

APPENDIX T3: BIOLOGICAL RESOURCES

Bob Jones Pathway – San Luis Obispo to Ontario Road



Biological Assessment

San Luis Obispo, California
San Luis Obispo County
District 05-SLO-0-CR
Federal Project # HPLU-5949(132)

June 2013



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June 2013

STATE OF CALIFORNIA
Department of Transportation
and
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Summary of Findings, Conclusions and Determinations

This Biological Assessment (BA) has been prepared to provide biological information for use during the environmental document phase of the Bob Jones Pathway – San Luis Obispo to Ontario Road (project). The information in this BA will be used to determine to what extent the proposed project may affect federally listed species and federally designated critical habitats protected under the Federal Endangered Species Act (FESA). The evaluation in this BA is based on project plans as of November 2008 and provides quantified estimates of habitat impacts within the Area of Direct Impact (ADI), encompassed by the Biological Study Area (BSA). For the purposes of this project, the BSA is defined as the area (land and water) that may be directly, indirectly, temporarily, or permanently impacted by construction and construction-related activities. The ADI is defined as the area that is either temporarily or permanently, but directly impacted by construction and construction-related activities.

California Department of Transportation (Caltrans) has been delegated the authority to act as the lead federal agency under the Federal Endangered Species Act (FESA) for Section 7 consultations on Federal Highway Administration (FHWA) funded projects. FHWA is the source of funding for this project.

Project Description, Purpose, and Need

The portion of the proposed Bob Jones Pathway – San Luis Obispo to Ontario Road (project) discussed herein is an approximately 4.4-mile (7.1-kilometer) path that would connect the existing path along South Higuera Street from the Land Conservancy of San Luis Obispo's (LCSLO) Octagon Barn, then south and paralleling San Luis Obispo Creek (SLO Creek) to the Ontario Road Staging Area, near State Route 101 and Avila Bay Drive in San Luis Obispo County, California. The purpose and need is for County of San Luis Obispo Parks, with the assistance of FHWA funding, to complete a primarily Class I (off street) pedestrian/bike path for recreational and alternative transportation use that will connect the community of Avila Beach with San Luis Obispo. Portions of the Bob Jones Pathway have previously been completed from Avila Beach to the Ontario Road Staging Area, and this project would reconcile the discontinuity between Avila Beach and San Luis Obispo.

Several proposed project alternatives were examined for feasibility. During the project development phase it was proposed that the path would either be on the west side of SLO Creek; between State Route 101, existing streets, and the creek; or on the east side of SLO Creek within a 20-foot (ft) (6-meter (m)) corridor at the top of bank

(or beyond the riparian edge); or a combination of each. The preferred alignment was selected based on an assessment that determined which route has the least environmental and land use impacts and is most cost effective, while still meeting the overall purpose of the project. Alternatives for several bridge crossings and installation of rock slope protection (RSP) within SLO Creek were also considered. During the project development phase it was proposed that RSP would be installed within the channel of SLO Creek in the vicinity of bridges and other areas for bank stabilization. In response to Caltrans concerns, these areas were redesigned to avoid impacts to wetlands along the riparian corridor of SLO Creek. Installation of RSP in SLO Creek is no longer proposed and project plans have been changed to remove RSP.

Class I bikeway segments would be built within a 20-ft (6-m) trail ROW. Construction of the bike/pedestrian pathway would primarily occur within a typically narrow 30 to 60-ft (9 to 18-m) wide construction disturbance zone on nearly level terrain. In some areas the construction disturbance zone would be wider, up to 140 ft (43 m) wide, to include adjacent staging or lay-down areas, for instance for assembly and installation of the pedestrian bridges. In several areas the pathway would run parallel to and within 30 ft (9 m) of the banks of SLO Creek and its riparian corridor. Some tree trimming at the riparian canopy edge will be required for construction access and to ensure adequate overhead clearance for bicyclists, where the trail parallels the creek corridor. Trimming and possible removal of some trees may be necessary for placement of bridge decks at the creek crossings.

The proposed path has been broken down into five segments for descriptive purposes. Segment 1 of the new path would begin at the Octagon Barn on South Higuera Street where a trailhead with parking and other facilities would be constructed. To provide access to the Octagon Barn parking and trailhead, the County would construct a turn lane devoted to traffic in and out of the Octagon Barn property. To accommodate the turn lane, the County will widen an approximately 865-ft (263.7 m) stretch of South Higuera Street. A Class I path with a retaining wall would proceed along the east side of South Higuera Street, and then cross to the west side, where the Class I path would be between the road and SLO Creek. The path would then be routed across to the east side of South Higuera Street before reaching a new South Higuera Bridge (BR-A) for the path to be constructed across SLO Creek near the Filippini Ecological Reserve. Several culverts would be installed along this segment.

Segment 2 of the Class I path would proceed between the east edge of South Higuera Street and SLO Creek at or near the top of bank, upon reaching the Maino property in

the vicinity of the U.S. 101 northbound off ramp. Along this section just north of Cloveridge Lane, a retaining wall and curb would be added as needed where the west bank of SLO Creek slopes steeply toward the thalweg (low point of the channel). At the southern end of this section, the path would be located within the Cloveridge Lane right-of-way and would become a Class III, then a Class I path, before crossing SLO Creek again at the new Bunnell Bridge (BR-B). Several culverts would need to be repaired along this segment in the future. Discussion of existing culvert repairs is provided for informational purposes based on current conditions. These culvert repairs should not be considered part of the project description for environmental review purposes.

After crossing SLO Creek at the Bunnell Bridge, Segment 3 of the Class I path would proceed adjacent to an agricultural field in Baron Canyon open space lands east of the SLO Creek corridor. Four new culverts would be installed under the path along this section, primarily extensions of the culverts that drain Monte Road, along with the improvement of two existing culverts near where the path would join Monte Road, as needed. Once this section of the trail reaches Monte Road, it would proceed along Monte Road as a Class III path before converting to a Class I path through the edge of agricultural land just west of Monte Road, with the extension of three existing culverts as needed and the installation of two new culverts, before reaching San Luis Bay Drive.

At Segment 4, a new crosswalk with a three-way stop would be implemented at the intersection of Monte Road and San Luis Bay Drive. The Class I path would parallel San Luis Bay Drive before reaching a new San Luis Bay Drive Bridge (BR-C) for the path across SLO Creek. Several culverts would be installed or extended.

The final segment of the path, Segment 5, extends from San Luis Bay Drive to the Ontario Road Staging Area. The Class I path would extend from the junction of Segment 4 and Segment 5, eventually traveling along an existing farm access road easement with four culverts installed under the path. The Class I path would then reach an elevated approach ramp for the new Highway 101 pedestrian overcrossing toward the Ontario Road Staging Area before connecting with the existing Bob Jones Trail to the south.

Several proposed staging areas have been identified along the new path. All staging areas will result in temporary impacts unless otherwise described. Access will be

along public and private roads and along California Department of Transportation (Caltrans) ROW.

The County has indicated that construction of the new corridor would be in roughly three sections/phases as funding becomes available. Construction of the entire path would be anticipated to occur within six years of the start of Phase 1. Construction of the bridge crossings and pathway segments located immediately adjacent to and through the riparian corridor of SLO Creek would occur within the typical agency-allowed window from June 1 to October 31 of any given year. Construction of the remainder of the pathway outside of the riparian corridor would occur year-round, weather permitting, and provided that all erosion control and stormwater management measures were in place and properly functioning.

Biological Study Area

A BSA encompassing the project area was defined and examined to assess the effects of the proposed project on federally listed species. Natural communities/habitats present within the BSA agricultural land, ruderal (disturbed), landscaping/ornamental vegetation (including groundcover and planted trees), non-native annual grassland, serpentine bunchgrass, coastal scrub, coast live oak woodland, riparian (riparian forest, riparian scrub, freshwater marsh, and riverine habitats), and seasonal wetlands. All natural communities were mapped in the BSA.

