# 3.13 BIOLOGICAL RESOURCES AND WETLANDS

This section addresses the potential impacts of the No Build Alternative and Build Alternative on biological resources and wetlands in the corridor.

## 3.13.1 REGULATORY REQUIREMENTS

Numerous federal, state, and local regulations and agencies have been enacted/created to protect biological resources. Listed below are pertinent regulations and/or oversight agencies related to biological resources and wetlands.

### Federal

#### Endangered Species Act

The ESA[1] establishes protection for species that are listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS). Sections 9 and 4(d) of the ESA prohibit "take" of endangered and threatened animal species. The USFWS has jurisdiction over wildlife and resident fish; the National Marine Fisheries Service (NOAA Fisheries) has jurisdiction over anadromous fish.[2] For plants, the ESA prohibits the removal or destruction of any endangered plant on federal land as well as destruction of an endangered plant species in non-federal areas in knowing violation of any state law. Section 7 of the ESA mandates that all federal agencies consult with the USFWS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species.

#### Migratory Bird Treaty Act

The MBTA[3] prohibits take of most species of birds and their active nests, eggs, and nestlings, without a permit from the USFWS. Activities that cause abandonment of a nest are also considered non-permitted take, prohibited by the MBTA.

[1] 16 USC 1531-1543

[2] Anadromous fish are fish that are born in freshwater, spend most of their lives in the sea, and return to fresh water to spawn. Salmon, smelt, shad, striped bass, and sturgeon are common examples. (http://www.nefsc.noaa.gov/faq/fishfaq1a.html)

[3] 16 USC 703-712

## Clean Water Act, Sections 404 and 401

Under Section 404 of the CWA[4], the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into "Waters of the United States" including wetlands. Section 401 requires a water quality certification from the state for all nationwide or individual permits issued by the USACE under Section 404. The Regional Water Quality Control Board (RWQCB) is the state agency that issues Section 401 certifications.

## Section 10 of the Rivers and Harbors Act

Section 10[5] regulates construction activities in "navigable waters" including rivers. The construction of any structure in or over any navigable water of the United States, the excavation from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The instrument of authorization is designated a Section 10 permit.

## Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA)[6] requires that wildlife conservation be given equal consideration to other features of water-resource development programs through planning, development, maintenance and coordination of wildlife conservation and rehabilitation. Wildlife resources are defined by the Act to include birds, fish, mammals and all other classes of wild animals and all types of vegetation upon which wildlife is dependent.

## Executive Order 11990, Protection of Wetlands

Executive Order (EO) 11990, Protection of Wetlands (DOT Order 5660.1A) is an overall wetland policy for all agencies managing federal lands, sponsoring federal projects, or providing federal funds to state and local projects. It requires federal agencies to follow procedures for avoidance, mitigation, and preservation, with public input, before proposing new construction in wetlands. When federal lands are proposed for lease or sale to nonfederal parties, EO 11990 requires that the lease or conveyance contain restrictions to protect and enhance the wetlands on the property. The restrictions of this executive order apply to wetlands on military

[4] 33 USC 1251-1376

[5] 33 USC 401 et seq

[6] 16 USC 661-666

installations proposed for closure. In this capacity, EO 11990 can affect the sale of federal lands with wetlands. Compliance with Section 404 permit requirements may constitute compliance with EO 11990.

### Executive Order 13112, Invasive species

EO 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species (including weeds). The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species.

## State

### California Endangered Species Act

The California Endangered Species Act (CESA)[7] prohibits the take of state-listed endangered and threatened species unless specifically authorized by the California Department of Fish and Wildlife (CDFW). The CDFW administers the CESA and authorizes take through permits or memorandums of understanding. Section 2090 of the California Fish and Wildlife requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species.

### Wildlife and Natural Areas Conservation Program

The Wildlife and Natural Areas Conservation Program of the State Fish and Wildlife code gives the CDFW the authority to create and administer wildlife areas.[8]

### Native Plant Protection Act

The Native Plant Protection Act (NPPA)[9] includes provisions that prohibit the taking of endangered or rare native plants from the wild and a salvage requirement for landowners. The CDFW administers the NPPA and generally regards as "rare" many plant species included on lists 1A, 1B and 2 of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2001).

[7] California Fish and Wildlife Code 2050 et seq

[8] California Fish and Wildlife Code Division 3, Chapter 7.5, Sections 2700-2729.

[9] California Fish and Wildlife Code Sections 1900 – 1913

### Streambed Alterations (California Fish and Wildlife Code Sections 1601-1603)

The California Fish and Wildlife Code regulates activities that interfere with the natural flow of, or substantially alter the channel, bed, or bank of a lake, river, or stream. Lakebed and streambed alteration activities are covered under Section 1602 for public and private entities. Requirements to protect the integrity of biological resources and water quality are often conditions of Streambed Alteration Agreements administered under Section 1600 to 1616.

## Local

There are no Habitat Conservation Plans in place within the project corridor.[10]

# 3.13.2 METHODS OF EVALUATION

The components of the Build Alternative would have varying potential to result in significant environmental effects, either directly or indirectly, to biological resources in the study area as described below. This section discusses how each component was evaluated.

Appendix G of the CEQA Guidelines was consulted to assist in determining whether the project would have significant impacts related to biological resources.

## Study Areas and Impact Footprints for Biological Resources

For the purposes of this evaluation, study areas were defined as the proposed work area, composed of *both* permanent and temporary impact areas, along with an additional 250-foot-wide buffer zone on all sides.

The 250-foot buffer was selected primarily, but not exclusively, for vernal pool species and wetlands that could be indirectly affected by alterations in hydrology from project construction. This buffer also serves to define an area of potential indirect effects upon species that may be affected by construction dust, noise, fuel and oil spills, and visual disturbance. These indirect effects have the potential to disrupt normal behavior patterns (e.g., disrupt nesting or foraging) or result in the exclusion of species from these areas.

[10] County of San Luis Obispo, 2011

Because these areas are generally already subject to rail operations, it is assumed that the operational indirect effects would be relatively similar to the baseline conditions.

# Biological Resource Evaluation

## Sensitive Plant and Wildlife Species and Associated Habitat

Impacts to special-status species were evaluated using a variety of government and private foundation databases. The CDFW's CNDDB records and the CNPS inventories were used to first identify all species occurring in the study area vicinity. Each impacted species was crosschecked with the USFWS and CNPS inventories to determine legal status, geographic distribution, habitat description, reported blooming period for plants, potential for occurrence in the study areas, and whether there are CNDDB records within the study areas.

The potential for occurrence of special-status species was further assessed using the land cover type data from USFS's CALVEG classification system and the California Fire and Resource Assessment Program (FRAP) to identify suitable habitat. The California Wildlife Habitat Relationship System – Life History Accounts and Range Maps were queried to determine wildlife species' range and habitat requirements. NatureServe Explorer was used to determine rare wildlife species' ranges and habitat requirements. Impacts to critical habitat for federally protected wildlife were assessed using USFWS and National Marine Fisheries Service Critical Habitat database.

Potential effects to special-status were determined based on whether or not there would be direct and/or indirect impacts to suitable habitat (i.e., land cover types suitable for the species).

## Wildlife Movement/Migration Corridors

Impacts to wildlife movement/migration corridors were identified qualitatively, wherever proposed improvements would result in new barriers within large open areas, parks and reserve areas, creeks, rivers and riparian areas in undeveloped settings.

## Jurisdictional Waters and Wetlands

Impacts to jurisdictional waters and wetlands were assessed using the USFWS's National Wetlands Inventory (NWI) for wetlands and the USGS's National Hydrography Dataset (NHD) for streams.

# 3.13.3 AFFECTED ENVIRONMENT

This section describes the biological and wetland resources present in the project corridor.

## Biological Resources and Wetlands in the Study Area

### Regional Summary

The project corridor is dominated largely by agricultural uses and urban/suburban areas in the cities of Salinas, Soledad, Paso Robles, Atascadero, San Luis Obispo, and many smaller communities. The Salinas River, a designated wildlife area, and a section of the Los Padres National Forest are each located within the project corridor. Each provides different degrees of habitat quality for plant and animal species. Wildlife may also be found in agricultural or urban/suburban areas, though to a lesser extent.

### Sensitive Vegetation Communities

Sensitive vegetation communities, groups of species, both plant and wildlife, that form communities, and wildlife habitats that are unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, state, and local government conservation programs. The maps comprising **Figure 3.13-1** depict these communities in relation to the existing railroad corridor.

#### *Riparian Communities*

**Freshwater Ponds** hold different plants and animals, depending on pond size and depth. Most permanent ponds support fish life; intermittent types typically do not. Algae, plankton, and pondweeds are typical of shallow lacustrine environments. Birds, mammals, reptiles, and amphibians use lacustrine habitats for reproduction, food, water, and cover.[11]

**Riverine** habitats are characterized by the presence of intermittent or continually running water, as in a river or stream. Open water zones provide resting and escape cover for many species of waterfowl, and habitat for aquatic mammals. Insects, such as nymphs of mayflies, caddisflies, alderflies, stoneflies, and their larvae, are

[11] Grenfell, 1988a

the most common fast stream inhabitants. Water moss and algae grow on rocks. Smaller organisms are found in slow-moving waters. The turbidity and velocity of the river have the most prominent impact on the species that may be present.[12]

**Valley Foothill Riparian** habitats are found in valleys bordered by sloping alluvial fans, lower foothills, and coastal plains. Winter-deciduous trees grow to form a canopy and subcanopy, with an understory shrub layer. Dominant species include cottonwood, California sycamore, valley oak, white alder, bozelder, wild grape, wild rose, and California blackberry.[13]

### *Terrestrial Communities*

**Annual Grassland** is the most abundant natural community in the project corridor. Where natural conditions restrict the growth of other species, exotic grasses will flourish. Exotic grass species such as wild oats, various Bromes, Foxtail Fescue, and Kentucky Bluegrass are common in these areas.[14]

**Blue Oak Woodland** communities often include California juniper and various small shrubs, in addition to the abundant blue oak trees. The term "woodland" is used instead of "forest" because woodlands tend to be more open and sunlit than forests. Blue oak woodlands are typically associated with shallow, rocky, infertile, well-drained soils in dry, hilly terrain. **Blue Oak-Foothill Pine** is a similar natural community found at higher elevations.[15]

**Coastal Oak Woodland** is typically found within a 50-mile radius of the coast, often in drainages in ravines between grassy hillsides. Fog is common in these areas, though soil most often remains too dry to support a forest. In addition to coast live oak trees, California blackberry, creeping snowberry, toyon, and poison oak are commonly present. Wildfire is an intrinsic part of coastal live oak woodland ecology.[16]

**Coastal Scrub** is an upland vegetation community characterized by low soft-leaved, drought-deciduous shrubs. Coastal scrub is typically found on dry sites and steep slopes, providing habitat for many endangered and threatened species.[17]

---

[12] Grenfell, 1988b

[13] Grenfell, 1988c

[14] US Forest Service, 2009

[15] Ritter, 1998

[16] Cal Poly Land, n.d.

[17] Caltrans, 2007, p. 3.13-6

**Mixed Chaparral** is a mix of fully woody and sometimes semi-woody, low to mid-elevation chaparral and coastal sage scrub species. Chaparral is typically dominated by drought-tolerant shrubs with hard evergreen leaves.[18]

**Valley Oak Woodland** is located on low to moderate slopes at elevations below 4,000 feet. Valley Oaks are large, winter-deciduous trees.[19]

## Non-Sensitive Land Use Types[20]

**Urban land** includes developed areas near towns and cities. This land can include any combination or residential, commercial, or public uses.

**Barren land** refers to non-urban, non-agricultural, public or private land that is not under special protection under relevant state or federal laws.

**Cropland** includes all agricultural lands, whether for grazing or production of crops. In this section, no distinction is made between various forms of cropland. For additional information on agricultural resources, see **Section 3.7, Agricultural and Forest Resources**.

## Sensitive Plant Species

Sensitive plant species include those species that have been identified for special status and/or recognition by federal and state resource agencies, as well as relevant private organizations, due to concerns of documented or perceived decline or limitation of population size or geographical extent. **Table 3.13-1** lists the 55 species with potential to occur in the study area, per the CNDDB. Of these 55 species, a total of 8 are known or expected to occur in the study area.

[18] US Forest Service, 2009

[19] US Forest Service, 2009

[20] Non-sensitive land use types are considered to have a low potential of providing habitat for state of federally protected species. Regular maintenance of croplands generally make them unattractive as potential habitat.

Table 3.13-1 Special-Status Plant Species Potentially Occurring in Coast Corridor Study Area

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Abbott's bush-mallow<br>(Malacothamnus abbottii) | –/–/1B.1 | Known from Monterey County. Occurs in riparian scrub; 135-490 meters. Blooms May-Oct. | Low. Suitable habitat occur in one Study Area; and several occurrences in the region | No |
| Blochman's dudleya<br>(Dudleya blochmaniae ssp. blochmaniae) | –/–/1B.1 | Known from Coastal California from San Luis Obispo County to San Diego County; Baja California. Occurs on clay soils, rock outcrops, in coastal scrub and adjacent grasslands, often on serpentinite; 5-450 meters. Blooms Apr-Jun. | Moderate. Suitable habitat may be present if rocky microhabitat areas are present within grassland and shrubland habitats and several occurrences in the region | No |
| Brewer's spineflower<br>(Chorizanthe breweri) | –/–/1B.3 | Known from South Coast Ranges, San Luis Obispo County. Occurs on rocky or gravelly serpentinite soils in oak woodland, chaparral, and coastal scrub; 45-800 meters. Blooms Apr-Aug. | High. Suitable rocky or gravelly serpentinite substrates may be present in Study Areas and many occurrences in the region | No |
| Caper-fruited tropidocarpum<br>(Tropidocarpum capparideum) | –/–/1B.1 | Historically known from the northwest San Joaquin Valley and adjacent Coast Range foothills; currently known from Fresno, Monterey, and San Luis Obispo Counties. Occurs in grasslands on alkaline hills; below 455 meters. Blooms Mar-Apr. | Low. Could occur in one Study Area if suitable alkaline soils are present; one occurrence in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Chaparral ragwort<br>(Senecio aphanactis) | –/–/2B.2 | Known from Scattered locations in central western and southwestern California, from Alameda County to San Diego County. Occurs in oak woodland, coastal scrub, chaparral, open sandy or rocky areas, sometimes on alkaline soils; 15-800 meters. Blooms Jan-Apr. | Moderate. Suitable habitat present, and several occurrences in region | No |
| Chorro Creek bog thistle (aka San Luis Obispo fountain thistle)<br>(Cirsium fontinale var. obispoense) | E/E/1B.2 | Known from Endemic to San Luis Obispo County. Occurs in Serpentinite seeps, drainages, and stream banks in chaparral, oak woodlands, coastal scrub, annual grassland; 35-380 meters. Blooms Feb-Jul, less often Aug-Sep. | Moderate. Suitable habitat may be present in one Study Areas if alkaline seeps occur, several occurrences known in region | No |
| Congdon's tarplant<br>(Centromadia parryi ssp. congdonii) | –/–/1B.1 | Known from East San Francisco Bay Area, Salinas Valley, Los Osos Valley. Occurs in alkaline soils in annual grassland, on lower slopes, flats, and swales, sometimes on saline soils; below 230 meters. Blooms May-Oct, less often Nov. | High. Suitable habitat may be present if alkaline soils occur in Study Areas, one occurrence known in region is in a Study Area | Yes |
| Cuesta Pass checkerbloom<br>(Sidalcea hickmanii ssp. anomala) | –/R/1B.2 | Known from Cuesta Ridge, San Luis Obispo County. Occurs on serpentinite soils in chaparral; 600-800 meters. Blooms May-Jun. | None. Occurs at higher elevations than Study Areas | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Cuesta Ridge thistle<br>(Cirsium occidentale var. lucianum) | –/–/1B.2 | Known only from fewer than 10 extant occurrences in the southern Santa Lucia Mtns. Of San Luis Obispo County. Occurs on serpentinite, often steep rocky slopes and disturbed roadsides, openings in chaparral; 500-750 meters. Blooms Apr-Jun. | None. Occurs at higher elevations than Study Areas | No |
| Davidson's bush-mallow<br>(Malacothamnus davidsonii) | –/–/1B.2 | Known from Los Angeles, Monterey, Santa Clara, San Luis Obispo, and San Mateo Counties. Occurs in coastal scrub, chaparral, oak woodland, and riparian woodland in sandy washes; 185-855 meters. Blooms Jun-Jan. | Moderate. Suitable habitat is present, two occurrences in region | No |
| Dune larkspur<br>(Delphinium parryi ssp. blochmaniae) | –/–/1B.2 | Known from Coastal areas of Santa Barbara, San Luis Obispo, and Ventura Counties. Occurs in maritime chaparral, coastal dunes; below 200 meters. Blooms Apr-Jun. | Low. Suitable habitat may be present if maritime chaparral occurs in Study Areas, one occurrence in region | No |
| Dwarf calycadenia<br>(Calycadenia villosa) | –/–/1B.1 | Known from about 20 occurrences in interior foothills of South Coast Ranges in Fresno, Kern*, Monterey, Santa Barbara, and San Luis Obispo Counties. Occurs on rocky, fine soils in chaparral, oak woodland, meadows and seeps, annual grassland; 240-1,350 meters. Blooms May-Oct. | Moderate. Suitable habitat may be present if suitable soil type occurs, two occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Dwarf soaproot (Chlorogalum pomeridianum var. minus) | –/–/1B.2 | Known from widely disjunct populations in Tehama, Colusa, Lake, Sonoma, and San Luis Obispo counties. Occurs in openings in chaparral, annual grasslands, on serpentinite outcrops; 305-1000 meters. Blooms May-Aug. | Moderate. Suitable habitat may be present if serpentinite soil type occurs, two occurrences in region, including one in Study Area | Yes |
| Eastwood's larkspur (Delphinium parryi ssp. eastwoodiae) | –/–/1B.2 | Known from Coastal San Luis Obispo County. Occurs on serpentinite substrates in openings in chaparral, annual grassland; 75-500 meters. Blooms Mar, less often Feb. | Moderate. Suitable habitat may be present if serpentinite soil type occurs, several occurrences in region | No |
| Hardham's evening-primrose (Camissoniopsis hardhamiae) | –/–/1B.2 | Known from South Coast Ranges, Monterey and San Luis Obispo Counties. Occurs on sandy, decomposed carbonate in disturbed or burned areas in chaparral, oak woodland; 140-945 meters. Blooms Mar-May. | High. Suitable habitat may be present if suitable soil type and microhabitats occur, several occurrences in region, including one in Study Area | Yes |
| Hooked popcorn-flower (Plagiobothrys uncinatus) | –/–/1B.2 | Known from Monterey, San Benito, Santa Clara, San Luis Obispo, and Stanislaus Counties. Occurs in Chaparral on sandy soils, oak woodland, annual grassland; 300-760 meters. Blooms Apr-May. | Moderate. Suitable habitat is present, and two occurrences in region | No |
| Hoover's bent grass (Agrostis hooveri) | –/–/1B.2 | Known from Southern central coast, southern outer South Coast Ranges: Santa Barbara, San Luis Obispo Counties. Occurs usually in sandy soils in chaparral, closed cone forest, oak woodland, annual grassland; 6-610 meters. Blooms Apr-Jul. | Moderate. Suitable habitat is present, some occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Hutchinson's larkspur (Delphinium hutchinsoniae) | –/–/1B.2 | Known from Monterey County. Occurs in broadleaved upland forest, chaparral, coastal prairie, coastal scrub; below 427 meters. Blooms Mar-Jun. | Moderate. Suitable habitat is present, only one occurrences in region. | No |
| Indian Valley bush-mallow (Malacothamnus aboriginum) | –/–/1B.2 | Known from Inner South Coast Ranges: Fresno, Kings, Monterey, San Benito, Santa Clara, and San Mateo Counties. Occurs on granitic rocky areas in chaparral and oak woodland, often in burned areas; 150-1700 meters. Blooms Apr-Oct. | Moderate. Suitable habitat may be present if granitic rocky microhabitat is present; several occurrences in region | No |
| Indian Valley spineflower (Aristocapsa insignis) | –/–/1B.2 | Known from Inner South Coast Range, Monterey and San Luis Obispo Counties. Occurs on sandy soils in oak woodland; 300-600 meters. Blooms May-Sep. | Moderate. Suitable habitat may be present if granitic rocky microhabitat is present; several occurrences in region | No |
| Jared's pepper-grass (Lepidium jaredii ssp. jaredii) | –/–/1B.2 | Known from Inner South Coast Ranges, Carrizo Plain and western San Joaquin Valley from Kern County south to San Luis Obispo County. Occurs in alkaline, adobe soils in grassland, in sinks, alluvial fans, and washes; 335-1005 meters. Blooms Mar-May. | Low. Suitable habitat may be present if alkaline adobe soils occur in Study Areas, only one occurrence in region | No |
| Jolon clarkia (Clarkia jolonensis) | –/–/1B.2 | Known from Northern outer South Coast Ranges, Monterey County. Occurs in chaparral, oak woodland, coastal scrub; 20-660 meters. Blooms Apr-Jun. | High. Suitable habitat is present, and several occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Jones' layia<br>(Layia jonesii) | –/–/1B.2 | Known from Coastal Monterey and San Luis Obispo Counties. Occurs on clay soil or serpentinite outcrops in chaparral and annual grasslands; 5-400 meters. Blooms Mar-May. | Low. Suitable habitat may be present in one Study Area if suitable soil substrates are present; several occurrences in region | No |
| Kellogg's horkelia<br>(Horkelia cuneata var. sericea) | –/–/1B.1 | Known from Coastal California from San Mateo to Santa Barbara Counties, formerly further north. Occurs in openings in coastal scrub, maritime chaparral, on sandy or gravelly soils; 10-200 meters. Blooms Apr-Sep. | None. No suitable habitat is present | No |
| La Panza mariposa lily (formerly San Luis Obispo mariposa lily)<br>(Calochortus simulans) | –/–/1B.3 | Known from Southeastern outer South Coast Ranges with occurrences in Santa Barbara and San Luis Obispo Counties. Occurs in sandy, often granitic, sometimes serpentine soils in chaparral, oak woodland, annual grassland; 395-1,100 meters. Blooms Apr-Jun. | Low. Suitable habitat may be present in one Study Area if suitable sandy soils are present; several occurrences in region | No |
| Lemmon's jewelflower<br>(Caulanthus lemmonii) | –/–/1B.2 | Known from Southeast San Francisco Bay Area, south through the South Coast Ranges and adjacent San Joaquin Valley to Ventura County. Occurs on dry, exposed slopes in grasslands and pinyon-juniper woodland; 80-1220 meters. Blooms Mar-May. | High. Suitable habitat is present, and several occurrences in region | Yes |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Mesa horkelia<br>(Horkelia cuneata var. puberula) | –/–/1B.1 | Known from Los Angeles, Orange, Santa Barbara, San Luis Obispo, and Ventura Counties; extirpated from Riverside, San Bernardino, and San Diego Counties. Occurs on sandy or gravelly soils in oak woodland, maritime chaparral, and coastal scrub; 70-810 meters. Blooms Feb-Jul, occasionally Sep. | Low. The CNDDB polygon for this species overlaps the study area but there is likely no suitable habitat (sandy or gravelly soils) in the study area ; | Yes |
| Miles' milk-vetch<br>(Astragalus didymocarpus var. milesianus) | –/–/1B.2 | Known from Santa Barbara, San Luis Obispo, and Ventura Counties. Occurs on clay soils in coastal scrub; 20-90 meters. Blooms Mar-Jun. | None. Plant occurs at lower elevations than Study Areas | No |
| Monterey spineflower<br>(Chorizanthe pungens var. pungens) | T/–/1B.2 | Known from Northern and Central Coast, San Francisco Bay in Monterey, Santa Cruz, and San Luis Obispo* Counties. Occurs in sandy areas in maritime chaparral, oak woodland, coastal dunes, coastal scrub, annual grassland; 3-450 meters. Blooms Apr-Jun, less often Jul-Aug. | Moderate. Suitable habitat may be present if sandy soils occur in Study Areas, several occurrences in region | No |
| Most beautiful jewel-flower<br>(Streptanthus albidus ssp. peramoenus) | –/–/1B.2 | Known from Eastern San Francisco Bay area, central outer South Coast Ranges in Alameda, Contra Costa, Monterey, Santa Barbara, Santa Clara, San Luis Obispo, and Stanislaus Counties. Occurs on serpentinite outcrops in chaparral, oak woodland, annual grassland, on ridges and slopes; 94-1000 meters. Blooms Apr-Sep, less often Mar and Oct | Moderate. Suitable habitat may be present if serpentine outcrops occur in Study Areas, several occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Mouse-gray dudleya (formerly San Luis Obispo dudleya)<br>(Dudleya abramsii ssp. murina) | –/–/1B.3 | Known from San Luis Obispo County. Occurs on serpentinite in chaparral, oak woodland, annual grassland; 90-440 meters. Blooms May-Jun. | Moderate. Suitable habitat may be present if serpentinite substrates occur in Study Areas, many occurrences in region | No |
| Pale-yellow layia<br>(Layia heterotricha) | –/–/1B.1 | Known from Interior foothills of the South Coast Ranges, Transverse Ranges, and Tehachapi Mountains in Fresno, Kings*, Kern*, Monterey*, Santa Barbara, San Luis Obispo*, Ventura, and possibly San Benito Counties. Occurs on alkaline or clay soils in coastal scrub, oak woodland, pinyon-juniper woodland, annual grassland in open areas; 300-1705 meters. Blooms Mar-Jun. | Moderate. Suitable habitat may be present if suitable substrates occur in Study Areas, several occurrences in region | Yes |
| Palmer's monardella<br>(Monardella palmeri) | –/–/1B.2 | Known from Monterey and San Luis Obispo Counties. Occurs on serpentinite in chaparral and oak woodland; 200-800 meters. Blooms Jun-Aug. | Moderate. Suitable habitat may be present if serpentinite substrates occur in Study Areas, several occurrences in region | No |
| Pecho manzanita<br>(Arctostaphylos pechoensis) | –/–/1B.2 | Known from Pecho Hills in coastal mountains of San Luis Obispo County, also Santa Barbara County. Occurs on siliceous shale in chaparral, coastal scrub; 125-850 meters. Blooms Nov-Mar. | Low. Suitable habitat may be present in one Study Area if silaceous shale occurs, only one occurrence in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Pinnacles buckwheat (Eriogonum nortonii) | –/–/1B.3 | Known from Restricted to Gabilan Range of Monterey and San Benito Counties. Occurs on sandy soils in chaparral, annual grassland, often on recent burns; 300-975 meters. Blooms May-Aug(Sep). | None. Plant occurs at higher elevations than Study Areas | No |
| Recurved larkspur (Delphinium recurvatum) | –/–/1B.2 | Known from Central Valley from Colusa* to Kern Counties. Occurs on alkaline soils in annual grassland, saltbush scrub, oak woodland; 3-790 meters. Blooms Mar-Jun. | Low. Suitable habitat may be present in two Study Area if alkaline soils occur, only one occurrence in region | No |
| Robust spineflower (Chorizanthe robusta var. robusta) | E/–/1B.1 | Known from Coastal central California, from Marin to Monterey County. Occurs on sandy or gravelly areas in coastal scrub, coastal dunes, and openings in oak woodland; 3-300 meters. Blooms Apr-Sep. | Low. Suitable habitat may be present in one Study Area if suitable sandy openings occur, only one occurrence in region | No |
| Round-leaved filaree (California macrophylla) | –/–/1B.1 | Known from Scattered occurrences in the Great Valley, southern North Coast Ranges, San Francisco Bay Area, South Coast Ranges, Channel Islands, Transverse Ranges, and Peninsular Ranges. Occurs in oak woodland, annual grassland on clay soils; 15-1,200 meters. Blooms Mar-May. | Moderate. Suitable habitat may be present if suitable soil types occur, two occurrences in region | No |
| San Antonio collinsia (Collinsia antonina) | –/–/1B.2 | Known from Outer South Coast Ranges in Monterey County. Occurs in chaparral and oak woodland; 280-365 meters. Blooms Mar-May. | None. Plant occurs at higher elevations than Study Areas | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| San Benito fritillary (Fritillaria viridea) | –/–/1B.2 | Known from Central Coast Ranges in Fresno, San Benito, Monterey, and San Luis Obispo Counties. Occurs on serpentinite outcrops, on slopes in chaparral; 200-1525 meters. Blooms Mar-May. | Moderate. Suitable habitat may be present in one Study Area if serpentinite substrates occur, one occurrence in region | Yes |
| San Luis mariposa lily (Calochortus obispoensis) | –/–/1B.2 | Known from Outer South Coast Range in San Luis Obispo County. Occurs often on serpentine soils in chaparral, coastal scrub, annual grassland; 50-730 meters. Blooms May-Jul. | High. Suitable habitat is present, many occurrences in region | No |
| San Luis Obispo County lupine (Lupinus ludovicianus) | –/–/1B.2 | Endemic to San Luis Obispo County. Occurs on sandstone or sandy soil in oak woodland, openings in chaparral or pine-oak woodland on carbonate substrate; 50-525 meters. Blooms Apr-Jul. | Low. Suitable habitat may be present if sandstone or sandy soils are present in Study Areas, only one occurrence in region | No |
| San Luis Obispo owl's-clover (Castilleja densiflora var. obispoensis) | –/–/1B.2 | Endemic to San Luis Obispo County. Occurs in annual grassland; 10-400 meters. Blooms Mar-May. | None. No suitable habitat is present | No |
| San Luis Obispo sedge (Carex obispoensis) | –/–/1B.2 | Known from Outer South Coast Ranges in Monterey, San Diego, and San Luis Obispo County. Occurs often on serpentine seeps, sometimes gabbro soils in chaparral, coastal prairie, coastal scrub, and annual grassland; 10-820 meters. Blooms Apr-Jun. | High. Suitable habitat is present, several occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Santa Cruz microseris (Stebbinsoseris decipiens) | –/–/1B.2 | Known from Coastal California: scattered occurrences from Marin County to Monterey County. Occurs in mixed oak forest, chaparral, annual grasslands, coastal prairie, coastal scrub, and open grassy areas in other habitat types, sometimes on serpentinite; 10-500 meters. Blooms Apr-May. | Moderate. Suitable habitat is present, one occurrence in region | No |
| Santa Cruz Mountains pussypaws (Calyptridium parryi var. hesseae) | –/–/1B.1 | Known from Southern San Francisco Bay, Mount Hamilton, Santa Cruz Mountains, northern inner South Coast Ranges, Monterey, San Benito, Santa Clara, San Luis Obispo, Stanislaus, and Santa Cruz Counties. Occurs in sandy or gravelly, openings in chaparral, oak woodland; 305-1530 meters. Blooms May-Aug. | Low. Suitable habitat may be present if suitable microhabitat conditions occur in Study Areas, one occurrence in region | No |
| Santa Lucia dwarf rush (Juncus luciensis) | –/–/1B.2 | Known from Lassen, Monterey, Modoc, Napa, Nevada, Placer, Plumas, Riverside, Santa Barbara, San Benito, San Diego, Shasta, San Luis Obispo Counties. Occurs in chaparral, meadows and seeps, vernal pools; 300-2040 meters. Blooms Apr-Jul. | Moderate. Suitable habitat is present, two occurrences in region | No |
| Santa Lucia manzanita (Arctostaphylos luciana) | –/–/1B.2 | Endemic to Santa Lucia Range in San Luis Obispo County. Occurs on shale outcrops in chaparral and oak woodland; 350-850 meters. Blooms Dec-Mar. | Moderate. Suitable habitat may be present if shale outcrops occur in Study Areas, several occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Santa Margarita manzanita<br>(Arctostaphylos pilosula) | –/–/1B.2 | Known from South Coast Ranges: near Santa Margarita in Monterey and San Luis Obispo Counties. Occurs on outcrops and slopes in chaparral, oak woodland; 170-1,100 meters. Blooms Dec-May. | High. Suitable habitat is present, several occurrences in region | Yes |
| Shining navarretia<br>(Navarretia nigelliformis ssp. radians) | –/–/1B.2 | Known from Interior foothills of South Coast Ranges from Merced County to San Luis Obispo County. Occurs in Mesic areas with heavy clay soils, in swales and clay flats, in oak woodland, grassland; 76-1000 meters. Blooms Apr-Jul. | High. Suitable habitat is present, many occurrences in region | No |
| Straight-awned spineflower<br>(Chorizanthe rectispina) | –/–/1B.3 | Known from Outer South Coast Ranges: Monterey, Santa Barbara, and San Luis Obispo Counties. Occurs often on granitic soils in chaparral, coastal scrub, oak woodland; 85-1,035 meters. Blooms Apr-Jul. | High. Suitable habitat is present, several occurrences in region | No |
| Toro manzanita (formerly Monterey manzanita)<br>(Arctostaphylos montereyensis5) | –/–/1B.2 | Known from Central Coast, Fort Ord, northern outer South Coast Ranges, Toro Mountain, northwestern Monterey County and San Luis Obispo County. Occurs on sandy soils in maritime chaparral, oak woodland, and coastal scrub; 30-730 meters. Blooms Feb-Mar. | Low. Suitable habitat may be present in one Study Area if suitable sandy soils occur, two occurrences in region | No |

