

**BOB JONES CITY TO SEA TRAIL  
ENGINEERING FEASIBILITY STUDY**  
COUNTY OF SAN LUIS OBISPO



**MORRO GROUP, INC.**  
Environmental Services



Date: 2/7/2007  
DESIGN: MH DRAWN: IV  
CHECKED: JP  
Appr'd: JP  
Proj. No: 250083

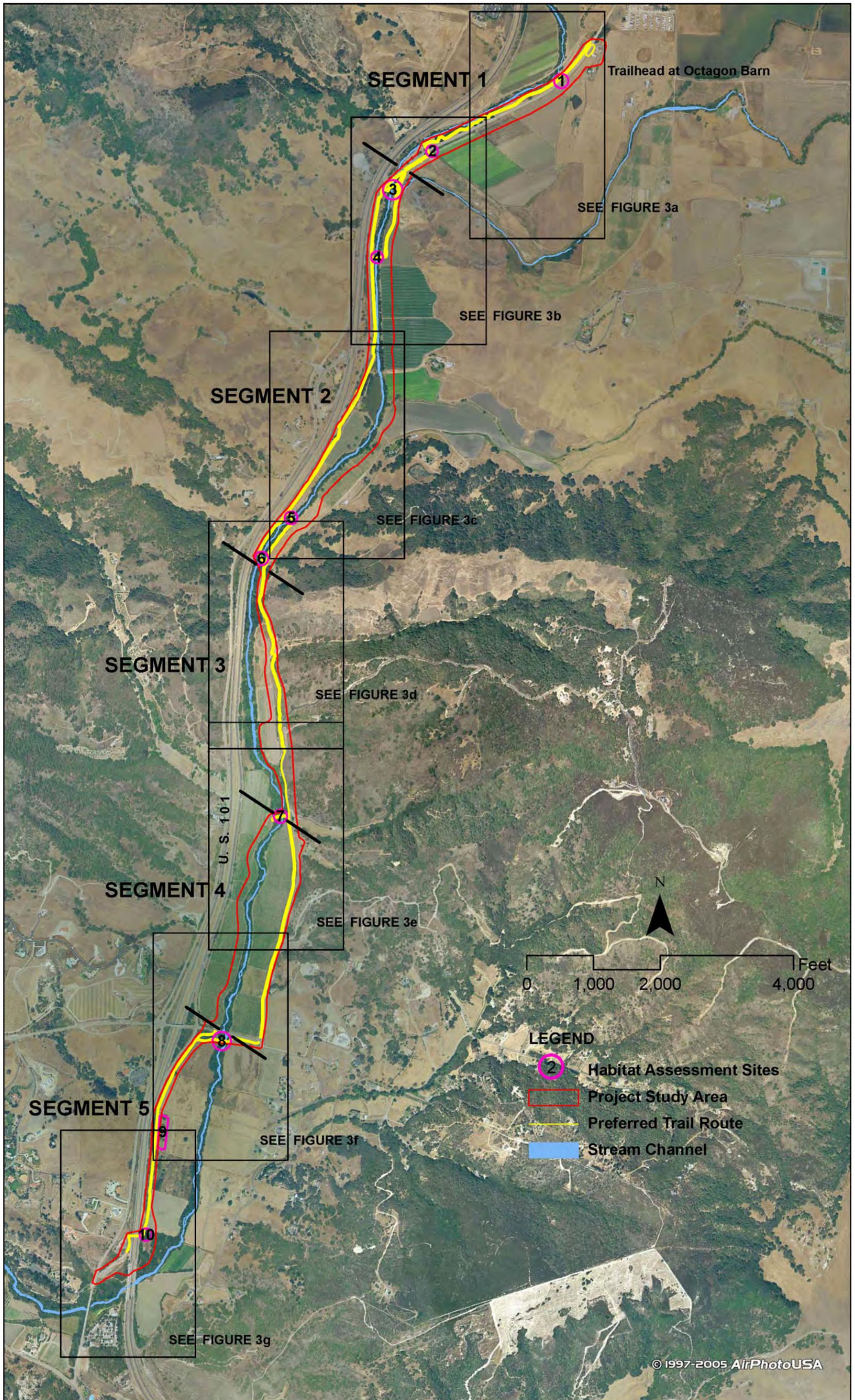
**QUESTA**  
Civil Environmental & Water Resources  
ENGINEERING CORP.  
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P.O. Box 70356 1220 Brickyard Cove Road Point Richmond, CA 94807

**PREFERRED TRAIL ALIGNMENT**  
SAN LUIS OBISPO, CALIFORNIA

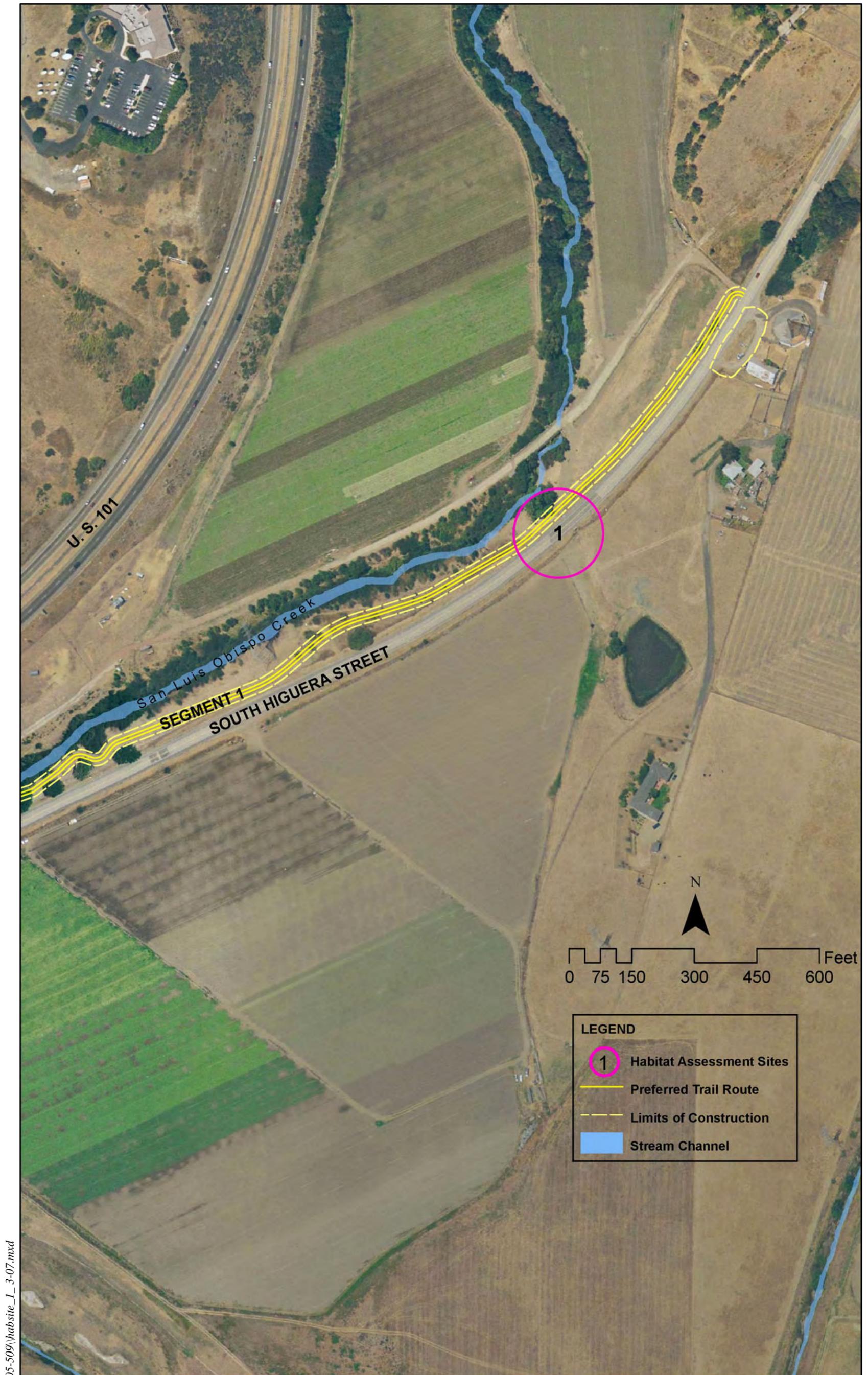
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Project Location Map  
FIGURE 2

