

## **3.18 Animal Species**

### **3.18.1 Regulatory Setting**

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 3.19 below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Section 4150 and 4152 of the California Fish and Game Code
- California Wildlife Protection Act of 1990

The Project Area is also subject to the requirements of the Orange County Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). The entire footprint of the ETC Corridor was assumed “take” through its construction, and per the NCCP/HCP documents, all development activities and uses addressed by the NCCP/HCP by participating landowners within the NCCP/HCP Plan Areas are considered fully mitigated by the NCCP/HCP. No additional mitigation is required for impacts to identified species and their habitat or for species residing in non-coastal sage scrub (covered habitats).

### 3.18.2 Affected Environment

This section is based on the *Natural Environment Study* (NES; December 2015), the *Supplemental Natural Environment Study* (Supplemental NES; April 2016), and the *Biological Assessment* (BA; April 2016) prepared for the Proposed Project.

A literature review and records search were conducted to identify the existence or potential occurrence of special-status animal species located within or in the vicinity of the Biological Study Area (BSA), shown previously on Figure 3.15.1 in Section 3.15, Natural Communities. The most recent records of the California Natural Diversity Data Base (CNDDB) (Commercial Version) were reviewed for the quadrangles containing and surrounding the BSA (i.e., the *Orange, Yorba Linda, Black Star Canyon, and Prado Dam, California*, United States Geological Survey [USGS] 7.5-minute quadrangles). This database contains records of reported occurrences of federal- or State-listed endangered, threatened, proposed endangered, or threatened species; California Species of Special Concern (SSC); or otherwise special-status animal species or habitat that may occur within or in the immediate vicinity of the BSA. In addition, a list of animal species occurring in the County of Orange was obtained from the USFWS Information, Planning, and Conservation (IPaC) System online database on May 19 and June 15, 2011, September 9, 2013, and December 1, 2014. Official species lists were obtained from the USFWS on January 22, 2014, February 2, 2015, February 11, 2016, and September 16, 2016.

Reconnaissance-level biological resource surveys were conducted on May 10, 2011, March 17, 2015, and March 19, 2015. In addition, a bat habitat suitability assessment was conducted on November 30, 2011.

The results of the literature review indicated that a total of 74 special-status animal species have the potential to occur on or within the vicinity of the BSA. Twelve are federal- and/or State-listed threatened or endangered species and are discussed later in Section 3.19, Threatened and Endangered Species.

Of the remaining 62 special-status animal species identified through the literature review as potentially occurring in the BSA, it was determined that the BSA does not contain suitable habitat for the following 21 species:

- Black-crowned night-heron (nesting) (*Nycticorax nycticorax*)
- Coast Range newt (*Taricha torosa torosa*)
- Double-crested cormorant (nesting) (*Phalacrocorax auritus*)
- Great blue heron (nesting) (*Ardea herodias*)

- Great egret (nesting) (*Ardea alba*)
- Long-eared owl (nesting) (*Asio otus*)
- Mexican long-tongued bat (*Choeronycteris mexicana*)
- Northern harrier (nesting) (*Circus cyaneus*)
- Northern leopard frog (*Lithobates pipiens*)
- Nuttall's woodpecker (nesting) (*Picoides nuttallii*)
- Oak titmouse (nesting) (*Baeolophus inornatus*)
- Ringtail (*Bassariscus astutus*)
- San Diego cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)
- Santa Ana speckled dace (*Rhinichthys osculus*)
- Snowy egret (nesting) (*Egretta thula*)
- Southwestern pond turtle (*Actinemys marmorata pallida*)
- Two-striped garter snake (*Thamnophis hammondi*)
- White-tailed kite (*Elanus leucurus*)
- Yellow warbler (nesting) (*Dendroica petechia*)
- Yellow-breasted chat (nesting) (*Icteria virens*)
- Tricolored blackbird (nesting) (*Agelaius tricolor*)

In addition, with the exception of the great egret, great blue heron, and double-crested cormorant, which were observed flying over the BSA, these special-status animal species were not observed or otherwise detected in the BSA at the time of the surveys. Therefore, these species are considered absent from the BSA and are not discussed further in this section.

