BIOLOGICAL ENVIRONMENT

3.15 Natural Communities

3.15.1 Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species, Section 3.19. Wetlands and Other Waters are also discussed below in Section 3.16.

The Project Area is 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 covered habitats.

3.15.2 Affected Environment

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

3.15.2.1 Biological Study Area

The Project Area (physical footprint of the Proposed Project) is in the cities of Anaheim, Yorba Linda, and Corona and in unincorporated counties of Orange and Riverside. The Project Area is mostly within Caltrans right-of-way along SR-241 and SR-91 with the exception of a slope that is part of the Irvine Ranch National Natural Landmark (NNL), south of SR-91 and approximately 3,600 feet (ft) west of Coal Canyon Undercrossing. The Project Limits extend farther east on SR-91 than the ETC

Project; the ETC Project limits are shown on Figure 3.15.1. The Project Vicinity is dominated by the NNL, the Santa Ana River, and local and State parks.

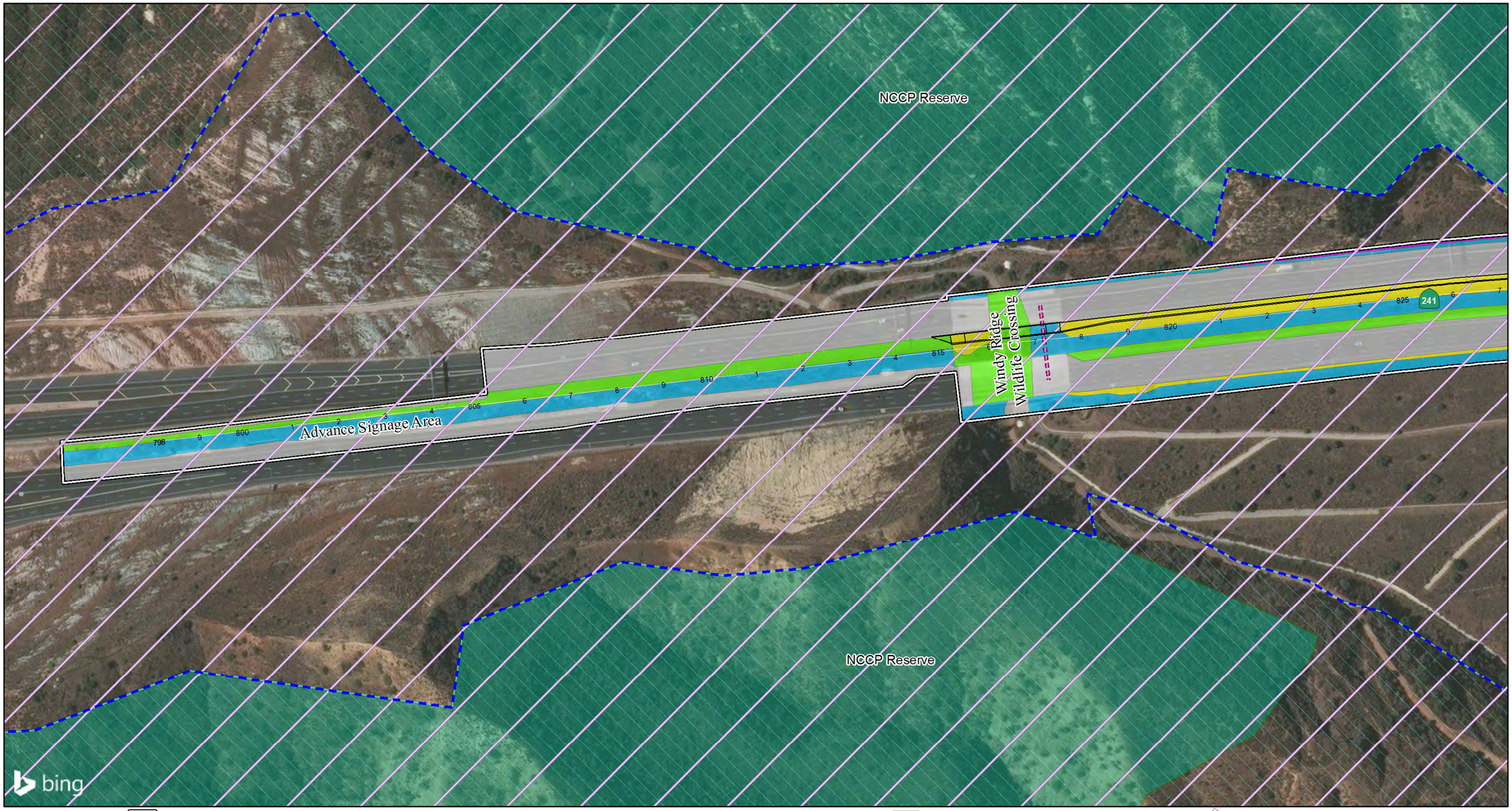
The Study Area assessed for biological resources, the Biological Study Area (BSA), is entirely within the Project Area. The limits of the BSA are shown on Figure 3.15.1. The BSA includes all areas of potential direct impact. The limits of the BSA were extended beyond the maximum extent of potential direct impact, where necessary, to identify sensitive biological resources in the Project Area. The BSA was limited to within the SR-241 and SR-91 right-of-way except the slope identified above, that would be graded as part of the Proposed Project. That slope area, on land owned by the County of Orange (Assessor's Parcel Number 085-071-56), has a conservation easement over it and is part of the NNL. Although the slope would be revegetated after construction is complete, a maintenance access road and drainage structures may need to be constructed on the slope; therefore, all impacts on this parcel are considered permanent impacts. In general, this resulted in the identification of a BSA that was larger than the area of potential direct impact. The BSA was used as the study limit boundary for all the biological resources studies for the Proposed Project.

3.15.2.2 Natural Communities

Reconnaissance-level survey and plant community mapping were conducted on May 10, 2011; March 17, 2015; and March 19, 2015. Plant communities and subcommunities were determined in general accordance with categories set forth in Preliminary Descriptions of the Terrestrial Natural Communities of California. Plant communities were mapped on an orthographically corrected 1 inch = 200 feet (ft) aerial photograph. Plant communities that were considered too small to map separately were included in nearby community types determined to be the most appropriate based on species composition.

To adequately identify plant communities in the BSA, the survey methods included pulling off onto the SR-241 and SR-91 right-of-way, and using frontage roads adjacent to the freeways leading to observation points. Access to the County of Orange-owned parcel was provided by a County of Orange Park Ranger and Nature Conservancy staff. At the observation points, the roadside areas were investigated on foot or with the aid of binoculars if pedestrian access was not possible.