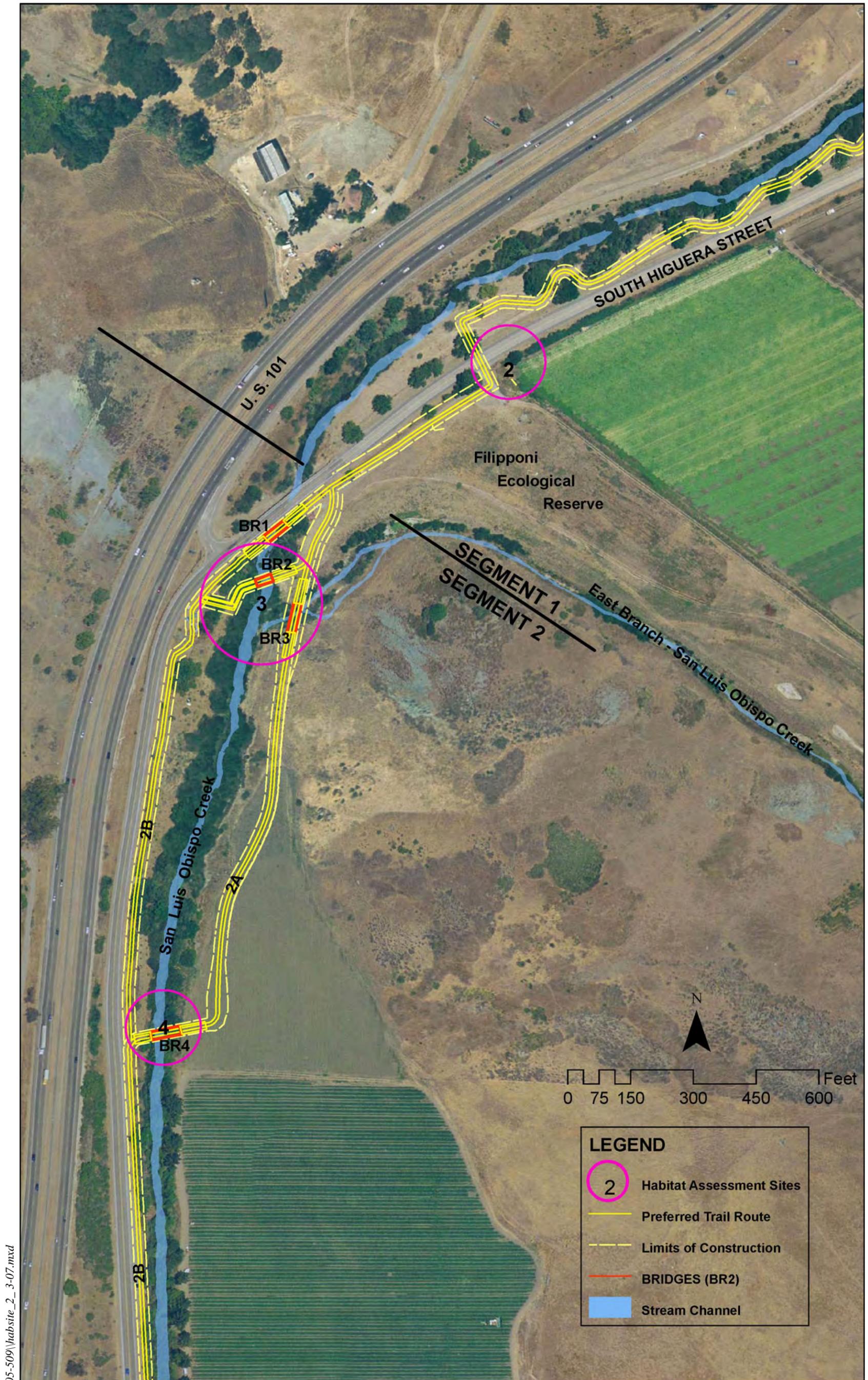


Aerial Site Map - Key  
FIGURE 3



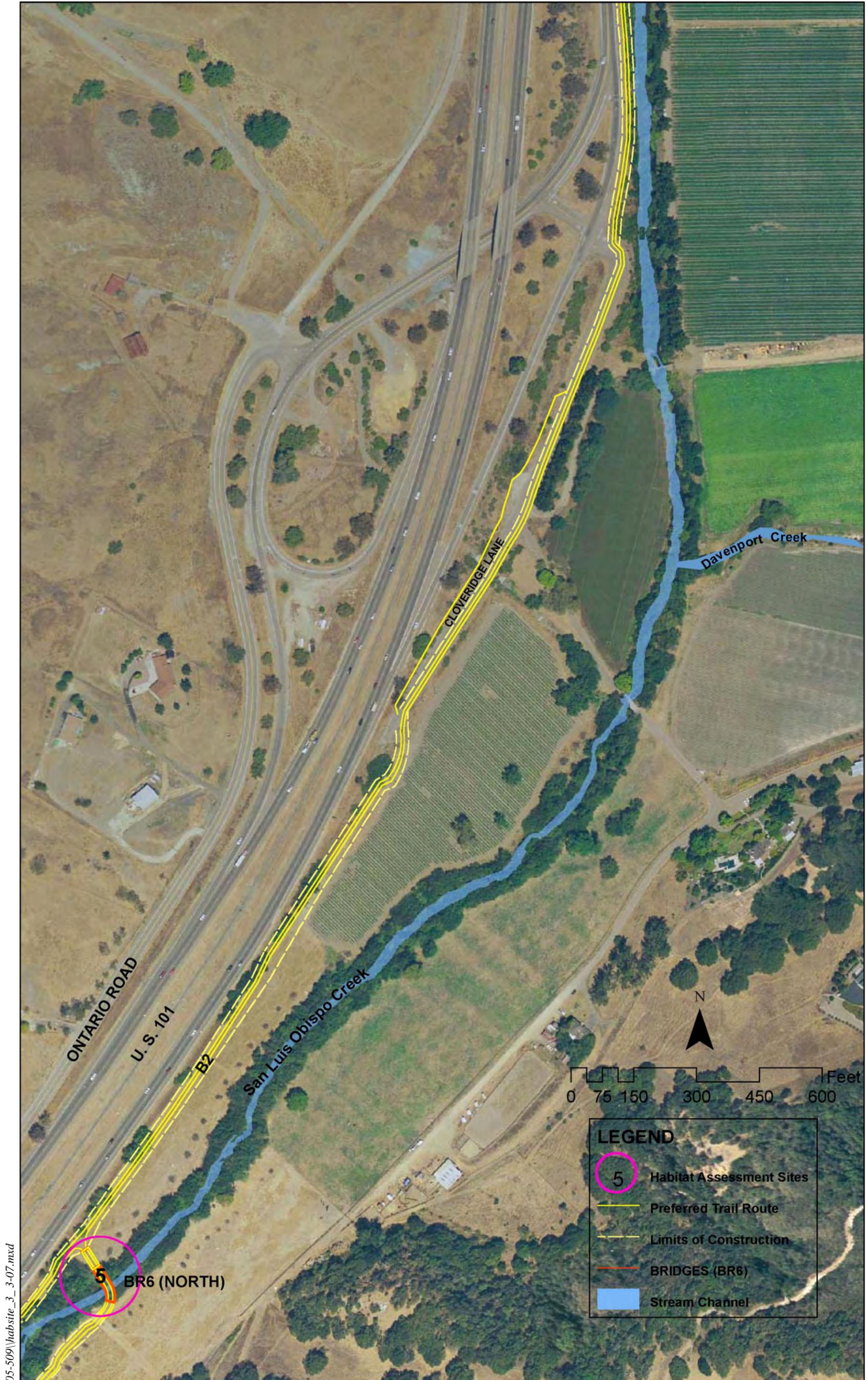
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Aerial Site Map – Site 1  
FIGURE 3a

