E	

REV. NO	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

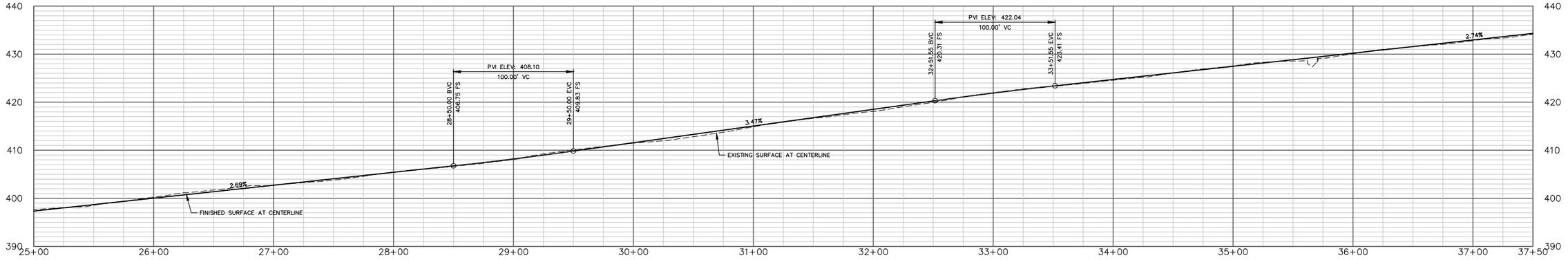
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 12+50 TO 25+00

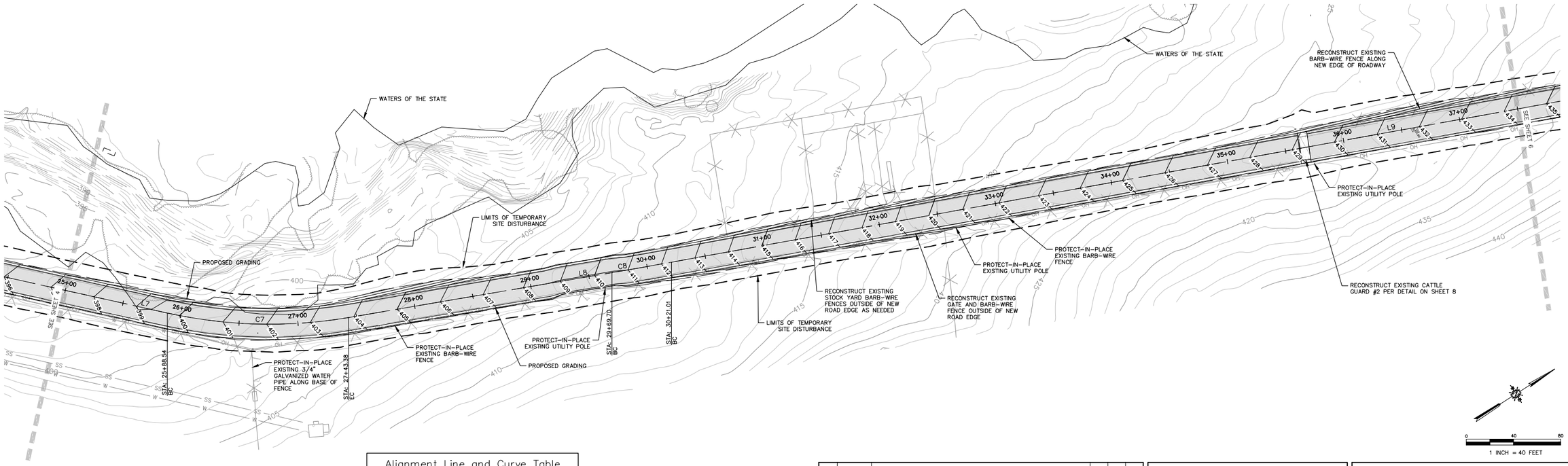
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	4 OF 15



SAN BENITO ROAD PLAN STATIONS 25+00 TO 37+50

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L7	635.90	N45° 15' 02.62"E	
C7	154.84	22.18	400.00
L8	226.33	N23° 04' 17.61"E	
C8	51.31	0.59	5000.00
L9	1152.19	N22° 29' 00.97"E	

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

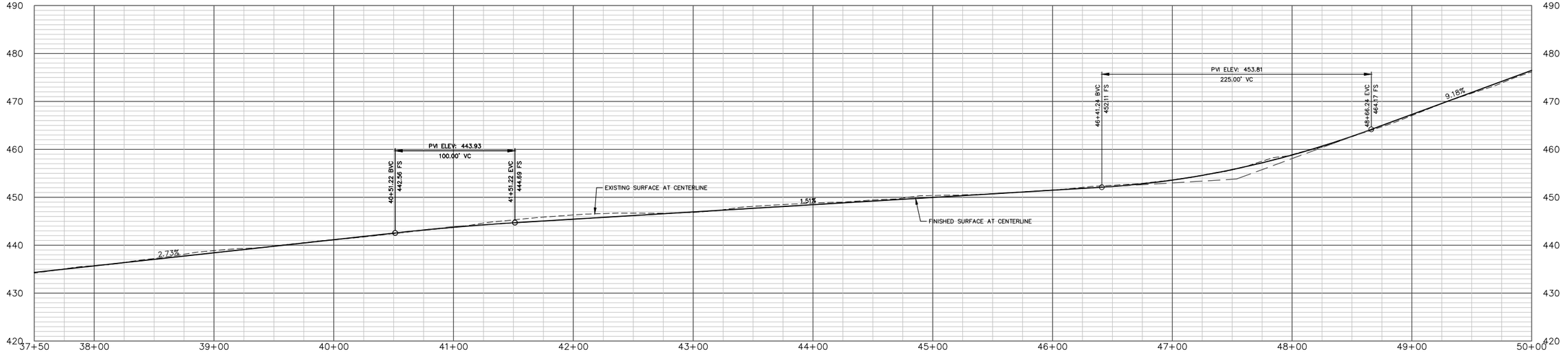
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 25+00 TO 37+50

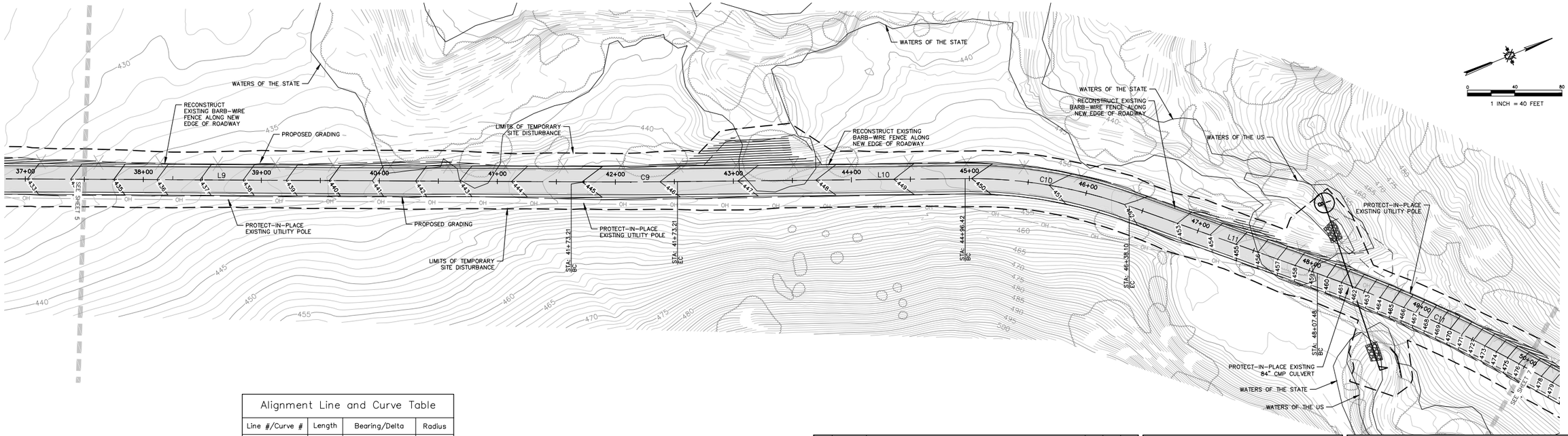
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	5 OF 15



SAN BENITO ROAD PLAN STATIONS 37+50 TO 50+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L9	1152.19	N22° 29' 00.97"E	
C9	79.41	0.91	5000.00
L10	243.81	N21° 34' 25.19"E	
C10	141.68	20.29	400.00
L11	169.38	N41° 52' 02.61"E	
C11	199.09	9.51	1200.00

REV. NO.	DATE	REVISED DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

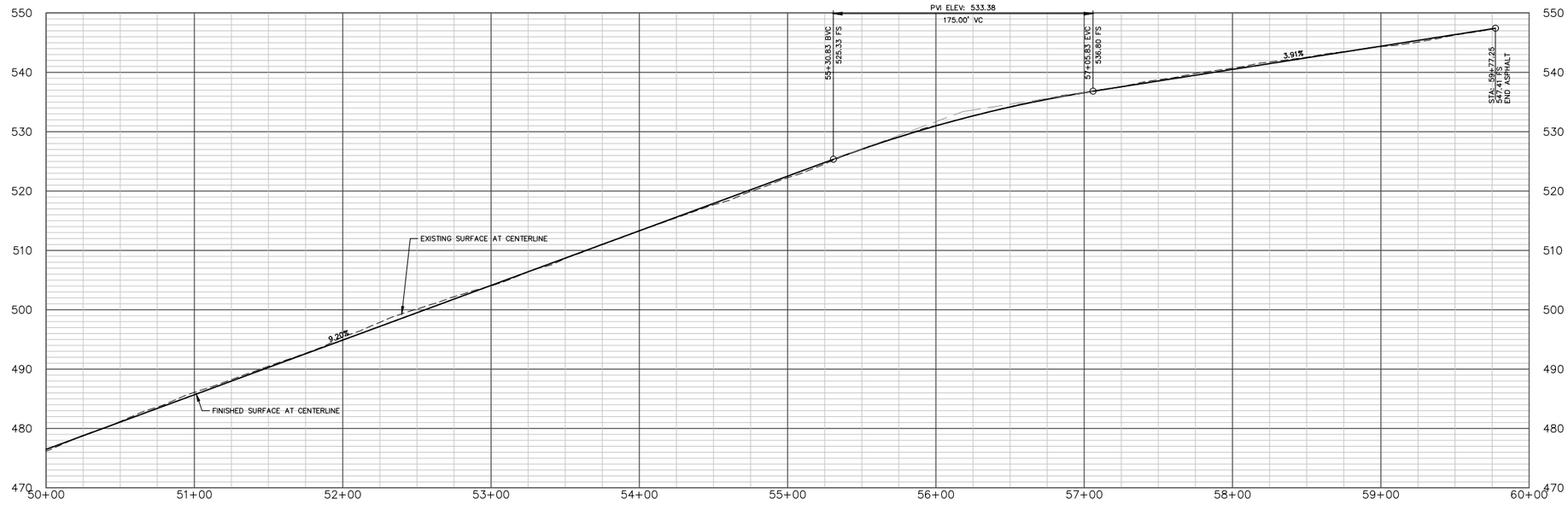
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD
REHABILITATION

PLAN STATIONS 37+50 TO 50+00

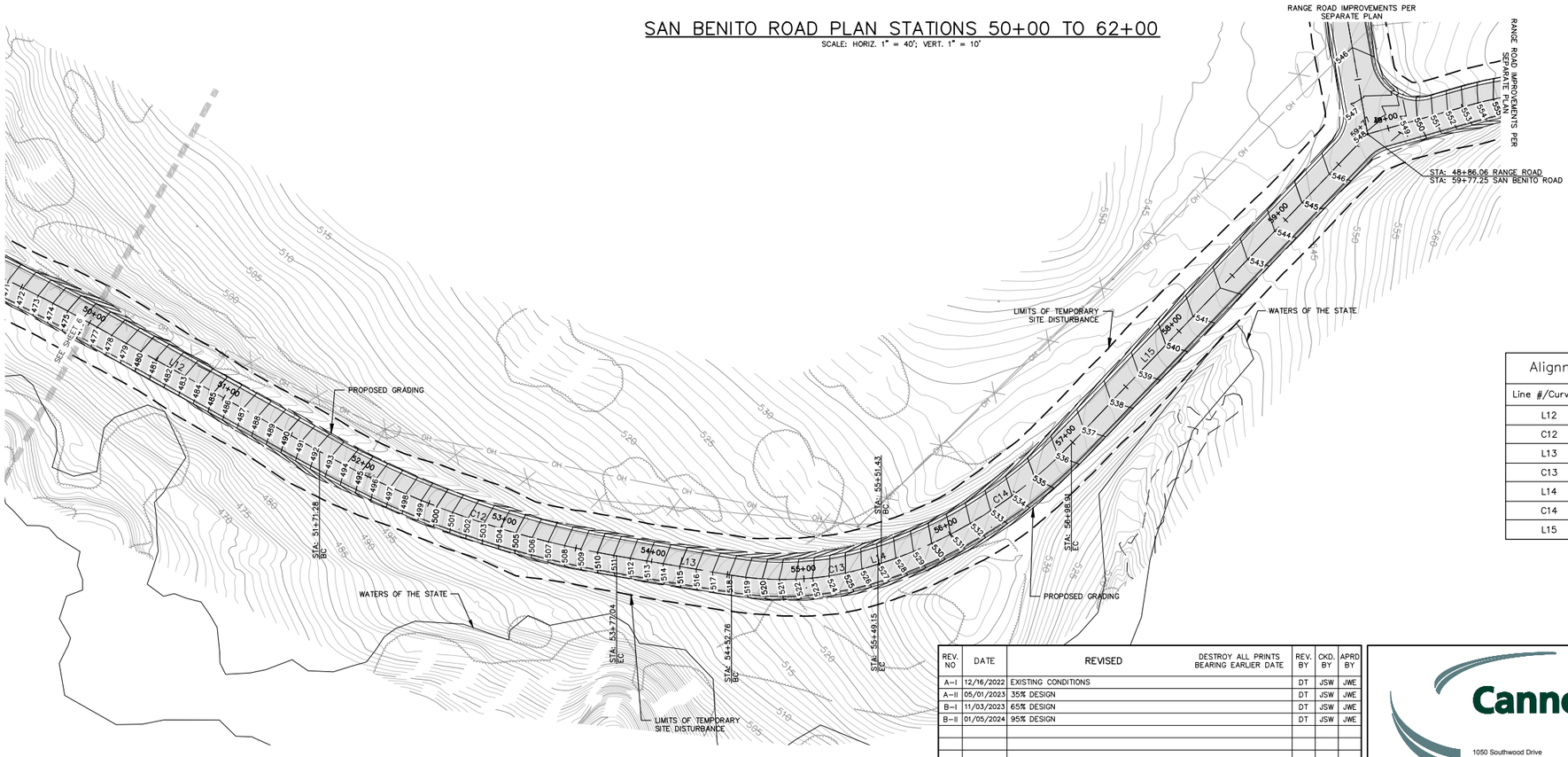
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	6 OF 15



SAN BENITO ROAD PLAN STATIONS 50+00 TO 62+00

SCALE: HORIZ. 1" = 40'; VERT. 1" = 10'



Alignment Line and Curve Table			
Line #/Curve #	Length	Bearing/Delta	Radius
L12	164.71	N51° 22' 23.56"E	
C12	205.77	19.65	600.00
L13	75.72	N31° 43' 26.27"E	
C13	96.39	27.61	200.00
L14	2.28	N4° 06' 41.12"E	
C14	147.48	28.17	300.00
L15	278.34	N24° 03' 20.24"W	

0 40 80

1 INCH = 40 FEET

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A–I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A–II	05/01/2023	35% DESIGN	DT	JSW	JWE
B–I	11/03/2023	65% DESIGN	DT	JSW	JWE
B–II	01/05/2024	95% DESIGN	DT	JSW	JWE

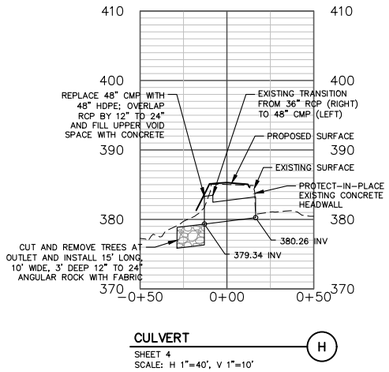
Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