As shown on Figure 3.15.1, the following six plant communities were identified in the BSA: coastal sage scrub, chaparral, coast live oak woodland, ruderal vegetation, nonnative grassland, and developed areas. The acreages of each of these plant



Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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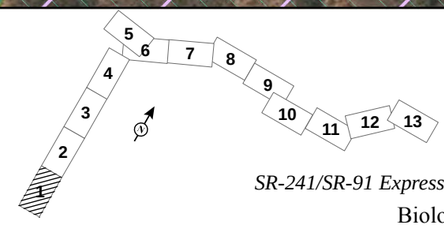
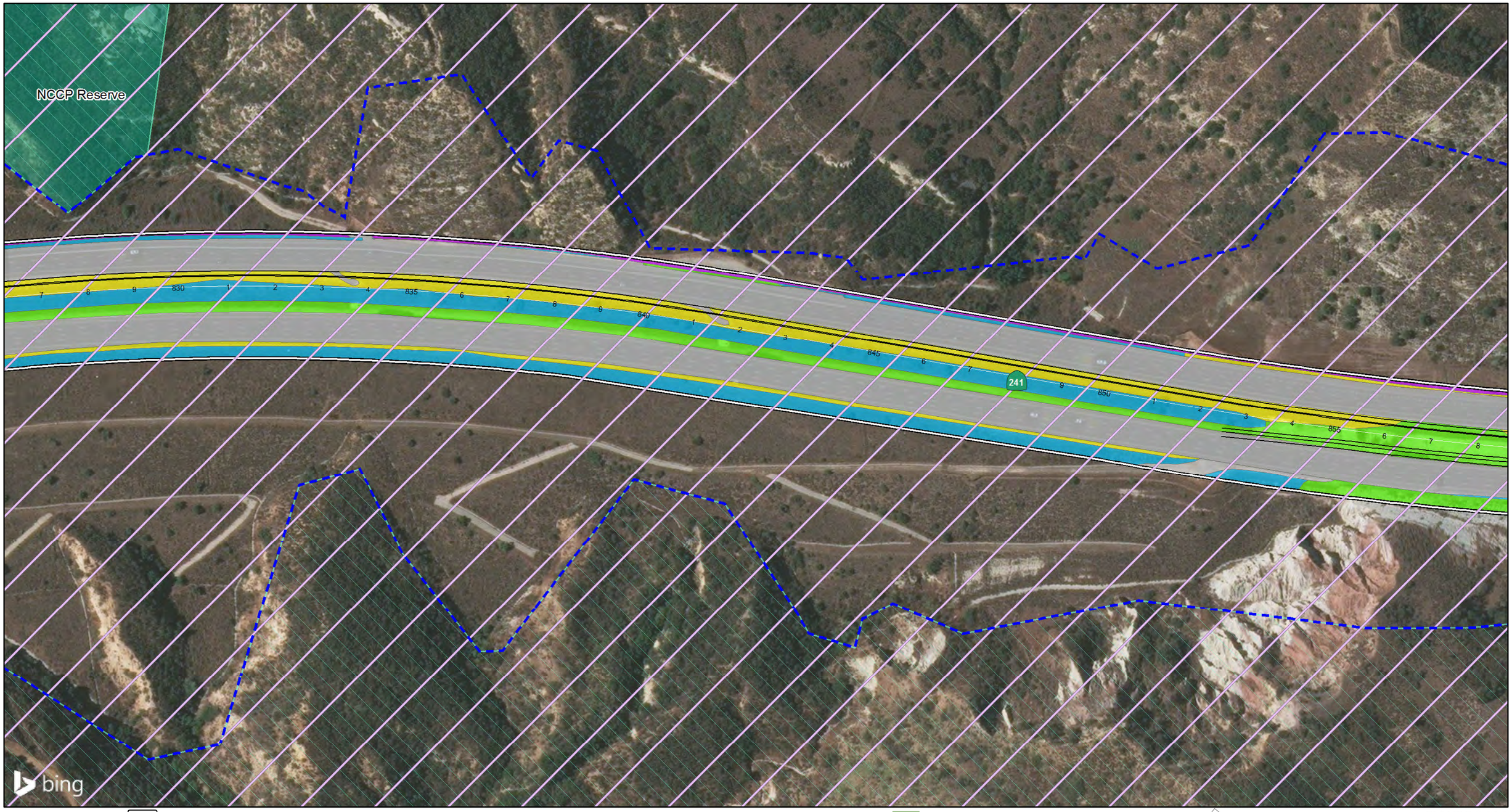


FIGURE 3.15.1
Sheet 1 of 13

SR-241/SR-91 Express Lanes Connector

Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way
Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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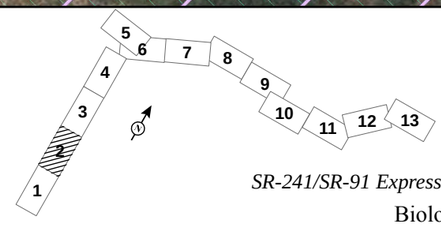
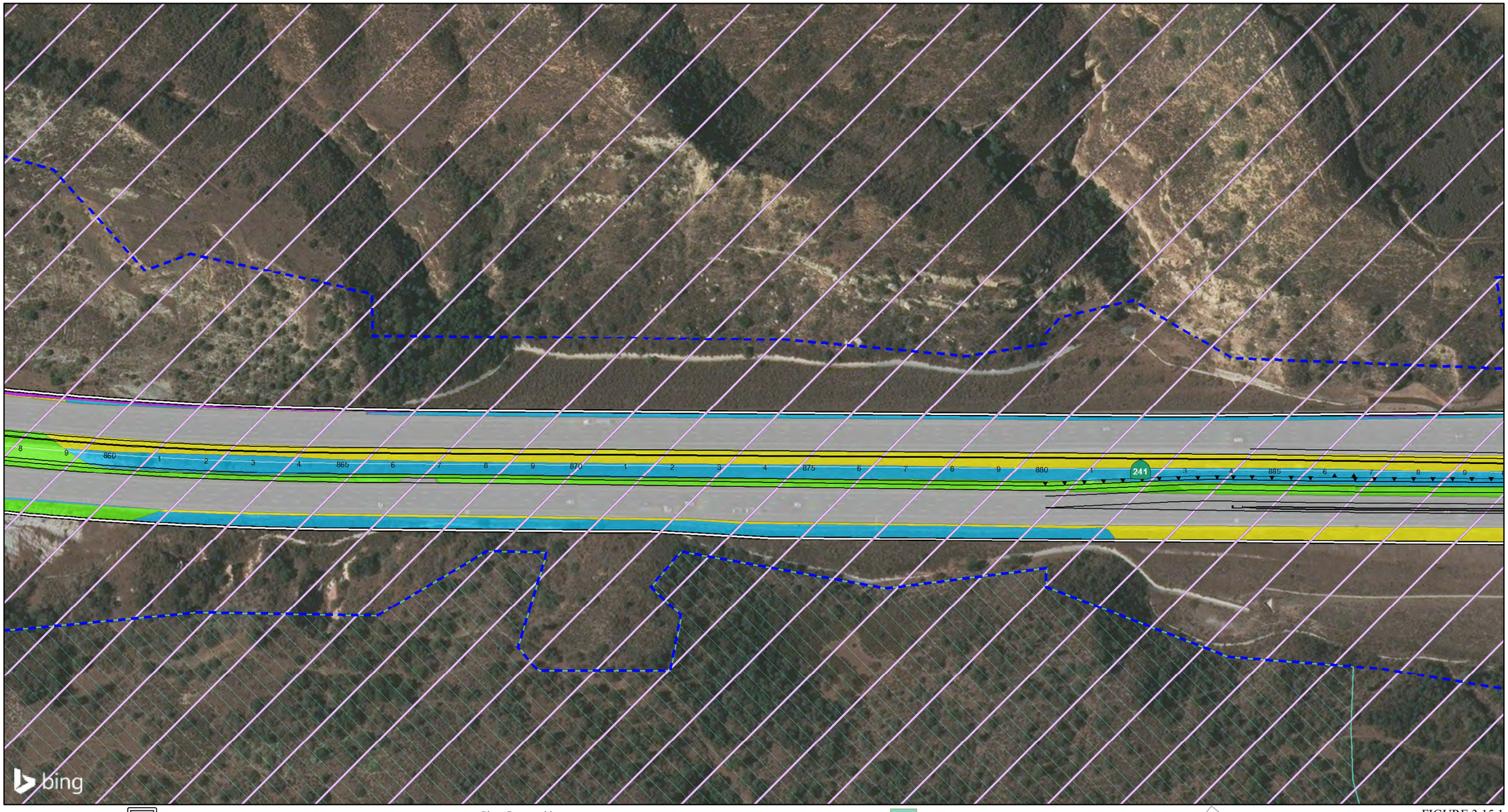