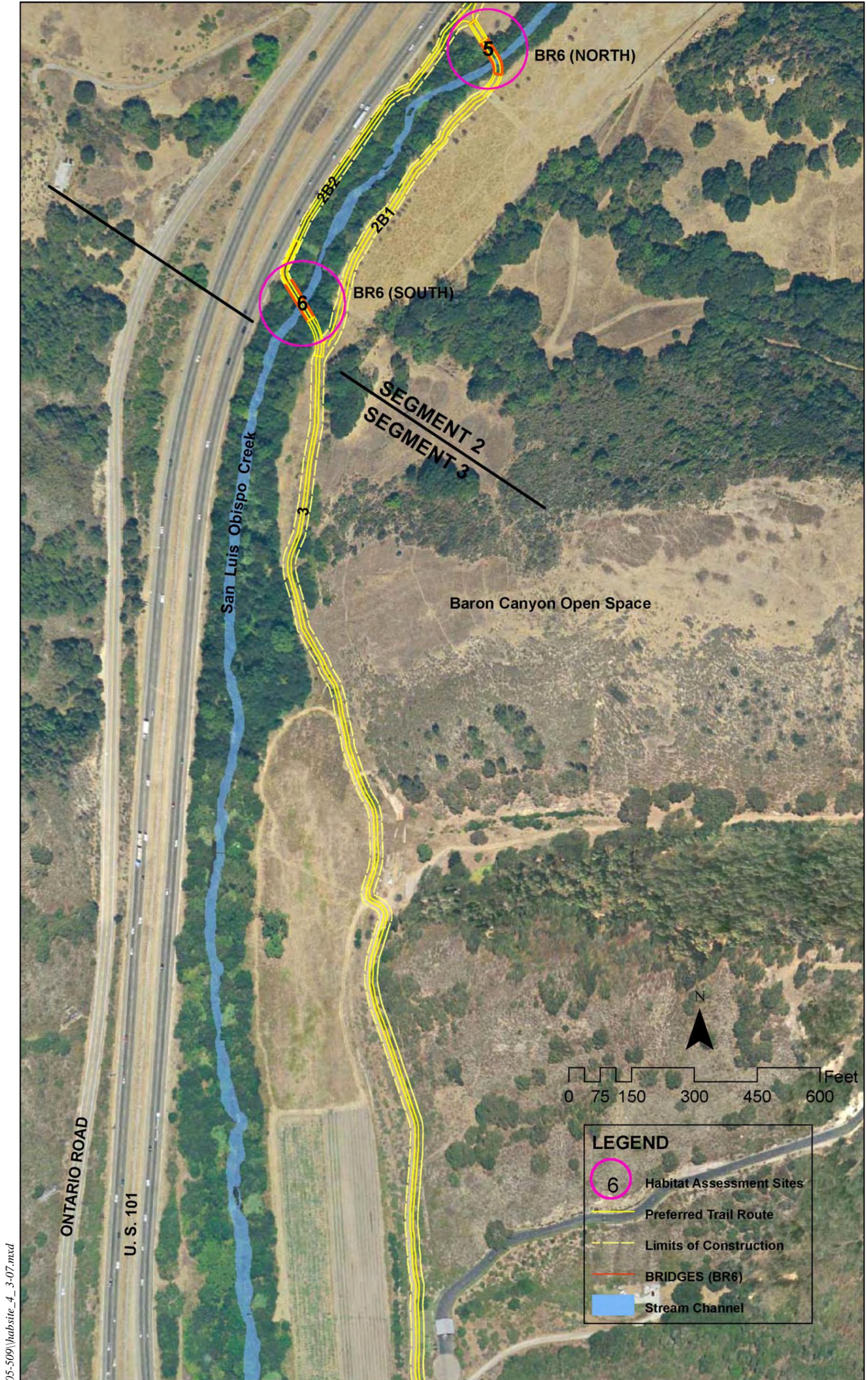


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Aerial Site Map – Sites 2, 3, 4  
FIGURE 3b

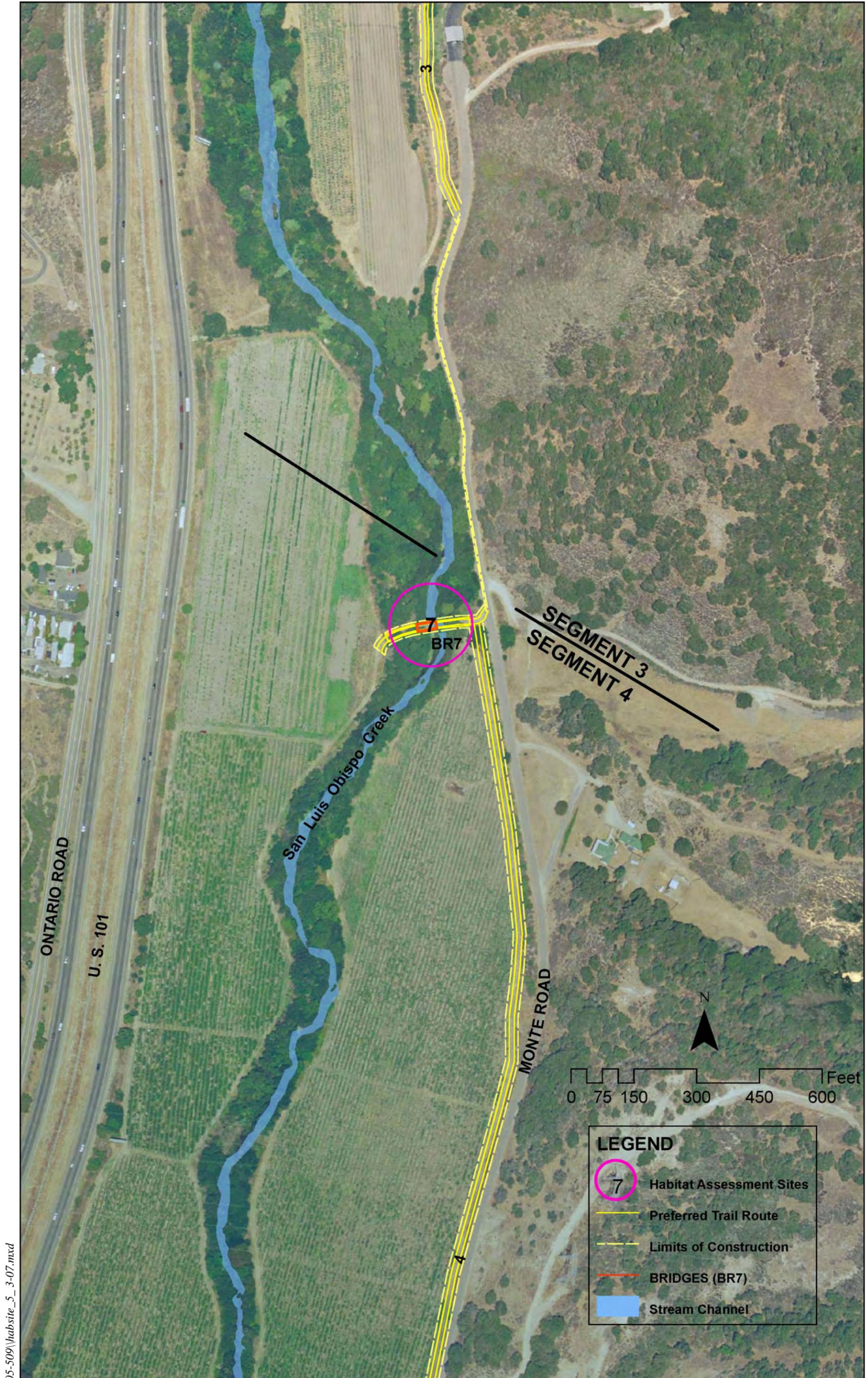


Aerial Site Map – Site 5  
FIGURE 3c



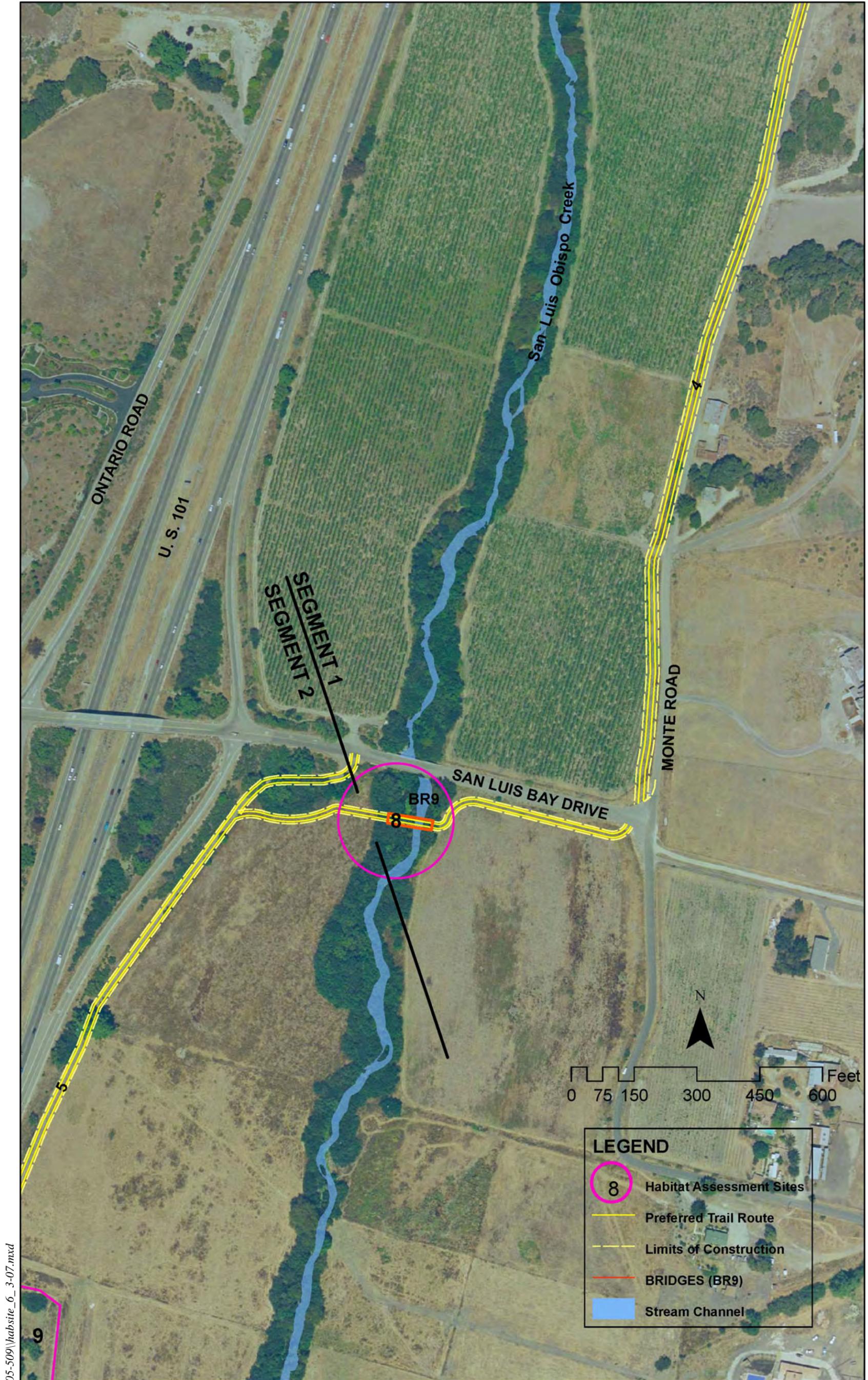
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Aerial Site Map – Sites 5, 6  
FIGURE 3d