| Common and Scientific Names | Status[a] (Federal/State/ Other) | Geographic Distribution and General Habitat Description [b] | Species Potential to Occur in Study Area | Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Umbrella larkspur (Delphinium umbraculorum) | –/–/1B.3 | Known from Monterey, Santa Barbara, San Luis Obispo, and Ventura Counties. Occurs in moist areas in oak woodland; 400-1600 meters. Blooms Apr-Jun. | None. No suitable habitat is present | No |
| woodland woolythreads (Monolopia gracilens) | –/–/1B.2 | Known from Alameda, Contra Costa, Monterey, San Luis Obispo, Santa Clara, Santa Cruz, and San Mateo Counties. Occurs on serpentinite soils in openings in mixed oak woodland, chaparral, oak woodland, and annual grassland; 100-1200 meters. Blooms Mar-Jul, less often Feb. | Low. Suitable habitat may be present in Study Areas if serpentinite soils and suitable microhabitat conditions occur, one occurrence in region | No |
| Yellow-flowered eriastrum (Eriastrum luteum) | –/–/1B.2 | Known from Monterey and San Luis Obispo Counties. Occurs on sandy or gravelly soils in mixed oak forest, chaparral, oak woodland; 290-1000 meters. Blooms May-Jun. | Moderate. Suitable habitat may be present in Study Areas if suitable soil types occur, several occurrences in region | No |

Source: ICF, 2013

[a] **Status explanations:**

**Federal**

E = Listed as endangered under the federal ESA.
T = Listed as threatened under the federal ESA.
— = No listing status.

**State**

E = Listed as endangered under CESA.
T = Listed as threatened under CESA.
R =Listed as rare under the CESA. This category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation.
— = No listing status.

**Other**

1B = CRPR List 1B species: rare, threatened, or endangered; rare in California and elsewhere.
2B = CRPR List 2B species: rare, threatened, or endangered; rare in California but not elsewhere.
.1 = seriously endangered in California (over 80% of occurrences threatened–high degree and immediacy of threat).
.2 = fairly endangered in California (20-80% occurrences threatened).
.3 = not very endangered in California (<20% occurrences threatened).

[b] **Distribution information**

* = presumed extirpated in that county.
? = status within county unknown.

## Sensitive Wildlife Species

Sensitive wildlife species include those species that have been identified for special status and/or recognition by federal and state resource agencies due to concerns of documented or perceived decline or limitation of population size or geographical extent. Wildlife that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations are all considered special-status. Special status species include those species listed in state and or/federal threatened or endangered species records under FESA or CESA, those considered as candidates for listening, and species recognized by USFWS and or CDFG as California species of special concern.

According to a search of the CNDDB, the study area may contain potential habitat for more than 45 sensitive species of fish, invertebrates, birds, amphibians, reptiles, and mammals. **Table 3.13-2** identifies each of these species and evaluates the likelihood of their presence in the study area given particular conditions.

Table 3.13-2 Special-Status Wildlife Species Potentially Occurring in Coast Corridor Study Area

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| **Fish** | | | | |
| Steelhead - south/central California coast DPS<br>(Oncorhynchus mykiss irideus) | T/SSC/- | Occurs in rivers and creeks from the Pajaro River south to, but not including, the Santa Maria River. | High. Study areas in the range of the species and the Salinas River and tributaries provide habitat for this species. | Not in CNDDB but species is noted to occur in the Salinas River according to the National Marine Fisheries Service (2007)b |
| **Invertebrates** | | | | |
| Atascadero June beetle<br>(Polyphylla nubile) | -/-/- | Known only from sand dunes in San Luis Obispo County | None. No suitable habitat in the Study Areas. | No |
| California linderiella<br>(Linderiella occidentalis) | -/-/- | Central Valley of California and central coastal California. Vernal pools, swales, and other ephemeral wetlands found in annual grasslands. | Moderate. Potential habitat in annual grasslands. Species known to occur in region. | No |
| Conservancy fairy shrimp<br>(Branchinecta conservation) | E/-/- | Disjunct occurrences in Butte, Tehama, Glenn, Placer, Yolo, Solano, Merced, Stanislaus, and Ventura counties. Found in vernal pools in swales. Most records are in large turbid pools yet they have been found in a few instances in smaller pools with relatively clear water. | Low. Potential habitat in annual grasslands. Species not known to occur in region. | No |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Lompoc grasshopper (Trimerotropis occulens) | -/-/- | Occurs in San Luis Obispo and Santa Barbara counties. Little is known about the species habitat requirements. CNDDB records indicate that the species is found on exposed, weathered shale. | Low. Potential habitat in annual grasslands and one occurrence in the region. | No |
| San Luis Obispo pyrg (Pyrgulopsis taylori) | -/-/- | Occurs in San Luis Obispo County. Snail species found in freshwater habitats, typically springs and creeks. | Moderate. Potential habitat in streams and a few occurrences in the region. | No |
| Vernal pool fairy shrimp (Branchinecta lynchi) | T/-/- | Occurs in the Central Valley from Shasta County to Tulare County and the central and southern Coast Ranges from northern Solano County to Ventura County. Occurs in vernal pools and seasonal wetlands found in annual grasslands. | Moderate. Potential habitat in annual grasslands. Several occurrences in the region. | No |
| **Amphibians** | | | | |
| California red-legged frog (Rana draytonii) | T/SSC/- | Occurs primarily in the foothills of the central Coast Ranges, with isolated populations in the Sierra Nevada. Ponds and streams with a minimum 11–20 weeks of water for larval development, and upland refugia for aestivation. Recovery Plan identifies Diablo Range and Salinas Valley as part of historic range. | High. Suitable habitat in Study Areas and numerous occurrences in the region. | No |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| California tiger salamander (central California)<br>(Ambystoma californiense) | T/T/- | Central Valley from Sacramento County south to Kern County, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from San Francisco Bay area south to northeastern San Luis Obispo County. Small ponds or vernal pools in annual grasslands and oak woodlands for aquatic habitat; rodent burrows or soil crevices for adult cover during the summer. | Moderate. Suitable habitat in Study Areas and a few occurrences in the region. | No |
| Coast Range newt<br>Taricha torosa | -/SSC/- | Occurs from Mendocino County south through the Coast Range and on into coastal areas of southern California. Found in woodlands that are interspersed with grassland and chaparral. Breeding takes place in streams, ponds, and lakes. | High. Suitable habitat in Study Areas and several occurrences in the region. | No |
| Foothill yellow-legged frog<br>Rana boylii | -/SSC/- | Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet. Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby. | Moderate. Potentially suitable habitat in Study Area and a few occurrences in the region. | No |
| Western spadefoot toad<br>Spea hammondii | -/SSC/- | Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California. Seasonal streams and seasonal wetlands, such as vernal pools in annual grasslands. | High. Suitable habitat in Study Areas and numerous occurrences in the region. | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| **Reptiles** | | | | |
| Black legless lizard<br>Anniella pulchra nigra | -/SSC/- | Subspecies currently distributed in Monterey County between Salinas and Carmel Rivers. Associated with a variety of vegetation types on sandy soils with accessible moisture. | Low. Study areas outside species known range. | No |
| Coast horned lizard<br>Phrynosoma blainvillii | -/SSC/- | Occurs in select regions of the Coast Range, the Sierra Nevada foothills, parts of the Central Valley, South Coast, Tehacapi, Transverse, and Peninsular ranges. Inhabits sandy areas such as washes, flood plains, or windblown deposits. Usually associated with grassland, open chaparral, open coniferous forest, coastal sage scrub, and broadleaf woodlands. | Moderate. Suitable habitat in Study Areas and some occurrences in the region. | No |
| San Joaquin whipsnake<br>Masticophis flagellum ruddocki | -/SSC/- | Occurs in the southern half of the Central Valley and coast ranges south of San Francisco. Occur in open terrain and most abundant in grasslands, desert, scrub, and chaparral. | High. Suitable habitat in Study Area and numerous occurrences in region. | Yes |
| Silvery legless lizard<br>Anniella pulchra pulchra | -/SSC/- | Patchily distributed from Antioch south along the coast, foothills, San Joaquin Valley, and southern Sierra Nevada. Associated with a variety of vegetation types on sandy soils with accessible moisture. | Moderate. Suitable habitat in Study Areas | No |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Two-striped garter snake<br>Thamnophis hammondii | -/SSC/- | Occurs from the Diablo Range and the Salinas Valley south along the South Coast and Transverse ranges to the Mexican border, and on Catalina Island. Associated with permanent and semi-permanent bodies of water in a variety of habitats. Forages primarily along streams and uses mammal burrows and crevices at times for upland cover. | Moderate. Suitable habitat in Study Areas and one occurrence in the region. Species likely not typically reported to CNDDB. | No |
| Western pond turtle<br>Emys marmorata | -/SSC/- | Range spans across California west of the Sierra-Cascade crest, below 5,000 feet in elevation. Forages in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; nests in nearby uplands with low, sparse vegetation. | High. Suitable habitat in Study Areas and numerous occurrences in region. | Yes |
| **Birds** | | | | |
| American peregrine falcon<br>Falco peregrinus anatum | D/D(FP)/BCC | Permanent resident along the north and south Coast Ranges. May summer in the Cascade and Klamath Ranges and through the Sierra Nevada to Madera County. Winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range. Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large prey populations | Low. The CNDDB polygon for this species overlaps the study area but there is likely no suitable nesting habitat (cliffs) in the study areas. | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Bank swallow<br>Riparia riparia | -/T/- | Occurs along the Sacramento River from Tahama County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley; and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties. Small populations near the coast from San Francisco County to Monterey County. Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam. | High. There are records for colonies along the Salinas River. Portions of the study areas may include suitable habitat. | Yes |
| Burrowing owl<br>Athene cunicularia | -/SSC | Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast. Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows | High. Suitable habitat in Study Areas and numerous occurrences in region. | No |
| California condor<br>Gymnogyps californianus | E/E/- | Populations exist in central and southern California, northern Arizona, and southern Utah, as well as northern Baja California. Species nests primarily in cavities located on steep rock formations or in the burned out hollows of old-growth conifers with less typical nesting occurring on cliff ledges, cupped broken tops of old-growth conifers, and nests of other species. Forage widely in open terrain of foothill grassland and oak savanna habitats. | Low. No suitable nesting habitat in the Study Areas (cliffs or old growth trees) but species could forage in Study Areas. CNDBB record polygon is large and actual nesting habitat is far removed from the Study Areas. | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| California horned lark<br>Eremophila alpestris actia | -/-/WL | Year-round range spans most of lowland California. Nests and forages in open habitats with sparse vegetation, including grasslands and fallow agricultural fields. | Moderate. Suitable habitat is present and some occurrences in the region. | No |
| California least tern<br>Sternula antillarum browni | E/E(FP)/- | The Pacific Coast from San Francisco to Baja California; winters in Mexico; when feeding, follows schools of fish and is sometimes seen as far north as southern Oregon. Prefers undisturbed nest sites on open or sparsely vegetated, sandy, or gravelly shores on beaches or near shallow-water estuaries where it often feeds; has reportedly also nested on landfills and paved areas. | None. No suitable habitat in the Study Areas. | No |
| Ferruginous hawk<br>Buteo regalis | -/-/BCC,WL | Winter range spans most of California except the higher elevations of the Sierra Nevada and northern Coast Ranges; does not nest in California. Forages most commonly in grasslands and shrublands; also forages in agricultural fields. | Moderate. Suitable winter foraging habitat present. A few records in the region. | No |
| Golden eagle<br>*Aquila chrysaetos* | -/FP/BCC,WL | Foothills and mountains throughout California. Uncommon nonbreeding visitor to lowlands such as the Central Valley. Nest on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals. | Low-Moderate. Could nest in tall trees in Study Areas if present but typical nesting habitat not likely present. Suitable foraging habitat is present | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Grasshopper sparrow<br>*Ammodramus savannarum* | -/SSC/- | Breeding range spans much of the Central Valley and California coast, but populations are typically localized and disjunct; most individuals migrate, although some may be present year-round. Nests and forages in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs. | Low-Moderate. Suitable habitat present but only one occurrence in the region. | No |
| Great blue heron<br>*Ardea herodias* | -/-/- | Year-round range spans most of California except the eastern portion of the State and the highest elevations; winter range expands to include eastern California. Nests colonially in tall trees; forages in freshwater and saline marshes, shallow open water, and occasionally cropland or low, open upland habitats, such as pastures. | High. Suitable foraging and nesting habitat is present. Only one rookery reported in the region, yet species typically goes unreported. | No |
| Least Bell's vireo<br>*Vireo bellii pusillus* | E/E/- | Formerly a common and widespread summer resident throughout Sacramento and San Joaquin valleys, and in the coastal valleys and foothills from Santa Clara County south, but its numbers have drastically declined, and the species has vanished from much of its California range. Nests and roosts in low riparian thickets of willows and shrubs, usually near water but sometimes along dry, intermittent streams; other associated vegetation includes cottonwood trees, blackberry, mulefat, and mesquite (in desert). Occurred historically in the Salinas Valley. There are CNDDB records around Paso Robles. | Low-Moderate. Suitable habitat is present. Species is rare but there are recent sightings in the region. | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Merlin<br>*Falco columbarius* | -/-/WL | Winter range encompasses most of California except the highest elevations; does not breed in California. Forages in a wide variety of habitats, but in the Central Valley is most common around agricultural fields and grasslands | Moderate. Suitable winter foraging habitat present. A few records in the region. | No |
| Prairie falcon<br>Falco mexicanus | -/-/BCC,WL | Year-round range includes eastern California, the Coast Ranges, and much of southern California; winter range expands to include the Delta, Central Valley, and coastal California. Forages most commonly in grasslands and low shrublands; also forages in agricultural fields. | High. Suitable habitat is present and numerous records in the region. | Yes |
| Purple martin<br>Progne subis | -/SSC/- | Breeding range includes the Sierra Nevada, Cascade Range, portions of the Coast Ranges and coast, and parts of southern California; extirpated from the Delta, and nesting in the Central Valley has been reduced to transportation structures in and around the city of Sacramento. Nests in tree cavities, bridges, utility poles, lava tubes, and buildings; forages in foothill and low montane oak and riparian woodlands, and less frequently in coniferous forests and open or developed habitats. | Low. Potentially suitable habitat is present but the species is rare in the region. | No |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Tricolored blackbird<br>Agelaius tricolor | -/SSC/- | Year-round resident throughout the Central Valley and the central and southern coasts, with additional scattered locations throughout California. Nests colonially in large, dense stands of freshwater marsh, riparian scrub, and other shrubs and herbs; forages in grasslands and agricultural fields. | Moderate. Suitable habitat is present but the species is rare in the region. | Yes |
| White-tailed kite<br>Elanus leucurus | -/FP/- | Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border. Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging. | High. Suitable habitat is present and species is relatively common in the region. | Yes |
| Yellow warbler<br>Dendroica petechial brewsteri | -/SSC/BCC | Range includes coastal and northern California and the Sierra Nevada below approximately 7,000 feet; mostly extirpated from the southern Sacramento and San Joaquin valleys. Nests and forages in early successional riparian habitats. | Moderate. Suitable habitat is present yet the species is rare in the region. | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| **Mammals** | | | | |
| American badger<br>Taxidea taxus | -/SSC/- | In California, badgers occur throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties. Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the primary habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground. | High. Suitable habitat is present and species is common in the region. | Yes |
| Big-eared kangaroo rat<br>Dipodomys venustus elephantinus | -/SSC/- | Found in Monterey and San Benito counties. Occurs in chaparral-covered slopes of the southern part of the Gabilian Range in the vicinity of Pinnacles. | Low. Study areas are outside of the species known range. | No |
| Giant kangaroo rat<br>Dipodomys ingens | E/E/- | Current population fragmented into six major geographic units: Ciervo-Panoche in western Fresno and eastern San Benito counties; Kettleman Hills in southwestern Kings County; San Juan Creek Valley in eastern San Luis Obispo County; the Lokenr area, Elk Hills in western Kern County; Carrizo Plain in eastern San Luis Obispo County; and Cuyama Valley along the eastern Santa Barabara-San Luis Obispo County line. Occurs in annual grasslands and shrub communities with sandy-loam soils, typically with sparse vegetation. | Low. Study areas are outside of the species known range | No |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Hoary bat<br>Lasiurus cinereus | -/-/M | Ranges widely, but populations in the Central Valley are most likely non-reproductive or migratory. Typically roosts alone in a variety of broadleaf tree species such as cottonwood and sycamore; also found roosting in conifers. May be found in a range of vegetation and roost substrates during migration. | Moderate. Suitable habitat is present but there are few records in the region. | No |
| Pallid bat<br>Antrozous pallidus | -/SSC/H | Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations. Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts. | Moderate-High. Suitable habitat is present and there are multiple records in the region. | No |
| Salinas pocket mouse<br>Perognathus inornatus psammophilus | -/SSC/- | Found in the Salinas Valley in Monterey and San Luis Obispo counties. Occurs in annual grasslands and desert shrub communities with fine-textured, sandy, friable soils. | Moderate-High. Potentially suitable habitat is present and there are multiple records in the region. | No |
| San Joaquin kit fox<br>Vuples macrotis mutica | E/T/- | Occurs primarily in the southern San Joaquin Valley but is also found in Carrizo Plain, the inner portions of the Coast Range between Santa Clara County and San Luis Obispo County, and there are records in Contra Costa, Alameda, and San Joaquin Counties. The species occurs in grasslands and alkali scrub. | High. Suitable habitat is present and there are several records within the region and in the Study Areas. | Yes |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| San Joaquin pocket mouse<br>Perognathus inornatus inornatus | -/-/- | Year-round range spans the San Joaquin Valley, Delta, Sacramento Valley through Colusa County, and portions of the southern Coast Ranges. Inhabits grassland and scrub habitats with friable soils. | Low-Moderate. Suitable habitat is present but only one record within the region. | Yes |
| Townsend's big-eared bat<br>Corynorhinus townsendii | -/SSC/H | Year-round range spans most of California except the highest elevations of the Sierra Nevada south of Lake Tahoe. This species may use several alternate roost sites (Woodruff and Ferguson 2005). Typically roosts in colonies of fewer than 100 individuals in caves or mines; occasionally roosts in buildings or bridges, and rarely, hollow trees; forages in all habitats except alpine and subalpine, although most commonly in mesic forests and woodlands. | Low. No typical roosting habitat is present in the Study Areas but may use them for foraging. Only a few records in the region. | No |