FIGURE 3.15.1
Sheet 2 of 13

SR-241/SR-91 Express Lanes Connector

Biological Resources

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- Biological Study Area
- Proposed Acquisition Area (approx. 5 acres)
- Existing Caltrans Right-of-Way

Project Features

- Proposed Bridge Structure
- Proposed Roadway
- Proposed Retaining Wall
- Proposed Storm Drain Pipe
- Proposed Storm Drain Swale
- Proposed Storm Drain Structure
- California Black Walnut Observed
- Coast Live Oak Tree
- Western Sycamore Tree
- Coulter's Matilija Poppy Observed

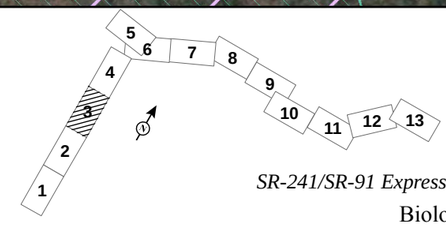
Plant Communities

- Bare Ground
- Chaparral
- Coastal Sage Scrub
- Developed
- Native Plant Restoration
- Nonnative Grassland
- Oak Woodland
- Ruderal
- Potential Bat Roosting Sites
- CAGN Use Area Observed
- Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
- Coastal Cactus Wren Nest Remnants
- CAGN Designated Critical Habitat
- Braunton's Milk-vetch Designated Critical Habitat
- Santa Ana Sucker Designated Critical Habitat
- NCCP Plan Area
- NCCP Reserve
- NCCP Existing Use Area
- Drainage Feature (with ID#)
- CDFW Jurisdiction

USACE Jurisdiction

- Approved Jurisdictional Nonwetland Waters
- Approved Nonjurisdictional Nonwetland Waters
- Approved Nonjurisdictional Nonwetland Waters

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FEET



SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

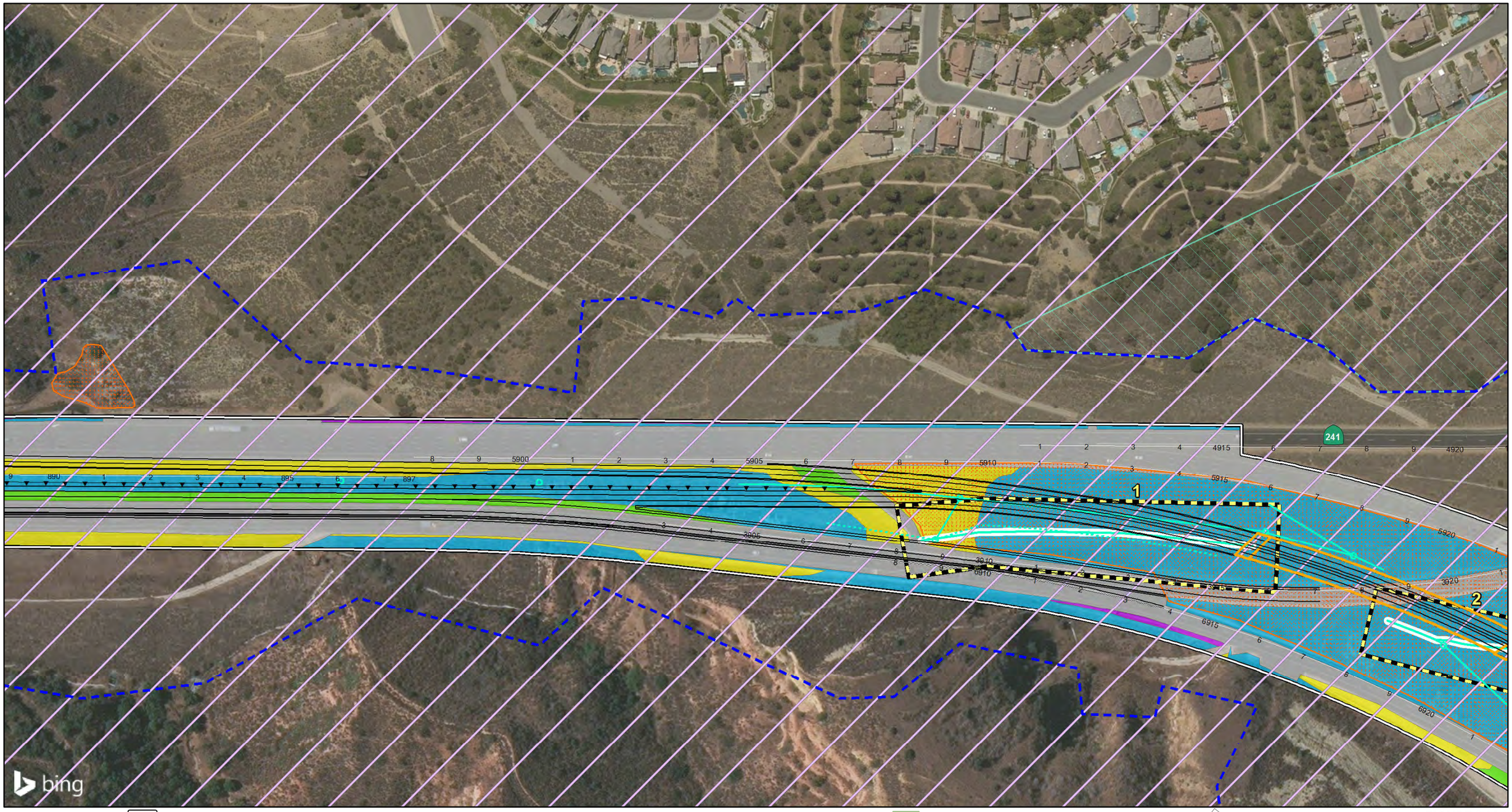
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FIGURE 3.15.1
Sheet 3 of 13