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Aerial Site Map – Site 7  
FIGURE 3e



Aerial Site Map – Sites 8, 9  
FIGURE 3f



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Aerial Site Map – Sites 9, 10  
FIGURE 3g

**TABLE 1  
Proposed Project Segments**

<b>Segment 1: Octagon Barn to South Higuera Street Creek Crossing</b>
West side of South Higuera St., crossing over to the west side of South Higuera St. at the north end of South Higuera St. Bridge.
<b>Segment 2: North end of South Higuera Bridge to Bunnell/Baron Canyon Open Space</b>
Alternative 2A: Bridge crossing to east side of San Luis Obispo Creek (SLO Creek)
Alternative 2B: One of two options along the west side of SLO Creek: either 1) a bridge structure attached to the existing South Higuera Street Bridge supports; or, 2) construction of an entirely new bridge structure across SLO Creek to the west side. There would then be two potential SLO Creek crossing locations at the southern end of Segment 2. Alternative 2B1 would cross approximately 600 feet upstream of the Bunnell/Baron Canyon property line. Alternative 2B2 locates the SLO Creek crossing (BR 6) immediately adjacent to the Bunnell/Baron Canyon property line.
<b>Segment 3: Bunnell/Baron Canyon Open Space to Monte Road at Farm Bridge</b>
Through Baron Canyon Open Space land on an existing access road joining Monte Road south of Baron Canyon Estates entrance and terminating near the Monte Road farm bridge.
<b>Segment 4: Farm Bridge to San Luis Bay Drive</b>
From the farm bridge located off of Monte Road and would continue between the existing agricultural roads and Monte road. The pathway would continue adjacent to Monte Road until the intersection with San Luis Bay Drive, where it would cross, at-grade, to the southern side of San Luis Bay Drive. Segment 4 would then continue adjacent to San Luis Bay drive until spanning SLO Creek with a new bridge.
<b>Segment 5: San Luis Bay Drive to Ontario Road Staging Area/Bob Jones Phase I</b>
From the west side of SLO Creek, the pathway would continue west to an existing agricultural road where it would head south, parallel to the east side of Highway 101. Approximately 400 feet north of the Highway 101 bridge over SLO Creek the pathway would cross Highway 101 on an elevated bicycle/pedestrian bridge. The bridge would land approximately 200 feet north of the existing Bob Jones pathway Ontario Road staging area and continue to the staging area.

The following is a brief description of each segment and the alternatives that are currently being evaluated in support of the proposed project:

**1. Segment 1: Octagon Barn to South Higuera Street Bridge Crossing**

Segment 1 would originate at the Octagon Barn and would require users to cross South Higuera Street with the use of a crosswalk or controlled intersection (not yet determined). This segment would include a trailhead marker, parking, and other staging facilities. The segment would continue along the west side of South Higuera, between the southbound lane and San Luis Obispo Creek (SLO Creek), providing users with views of the creek. Segment 1 would cross two potentially jurisdictional drainage ditches and possibly encroach within the riparian canopy of SLO Creek (CDFG jurisdiction). The pathway would be routed east across South Higuera

Street with an at-grade crossing approximately 200 feet north of the existing South Higuera Street Bridge, near an existing unimproved agricultural road, and would continue south along the east side of South Higuera Street through the edge of the City of San Luis Obispo Filipponi Ecological Reserve. Segment 1 ends at the north end of South Higuera Street Bridge near the confluence of SLO Creek and the East Fork of SLO Creek.

## **2. Segment 2: North end of South Higuera Street Bridge to Bunnell/Baron Canyon Open Space**

Segment 2 begins at SLO Creek, immediately east of the South Higuera Bridge. Segment 2 includes 2 alternatives, 2A and 2B. These alternatives exist primarily because the final locations of creek crossings have not yet been determined. Segment 2 continues south to the property line between the Bunnell property and the Baron Canyon Open Space.

### **a. Alternative 2A: East side of San Luis Obispo Creek**

Alternative 2A begins on the east side of South Higuera Street and crosses over the East Fork of SLO Creek [Bridge (BR) 3]. From this proposed bridge crossing, Alternative 2A continues south through the Filipponi Ecological Reserve, crossing SLO Creek (BR 4) approximately 800 feet downstream from the beginning of Segment 2 joining with Alternative 2B. Near the southern end of Segment 2, it may be necessary to utilize Alternative 2A again (see discussion below).

### **b. Alternative 2B: West side of San Luis Obispo Creek**

Alternative 2B also begins on the east side of South Higuera Street, but it would cross SLO Creek in a different way. One option (BR 1) would include a bridge structure attached to the existing South Higuera Street Bridge supports. The second option (BR 2) would require the construction of an entirely new bridge structure across SLO Creek. After crossing SLO Creek, both options would continue between South Higuera Street and the west side of SLO Creek to Cloveridge Lane. At Cloveridge Lane, the pathway would become a Class III (shared surface) bikeway. At the southern terminus of Cloveridge Lane, the pathway continues through the agricultural lands of the Bunnell Property. The pathway would cross SLO Creek near the southern end of Segment 2.

There are two potential SLO Creek crossing locations at the southern end of Segment 2. Alternative 2B1 would locate a SLO Creek crossing [BR 6 (North)] approximately 600 feet upstream of the Bunnell/Baron Canyon property line. Alternative 2B2, generated due to property owner concerns, locates the SLO Creek crossing [BR 6 (South)] immediately adjacent to the Bunnell/Baron Canyon property line and the start of Segment 3. The pathway would then continue south, on the east side of SLO Creek until its terminus at the property line.

Segment 2 connects with Segment 1 at the north end of South Higuera Bridge. Alternatives for Segment 2 generally continue in a southerly direction and connect with Segment 3 at the property line for the Bunnell/Baron Canyon Open Space.

### **3. Segment 3: Bunnell/Baron Canyon Open Space to Old Farm Bridge Crossing**

Segment 3 continues from the southern terminus of Segment 2 at the Baron Canyon Open Space property line, at the south end of the Bunnell Property. Segment 3 continues through the Baron Canyon Open Space land within the floodplain and on an existing, unimproved, secondary fire access road. This access road joins Monte Road south of the Baron Canyon Estates entrance and terminates near a farm bridge located off of Monte Road. There are no alternative routes or creek crossings proposed for Segment 3.

### **4. Segment 4: Old Farm Bridge Crossing to San Luis Bay Drive**

Segment 4 continues from the southern terminus of Segment 3 near the farm bridge located off of Monte Road, and would be located between the existing agricultural roads and Monte Road. This segment includes a creek crossing (BR 7), which would not be part of the pathway, but may be removed and replaced as mitigation for hydrologic impacts associated with pathway construction in the SLO Creek floodplain. The pathway would continue adjacent to Monte Road until the intersection with San Luis Bay Drive, where it would cross, at-grade, to the southern side of San Luis Bay Drive. Segment 4 would then continue adjacent to San Luis Bay Drive until it reaches SLO Creek. A new bridge (BR 9) would span SLO Creek at this point. Segment 5 would begin on the west side of SLO Creek. An additional creek crossing (BR 8) has been deleted as an option and is no longer under consideration.

### **5. Segment 5: San Luis Bay Drive to Ontario Road Staging Area (Bob Jones Phase I)**

Segment 5 continues from the southern terminus of Segment 4 on the west side of SLO Creek just downstream of the San Luis Bay Drive Bridge. The pathway would continue west to an existing agricultural road where it would head south, parallel to the east side of Highway 101. Approximately 400 feet north of the Highway 101 Bridge over SLO Creek, the pathway would cross Highway 101 on an elevated bicycle/pedestrian bridge (BR 10). The bridge would land approximately 200 feet north of the existing Bob Jones pathway Ontario Road staging area. The pathway would head south from the bridge and enter the staging area and the terminus of Segment 5.

## **II. STUDY METHODOLOGY**

For the purposes of this report, the study area for this California red-legged frog site assessment considers the Least Environmentally Damaging Preferred Alternative (LEDPA), which has been evaluated by the County through many rounds of in-house discussion and review. The following is a brief summary of the methodologies utilized during the site assessment:

California red-legged frog habitat within the project site and vicinity was evaluated based on thoroughly reviewing the most recent project plans, aerial photographs, database queries, literature search, correspondence with local biologists and agency personnel, and a reconnaissance-level survey of potential habitat areas where permissions and accessibility could be obtained. Information reviews and reconnaissance-level surveys were conducted by SWCA Biologists, Mr. Geoff Hoetker and Mr. Travis Belt. Both individuals are familiar with California

red-legged frog habitat, and both biologists have conducted numerous site assessments and protocol-level surveys for California red-legged frogs along the central coast of California.

Reconnaissance-level surveys within the project site focused on those areas where the proposed project may potentially jeopardize habitat that could contain California red-legged frog. These focused study areas were investigated by Mr. Hoetker and Mr. Belt on February 23, 24, and July 11, 2006; and January 9 and March 14, 2007. Physical conditions at the time of the assessment were photo-documented by SWCA and included in Attachment A. Detailed information on sites investigated was recorded on the USFWS California Red-legged Frog Habitat Site Assessment Data Sheets included in Attachment B. The resumes of Mr. Hoetker and Mr. Belt are included in Attachment C.