Habitat Impacts

Impacts to habitats within the project BSA have been quantified based on the areas of vegetation removal/displacement occupied by the proposed pathway and culvert installations, the bridge crossings of SLO Creek, the State Route 101 overcrossing, staging areas, and construction access. These impact areas are represented as the ADI, which was overlain with habitat and jurisdictional areas to quantify impacts. The ADI includes potential disturbance areas for both permanent and temporary impacts.

Estimates of potential impacts to plant communities/habitat areas within the ADI include the following:

Habitat Type	Permanent			Temporary			TOTAL		
	ft ²	m ²	ac	ft ²	m ²	ac	ft ²	m ²	ac
Agricultural Land	73,812	6,857	1.69	150,935	14,022	3.47	224,747	20,879	5.16
Ruderal (Disturbed)	63,619	5,910	1.46	193,611	17,987	4.44	257,230	23,897	5.9
Landscaping /Ornamental	4,025	374	0.09	14,758.13	1,371.07	0.34	18,783	1,745	0.43
Annual Grassland	32,339	3,004	0.74	138,678	12,884	3.18	171,017	15,888	3.92
Serpentine Bunchgrass	0	0	0	0	0	0	0	0	0
Coastal Scrub	22,625	2,102	0.52	60,379	5,609	1.39	83,004	7,711	1.91
Oak Woodland	0	0	0	305	28	0.01	305	28	0.01
Riparian	39,065	3,629	0.90	126,097	11,715	2.89	165,162	15,344	3.79
Seasonal Wetlands	2,483	231	0.06	2,030	189	0.05	4,513	420	0.11
Developed	29,399	2,731	0.67	127,213	11,818.44	2.92	156,612	14,549	3.59

Federally Listed Species

The BSA is within the south-central California coast region for steelhead, which is a federally threatened species. Steelhead are known to inhabit SLO Creek and were observed during reconnaissance surveys of the BSA. The BSA is also within the range of the California red-legged frog (CRLF), which is inferred to inhabit SLO Creek based on USFWS review of a California Red-legged Frog Site Assessment Report submitted to USFWS for the project. No other federally listed plant or wildlife species were observed within the BSA or are expected to occur within the BSA.

Federally Designated Critical Habitat

The main channel of SLO Creek occurs within the south-central California coast steelhead critical habitat unit defined as Estero Bay Hydrologic Unit 3310 – (xii) San Luis Obispo Creek Hydrologic Sub-area 331024. Other tributaries in the BSA are not included in the critical habitat designation. Based on surveys within the BSA and a review of the relevant literature, the section of SLO Creek that traverses the BSA contains the constituent elements of steelhead critical habitat. Although there will be impacts resulting from trimmed or removed willows, these effects would be minor and would not substantially affect the ability of steelhead to spawn, rear young, migrate, or feed in SLO Creek. It is anticipated the proposed project would permanently impact

approximately 9,835 ft² (914 m²) (0.23 ac) of steelhead critical habitat associated with construction of bridge crossings through the SLO Creek riparian corridor. Temporary impacts to approximately 19,671 ft² (1,827 m²) (0.45 ac) of steelhead critical habitat are estimated to result from work space associated with bridge construction. There will be no permanent or temporary loss of service to steelhead because no in-stream work or fill will be required within SLO Creek. The BSA is within the range of the CRLF but does not occur within a designated CRLF critical habitat unit. The southern boundary of proposed CRLF critical habitat unit SLO-3 ends north of the BSA in downtown San Luis Obispo.

Avoidance, Minimization, and Mitigation Agreements

Adverse project-related effects to federally listed species can be avoided or minimized if: 1) Necessary surveys are conducted prior to construction during the appropriate times of the year; 2) in-stream work is avoided; 3) site construction is monitored by a qualified biologist to ensure that Best Management Practices (BMPs) are employed and avoidance and minimization measures are correctly implemented; and, 4) appropriate mitigation measures are incorporated into the project;

Impacts to natural communities/habitats, federally listed species, and other areas of regulatory agency concern will be mitigated through the avoidance and minimization measures detailed in this BA and provisions of the project's conceptual Habitat Mitigation and Monitoring Plan (HMMP), and provisions of the project's final Habitat Mitigation and Monitoring Plan (HMMP), which will be based on the conceptual HMMP included with this BA.

Determination

The project may affect, but is not likely to adversely affect, south-central California coast steelhead. Construction of bridges across SLO Creek could result in the removal of riparian cover that provides thermoregulation for steelhead; although, this amount is estimated to be minimal. No in-stream work will be required. While the removal of trees to accommodate the new bridges may slightly alter shading and micro-climate characteristics of the riparian corridor, the bridge themselves would create shade over the section of the creek flowing underneath, and shading differences are likely to be negligible. The loss of trees to clear space for the bridge crossings will also be mitigated with replacement trees, which will offer shade and temperature regulation in other areas along SLO Creek.

The project may affect, but will not adversely modify, south-central California coast steelhead critical habitat. Although there will be impacts resulting from trimmed or removed willows, these effects would be minor and would not substantially affect the ability of steelhead to spawn, rear young, migrate, or feed in SLO Creek. In addition, new trees will be planted to offset the loss of trees associated with bridge construction.

The project may affect, and is likely to adversely affect, CRLF. Although no CRLFs were observed during reconnaissance surveys within the BSA, USFWS has indicated that CRLF presence within the BSA can be inferred. There would be a potential for take of CRLF during construction in potential upland dispersal habitat adjacent to SLO Creek and any necessary capture and relocation of CRLF. The proposed project will also create impacts to vegetation along SLO Creek, which may offer shading and microhabitat temperature regulation in the channel; however, the loss of trees will be mitigated with replacement trees. The potential for take of CRLF is believed to be very low, as CRLF are believed to be uncommon along the SLO Creek corridor.

The project will have no effect on CTS. The basis for this determination is that it is highly unlikely that CTS uses aquatic areas within the BSA for breeding and/or adjacent uplands for estivation. There are no known recent nearby occurrence records for the species. The action area does not occur in a federally designated critical habitat unit for CTS.

The proposed project will have no effect on western yellow-billed cuckoo. The basis for this determination is that riparian habitat in the BSA, while present, is unsuitable and there are no known nesting records in or near the BSA.

The proposed project will have no effect on LBV. The basis for this determination is that riparian habitat in the BSA, while present, is unsuitable and there are no known nesting records in or near the BSA.

The proposed project will have no effect on Southwestern willow flycatcher. The basis for this determination is that while some riparian habitat present in the BSA may be potentially suitable, there are no known nesting records in or near the BSA.

The proposed project is not expected to jeopardize the existence of any federal listed species or adversely modify critical habitat.

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List of Abbreviated Terms

Abbreviation	Term
ac	acre/acres
USACE	U.S. Army Corps of Engineers
ADI	Area of Direct Impact
BA	Biological Assessment
BMPs	best management practices
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRLF	California red-legged frog
CSC	California Special Concern (species)
ESU	evolutionarily significant unit
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
ft	foot/feet
ft ²	square foot/feet
GIS	Geographic Information System
GPS	Global Positioning System
HMMP	Habitat Mitigation and Monitoring Plan
km	kilometer/kilometers
LCSLO	Land Conservancy of San Luis Obispo
LEDPA	Least Environmentally Damaging Practicable Alternative
m	meter/meters
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
OHWM	ordinary high water mark
PCEs	primary constituent elements
RSP	Rock slope protection
RWQCB	Regional Water Quality Control Board
SCS	Soil Conservation Service
SLO Creek	San Luis Obispo Creek
SWCA	SWCA Environmental Consultants
SWPPP	Stormwater Pollution Prevention Plan
USFWS	United States Fish and Wildlife Service
WMP	San Luis Obispo Creek Waterway Management Plan

Chapter 1. Introduction

This Biological Assessment (BA) provides technical information and reviews the proposed project in sufficient detail to assess the effects of the proposed project on threatened, endangered, or proposed species. The BA is prepared in accordance with legal requirements found in Section 7 (a)(2) of the Federal Endangered Species Act (FESA) (16 U.S. C 1536(c)) and with Federal Highway Administration (FHWA) and California Department of Transportation (Caltrans) regulation, policy and guidance.