| Common and Scientific Names | Status[a] (Federal/ State/ Other) | Geographic Distribution and General Habitat Description | Species Potential to Occur in Study Area | CNDDB Occurrences in Study Area (Y/N) |
|---|---|---|---|---|
| Western mastiff bat<br>Eumops perotis californicus | -/SSC/H | Year-round range spans most of California, with records absent from the northwest and northeast portions of the State. Typically roosts in crevices in cliffs and rocky outcrops, in colonies of fewer than 100 individuals. May also roost in bridges, caves and buildings that allow sufficient height and clearance for dropping into flight. There is at least one record of this species roosting in an untrimmed palm tree. Forages in a variety of grassland, shrub, and wooded habitats, including riparian and urban areas, although most commonly in open, arid lands. | Low. No suitable roosting habitat is present in the Study Areas but may use them for foraging. Only one record in the region. | No |

[a] **Status explanations:**

**Federal**

E = Listed as endangered under the federal ESA.
T = Listed as threatened under the federal ESA.
C = Species for which USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded.
D = Delisted
— = No listing status.

**State**

E = Listed as endangered under CESA.
T = Listed as threatened under CESA.
D = Delisted
FP = Fully protected
SSC = Species of Special Concern
— = No listing status.

**Other**

BCC = USFWS - Bird of Conservation Concern
WL = California Department of Fish and Wildlife - Watch List
H = Western Bat Working Group – High level of concern
M = Western Bat Working Group – Medium level of concern

[b] National Marine Fisheries Service Southwest Regional Office, 2007

## Critical Habitat

It is assumed that all sensitive vegetation communities within the study area provide wildlife habitat. Certain portions of the existing rail alignment and the proposed improvements occur in areas that have been dedicated as **Critical Habitat** for certain species. Designated critical habitat is defined by the USFWS as habitat believed to be essential to the conservation of a designated threatened or endangered species. The study area contains critical habitat areas for three threatened or endangered species: vernal pool fairy shrimp, California red-legged frog, and south-coast California steelhead. **Figure 3.13-2** shows the distribution of critical habitat in the study area.

## Wildlife Movement/Migration Corridors

Any large open areas, parks and reserve areas, creeks, rivers and riparian areas in undeveloped settings are considered potential wildlife movement corridors. Smaller creeks and areas of disconnected habitat can also provide connectivity for wildlife by acting as stepping stones for the regional movement of some avian species, or by providing rest areas for migratory species.

At a secondary level, agricultural and even suburbanized areas can provide limited opportunities for wildlife movement.

Based on the foregoing, the most likely wildlife movement/migration corridors in the study area include the Salinas River, San Marcos Creek, Santa Margarita Creek, Yerba Buena Creek, San Lorenzo Creek, Camp Roberts, the Big Sandy Wildlife Area, and Los Padres National Forest.

## Jurisdictional Waters and Wetlands

The study area includes numerous creeks, rivers, and wetlands. These bodies are important for consideration as both jurisdictional waters and potential wildlife areas. **Figure 3.13-3** shows the distribution of wetlands and jurisdictional waters in the study area.

### *Rivers and Creeks*

The most prominent river in the study area is the Salinas River. No proposed improvements would involve crossing the Salinas River. Other streams in the study area include San Marcos Creek, Santa Margarita Creek, Yerba Buena Creek, and San Lorenzo Creek. The areas around each creek are considered potential wildlife habitat.

### Wetlands and Waters

Wetlands are considered a unique biological resource for both sensitive plant and wildlife communities. A wetland is defined by meeting one of the following three jurisdictional criteria: presence of wetland hydrology, predominance of hydrophytic (literally, water-loving) plants, and presence of hydric soils. According to the USFWS's inventory of wetlands (the NWI) four types of wetlands and waters are present in the study area. Wetlands include freshwater emergent wetlands, freshwater forested/shrub wetlands; waters includes freshwater ponds and riverine environments (see **Figure 3.13-3**). The two types of wetlands present in the study area are described below.

**Freshwater Emergent Wetlands** are characterized by erect, rooted aquatic plants that thrive under frequent flood conditions. In wetter areas, this includes common cattail, tule bulrush, river bulrush, and arrowhead. On the drier margins of these wetlands, big leaf sedge, baltic rush, redroot nutgrass and saltgrass can be found. Freshwater emergent wetlands occur in virtually all exposures and slopes, however they are most often found on level to gently rolling topography.[21]

**Freshwater Forested/Shrub Wetlands** often occur adjacent to riverine habitats. They are characterized by woody vegetation, including broad-leaved deciduous.[22]

There are situations where riverine and freshwater pond habitats could possess emergent vegetation and thus be classified as wetlands. Nonetheless, all of the waters assessed herein are afforded the same protection under the CWA.

### Habitat Conservation Plans and Habitat Reserves

There are no adopted Habitat Conservation Plans in the study area. The Big Sandy Wildlife Area, occupying two sections of land in the study area, is a reserve under the jurisdiction of the CDFW. CDFW has not to date adopted any plan to more specifically regulate resources within Big Sandy.[23]

# 3.13.4 ENVIRONMENTAL CONSEQUENCES

## No Build Alternative

The No Build Alternative represents the continuation of existing operations and physical components, and assumes the perpetuation of existing freight and

[21] Mayer and Laudenslayer, 1988, p. 124

[22] Cowardin et al., 1979

[23] Personal Communication with Bob Stafford on March 8, 2013.

passenger service. Under the No Build Alternative, passenger rail operations between Salinas and San Luis Obispo would not change. Coast Starlight service would continue through the corridor. Pacific Surfliner service to Southern California would continue to originate/terminate in San Luis Obispo. The only physical improvement expected under the No Build Alternative would be the installation of positive train control (PTC) along the Corridor, which would provide increased safety for freight and passenger trains. PTC equipment would likely be installed within the existing railroad, likely in close proximity to the rail bed. These are highly developed areas that are unlikely to contain protected species or sensitive habitat areas. As a result, the No Build Alternative would be unlikely to result in any substantial new impacts to biological resources.

# Build Alternative

## Construction-Period Effects

**Table 3.13-3** summarizes potential temporary construction period effects for Build Alternative components. Critical habitat for special-status species is typically recorded in acreages for terrestrial or wetland habitat and linear feet for watercourses, such as streams and river.

Certain proposed physical improvements, such as curve realignments and new or extended sidings may in some cases diverge substantially from the existing railroad right of way. Construction (and as described further below, operation) of such improvements would require staging areas on adjacent lands that may be protected for sensitive vegetation, special-status species, critical habitat for protected species, wetlands, or non-jurisdictional waters. Access routes to construction sites as well as construction staging areas could disturb biological resources by traveling through and potentially damaging these sensitive habitats. Such uses would be temporary, lasting for the duration of construction. Where possible, these protected areas would be rehabilitated.

Table 3.13-3 Build Alternative Potential Construction-Period Biological Resource Impacts

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Salinas Powered Switch | None | None | None | None | None |
| ***Upgrades to Existing Alignment Section #1*** | None | None | None | None | None |
| Spence Siding Extension | 0.1 freshwater emergent wetland | 10 animal species | None | Freshwater Emergent Wetland – 0.09<br>Riverine – 0.03 | 129 linear feet |
| ***Upgrades to Existing Alignment Section #2*** | None | None | None | None | None |
| Gonzales Powered Switch | None | None | None | None | None |
| Soledad Powered Switch | None | None | None | None | None |
| Soledad New Passenger Station | None | None | None | None | None |
| Harlem/Metz Curve Realignments | 52.8 ac grassland<br>0.1 ac riverine<br>1.0 ac valley foothill riparian | 30 animal species<br>6 plant species | None | Riverine – 0.13 | 302 linear feet |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Chalone Creek New Siding | 21.9 ac grassland<br>0.1 coastal oak woodland<br>0.7 ac freshwater emergent wetland<br>1.2 ac valley foothill riparian | 29 animal species<br>4 plant species | None | Freshwater Emergent Wetland – 0.66 | None |
| ***Upgrades to Existing Alignment Section #3*** | None | None | None | None | None |
| Coburn Curve Realignments | 32.2 ac grassland<br>0.1 ac riverine | 24 animal species<br>1 plant species | None | Riverine – 0.12 | 61 linear feet |
| King City Siding Extension | 4.0 ac grassland<br>0.1 ac freshwater emergent wetland | 21 animal species<br>3 plant species | None | Freshwater Emergent Wetland – 0.05 | 133 linear feet |
| King City New Passenger Station | None | None | None | None | None |
| King City Powered Switch | None | None | None | None | None |
| ***Upgrades to Existing Alignment Section #4*** | None | None | None | None | None |
| MP 165 Curve Realignment | 21.8 ac grassland<br>0.2 freshwater forested/shrub wetland<br>0.5 ac freshwater pond | 24 animal species<br>3 plant species | None | Freshwater Forested/Shrub Wetland – 0.24<br>Freshwater Pond – 0.49 | 403 linear feet |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| San Lucas New Siding | 8.9 ac grassland<br>0.8 ac valley foothill riparian | 26 animal species<br>2 plant species | None | None | None |
| ***Upgrades to Existing Alignment Section #5*** | None | None | None | None | None |
| MP 172 Track Realignment | 8.5 ac grassland<br>0.8 ac valley foothill riparian | 26 animal species<br>3 plant species | None | None | 785 linear feet |
| San Ardo Powered Switch | None | None | None | None | None |
| Getty/Bradley Curve Realignments | 54.3 ac grassland<br>1.3 ac blue oak woodland<br>0.9 ac coastal scrub<br>0.7 ac freshwater pond<br>3.5 ac riverine<br>11.7 ac valley foothill riparian | 36 animal species<br>4 plant species | None | Freshwater Pond – 0.65<br>Riverine – 3.49 | 1,636 linear feet |
| Bradley Siding Extension | 34.1 ac grassland<br>0.7 ac riverine<br>4.5 ac valley foothill riparian | 35 animal species<br>3 plant species | Vernal pool fairy shrimp – 5 ac | Riverine – 0.73 | 109 linear feet |
| Bradley Powered Switch) | None | None | None | None | None |
| ***Upgrades to Existing Alignment Section #6*** | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| ***Upgrades to Existing Alignment Section #7*** | None | None | None | None | None |
| McKay/Wellsona Curve Realignments | 6.0 ac blue oak woodland<br>12.4 ac coastal oak woodland<br>12.6 ac freshwater emergent wetland<br>1.2 ac freshwater forested/shrub wetland<br>0.1 ac riverine | 16 animal species<br>10 plant species | None | Freshwater Emergent Wetland – 12.57<br>Freshwater Forested/Shrub Wetland – 1.22<br>Riverine – 0.11 | None |
| McKay East Powered Switches | None | None | None | None | None |
| Wellsona New Siding | 4.5 ac grassland<br>8.8 ac blue oak woodland<br>14.4 ac coastal oak woodland<br>11.7 ac freshwater emergent wetland<br>1.6 ac freshwater forested/shrub wetland<br>0.1 ac riverine | 32 animal species<br>9 plant species | South-Coast California steelhead – 66 linear feet | Freshwater Emergent Wetland – 11.68<br>Freshwater Forested/Shrub Wetland – 1.65<br>Riverine – 0.15 | 123 linear feet |
| ***Upgrades to Existing Alignment Section #8*** | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Wellsona/Paso Robles Curve Realignments | 8.8 ac grassland<br>2.3 ac blue oak woodland<br>1.0 ac coastal oak woodland | 26 animal species<br>8 plant species | None | None | None |
| Templeton Siding | 7.3 ac grassland<br>1.2 ac blue oak woodland<br>0.5 ac freshwater emergent wetland<br>2.1 freshwater forested/shrub wetland<br>0.8 ac riverine<br>0.3 ac valley foothill riparian | 30 animal species<br>8 plant species | None | Freshwater Emergent Wetland – 0.52<br>Freshwater Forested/Shrub Wetland – 2.11<br>Riverine – 0.77 | 267 linear feet |
| Templeton/Henry Curve Realignments | 1.7 ac grassland<br>2.5 ac blue oak woodland<br>0.1 ac blue oak-foothill pine<br>6.2 ac coastal oak woodland<br>3.3 ac unknown shrub type | 23 animal species<br>8 plant species | None | None | None |
| ***Upgrades to Existing Alignment Section #9*** | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Henry/Santa Margarita Curve Realignment | 44.5 ac grassland<br>25.1 ac blue oak-foothill pine<br>1.6 ac coastal oak woodland<br>10.1 ac coastal scrub<br>3.4 ac freshwater emergent wetland<br>3.3 ac freshwater forested/shrub wetland<br>1.1 ac freshwater pond<br>4.8 ac riverine<br>0.9 ac valley oak woodland | 33 animal species<br>19 plant species | California red-legged frog – 0.001 ac<br>South-Coast California steelhead – 1,362 linear feet | Freshwater Emergent Wetland – 3.40<br>Freshwater Forested/Shrub Wetland – 3.34<br>Freshwater Pond – 1.14<br>Riverine – 4.75 | 5,719 linear feet |
| Santa Margarita Powered Switch | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Cuesta Second Main Track | 10.2 ac grassland<br>5.4 ac blue oak woodland<br>14.8 ac coastal oak woodland<br>2.1 ac coastal scrub<br>0.1 ac freshwater emergent wetland<br>6.7 ac freshwater forested/shrub wetland<br>1.4 ac riverine<br>1.5 ac valley oak woodland | 29 animal species<br>23 plant species | California red-legged frog – 46 ac | Freshwater Emergent Wetland – 0.14<br>Freshwater Forested/Shrub Wetland – 6.67<br>Freshwater Pond – 0.04<br>Riverine – 1.41 | 5,986 linear feet |
| ***Upgrades to Existing Alignment Section #10*** | None | None | None | None | None |

Source: ICF, 2013

Generally, construction of any of the proposed physical improvements that would be placed within the existing railroad tracks or existing railroad right-of-way (rail and track upgrades, signal upgrades, and powered switches) would result in little or no impact to adjacent protected lands and special status species, as such work would take place entirely within the existing rail transportation corridor. Therefore, all of the existing alignment areas listed in the Table below are noted as having no sensitive biological resources.

As identified in **Table 3.13-3** above, many of the proposed improvements that would require use of land outside of the existing railroad right-of-way have somewhat greater potential to impact biological resources. Most of the temporary impacts areas for curve realignments and the second mainline include substantial areas of land not currently in transportation use. Some of these areas host sensitive habitats and protected species. Of note are the critical habitat areas of the California Red-Legged Frog located within the area of the proposed second mainline near Cuesta Grade and that of the South-Coast California Steelhead located within the Henry/Santa Margarita Curve Realignment. Temporary impacts associated with one curve realignment at Getty/Bradley have the potential to intrude into the river during construction.

## Operational Effects

Permanent impact areas comprise the potential footprint of the new improvement or extended right-of-way necessary for the specific improvement.

For those elements of the Build Alternative that could be constructed within or immediately adjacent to the railbed, impacts to biological resources and wetlands are not considered significant because it is unlikely that sensitive biological resources are located within the rail bed, due to train operations, and unsuitable habitat such as rocks, dirt, and the railway itself. This is expected to include track and signal upgrades and new powered switches. There is some potential for biological resources to be present outside of the railbed but within the railway right-of-way. New stations are also expected to have non-significant impacts to biological resources, since they are located in urban areas and mostly surrounded by developed lands.

Outside the right-of-way, curve realignments, as well as several sidings and extensions could have permanent impacts to biological resources. This assessment is intended to represent worst case conditions; conservative (i.e. large) impact buffers were used and the maximum potential footprint for each of the improvements was assumed. **Table 3.13-4** summarizes the maximum potential permanent impacts to biological resources that are associated with the various components of the Build Alternative.