Suitable habitat for the remaining 40 special-status animal species occurs or potentially occurs in the BSA. These special-status animal species are:

- Allen's hummingbird (nesting) (*Selasphorus sasin*)
- American badger (*Taxidea taxus*)
- Bell's sparrow (nesting) (*Amphispizabelli*)
- Big free-tailed bat (*Nyctinomops macrotis*)
- Black-chinned sparrow (nesting) (*Spizella atrogularis*)
- Burrowing owl (burrow sites) (*Athene cunicularia*)
- California horned lark (*Eremophila alpestris actia*)
- Coast horned lizard (*Phrynosoma blainvillii*)
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*)
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*)

- Cooper's hawk (nesting) (*Accipiter cooperii*)
- Costa's hummingbird (nesting) (*Calypte costae*)
- Ferruginous hawk (*Buteo regalis*)
- Golden eagle (*Aquila chrysaetos*)
- Grasshopper sparrow (nesting) (*Ammodramus savannarum*)
- Hoary bat (*Lasiurus cinereus*)
- Lark sparrow (nesting) (*Chondestes grammacus*)
- Lawrence's goldfinch (nesting) (*Carduelis lawrencei*)
- Loggerhead shrike (nesting) (*Lanius ludovicianus*)
- Long-eared myotis (*Myotis evotis*)
- Long-legged myotis (*Myotis volans*)
- Merlin (wintering) (*Falco columbarius*)
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*),
- Orange-throated whiptail (*Aspidoscelis hyperythra*)
- Pallid bat (*Antrozous pallidus*)
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*)
- Red-diamond rattlesnake (*Crotalus ruber*)
- Rosy boa (*Charina trivirgata*)
- San Diego banded gecko (*Coleonyx variegates abbotti*)
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)
- San Diego desert woodrat (*Neotoma lepida intermedia*)
- Silvery legless lizard (*Anniella pulchra pulchra*)
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)
- Southern grasshopper mouse (*Onychomys torridus ramona*)
- Southwestern yellow bat (*Lasiurus xanthinus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Western mastiff bat (*Eumops perotis californicus*)
- Western red bat (*Lasiurus blossevillii*)
- Western small-footed myotis (*Myotis ciliolabrum*)
- Western spadefoot (*Spea hammondi*)
- Yuma myotis (*Myotis yumanensis*)

Of the 40 species listed above with suitable or potentially suitable habitat present in the BSA, only 4 species, Cooper's hawk, Allen's hummingbird, western small-footed myotis, and Yuma myotis, were observed during field surveys.

### **3.18.2.1 Golden Eagle**

The golden eagle is considered Fully Protected by the State of California. Golden eagles typically occur in rolling foothills, mountain areas, sage-juniper flats, and desert habitats. The golden eagle is known to have formerly nested in Gypsum Canyon south of the SR-241/SR-91 junction. However, because no golden eagles were observed in the BSA during the surveys conducted in 2011, 2013, and 2014, no suitable nesting habitat was identified in the BSA; and as there is limited foraging opportunity in the BSA, there is a low probability of the golden eagle occurring in the BSA.

### **3.18.2.2 Special-Status Coastal Sage Scrub and Chaparral Animal Species**

Special-status coastal sage scrub and chaparral species with the potential to occur in the BSA include San Diego banded gecko, coast horned lizard, orange-throated whiptail, coastal whiptail, silvery legless lizard, rosy boa, red-diamond rattlesnake, coast patch-nosed snake, Cooper's hawk, Allen's hummingbird, southern California rufous-crowned sparrow, Bell's sparrow, burrowing owl, Costa's hummingbird, Lawrence's goldfinch, lark sparrow, loggerhead shrike, black-chinned sparrow, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, San Diego desert woodrat, and southern grasshopper mouse. Of these, only Cooper's hawk and Allen's hummingbird were observed during 2011 surveys. None of the other special-status coastal sage scrub and chaparral animal species was observed during surveys conducted in 2011, 2013, and 2014.

### **3.18.2.3 Bridge, Crevice, and Cavity-Dwelling Animal Species**

#### **Bats**

Special-status bats known to occur or with the potential to occur in the BSA include pallid bat, Townsend's big-eared bat, western mastiff bat, southwestern yellow bat, long-eared myotis, long-legged myotis, western small-footed myotis, Yuma myotis, pocketed free-tailed bat, and big free-tailed bat. Suitable foraging habitat exists within the BSA for special-status bat species.

None of these species was observed during surveys conducted in 2011, 2013, and 2014. However, bat-specific studies were not conducted for the Proposed Project because bat-specific studies have been conducted in the BSA for other projects as described below.