Caltrans has been delegated the authority to act as the lead federal agency under the Federal Endangered Species Act (FESA) for Section 7 consultations on Federal Highway Administration (FHWA) funded projects. FHWA is the source of funding for this project.

1.1. Project History

The portion of the proposed Bob Jones Pathway – San Luis Obispo to Ontario Road (project) discussed herein is an approximately 4.4-mile (7.1-kilometer) path that would connect the existing path along South Higuera Street from the Land Conservancy of San Luis Obispo’s (LCSLO) Octagon Barn, then south and paralleling San Luis Obispo Creek (SLO Creek) to the Ontario Road Staging Area, near State Route 101 and Avila Bay Drive in San Luis Obispo County, California (refer to Figures 1 to 3 and Preliminary Plans in Appendix A). The purpose and need is for County of San Luis Obispo Parks, with the assistance of FHWA funding, to complete a primarily Class I (off street) pedestrian/bike path for recreational and alternative transportation use that will connect the community of Avila Beach with San Luis Obispo. Portions of the Bob Jones Pathway have previously been completed from Avila Beach to the Ontario Road Staging Area, and this project would reconcile the discontinuity between Avila Beach and San Luis Obispo.

Figure 1. Project Vicinity Map



Figure 2. Project Location Map

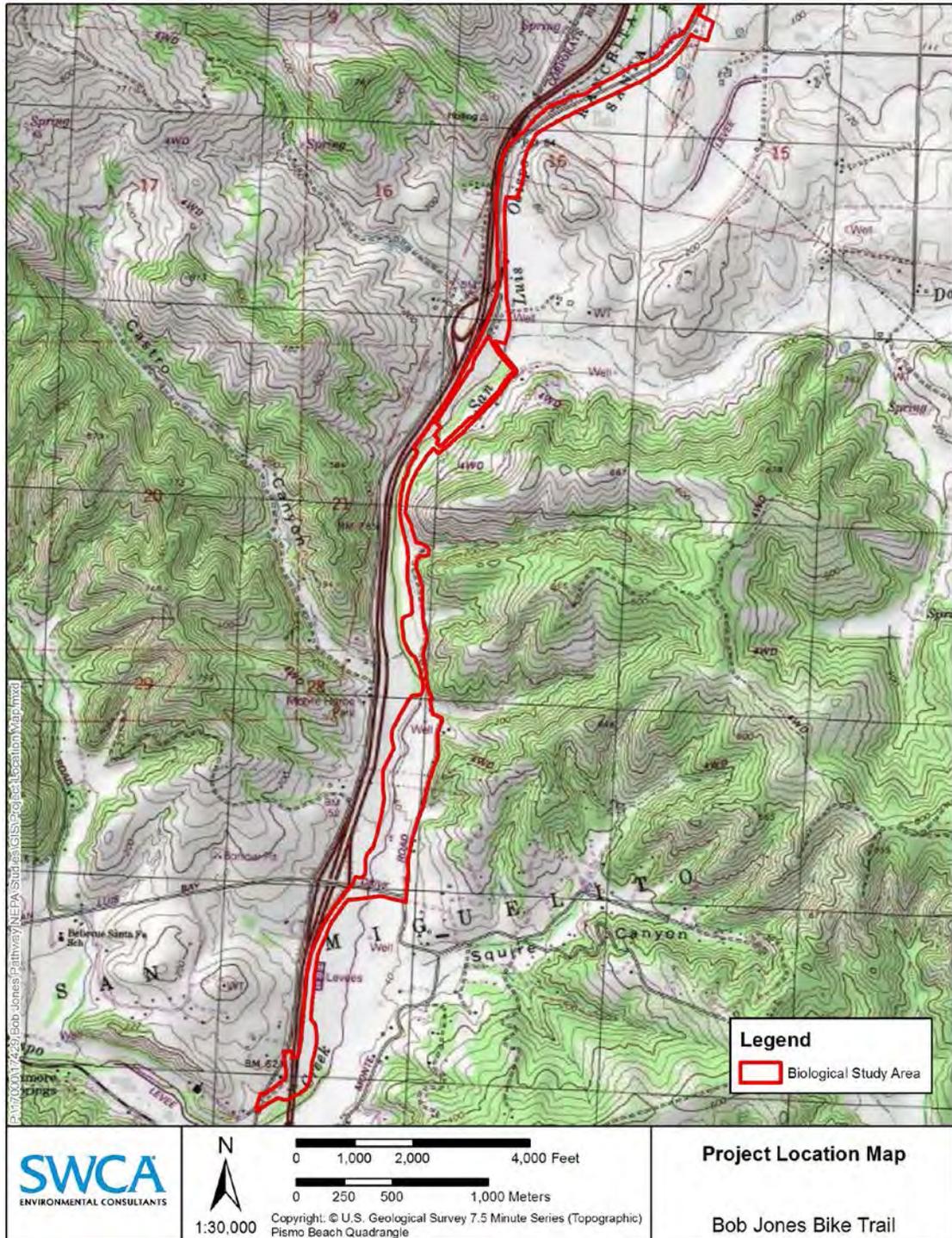
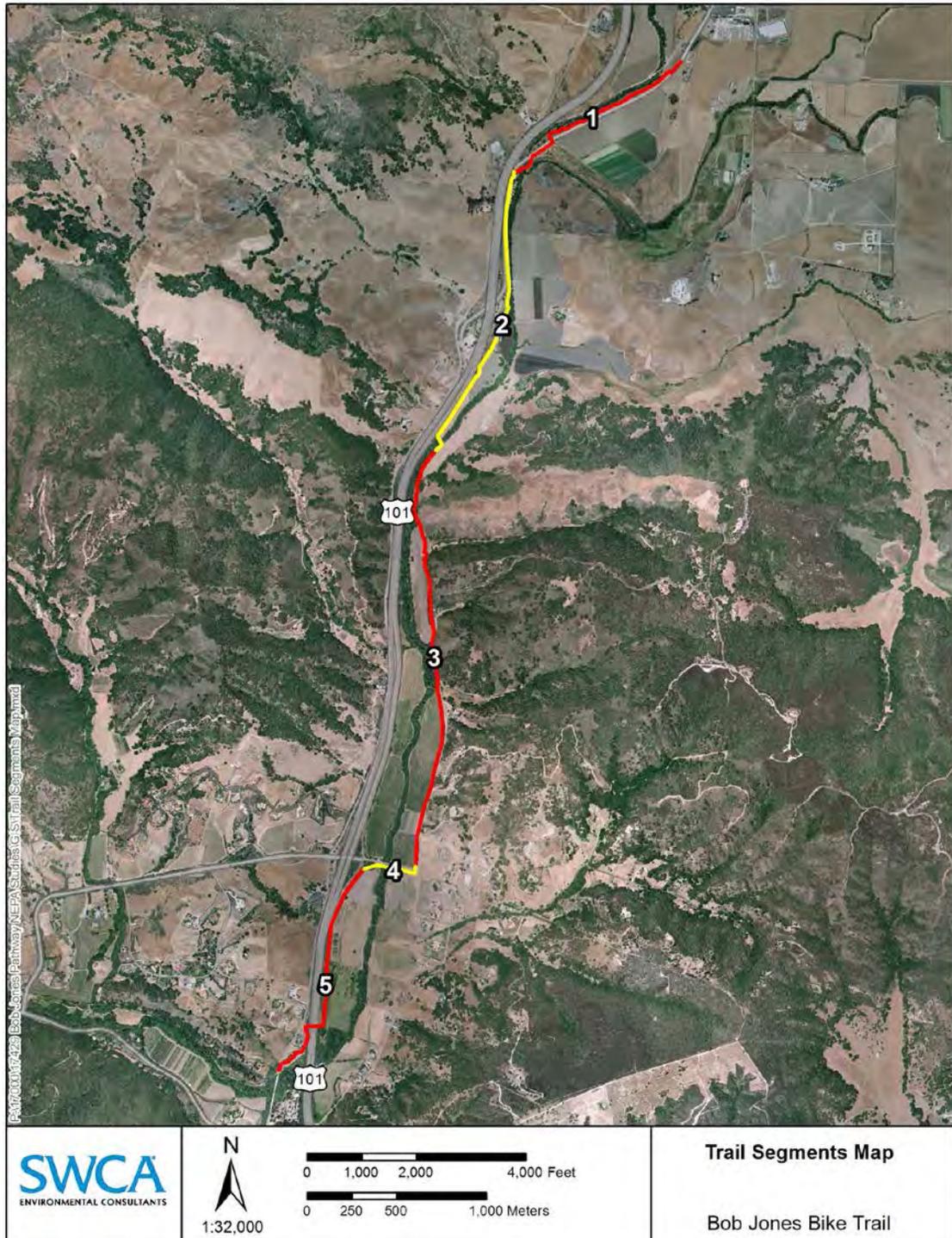