### **III. RESULTS**

The USFWS site assessment protocol for California red-legged frog (USFWS, 2005) consists of the following three elements when determining habitat suitability:

1. Is the project site within the range of the California red-legged frog?
2. What are the known localities of California red-legged frog within the project site and within one mile (1.6 kilometers) (km) of the project boundaries?
3. What are the habitats within the project site and within one mile (1.6 km) of the project boundaries?

The following sections address each of the elements listed above based on the most recent project description and existing data.

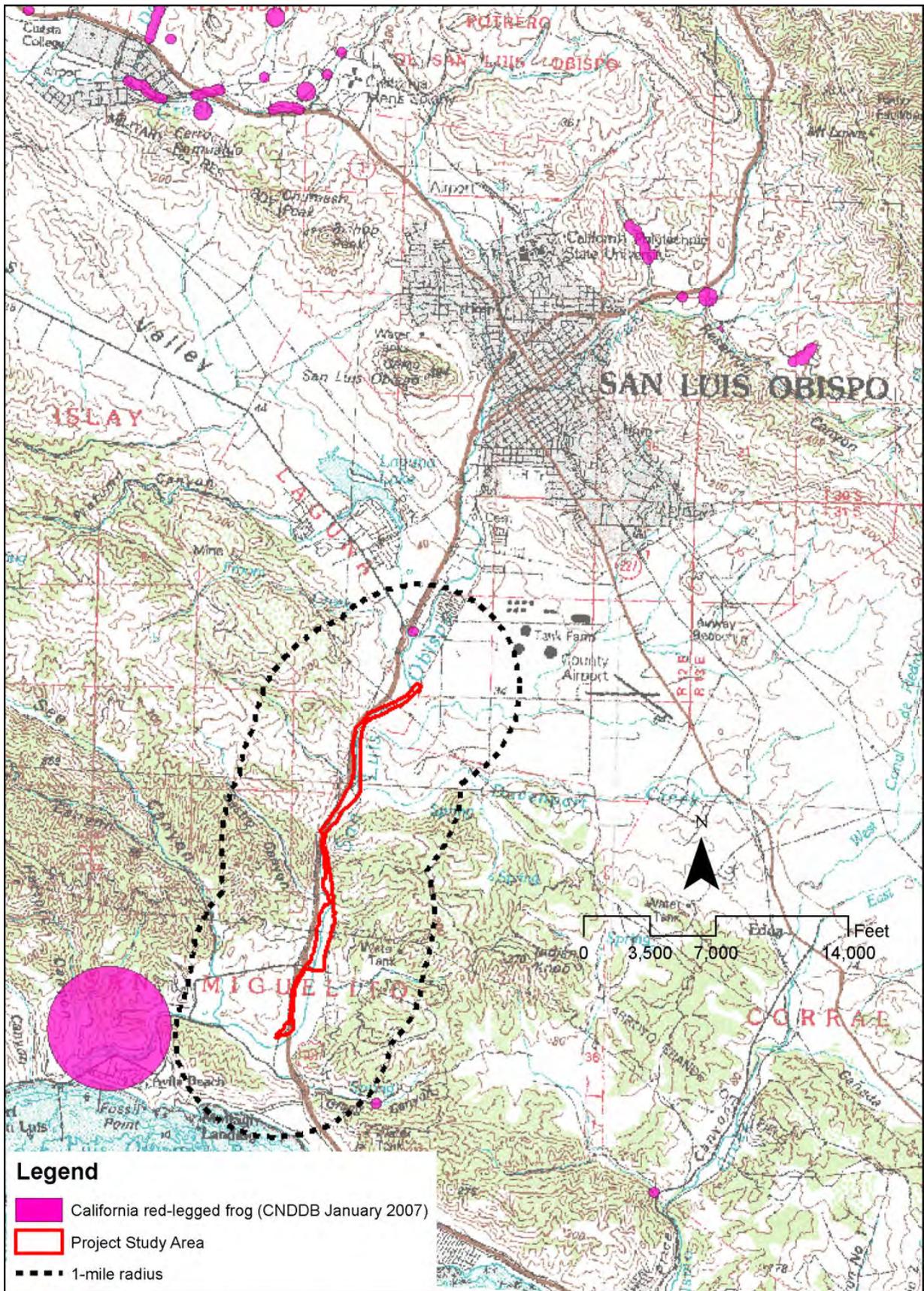
#### **A. IS THE PROJECT SITE WITHIN THE RANGE OF THE CALIFORNIA RED-LEGGED FROG?**

The project site is within the historic range of the California red-legged frog, which extends coastally from the vicinity of Point Reyes National Seashore, Marin County, and inland from the vicinity of Redding, Shasta County, in California southward to northwestern Baja California, Mexico. The project site is also known to occur within the range of the California red-legged frog based on relevant literature and personal observations.

#### **B. WHAT ARE THE KNOWN LOCALITIES OF CALIFORNIA RED-LEGGED FROG WITHIN THE PROJECT SITE AND WITHIN ONE MILE (1.6 KM) OF THE PROJECT BOUNDARIES?**

SWCA Biologists conducted a query of the most current version of the California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDDB, 2007) to obtain information regarding known occurrences of California red-legged frog within one mile (1.6 km) of the project site (refer to Figure 4). SWCA Biologists have also contacted City of San Luis Obispo (City) staff and their consultant in regards to a known recent sighting of California red-legged frog near SLO Creek that was recently submitted to the CNDDDB (Neil Havlik; Brooke Langle, personal communication, 2006).

USGS 1:100,000 scale, San Luis Obispo - 05-509\cwf\occurrences.mxd



California Red-legged Frog Occurrence Map  
FIGURE 4

As a result of the CNDDDB query and discussion with the City staff and their consultant, the nearest known occurrence of California red-legged frog is located near the intersection of Highway 101 and Los Osos Valley Road, within the boundaries of the City of San Luis Obispo. The California red-legged frogs identified within this area may comprise a metapopulation as they are located within a concrete raceway channel and are potentially unable to disperse; however, this has not been confirmed by SWCA at this time. Nonetheless, this sighting is within 0.75 mile of the northernmost crossing site for the proposed project [Habitat Assessment (HA) Site #1]. The other nearest documented locations are an occurrence at Avila Beach Golf Course, approximately 1.3 miles southwest of the southern most crossing site for the proposed project (HA Site #10), and an occurrence from a spring in Gragg Canyon, approximately 1.0 mile southeast of HA Site #10. It is a local curiosity as to why California red-legged frogs have not been observed in other areas along the corridor of SLO Creek.

### **C. WHAT ARE THE HABITATS WITHIN THE PROJECT SITE AND WITHIN ONE MILE (1.6 KM) OF THE PROJECT BOUNDARIES?**

As described Section II (Study Methodology), habitats within the project site and within one-mile (1.6 km) of the project boundaries have been characterized and mapped by SWCA Biologists based on reviewing the most recent project plans, aerial photographs, existing County GIS database, literature search, and a reconnaissance-level survey of potential habitat areas where permissions and accessibility could be obtained (refer to Figure 5). A brief description of habitats within the project area is provided in the following section.

#### **1. Habitat Description**

##### **a. Agricultural land (Agrarian)**

*Background:* Agrarian habitat describes vegetation that has been significantly disturbed by agricultural practices. Small areas of ruderal vegetation generally are present along the edges of agricultural fields. Agrarian and associated ruderal habitats within the study area offer no wildlife habitat value for California red-legged frog.

*Project Conditions:* A significant portion of the project site consists of agrarian habitat (refer to Figure 5). The majority of agrarian habitat within the project site consists of orchards, vineyards, and row crops.

##### **b. Ruderal (Disturbed)**

*Background:* Ruderal habitat generally consists of disturbed areas that have been significantly altered by construction, landscaping, or other types of land-clearing activities. Ruderal habitats often occur along roadsides and fence-lines, near developments, and in other areas experiencing severe ground surface disturbance. Plants found within this habitat are typically introduced, weedy, Mediterranean species. This habitat offers no wildlife habitat value for California red-legged frog other than cover from predators during dispersal to adjacent suitable habitat.

*Project Conditions:* Ruderal habitat is common throughout the study area and surrounding areas, occurring along road edges, fences, and other areas subjected to disturbance (refer to Figure 5).

### c. Landscaping/Ornamental Vegetation

**Background:** Small portions of the project area are vegetated by ornamental species, or other herbaceous plants, shrubs, and trees typically used for landscaping. Landscaping/ornamental vegetation in the study area includes species such as acacia tree (*Acacia* sp.), iceplant (*Carpobrotus edulis*), birdsfoot trefoil (*Lotus corniculatus*), garden nasturtium (*Tropaeolum majus*), clover (*Trifolium* sp.), and violet (*Viola* sp.), as well as Monterey pine (*Pinus radiata*) that have been planted in certain residential areas. Because these plants tend to grow or be planted in disturbed areas, they do not typically support California red-legged frog habitat.

**Project Conditions:** Landscaped areas in the study area occur primarily near residences and along medians (refer to Figure 5).