There are several areas where there is suitable bat-roosting habitat in the BSA, including five areas in the BSA that were found to contain suitable bat-roosting habitat during a bat habitat assessment conducted in 2006 for the SR-91 Eastbound Widening Project. Evening acoustic and emergence surveys were subsequently conducted in these areas in 2008 for the same project. In addition, in 2006, 2008, and 2013 bat surveys were conducted as part of the SR-91 Capital Improvement Project. The following are findings from these projects for areas that overlap with the Proposed Project:

- The first area at the Windy Ridge Wildlife Crossing had approximately 30 Brazilian (Mexican) free-tailed bats day roosting in crevices during the 2008 surveys. Brazilian free-tailed bats are not a special-status species, but their presence indicates the area is suitable for roosting bats. Evening emergence surveys would determine the probability of this bridge structure being used by special-status bat species. Barring additional studies conducted at the Windy Ridge Wildlife Crossing, the use of this structure by night-roosting bats is presumed.
- The second area includes at least three separate expansion joints in the overhead connectors between SR-241 and SR-91. Due to the height of these overhead structures, roosting at these locations was not confirmed.
- The third and fourth areas consist of crevices at box culverts between Gypsum Canyon Creek and Coal Canyon Creek and at the Coal Canyon Creek box culverts beneath SR-91. During surveys conducted at these locations in 2006, 2008, and 2013, a myotis species, Yuma myotis, and/or big brown bats were confirmed to be day roosting in both culverts, while four additional species including pallid bat, small-footed myotis, long-eared myotis, and California myotis (not special-status) were detected at Coal Canyon that were likely night roosting within that structure.
- The fifth area, the Coal Canyon Bridge, does not contain crevices suitable for day-roosting bats but, during the 2008 surveys, bats (likely Yuma myotis) were observed using this structure as a night roost and pallid, California myotis (not special-status), Yuma myotis, big brown, and Brazilian free-tailed bats were observed night roosting in 2013.

### ***Birds***

In addition to various bat species, swallows are known to nest and inhabit Coal Canyon Undercrossing and could be present at Windy Ridge Wildlife Undercrossing and at culverts within the BSA.

#### **3.18.2.4 Special-Status Grassland and Open Habitat Animal Species**

Special-status grassland and open habitat species with the potential to occur in the BSA include western spadefoot, coast horned lizard, silvery legless lizard, red-diamond rattlesnake, coast patch-nosed snake, grasshopper sparrow, burrowing owl, ferruginous hawk, California horned lark, merlin, northwestern San Diego pocket mouse, and American badger. None of these special-status grassland and open habitat animal species was observed during surveys conducted in 2011, 2013, and 2014.

### **3.18.3 Environmental Consequences**

#### **3.18.3.1 Temporary Impacts**

##### ***Build Alternative (Two-Lane Express Lanes Connector) (Preferred Alternative)***

##### ***Golden Eagles***

Due to the presence of existing highways within the BSA, and the fact that there is higher quality foraging habitat outside of and near the BSA, it is unlikely that golden eagles are currently foraging in the BSA or would be during construction. There is an incremental probability that construction of the Build Alternative may temporarily redirect foraging golden eagles away from the borders of the BSA during construction; however, those temporary impacts would be short-term and would occur only during construction activities. Therefore, temporary impacts to golden eagles would not be adverse and no avoidance, minimization, or mitigation measures are warranted.

##### ***Special-Status Coastal Sage Scrub and Chaparral Animal Species***

Construction of the Build Alternative is expected to have indirect temporary impacts to species that occupy the coastal sage scrub and chaparral natural communities through the disturbance of potentially suitable habitat. Even though none of the special-status coastal sage scrub and chaparral animal species besides Allen's hummingbird and Cooper's hawk was observed during the surveys conducted in 2011, 2013, and 2014, there is a possibility for them to move into the project limits and the BSA prior to construction. Table 3.18.1 presents temporary impacts for these plant communities within and outside the Natural Communities Conservation Plan (NCCP) Plan Area. Impacts to plant communities are depicted previously in Figure 3.15.2, in Section 3.15, Natural Communities. Measures NC-1 through NC-6, discussed earlier in Section 3.15, Natural Communities, and Measures TE-2 and TE-3, discussed later in Section 3.19, Threatened and Endangered Species, prohibit construction activities in and adjacent to coastal sage scrub habitat. Implementation of

**Table 3.18.1 Potential Temporary Impacts to Coastal Sage Scrub and Chaparral Habitat Inside and Outside the NCCP Plan Area**