Figure 3. Trail Segments Map



1.2. Project Description

Several proposed project alternatives were examined for feasibility. During the project development phase it was proposed that the path would either be on the west side of SLO Creek; between State Route 101, existing streets, and the creek; or on the east side of SLO Creek within a 20-foot (ft) (6-meter (m)) corridor at the top of bank (or beyond the riparian edge); or a combination of each. The preferred alignment was selected based on an assessment that determined which route has the least environmental and land use impacts and is most cost effective, while still meeting the overall purpose of the project. Alternatives for several bridge crossings and installation of rock slope protection (RSP) within SLO Creek were also considered. During the project development phase it was proposed that RSP would be installed within the channel of SLO Creek in the vicinity of bridges and other areas for bank stabilization. In response to Caltrans concerns, these areas were redesigned to avoid impacts to wetlands along the riparian corridor of SLO Creek. Installation of RSP in SLO Creek is no longer proposed and project plans have been changed to remove RSP.

The Streets and Highway Code Section 890.4 defines a "bikeway" as a facility that is provided primarily for bicycle travel. The proposed project would incorporate Class I and III Paths. The three classes of paths are defined as:

- 1) Class I Bikeway (Bike Path). Provides a completely separated right of way (ROW) for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized.
- 2) Class II Bikeway (Bike Lane). Provides a striped lane for one-way bike travel on a street or highway.
- 3) Class III Bikeway (Bike Route). Provides for shared use with pedestrian or motor vehicle traffic.

For the purposes of this proposed project, widths of the pathways are shown in the Trail Cross Sections in Appendix C and the details in Appendix D, Sheet 1, and would be approximately:

- 1) Class I: separated 8 ft (2.4 m) trail including 2 ft (0.6 m) shoulders on either side; the 8-ft section would likely be paved with asphalt and the shoulders would be base material; and,
- 2) Class III: varying from 5 to 7.5 ft (1.5 to 2.3 m) of shared use along existing road surface.

Class I bikeway segments would be built within a 20-ft (6-m) trail ROW. Construction of the bike/pedestrian pathway would primarily occur within a typically narrow 30 to 60-ft (9 to 18-m) wide construction disturbance zone on nearly level terrain. In some areas the construction disturbance zone would be wider, up to 140 ft (43 m) wide, to include adjacent staging or lay-down areas, for instance for assembly and installation of the pedestrian bridges. In several areas the pathway would run parallel to and within 30 ft (9 m) of the banks of SLO Creek and its riparian corridor. Some tree trimming at the riparian canopy edge will be required for construction access and to ensure adequate overhead clearance for bicyclists, where the trail parallels the creek corridor. Trimming and possible removal of some trees may be necessary for placement of bridge decks at the creek crossings.

The proposed trail has been broken down into five segments for descriptive purposes (refer to Appendix A, Sheet 1).

1.2.1. Segment 1: Octagon Barn to South Higuera Street Crossing

Segment 1 of the new trail would begin at the Octagon Barn on South Higuera Street where a 10,000 ft² (930 m²) trailhead with parking and other facilities would be constructed (refer to Appendix A, Sheet 2). Grading for approximately 65 parking spaces, a restroom, and bicycle parking adjacent to the restroom would occur and the surface of the parking spaces would likely be covered with a permeable surface (e.g., decomposed granite). The parking spaces and restroom would occupy an approximately 1.52-ac (66,211-ft²) footprint. The County would also construct access to the parking spaces, an emergency exit (which the bike path is located within), and the portion of the Bob Jones Pathway that that occurs on the Octagon Barn site. To accommodate a turn lane devoted to traffic in and out of the Octagon Barn property, the County will widen an approximately 865-ft (263.7 m) stretch of South Higuera Street. For the turn lane specifications: the approach taper lengths (northbound) on each side would be at least 330 linear feet in accordance with standard high speed road requirements. The bay taper and deceleration lengths (southbound) would be 485 linear feet. An additional 50 linear feet would be provided for stacking (2 cars assumed). Other components may include:

- 2:1 slopes on the edges of the road;
- installation of a retaining wall; or,
- Lengthening of the existing headwall near where a culvert drains an isolated riparian wetland near the northwest section of the property.

There would be a maximum 8 to 10-foot wide permanent disturbance on either side of the road, and a 10-foot total disturbance corridor (permanent plus temporary impact) along both sides of the road is assumed. This equates to approximately 17,300 ft² (0.40 ac) of total disturbance along the edges of South Higuera Street (0.20 ac on each side). These assumptions are consistent with County Public Works requirements (Marshall 2010).

A Class I path would proceed southwest for approximately 300 ft (90 m) with a 180-ft (55-m) long, 4-ft to 6-ft (1.2-m to 1.8-m) high retaining wall along the east side of South Higuera Street, where a new crosswalk and traffic signal would be implemented to route the Class I pathway to the west side of South Higuera Street (the traffic signal would be part of the future Buckley Road extension project and not part of the Bob Jones Pathway Project). Access would be provided from the staging or parking area through the Octagon Barn area to the Class I pathway.

After crossing to the west side of South Higuera Street, the Class I pathway would extend approximately 3,500 ft (1,067 m) along the west side of South Higuera Street between the road and SLO Creek, with the installation of six culverts/bridges under the path to allow for storm water drainage. Two of these crossings would be constructed over jurisdictional waters of the U.S. However, installation of freespan foot bridges would negate the need for fill in the drainage (conceptual details for general culvert crossings are included in Appendix D, Sheet 1). The largest of the culverts would be a new 20-ft (6-m) long, 72-inch (180-cm) concrete box culvert crossing of an un-named small farm drainage ditch tributary to SLO Creek. The proposed box culvert is an extension of the existing box culvert under South Higuera Street, about 600 ft (180 m) south of the Octagon Barn.

The trail would then be routed across to the east side of South Higuera Street via a new crosswalk with traffic warning device, over another installed culvert, and proceed southwest paralleling South Higuera Street for approximately 400 ft (122 m) before reaching a new South Higuera Bridge for the pathway to be constructed across SLO Creek near the Filipponi Ecological Reserve (refer to Appendix A, Sheets 3 and 4). The bridge across SLO Creek has been designed to span the creek, negating the need for fill in the creek and in-stream work. The largest of the culverts would be a new 20-ft (6-m) long, 72-inch (180-cm) concrete box culvert crossing of an un-named small farm drainage ditch tributary to SLO Creek. The proposed box culvert is an extension of the existing box culvert under South Higuera Street, about 600 ft (180 m) south of the Octagon Barn.