Table 3.13-4 Build Alternative Potential Operational Biological Resources Impacts

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Salinas Powered Switch | None | None | None | None | None |
| ***Upgrades to Existing Alignment Section #1*** | None | None | None | None | None |
| Spence Siding Extension | None | 5 animal species | None | Pond – 0.00<br>Riverine – 0.01 | 83 linear feet |
| ***Upgrades to Existing Alignment Section #2*** | None | None | None | None | None |
| Gonzales Powered Switch | None | None | None | None | None |
| Soledad Powered Switch | None | None | None | None | None |
| Soledad New Passenger Station | None | None | None | None | None |
| Harlem/Metz Curve Realignments | 15.0 ac grassland<br>0.3 ac valley foothill riparian | 26 animal species<br>5 plant species | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Chalone Creek New Siding | 10.4 ac grassland<br>0.6 ac freshwater emergent wetland<br>1.1 ac valley foothill riparian | 28 animal species<br>2 plant species | None | Freshwater Emergent Wetland – 0.60 | None |
| ***Upgrades to Existing Alignment Section #3*** | None | None | None | None | None |
| Coburn Curve Realignments | 5.5 ac grassland | 19 animal species<br>1 plant species | None | None | None |
| King City Siding Extension | 3.5 ac grassland | 18 animal species<br>3 plant species | None | None | 100 linear feet |
| King City New Passenger Station | None | None | None | None | None |
| King City Powered Switch | None | None | None | None | None |
| ***Upgrades to Existing Alignment Section #4*** | None | None | None | None | None |
| MP 165 Curve Realignment | 6.3 ac grassland<br>0.1 ac freshwater forested/shrub wetland<br>0.2 ac freshwater pond | 24 animal species<br>3 plant species | None | Freshwater Forested/Shrub Wetland – 0.13<br>Freshwater Pond – 0.15 | 100 linear feet |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| San Lucas New Siding | 7.7 ac grassland<br>0.9 ac valley foothill riparian | 26 animal species<br>2 plant species | None | None | None |
| ***Upgrades to Existing Alignment Section #5*** | None | None | None | None | None |
| MP 172 Track Realignment | 1.4 ac grassland | 19 animal species<br>2 plant species | None | None | 150 linear feet |
| San Ardo Powered Switch | None | None | None | None | None |
| Getty/Bradley Curve Realignments | 16.2 ac grassland<br>0.3 ac riverine<br>3.8 ac valley foothill riparian | 35 animal species<br>3 plant species | None | Riverine – 0.26 | 417 linear feet |
| Bradley Siding Extension | 48.0 ac grassland<br>0.3 ac riverine<br>3.7 ac valley foothill riparian | 36 animal species<br>3 plant species | Vernal pool fairy shrimp – 7 ac | Riverine – 0.27 | 109 linear feet |
| Bradley Powered Switch) | None | None | None | None | None |
| ***Upgrades to Existing Alignment Section #6*** | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| ***Upgrades to Existing Alignment Section #7*** | None | None | None | None | None |
| McKay/ Wellsona Curve Realignments | 2.4 ac blue oak woodland<br>4.6 coastal oak woodland<br>7.2 ac freshwater emergent wetland<br>0.7 freshwater forested/shrub wetland | 13 animal species<br>10 plant species | None | Freshwater Emergent Wetland – 7.20<br>Freshwater Forested/Shrub Wetland – 0.65<br>Riverine 0.00 | None |
| McKay East Powered Switches | None | None | None | None | None |
| Wellsona New Siding | 3.2 ac grassland<br>6.1 ac blue oak woodland<br>8.1 coastal oak woodland<br>7.2 ac freshwater emergent wetland<br>0.8 ac freshwater forested/shrub wetland | 30 animal species<br>9 plant species | South-Coast California steelhead – 61 linear feet | Freshwater Emergent Wetland – 7.20<br>Freshwater Forested/Shrub Wetland – 0.82<br>Riverine – 0.04 | 124 linear feet |
| ***Upgrades to Existing Alignment Section #8*** | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Wellsona/ Paso Robles Curve Realignments | 3.8 ac grassland | 22 animal species<br>7 plant species | None | None | None |
| Templeton Siding | 7.3 ac grassland<br>1.5 ac blue oak woodland<br>0.7 ac freshwater emergent wetland<br>0.8 ac freshwater forested/shrub wetland<br>0.4 ac valley foothill riparian | 28 animal species<br>8 plant species | None | Freshwater Emergent Wetland – 0.67<br>Freshwater Forested/Shrub Wetland – 0.84<br>Riverine – 0.05 | 226 linear feet |
| Templeton/ Henry Curve Realignments | 0.6 ac grassland<br>0.6 ac blue oak woodland<br>2.1 ac coastal oak woodland<br>0.7 ac unknown shrub type | 23 animal species<br>8 plant species | None | None | None |
| ***Upgrades to Existing Alignment Section #9*** | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Henry/Santa Margarita Curve Realignment | 13.3 ac grassland<br>6.1 ac blue oak-foothill pine<br>2.7 ac coastal scrub<br>0.8 ac cropland<br>1.4 ac freshwater emergent wetland<br>0.4 ac freshwater forested/shrub wetland<br>0.1 ac freshwater pond<br>0.1 ac riverine<br>0.0 ac unknown shrub type<br>1.7 ac urban | 33 animal species<br>19 plant species | None | Freshwater Emergent Wetland – 1.37<br>Freshwater Forested/Shrub Wetland – 0.36<br>Freshwater Pond – 0.11<br>Riverine – 0.08 | 305 linear feet |
| Santa Margarita Powered Switch | None | None | None | None | None |

| Build Alternative Components | Sensitive Vegetation Communities (Type/Acreage) | Number of Special Status Species | Critical Habitat Area (Species/Acreage/ Linear Feet) | Wetlands and Waters (Acres) | Non Wetland Jurisdictional Waters (linear feet) |
|---|---|---|---|---|---|
| Cuesta Second Main Track | 8.9 ac grassland<br>2.4 ac blue oak woodland<br>6.7 ac coastal oak woodland<br>1.2 ac coastal scrub<br>0.7 ac freshwater forested/shrub wetland<br>0.1 ac riverine<br>0.6 ac valley oak woodland | 28 animal species<br>23 plant species | California red-legged frog – 26 ac | Freshwater Forested/Shrub Wetland – 0.69<br>Riverine – 0.09 | 749 linear feet |
| ***Upgrades to Existing Alignment Section #10*** | None | None | None | None | None |

Source: ICF, 2013

As summarized in **Table 3.13-4** above, potential permanent impacts are most likely associated with the curve realignments and second mainline, as each would require lands outside the existing railroad right-of-way where sensitive biological resources are or are suspected of being present.

The second mainline has the potential to impact approximately 26 acres of California red-legged frog habitat, several special-status species, and almost 20 acres of sensitive vegetation communities. The Bradley siding extension may impact up to 7 acres of vernal pool fairy shrimp habitat and as many as 36 special-status animal species. The Harlem/Metz curve realignments may impact over 15 acres of sensitive vegetation communities and 26 special-status animal species. The McKay/Wellsona curve realignments and the Wellsona new siding may each impact over 7 acres of freshwater emergent wetlands, and several special-status species.

Additional potential biological resource impacts would result from the various physical improvements.

There is considerable uncertainty whether some or all of the Build Alternative improvements would be carried forward. Improvements likely to be carried forward are those that most cost-effectively improve rail service. Elements of the Build Alternative that would require substantial biological permitting and/or mitigation would likely be deemed less feasible and less cost-effective than elements without such hindrances. Information in this document will be useful in the future preparation of detailed design plausibility for various improvements.

While future design efforts are likely to make every effort to develop alignment and improvement options that minimize impact to these resources to the extent feasible, in some cases, construction and operation of the proposed improvements could permanently remove or alter habitat outside of the existing railroad right-of-way and thus could result in significant/substantial effects upon protected species and/or their habitat.

## 3.13.5 AVOIDANCE, MINIMIZATION, AND MITIGATION STRATEGIES

Individual improvements comprising the Build Alternative should be designed to minimize impacts to biological resources along the Corridor. The following strategies have been identified at this preliminary stage to avoid, minimize, and/or mitigate any potentially significant impacts.

**MIN-BIO-1**. Field surveys should be conducted to determine the extent and type of general and sensitive biological resources, including focused surveys following resource agency protocols for special- status species.

**MM-BIO-2**. Biological Resources Management Plans (BRMP) should be prepared to specify the design and implementation of biological resources mitigation measures, including habitat replacement and revegetation, protection during construction, performance (growth) standards, maintenance criteria, and monitoring requirements. The USFWS, CDFG, and USACE would review Draft BRMPs. The primary goal of a BRMP is to ensure the long- term perpetuation of the existing diversity of habitats in the study area and adjacent urban interface zones. BRMPs will contain the following:

- Specific measures to ensure the protection of sensitive amphibian, mammal, bird, and plant species during construction activities.
- Identification and quantification of habitats that will be removed, as well as the locations where these habitats are to be restored or relocated.
- Procedures for vegetation analyses of adjacent protected habitats to estimate their relative composition; site preparation (clearing, grading, weed eradication, soil amendment, topsoil storage); irrigation, planting (container plantings, seeding); and maintenance (weed control, irrigation system checks, replanting). This information would be used to determine the requirements for revegetation areas.
- Proposed sources of plant materials and methods of propagation.
- Specific parameters for the determination of the amount of replacement habitat for temporary disturbance areas.
- Specification of parameters for maintenance and monitoring of re-established habitats, including weed control measures, frequency of field checks, and monitoring reports for temporary disturbance areas.
- Specification of performance standards for growth of re-established plant communities and cut-and-fill slopes.
- Remedial measures to be taken if performance standards are not met.
- Procedures and requirements to monitor all restoration/replacement efforts.
- Measures to preserve topsoil and control erosion control.
- Design of protective fencing around Environmentally Sensitive Areas (ESAs) and construction staging areas.

- Identification of location and quantities of gallinaceous guzzlers (catch basin/artificial watering structures, if needed); specification of monitoring of water levels in guzzlers.
- Location of trees that are designated for be protected as wildlife habitat (roosting sites) and locations for planting of replacement trees.
- Identification of the purpose, type, frequency, and extent of chemical use for insect and disease control operations as part of vegetative maintenance within sensitive habitat areas.
- Specific monitoring programs for sensitive species during construction.
- Specific procedures to ensure the protection of sensitive identified for preservation. These measures may include, but are not limited to, erosion and siltation control measures, protective fencing guidelines, dust control measures, grading techniques, construction area limits, and biological monitoring requirements.
- Provisions for biological monitoring during construction activities that ensure the compliance and success of the proposed protective measures. The monitoring procedures would (1) identify specific locations of wildlife habitat and sensitive species to be monitored; (2) identify the frequency of monitoring, monitoring methodology (for each habitat and sensitive species to be monitored); (3) list required qualifications of biological monitor(s); and (4) identify reporting requirements.

**MM-BIO-3**. Mitigation techniques to protect plant and wildlife species may include, but would not be limited to on- and/or off-site revegetation/restoration of plant species, and purchase of credits from existing mitigation banks. Requirements for mitigation ratios would vary depending on the character of the impacted plant community and whether or not provides notable habitat for sensitive plant or wildlife species. Regulatory agencies would be consulted to determine appropriate mitigation ratios. Relocation of plants, seed collection, plant propagation, out-planting to a suitable mitigation site, and participation in an existing HCP could employed to mitigate for impacted plant species.[24] Restoration of suitable breeding and foraging habitat, purchase of credits from an existing mitigation bank, and participation in an existing HCP could mitigate for impacted wildlife species.

[24] A HCP is a planning document required as part of an application for an incidental take permit. They describe the anticipated effects of the proposed taking, how those impacts will be minimized or mitigated, and how the HCP is to be funded

Whenever possible, on-site mitigation would be preferred to off-site. Off-site mitigation must be located within the same watershed or in close proximity to the impact area, where feasible.

**MIN-BIO-4**. Minimization measures may include, but not be limited to, pre-construction focused surveys and construction monitoring. Prior to construction, focused surveys should be conducted for sensitive plant and wildlife species identified as occurring in the study area. Locations of sensitive plant/wildlife species observed would be mapped on construction drawings. Research must be conducted on appropriate methods to use on a species-by-species basis (i.e. transplantation, germination from seed, greenhouse propagation), and construction could be phased around the breeding season for sensitive wildlife species (See also BRMP information above.)

**MIN-BIO-5**. Specific measures would be developed to minimize or avoid the propagation of weeds during construction and operation. Potential preventive measures during construction could include identification of areas with existing weed problems and measures to control traffic moving out of those areas (e.g., cleaning of construction vehicles, limitations on movement of fill). Mitigation for operational impacts would be developed similarly.

**MIN-BIO-6**. Field studies would identify locally significant wildlife movement/migration corridors beyond those discussed in this programmatic document and provide data to assist in the design of bridges and wildlife crossings at crucial travel route points. Wildlife crossings would be designed to mimic natural corridors and must be sufficiently attractive to encourage wildlife use. Where feasible, overcrossings and undercrossings for wildlife would be appropriately vegetated to afford cover and other species requirements. Functional corridors would be established to provide connectivity to protected land zoned for uses that provide wildlife permeability. Corridors would be designed using the following procedure:

- Identify the habitat areas the corridor is designed to connect;
- Determine several species of interest from the species present in these areas;
- Evaluate the relevant needs of each selected species;
- For each potential corridor, evaluate how the area will accommodate movement according to the needs of each species of interest;
- Map the corridors;
- Design a monitoring program.

**MM-BIO-7**. Delineation of jurisdictional waters and wetlands would be conducted to determine the extent of USACE and CDFG jurisdiction, and consultation with these agencies to determine appropriate mitigation would occur.

- The amount of mitigation required would be assessed on an acreage basis, with ratios depending upon the nature and condition of the jurisdictional areas located within the impact areas. Whenever appropriate and feasible, on-site mitigation would be preferred. Off-site mitigation should be located within the same watershed or as close in proximity to the area of impact as possible. Mitigation options for unavoidable impacts to state and federal jurisdictional waters would include on- or off-site restoration, creation, or enhancement, mitigation banking, or in-lieu fee payments, as described below:
  - Restoration – Return degraded habitat to a pre-existing condition.
  - Creation – Conversion of a persistent non-wetland habitat into wetland (or other aquatic) habitat. The created habitat may be self-sustaining or dependent upon artificial irrigation.
  - Enhancement – Increase one or more functions of a replacement habitat through activities such as plantings or non-native vegetation eradication.
- Passive Revegetation – Allow a disturbed area to naturally revegetate without intervention or plantings.
- Mitigation Banking – Purchase of units of previously restored or enhanced wetland or waters habitat within a larger managed conservation area. These units are often known as “credits” and are typically sold by the acre.
- In-Lieu Fee Program – A monetary payment would be made to an entity approved by an agency that provides habitat conservation or restoration. For example, the Nature Conservancy may receive in-lieu fee payments for impacts in all watersheds.
- Current federal and state policy emphasizes a "no net loss" of wetlands habitats policy, which is usually achieved through restoration of areas subject to temporary impacts or creation of wetlands to offset permanent impacts. However, according to the the January 27, 2003, Special Public Notice for Mitigation and Monitoring Guidelines, the USACE favors the use of approved mitigation banks or in-lieu fee programs in the event that these programs would result in a net increase in regional or watershed benefit over on-site compensatory mitigation. Approved mitigation and in-lieu fee programs include measures designed to ensure the no net loss of wetlands policy is met.

The strategies presented herein, including provisions for further study to obtain additional data and refine site-specific mitigation measures, can be expected to substantially lessen or avoid impacts to biological resources and wetlands. Impacts to biological resources and wetlands will be reduced through subsequent environmental review, ongoing consultation with resource agencies, the requirements associated with the permit-acquisition process for segments of the rail improvements, and compliance with those permit terms and conditions. Until these plans and provisions have been implemented, potential impacts to biological resources and wetlands should be considered significant and unavoidable under CEQA.

## 3.13.6 SUBSEQUENT ANALYSIS

Some plant and wildlife species require specific habitat elements that cannot be detected at the scale of this assessment. It is assumed that further detailed analysis will be conducted prior to implementing any elements of the Build Alternative in order to conclusively determine the presence of biological resources in affected areas.

Consultation and possibly permits may be necessary from federal and state resource agencies prior to implementing specific elements of the Build Alternative. The consultation and permit process would result in the development of site-specific avoidance and minimization strategies. For example, permits under the Clean Water Act require the USACE to identify the “least environmentally damaging practicable alternative” or “LEDPA.”

The discussion of potential impacts to various biological resources presented herein has relied primarily on the available GIS database, other GIS tools, and review of available literature. While these sources can be expected to present an accurate overview of natural resources conditions in the corridor, they may not exactly correspond to actual field conditions. In order to obtain more reliable assessments of potential impacts to biological resources, further environmental studies should be conducted prior to implementing elements of the Build Alternative.