### d. Non-native Annual Grassland

**Background:** Non-native annual grassland is primarily comprised of non-native species and is generally variable in species composition depending upon soils, aspect, slope, hydrology, disturbance regime, prior uses, and species recruitment opportunity. This vegetation type is dominated by introduced annual grasses in association with many species of showy native forbs (herbaceous annual plants such as wildflowers), especially in years of abundant rainfall. Dominant species in the grasslands include grasses such as ripgut brome (*Bromus diandrus*) and annual ryegrass (*Lolium multiflorum*), and abundant forbs such as Spanish clover (*Lotus purshianus*), telegraph weed, and several other species. Density of vegetative cover in annual grassland areas typically range from open to more moderately dense, with grasses attaining a height of 12 to 20 inches. Annual grassland habitat does not typically support California red-legged frog other than cover from predators during dispersal to adjacent suitable habitat.

**Project Conditions:** California annual grassland is found within the study area (refer to Figure 5); however, the majority of annual grassland in the area is located on the west side of SR 101, where it is intermixed with chaparral and oak woodland habitats.

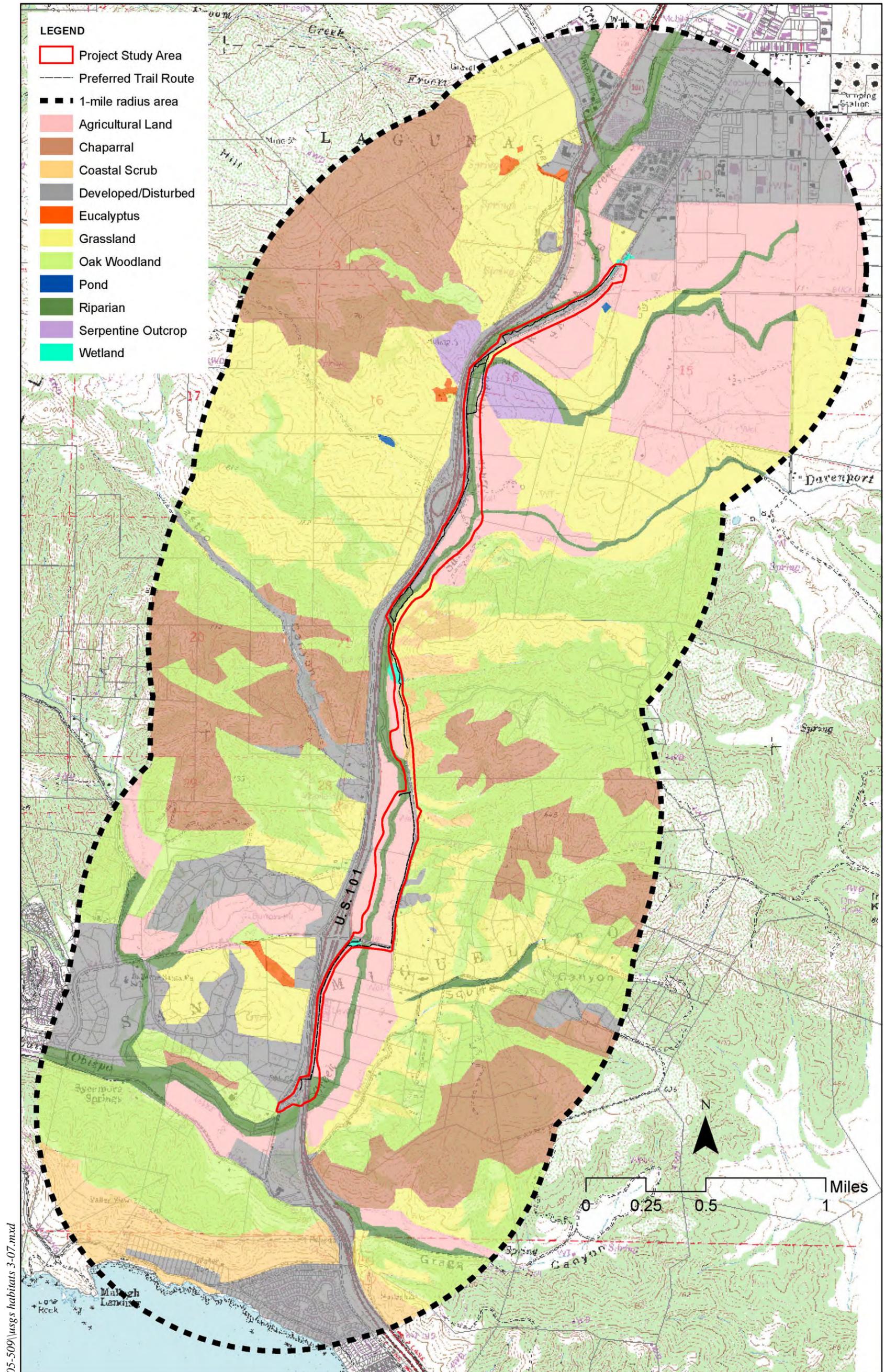
### e. Serpentine Bunchgrass

**Background:** This community is typically restricted to serpentinite rock sites, and is an open grassland dominated by perennial bunchgrasses such as *Nassella* spp. Total cover is typically low, but markedly dominated by native species. This community is widely scattered throughout the Coast Ranges.

**Project Conditions:** A small patch of serpentine bunchgrass was identified in the study area, just south of the East Fork of SLO Creek, on the Filipponi Ecological Reserve (refer to Figure 5). This patch of grassland occurs on a serpentine rock outcrop between a hill to the east of the BSA and SLO Creek to the west, and is dominated by mainly purple needlegrass (*Nassella pulchra*).

### f. Coastal Scrub

**Background:** Coastal scrub habitat is generally located inland from the immediate coast and is found on a variety of soil types. Characteristic species include a variety of semi-woody shrubs



such as black sage (*Salvia mellifera*), coffeeberry, California buckwheat (*Erigonum fasciculatum*), and California sagebrush (*Artemisia californica*). This habitat offers no wildlife habitat value for California red-legged frog other than cover from predators during dispersal to adjacent suitable habitat.

Project Conditions. Coastal scrub habitat is present in areas along Segment 3 and 4 and in upland areas bordering oak woodland and grassland areas (refer to Figure 5). Shrub coverage within this habitat is variable and ranges from scattered individual shrubs to dense clumps.

#### g. Chaparral

Background. A typical chaparral plant community consists of densely-growing shrubs that are drought-resistant. Typical species within this habitat include chamise (*Adenstoma fasciculatum*), ceanothus (*Ceanothus* sp.), deerweed (*Lotus scaporus*), and manzanita (*Arctostaphylos* sp.).

Project Conditions. Although chaparral habitat does not occur directly adjacent to or within the proposed project site, this habitat does occur within surrounding areas on the steeper, higher slopes (refer to Figure 5). Specifically, this habitat occurs east of the proposed project route where it is intermixed with oak woodland habitat.

#### h. Coast Live Oak Woodland

Background. Coast live oak woodland habitat is characteristic of the rolling hills and valleys of California's central coast. Coast live oak woodland is dominated by coast live oak primarily in dense stands on north-facing slopes. Typical understory species occurring within this community include toyon (*Heteromeles arbutifolia*), California coffee-berry (*Rhamnus californica*), poison oak (*Toxicodendron diversilobum*) and California blackberry (*Rubus ursinus*). Coast live oak woodland and associated understory typically represents no wildlife habitat value for California red-legged frog.

Project Conditions. Coast live oak woodland is common within the vicinity of the proposed project site and surrounding areas (refer to Figure 5). This habitat largely occurs adjacent to Segment 3 and 4.

#### i. Riparian

Background. Riparian habitat occurs adjacent to existing flowing stream channels, along seasonally flooded arroyos, or in depressional areas located close to ground water. This habitat often consists of one or more species of deciduous trees and/or shrubs and a variety of other shrubs and herbs, many of which are restricted to the banks and floodplains of these waterways. Occasionally the trees of riparian habitats are tall and dense enough to form a riparian forest, while other times the trees are more scattered and smaller, forming riparian scrub habitat. The extent of the vegetation away from the watercourse is dependant on the size and nature of the banks and floodplains, the amount of water conveyed by the waterway, and the depth and lateral extent of standing water and/or subterranean aquifers. Riparian habitats support a wide diversity of wildlife including semi-aquatic wildlife species such as the California red-legged frog which may utilize the riparian habitat for breeding, foraging, and dispersal purposes.

Project Conditions. Riparian habitat is present throughout the project site, where it is associated with banks and within the floodplain of SLO Creek and its tributaries (refer to Figure 5). SLO Creek originates in the Santa Lucia Mountains northeast of San Luis Obispo, near Cuesta Grade and continues in a roughly southwesterly direction through San Luis Obispo before heading roughly south, paralleling Highway 101 and transecting the project site. Tributaries to SLO Creek that are either within the project site or within a one-mile radius include Prefumo Creek, Davenport Creek, and Castro Canyon Creek. Throughout the project site, SLO Creek is approximately 10 to 20 feet wide, with water levels fluctuating from one to three inches during the summer, to one to two feet during non-flood winter conditions (City of San Luis Obispo, 2006). The riparian habitat associated with SLO Creek varies in width from approximately 10 feet to 300 feet near the SR 101 Bridge.

j. Seasonal Wetland

Background. Certain areas of low relief in or adjacent to the floodplain of SLO Creek within the study area support seasonal wetlands that are inundated for only a portion of the year, but long enough to support the growth of hydrophytic (“water-tolerant”) vegetation. Seasonal wetlands may attract California red-legged frogs when inundated.