Proposed construction of the South Higuera Bridge (BR-A) (refer to Appendix D, Sheet 2) would include:

- 1) one 10-ft wide by 50-ft long (3-m by 15-m) earthfill approach ramp at five percent (5%) grade on either side of the SLO Creek crossing;
- 2) two 10-ft wide by 50-ft long (3-m by 15-m) pre-fabricated steel truss approach ramps at five percent (5%) grade on either side of the SLO Creek crossing; with proposed 5-ft landings every 50 ft on 3-ft (1-m) diameter piers;
- 3) one 15-ft (4.5-m) wide concrete abutment/landing on a 3-ft (1-m) diameter pier placed on either side of the SLO Creek crossing; and,
- 4) one 10-ft wide by 120-ft long (3-m by 36.5-m) pre-fabricated steel truss bridge and one 10-ft-wide by 60-ft-long(3-m by 18.25-m) pre-fabricated steel truss bridge both with deck elevations at 90 ft (27.5 m) spanning SLO Creek.

1.2.2. Segment 2: South Higuera Street Crossing to Bunnell Crossing

After crossing SLO Creek at the new South Higuera Bridge, the bike path would proceed an additional 2,500 ft (760 m) between the east edge of South Higuera Street and the SLO Creek corridor, upon reaching the Maino property in the vicinity of the U.S. 101 northbound off ramp (refer to Appendix A, Sheet 4). Along this section just north of Cloveridge Lane, a 200-linear ft (61-linear m) by 3-ft (1-m) high retaining wall and curb would be added as needed where the west bank of SLO Creek slopes steeply toward the thalweg (low point of the channel).

Four existing 30-inch to 36-inch (76-cm to 90-cm) corrugated metal pipe (CMP) culverts conveying road drainage and runoff from South Higuera Street and Highway 101 to SLO Creek have deteriorated. These existing culverts will need to be repaired and replaced in the near future. An exposed and eroded section of an existing 36-inch (90-cm) concrete culvert, located approximately 1,500 ft (460 m) south of the proposed South Higuera Street Bridge crossing of SLO Creek will be restored with replacement piping, earth fill materials and bio-technical slope protection. Discussion of existing culvert repairs is provided for informational purposes based on current conditions. These culvert repairs would not be conducted as part of this project and should not be considered part of the project description for environmental review purposes.

South of this location and just north of Cloveridge Lane the proposed trail will require widening of the South Higuera shoulder area with an approximately 200-ft (60-m) long soldier-pile wall.

At the southern end of this section, the trail would be located within the Cloveridge Lane right-of-way and would become a Class III path for approximately 1,300 ft (395 m) with a split rail fence. Trail head parallel parking is proposed along the west side of Cloveridge Lane. Surface of the parking spaces would likely be covered with a permeable surface (e.g., decomposed granite). The trail from the south end of Cloveridge Lane to the new Bunnell Bridge would be a Class I path for approximately 1,500 ft (460 m) with the installation of two new culverts and repair of one existing culvert as needed (refer to Appendix A, Sheet 5).

At this point, the pathway would turn east and the Bunnell Bridge would be constructed to cross SLO Creek. Proposed construction of the Bunnell Bridge (BR-B) (refer to Appendix D, Sheet 3) would be similar to that of the South Higuera Bridge, including:

- 1) one 10-ft wide by 50-ft long (3-m by 15-m) earthfill approach ramp at five percent (5%) grade on either side of the SLO Creek crossing;
- 2) three 10-ft wide by 50-ft long (3-m by 15-m) pre-fabricated steel truss approach ramps at five percent (5%) grade on the northeast side relative to SLO Creek and four approach ramps of similar dimension on the southwest side relative to SLO Creek, with proposed 5-ft (1.5-m) landings every 50 ft (15 m) on 3-ft (1-m) diameter piers;
- 3) one 15-ft wide (4.5-m) concrete abutment/landing on a 3-ft (1-m) diameter pier placed on either side of the SLO Creek crossing; and,
- 4) one 10-ft wide by 120-ft long (3-m by 36.5-m) pre-fabricated steel truss bridge with deck elevation at 74.5 ft (23 m) spanning SLO Creek.

1.2.3. Segment 3: Bunnell Crossing to San Luis Bay Drive

After crossing SLO Creek at the Bunnell Bridge, Segment 3 of the Class I path would proceed for approximately 3,000 ft (915 m) adjacent to an agricultural field in Baron Canyon open space lands east of the SLO Creek corridor, with 1,000 ft (305 m) of unfenced area and 2,000 ft (610 m) of t-post fencing (refer to Appendix A, Sheet 6). Four new culverts would be installed under the path along this section, primarily extensions of the culverts that drain Monte Road, along with the improvement of two existing culverts near where the path would join Monte Road, as needed.

Once this section of the trail reaches Monte Road, it would proceed along Monte Road as a Class III path for approximately 1,000 ft (305 m) with a split rail fence and

improvement of one existing culvert as needed (refer to Appendix A, Sheet 7). At this point, the trail would convert to a Class I path through the edge of agricultural land just west of Monte Road for approximately 4,000 ft (1,220 m), with the extension of three existing culverts as needed and the installation of two new culverts, along with t-post fencing before reaching San Luis Bay Drive.

1.2.4. Segment 4: San Luis Bay Drive Crossing

At the intersection of Monte Road and San Luis Bay Drive, a new crosswalk with a three-way stop would be implemented. From the Monte Road/San Luis Bay Drive intersection the bike trail would run south of and parallel to San Luis Bay Drive. Segment 4 of the Class I path would continue for approximately 400 ft (120 m), with the extension of two existing culverts. The path would be separated from San Luis Bay Drive with either a metal guardrail or concrete barrier before reaching a new San Luis Bay Drive Bridge for the pathway.

Proposed construction of the new San Luis Bay Drive Bridge (BR-C) (refer to Appendix D, Sheet 4) would include:

- 1) one 10-ft-wide by 30-ft long (3-m by 9-m) earthfill approach ramp at five percent (5%) grade east of SLO Creek;
- 2) two 10-ft wide by 50-ft long (3-m by 15-m) pre-fabricated steel truss approach ramps at five percent (5%) grade east of SLO Creek with proposed 5-ft (1.5-m) landings every 50 ft (15 m) on 3-ft (1-m) diameter piers;
- 3) one 15-ft wide (4.5-m) concrete abutment/landing on a 3-ft (1-m) diameter pier placed on either side of the SLO Creek crossing;
- 4) one 10-ft wide by 120-ft long (3-m by 36.5-m) pre-fabricated steel truss bridge with deck elevation at 45.5 ft (14 m) spanning SLO Creek;
- 5) one 10-ft wide by 50-ft long (3-m by 15-m) pre-fabricated steel truss approach ramp at five percent (5%) grade west of SLO Creek; and,
- 6) one 10-ft wide by 20-ft long (3-m by 6-m) earthfill approach ramp at five percent (5%) grade west of SLO Creek.

At the west end of the San Luis Bay Drive Bridge, a 10,000 ft² (930 m²) temporary staging area is proposed. A Class I path with a split rail fence would extend approximately 300 ft (90 m) with the installation of one new 24-inch culvert toward the end of Segment 4. The pathway would be separated from San Luis Bay Drive by guardrails or metal bollards.