PLAN STATIONS 50+00 TO 59+77

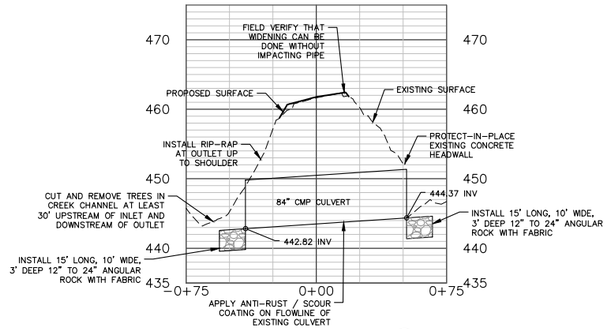
CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	7 OF 15



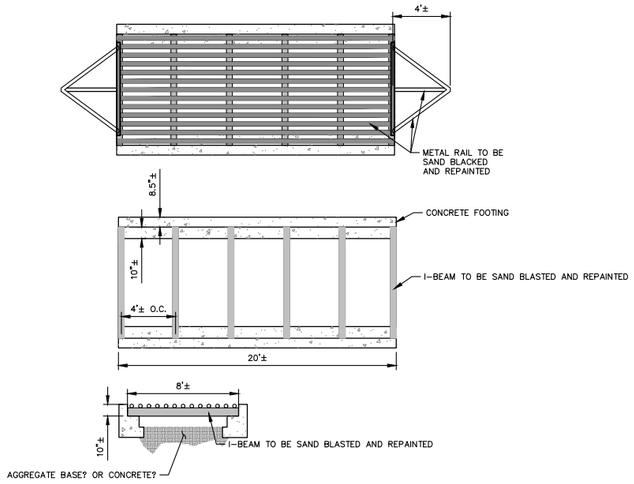
CULVERT (H)

SHEET 4
SCALE: H 1"=40', V 1"=10'



CULVERT (I)

SHEET 6
SCALE: H 1"=40', V 1"=10'



CATTLE GUARD DETAIL (1)

SHEET 4 & 5
SCALE: 1"=5'

REV. NO	DATE	REVISED — DESTROY ALL PRINTS BEARING EARLIER DATE	REV. BY	CKD. BY	APRD BY
A-I	12/16/2022	EXISTING CONDITIONS	DT	JSW	JWE
A-II	05/01/2023	35% DESIGN	DT	JSW	JWE
B-I	11/03/2023	65% DESIGN	DT	JSW	JWE
B-II	01/05/2024	95% DESIGN	DT	JSW	JWE

Cannon
1050 Southwood Drive
San Luis Obispo, CA 93401
P 805.544.7407 F 805.544.3863

SAN BENITO ROAD REHABILITATION

CULVERT SECTIONS

CAMP SAN LUIS OBISPO, CALIFORNIA

DRAWN BY	DATE	CA JOB NO.
JSW	01/05/2024	200325.10
CHECKED BY	SCALE	SHEET
	1" = 40'	8 OF 15

APPENDIX C

Regionally Occurring Special-Status Species

Table C-1. Sensitive Vegetation Communities and Habitats Investigated for Potential Occurrence

Community / Habitat[1]	Description[2]	Observed On-Site?	Comments / Potential for Occurrence
CNDDB-Designated Sensitive Natural Communities			
Central Dune Scrub	Restricted to coastal areas with stabilized back dunes slopes, ridges, and flats. Vegetation consists of shrubs, subshrubs, and herbs less than a meter tall. Indicator species include *Lupinus chamissonis*.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Central Foredunes	Sand dunes along the immediate coastline characterized by dune mat species such as *Abronia latifolia* and *Ambrosia chamissonis.* Greater species richness on inner dunes than on leading edge of the beach. Perennial herbs, grasses, and low shrubs form a low canopy.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Central Maritime Chaparral	Associated with well-drained/dry soils. Located on exposed upland location with moderate to high cover. Typically dominated by *Arctostaphylos* species that develop into dense patches of vegetation.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Coastal Brackish Marsh	Similar to salt and freshwater marshes. Dominated by perennial, emergent monocots. Water is brackish from input of freshwater.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Coastal and Valley Freshwater Marsh	Dominated by perennial, emergent, and tall monocots that often form closed canopies. Tend to be *Typha* dominated and permanently flooded with fresh water, which results in deep peaty soils.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Northern Coastal Salt Marsh	Highly productive herbaceous systems with salt-tolerant hydrophytes forming solid cover. Plants are typically active in the summer and dormant in the winter with tidal saltwater saturation for a part of the year.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Northern Interior Cypress Forest	Open, fire-maintained scrubby forest dominated by *Cupressus* species with dry, rocky, ultramafic soils. Often associated with serpentine chaparral.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Serpentine Bunchgrass	Native bunchgrasses, such as *Elymus multisetus,* with non-native grasses and herbs less than 1 meter. Common on rocky slopes and ridges with clayey soils. Emergent shrubs may be present and canopy is open to intermittent.	No	Diagnostic species and substrate are not present on-site; this community is not present within the survey area.
Valley Needlegrass Grassland	**Associated with fine textured/clay soils or moist, waterlogged soils. Vegetation type dominated by bunches of *Nassella pulchra* with other native bunchgrasses and introduced annuals. Often associated with Oak woodlands.**	**Yes**	**Diagnostic species and substrate are present on-site; this community is present within the survey area.**

Note: Communities observed on-site are indicated with gray highlight.

[1] List of sensitive vegetation communities and habitats obtained from CNDDB (CDFW 2023).

[2] Community and habitat descriptions acquired from CNDDB and *A Manual of California Vegetation* (CDFW 2023a; Sawyer et al. 2009; CNPS 2023b); critical habitat information was acquired from the USFWS Critical Habitat Portal (USFWS 2023b).

Table C-2. Special-Status Plant Species Investigated for Potential Occurrence

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Abronia maritima Red sand verbena	-- / -- / CRPR 4.2	February–October	Coastal dunes. Elevation: 0–100 meters (m).	No / No	No suitable habitat within the BSA; not observed during survey.
Agrostis hooveri Hoover's bent grass	-- / -- / CRPR 1B.2	April–August	Dry sandy soils, open chaparral, oak woodland. Elevation: < 600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos luciana Santa Lucia manzanita	-- / -- / CRPR 1B.2	January–March	Shale outcrops, slopes, upland chaparral near coast. Elevation: 100–800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos morroensis Morro manzanita	FT / -- / CRPR 1B.1	January–March	Stabilized sand dunes, sandstones, and chaparral. Elevation: < 200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos obispoensis Bishop manzanita	-- / -- /CRPR 4.3	February–March	Rocky, generally serpentine soils, chaparral, open closed-cone forest near coast. Elevation: 60–950 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos osoensis Oso manzanita	-- / -- / CRPR 1B.2	December–February	Dacite (volcanic) outcrops, chaparral. Elevation: 50–375 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos pechoensis Pecho manzanita	-- / -- / CRPR 1B.2	January–March	Shale outcrops, chaparral, coniferous forest. Elevation: < 500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos pilosula Santa Margarita manzanita	-- / -- / CRPR 1B.2	December–March	Shale outcrops, slopes, chaparral. Elevation: 30–1,250 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos rudis Sand mesa manzanita	-- / -- / CRPR 1B.2	November–February	Sandy soils, chaparral. Elevation: < 380 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arctostaphylos tomentosa ssp. *daciticola* Dacite manzanita	-- / -- / CRPR 1B.1	December–March	Chaparral. Elevation: 200–300 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Arenaria paludicola Marsh sandwort	FE / SE / CRPR 1B.1	May–August	Wet meadows, marshes. Elevation: < 300 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Aspidotis carlotta-halliae Carlotta Hall's lace fern	-- / -- / CRPR 4.2	January–December	Generally serpentine slopes, crevices, outcrop. Elevation: 100–1,400 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Astragalus didymocarpus var. *milesianus* Miles' milkvetch	-- / -- / CRPR 1B.2	March–May	Grassy areas near the coast, clay soils in coastal scrub. Elevation: < 400 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Astragalus nuttallii var. *nuttallii* Ocean bluff milkvetch	-- / -- / CRPR 4.2	Year-round	Rock, sandy areas, bluffs. Elevation: < 250 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Atriplex coulteri Coulter's saltbush	-- / -- / CRPR 1B.2	March–October	Alkaline or clay soils, open sites, scrub, coastal bluff scrub. Elevation: < 500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Calandrinia breweri Brewer's calandrinia	-- / -- / CRPR 4.2	February–May	Sandy to loamy soil, disturbed sites, burns. Elevation: < 1,200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Calochortus clavatus* var. *clavatus **Club-haired mariposa lily**	**-- / -- / CRPR 4.3**	**April–June**	**Generally serpentine. Elevation: < 1,300 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey.**
Calochortus obispoensis San Luis mariposa-lily	-- / -- / CRPR 1B.2	May–June	Dry serpentine, generally open chaparral. Elevation: 100–500 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Calochortus simulans La Panza mariposa lily	-- / -- / CRPR 1B.3	May–July	Sand (often granitic), grassland to yellow-pine forest. Elevation: < 1,100 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Calystegia subacaulis* ssp. *episcopalis **Cambria morning-glory**	**-- / -- / CRPR 4.2**	**March–July**	**Dry, open scrub, woodland. Elevation: < 500 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey.**
Camissoniopsis hardhamiae Hardham's evening-primrose	-- / -- / CRPR 1B.2	March–May	Sandy soil, limestone, disturbed oak woodland. Elevation: 240–600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Carex obispoensis San Luis Obispo sedge	-- / -- / CRPR 1B.2	March–June	Springs, streamsides in chaparral, generally on serpentine. Elevation: < 800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Castilleja densiflora* ssp. *obispoensis **San Luis Obispo owl's-clover**	**-- / -- / CRPR 1B.2**	**March–June**	**Coastal grassland. Elevation: < 400 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey.**
Ceanothus cuneatus var. *fascicularis* Lompoc ceanothus	-- / -- / CRPR 4.2	February–May	Sandy substrates, coastal chaparral. Elevation: < 275 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Ceanothus impressus var. *nipomensis* Nipomo Mesa ceanothus	-- / -- / CRPR 1B.2	February–April	Sandy substrates, flats, canyons. Elevation: < 200 m.	No / No	No suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Ceanothus thyrsiflorus var. *obispoensis* Hollister Peak ceanothus	-- / -- / CRPR 1B.1	January–April	Dacite-derived soils, canyon, chaparral, coastal scrub, oak woodland. Elevation: 140–230 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	-- / -- / CRPR 1B.1	June–October	Terraces, swales, floodplains, grassland, disturbed sites. Elevation: < 300 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Cercocarpus betuloides var. *blancheae* Island mountain-mahogany	-- / -- / CRPR 4.3	March–April	Chaparral. Elevation: < 600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chenopodium littoreum Coastal goosefoot	-- / -- / CRPR 1B.2	June–October	Generally sandy soils, dunes. Elevation: < 40 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chlorogalum pomeridianum var. *minus* Dwarf soaproot	-- / -- / CRPR 1B.2	May–June	Serpentine outcrops in chaparral. Elevation: < 750 m.	No / No	No chaparral habitat within the BSA; not observed during survey.
Chloropyron maritimum ssp. *maritimum* Salt marsh bird's beak	FE / SE / CRPR 1B.2	May–October	Coastal salt marsh. Elevation: < 10 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chloropyron maritimum ssp. *palustre* Point Reyes bird's beak	-- / -- / CRPR 1B.2	June–October	Coastal salt marsh. Elevation: < 10 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chorizanthe aphanantha Irish Hills spineflower	-- / -- / CRPR 1B.1	April–June	Chaparral edges and openings, coastal scrub. Elevation: 100–370 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chorizanthe breweri Brewer's spineflower	-- / -- / CRPR 1B.3	March–July	Gravel or rocks. Elevation: 60–800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chorizanthe douglasii Douglas' spineflower	-- / -- / CRPR 4.3	April–July	Sand or gravel. Elevation: 300–1,600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chorizanthe palmeri **Palmer's spineflower**	**-- / -- / CRPR 4.2**	**May–August**	**Serpentine. Elevation: 60–700 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey.**
Chorizanthe rectispina Straight-awned spineflower	-- / -- / CRPR 1B.3	May–July	Sand or gravel. Elevation: 200–600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Chorizanthe ventricosa Potbellied spineflower	-- / -- / CRPR 4.3	May–September	Serpentine. Elevation: 500–1,000 m.	No / No	Outside species typical geographic range. No suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Cirsium fontinale var. *obispoense* Chorro Creek bog thistle	FE / SE/ CRPR 1B.2	April–October	Serpentine seeps and streams. Elevation: < 350 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Cirsium occidentale var. *lucianum* Cuesta Ridge thistle	-- / -- / CRPR 1B.2	April–July	Chaparral, woodland or forest openings, often on serpentine. Elevation: 500–750 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Cirsium rhothophilum Surf thistle	-- / ST / CRPR 1B.2	April–August	Dunes, bluffs. Elevation: < 20 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Cladonia firma Popcorn lichen	-- / -- / CRPR 2B.1	N/A	Coastal dunes, coastal scrub. Elevation: 30–75 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Clarkia speciosa ssp. *immaculata* Pismo clarkia	FE / SR / CRPR 1B.1	May–July	Sandy coastal hills. Elevation: < 100 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Clinopodium mimuloides Monkey-flower savory	-- / -- / CRPR 4.2	June–October	Moist places, streambanks, chaparral, woodland. Elevation: 400–1,800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Deinandra paniculata Paniculate tarplant	-- / -- / CRPR 4.2	May–November	Grassland, open chaparral and woodland, disturbed areas, often in sandy soils. Elevation: < 1,320 m.	No / Yes	Marginally suitable habitat within the BSA; not observed during survey.
Delphinium hutchinsoniae Hutchison's larkspur	-- / -- / CRPR 1B.2	March–June	Coastal prairie, chaparral openings, forest. Elevation: < 430 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Delphinium parryi ssp. *blochmaniae* Dune larkspur	-- / -- / CRPR 1B.2	April–May	Coastal chaparral, sand. Elevation: < 200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
***Delphinium parryi* ssp. *eastwoodiae* Eastwood's larkspur**	**-- / -- / CRPR 1B.2**	**March–May**	**Coastal chaparral, grassland, on serpentine. Elevation: 100–500 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey, but outside of the project footprint.**
Delphinium umbraculorum Umbrella larkspur	-- / -- / CRPR 1B.3	April–June	Moist oak forest. Elevation: 400–1,600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Dithyrea maritima Beach spectaclepod	-- / ST / CRPR 1B.1	March–August	Seashores, coastal sand dunes. Elevation: < 50 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Dudleya abramsii ssp. *bettinae* Betty's dudleya	-- / -- / CRPR 1B.2	May–June	Rocky outcrops in serpentine grassland. Elevation: 50–180 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Dudleya abramsii* ssp. *murina **Mouse-gray dudleya**	**-- / -- / CRPR 1B.3**	**May–June**	**Serpentine outcrops. Elevation: 120–300 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey.**
Dudleya blochmaniae* ssp. *blochmaniae **Blochman's dudleya**	**-- / -- / CRPR 1B.1**	**April–June**	**Open, rocky slopes, often serpentine or clay-dominated. Elevation: < 450 m.**	**Yes / Yes**	**Suitable habitat within the BSA; observed during survey.**
Eleocharis parvula Small spikerush	-- / -- / CRPR 4.3	Late winter–Fall	Brackish wet soil, coastal. Elevation: < 50 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Eriastrum luteum Yellow-flowered eriastrum	-- / -- / CRPR 1B.2	May–June	Drying slopes. Elevation: < 1,000 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Erigeron blochmaniae Blochman's leafy daisy	-- / -- / CRPR 1B.2	July–October	Sand dunes and hills. Elevation: < 70 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Erigeron sanctarum Saint's daisy	-- / -- / CRPR 4.2	March–June	Sandy sites, coastal scrub or woodland. Elevation: < 500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Eriodictyon altissimum Indian Knob mountainbalm	FE / SE / CRPR 1B.1	March–June	Sandstone ridges, chaparral. Elevation: < 270 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Eryngium aristulatum var. *hooveri* Hoover's button–celery	-- / -- / CRPR 1B.1	July	Vernal pools, seasonal wetlands, occasionally alkaline. Elevation: < 50 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Erysimum capitatum var. *lompocense* San Luis Obispo wallflower	-- / -- / CRPR 4.2	March–September	Open areas, alpine, deserts, woodland, sandy areas, chaparral. Elevation: < 4,000 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Erysimum suffrutescens Suffrutescent wallflower	-- / -- / CRPR 4.2	December–August	Stabilized coastal sand dunes, coastal scrub. Elevation: < 150 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Erythranthe serpentinicola Irish Hills monkeyflower	-- / -- / CRPR 1B.1	February–May	Chaparral openings, meadows and seeps, typically on serpentine soils. Elevation: 200–1200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Eschscholzia hypecoides San Benito poppy	-- / -- / CRPR 4.3	March–June	Grassy areas in woodland, chaparral. Elevation: 200–1,600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Extriplex joaquinana San Joaquin spearscale	-- / -- / CRPR 1B.2	April–September	Alkaline soils. Elevation: < 350 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Fritillaria agrestis Stinkbells	-- / -- / CRPR 4.2	March–June	Clay (generally serpentine) banks, depressions. Elevation: < 500 m.	No / Yes	No suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Fritillaria ojaiensis Ojai fritillary	-- / -- / CRPR 1B.2	February–May	Rocky slopes, river basins. Elevation: 300–500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Galium cliftonsmithii Santa Barbara bedstraw	-- / -- / CRPR 4.3	May–July	Light shade, coastal canyons, dry banks, and chaparral. Elevation: 200–1,220 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Gilia tenuiflora ssp. *amplifaucalis* Trumpet-throated gilia	-- / -- / CRPR 4.3	March–April	Sandy soil of dry creeks, floodplains, slopes. Elevation: 39–900 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Hesperocyparis macrocarpa Monterey Cypress	-- / -- / CRPR 1B.2	N/A	Closed-cone pine and cypress forests near the coast. Elevation: < 50 m. in native range.	No / No	No suitable habitat within the BSA; not observed during survey. Typical landscape plant. Not necessarily native.
Horkelia cuneata var. *puberula* Mesa horkelia	-- / -- / CRPR 1B.1	March–July	Dry, sandy, coastal chaparral. Elevation: 70–870 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Horkelia cuneata var. *sericea* Kellogg's horkelia	-- / -- / CRPR 1B.1	April–August	Old dunes, coastal sandhills. Elevation: < 200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Horkelia yadonii Santa Lucia horkelia	-- / -- / CRPR 4.2	June–September	Sandy meadow edges, seasonal streambeds in chaparral or foothill-pine woodland. Elevation: 350–1,900 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Juncus acutus ssp. *leopoldii* Southwestern spiny rush	-- / -- / CRPR 4.2	June–August	Moist saline places, salt marshes, alkaline seeps. Elevation: < 300 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Lasthenia californica ssp. *macrantha* Perennial goldfields	-- / -- / CRPR 1B.2	Year-round (mostly May–August)	Grassland, dunes along immediate coast. Elevation: < 500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	-- / -- / CRPR 1B.1	April–May	Saline places, vernal pools. Elevation: < 1,000 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Lasthenia leptalea Salinas Valley goldfields	-- / -- / CRPR 4.3	February–May	Openings in woodland. Elevation: < 500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Layia jonesii Jones' layia	-- / -- / CRPR 1B.2	March–May	Open serpentine or clayey slopes. Elevation: < 300 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Leptosiphon grandiflorus Large-flowered leptosiphon	-- / -- / CRPR 4.2	April–August	Open, grassy flats, generally sandy soil. Elevation: < 1,200 m.	No / No	No suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Lessingia tenuis Spring lessingia	-- / -- / CRPR 4.3	May–July	Openings in chaparral, woodland. Elevation: 50–2,200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Linanthus californicus ssp. *tomentosus* Fuzzy prickly-phlox	-- / -- / CRPR 4.2	March–August	Coastal dunes. Elevation: 1–185 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Lomatium parvifolium Small-leaved lomatium	-- / -- / CRPR 4.2	February–May	Pine woodland, serpentine outcrops. Elevation: 70–150 m.	No / No	Suitable habitat within the BSA; not observed during survey.
Lupinus ludovicianus San Luis Obispo County lupine	-- / -- / CRPR 1B.2	April–July	Open, grassy areas, on limestone, in oak woodland. Elevation: 50–500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Malacothamnus gracilis Slender bush-mallow	-- / -- / CRPR 4.3	June–October	Chaparral. Elevation: 240–370 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Malacothamnus jonesii Jones' bush-mallow	-- / -- / CRPR 4.3	May–July	Open chaparral in foothill woodland. Elevation: 250–830 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Malacothamnus palmeri var. *palmeri* Santa Lucia bush-mallow	-- / -- / CRPR 1B.2	May–July	Interior valleys foothills. Elevation: 30–800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Mielichhoferia elongata Elongate copper moss	-- / -- / CRPR 4.3	N/A	Broad-leafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, subalpine coniferous forest. Elevation: 0–1,960 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Monardella palmeri Palmer's monardella	-- / -- / CRPR 1B.2	June–August	Chaparral, forest, on serpentine. Elevation: 200–800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Monardella sinuata ssp. *sinuata* Southern curly-leaved monardella	-- / -- / CRPR 1B.2	April–September	Sandy soils, coastal strand, dune and sagebrush scrub, coastal chaparral and oak woodland. Elevation: < 300 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Monolopia gracilens Woodland woollythreads	-- / -- / CRPR 1B.2	March–July	Serpentine grassland, open chaparral, oak woodland. Elevation: 100–1,200 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Mucronea californica California spineflower	-- / -- / CRPR 4.2	March–August	Sand. Elevation: < 1,000 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Muhlenbergia utilis Aparejo grass	-- / -- / CRPR 2B.2	October–March	Wet sites along streams, ponds. Elevation: 250–1,000 m.	No / No	No suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Navarretia nigelliformis ssp. *radians* Shining navarretia	-- / -- / CRPR 1B.2	May–July	Vernal pools, clay depressions. Elevation: 150–1,000 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Nemacaulis denudata var. *denudata* Coast woolly-heads	-- / -- / CRPR 1B.2	March–August	Beaches. Elevation: < 100 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Perideridia pringlei Adobe yampah	-- / -- / CRPR 4.3	April–July	Grassy slopes, serpentine outcrops. Elevation: 300–1,800 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Piperia michaelii Michael's rein-orchid	-- / -- / CRPR 4.2	April–August	Generally dry sites, coastal scrub, woodland, mixed-evergreen or closed-cone-pine forest. Elevation: < 700 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Plagiobothrys uncinatus Hooked popcorn flower	-- / -- / CRPR 1B.2	April–May	Chaparral, canyon sides, rocky outcrops, ± fire follower. Elevation: 300–600 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Poa diaboli Diablo Canyon blue grass	-- / -- / CRPR 1B.2	March–April	Thin soils on Edna shale slopes, upper coastal scrub, live-oak woodland, Bishop-pine forest, near coast. Elevation: 120–400 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Prunus fasciculata var. *punctata* Sand almond	-- / -- / CRPR 4.3	March–April	Sandy soils, scrubland, oak woodland. Elevation: < 200 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Ribes sericeum Santa Lucia gooseberry	-- / -- / CRPR 4.3	December–April	Forest openings, coastal scrub, streamside thickets. Elevation: 180–800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Sanicula hoffmannii Hoffmann's sanicle	-- / -- / CRPR 4.3	March–May	Shrubby coastal hills, pine woodland. Elevation: < 500 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Sanicula maritima Adobe sanicle	-- / SR / CRPR 1B.1	April–May	Coastal, grassy, open wet meadows, ravines. Elevation: ± 150 m.	No / Yes	Suitable habitat within the BSA; not observed during survey.
Scrophularia atrata Black-flowered figwort	-- / -- / CRPR 1B.2	April–July	Calcium, diatom-rich soils. Elevation: < 400 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Senecio aphanactis Chaparral ragwort	-- / -- / CRPR 2B.2	February–May	Alkaline flats, dry open rocky areas. Elevation: 10–550 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Senecio astephanus San Gabriel ragwort	-- / -- / CRPR 4.3	April–June	Steep rocky slopes in chaparral/coastal–sage scrub and oak woodland. Elevation: 400–1,500 m.	No / No	No suitable habitat within the BSA; not observed during survey.