Plant Community	Inside the NCCP Plan Area		Outside the NCCP Plan Area	
	Inside the Caltrans Right-of-Way	Outside the Caltrans Right-of-Way	Inside the Caltrans Right-of-Way	Outside the Caltrans Right-of-Way
Coastal Sage Scrub	29.68 ac	1.58 ac	0.02 ac	0.00 ac
Chaparral	1.37 ac	0.00 ac	0.21 ac	0.00 ac
<b>Total</b>	<b>31.05 ac</b>	<b>1.58 ac</b>	<b>0.23 ac</b>	<b>0.00 ac</b>

Source: Supplemental Natural Environment Study (April 2016).

ac = acres

NCCP = Natural Community Conservation Plan

Measures NC-1 through NC-6 and Measures TE-2 and TE-3 would reduce temporary impacts to special-status animal species that occupy coastal sage scrub habitat.

*Bridge, Crevice, and Cavity-Dwelling Animal Species*

Temporary impacts to special-status bat species and bridge-nesting birds could include temporary disturbance during construction (such as noise, dust, night lighting, and human encroachment). In addition, construction could temporarily impede access to roost sites (existing and future) in the crevices of bridges and overhead structures. Implementation of Measures AS-1 and AS-2 through AS-5, provided later in this section, which would require construction activity restrictions with regards to nesting birds, and preconstruction and construction bat surveys, and limit construction work in the vicinity of bridges and overhead structures, would reduce potential temporary impacts to special-status bat species and bridge-nesting birds.

*Special-Status Grassland and Open Habitat Animal Species*

None of the special-status grassland and open habitat animal species with the potential to occur in the BSA were observed during surveys conducted in 2011, 2013, and 2014. However, it is possible for them to move into the project limits and the BSA prior to construction. With the exception of nesting/burrowing birds, should any of these species be present within the grassland or open habitats in the project limits, they are expected to move out of the area during construction. Because of this, the Build Alternative is not expected to directly impact these species. However, the Build Alternative is expected to result in indirect temporary impacts to these species through the temporary loss of approximately 14.1 ac of potential habitat (grasslands and open space) during construction.. Measure AS-1, which would require vegetation removal or tree-trimming activities to occur outside of the nesting season, to the extent feasible and preconstruction surveys for nesting birds if vegetation removal or

tree-trimming activities were to occur during the nesting season, would reduce potential temporary impacts to special-status grassland and open habitat animal species during construction. In addition, as discussed in detail earlier in Section 3.15, Natural Communities, mitigation for the loss of coastal sage scrub and chaparral species habitat for part of the Build Alternative in the NCCP Plan Area has already been conducted as part of the NCCP Implementation Agreement.

Limited suitable wintering habitat for burrowing owl is present along the roadsides, but suitably sized breeding habitat is lacking in the BSA. Burrowing owls were not observed during field surveys; however, the burrowing owl is a mobile species and may colonize potentially suitable habitat in the BSA prior to the start of construction. As specified in Measure AS-7, preconstruction surveys would be required to ensure that burrowing owls are not occupying potentially suitable habitat within the project disturbance limits. Implementation of Measure AS-7 would ensure that no temporary impacts to burrowing owl would occur.

#### *Migratory Birds*

Vegetation clearing, grading, and tree removal associated with the Build Alternative also has the potential to directly impact nesting birds by disturbing habitat occupied by nesting birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Construction activities could indirectly impact nesting birds as a result of disturbances near trees occupied by nesting birds. Measure AS-1 requires vegetation removal or tree-trimming activities to occur outside of the nesting season, to the extent feasible, as well as preconstruction surveys for nesting birds if vegetation removal or tree-trimming activities were to occur during the nesting season. Therefore, with the implementation of Measure AS-1, potential temporary impacts to migratory birds would not be substantial.

#### **No Build Alternative**

The No Build Alternative does not include any improvements to SR-241 or SR-91 in the BSA. Therefore, no temporary impacts to special-status animal species would occur as a result of the No Build Alternative.

### 3.18.3.2 Permanent Impacts

#### **Build Alternative (Two-Lane Express Lanes Connector) (Preferred Alternative)**

##### *Golden Eagles*

The Build Alternative is not expected to permanently impact any golden eagles due to the low probability of occurrence and the lack of suitable nesting habitat in the BSA. Because no golden eagles were observed in the BSA, there is no suitable nesting habitat in the BSA; and there is limited foraging opportunity in the BSA, there is a low probability of golden eagles to occur in the BSA. Therefore, no permanent impacts to golden eagles would occur, and no avoidance, minimization, or mitigation measures are required.