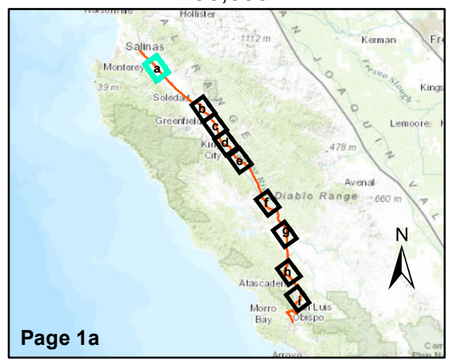

Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

**Project Components**

Existing Alignment
Realignments
Sidings

0 1,500 3,000 6,000
Feet

1:36,000



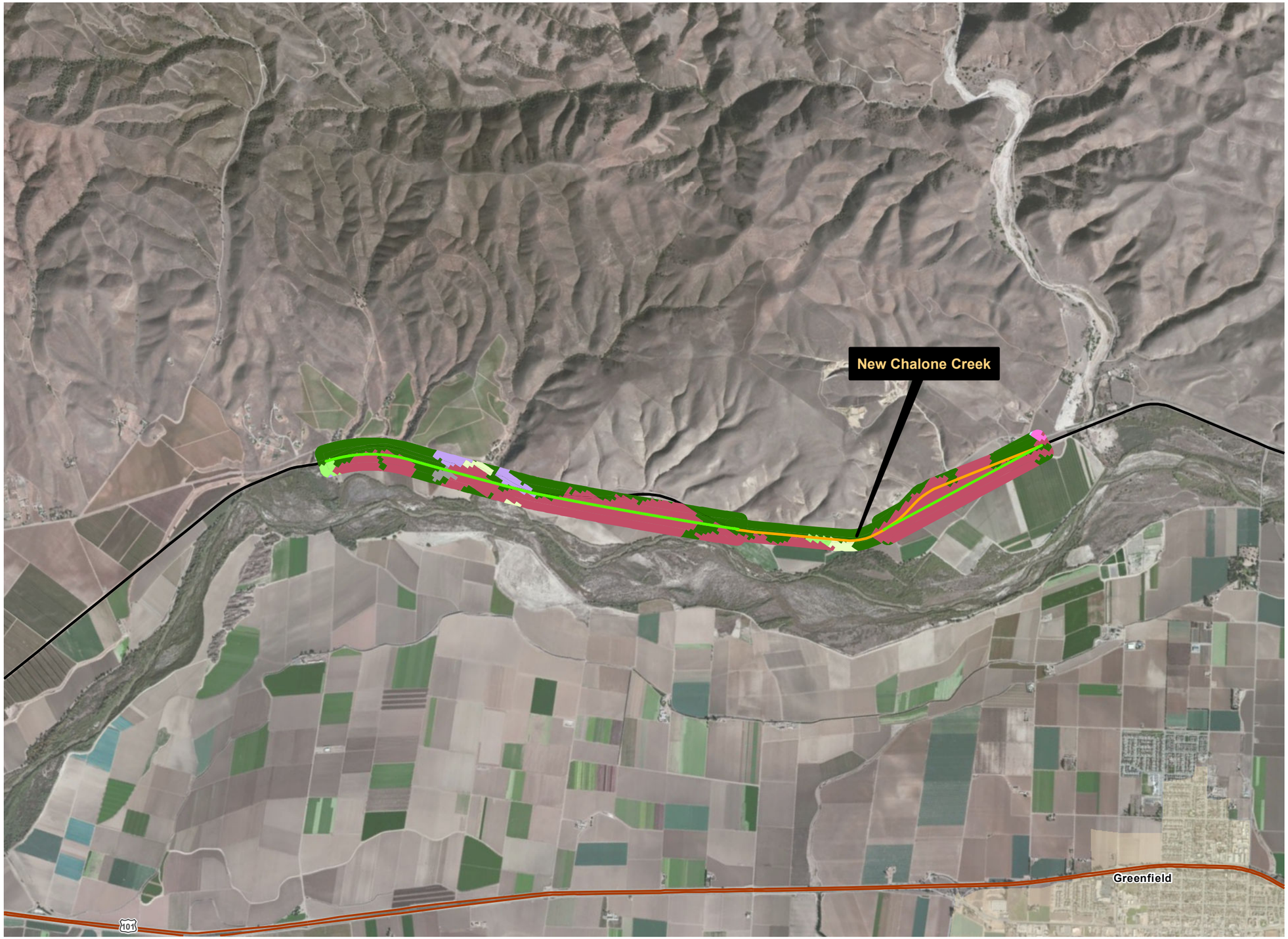

Page 1a

**Sensitive Vegetation Communites**

**Figure 3.13-1a**

*Source: ICF International, 2013*

*This page intentionally left blank.*



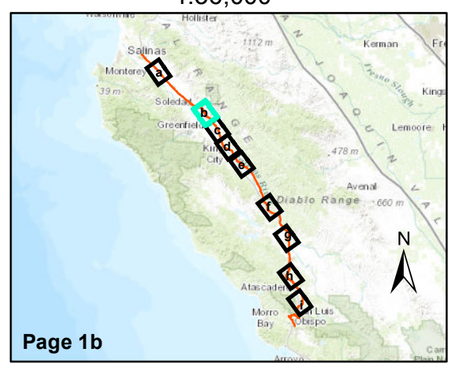

Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

**Project Components**

Existing Alignment
Realignments
Sidings

0 1,500 3,000 6,000
Feet

1:36,000




**Sensitive Vegetation Communites**

**Figure 3.13-1b**

*Source: ICF International, 2013*

*This page intentionally left blank.*

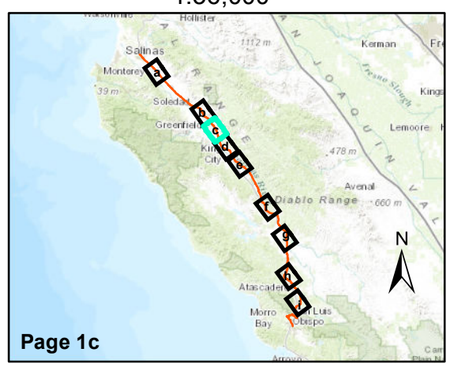

Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

**Project Components**

Existing Alignment
Realignments
Sidings

0 1,500 3,000 6,000
Feet

1:36,000

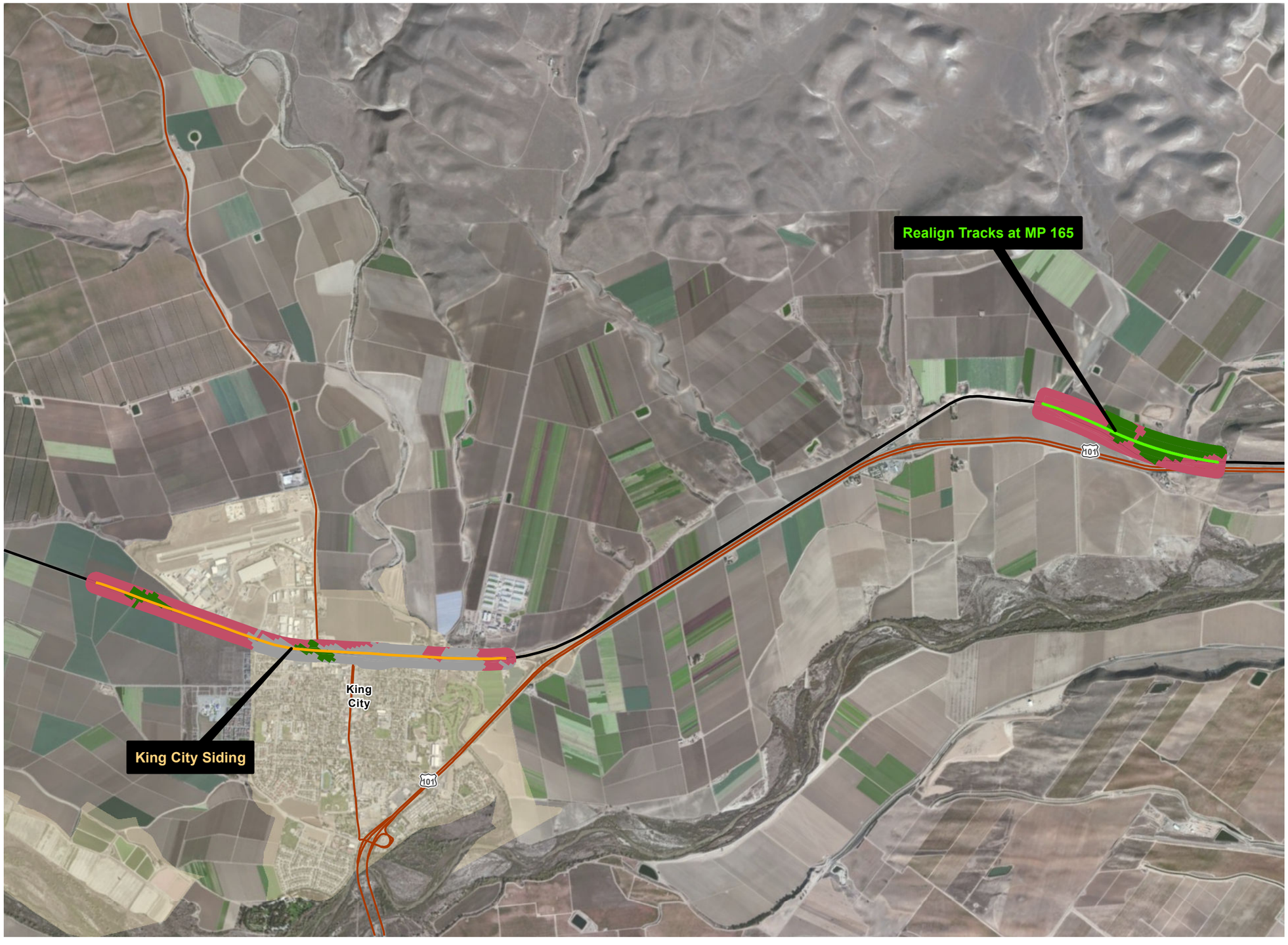



**Sensitive Vegetation Communites**

**Figure 3.13-1c**

*Source: ICF International, 2013*

*This page intentionally left blank.*



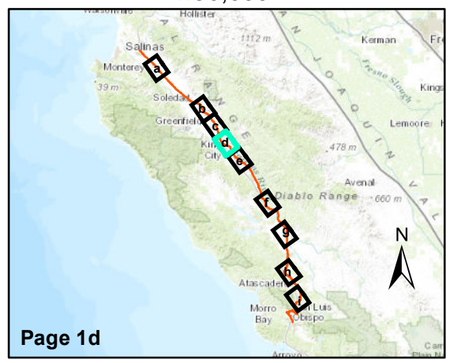

Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

**Project Components**

Existing Alignment
Realignments
Sidings

0 1,500 3,000 6,000
Feet

1:36,000

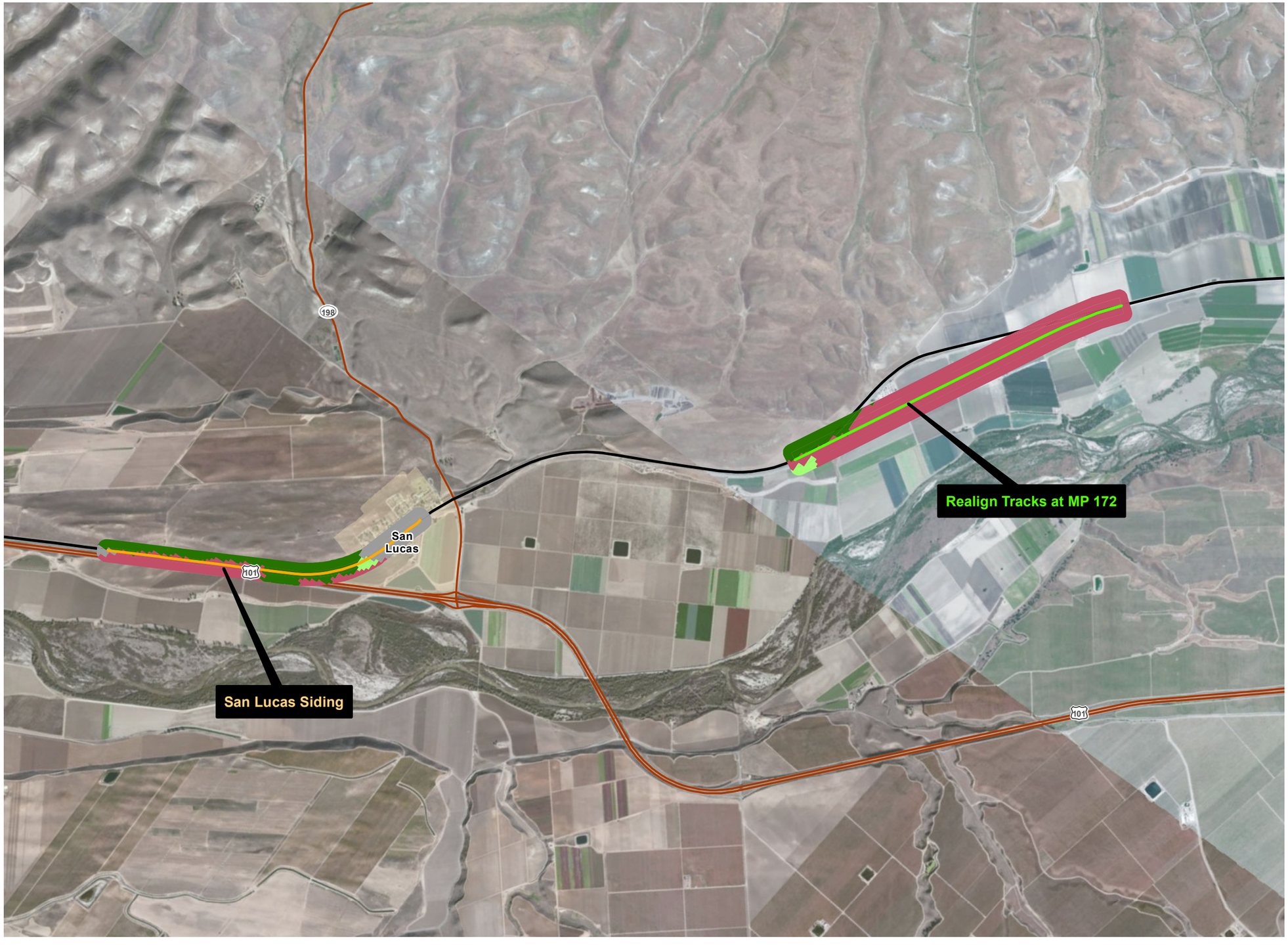



**Sensitive Vegetation Communites**

**Figure 3.13-1d**

*Source: ICF International, 2013*

*This page intentionally left blank.*



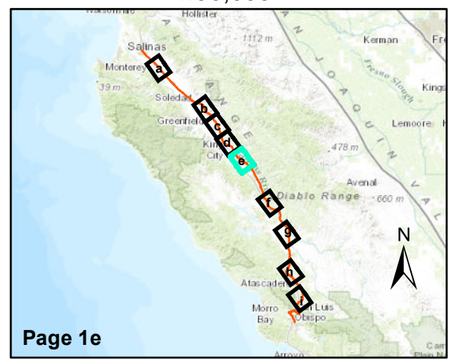

Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

**Project Components**

Existing Alignment
Realignments
Sidings

0 1,500 3,000 6,000
Feet

1:36,000



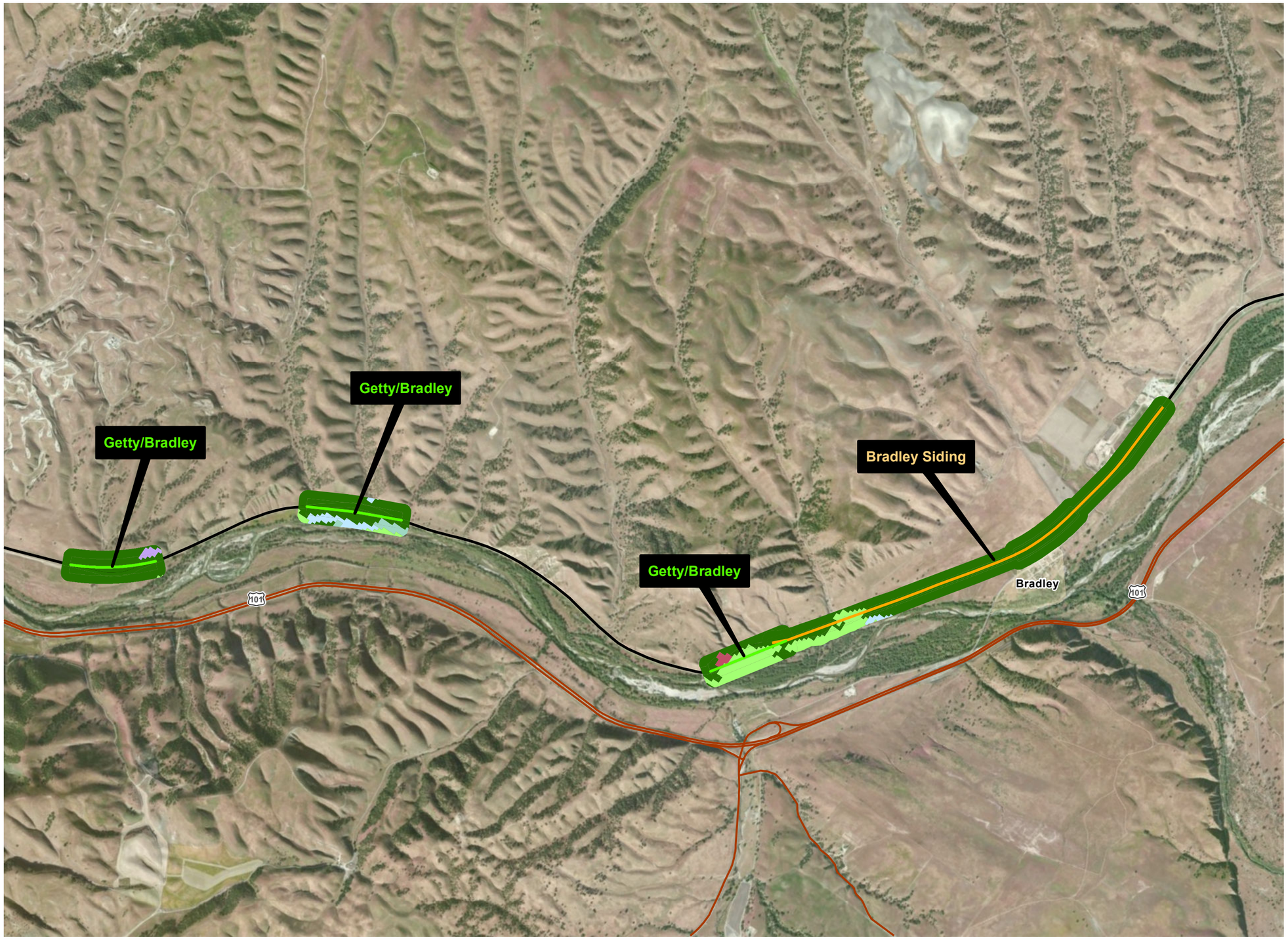

Page 1e

**Sensitive Vegetation Communites**

**Figure 3.13-1e**

*Source: ICF International, 2013*

*This page intentionally left blank.*



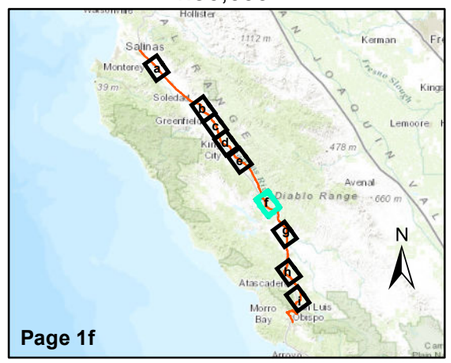

Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

**Project Components**

Existing Alignment
Realignments
Sidings

0 1,500 3,000 6,000
Feet

1:36,000



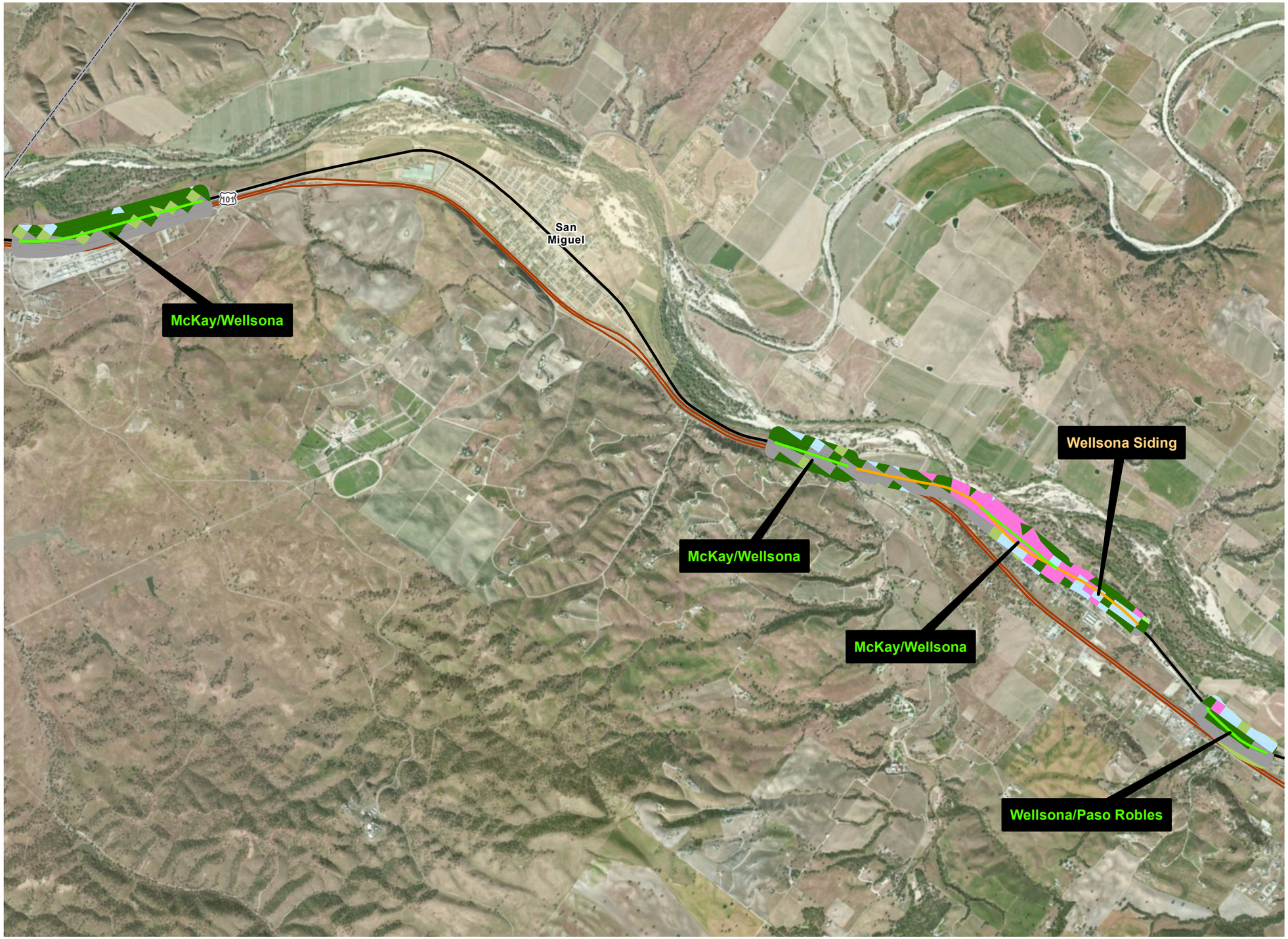



**Sensitive Vegetation Communites**

**Figure 3.13-1f**

*Source: ICF International, 2013*

*This page intentionally left blank.*




Agriculture
Annual Grassland
Barren
Blue Oak Woodland
Blue Oak-Foothill Pine
Coastal Oak Woodland
Coastal Scrub
Cropland
Lacustrine
Mixed Chaparral
Unknown Shrub Type
Urban
Valley Foothill Riparian
Valley Oak Woodland

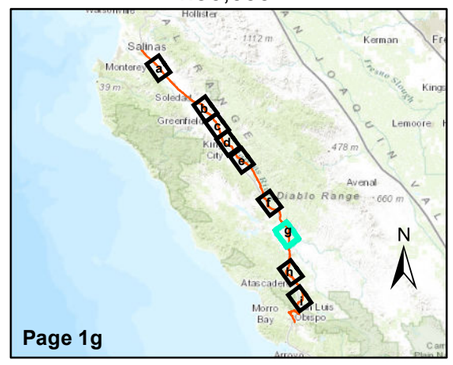
**Project Components**

Existing Alignment
Realignments
Sidings

N

0 1,500 3,000 6,000
Feet

1:36,000



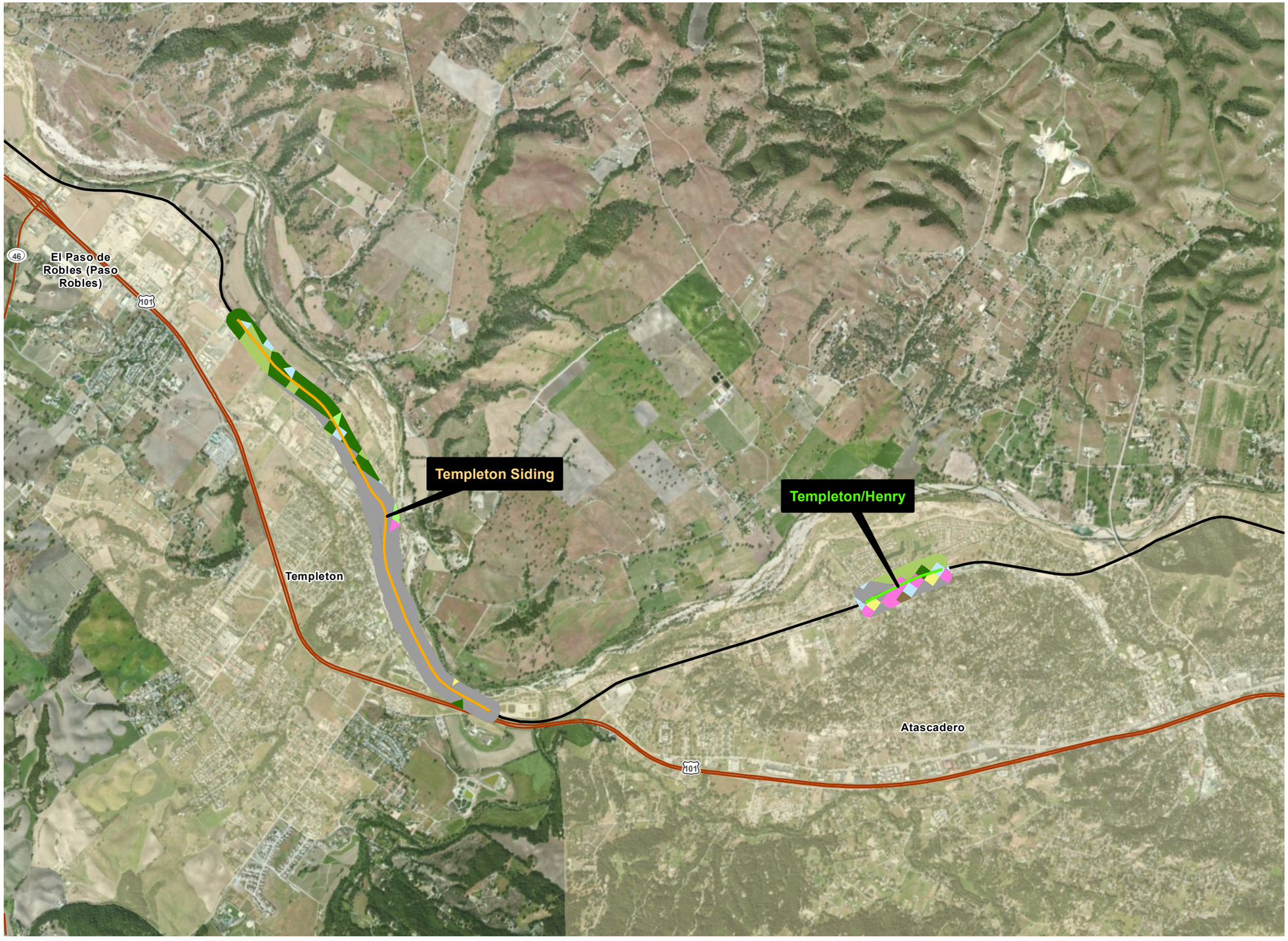

Page 1g

**Sensitive Vegetation Communites**

**Figure 3.13-1g**

*Source: ICF International, 2013*

*This page intentionally left blank.*



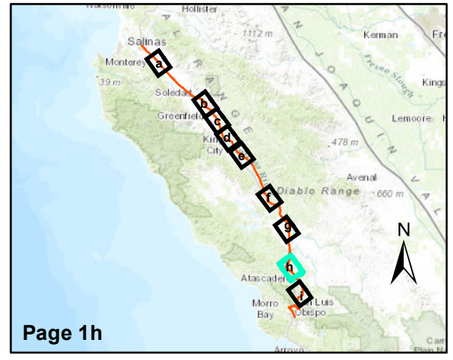

- Agriculture
- Annual Grassland
- Barren
- Blue Oak Woodland
- Blue Oak-Foothill Pine
- Coastal Oak Woodland
- Coastal Scrub
- Cropland
- Lacustrine
- Mixed Chaparral
- Unknown Shrub Type
- Urban
- Valley Foothill Riparian
- Valley Oak Woodland