Scientific / Common Name[1]	Listing Status[2] Federal / State / CNPS	Blooming Period[3]	Habitat Type[3]	Observed / Habitat Present?[4]	Comments
Senecio blochmaniae Blochman's ragwort	-- / -- / CRPR 4.2	May–November	Coastal sand dunes, sandy floodplains. Elevation: < 150 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Sidalcea hickmanii ssp. *anomala* Cuesta Pass checkerbloom	-- / SR / CRPR 1B.2	May–June	Closed-cone-coniferous forest, generally serpentine. Elevation: 600–800 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Suaeda californica California seablite	FE / -- / CRPR 1B.1	July–October	Margins of coastal salt marshes. Elevation: < 5 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Sulcaria isidiifera Splitting yarn lichen	-- / -- / CRPR 1B.1	N/A	Coastal scrub. Elevation: 20–30 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Sulcaria spiralifera Twisted horsehair lichen	-- / -- / CRPR 1B.2	N/A	Coastal dunes, North Coast coniferous forest. Elevation: 0–90 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Trifolium hydrophilum Saline clover	-- / -- / CRPR 1B.2	April–June	Salt marshes, open areas in alkaline soils. Elevation: < 300 m.	No / No	No suitable habitat within the BSA; not observed during survey.
Tropidocarpum capparideum Caper-fruited tropidocarpum	-- / -- / CRPR 1B.1	March–April	Alkaline soils, low hills, valleys. Elevation: < 400 m.	No / No	No suitable habitat within the BSA; not observed during survey.

Note: This list does not include listed non-vascular cryptograms.

Status Codes:
--= No status
Federal: FE = Federal Endangered; FT=Federal Threatened
State: SE = State Endangered; ST = State Threatened; SR = State Rare
CNPS: Rank 1B = rare, threatened, or endangered in California and elsewhere; Rank 4 = a watch list plants of limited distribution
Threat Codes: _.1 = Seriously endangered I California (over 80% of occurrences threatened / high degree and immediacy of threat); _.2 = Fairly endangered in California (20-80% occurrences threatened); _.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

[1] List of regionally occurring special-status species acquired from CNDDB (CDFW 2023a), CCH (2023), and CNPS Rare and Endangered Plant Inventory (CNPS 2023a), and local expert knowledge.

[2] Listing status obtained from CNPS Rare and Endangered Plant Inventory (CNPS 2023a).

[3] Blooming period and habitat type obtained from Jepson eFlora (Jepson Flora Project 2023) and occasionally supplemented with information provided by the CNPS (CNPS 2023a).

[4] Species observed during field surveys indicated with **bold** font; species determined to have suitable habitat on-site, even marginally suitable, are indicated with gray highlight and discussed further in the report.

Table C-3. Special-Status Wildlife Species Investigated for Potential Occurrence

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Accipiter cooperii Cooper's hawk	-- / -- / WL	March–May	Occurs in woodland habitats such as woodlots, riparian woodland, and patched woodlands. Nests 25–50 feet high in crotches or horizontal branches of trees. Prefers perched locations where it can watch for small birds or rodents to prey on.	No / Yes	Suitable habitat within the project area; not observed during survey.
Actinemys pallida Southwestern pond turtle	-- / -- / SSC	April–May	Occurs in ponds, lakes, rivers, creeks, marshes, and irrigation ditches with abundant vegetation and rocky or muddy bottoms. Require rocks, logs, or exposed banks for basking. Nests along water margins usually in full sunlight.	No / Yes	Suitable habitat within the project area; not observed during survey.
Agelaius tricolor Tricolored blackbird	-- / ST / SSC	Spring–Fall	Occurs in and nests near water sources such as marshes, grassland, and wetlands. Requires access to substrates, usually aquatic, to build nests. Forages for insects and plant matter on agricultural sites and grasslands. Very colonial.	No / No	No suitable nesting habitat within the project area; not observed during survey.
Ammodramus savannarum Grasshopper sparrow	-- / -- / SSC	May–August	Occurs in grasslands with sparse cover and bare areas for foraging on insects.	No / No	Suitable nesting habitat within the project area; not observed during survey.
Anniella pulchra Northern California legless lizard	-- / -- / SSC	March–July; live birth September–November	Occurs in moist, warm, loose soil with plant cover and under-leaf litter. Found in beach dunes, chaparral, foothill woodlands, desert scrub, sandy washes, and stream terraces.	No / No	Clay soil within the project area does not provide suitable burrowing habitat for this species; not observed during surveys.
Antrozous pallidus Pallid bat	-- / -- / SSC	Winter	Occurs in low elevations of California within grasslands, shrublands, woodlands, and forests. Most common in dry habitats with rocky areas for roosting. Occasionally in hollow trees or buildings.	No / No	No suitable roosting habitat within the project area; not observed during survey.
Aquila chrysaetos **Golden eagle**	**-- / -- / FP, WL**	**March–August**	**Occurs in semi-open and open habitats including tundra, open coniferous forest, and grasslands. Common in mountain areas but also found around wetlands and estuarine areas. Builds very large nests commonly on cliff edges but also in trees.**	**Yes / Yes**	**Suitable foraging habitat within the project area; observed during surveys. May nest in oak woodlands nearby.**

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Asio flammeus Short-eared owl	-- / -- / SSC	April–August	Occurs in open areas with few trees, such as grasslands, prairies, dunes, meadows, and emergent wetlands. Breeds in northern California, eastern Sierras and San Joaquin Valley.	No / No	Outside of known breeding range; not expected to nest within the project area; not observed during survey.
Asio otus Long-eared owl	-- / -- / SSC	February–July	Occurs in densely vegetated habitat in close relation to open areas used for feeding. Finds nests in trees made by other species.	No / No	Known to breed and winter in mountains around Los Osos Valley but has not been documented on CSLO.
Athene cunicularia Burrowing owl	-- / -- / SSC	March–July	Occurs in open, dry grasslands and deserts. Will use the burrows of other terrestrial animals. Also found in cleared residential areas such as vacant lots and golf courses,	No / Yes	Suitable habitat within the project area; not observed during survey.
Batrachoseps minor Lesser slender salamander	-- / -- / SSC	Unknown	Occurs in mesic, deeply shaded slopes with dense leaf litter of variable tree species, including coast live oak, tanbark oak, western sycamore, and poison oak, above 400 meters (m).	No / No	Outside of known range for species.
Bombus crotchii Crotch's bumble bee	-- / SCE / --	February–October	Occurs in open grassland and scrub habitat. Nests primarily underground. Generalist forager. Select food plant genera include *Fabaceae*, *Apocynaceae*, *Asteraceae*, *Lamiaceae*, *Boraginaceae*. Little is known about overwintering sites.	No / Yes	Suitable habitat within the project area; not observed during survey.
Bombus occidentalis Western bumble bee	-- / SCE / --	April–November	Occurs in meadows and grasslands with abundant floral resources in the mountains and northern coast of California. Nests primarily in small mammal burrows. Select food plant genera include *Cirsium*, *Erigonum*, *Solidago*, Asteraceae, *Ceanothus*, *Centarurea*, *Penstemon.* Little is known about overwintering sites.	No / No	Outside of know extant range; not observed during survey.
Branchinecta lynchi Vernal pool fairy shrimp	FT / -- / --	Rainy season	Occurs in vernal pools and depressions in grasslands.	No / No	No suitable vernal pool habitat within the project area; not observed during survey.