1.2.5. Segment 5: San Luis Bay Drive to Ontario Road Staging Area

The final segment of the pathway, Segment 5, extends from roughly San Luis Bay Drive to the Ontario Road Staging Area (refer to Appendix A, Sheets 8 and 9). An approximately 2,500-ft (760-m) Class I path would extend from the junction of Segment 4 and Segment 5, eventually traveling within or slightly west of an existing farm access road easement. In this segment, the Class I path would be located to coincide with the farm road thereby providing farm access on the east side of the road and bicycle/pedestrian access on the west side. Within this segment, four small 12-inch (30-cm) culverts would be installed under the path to allow sheet flow and drainage from Highway 101. The Class I path would then reach an elevated approach ramp for the new Highway 101 bike/pedestrian overcrossing for the pathway.

Proposed construction of the Highway 101 overcrossing (BR-D) (refer to Appendix D, Sheet 5), proceeding north to south, would include:

- 1) One 10-ft wide by 50-ft long (3-m by 15-m) earthfill approach ramp at five percent (5%) grade;
- 2) four 10-ft wide by 50-ft long (3-m by 15-m) pre-fabricated steel truss segments at five percent (5%) grade, with proposed 5-ft (1.5-m) landings every 50 ft (15 m) on 3-ft (1-m) diameter piers and with landscape buffer planting along the west side of the ramp;
- 3) one 15-ft wide (4.5-m) concrete landing/refuge on two (2) 3-ft (1-m) diameter piers;
- 4) five 10-ft wide by 50-ft long (3-m by 15-m) pre-fabricated steel truss segments at five percent (5%) grade, with proposed 5-ft (1.5-m) landings every 50 ft (15 m) on 3-ft (1-m) diameter piers;
- 5) one 15-ft wide (4.5-m) concrete abutment/view deck structure on two (2) 3-ft (1-m) diameter piers;
- 6) three 10-ft wide by 80-ft long (3-m by 24-m) pre-fabricated steel truss overcrossing segments with elevation from 55 to 60 ft (16.8 to 18.3 m) spanning State Route 101 on two (2) 3-ft (1-m) diameter piers; and,
- 7) one 65-ft long (20-m) earthfill approach ramp at five percent grade (5%) with a 100-ft long (30-m) retaining wall.

From the south end of the overcrossing, the Class I path would proceed approximately 400 ft (120 m) south with a 210-ft (64-m) long by 8-ft (2.4-m) high retaining wall parallel to Highway 101 through the Ontario Road Staging Area before connecting with the existing Bob Jones Trail to the south (refer to Appendix A, Sheet 9).

1.2.6. Construction Staging Areas and Access

Several proposed construction staging areas have been identified along the new path (refer to Path Right of Way in Appendix B). All construction staging areas will result in temporary impacts unless otherwise described. Construction staging areas proposed include:

- 1) one 12,000 ft² (1,115 m²) construction staging area located a few hundred feet southwest of the Octagon Barn on the west side of South Higuera Street (refer to Appendix B, Sheet 2);
- 2) one 6,000 ft² (557.5 m²) construction staging area near the crosswalk from the west side to the east side of South Higuera Street, and a 12,000 ft² (1,115 m²) staging area along the access roadway on the Filipponi Ecological Preserve (refer to Appendix B, Sheet 3);
- 3) two 15,000 ft² (1,395 m²) staging areas located within and adjacent to the Cloveridge Lane ROW that would become future permanent trailhead parallel parking; 7,500 ft² (695 m²) and 5,000 ft² (465 m²) staging areas near the Bunnell Bridge (BR-B); and, a temporary construction easement over Venado Trail approximately 2,050 ft (625 m) long with an overland extension of approximately 670 ft (204 m) to the east side of SLO Creek (refer to Appendix B, Sheet 5);
- 4) one 10,000 ft² (930 m²) staging area south of the proposed San Luis Bay Drive Bridge (BR-C) (refer to Appendix B, Sheet 8); and,
- 5) one 5,000 ft² (465 m²) staging area within County road ROW near the Ontario Road Staging Area, a 30,000 ft² (2,787 m²) staging area along the east approach ramp to the Hwy 101 bridge, and an approximately 13,800 ft² (1,282 m²) access area between Ontario Road and the west end of the Hwy 101 bridge (refer to Appendix B, Sheet 9).

Access will be along public and private roads and along Caltrans ROW.

1.2.7. Construction Techniques

Construction of the approximately 4.4-mile (7.1-kilometer) long bike path will be similar to the construction of a narrow country road. In areas adjacent to sensitive species, sensitive habitat, or active farmland, temporary fencing and similar materials (such as wattles, silt fencing, etc.) will be installed prior to construction. The intent of the fencing and similar materials are to provide a barrier between construction equipment and sensitive areas.

The Contractor may utilize heavy equipment such as scrapers, dozers, graders, or excavators for constructing the bike path. In addition heavy equipment, such as track excavators, drill rigs, and concrete trucks and pumps, would be used for specialized and localized aspects of the project. Examples would be retaining wall construction near the Octagon Barn, installation of culverts to provide drainage, and construction of the pedestrian and highway over-crossing bridge piers and abutments. Finally, large construction cranes will be required to lift the 40, 80, and 120-ft (12 m, 24 m, and 36.5-m) long pre-engineered steel bridge and approach ramp sections into place on the piers and abutments.

As proposed, path construction would occur within a varying 20 to 140-ft (9 to 43-m) wide construction zone, primarily on nearly level terrain, which in many places runs parallel to and within 30 ft (9 m) of the bank of SLO Creek, and directly alongside well-traveled county roads. A detailed traffic control plan will need to be prepared. Much of the construction work will be close to creek channels, with three stream crossings using pre-engineered pedestrian bridges. A detailed project erosion control and revegetation plan, along with a Stormwater Pollution Prevention Plan (SWPPP) will therefore be a necessary and important part of the final project design.

Grading for path construction will involve cuts and fills of less than two ft (0.6 m), within the 12 to 30-ft (3.5 to 9-m) wide path section with average cuts to level higher lying areas and fills of low lying areas of less than one ft (0.3 m). A front end loader or skip loader, and a backhoe with a front bucket will likely be utilized for most of the earthwork, including initial clearing and grubbing of the path alignment, minor cuts and fills needed to create a level course for the subgrade, and placement and compaction of the Class 2 aggregate base (AB) course that will underlie the eight-ft (2.5-m) wide asphalt concrete (AC) surface.

Clearing and grubbing of the path alignment will involve the removal and off-haul of two to three inches (five to 7.5 centimeters (cm)) of root laden surface soils and associated vegetation within the 12 to 30-ft (3.5 to 9-m) wide path cross section. Larger trees have been avoided in the path alignment, with the exception of trees that need to be removed for bridge construction. All stockpiling will be confined to the proposed 30 to 140-ft (9 to 43-m) wide construction zone (designated on the plans).

Following the clearing and grubbing and subgrade preparation to create the level, firm path sub-surface, approximately four to six inches (10 to 15 cm) (final thickness) of Class 2 AB will be imported and placed across the width of the 12-ft (3.65-m) path

cross section. The Class 2 AB material will be imported in dump trucks and placed in temporary approved stockpile areas. The Class 2 AB will be placed in an eight to ten-inch (20 to 25-cm) thick lift by a front end loader or skip loader, moisture conditioned by a water truck, and compacted to achieve the four to six-inch (10 to 15-cm) minimum AB thickness. Final AC path surfacing will be accomplished using a paver and vibratory roller. Four to five inches of loose AC material will be placed over the prepared Class 2 AB surface and rolled to obtain a final compacted minimum two-inch (5-cm) thick surface. Following any sealing, a center stripe dividing north and southbound lanes, and pavement stenciling may be applied using pickup mounted striping equipment.