**Project Components**

- Existing Alignment
- Realignments
- Sidings

0 1,500 3,000 6,000
Feet

1:36,000



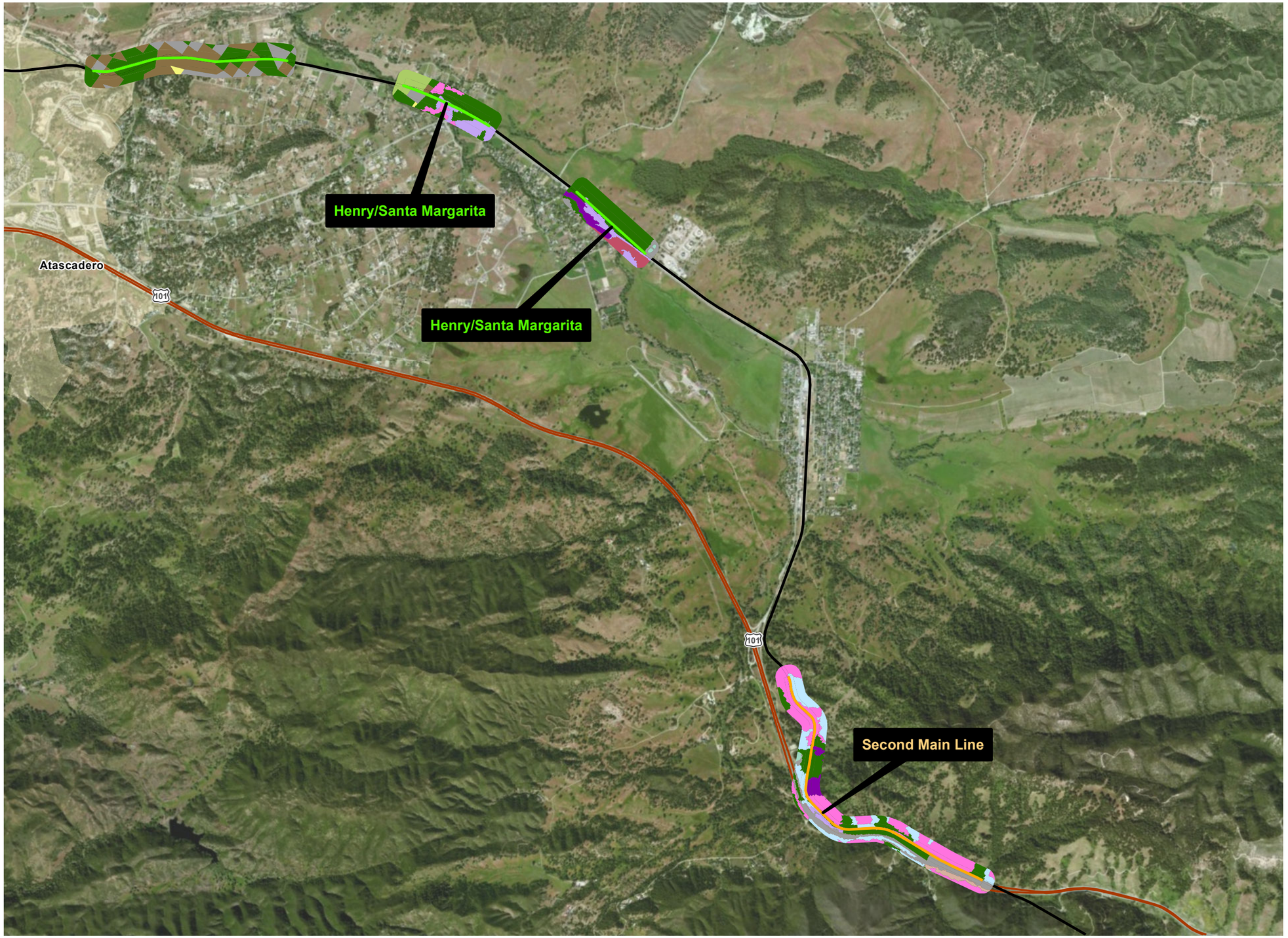

Page 1h

**Sensitive Vegetation Communites**

**Figure 3.13-1h**

*Source: ICF International, 2013*

*This page intentionally left blank.*



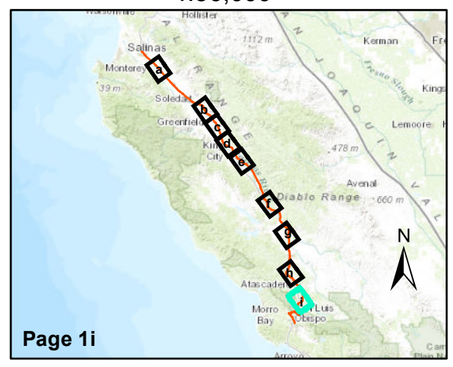

- Agriculture
- Annual Grassland
- Barren
- Blue Oak Woodland
- Blue Oak-Foothill Pine
- Coastal Oak Woodland
- Coastal Scrub
- Cropland
- Lacustrine
- Mixed Chaparral
- Unknown Shrub Type
- Urban
- Valley Foothill Riparian
- Valley Oak Woodland

**Project Components**

- Existing Alignment
- Realignments
- Sidings

0 1,500 3,000 6,000
Feet

1:36,000






Sensitive Vegetation Communites

Figure 3.13-1i

Source: ICF International, 2013

*This page intentionally left blank.*


## Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

Realignments

Sidings

0 1,500 3,000 6,000

Feet

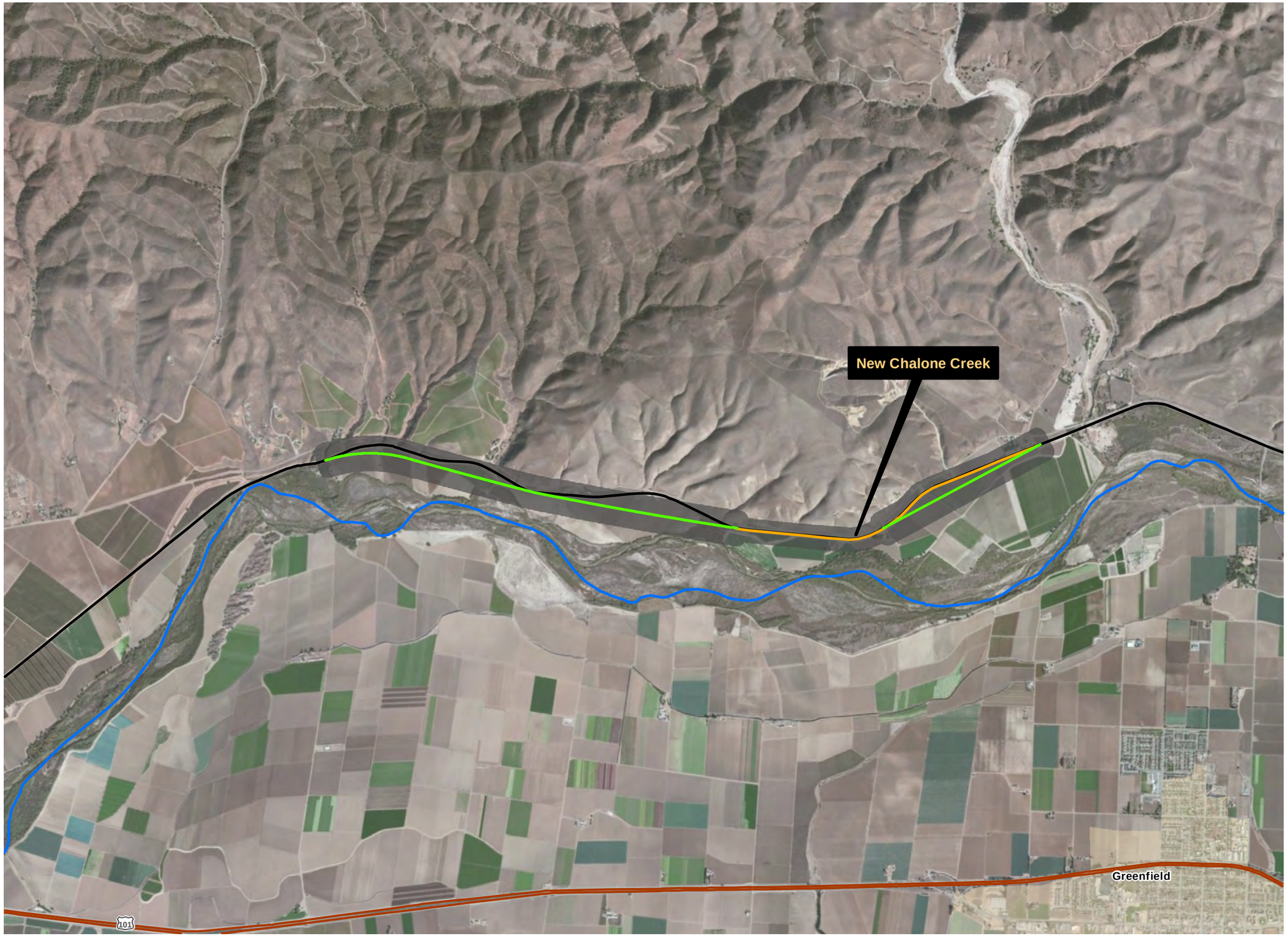
1:36,000


Page 2a

**Critical Habitat** **Figure 3.13-2a**

*Source: ICF International, 2013*

*This page intentionally left blank.*




## Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

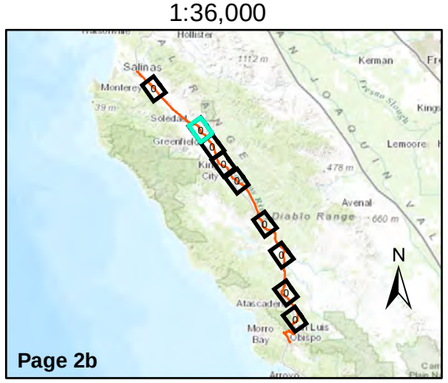
Realignments

Sidings

0 1,500 3,000 6,000

Feet

1:36,000

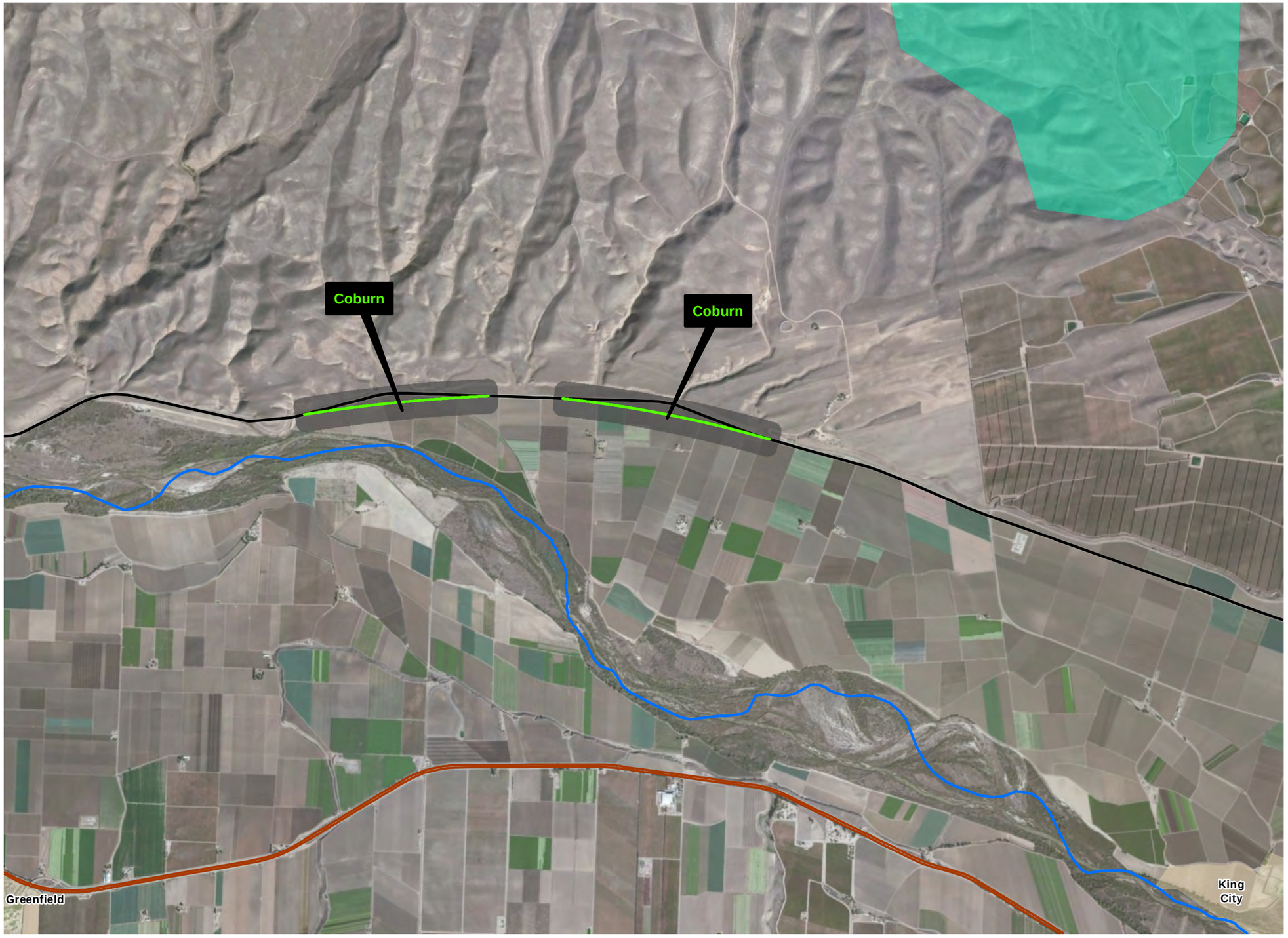



**Critical Habitat**

**Figure 3.13-2b**

*Source: ICF International, 2013*

*This page intentionally left blank.*




## Legend

- Biological Study Area

**Critical Habitat**

- California red-legged frog
- Vernal pool fairy shrimp
- South-Coast California steelhead

**Project Components**

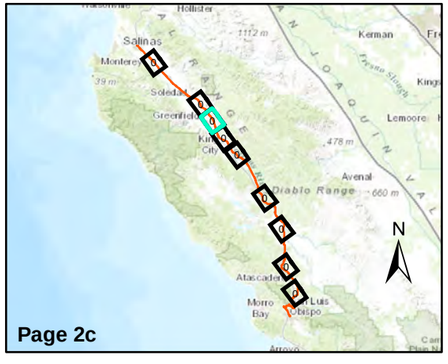
- Existing Alignment
- Realignments
- Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000

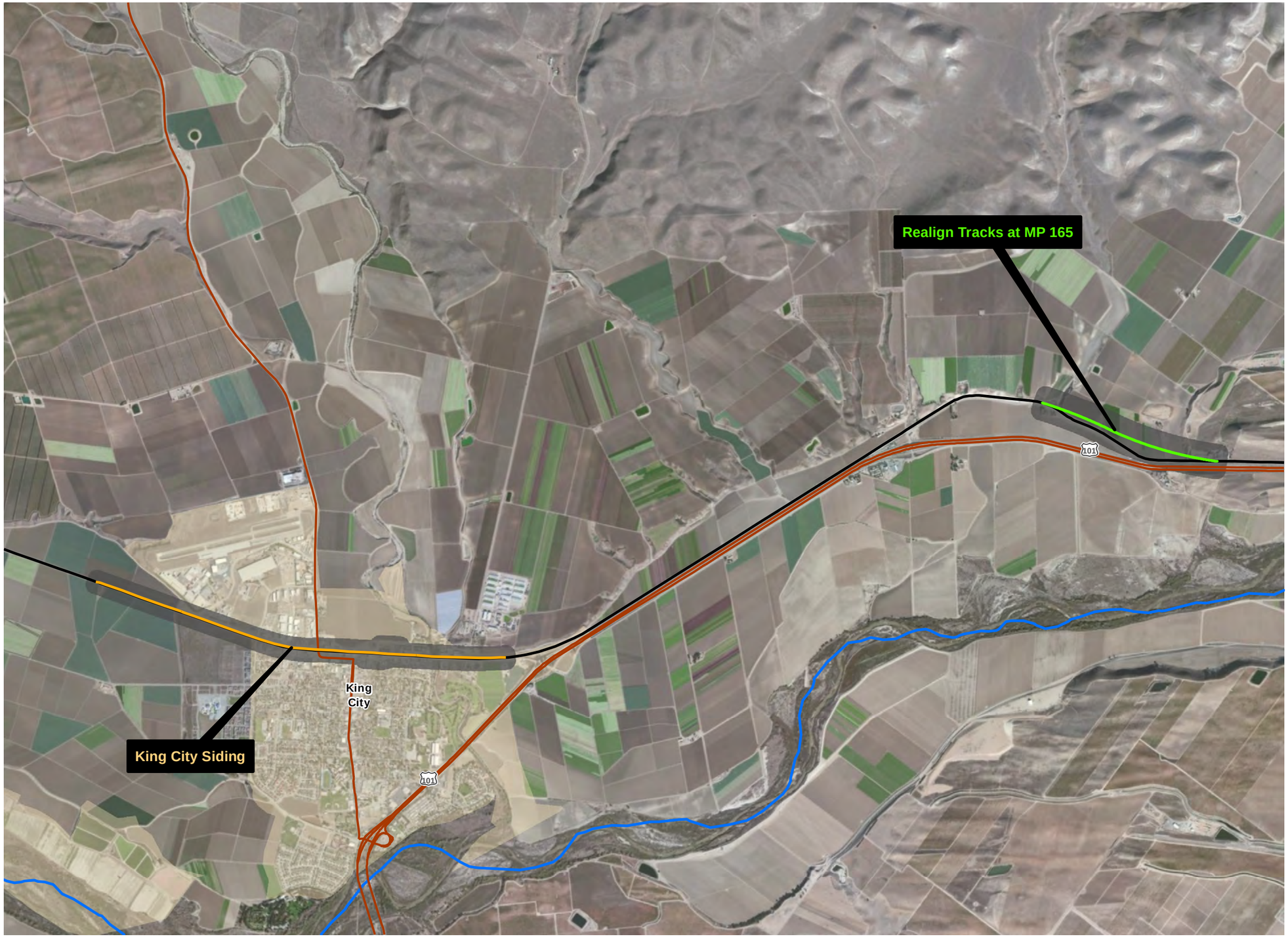





**Critical Habitat** **Figure 3.13-2c**

*Source: ICF International, 2013*

*This page intentionally left blank.*




Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

Realignments

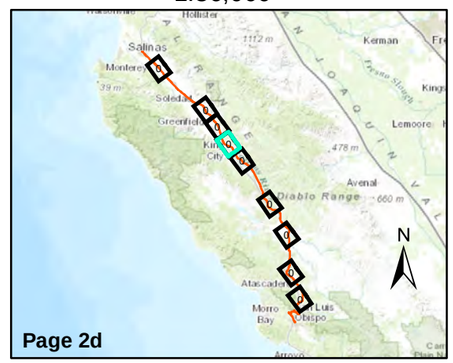
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000



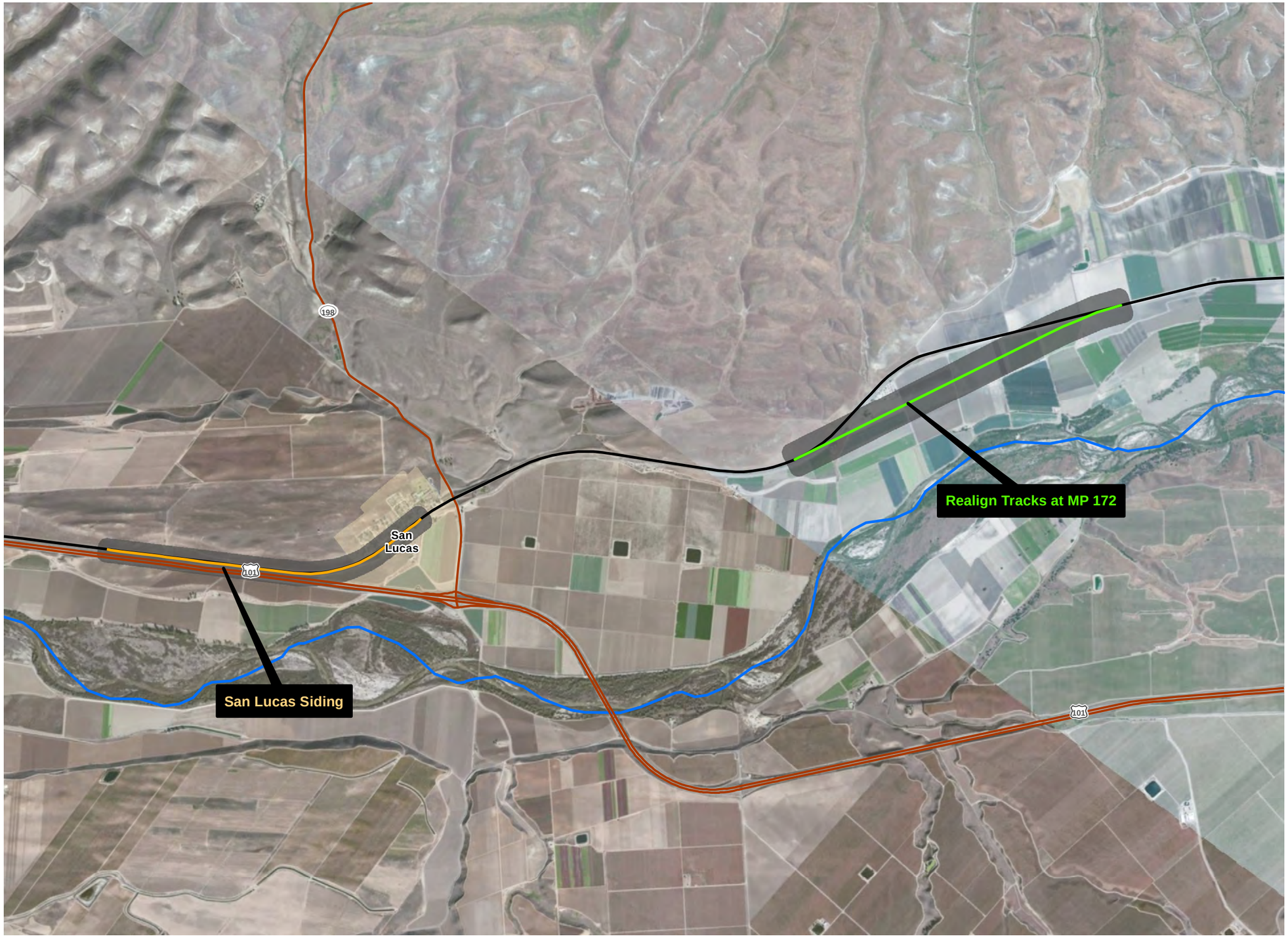



Critical Habitat

Figure 3.13-2d

*Source: ICF International, 2013*

*This page intentionally left blank.*




Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

Realignments

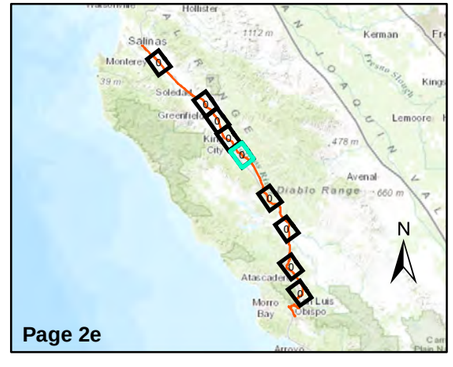
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000