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Buteo regalis Ferruginous hawk	-- / -- / WL	February–July	Occurs in lowlands, plateaus, rolling hills of grasslands, ranches, and agricultural fields. Primarily nests in trees.	No / No	Outside of known breeding range; not expected to nest within the project area; not observed during survey.
Charadrius nivosus nivosus Western snowy plover	FT / -- / SSC	March–August	Occurs on sandy beaches, salt pond levees, and shorelines of large alkali lakes. Needs friable soil for nesting.	No / No	No suitable habitat within the project area; not observed during survey.
Circus hudsonius Northern harrier	-- / -- / SSC	April–September	Occurs in frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands. Nests on the ground in shrubby vegetation in emergent wetlands or along rivers and lakes.	No / Yes	Suitable habitat within the project area; not observed during survey.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT / SE / --	May–July	Occurs in dense woodlands and low foliage near slow moving water bodies. Forages in cottonwood trees and builds nests in trees and shrubs. Current California range limited to Sacramento and Kern Rivers.	No / No	No suitable habitat within the project area; not observed during survey.
Corynorhinus townsendii Townsend's big-eared bat	-- / -- / SSC	November–May	Occurs in montane forests including pine, fir, and aspens surrounded by shrub and grasslands. Colonies roost in caves, mines, tunnels, buildings, and human-made structures.	No / Yes	Suitable roosting habitat and historical observations within the project area; not observed during survey.
Danaus plexippus pop. 1 Monarch butterfly	FC / -- / --	Spring	Relies on milkweed and protected stands of trees for roosting, usually blue gum eucalyptus. Found in fields, meadows, weedy areas, marshes, and along roadsides.	No / Yes	No suitable overwintering habitat within the project area; not observed during survey; however, milkweed was observed within the BSA.
Dipodomys heermanni morroensis Morro Bay kangaroo rat	FE / SE / FP	March–August	Occurs in stabilized sand dune, coastal dune and coastal sage scrub; sandy soils essential for burrowing. Prefers fine sand and is restricted to Morro Bay area.	No / No	No suitable habitat within the project area and outside of known range. Not observed during survey.
Elanus leucurus White-tailed kite	-- / -- / FP	March–August	Occurs in savanna, open woodlands, marshes, desert, grassland. Prefers partially cleared fields such as ranches and cultivated fields. Builds nests on top of old ones of other species in trees.	No / Yes	Suitable habitat within the project area; not observed during survey.
Eremophila alpestris actia California horned lark	-- / -- / WL	March–August	Occurs in open fields, short grass areas, fields, and rangelands.	No / Yes	Suitable habitat within the project area; not observed during survey.

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Eucyclogobius newberryi Tidewater goby	FE / -- / --	Year-round (April–May)	Occurs in shallow water lagoons and lower stream reaches. Needs fairly still but not stagnant water and high oxygen levels. Can tolerate array of different conditions depending on seasonal changes.	No / No	No suitable habitat within the project area; not observed during survey.
Eumops perotis californicus Western mastiff bat	-- / -- / SSC	March–July	Occurs in broad open areas, chaparral, montane meadows, rocky cliffs, and canyon areas. Roosts in crevices, tunnels, and buildings.	No / No	No suitable habitat within the project area; not observed during survey.
Falco columbarius Merlin	-- / -- / WL	April–July (typically breeds outside of California)	Occurs in open country habitats, including grasslands, seashores, sand dunes, marshlands, and steppes.	No / No	Not expected to nest within the project area; not observed during survey.
Falco mexicanus Prairie falcon	-- / -- / WL	February–July	Occurs primarily in dry grasslands, woodlands, savannahs, cultivated fields, lake shores, and rangelands. Primarily nests on cliffs, canyons, and rock outcrops.	No / No	Not expected to nest within the project area; not observed during survey.
Helminthoglypta walkeriana Morro shoulderband snail	FE / -- / --	October–April	Occurs in woody coastal dune scrub and under iceplant.	No / No	No suitable habitat within the project area and outside of known range. Not observed during survey.
Icteria virens Yellow-breasted chat	-- / -- / SSC	May–August	Occurs in shrubby habitats along rivers. Breeds in dense vegetation.	No / No	Areas of suitable nesting habitat within the BSA; however, there are no documented occurrences on CSLO.
Lanius ludovicianus Loggerhead shrike	-- / -- / SSC	April–July	Occurs in open country with short vegetation and well-spaced shrubs or low trees. Forages in variety of areas, including agricultural fields, pastures, orchards, riparian areas, and desert scrublands. Nests in shrubs, brush piles, short trees, and human-made structures.	No / Yes	Areas of suitable nesting habitat within the BSA; not observed during survey.
Lasiurus blossevillii Western red bat	-- / -- / SSC	Late Summer–Early Fall	Roosts in broadleaf trees in the foothills and lower mountains, primarily edge habits adjacent to streams or open fields. Typically distances itself from human activity.	No / No	Areas of suitable roosting habitat within the BSA. However, there are no documented occurrences on CSLO and surrounding areas for this species.

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Laterallus jamaicensis coturniculus California black rail	-- / ST / FP	February–June	Occurs and nests in areas containing dense and expansive salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	No / No	No suitable habitat within the project area; not observed during survey.
Neotoma fuscipes luciana Monterey dusky-footed woodrat	-- / -- / SSC	December–September	Occurs in dense chaparral; hardwood, conifer, and mixed forests; and riparian woodlands. In most instances, nests constructed in inaccessible areas, such as thorny thickets, poison oak patches, or nettles.	No / Yes	Suitable habitat within the project area; not observed during survey.
Neotoma lepida intermedia San Diego desert woodrat	-- / -- / SSC	November–April	Occurs in woodland, mixed chaparral, and desert habitats. Forms dens using gathered materials, such as twigs and leaves, in cracks of boulders.	No / No	Suitable habitat within the project area. However, the nearest documented occurrence is greater than 10 miles way. Not observed during survey.
Numenius americanus Long-billed curlew	-- / -- / WL	April–September	Winters from early July to early April along California central coast in large coastal estuaries, upland herbaceous areas, and croplands. Breeds in wet meadow habitat in northeastern California.	No / No	Outside of known breeding range; not expected to nest within the project area; not observed during survey.
Nyctinomops macrotis Big free-tailed bat	-- / -- / SSC	February–June	Occurs in rugged, rocky terrain; preferably weathered fissures and crevices. Roosts in rocky cliffs, buildings, and some plants (ponderosa pines, Douglas fir, and desert shrubs.	No / No	No suitable roosting habitat within the project area; not observed during survey.
Oncorhynchus mykiss Steelhead – South-Central California Coast Distinct Population Segment (DPS)	FT / -- / SSC	April–July	Federal listing refers to naturally spawned anadromous steelhead originating below natural and human-made impassable barriers from Pajaro River to (but not including) Santa Maria River.	No / No	Drainages within the project area do not provide suitable flows and pool habitat to support steelhead. Further, presumed barriers to spawning located downstream of project site (i.e., limits of anadromy); not observed during survey.
Phrynosoma blainvillii Coast horned lizard	-- / -- / SSC	May–September	Occurs in open, loose, sandy soil and low vegetation in valleys, foothills, and semiarid mountains below 2,438 meters. Found in grasslands, coniferous forests, woodlands, and chaparral, frequently found near ant hills.	No / Yes	Suitable habitat within the project area; not observed during survey.

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Progne subis Purple martin	-- / -- / SSC	May–June	Occurs in woodlands in close proximity to water bodies and open fields for foraging. Tolerant of humans and very attracted to bird feeders. Cavity nesters.	No / No	No suitable habitat within the project area; not observed during survey.
Puma concolor Mountain lion	-- / SCE / --	Spring	Occurs in nearly all habitats ranging from sea level to alpine meadows. Excludes Mojave and Colorado Deserts and croplands in Central Valley.	No / Yes	Suitable habitat within the project area; not observed during survey.
Rallus obsoletus obsoletus California Ridgway's rail	FE / SE / FP	March–July	Occurs in wetlands and coastal salt marshes.	No / No	No suitable habitat within the project area; not observed during survey.
Rana boylii Foothill yellow-legged frog (Southwest / South Coast clade)	-- / SE / SSC	April–July	Occurs in rocky streams and rivers with rocky substrate. Found in woodlands, chaparral and forests with open sunny banks.	No / No	No suitable habitat within the project area and outside of known extant range. Not observed during survey.
Rana draytonii California red-legged frog	FT / -- / SSC	January–July	Occurs most commonly in ponds and streams with surrounding woodlands and grasslands. Found in upland habitats adjacent to ponds/streams or water access.	No / Yes	Suitable habitat within the project area; not observed during survey.
Setophaga petechia Yellow warbler	-- / -- / SSC	May–June	Nests in wet, deciduous thickets, especially in willows; also in shrubby areas and old fields.	No / Yes	Suitable habitat within the project area; not observed during survey.
Spea hammondii Western spadefoot toad	-- / -- / SSC	January–August	Occurs in seasonal/vernal pools in grassland, coastal scrub, chaparral, woodland habitat, and open areas with sandy or gravelly soils.	No / No	Outside of known range; not observed during survey.
Taricha torosa Coast Range newt	-- / -- / SSC	December–April	Occurs in slow moving streams, ponds, and lakes with surrounding evergreen/oak forests along coast. Aquatic when breeding.	No / Yes	Suitable aquatic habitat within the project area; not observed during survey.
Taxidea taxus American badger	-- / -- / SSC	Late Summer–Early Fall	Occurs in dry, open fields with friable soil for tunneling and foraging.	No / Yes	Suitable habitat within the project area; not observed during survey.
Thamnophis hammondii Two-striped garter snake	-- / -- / SSC	March–August	Occurs near pools, creeks, cattle tanks, and other water sources around rocky areas, oak woodland, chaparral, brush land, and coniferous forest.	No / Yes	Suitable aquatic habitat within the project area; not observed during survey.

Scientific / Common Name[1]	Listing Status[1] Federal / State / CDFW	Nesting / Breeding Period[2]	Habitat Type[2]	Observed / Habitat Present?[3]	Comments / Potential for Occurrence
Vireo belli Least Bell's vireo	FE / SE / --	March–September	Occurs in dense, low, shrubby vegetation; riparian areas, brushy fields, second-growth forest or woodland, scrub oak, coastal chaparral, and mesquite brushlands; often near water in arid regions. Nests suspended from low branches of small trees or shrubs.	No / Yes	Suitable nesting habitat present within the BSA; not observed during survey.

Status Codes:

--= No status
Federal: FE = Federal Endangered; FT= Federal Threatened; FC = Federal Candidate
State: SE= State Endangered; ST= State Threatened; SCE = State Candidate Endangered
CDFW: SSC= Species of Special Concern ; FP= Fully Protected Species; WL= Watch List

[1] List of regionally occurring special-status species and listing status acquired from CNDDB (CDFW 2023a), CSLO INRMP (CAARNG 2022) and local expert knowledge. State Special Animals and California Department of Forestry and Fire Protection (CDF) Sensitive species have been omitted from this list because these taxa do not currently have a protected status, or the protected status (CDF Sensitive) only applies during timber operations.

[2] Life history information obtained from multiple sources, including All About Birds (Cornell Lab of Ornithology 2023), California Herps (Nafis 2023), and USFWS ECOS (USFWS 2023b).

[3] Species observed during field surveys indicated with **bold** font; species determined to have suitable habitat on-site, even marginally suitable, are indicated with gray highlight and discussed further in the report.

This page intentionally left blank.

APPENDIX D

Botanical and Wildlife Species Observed

Table D-1. Plant Species Observed

Family	Scientific Name	Common Name	Origin[1]
Anacardiaceae, Sumac Family	*Schinus molle*	Peruvian pepper tree	Naturalized
	Toxicodendron diversilobum	Poison oak	Native
Agavaceae, Agave Family	*Chlorogalum pomeridianum*	Soaproot	Native
	Hesperoyucca whippleyi	Our Lord's candle	Native
Alliaceae, Onion Family	*Allium amplectans*	Narrowleaf onion	Native
Apiaceae, Carrot Family	*Berula erecta*	Cut leaved water parsnip	Native
	Foeniculum vulgare	Sweet fennel	Naturalized
	Lomatium caruifolium	Caraway leaved lomatium	Native
	Lomatium dasycarpum	Lace parsnip	Native
	Lomatium utriculatum	Hog fennel	Native
	Sanicula arguta	Sharp toothed snakeroot	Native
	Sanicula crassicaulis	Pacific sanicle	Native
	Torilis arvensis	Field hedge parsley	Naturalized
Apocynaceae, Dog's Bane Family	*Asclepias fasicularis*	Narrow leaf milkweed	Native
Arecaceae, Palm Family	*Phoenix canariensis*	Canary island date palm	Naturalized
Asphodelaceae, Asphodel Family	*Asphodelus fistulosus*	Onionweed	Native
Asteraceae, Sunflower Family	*Achillea millefolium*	Yarrow	Native
	Achyrachaena mollis	Blow-wives	Native
	Agoseris grandiflora	Giant mountain dandelion	Native
	Agoseris heterophylla	Mountain dandelion	Native
	Agoseris retrosa	Spear leaved agoseris	Native
	Anthemis cotula	Dog fennel	Naturalized
	Artemisia californica	California sagebrush	Native
	Artemisia douglasiana	California mugwort	Native
	Baccharis pilularis	Coyote brush	Native
	Carduus pycnocephalus	Italian thistle	Naturalized
	Centaurea calcitrapa	Purple star thistle	Naturalized
	Centaurea melitensis	Tocalote	Naturalized
	Centaurea soltitialis	Yellow star thistle	Naturalized
	Cichorium intybus	Chicory	Naturalized
	Cirsium vulgare	Bullthistle	Naturalized
	Corethrogyne filaginifolia	Common sandaster	Native
	Deinandra fasciculata	Clustered tarweed	Native
	Grindelia hirsutula	Gumweed	Native
	Hazardia squarrosa	Saw toothed goldenbush	Native
	Hedypnois rhagadioloides	Crete weed	Naturalized

Family	Scientific Name	Common Name	Origin[1]
	Helminthotheca echioides	Bristly ox-tongue	Naturalized
	Hemizonia congesta ssp. *luzulifolia*	Woodrush tarweed	Native
	Hesperevax sparsiflora	Few flowered evax	Native
	Heterotheca grandiflora	Telegraph weed	Native
	Hypochaeris glabra	Smooth catear	Naturalized
	Isocoma menziesii	Menzie's goldenbush	Native
	Lactuca saligna	Willow lettuce	Naturalized
	Lactuca serriola	Prickly lettuce	Naturalized
	Logfia gallica	Narrowleaf cottonrose	Naturalized
	Madia sativa	Coastal tarweed	Native
	Matricaria discoidea	Pineapple weed	Native
	Pseudognaphalium luteoalbum	Jersey cudweed	Naturalized
	Pseudognaphalium californicum	California cudweed	Native
	Silybum marianum	Milk thistle	Naturalized
	Sonchus asper	Sow thistle	Naturalized
	Sonchus oleraceus	Prickly sow thistle	Naturalized
	Stephanomeria cichoriacea	Silver rock-lettuce	Native
	Symphyotrichum sp.	Aster	Native
	Taraxacum officinale	Common dandelion	Naturalized
	Uropappus lindleyi	Silver puffs	Native
Boraginaceae, Borage Family	*Amsinckia menziesii*	Fiddleneck	Native
	Cryptantha sp.	Popcorn flower	Native
	Pholistoma membranaceum	White fiesta flower	Native
	Plagiobothrys nothofulvus	Rusty haired popcorn flower	Native
Brassicaceae, Mustard Family	*Brassica nigra*	Black mustard	Naturalized
	Cardamine californica	Milkmaids	Native
	Caulanthus heterophyllus	Slender pod jewelflower	Native
	Hirschfeldia incana	Perennial mustard	Naturalized
	Lepidium draba	Whitetop	Naturalized
	Lepidium nitidum	Shining pepper grass	Native
	Raphanus sativus	Jointed charlock	Naturalized
	Sisymbrium officinale	Hedge mustard	Naturalized
Caprifoliaceae, Honeysuckle Family	*Symphoricarpos mollis*	Creeping snowberry	Native
Caryophyllaceae, Pink Family	*Polycarpon tetraphyllum* var. *tetraphyllum*	Four leaved allseed	Naturalized
	Silene gallica	Common catchfly	Naturalized
Chenopodiaceae, Goosefoot Family	*Salsola tragus*	Russian thistle	Naturalized
Crassulaceae, Stonecrop Family	*Crassula connata*	Sand pygmy weed	Native
	Crassula tillaea	Mediterranean pygmy weed	Naturalized