The project also includes the installation of fencing, signage, benches, and other fixtures. Installation of these structures will require the drilling of shallow 24 to 36-inch deep by 12-inch (61 to 91.5-cm by 30.5 cm) diameter postholes, (for fencing and signage) installation of the posts, and backfilling with concrete. Equipment such as a backhoe or skid-steer equipped with a small auger will be used for the installation of these items.

1.2.8. Construction Schedule

The County has indicated that construction of the new corridor would be in roughly three sections/phases as funding becomes available. Construction of the entire path would be anticipated to occur within six years of the start of Phase 1. Construction of the bridge crossings and pathway segments located immediately adjacent to and through the riparian corridor of SLO Creek would occur within the typical agency-allowed window from June 1 to October 31 of any given year. Construction of the remainder of the pathway outside of the riparian corridor would occur year-round, weather permitting, and provided that all erosion control and stormwater management measures were in place and properly functioning.

1.3. Summary of Consultation to Date

A formal federal species list was provided by the USFWS for the project area in December 2012. Preliminary technical assistance with U.S. Fish and Wildlife Service (USFWS) has been conducted for the federally listed California red-legged frog (CRLF). A CRLF Site Assessment Report (refer to Appendix G) was prepared and submitted to the Ventura USFWS Office on April 2, 2007. Upon review of the CRLF site assessment, USFWS determined that presence of CRLF within the Biological

Study Area (BSA) could be inferred and protocol surveys would not be required (Elvin, 2007). Technical assistance with National Marine Fisheries Service (NMFS) included a request for clarification on steelhead critical habitat designation along the SLO Creek watershed (Spina, 2006). As the proposed project has the potential to affect federally listed species under the jurisdiction of USFWS, formal consultation under Section 7 of the federal Endangered Species Act (ESA) by the federal lead agency for the project will need to be completed with NMFS and USFWS prior to project implementation.

1.4. Document Preparation History

This BA was prepared for the County of San Luis Obispo General Services Agency/ County Parks and Caltrans by SWCA Environmental Consultants (SWCA).

BA Preparation and Assembly: SWCA Senior Biologist and Project Manager Geoff Hoetker (805.543.7095 ext. 6821; ghoetker@swca.com) was the primary author of the BA. Assistance was provided by SWCA Biologists Travis Belt, Jon Claxton, and Katie Thaxter.

BA Graphics: SWCA Geographic Information System (GIS)/Planning Specialists Deborah Hollowell, Kevin Doyle, and Seth Sutherland prepared project maps and graphics using global positioning system (GPS) field data and other data sources.

BA Project Director: SWCA Senior Consultant Mary Reents served as the project director and conducted peer review and quality assurance/quality control.

Chapter 2. Study Methods

2.1. Listed, Candidate, and Proposed Plant and Animal Species Potentially Occurring in the BSA

Table 1. Listed, Candidate, and Proposed Plant Species Potentially Occurring in the BSA

Common Name	Scientific Name	Federal Status	General Habitat Description,	Habitat Present/Absent in BSA	Rationale
marsh sandwort	<i>Arenaria paludicola</i>	FE	<ul style="list-style-type: none"> Bogs and ferns along with freshwater marshes and swamps Flowers May-August 3-170 meters 	P	<ul style="list-style-type: none"> Marginal marsh habitat occurs within the BSA along the streambed of SLO Creek. Species was not observed during appropriately timed floristic surveys. Not expected to occur within the BSA. No further studies recommended.
Chorro Creek bog thistle	<i>Cirsium fontinale</i> var. <i>obispoense</i>	FE	<ul style="list-style-type: none"> Chaparral and cismontane woodland habitats in association with serpentine seeps Flowers February-July 35-380 meters 	A	<ul style="list-style-type: none"> No suitable habitat occurs within the BSA. Species was not observed during appropriately timed floristic surveys. Not expected to occur within the BSA. No further studies recommended.
Pismo clarkia	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	FE	<ul style="list-style-type: none"> Cismontane woodland, valley foothill grasslands, and in openings along the margins of chaparral on sandy soil Flowers May-July 25-185 meters 	P	<ul style="list-style-type: none"> Marginal habitat occurs within the BSA but the species is not known to occur in the vicinity of San Luis Obispo. Species was not observed during appropriately timed floristic surveys. Not expected to occur within the BSA. No further studies recommended.

Common Name	Scientific Name	Federal Status	General Habitat Description,	Habitat Present/ Absent in BSA	Rationale
Indian Knob mountainbalm	<i>Eriodictyon altissimum</i>	FE	<ul style="list-style-type: none"> Maritime chaparral, cismontane woodland, coastal scrub habitats on sandstone Flowers March-June 80-270 meters 	A	<ul style="list-style-type: none"> BSA elevation likely too low for the species. Species was not observed during appropriately timed floristic surveys. Not expected to occur within the BSA. No further studies recommended.
Gambel's water cress	<i>Rorippa gambelii</i>	FE	<ul style="list-style-type: none"> Freshwater or brackish marshes and swamps Flowers April-September 5-330 meters 	P	<ul style="list-style-type: none"> Suitable habitat occurs within the BSA. Species was not observed during appropriately timed floristic surveys. Not expected to occur within the BSA. No further studies recommended.

Status Codes:**Federal:**

FE = Federal Endangered

FT = Federal Threatened

FC = Federal Candidate

FD = Federal Delisted

CH = Critical Habitat Designated in BSA

Habitat: Presence/Absence**A** = absent; means no further work needed.**P** = present; general habitat is present and species may be present.

Table 2. Listed, Candidate, and Proposed Animal Species Potentially Occurring in the BSA

Common Name	Scientific Name	Federal Status	General Habitat Description	Habitat Present/ Absent in BSA	Rationale
Invertebrates					
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	Vernal pools, usually less than 0.05 acres in size; swales or basalt flow depression pools in unplowed grasslands.	A	<ul style="list-style-type: none"> No suitable habitat occurs within the BSA. Species was not observed during surveys. Not expected to occur within the BSA. No further studies recommended.
Fish					
steelhead – south-central California coast ESU	<i>Oncorhynchus mykiss irideus</i>	FT, CH	Optimally, clear, cool water with abundant instream cover, well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio.	P	<ul style="list-style-type: none"> Suitable habitat occurs within SLO Creek and marginal habitat may occur within its tributaries. Juvenile steelhead were observed during surveys. Impacts to riparian vegetation will occur, but there will be no in-stream impacts. Steelhead are not likely to be adversely affected.
Tidewater goby	<i>Eucyclogobius newberryi</i>	FE	Brackish shallow lagoons and lower stream reaches where water is fairly still, but not stagnant.	A	<ul style="list-style-type: none"> No suitable habitat occurs within the BSA. Species was not observed during surveys. Known to occur near the mouth of SLO Creek to 2.5 miles upstream; therefore, not expected to occur within the BSA. No further studies recommended.
Amphibians					
California tiger salamander	<i>Ambystoma californiense</i>	FT	Grassland or open woodland habitats, shallow ephemeral, semi-permanent, or occasionally permanent pools and ponds that fill during winter rains.	P (marginal upland habitat, unsuitable breeding habitat)	<ul style="list-style-type: none"> Marginal upland habitat may occur in and near the BSA, but SLO Creek has unsuitable breeding habitat and no vernal pool habitat is in the BSA. Species was not observed during surveys. Not expected to occur within the BSA. No further studies recommended.