SR-241/SR-91 Express Lanes Connector

Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
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Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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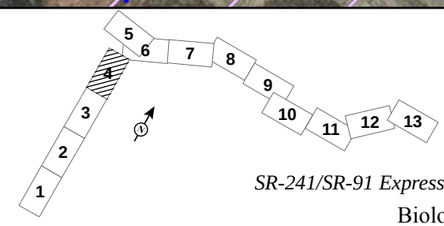
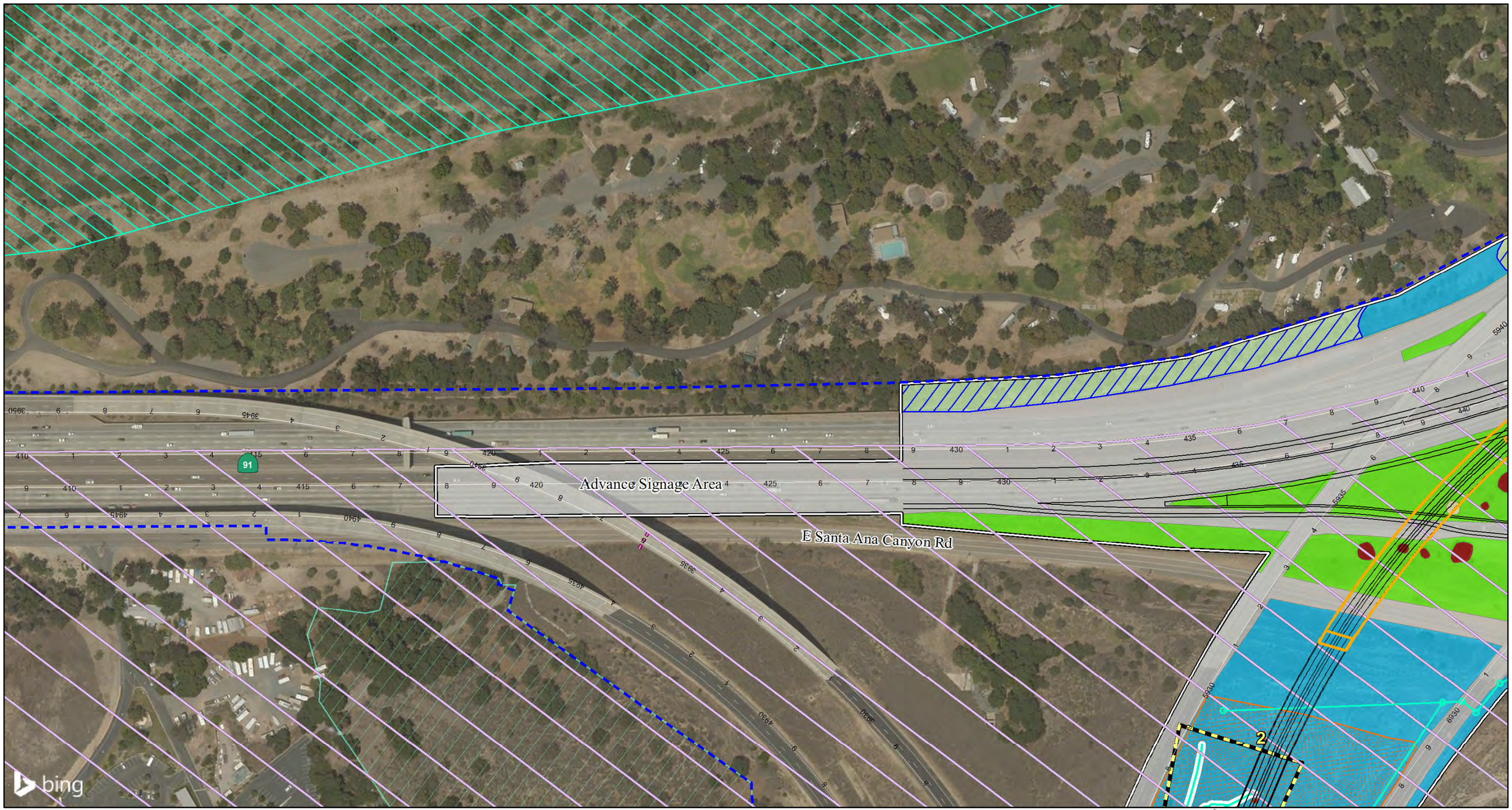


FIGURE 3.15.1
Sheet 4 of 13

SR-241/SR-91 Express Lanes Connector

Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall
Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
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Potential Bat Roosting Sites
CAGN Use Area Observed
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NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)
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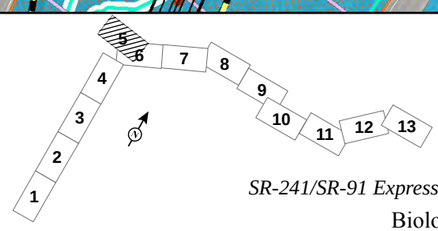
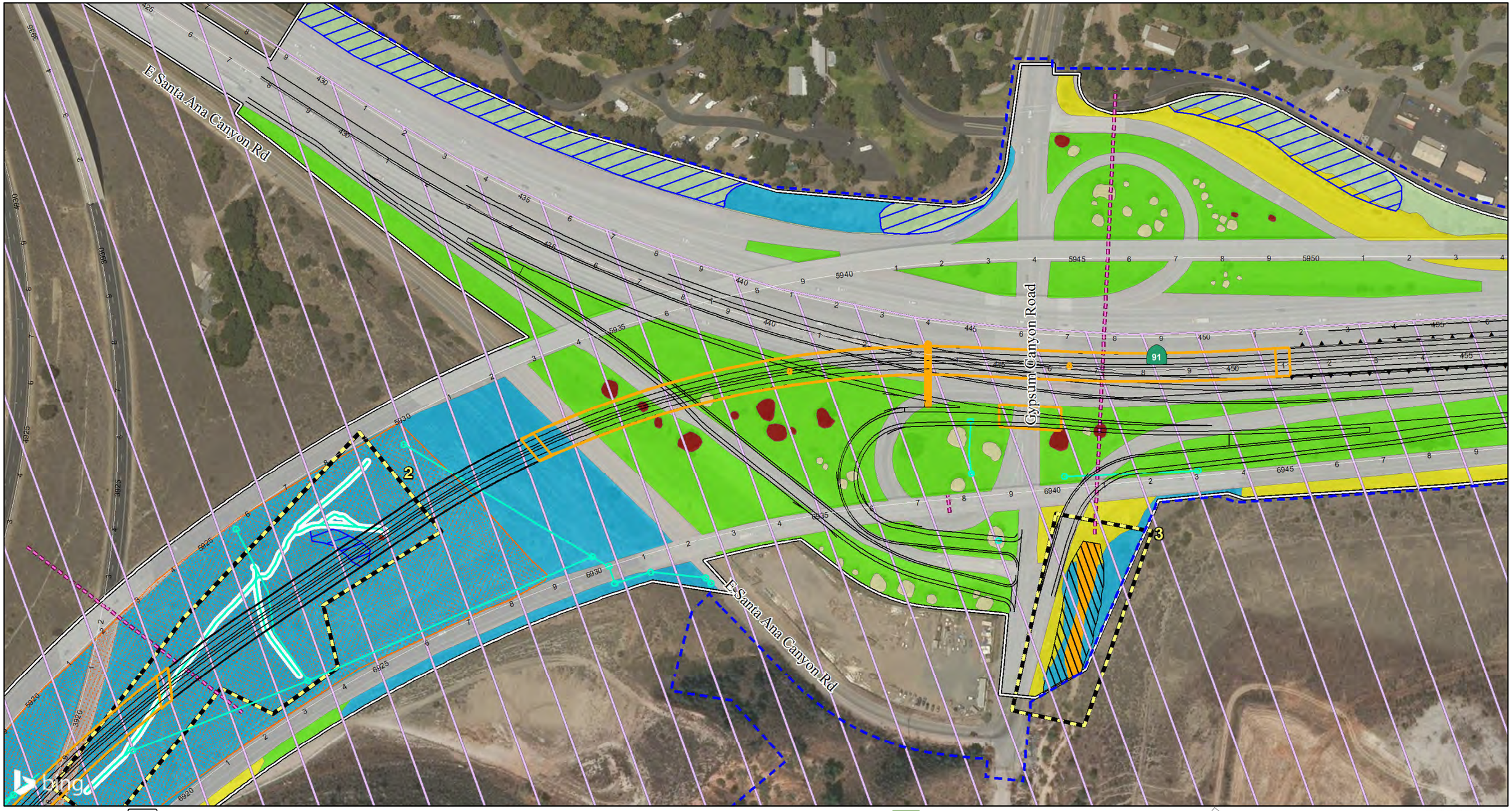