Family	Scientific Name	Common Name	Origin[1]
	Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	Native, **CRPR 1B.1**
	Dudleya abramsii ssp. *murina*	Mouse grey dudleya	Native, **CRPR 1B.2**
Convolvulaceae, Morning Glory Family	*Calystegia macrostegia* ssp. *cyclostegia*	Coast morning glory	Native
	Calystegia subacaulis ssp. *episcopalis*	Cambria morning glory	Native, **CRPR 4.2**
	Convolvulus arvensis	Field bindweed	Native
Cupressaceae, Cypress Family	*Hesperocyparis macrocarpa*	Monterey Cypress	Naturalized
Cyperaceae, Sedge Family	*Cyperus eragrostis*	Tall cyperus	Native
	Eleocharis macrostachya	Spike rush	Native
	Schoenoplectus californicus	California bulrush	Native
Dipsacaceae, Teasel Family	*Dipsacus fullonum*	Wild teasel	Naturalized
Euphorbiaceae, Spurge Family	*Croton setiger*	Turkey mullien	Native
	Euphorbia peplus	Petty spurge	Naturalized
Fabaceae, Legume Family	*Acmispon americanus*	American bird's foot trefoil	Native
	Acmispon glaber	Deerweed	Native
	Acmispon strigosus	Strigose lotus	Native
	Acmispon wrangelianus	Chilean trefoil	Native
	Astragalus curtipes	South coast milk vetch	Native
	Astragalus gambelianus	Gambel's dwarf milk vetch	Native
	Lathyrus vestitus	Common pacific pea	Native
	Lotus corniculatus	Bird's foot trefoil	Naturalized
	Lupinus albifrons	Silver bush lupine	Native
	Lupinus bicolor	Miniature lupine	Native
	Lupinus succulentus	Succulent lupine	Native
	Medicago polymorpha	California burclover	Naturalized
	Melilotus albus	White sweetclover	Naturalized
	Melilotus indicus	Yellow sweetclover	Naturalized
	Trifolium campestre	Hop clover	Naturalized
	Trifolium ciliolatum	Tree clover	Native
	Trifolium hirtum	Rose clover	Naturalized
	Trifolium oliganthum	Few flowered clover	Native
	Trifolium repens	White clover	Naturalized
	Trifolium variegatum	Variegated clover	Native
	Trifolium wildenovii	Tomcat clover	Native
Fagaceae, Oak Family	*Quercus agrifolia*	Coast live oak	Native
Gentianaceae, Gentian Family	*Zeltnera muehlenbergii*	Monterey century	Native

Family	Scientific Name	Common Name	Origin[1]
Geraniaceae, Geranium Family	*Erodium botrys*	Broadleaf filaree	Naturalized
	Erodium cicutarium	Redstem filaree	Naturalized
	Geranium dissectum	Wild geranium	Naturalized
Hydrophyllaceae, Waterleaf Family	*Phacelia imbricata*	Imbricate phacelia	Native
Iridaceae, Iris Family	*Sisyrinchium bellum*	Western blue-eyed-grass	Native
Juglandaceae, Walnut Family	*Juglans regia*	English walnut	Native
Juncaceae, Rush Family	*Juncus bufonius*	Toadrush	Native
	Juncus patens	Common rush	Native
	Juncus xiphioides	Iris leaved rush	Native
Lamiaceae, Mint Family	*Monardella villosa* ssp. *obispoensis*	San Luis Obispo coyote mint	Native
	Salvia columbariae	Chia sage	Native
	Salvia mellifera	Black sage	Native
	Salvia spathacea	Hummingbird sage	Native
	Stachys bullata	California hedge nettle	Native
Liliaceae, Lily Family	*Calochortus clavatus* var. *clavatus*	Club haired mariposa lily	Native, **CRPR 4.3**
Lythraceae, Lossestrife Family	*Lythrum hyssopifolia*	Hyssop loosestrife	Naturalized
Malvaceae, Mallow Family	*Sidalcea malviflora*	Wild hollyhock	Native
Melanthiaceae, False-Hellebore Family	*Toxicoscordion fremontii*	Fremont's deathcamas	Native
Montiaceae, Miner's Lettuce Family	*Calandrinia menziesii*	Calandrinia	Native
Myrsinaceae, Myrsine Family	*Lysimachia arvensis*	Scarlet pimpernel	Naturalized
Myrtaceae, Eucalyptus Family	*Eucalyptus globulus*	Blue gum	Naturalized
Onagraceae, Evening Primrose Family	*Clarkia purpurea* ssp. *quadrivulnera*	Purple clarkia	Native
	Clarkia unguiculata	Woodland clarkia	Native
	Epilobium brachycarpum	Willow herb	Native
	Epilobium canum	California fuchsia	Native
Orobanchaceae, Broomrape Family	*Bellardia trixago*	Mediterranean lineseed	Naturalized
	Castilleja affinis	Indian paintbrush	Native
	Castilleja attenuata	Narrow leaved owl's clover	Native
	Castilleja densiflora ssp. *obispoensis*	San Luis Obispo owl's-clover	Native, **CRPR 1B.2**
	Triphysaria eriantha	Butter 'n' eggs	Native
Oxalidaceae, Woodsorrel Family	*Oxalis corniculata*	Creeping wood sorrel	Naturalized
	Oxalis pes-capre	Bermuda buttercup	Naturalized

Family	Scientific Name	Common Name	Origin[1]
Papaveraceae, Poppy Family	*Eschscholzia californica*	California poppy	Native
Phrymaceae, Monkeyflower Family	*Diplacus aurentiacus*	Orange-bush monkeyflower	Native
	Erythranthe guttata	Seep monkeyflower	Native
Plantaginaceae, Plantain Family	*Collinsia heterophylla*	Chinese houses	Native
	Plantago coronopus	Cut leaf plantain	Naturalized
	Plantago erecta	California plantain	Native
	Plantago lanceolata	Lance leaved plantain	Naturalized
	Veronica anagallis-aquatica	Water speedwell	Naturalized
Platanaceae, Sycamore Family	*Platanus racemosa*	California sycamore	Native
Poaceae, Grass Family	*Avena barbata*	Slender wild oats	Naturalized
	Avena fatua	Wild oats	Naturalized
	Brachypodium distachyon	False brome	Naturalized
	Briza maxima	Rattlesnake grass	Naturalized
	Briza minor	Little rattlesnake grass	Naturalized
	Bromus diandrus	Ripgut brome	Naturalized
	Bromus hordeaceus	Soft chess brome	Naturalized
	Bromus sitchensis var. *carinatus*	California brome	Native
	Cynodon dactylon	Bermuda grass	Naturalized
	Danthonia californica	California oatgrass	Native
	Festuca microsyachys	Small fescue	Native
	Festuca myuros	Rattail sixweeks grass	Naturalized
	Festuca perennis	Italian rye grass	Naturalized
	Gastridium pheloides	Nit Grass	Naturalized
	Hordeum marinum	Seaside barley	Naturalized
	Hordeum murinum	Foxtail barley	Naturalized
	Lamarckia aurea	Goldentop	Naturalized
	Melica imperfecta	Coast range melic	Native
	Muhlenbergia rigens	Deergrass	Native
	Phalaris paradoxa	Hood canarygrass	Naturalized
	Pennisetum setaceum	Fountaingrass	Naturalized
	Poa secunda	Pine bluegrass	Native
	Polypogon monspeliensis	Annual beard grass	Naturalized
	Stipa pulchra	Purple needle grass	Native
Polemoniaceae, Phlox Family	*Gilia achilleifolia*	California gilia	Native
	Gilia brecciarum	Small gilia	Native
	Navarretia atractyloides	Holly leaf navarretia	Native
Polygonaceae, Buckwheat Family	*Chorizanthe palmeri*	Palmer's spineflower	Native, **CRPR 4.2**
	Eriogonum fasciculatum	California buckwheat	Native

Family	Scientific Name	Common Name	Origin[1]
	Eriogonum sp.	Buckwheat	Native
	Pterostegia drymarioides	Fairy mist	Native
	Rumex acetosella	Sheepsorrel	Naturalized
	Rumex crispus	Curly dock	Naturalized
	Rumex obtusifolius	Broadleaf dock	Naturalized
	Rumex pulcher	Fiddleleaf dock	Naturalized
	Rumex salicifolius	Willow leaved dock	Native
Polypodiaceae, Polypody Fern Family	*Polypodium californicum*	California polypody	Native
Primulaceae, Primrose Family	*Primula clevelandii*	Padre's shooting star	Native
Pteridaceae, Brake Fern Family	*Adiantum jordanii*	California maidenhair fern	Native
	Pallaea andromedifoila	Coffee fern	Native
	Pentagramma triangularis	Goldieback fern	Native
Ranunculaceae, Buttercup Family	*Delphinium parryi* ssp. *eastwoodiae*	Eastwood's larkspur	Native, **CRPR 1B.2**
	Ranunculus californicus	California buttercup	Native
Rhamnaceae, Buckthorn Family	*Frangula californica*	California coffeeberry	Native
	Rhamnus crocea	Redberry	Native
Rosaceae, Rose Family	*Cotoneaster lacteus*	Milkflower cotoneaster	Naturalized
	Heteromeles arbutifolia	Toyon	Native
	Rosa californica	California wild rose	Native
	Rubus ursinus	California blackberry	Native
Rubiaceae, Coffee Family	*Galium aparine*	Cleavers	Native
	Galium californicum ssp. *californicum*	California bedstraw	Native
	Galium porrigens	Climbing bedstraw	Native
Salicaceae, Willow Family	*Populus fremontii*	Fremont cottonwood	Native
	Salix lasiolepis	Arroyo willow	Native
Themidaceae, Brodiea Family	*Bloomeria crocea*	Goldenstar	Native
	Dipterostemon capitatum	Blue dicks	Native
Urticaceae, Nettle Family	*Urtica dioica*	Stinging nettle	Native
Verbenaceae, Vervain Family	*Verbena lasiostachys*	Western vervain	Native
Violaceae, Violet Family	*Viola pedunculata*	California golden violet	Native

[1] **CNPS:** Rank 1B = rare, threatened, or endangered in California and elsewhere; Rank 4 = a watch list plants of limited distribution
Threat Codes: _.1 = Seriously endangered I California (over 80% of occurrences threatened / high degree and immediacy of threat);
_.2 = Fairly endangered in California (20-80% occurrences threatened);
_.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)

Table D-2. Wildlife Species Observed

Taxa	Scientific Name	Common Name	Status[1]
Birds	*Aphelocoma californica*	California scrub jay	--
	Aquila chrysaetos	Golden Eagle	FP, WL
	Baeolophus inornatus	Oak titmouse	--
	Buteo jamaicensis	Red-tailed hawk	--
	Buteo lineatus	Red-shouldered hawk	--
	Cathartes aura	Turkey vulture	--
	Chamaea fasciata	Wrentit	--
	Charadrius vociferous	Killdeer	--
	Chondestes grammacus	Lark sparrow	--
	Dryobates nuttallii	Nuttall's woodpecker	--
	Empidonax difficilis	Pacific slope flycatcher	--
	Euphagus cyanocephalus	Brewer's blackbird	--
	Falco sparverius	American kestrel	--
	Junco hyemalis	Dark-eyed junco	--
	Melanerpes formicivorus	Acorn woodpecker	--
	Meleagris gallopavo	Wild turkey	--
	Melospiza melodia	Song sparrow	--
	Melozone crissalis	California towhee	--
	Psaltriparus minimus	Bushtit	--
	Sayornis nigricans	Black phoebe	--
	Sialia mexicana	Western bluebird	--
	Spinus psaltria	Lesser goldfinch	--
	Sturnella neglecta	Western meadowlark	--
	Tachycineta bicolor	Tree swallow	--
	Zenaida macroura	Mourning dove	--
Invertebrates	*Apis mellifera*	European honey bee	--
	Junonia grisea	Gray buckeye	--
	Papilio rutulus	Western tiger swallowtail	--
	Venessa virginiensis	American lady	--
Mammals	*Odocoileus hemionus*	Mule deer	--
	Otospermophilus beecheyi	California ground squirrel	--
	Thomomys bottae	Botta's pocket gopher	--
Reptiles	*Coluber constrictor mormon*	Western yellow-bellied racer	--
	Sceloporus occidentalis	Western fence lizard	--

[1] **CDFW:** FP= Fully Protected Species; WL= Watch List

This page intentionally left blank.

APPENDIX E

Representative Site Photographs

Photo E-1. View of typical grassland and oak woodland habitat within BSA and adjacent to project area. Photo taken April 28, 2023.

Photo E-2. View of serpentine outcrop adjacent to Range Road, west of Culvert G. Palmer's spineflower and mouse-gray dudleya observed in this habitat. Photo taken April 28, 2023.

Photo E-3. View looking east of purple needlegrass grassland adjacent to Range Road, west of Echo Range. Photo taken April 28, 2023.

Photo E-4. View looking south towards outlet of Culvert E and Drainage 10 with coast live oak woodland in background. Photo taken April 28, 2023.

Photo E-5. View looking north along lower reach of San Benito Road with eucalyptus groves in background and Swale 11 visible adjacent to road. Photo taken April 28, 2023.

Photo E-6. View looking northwest of potential staging area #1, adjacent to Drainage 10. Photo taken April 6, 2023.

Photo E-7. View looking south of Drainage 1 with wetland habitat in-channel (Wetland 1) prior to entering inlet of Culvert A. Photo taken April 28, 2023.

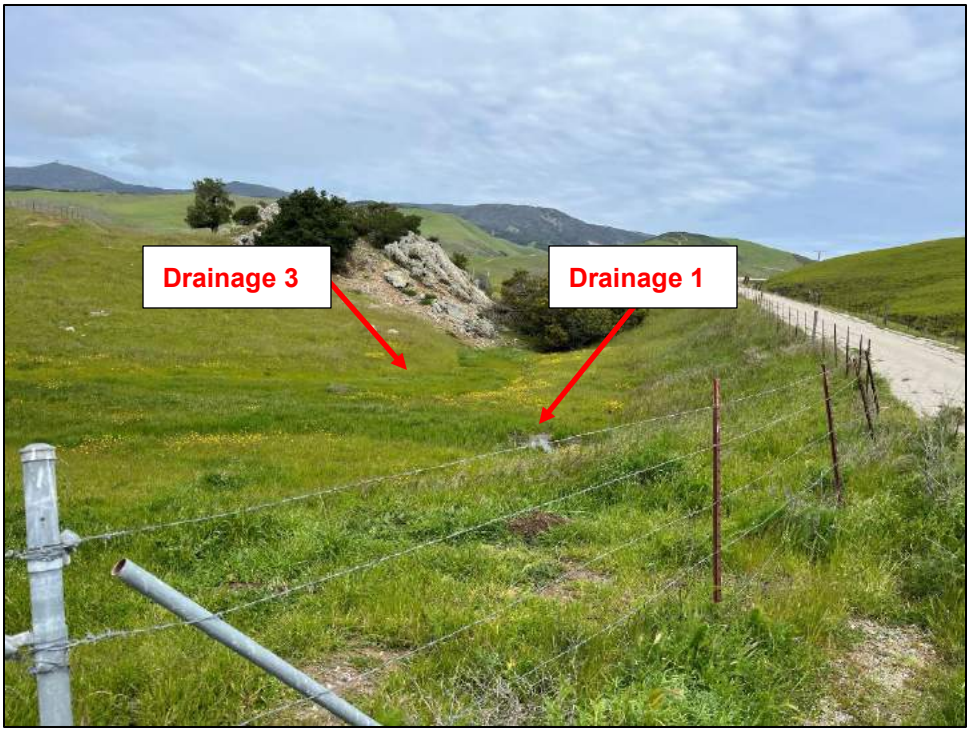


Photo E-8. View northeast of outlet of Culvert A, Drainage 1 and Drainage 3. Photo taken April 28, 2023.

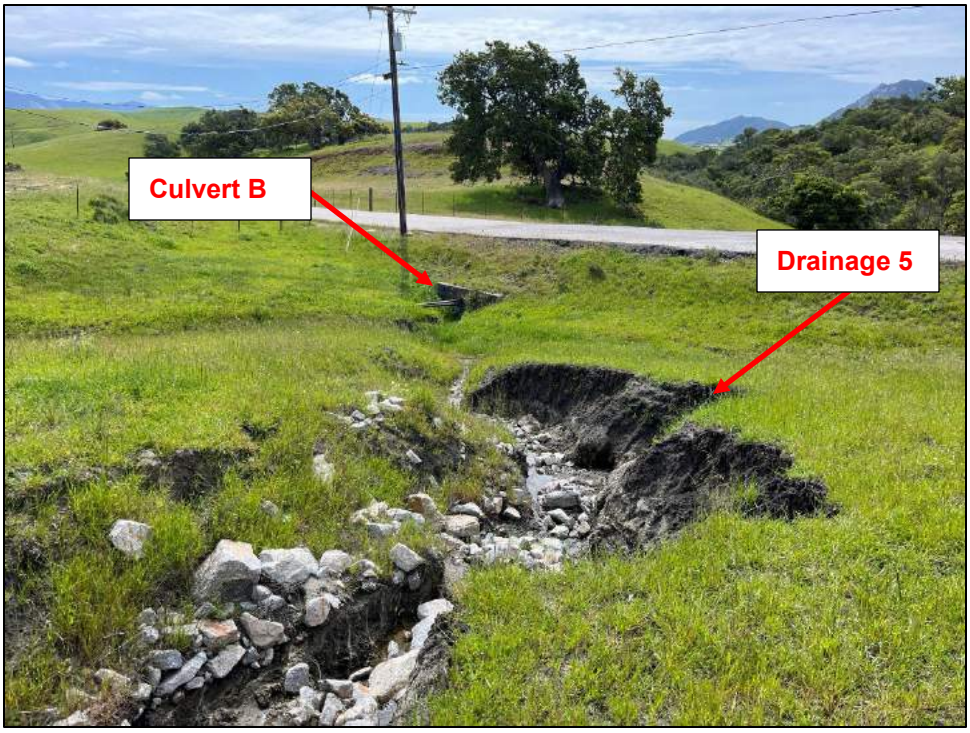


Photo E-9. View south of Drainage 5 upstream of Culvert B. Photo taken April 6, 2023.