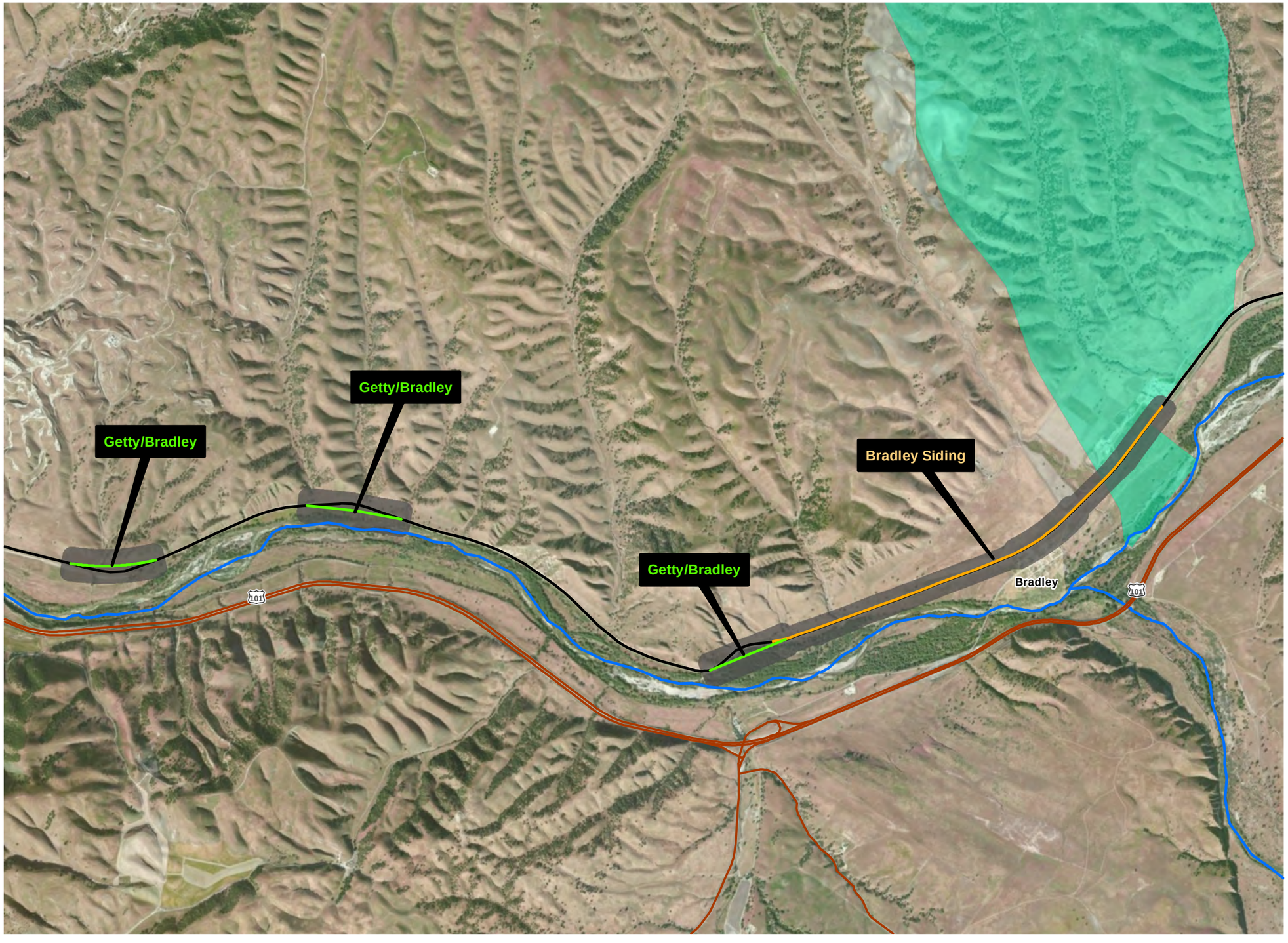



Page 2e

**Critical Habitat** **Figure 3.13-2e**

*Source: ICF International, 2013*

*This page intentionally left blank.*




Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

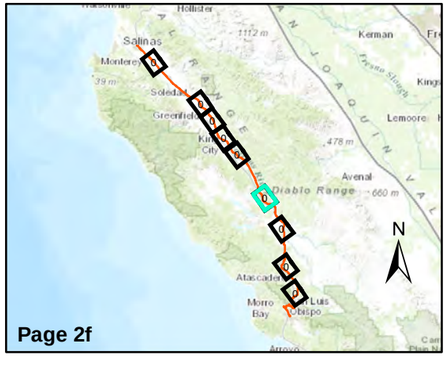
Realignments

Sidings

0 1,500 3,000 6,000

Feet

1:36,000



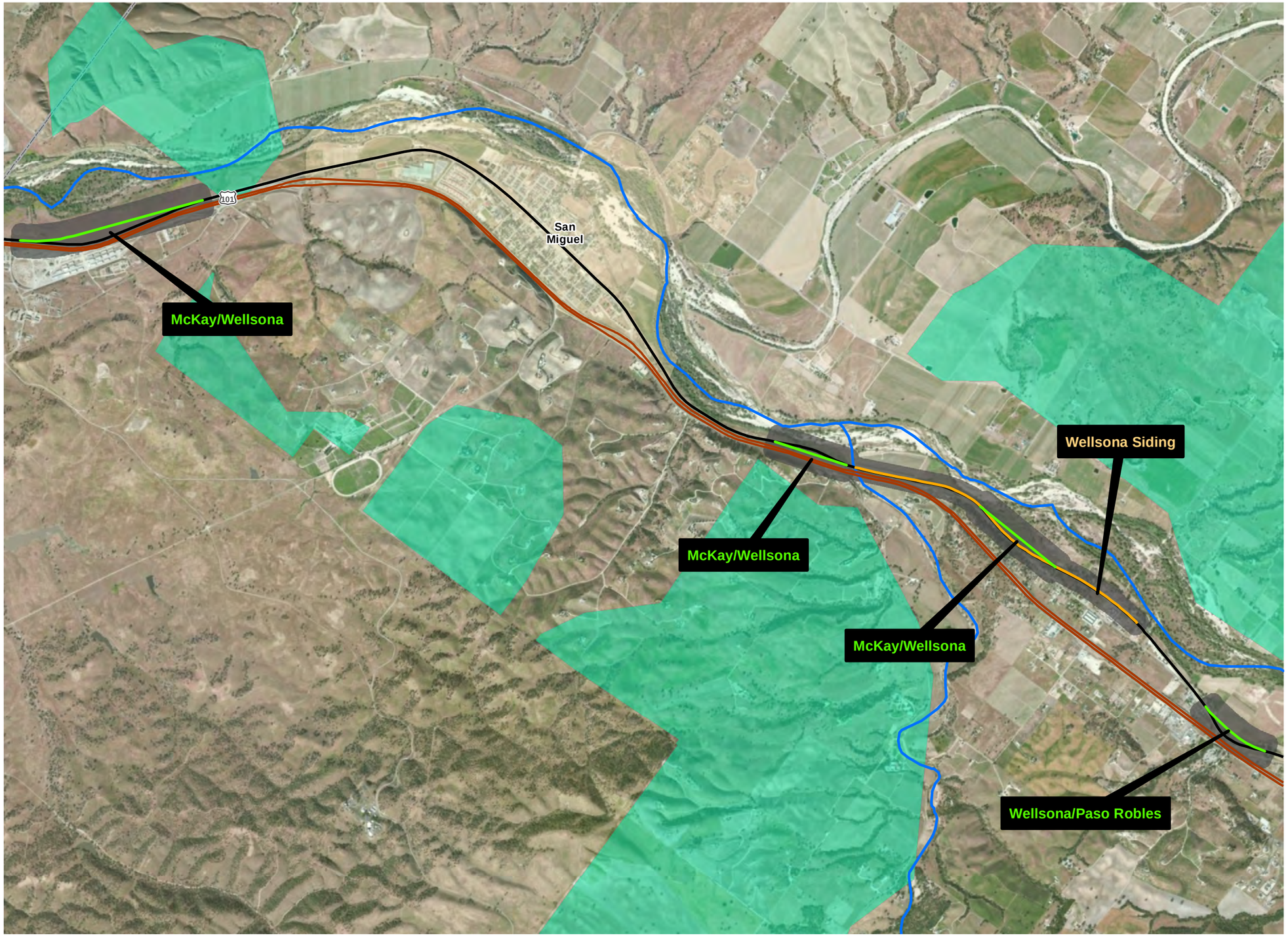



**Critical Habitat**

**Figure 3.13-2f**

*Source: ICF International, 2013*

*This page intentionally left blank.*




## Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

Realignments

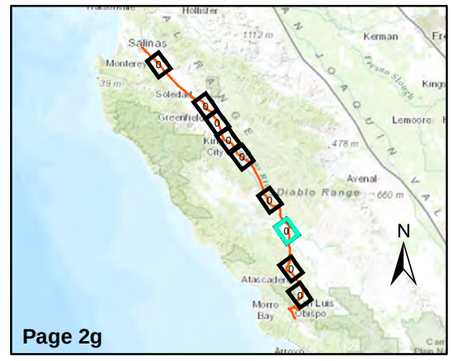
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000

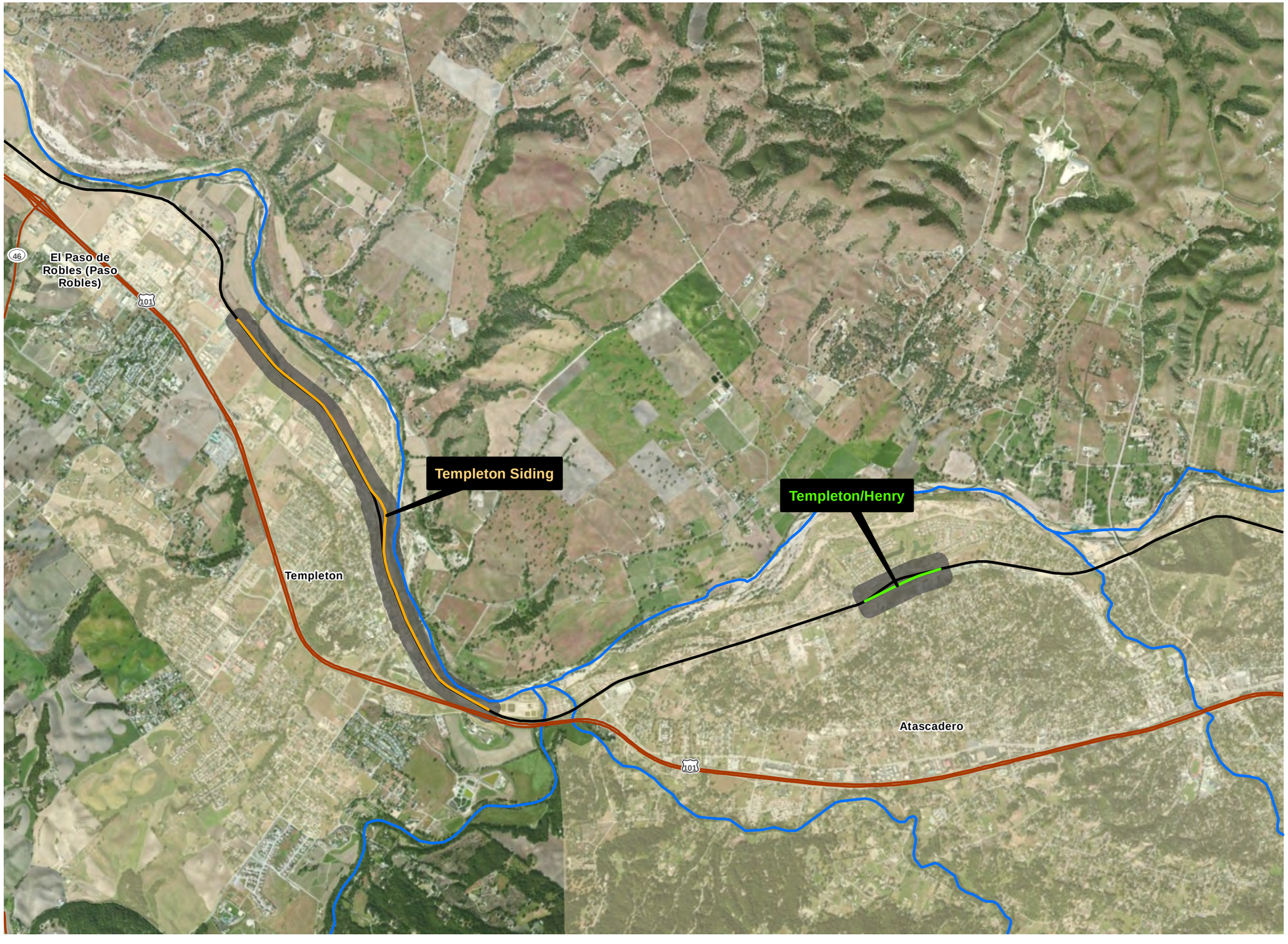





**Critical Habitat** **Figure 3.13-2g**

*Source: ICF International, 2013*

*This page intentionally left blank.*




## Legend

Biological Study Area

**Critical Habitat**

California red-legged frog

Vernal pool fairy shrimp

South-Coast California steelhead

**Project Components**

Existing Alignment

Realignments

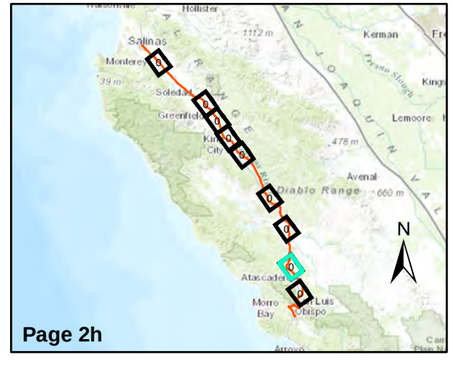
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000

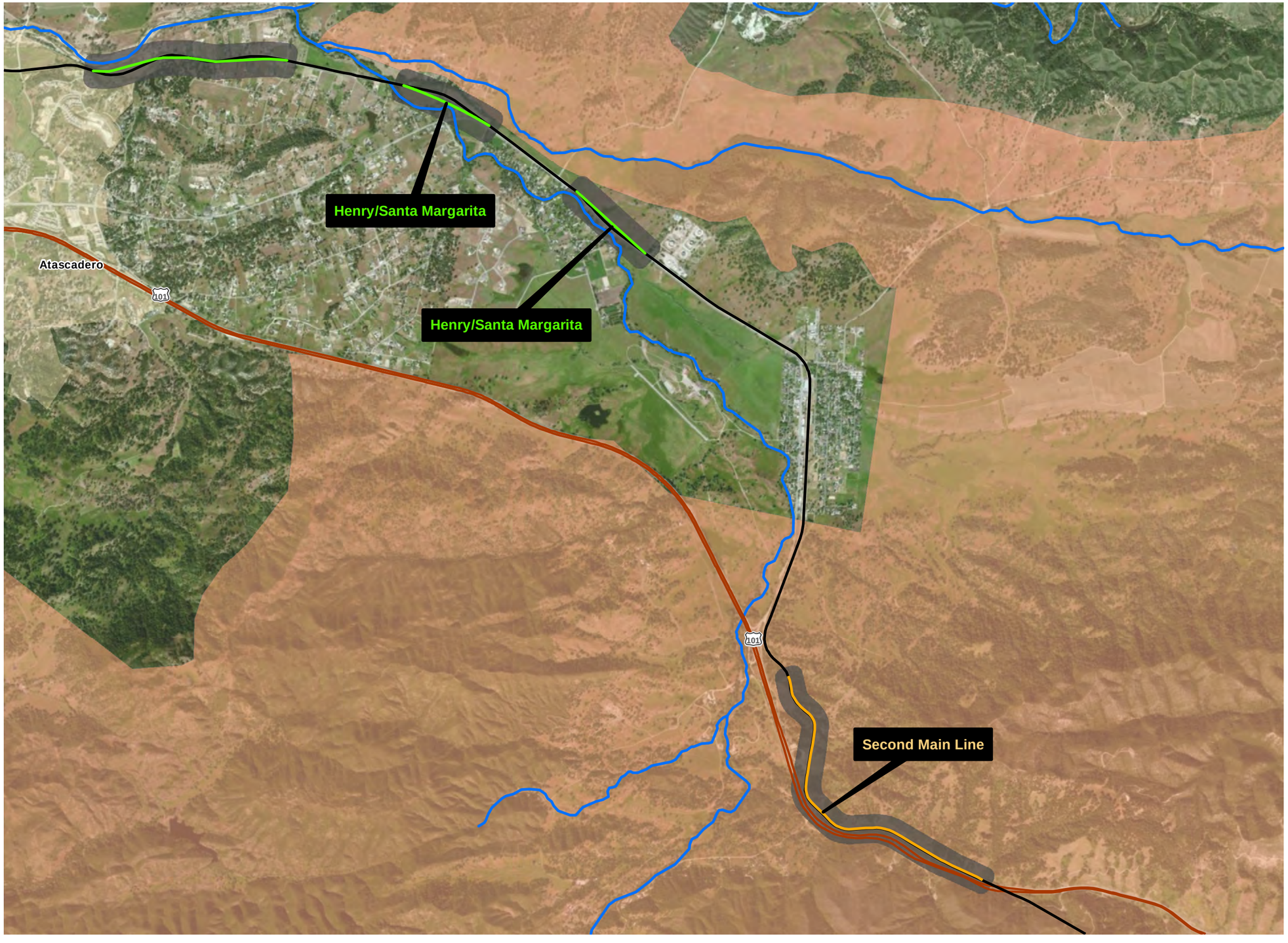





**Critical Habitat** **Figure 3.13-2h**

*Source: ICF International, 2013*

*This page intentionally left blank.*




Legend

- Biological Study Area

**Critical Habitat**

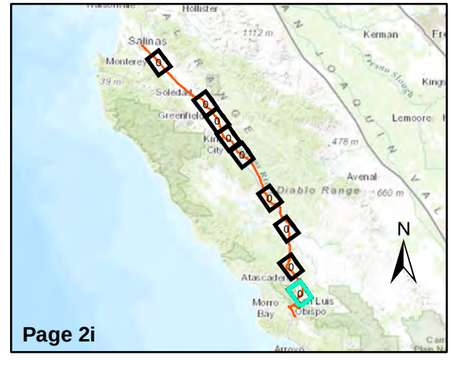
- California red-legged frog
- Vernal pool fairy shrimp
- South-Coast California steelhead

**Project Components**

- Existing Alignment
- Realignments
- Sidings

0 1,500 3,000 6,000
Feet

1:36,000






**Critical Habitat** **Figure 3.13-2i**

*Source: ICF International, 2013*

*This page intentionally left blank.*


## Legend

Biological Study Area

Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Riverine

Project Components

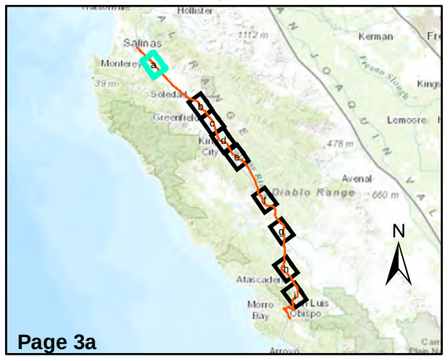
- Existing Alignment
- Realignments
- Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000



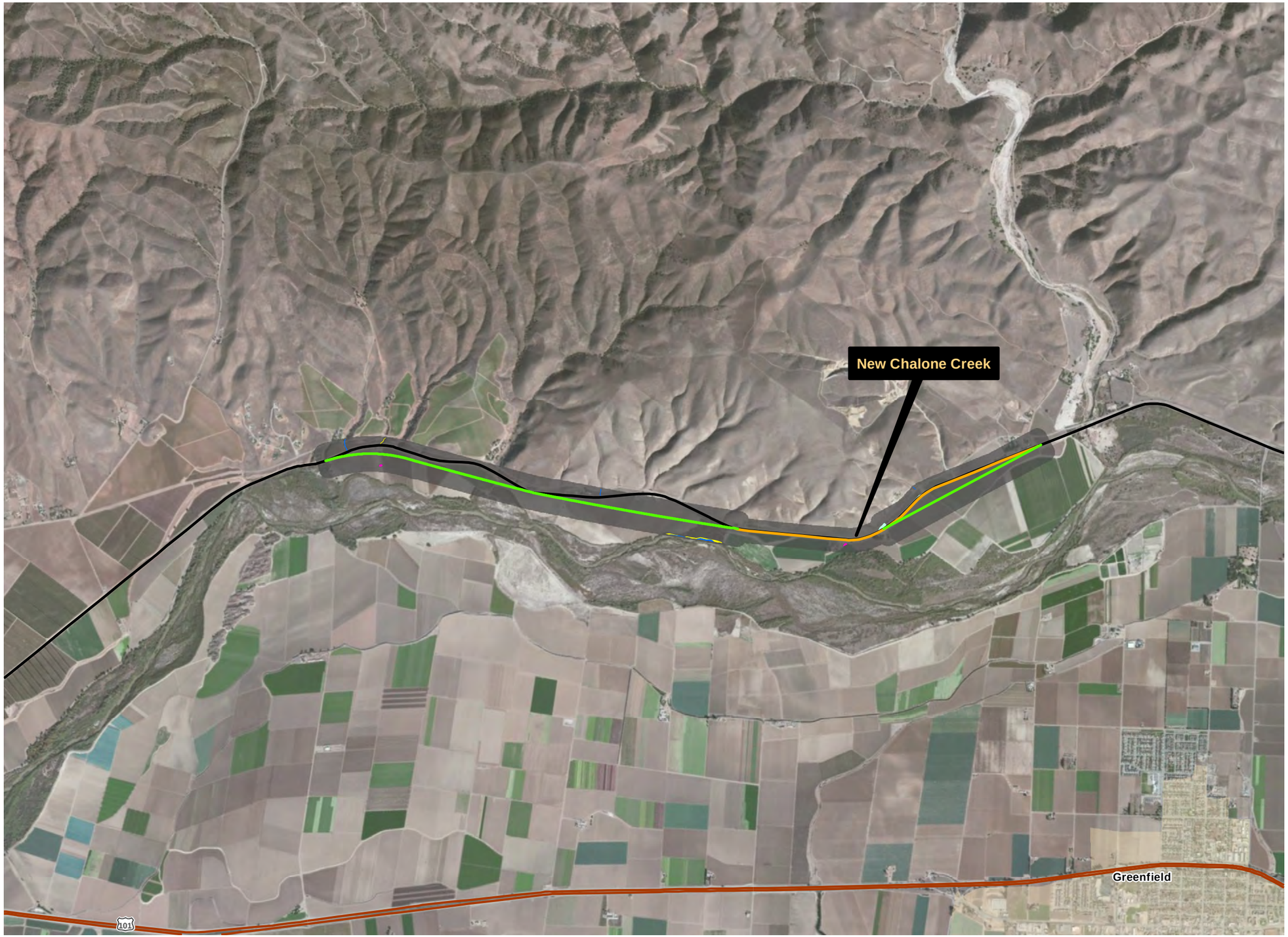



Wetlands and Jurisdictional Waters

Figure 3.13-3a

Source: ICF International, 2013

*This page intentionally left blank.*




Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

Realignments

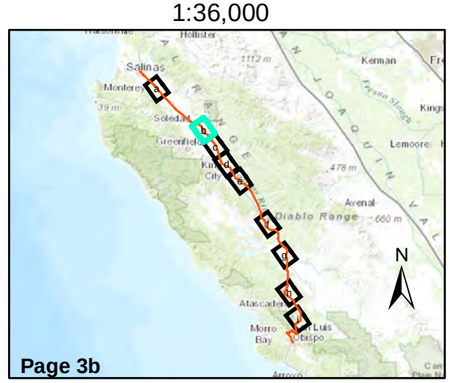
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000




Wetlands and Jurisdictional Waters

Figure 3.13-3b

*Source: ICF International, 2013*

*This page intentionally left blank.*


## Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

Realignments

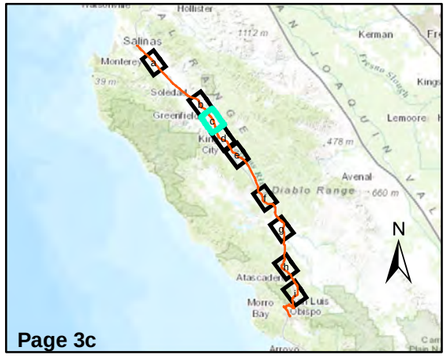
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000