FIGURE 3.15.1
Sheet 5 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
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Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
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CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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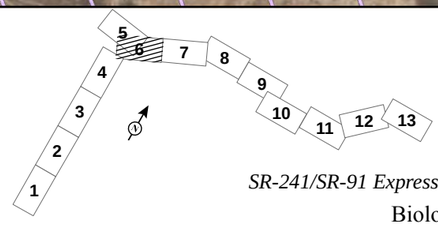
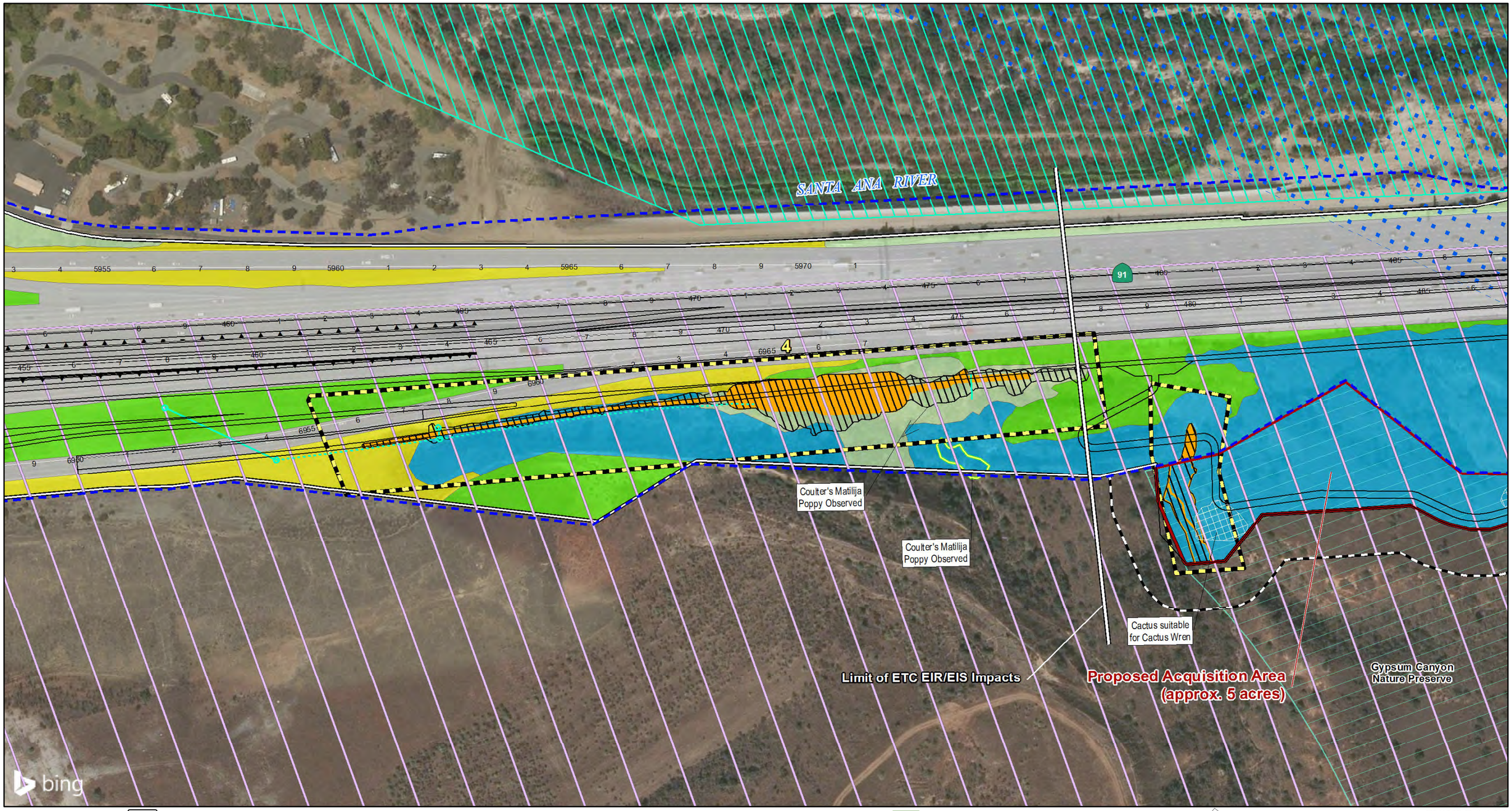