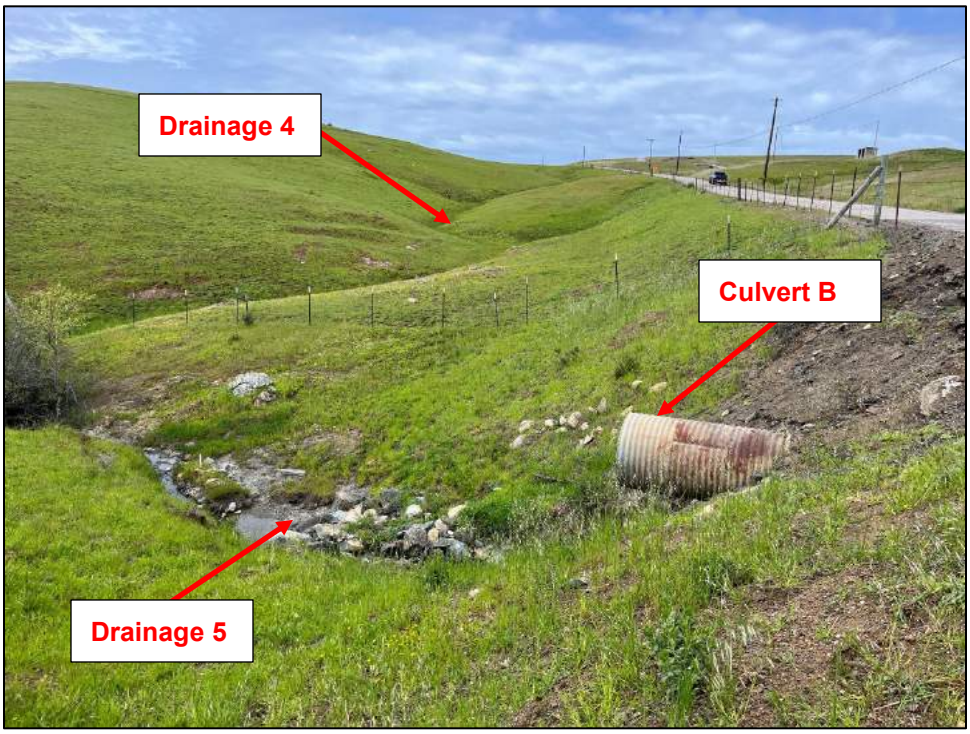


Photo E-10. View west of Drainages 4 and 5 immediately downstream of Culvert B. Photo taken April 6, 2023.

Photo E-11. View west of Drainage 6 running parallel to Range Road. Photo taken April 6, 2023.

Photo E-12. View south of Drainage 8 running through serpentine outcrops. Note Blochman's dudleya observed on serpentine outcrops in this area. Photo taken April 6, 2023.

Photo E-13. View south towards Culvert D in flowline of Drainage 9. Oak trees and willows may be removed at this location to facilitate culvert improvements. Photo taken April 6, 2023.

Photo E-14. View north of Drainage 9 downstream of Culvert D. Photo taken April 6, 2023.

Photo E-15. View west of Culvert F headwall. Non-jurisdictional feature. Photo taken April 6, 2023.

Photo E-16. View north of Drainage 11 upstream of Culvert G with adjacent feature dominance by iris-leaved juncus. Photo taken April 6, 2023.

Photo E-17. View of Culvert G from southside of Range Road, looking northeast. Photo taken April 6, 2023.

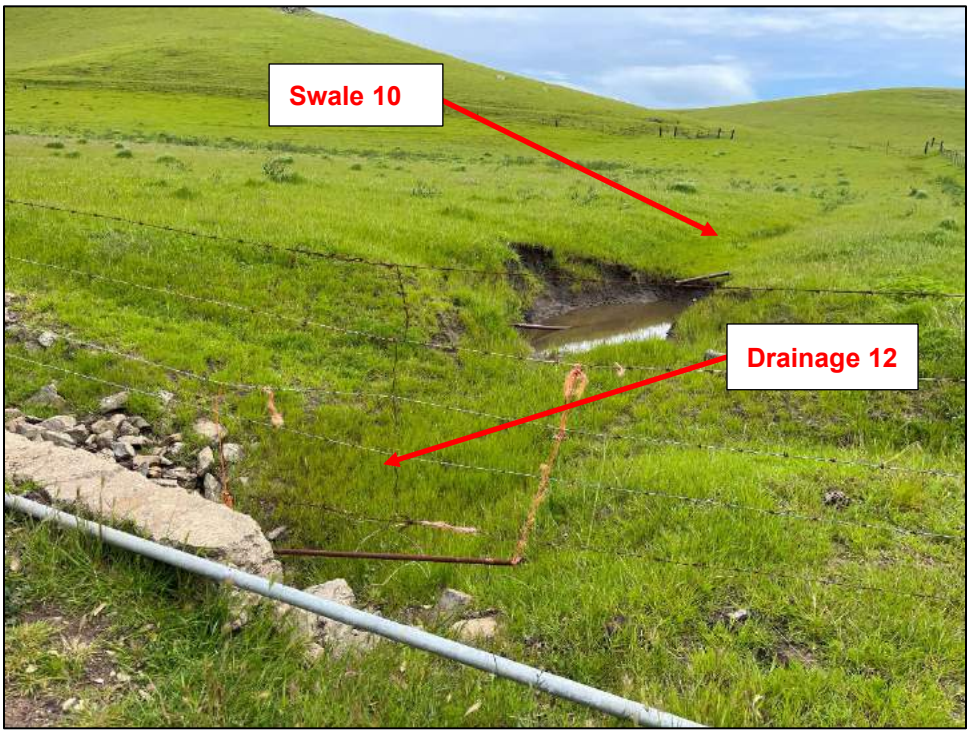


Photo E-18. View of Culvert H from San Benito Road, looking northeast towards Swale 10. Photo taken April 6, 2023.

Photo E-19. View of riparian habitat at inlet of Culvert I, looking north towards proposed work area. Photo taken April 6, 2023.

Photo E-20. View west of Ponds 2 and 3 adjacent to Range Road. No impacts proposed to these features. Photo taken April 6, 2023.

Photo E-21. Fields of San Luis Obispo owl's clover on grassy slope above Culvert F. Photo taken April 28, 2023.

Photo E-22a and E-22b. Photo of Cambria morning-glory (left) and mouse-gray dudleya and Palmer's spineflower seedlings (right). Photo taken April 28, 2023.

Photo E-23a and E-23b. Photo of Blochman's dudleya (left) and club-haired mariposa lily (right). Photo taken April 28 and June 28, 2023, respectively.

APPENDIX F

CNDDB Observation Form

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0008
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Calochortus clavatus var. clavatus*

Common name: club-haired mariposa-lily

Date of field work (mm-dd-yyyy): 06-28-2023

Comment about field work date(s): Survey completed as a part of a Biological Resources Assessment

OBSERVER INFORMATION

Observer: Amy Golub

Affiliation: SWCA

Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401

Email: Amy.Golub@swca.com

Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 60

Collection? **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
0 %	100 %	0 %

SITE INFORMATION

Habitat description: Grassland habitat; co-occurring species include purple needlegrass (Stipa pulchra), wild oat (Avena fatua), ripgut brome (Bromus diandrus), soft chess brome (Bromus hordeaceus), Crete weed (Hedypnois rhagadioloides), silver puffs (Uropappus lindleyi), and Italian thistle (Carduus pycnocephalus).

Slope:

Land owner/manager: California Army National Guard

Aspect:

Site condition + population viability:

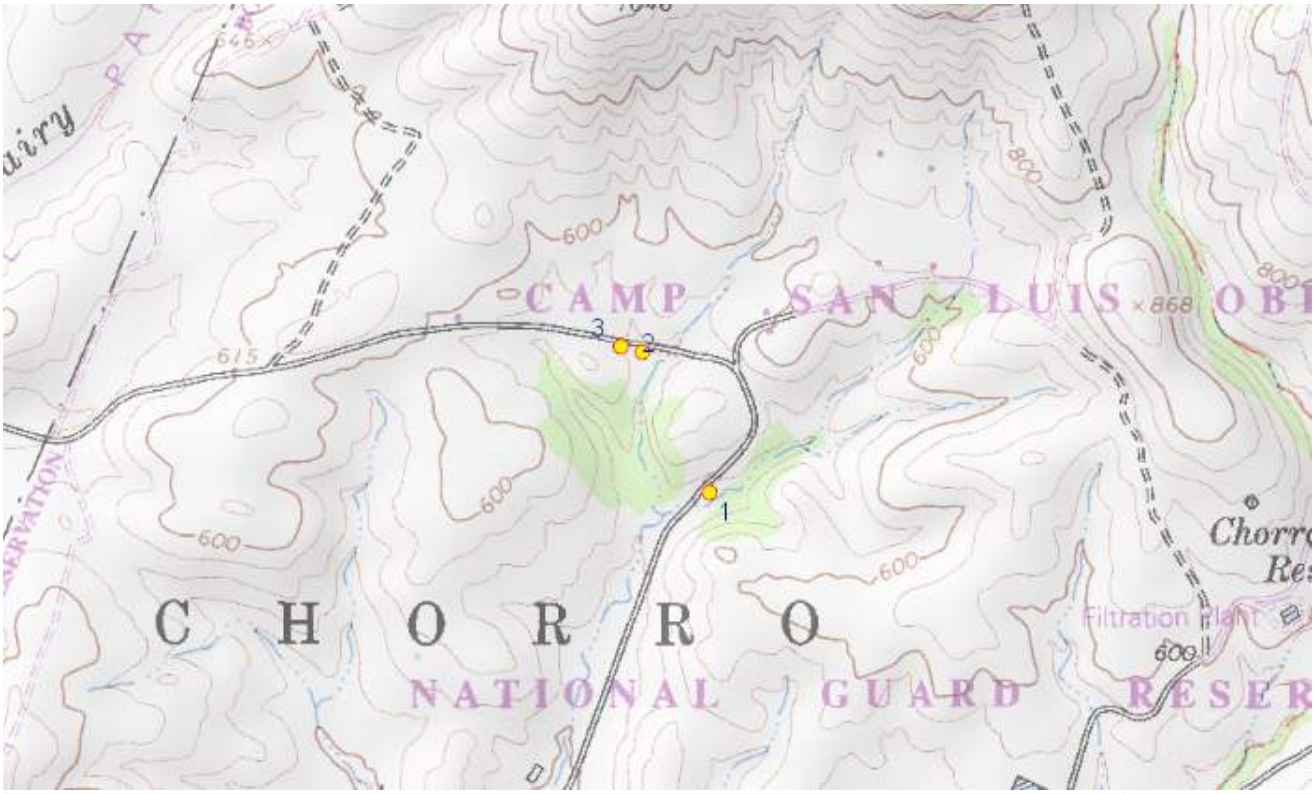
Immediate & surrounding land use: military

Visible disturbances:

Threats: military development and activities

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	468	35.33933	-120.70182	708861	3913099	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	512	35.34196	-120.70337	708714	3913387	10
2	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	515	35.34206	-120.70386	708669	3913397	10
3	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes: each point represents 15-30 individuals observed

Location/directions comments:

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0013
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Calystegia subacaulis ssp. episcopalis*

Common name: Cambria morning-glory

Date of field work (mm-dd-yyyy): 04-28-2023

Comment about field work date(s): Survey completed as a part of a Biological Resources Assessment

OBSERVER INFORMATION

Observer: Amy Golub

Affiliation: SWCA

Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401

Email: Amy.Golub@swca.com

Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 6200+

Collection? **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
50 %	50 %	0 %

SITE INFORMATION

Habitat description: coastal scrub and grassland habitats; co-occurring species include wild oat (Avena fatua), ripgut brome (Bromus diandrus), soft chess brome (Bromus hordeaceus), Crete weed (Hedypnois rhagadioloides), silver puffs (Uropappus lindleyi), and Italian thistle (Carduus pycnocephalus)

Slope:

Land owner/manager: California Army National Guard

Aspect:

Site condition + population viability:

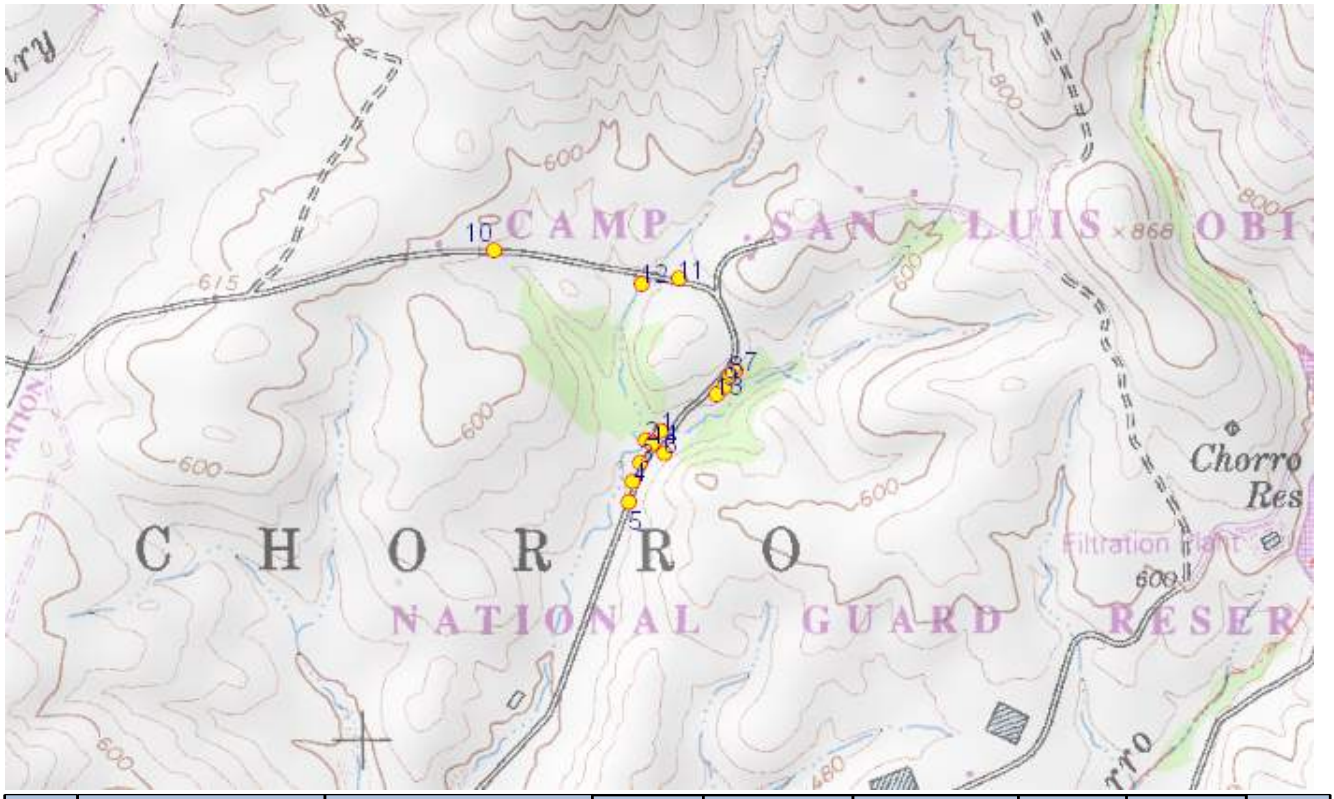
Immediate & surrounding land use: Military

Visible disturbances:

Threats: Military activities and development

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	446	35.33911	-120.70251	708800	3913072	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	440	35.33893	-120.70285	708769	3913052	10
2	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	448	35.33851	-120.70298	708758	3913005	10
3	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	441	35.33816	-120.70315	708744	3912966	10
4	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	446	35.33778	-120.70324	708737	3912923	10
5	Public Land Survey	Feature Comment						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	469	35.33869	-120.70242	708809	3913026	10
6	Public Land Survey	Feature Comment						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	505	35.34023	-120.70079	708953	3913200	10
7	Public Land Survey	Feature Comment						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	505	35.34014	-120.70092	708941	3913190	10
8	Public Land Survey	Feature Comment						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	496	35.33993	-120.70105	708930	3913167	10
9	Public Land Survey	Feature Comment						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	548	35.34248	-120.70633	708443	3913439	10
10	Public Land Survey	Feature Comment						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	537	35.34196	-120.70208	708831	3913390	10
11	Public Land Survey	Feature Comment						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	509	35.34185	-120.70294	708753	3913376	10
12	Public Land Survey	Feature Comment						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	490	35.33979	-120.70122	708915	3913151	10
13	Public Land Survey	Feature Comment						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	446	35.33886	-120.70270	708782	3913045	10

14	Public Land Survey	Feature Comment
	M T30S R12E 5	

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes:

Location/directions comments: Species was observed within coastal scrub and grassland habitats within the vicinity of this location.