Project Conditions. Portions of the study area that are occasionally inundated may support stands of facultative wetland species such as poison hemlock (*Conium maculatum*). Areas more frequently inundated, such as within the middle of the SLO Creek floodplain, support wetland species such as brown-headed rush and spikerush. Suitable seasonal wetlands/ aquatic habitats that may occur within one mile of the project boundaries were documented by SWCA to the extent feasible (refer to Figure 5); however, there may be additional habitats that were not observable by examination of aerial maps, field reconnaissance, or were unattainable due to lack of land owner permission.

## 2. Site Specific Information

SWCA Biologists conducted detailed site assessments at ten locations where it was determined that the proposed project may potentially impact habitat that could support California red-legged frog. This information was recorded on the data sheets in Attachment B. Table 2 concisely summarizes the data collected for each site, including the distance of each site from known occurrence records for California red-legged frog. The locations of these ten sites are labeled in Figures 3 to 3g.

**TABLE 2**  
**California Red-legged Frog Habitats within One Mile of the Project Area**

CRLF HA Site	General Location	Habitat Description	Perennial / Ephemeral	Habitat Quality	Miles from CRLF Record
#1	South Higuera box culvert crossing #1	Box culvert directs flows from swale beneath S. Higuera street to SLO Creek; habitat upstream and downstream consists of a grassy swale.	Ephemeral	Poor	0.75 mi
#2	South Higuera box culvert crossing #2	Box culvert directs flows from an agricultural ditch to a ditch on west side of S. Higuera that leads to SLO Creek; no emergent vegetation; very low gradient with small bank.	Ephemeral	Very Poor	0.95 mi
#3	East Fork of SLO Creek	Perennial stream with ponded areas; emergent vegetation present, riparian overstory; pools present (5' deep); creek bank eroded and rip rap present; three possible crossings proposed.	Perennial	Good	1.10 mi
#4	≈800 feet down from Site #3	SLO Creek; widely-spaced banks with riffles upstream, 4'-5' deep-water glide at proposed crossing, and slow glide downstream; no emergents; dense willow cover.	Perennial	Very Good	1.35 mi
#5	Bunnell property crossing #1	SLO Creek; slow moving water likely pool in dry periods; riparian vegetation; no emergents; undercut banks and mud terraces; juvenile steelhead, bullfrog larvae, and crayfish observed.	Perennial	Good	2.20 mi
#6	Bunnell property crossing #2	SLO Creek; riffle upstream to northwest end of crossing; glide at southeast end then riffle downstream; emergents are minimal water-cress, cattail, sedge, and grasses (approx. 5-10% cover); about 50% arroyo willow and alder cover; 5' x 10' pool 1.5' to 2.5' deep.	Perennial	Moderate	2.35 mi
#7	Farm bridge near Monte Road	SLO Creek; clear, cold-water stream habitat consists of a run upstream of bridge becoming a riffle downstream of bridge; overstory dominated by sycamore/arroyo willow woodland; no emergents; moderately sloping muddy bank with some rock riprap.	Perennial	Moderate	1.95 mi
#8	South of San Luis Bay Drive Bridge	SLO Creek; cold flowing water with willows and no emergent vegetation; gradually sloping to steep bank; sand bars present; steelhead and speckled dace observed.	Perennial	Moderate	1.35 mi
#9	Pollard property downstream from Site #8	Artificial, bermed stock pond consisting of three rectangular ponds separated by berms; adjacent to ranchland and 600 ft. west of SLO Creek; no emergents with few willows and shrubs; apparently fills after rains; completely dry at the time of the assessment.	Ephemeral	Poor	1.20 mi
#10	Hwy 101 crossing north of SLO Creek floodplain	SLO Creek riparian floodplain occasionally subjected to creek overflows; willows and coyote brush with some spikerush; pathway would cross over Hwy 101 just north of this habitat.	Ephemeral	Poor	1.00 mi

## IV. DISCUSSION

Only one documented occurrence of California red-legged frog has been recorded within a one-mile (1.6-km) radius of the project site. Based on personnel communication with Ms. Brooke Langle (LSA Biologist) and Mr. Neil Havlik (City of San Luis Obispo), this occurrence is unusual, as the individuals found are restricted to an abandoned concrete raceway rather than natural habitat. Although SWCA has not investigated this location, the features of the concrete raceway are such that dispersal of these individuals is highly unlikely (Havlik, 2006). As a result, it appears that these individuals comprise a metapopulation.

No California red-legged frogs were observed during any of the site assessment site visits (refer to Attachment B). Although it is not fully understood why California red-legged frogs have not been observed along most of SLO Creek in the recent past, it is speculated that the minimal in-stream emergent vegetation along the creek and tributaries and limited backwater pools may make inhabitation of these areas by California red-legged frogs difficult. Secondly, SLO Creek and its tributaries support plentiful introduced predators such as bullfrog (*Rana catesbeiana*) and crayfish (Crustacea: Decapoda). Also, habitats within one mile (1.6 km) of the project boundaries are highly fragmented primarily due to agricultural use, residential development, and the presence of SR 101, South Higuera Road, and other surrounding roadways.

Despite these factors and considering the recent California red-legged frog occurrence near Highway 101 and Los Osos Valley Road, SWCA has determined that SLO Creek, its tributaries, and other aquatic areas within the study area appear to support suitable breeding and foraging habitat. It is SWCA's opinion that there is a potential for California red-legged frog occurrence within SLO Creek and/or its tributaries due to the presence of suitable habitat and documented occurrences of the species both upstream and downstream of the project site.

## V. SURVEY PROPOSAL

SWCA is requesting authorization to begin protocol California red-legged frog surveys as soon as possible, in order to complete the potential six surveys that must be conducted prior to the end of the breeding season on July 1, 2007. Surveys must be initiated no later than May 19, 2007, to make this deadline. With authorization from USFWS, SWCA proposes to conduct protocol California red-legged frog surveys at each of the ten sites identified as traversing potential California red-legged frog habitat. SWCA proposes to visually scan each of these sites and their vicinities (100 meters upstream and downstream) for frogs, larvae, and eggs, other than HA Site #9, which is a stock pond that is expected to be dry or nearly dry during the time of surveys, and surveys will be restricted to within the bermed areas of the ponds at this site. Disturbance to vegetation and turbidity in aquatic areas will be minimized to the extent practicable. Night-time surveys will be performed using 6.0-volt headlamps and binoculars to scan potential habitat areas. Survey forms and results will be compiled and incorporated into a California Red-legged Frog Survey Report for the proposed project.

The County and SWCA appreciate USFWS review of this report. We would also appreciate a timely acknowledgment of receipt upon submittal and response upon its review.

## VI. REFERENCES

- California Natural Diversity Data Base (CNDDB). 2007. Rarefind data output for the Santa Cruz, Soquel, and Watsonville West USGS 7.5-minute quadrangles and eight surrounding quadrangles. California Department of Fish and Game. Sacramento, California. January 2007 data.
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## **ATTACHMENT A**

- **Photo Documentation**





**Photo 1:**

East view of Habitat Assessment (HA) Site #1, just east of South Higuera Street. A box culvert directs runoff from a swale traversing annual grassland, continuing under the road to a stream on the opposite side of the road.

Photo taken on February 24, 2006.



**Photo 2:**

East view of HA Site #2, just west of South Higuera Street. A box culvert conveys runoff into an agricultural drainage ditch and under the road.

Photo taken on February 24, 2006.

**PHOTO DOCUMENTATION**



**Photo 3:**

South view of general vicinity of HA Site #3 at confluence of San Luis Obispo Creek with its East Fork. Site has overhanging arroyo willow cover with some emergent vegetation. One of three crossing options proposed at this location.

Photo taken on February 24, 2006.



**Photo 4:**

Southeast view of flow conditions of SLO Creek just upstream of HA Site #3.

Photo taken on February 23, 2006.

**PHOTO DOCUMENTATION**



**Photo 5:**

North view of HA Site #3, showing overhanging willow cover and some emergent vegetation of SLO Creek

Photo taken on February 24, 2006.



**Photo 6:**

Northeast view of East Fork of SLO Creek at HA Site #3, where significant erosion has occurred and pipes are exposed. There was some backwater pooling in this area at the time of the site assessment.

Photo taken on February 24,

**PHOTO DOCUMENTATION**



**Photo 7:**

West view of HA Site #4 proposed crossing, from the east side of SLO Creek a few hundred feet south of the Filipponi Reserve. Willows and walnut trees provide the overstory.

Photo taken on March 14, 2007.



**Photo 8:**

Northwest view of upstream conditions at HA Site #4. Dense vegetation grows along the banks and there is no emergent vegetation in the wetted portion of the stream channel.

Photo taken on March 14, 2007.

**PHOTO DOCUMENTATION**



**Photo 9:**

Southwest view of flow conditions through HA Site #4. Note dense vegetative cover along the banks but no emergent vegetation.

Photo taken on March 14, 2007.



**Photo 10:**

Close-up at wetted channel at HA Site #4. Water is still to slow-moving at this location with depths of 4 to 5 feet.

Photo taken on March 14, 2007.

**PHOTO DOCUMENTATION**



**Photo 11:**

East view of HA Site #5, which is the northernmost proposed crossing of SLO Creek on the Bunnell property.