FIGURE 3.15.1
Sheet 6 of 13

SR-241/SR-91 Express Lanes Connector

Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall
Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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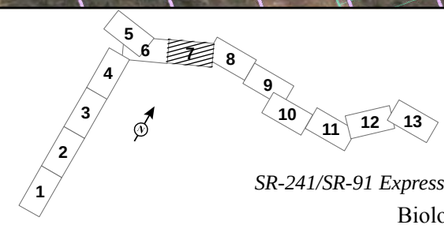
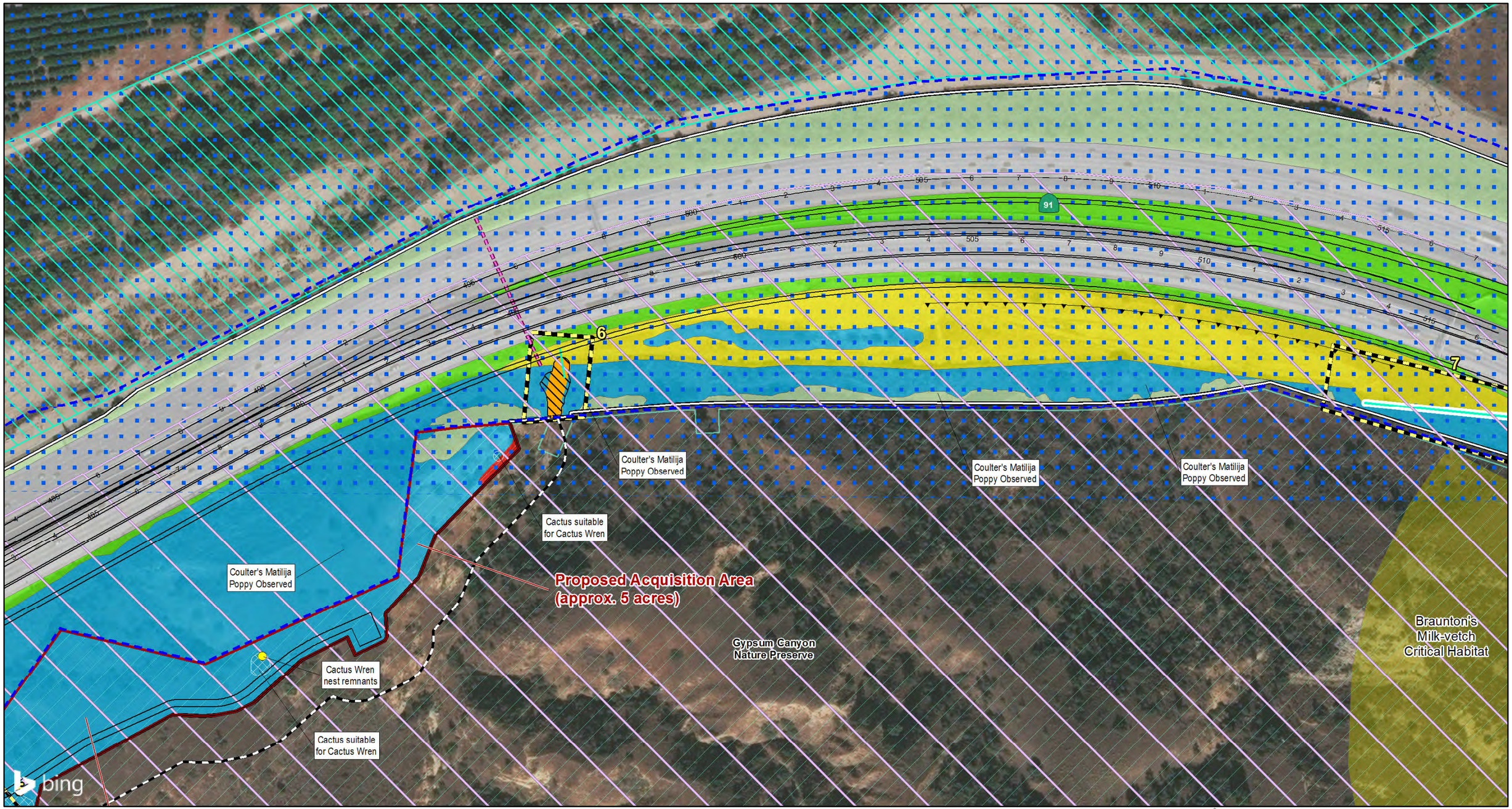


FIGURE 3.15.1
Sheet 7 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall
Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
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Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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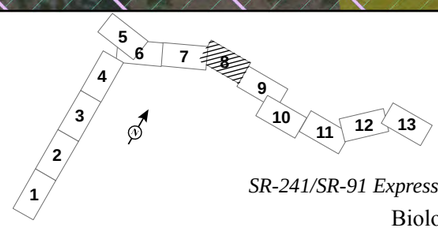
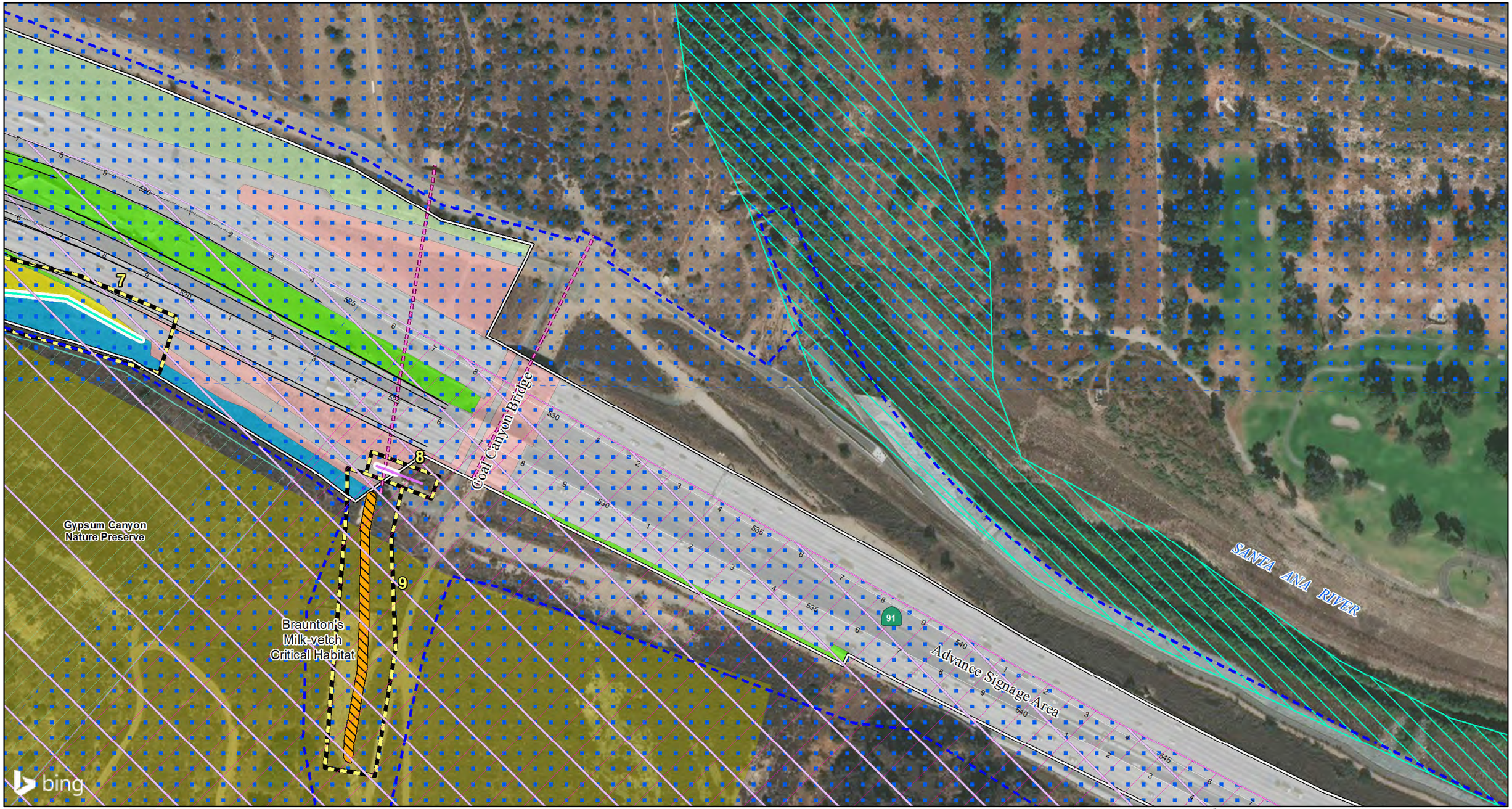


FIGURE 3.15.1
Sheet 8 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
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Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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FEET

SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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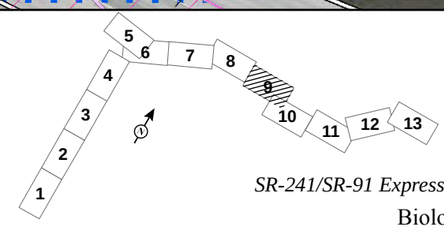
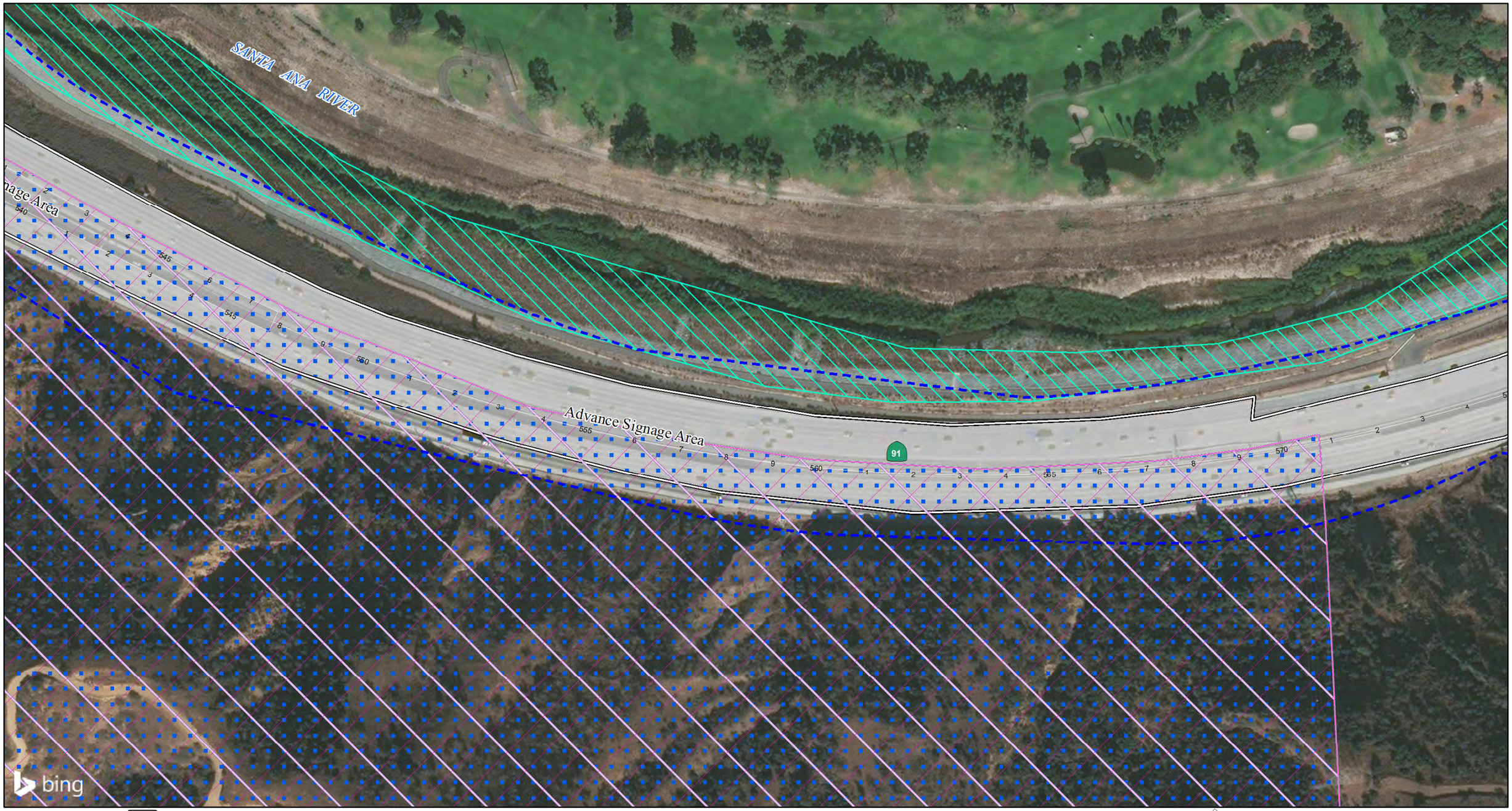


FIGURE 3.15.1
Sheet 9 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall
Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

0 100 200
FEET

SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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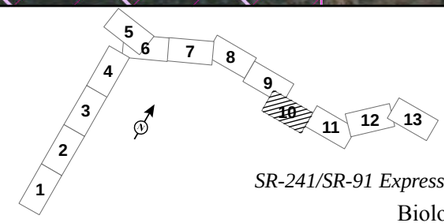
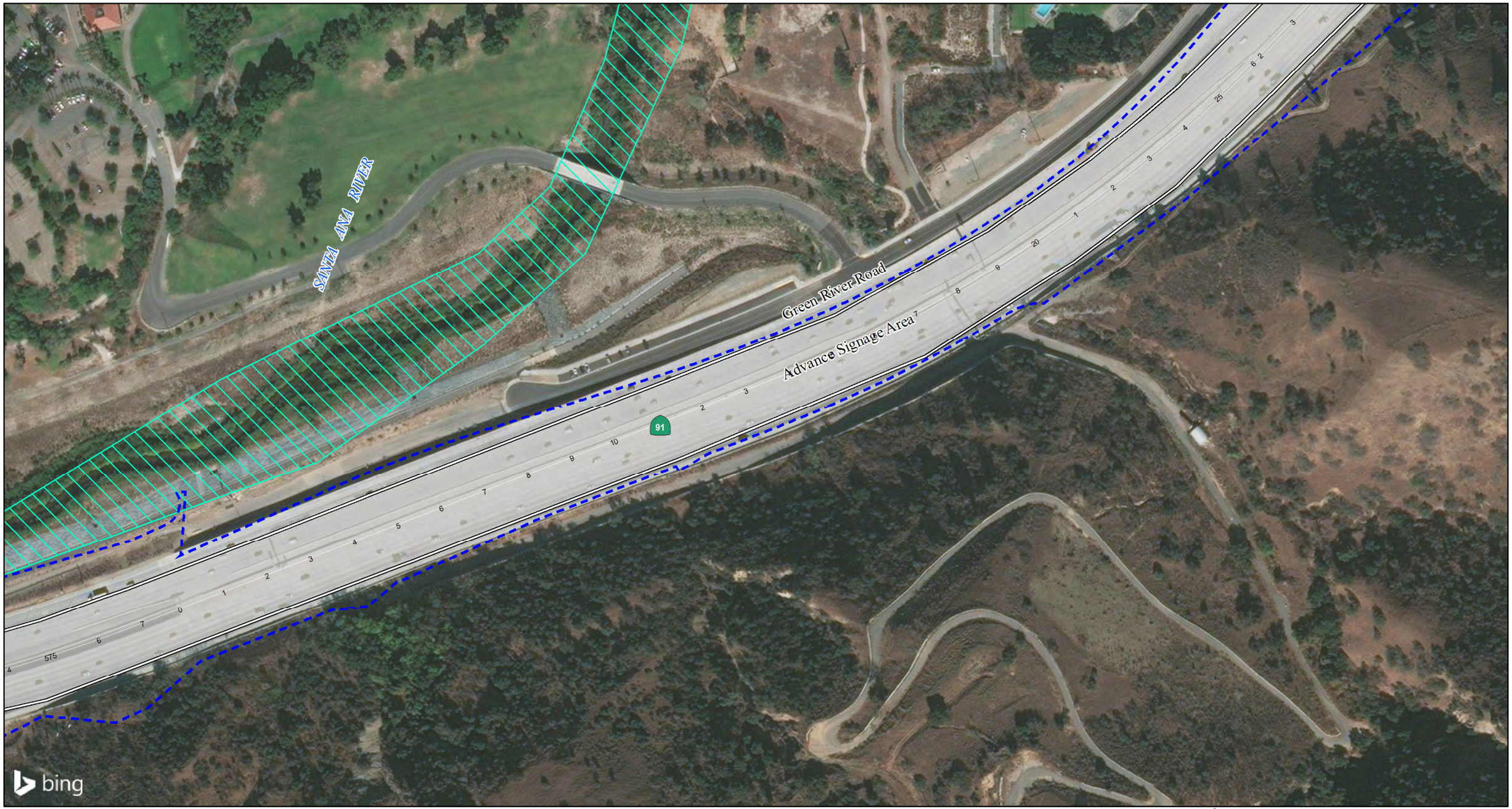