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0012
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Castilleja densiflora var. obispoensis*

Common name: San Luis Obispo owl's-clover

Date of field work (mm-dd-yyyy): 04-28-2023

Comment about field work date(s): Survey completed as a part of a Biological Resources Assessment

OBSERVER INFORMATION

Observer: Amy Golub

Affiliation: SWCA

Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401

Email: Amy.Golub@swca.com

Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 5600+

Collection? **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
0 %	100 %	0 %

SITE INFORMATION

Habitat description: coastal scrub, grassland, and woodland habitats; co-occurring species include wild oat (Avena fatua), ripgut brome (Bromus diandrus), soft chess brome (Bromus hordeaceus), Crete weed (Hedypnois rhagadioloides), silver puffs (Uropappus lindleyi), Italian thistle (Carduus pycnocephalus), toyon (Heteromeles arbutifolia), coast live oak (Quercus agrifolia), hummingbird sage (Salvia spathacea), and California bedstraw (Galium californicum subsp. californicum),

Slope:

Aspect:

Site condition + population viability: Land owner/manager: California Army National Guard

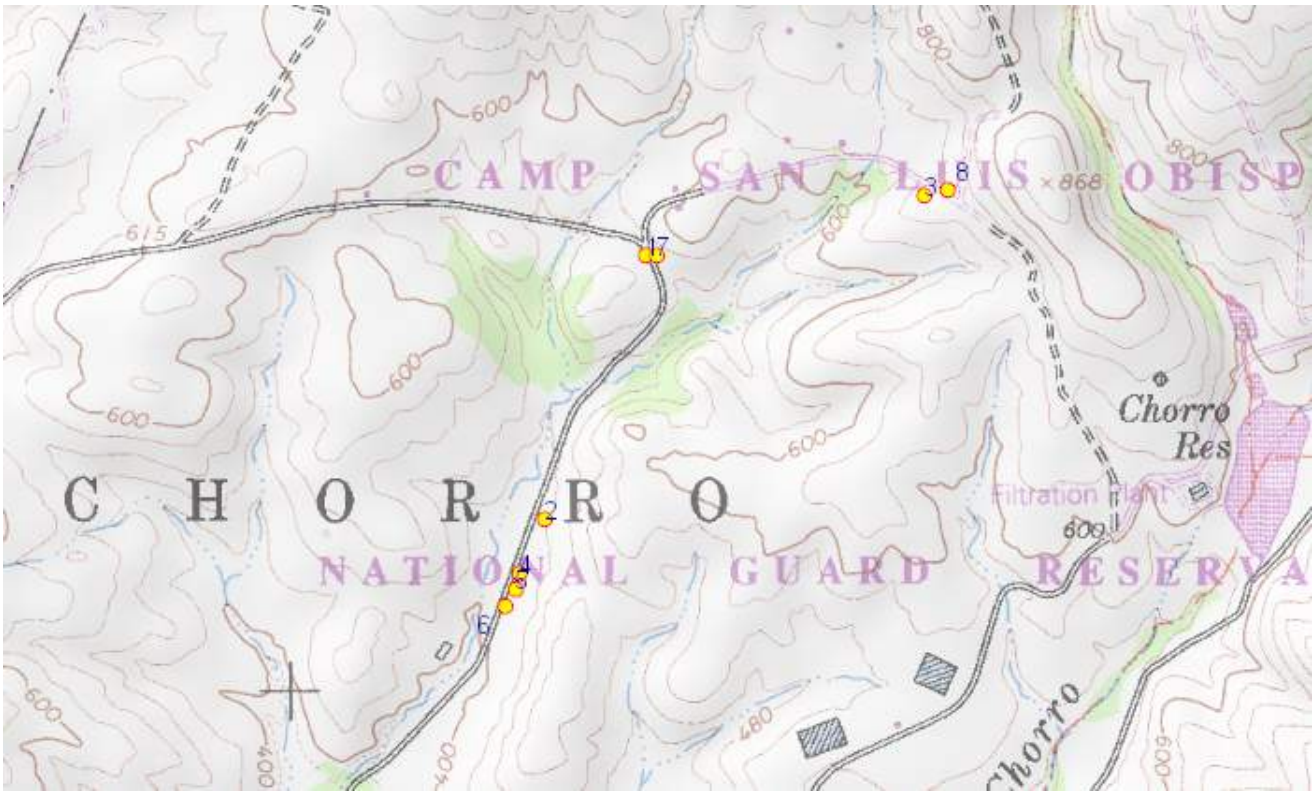
Immediate & surrounding land use: Military

Visible disturbances:

Threats: Military development and activities

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	543	35.34147	-120.70120	708913	3913337	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	439	35.33653	-120.70352	708715	3912784	10
2	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	677	35.34259	-120.69480	709491	3913475	10
3	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	426	35.33551	-120.70409	708665	3912671	10
4	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	421	35.33522	-120.70418	708658	3912637	10
5	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	415	35.33490	-120.70442	708637	3912602	10
6	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 8							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	542	35.34147	-120.70094	708936	3913337	10
7	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 4							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	677	35.34269	-120.69427	709539	3913487	10
8	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 4							

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes:

Location/directions comments: Species was observed within coastal scrub, grassland, and woodland habitats within vicinity of this location

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0009
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Chorizanthe palmeri*

Common name: Palmer's spineflower

Date of field work (mm-dd-yyyy): 04-28-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Amy Golub

Affiliation: SWCA

Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401

Email: Amy.Golub@swca.com

Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 500+

Collection? **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
100 %	0 %	0 %

SITE INFORMATION

Habitat description: serpentine rock outcrop; co-occurring species include narrow leaved onion (Allium amplectans), San Luis Obispo dudleya (Dudleya abramsii subsp. murina), chaparral yucca (Hesperoyucca whippleyi), and Blochman's dudleya (Dudleya blochmaniae).

Slope:

Land owner/manager: California Army National Guard

Aspect:

Site condition + population viability:

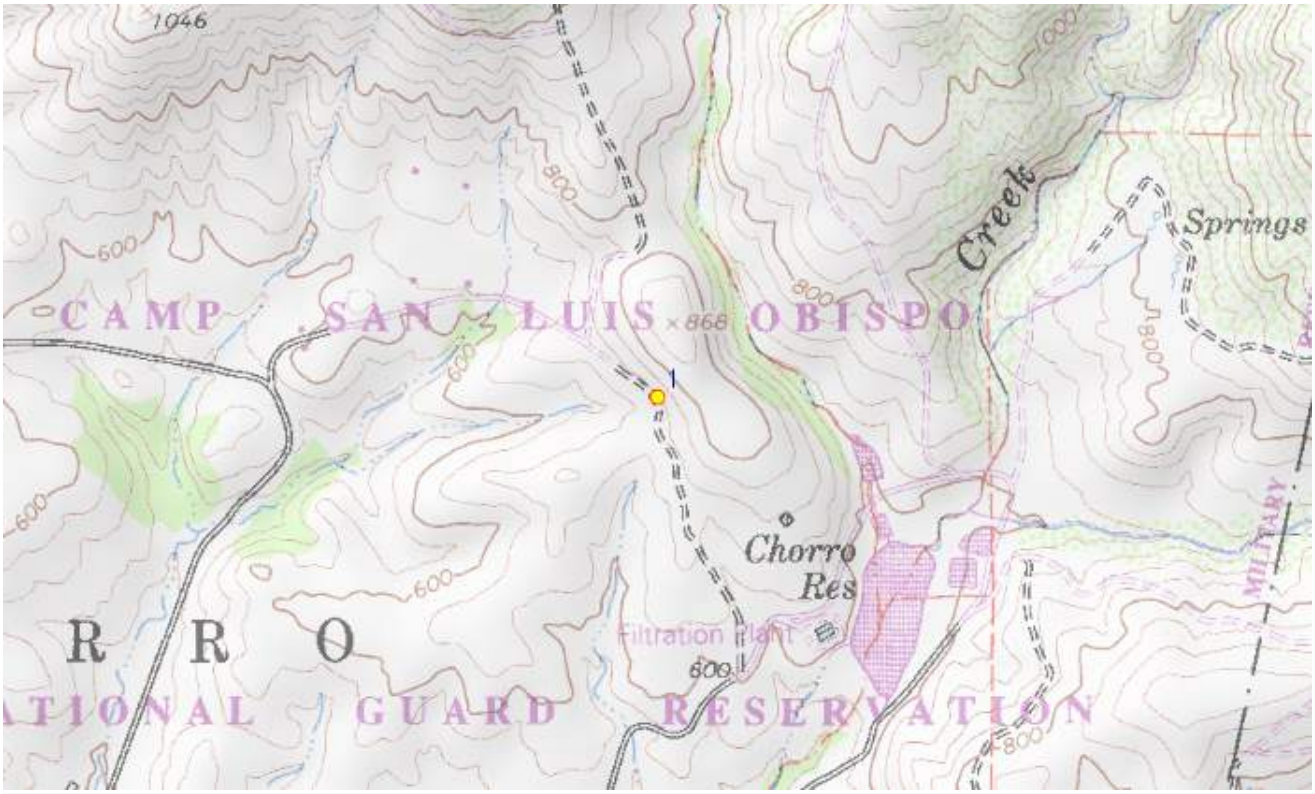
Immediate & surrounding land use: military

Visible disturbances:

Threats: military development and activities

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	730	35.34144	-120.69234	709718	3913353	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 4							

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes:

Location/directions comments: Species was observed on other serpentine rock outcrops within vicinity of this location

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0011
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Delphinium parryi ssp. eastwoodiae*

Common name: Eastwood's larkspur

Date of field work (mm-dd-yyyy): 04-28-2023

Comment about field work date(s): Survey completed as a part of a Biological Resources Assessment

OBSERVER INFORMATION

Observer: Amy Golub

Affiliation: SWCA

Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401

Email: Amy.Golub@swca.com

Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 20+

Collection? **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
50 %	50 %	0 %

SITE INFORMATION

Habitat description: This species was observed within grassland habitats on clay serpentine derived soils adjacent to a drainage; co-occurring species include wild oat (Avena fatua), ripgut brome (Bromus diandrus), soft chess brome (Bromus hordeaceus), Crete weed (Hedypnois rhagadioloides), silver puffs (Uropappus lindleyi), and Italian thistle (Carduus pycnocephalus).

Slope:

Land owner/manager: California Army National Guard

Aspect:

Site condition + population viability:

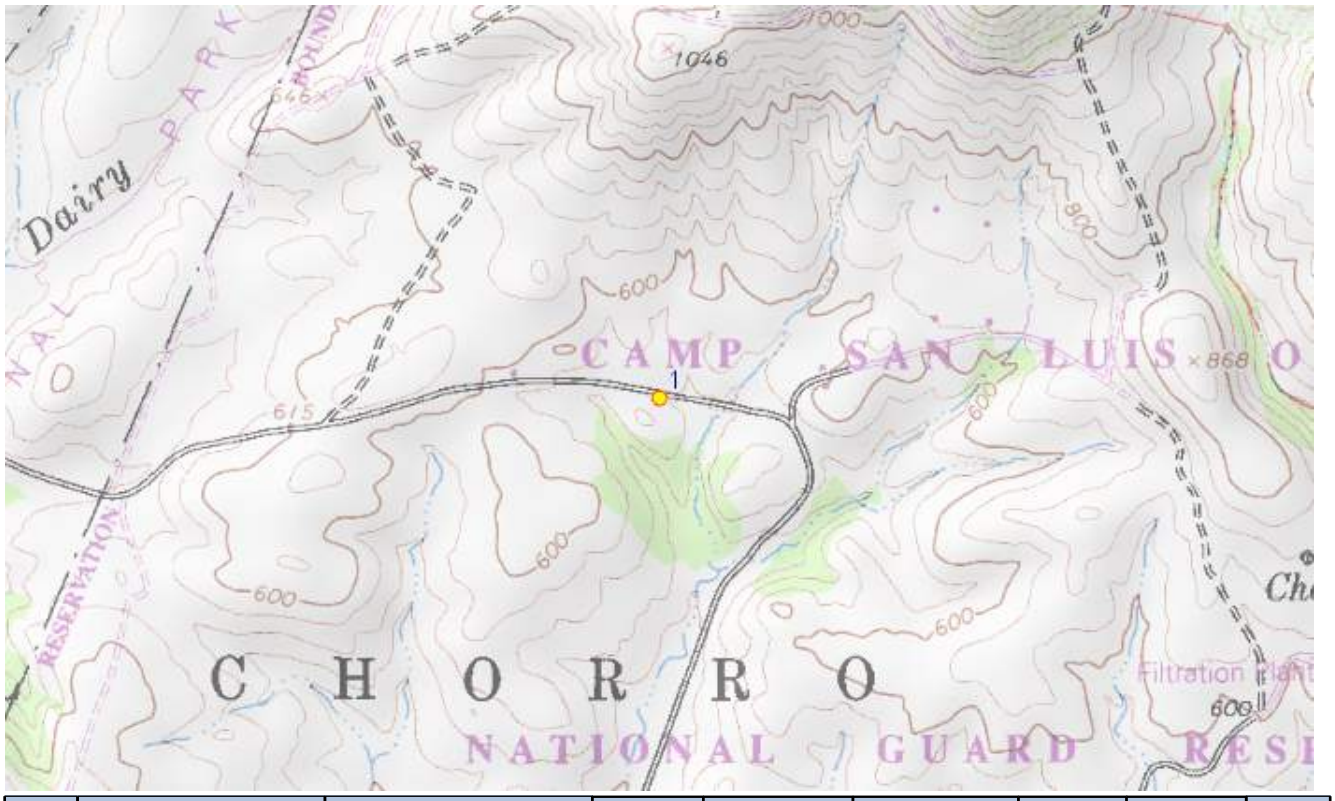
Immediate & surrounding land use: Military

Visible disturbances:

Threats: Military development and activities

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	524	35.34213	-120.70426	708633	3913405	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes:

Location/directions comments:

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0007
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Dudleya abramsii ssp. murina*

Common name: mouse-gray dudleya

Date of field work (mm-dd-yyyy): 04-28-2023

Comment about field work date(s): Survey completed as a part of a Biological Resources Assessment

OBSERVER INFORMATION

Observer: Amy Golub

Affiliation: SWCA

Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401

Email: Amy.Golub@swca.com

Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 45+

Collection? **Collection number:**

Museum/Herbarium:

PLANT INFORMATION

Phenology:

100 %	0 %	0 %
vegetative	flowering	fruiting

SITE INFORMATION

Habitat description: serpentine rock outcrop, co-occurring species include: narrow leaved onion (Allium amplectans), chaparral yucca (Hesperoyucca whippleyi), Palmer's spineflower (Chorizanthe palmeri), and Blochman's dudleya (Dudleya blochmaniae).