##### *Special-Status Coastal Sage Scrub and Chaparral Animal Species*

The Build Alternative is not anticipated to result in permanent direct impacts to special-status coastal sage scrub species. However, the Build Alternative is expected to have indirect permanent impacts to species that occupy coastal sage scrub and chaparral through the removal of potential suitable habitat. Table 3.18.2 presents permanent impacts to coastal sage scrub and chaparral habitat, which would occur in the NCCP Plan Area. Impacts to plant communities are depicted previously in Figure 3.15.2, in Section 3.15, Natural Communities. Operation of the Build Alternative may permanently redirect foraging or nesting birds away from the BSA. However, as discussed in detail earlier in Section 3.15, Natural Communities, the Build Alternative is not expected to result in long-term impacts to coastal sage scrub and chaparral species because mitigation for part of the Build Alternative in the NCCP Plan Area has already been conducted as part of the NCCP Implementation Agreement. Therefore, no substantial permanent impacts would occur.

**Table 3.18.2 Potential Permanent Impacts to Coastal Sage Scrub and Chaparral Habitat Inside and Outside the NCCP Plan Area**

Plant Community	Inside the NCCP Plan Area		Outside the NCCP Plan Area	
	Inside the Caltrans Right-of-Way	Outside the Caltrans Right-of-Way	Inside the Caltrans Right-of-Way	Outside the Caltrans Right-of-Way
Coastal Sage Scrub	10.41 ac	3.25 ac	0.00 ac	0.00 ac
Chaparral	0.72 ac	0.17 ac	0.00 ac	0.00 ac
<b>Total</b>	<b>11.13 ac</b>	<b>3.42 ac</b>	<b>0.00 ac</b>	<b>0.00 ac</b>

Source: *Natural Environment Study* (April 2016).

ac = acres

NCCP = Natural Community Conservation Plan

### *Bridge, Crevice, and Cavity-Dwelling Animal Species*

The Build Alternative is not expected to permanently impact any special-status bat species or bridge-nesting birds because the bridge structures and roosting areas would not be directly impacted (e.g., no roosting/nesting sites would be removed).

Permanent impacts to special-status bat species would be avoided and/or minimized through implementation of Measure AS-6, which would require existing unfilled expansion joints to remain unfilled and newly created expansion joints to not be rubberized if possible in order to be available to bats for day roosting. With the implementation of Measures AS-2, AS-3, AS-4, and AS-6, no adverse impacts to special-status bat species would occur.

### *Special-Status Grassland and Open Habitat Animal Species*

The Build Alternative is not anticipated to result in permanent direct impacts to special-status grassland and open habitat animal species. However, the Build Alternative would result in permanent impacts to approximately 5.2 ac of grassland habitat which may indirectly impact special-status grassland animal species through potential habitat loss. Because no special-status animal species were observed during the field surveys, no direct impacts to these species are anticipated. However, limited suitable wintering habitat for burrowing owl is present along the roadsides, but suitably sized breeding habitat is lacking within the BSA. Burrowing owls were not observed during field surveys; however, the burrowing owl is a mobile species and may colonize potentially suitable habitat in the BSA or the project disturbance limits prior to the start of construction. As specified in Measure AS-7, preconstruction surveys would be required prior to construction to ensure that burrowing owls are not occupying potentially suitable habitat. Implementation of Measure AS-7 would ensure that no permanent impacts to burrowing owl would occur.

### *Migratory Birds*

The Build Alternative may result in permanent indirect impacts to migratory birds; the permanent impacts may include loss of foraging and nesting habitat due to permanent loss of vegetation or changes in habitat types. However, because permanent loss of habitat resulting from the Build Alternative would be minimal and migratory birds are mobile, they are anticipated to find nearby habitat for foraging and nesting. It is not anticipated that the Build Alternative would result in permanent direct impacts to migratory birds through loss of individual birds. To prevent loss of individual birds, Measure AS-1 requires vegetation removal or tree-trimming activities to occur outside of the nesting season, to the extent feasible, as well as preconstruction surveys for nesting birds if vegetation removal or tree trimming

activities were to occur during the nesting season. Therefore, with the implementation of Measure AS-1, potential direct impacts to migratory birds are not anticipated.