Common Name	Scientific Name	Federal Status	General Habitat Description	Habitat Present/ Absent in BSA	Rationale
California red-legged frog	<i>Rana aurora draytonii</i>	FT	Aquatic habitats with little or no flow, the presence of surface water to at least early June, surface water depths to at least 2.3 feet, and the presence of fairly sturdy underwater supports such as cattails.	P	<ul style="list-style-type: none"> • Suitable habitat occurs year-round within the BSA in SLO Creek and uplands adjacent to SLO Creek. Suitable habitat may also occur within the tributaries to SLO Creek. • Not observed during reconnaissance surveys. • USFWS has indicated that protocol surveys are not necessary and presence can be inferred. • Measures to avoid or minimize impacts have been recommended.
Birds					
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	FC	Forests to open riparian woodlands with thick understory.	P (riparian habitat present but not expected to nest in SLO County)	<ul style="list-style-type: none"> • Riparian scrub habitat occurs within the BSA, but there are no known nesting populations or recent nesting records in SLO County. • Species was not observed during surveys. • Not expected to occur within the BSA. • No further studies recommended.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E	Breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, wetlands, lakes, and reservoirs.	P (riparian habitat present but no nesting record in SLO County)	<ul style="list-style-type: none"> • Suitable riparian habitat occurs within the BSA along SLO Creek. • Species was not observed during surveys. • Nesting individuals are not expected to occur in the BSA. • Closest recent nesting was in 2010 in Kern County near Lake Isabella. • No further studies recommended.
least Bell's vireo	<i>Vireo bellii pusillus</i> (nesting)	FE	(Nesting) summer resident of southern California in low riparian areas near water or river bottoms. Nests placed along margins of bushes or on twigs usually <i>Salix</i> , <i>Baccharis</i> , and mesquite.	P (riparian habitat present but not suitable)	<ul style="list-style-type: none"> • Riparian scrub habitat occurs within the BSA, but is not suitable nesting habitat for this species. • No known nesting populations or recent nesting records in SLO County. • Species was not observed during surveys. • Not expected to occur within the BSA. • No further studies recommended.

Common Name	Scientific Name	Federal Status	General Habitat Description	Habitat Present/ Absent in BSA	Rationale
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Status Codes:**Federal:**

FE = Federal Endangered
 FT = Federal Threatened
 FC = Federal Candidate
 FD = Federal Delisted
 CH = Critical Habitat Designated in BSA

Habitat: Presence/Absence

A = absent; means no further work needed.
P = present; general habitat is present and species may be present.

2.2. Studies Required

Several focused biological surveys or studies were performed to satisfy the requirements of federal and state laws. Surveys were conducted within the BSA (refer to Figure 2 and Appendix F) based on lists of species obtained from the California Natural Diversity Database (CNDDDB, 2006-2008), from USFWS online (USFWS, 2006-2008), information provided by the California Native Plant Society (Tibor, 2001; CNPS, 2006-2008), and other sources such as Zeiner et al. (1990). SWCA received an updated federal species list from the USFWS for the project on December 31, 2012; the updated list is included as Appendix J of this report.

For the purposes of this project, the BSA is defined as the area (land and water) that may be directly, indirectly, temporarily, or permanently impacted by construction and construction-related activities. The Area of Direct Impact (ADI) is defined as the area that is either temporarily or permanently, but directly impacted by construction and construction-related activities.

Biological survey efforts summarized within this BA focused on the vicinities of the proposed path, stream crossings, access, and staging areas. Areas located outside of, but adjacent to the project site were included in field survey efforts to maximize the potential for observing special-status species with migratory behaviors or varied life histories. Studies were timed appropriately when the special-status species in question were most likely to be present, or when regulations allowed/recommended.

Focused surveys for special-status plants known to occur in region and with the potential for occurrence onsite were initiated within the BSA on February 23 and 24, 2006 by SWCA Biologists Geoff Hoetker and Travis Belt. Spring surveys were conducted on May 30, 2006 by Geoff Hoetker and SWCA Biologist Katie Thaxter. Surveys were timed to correspond with the appropriate flowering seasons for regional special-status plant species. Supplemental summer surveys were conducted on July 11, 2006 by Geoff Hoetker and in April 2008 during field work for the wetland delineation by Geoff Hoetker and Jon Claxton. In addition, a floristic inventory of the BSA was compiled within the project site during these dates following the guidelines of CDFG (CDFG, 2000) and USFWS (USFWS, 1996). Plants were identified with dichotomous keys used as necessary (Hoover, 1970; Hickman, ed., 1993). Presence or absence of special-status plant species in the project area was confirmed during the floristic surveys. General-level reconnaissance surveys for special-status wildlife

coincided with the 2006 botanical surveys. A list of plants and wildlife observed within the BSA is included in Appendix H.

The BSA is within the south-central California coast region for steelhead, which is a federally threatened species. This particular area is defined as that geographic region north of the Santa Maria River, northward to (and including) the Pajaro River (and its tributaries), Santa Cruz County. No protocol survey method exists for steelhead; however, steelhead were readily visible during reconnaissance surveys and the potential for suitable habitat was assessed during biological surveys of the project site.

The BSA is within the range of the CRLF, which is also a federally threatened species. A site assessment for CRLF habitat was conducted following USFWS protocol (USFWS, 2005) from February 2006 to March 14, 2007 by SWCA Biologists Geoff Hoetker and Travis Belt. The results of the CRLF site assessment were submitted to the Ventura USFWS office on April 2, 2007. Upon review of the CRLF site assessment, USFWS determined that presence of CRLF within the BSA could be inferred and protocol surveys would not be required (Elvin, 2007).

No recovery plan implementation or other recovery actions are known to be occurring within the BSA.

2.3. Personnel and Survey Dates

Table 3 summarizes biological survey efforts conducted to date.

Table 3. Survey Tasks, Dates, Personnel, and Methodology

Study or Survey	Date	SWCA Personnel	Methodology
Floristic Surveys and Reconnaissance Wildlife Surveys	February 23 and 24, 2006	Geoff Hoetker and Travis Belt	CDFG (2000) and USFWS (1996) guidelines for floristic surveys; no specific protocol for wildlife
Floristic Surveys and Reconnaissance Wildlife Surveys	May 30, 2006	Geoff Hoetker and Katie Thaxter	CDFG (2000) and USFWS (1996) guidelines for floristic surveys; no specific protocol for wildlife
Floristic Surveys and Reconnaissance Wildlife Surveys	July 11, 2006	Geoff Hoetker	CDFG (2000) and USFWS (1996) guidelines for floristic surveys; no specific protocol for wildlife
CRLF Site Assessment	February 23 and 24, 2006; July 11, 2006; January 9, 2007; March 14, 2007	Geoff Hoetker and Travis Belt	USFWS revised guidelines (2005)
Wetland Delineation	April 3 and 4, 2008	Geoff Hoetker and Jon Claxton	USACE (1987) methodology and USACE regional Arid West Supplement (2006)

2.4. Agency Coordination and Professional Contacts

Table 4 summarizes agency coordination and professional contacts to date.

Table 4. Agency Coordination and Professional Contacts

Name	Agency/Company	Title/Responsibility	Type of Coordination
Jan Di Leo	County of San Luis Obispo	Parks Planner	Project Coordination
Julie Eliason	County of San Luis Obispo	Environmental Resource Specialist	Environmental Planning
Mike Giuliano	Caltrans	Local Assistance	Project Coordination
John Smida	Caltrans	Local Assistance	Project Coordination
Gary Ruggerone	Caltrans	Environmental Planning	Project Coordination
Tom Edell	Caltrans	Biologist	Project Coordination
Diane Noda	USFWS	Field Supervisor	CRLF site assessment
Chris Kofron	USFWS	Senior Fish and Wildlife Biologist	Environmental Planning
Julie Vanderwier	USFWS	Senior Fish and Wildlife Biologist	Environmental Planning
Steve Henry	USFWS	Fish and Wildlife Biologist	Species List Request
Mark Elvin	USFWS	Fish and Wildlife Biologist	CRLF Site Assessment
Chris Dellith	USFWS	Fish and Wildlife Biologist	CRLF Critical Habitat
Anthony Spina	NMFS	Fisheries Biologist	Steelhead Critical Habitat
Deborah Hillyard	CDFG	Biologist	Environmental Planning, Field Visit