Slope:

Land owner/manager: California Army National Guard

Aspect:

Site condition + population viability:

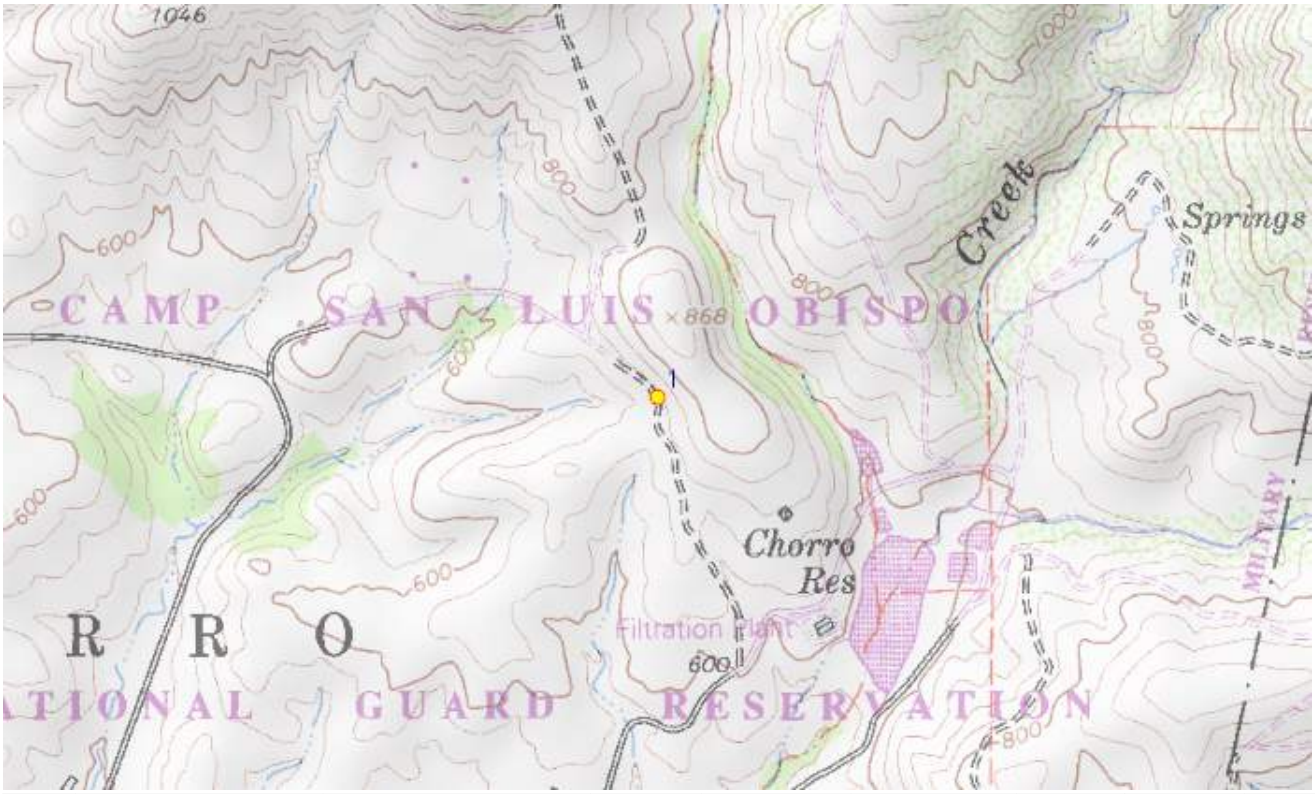
Immediate & surrounding land use: military

Visible disturbances:

Threats: military development and activities

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	726	35.34133	-120.69232	709720	3913341	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 4							

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes:

Location/directions comments: observed on the road cut rock outcrop west of a culvert

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOL23F0010
Quad code 3512036
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Dudleya blochmaniae ssp. blochmaniae*

Common name: Blochman's dudleya

Date of field work (mm-dd-yyyy): 04-28-2023

Comment about field work date(s): Survey completed as a part of a Biological Resources Assessment

OBSERVER INFORMATION

Observer: Amy Golub
Affiliation: SWCA
Address: 3765 South Higuera Street, Suite 102 San Luis Obispo, CA 93401
Email: Amy.Golub@swca.com
Phone: (415) 533-7372

Other observers: Kyle Suchy

DETERMINATION

Keyed in: The Jepson Manual Vascular Plants of California, Second Edition
Compared w/ specimen at:
Compared w/ image in:
By another person:
Other:
Identification explanation:
Identification confidence: Very confident

Species found: Yes **If not found, why not?**
Level of survey effort:
Total number of individuals: 850+
Collection? **Collection number:**
Museum/Herbarium:

PLANT INFORMATION

Phenology:

vegetative	flowering	fruiting
80 %	20 %	0 %

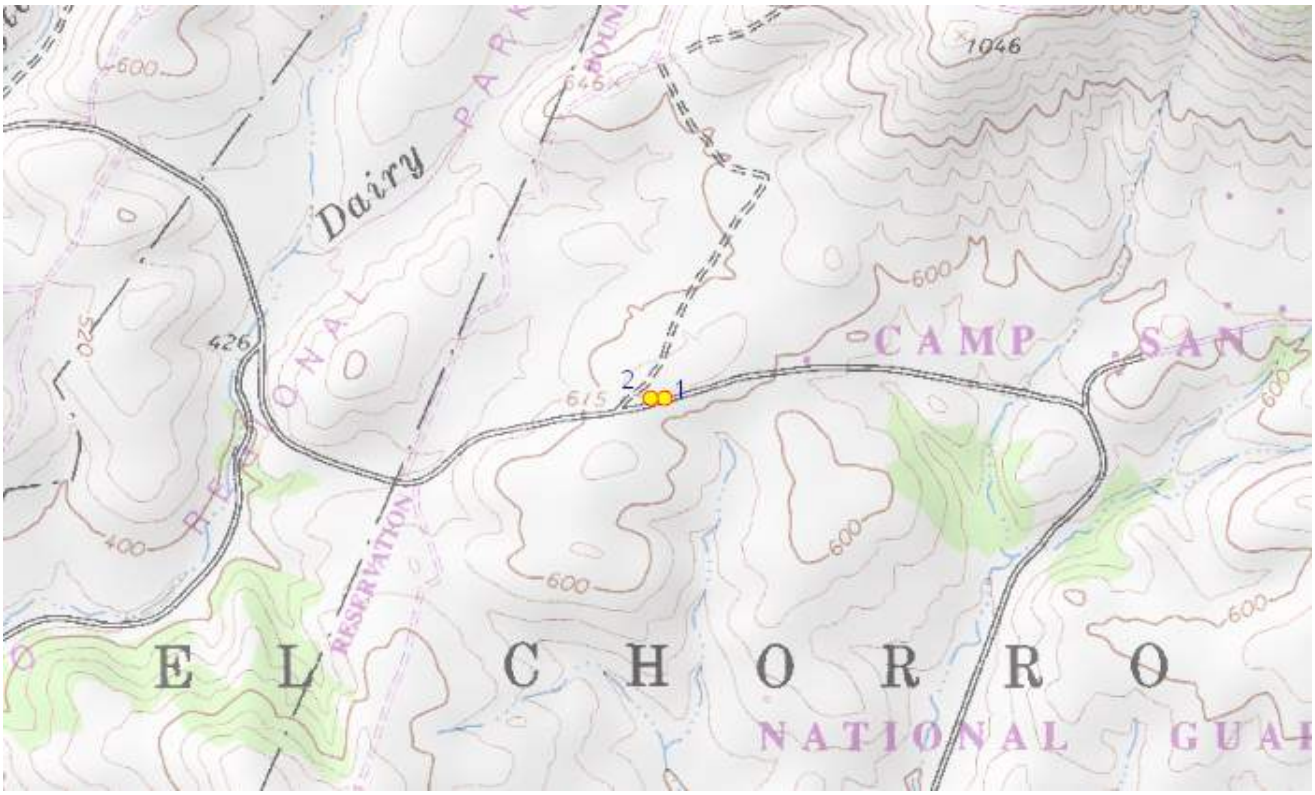
SITE INFORMATION

Habitat description: serpentine rock ourcrop; co-occuring species include annual grasses and Deinandra fasciculata
Slope:
Land owner/manager: California Army National Guard
Aspect:
Site condition + population viability:
Immediate & surrounding land use: military
Visible disturbances:

Threats: military development and activities

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	628	35.34189	-120.71085	708034	3913363	10
1	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Luis Obispo	San Luis Obispo	631	35.34189	-120.71118	708005	3913362	10
2	**Public Land Survey**	**Feature Comment**						
	M T30S R12E 5							

The mapped feature is accurate within: 20 m

Source of mapped feature: GPS

Mapping notes:

Location/directions comments: Species was observed on other serpentine rock outcrops within vicinity of this location

Attachment(s):

APPENDIX D

NEPA Categorical Exclusion

ENVIRONMENTAL DETERMINATION

Project Name: CSLO – Repair San Benito and Range Roads **Date: 29 May 2024**

Project Description:
The project includes roadway and culvert improvements along approximately 13,967 linear feet (2.65 miles) of roadway along San Benito Road and Range Road.

The project would widen and improve Range Road, which provides access to all six shooting ranges on Camp SLO, including the Alpha, Bravo, Charlie, Delta, Echo, and Foxtrot Ranges, as well as the Urban Training Complex. The project would include improvements to eight existing corrugated metal pipe (CMP) culverts within Range Road. Proposed improvements to existing culverts would generally include replacement of CMP culverts with high-density polyethylene (HDPE) pipe culverts, installation of rip-rap materials, and/or retaining or replacing existing concrete headwalls. The project would include the reconstruction and widening of Range Road to include one 11-foot-wide vehicle travel lane in each direction with 1- to 2-foot-wide shoulders on each side of the roadway. Existing barbed-wire fencing along the edge of the roadway would be reconstructed outside of the new roadway edge following completion of roadway improvements. An existing cattle guard located within the roadway would be removed and reconstructed to match the new road width near the same location. Existing utility poles located within the project site would be protected in place during construction activities. The project would also include burial of empty conduit underneath Range Road at the entrances to each shooting range to accommodate potential future utility connections.

The San Benito Road portion of the project would reconstruct and widen San Benito Road to include one 11-foot-wide vehicle travel lane in each direction with 1- to 2-foot-wide shoulders on each side of the roadway. This would include improvements to two existing CMP culverts within San Benito Road. In addition, the roadway centerline would be offset by 1 to 2 feet at certain locations in order to avoid impacting existing utility poles and to minimize grading within the creek adjacent to the roadway, existing barbed-wire fence located along the sides of the existing roadway would be either protected in place or rebuilt following construction activities, and existing overhead utility poles located in close proximity to the existing roadway would be protected in place. The existing State of California 8-inch underground water pipeline that bisects the San Benito Road alignment would also be protected in place and would not be affected by project activities.

A CEQA Initial Study and Mitigated Negative Declaration (IS/MND) has been prepared for the project. Mitigation measures from the IS/MND will be incorporated into the project, see Mitigation, Monitoring and Reporting Program of the IS/MND.

This project has been reviewed in accordance with the National Environmental Policy Act (NEPA) and determined to qualify for NEPA Categorical Exclusion (CX) G2: Repair and maintenance of roads and trails. **A NEPA Record of Environmental Consideration is REQUIRED, see below.**

ENVIRONMENTAL DETERMINATION

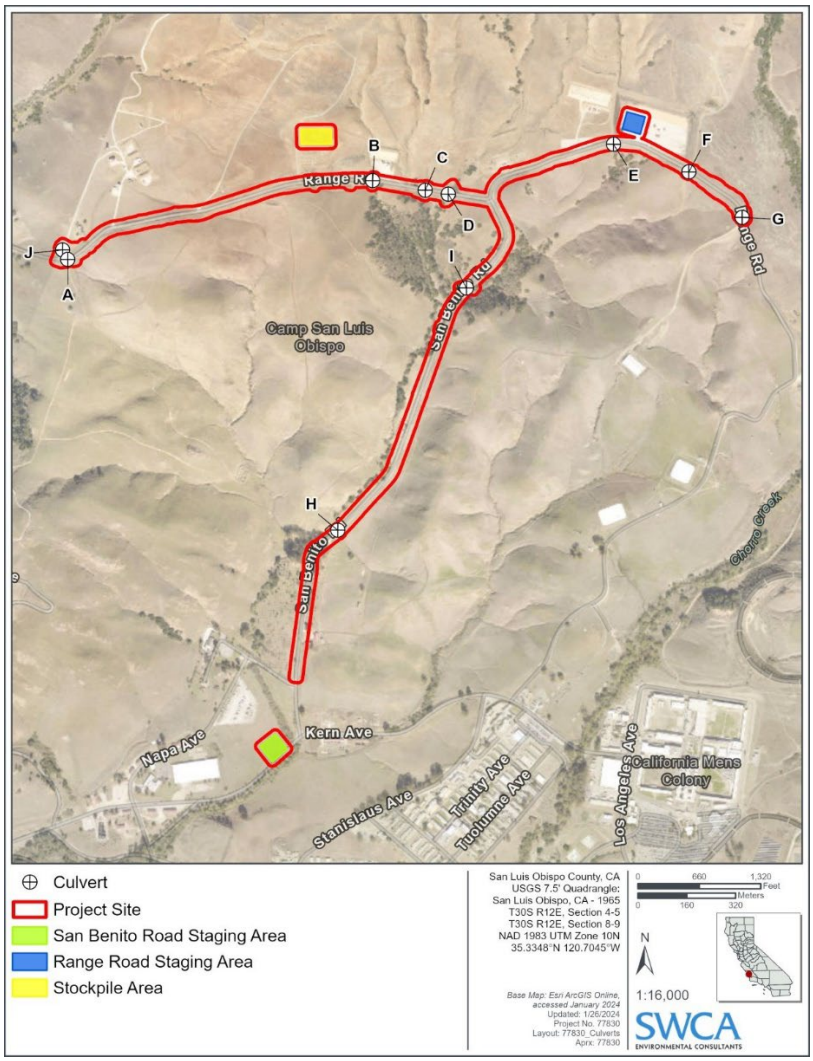
Project Name: **CSLO – Repair San Benito and Range Roads** **Date: 29 May 2024**

Project Proponent (Signature/Date): _____

Brian Woods
Project Manager, CANG Facilities & Infrastructure
805.748.1232 Office

Determined by (Signature/Date): _____

Douglas Bryceson
Branch Chief, Environmental Programs
916.854.1474 Office



ENVIRONMENTAL DETERMINATION

Project Name: **CSLO – Repair San Benito and Range Roads** **Date: 29 May 2024**

Enviro tracking #	**ARNG RECORD OF ENVIRONMENTAL CONSIDERATION**	State ARNG

1. Project name: Repair San Benito and Range Road
2. Project number: (MILCON if applicable) | 3. Date prepared: 29 May 2024
4. Start date of proposed action (dd-mmm-yy): 1 July 2024 *NOTE: this must be a future date.*
5. Programmed fiscal year:
6. End date (if applicable):
7. Description and location of the project/proposed action.

a. Location (Include a detailed map if applicable):

The project is located along San Benito and Range Roads in the training areas, north of highway 1.

b. Description:

The project includes roadway and culvert improvements along approximately 13,967 linear feet (2.65 miles) of roadway along San Benito Road and Range Road, see project description above.

8. Choose one of the following:

☐ An existing environmental assessment* adequately covers the scope of this project. Attach FNSI if EA was completed by another federal agency (non-ARNG).
Date of EA (dd-mmm-yy): Lead Agency:

☐ An existing environmental impact statement* adequately covers the scope of this project.
Date of EIS (dd-mmm-yy): Lead Agency:

☒ After reviewing the screening criteria and completing the ARNG environmental checklist, this project qualifies for a categorical exclusion (select below).
CAT EX Code: G2: Repair and maintenance of roads and trails.
CAT EX Code:
CAT EX Code:

☐ This project is exempt from NEPA requirements under the provisions of:
Cite superseding law:

**Copies of the referenced environmental assessment or environmental impact statement can be found in the ARNG Environmental Office within each state.*

9. Remarks (if needed):

Signature of Proponent (requestor)	Signature of Environmental Branch Chief
Name: Major Brian Woods	Name: Douglas Bryceson
Date:	Date:

Proponent Information

10. Proponent: CANG Facilities & Infrastructure
11. Address: CANG Sacramento
12. POC: Major Brian Woods
13. Comm. voice: (805) 748-1232
14. Proponent POC e-mail: brian.d.woods26.mil@army.mil