Page 3c

**Wetlands and Jurisdictional Waters** **Figure 3.13-3c**

*Source: ICF International, 2013*

*This page intentionally left blank.*


## Legend

Biological Study Area

Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Riverine

Project Components

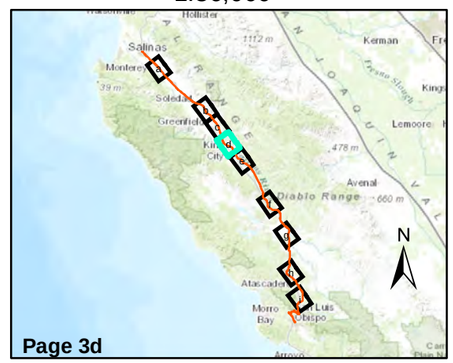
- Existing Alignment
- Realignments
- Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000

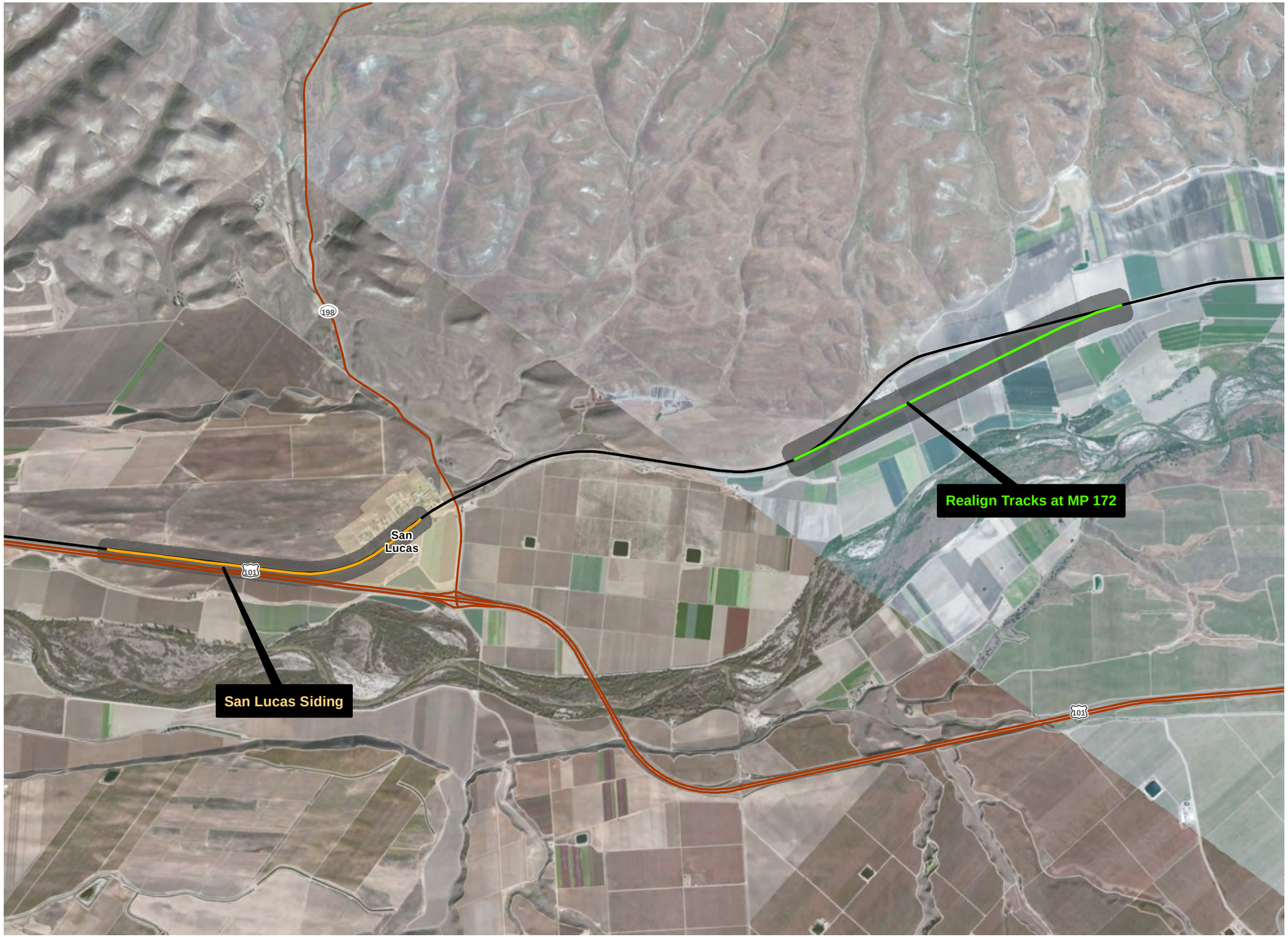





**Wetlands and Jurisdictional Waters** **Figure 3.13-3d**

*Source: ICF International, 2013*

*This page intentionally left blank.*




## Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

Realignments

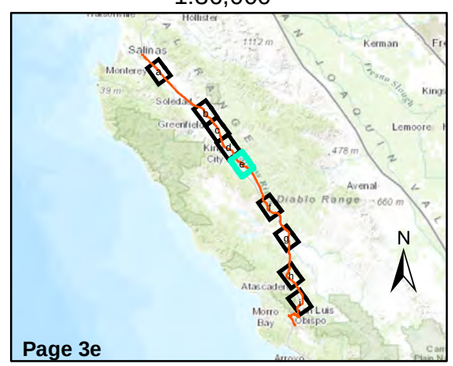
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000

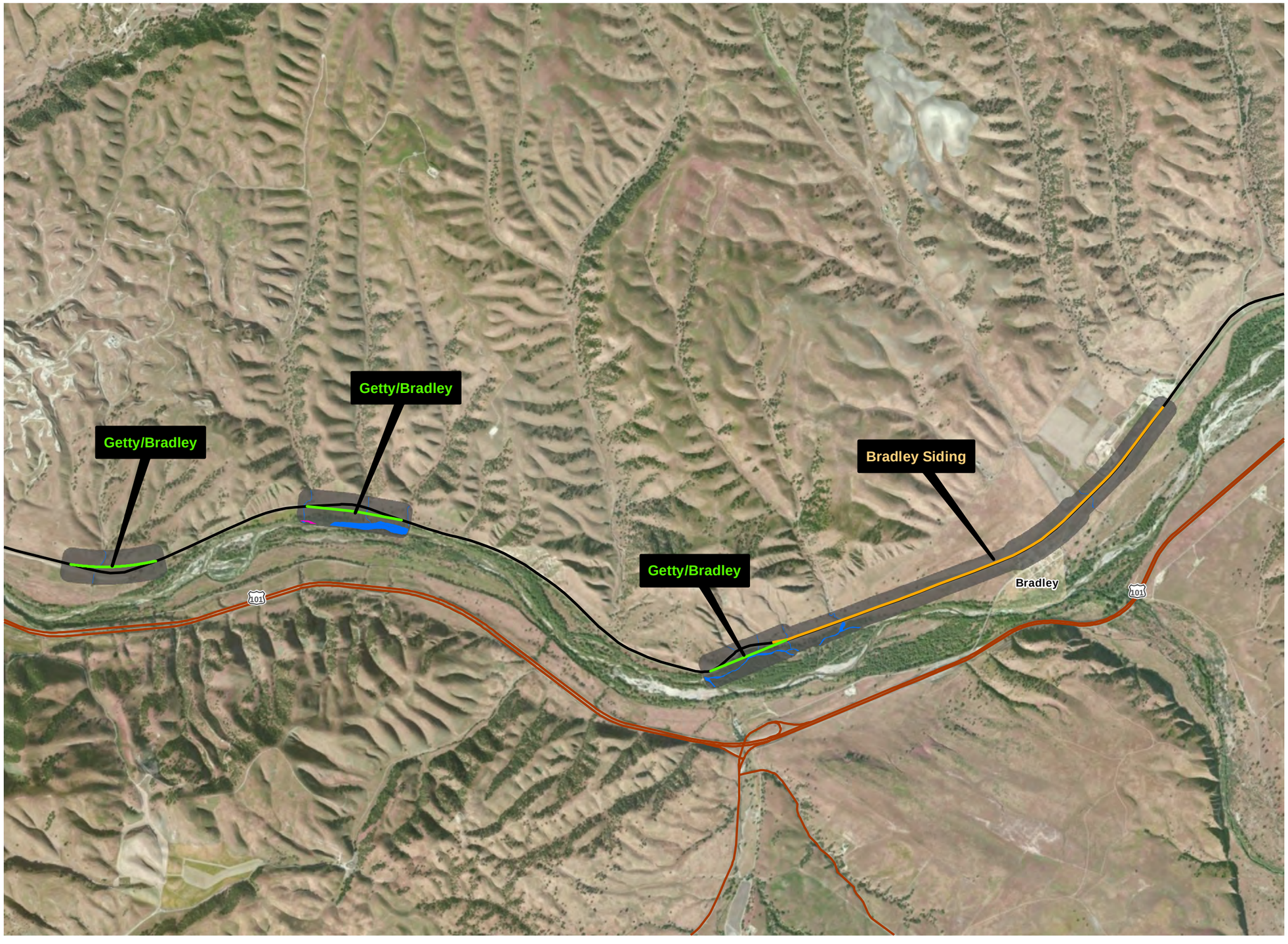





**Wetlands and Jurisdictional Waters** **Figure 3.13-3e**

*Source: ICF International, 2013*

*This page intentionally left blank.*




Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

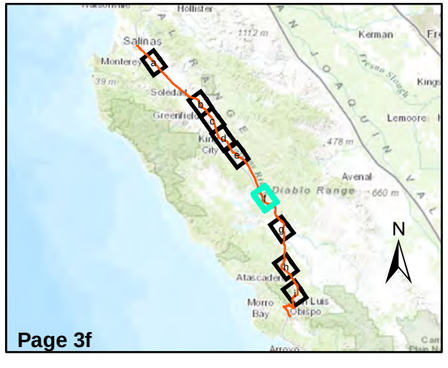
Realignments

Sidings

0 1,500 3,000 6,000

Feet

1:36,000



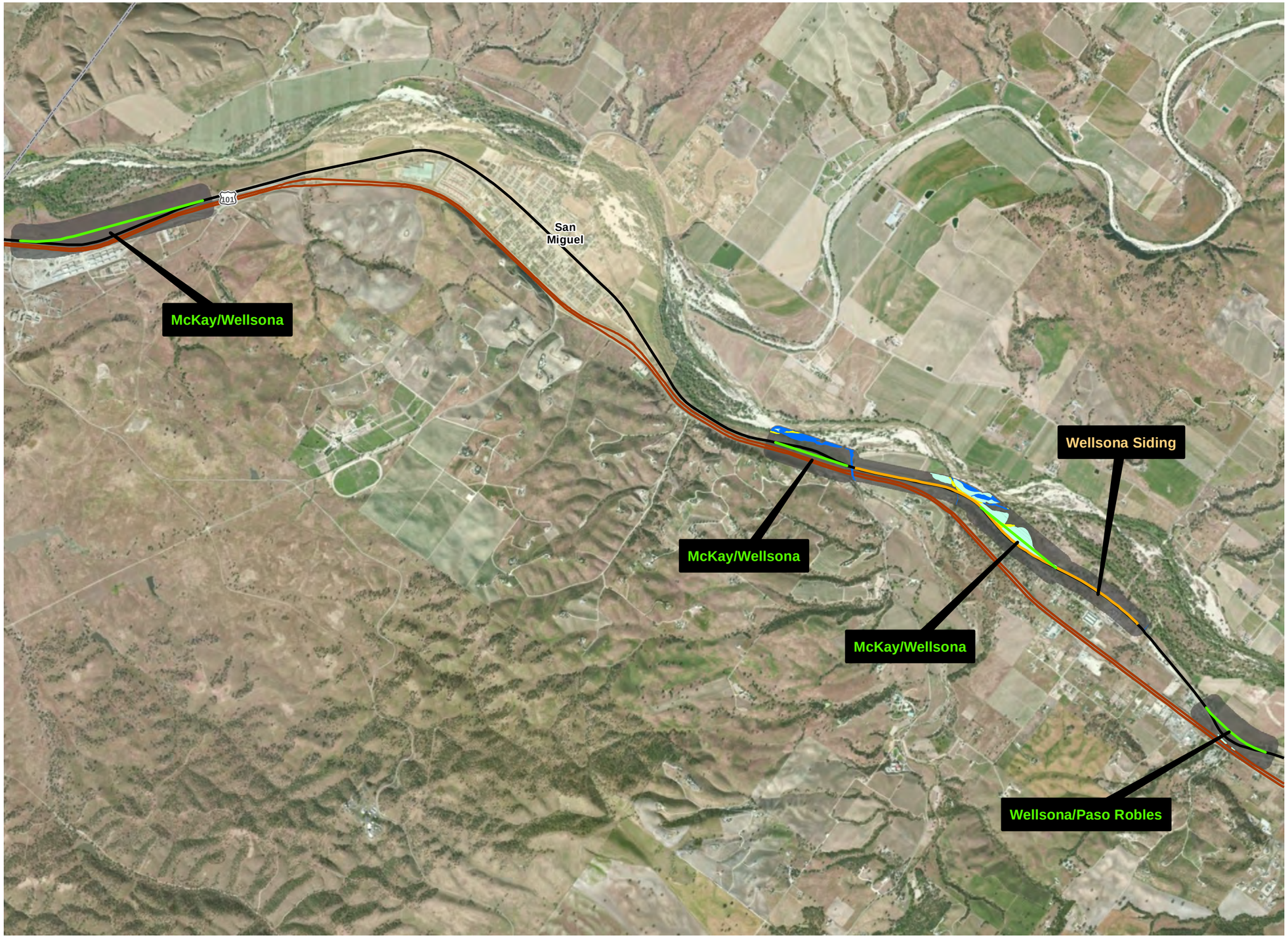

Page 3f

Wetlands and Jurisdictional Waters

Figure 3.13-3f

Source: ICF International, 2013

*This page intentionally left blank.*




Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

Realignments

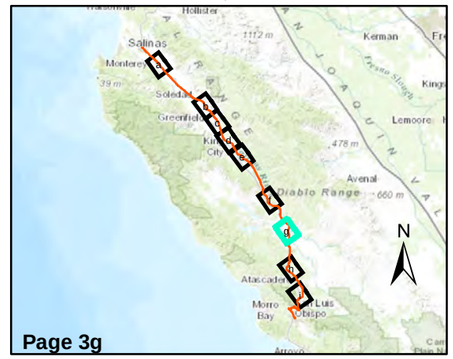
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000



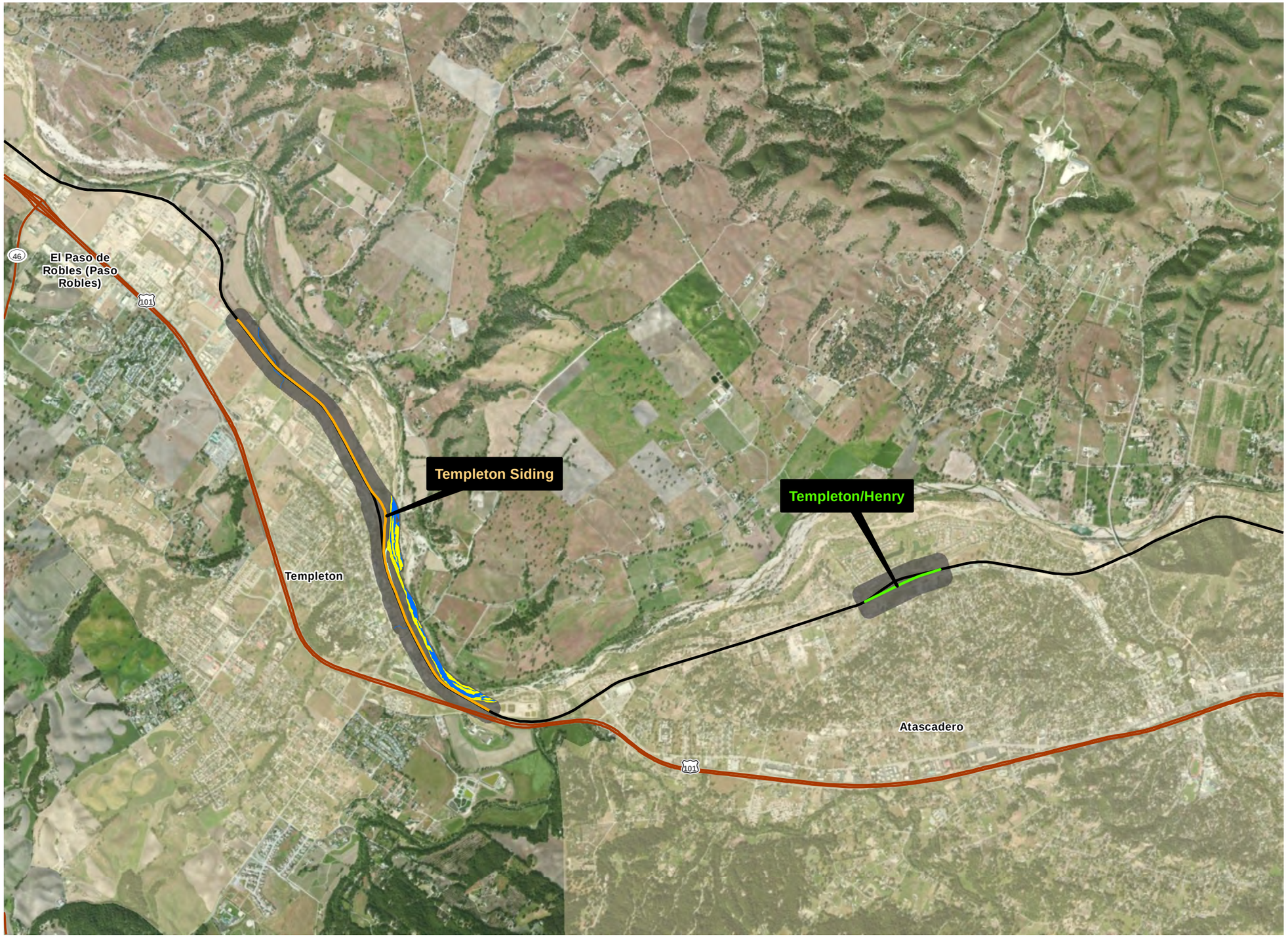

Page 3g

Wetlands and Jurisdictional Waters

Figure 3.13-3g

Source: ICF International, 2013

*This page intentionally left blank.*




## Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

Realignments

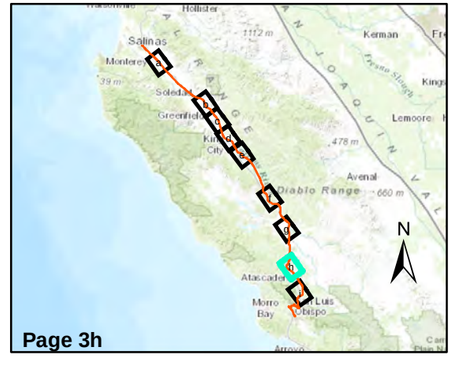
Sidings

N

0 1,500 3,000 6,000

Feet

1:36,000



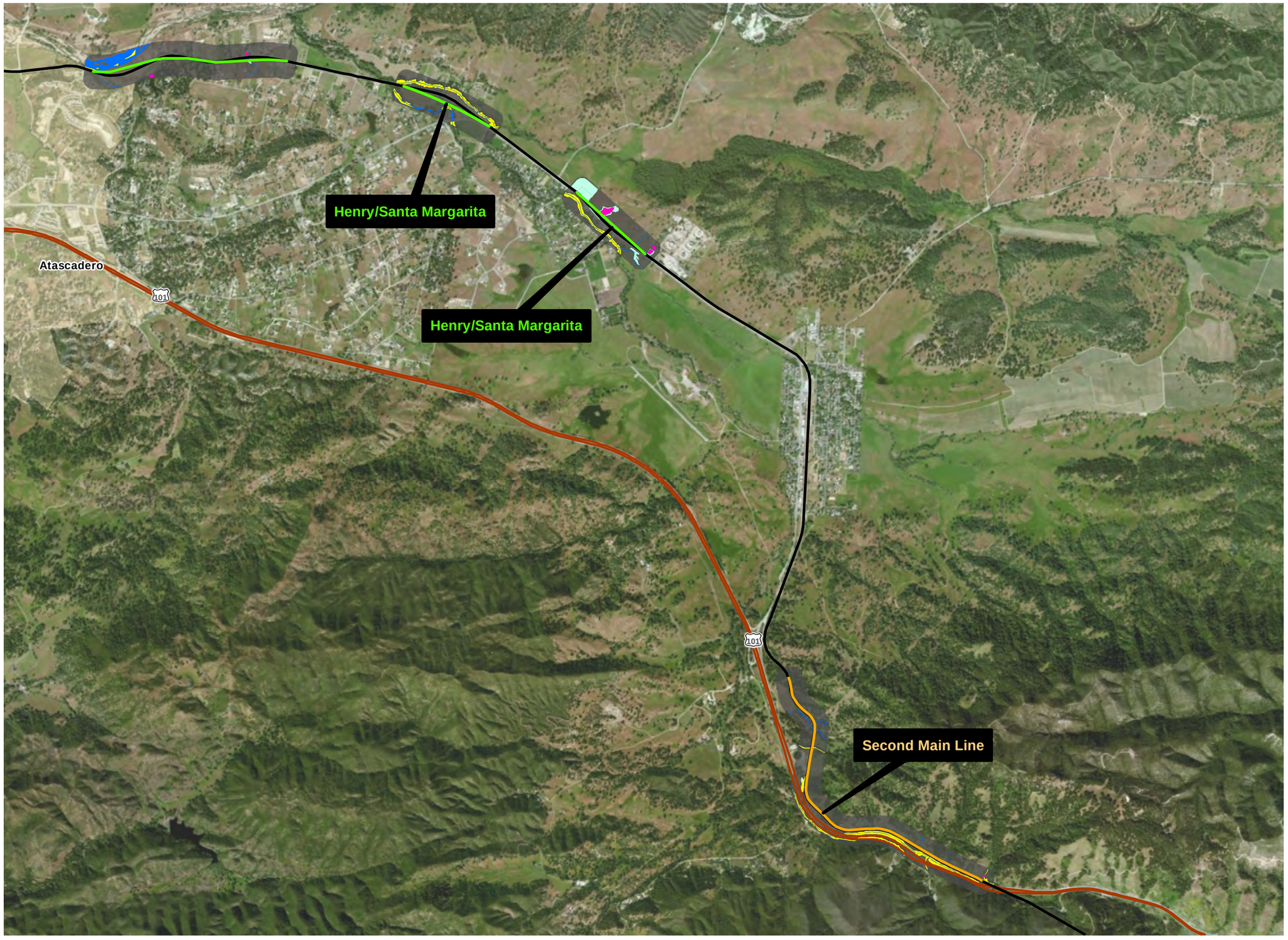

Page 3h

Wetlands and Jurisdictional Waters

Figure 3.13-3h

*Source: ICF International, 2013*

*This page intentionally left blank.*




Legend

Biological Study Area

Wetlands

Freshwater Emergent Wetland

Freshwater Forested/ Shrub Wetland

Freshwater Pond

Riverine

Project Components

Existing Alignment

Realignments

Sidings

0 1,500 3,000 6,000

Feet

1:36,000


Page 3i

Wetlands and Jurisdictional Waters

Figure 3.13-3i

Source: ICF International, 2013

*This page intentionally left blank.*