Photo taken on July 11, 2006.



**Photo 12:**

East view of HA Site #5. Note slow flow conditions, lack of emergent vegetation, willow cover, and rootwads along the east bank.

Photo taken on July 11, 2006.



**Photo 13:**

East view of in-stream conditions of HA Site #6, near the southern boundary of the Bunnell property. Note glide conditions and gravel and cobble substrate.

Photo taken on January 9, 2007.



**Photo 14:**

Southeast view of downstream conditions at HA Site #6. Note lack of emergent vegetation with some overhanging willow cover.

Photo taken on January 9, 2007.

**PHOTO DOCUMENTATION**



**Photo 15:**

West view of HA Site #7 – bridge over SLO Creek near Monte Road.

Photo taken on February 23, 2006.



**Photo 16:**

Southeast view of undercut banks and in-stream conditions just downstream of HA Site #7 bridge.

Photo taken on February 23, 2006.

**PHOTO DOCUMENTATION**



**Photo 17:**

Upstream view of SLO Creek from HA Site #7 bridge.

Photo taken on February 23, 2006.



**Photo 18:**

Downstream view of SLO Creek from HA Site #7 bridge.

Photo taken on February 23, 2006.

**PHOTO DOCUMENTATION**



**Photo 19:**

East view of south side of San Luis Bay Drive Bridge over SLO Creek, at HA Site #8. Note dense willow vegetation in this area..

Photo taken on February 23, 2006.

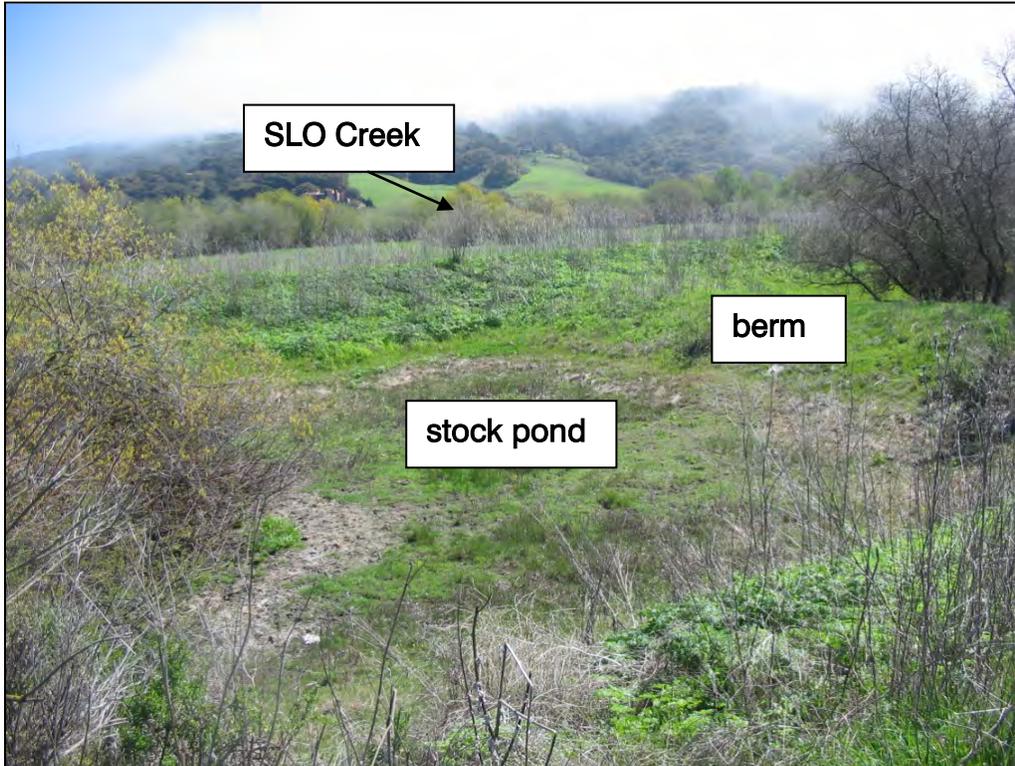


**Photo 20:**

Conditions upstream from HA Site #8, on the north (opposite) side of San Luis Bay Drive Bridge over SLO Creek.

Photo taken on February 23, 2006.

**PHOTO DOCUMENTATION**



**Photo 21:**

Southeast view of northernmost stock pond (dry) at HA Site #9. The SLO Creek corridor is in the background, located about 600 feet away.

Photo taken on March 14, 2007.

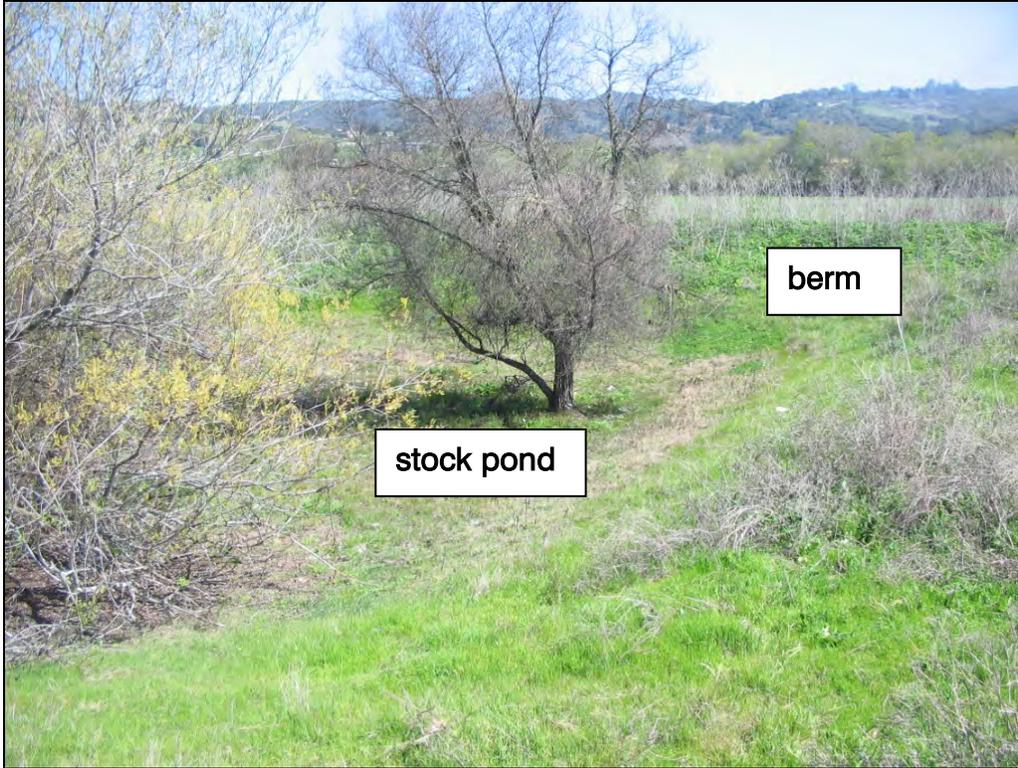


**Photo 22:**

Southeast view of central stock pond (dry) at HA Site #9. Note willow and shrub cover, but no emergent vegetation.

Photo taken on March 14, 2007.

**PHOTO DOCUMENTATION**



**Photo 23:**

Northeast view of southernmost stock pond (dry) at HA Site #9. The SLO Creek corridor is in the background.

Photo taken on March 14, 2007.



**Photo 24:**

South view of SLO Creek floodplain in the vicinity of HA Site #10. Arroyo willow cover and some spikerush occur in this area. This area was dry at the time of the site assessment

Photo taken on February 23, 2006.

**PHOTO DOCUMENTATION**

## **ATTACHMENT B**

- **Data Sheets**



**Appendix D.**  
**California Red-legged Frog Habitat Site Assessment Data Sheet**

Site Assessment reviewed by \_\_\_\_\_  
(FWS Field Office) (date) (biologist)

Date of Site Assessment: 02/24/2006  
(mm/dd/yyyy)

Site Assessment Biologists: Hoetker Geoff  
(Last name) (first name) (Last name) (first name)

Belt Travis  
(Last name) (first name) (Last name) (first name)

Site 1 (San Luis Obispo County; box culvert crossing on South Higuera Street, San Luis Obispo: UTM: Zn 10. 710.552 E. 3.901.379 N) **+**  
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S ).

**\*\*ATTACH A MAP** (include habitat types, important features, and species locations)\*\*

Proposed project name: Bob Jones Pathway  
 Brief description of proposed action:  
 The proposed project would include construction of a bikeway approximately five miles in length and would extend from the San Luis Obispo Land Conservancy Octagon Barn in San Luis Obispo to the San Luis Obispo County's Ontario Road Staging Area near Avila in California. Several crossings of San Luis Obispo Creek and tributaries are proposed.

- 1) Is this site within the current or historic range of the CRF (circle one)? YES NO
- 2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES NO  
 If yes, attach a list of all known CRF records with a map showing all locations.

**GENERAL AQUATIC HABITAT CHARACTERIZATION**

*(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)*

**POND:**

Size: N/A Maximum depth: \_\_\_\_\_

Vegetation: emergent, overhanging, dominant species: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Substrate: \_\_\_\_\_  
 \_\_\_\_\_

**Perennial or Ephemeral** (circle one). If ephemeral, date it goes dry: \_\_\_\_\_