### **No Build Alternative**

The No Build Alternative does not include any improvements to SR-241 or SR-91 in the BSA. Therefore, no permanent impacts to special-status animal species would occur as a result of the No Build Alternative.

### **3.18.4 Avoidance, Minimization, and/or Mitigation Measures**

In addition to the measures listed below, Measures NC-1 through NC-6 discussed in Section 3.15, Natural Communities, and Measures TE-3 through TE-7, discussed in Section 3.19, Threatened and Endangered Species, would avoid and/or minimize impacts to special-status coastal sage scrub and chaparral animal species.

The following measure would avoid and/or minimize potential impacts to nesting birds during construction of the Build Alternative:

**Measure AS-1 Nesting Birds.** Prior to clearing or construction, to avoid impacts to nesting birds, any native vegetation removal or tree- (native or exotic) trimming activities will occur outside of the bird nesting season (February 15 through August 31). In the event that vegetation clearing is necessary during the nesting season or if construction activities or access have the potential to impact nesting birds, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.

Construction of the Coal Canyon Undercrossing access ramp and widening of Windy Ridge Wildlife Undercrossing will be conducted outside the bird nesting season (February 15 through August 31).

Periodic monitoring by the project biologist will be conducted as needed to ensure that construction activities do not impact bridge-nesting birds at Coal Canyon Undercrossing and Windy Ridge Wildlife Undercrossing.

For work on bridge structures, the following measures would avoid and/or minimize impacts to special-status bat species:

**Measure AS-2 Bat Maternity Roosting Survey.** A qualified bat biologist will survey the Project Area during the maternity roosting period, typically in June, to assess the potential for its use as a maternity roost because maternity roosts are generally formed in late spring. The qualified bat biologist will also perform preconstruction surveys because bat roosts can change seasonally. The surveys will include a combination of structure inspection, sampling, exit counts, and acoustic surveys.

**Measure AS-3 Bridgework Schedule.** To prevent impacts to bridge and crevice-roosting bats, all bridgework will be scheduled between September 1 and November 30 to avoid hibernating bats and the maternity season. If this is not feasible, temporary bat eviction and exclusion devices will be installed between September 1 and November 20 prior to the initiation of construction activities and under the supervision of a qualified bat biologist. Exclusion devices will be installed during the fall, or as otherwise directed by a qualified biologist, to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Such exclusion efforts will be continued to keep the structures free of bats until the completion of construction on those structures, at which time the devices will be removed to allow the bats to resume roosting in the structure and prevent any permanent loss of bat-roosting habitat. All bat exclusion techniques will be coordinated between the District Biologist and the resource agencies.

**Measure AS-4 Construction Work Activities.** To avoid or minimize impacts to bats at a night roost, work activities are not to occur within

100 feet of the structure between sunset and sunrise. If construction work must be performed at night in the vicinity of the bridge structure containing a night roost, noise and direct lighting will be directed away from the structure or lighting will be specifically focused on the section of the bridge actively under construction to minimize impacts to night-roosting bats.

**Measure AS-5**      **Bird Exclusion Netting.** Airspace access to and from a bridge structure containing a night roost will not be restricted. Bird exclusion netting will not be used unless made from thick plastic and installed with no exposed overlap joints. Clearing of vegetation in the vicinity of the structure will also be minimized to the greatest extent practicable.

**Measure AS-6**      **Unfilled Expansion.** Subject to public health and safety considerations, existing unfilled expansion joints will remain unfilled and unobstructed to prevent permanent loss of existing day- and/or night-roosting habitat. Habitat for bats may be enhanced in the project limits by leaving newly created expansion joints unrubberized so that they are available to bats for day roosting after construction is complete.

**Measure AS-7**      **Burrowing Owl Survey.** In accordance with the California Department of Fish and Wildlife survey guidelines for burrowing owl, a take avoidance survey shall be conducted no less than 14 days prior to initiating ground-disturbance activities and, if time lapses between project activities, a final survey may be conducted within 24 hours prior to ground disturbance.

***Applicable ETC Final EIR and Final EIS Avoidance, Minimization, and/or Mitigation Measures***

ETC Measures B-2, B-3, B-4, B-8, B-10, B-11, and B-25 discussed in Section 3.15, Natural Communities, and ETC Measure B-27, discussed in Section 3.19, Threatened and Endangered Species, would be applicable to the Proposed Project, to minimize impacts to special-status species that occupy coastal sage scrub habitat.