FIGURE 3.15.1
Sheet 10 of 13

SR-241/SR-91 Express Lanes Connector

Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall
Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

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FEET

SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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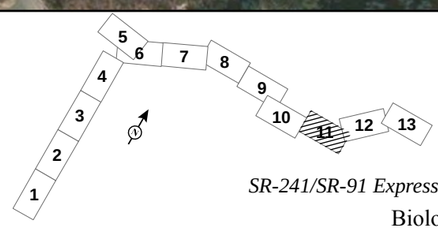
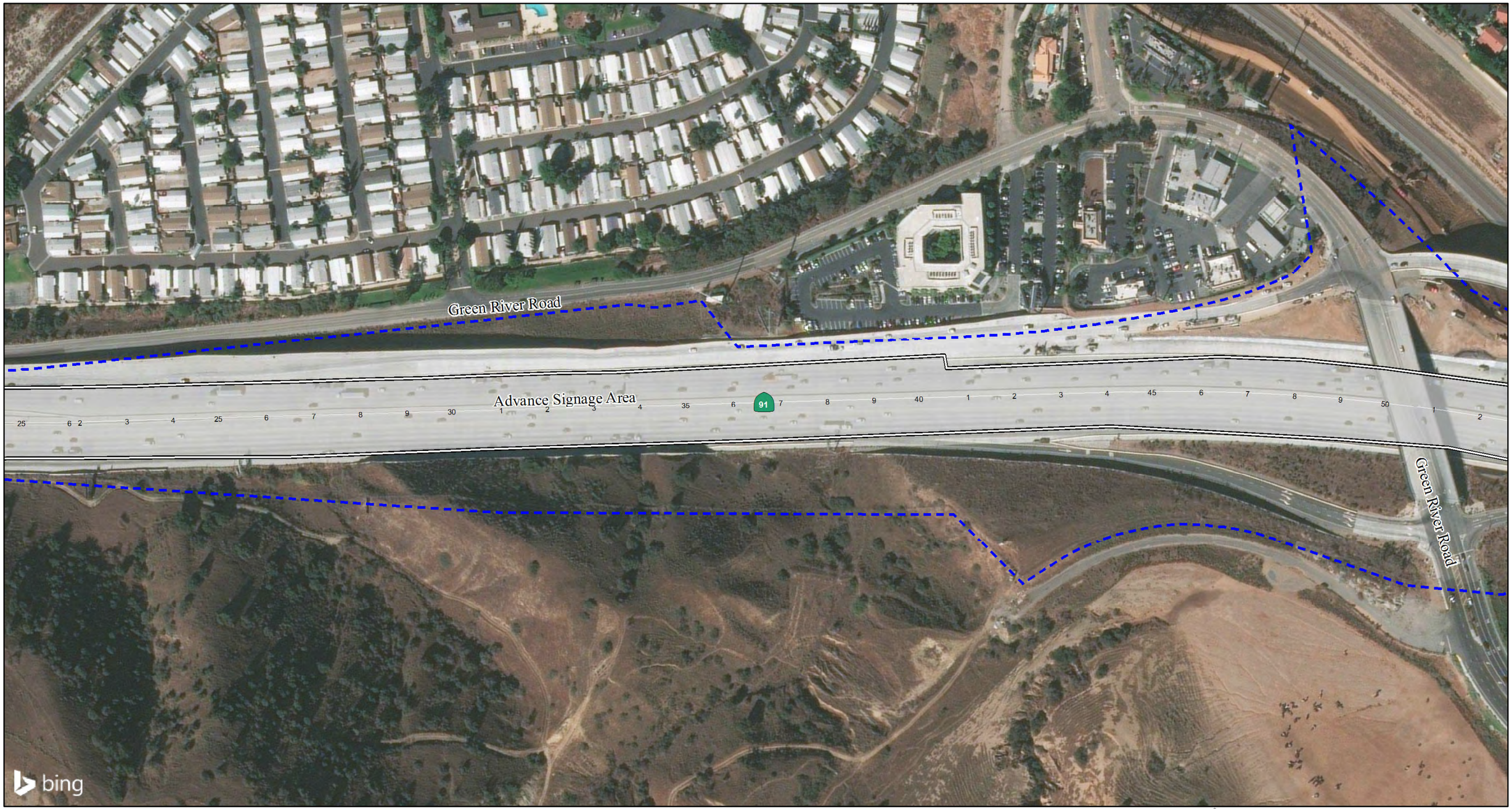


FIGURE 3.15.1
Sheet 11 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

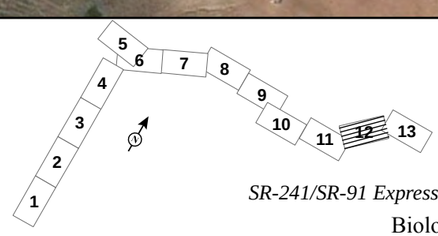
Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
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NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters



SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)
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FIGURE 3.15.1
Sheet 12 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Existing Caltrans Right-of-Way

Project Features
Proposed Bridge Structure
Proposed Roadway
Proposed Retaining Wall

Proposed Storm Drain Pipe
Proposed Storm Drain Swale
Proposed Storm Drain Structure
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Potential Bat Roosting Sites
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting
Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area

NCCP Reserve
NCCP Existing Use Area
Drainage Feature (with ID#)
CDFW Jurisdiction

USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters

0 100 200
FEET

SOURCE: Bing Maps (2012); USFWS (2011); RBF (12/2014)

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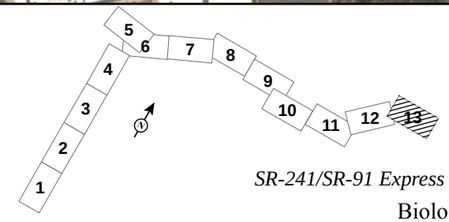


FIGURE 3.15.1
Sheet 13 of 13

SR-241/SR-91 Express Lanes Connector
Biological Resources

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communities in the BSA are summarized in Table 3.15.1. These plant communities are described in the following sections.

Table 3.15.1 Plant Communities in the BSA

Plant Community	Total Acres in the BSA
Scrub and Chaparral Habitats	
Coastal Sage Scrub	53.99
Chaparral	14.38
Woodland Habitat	
Coast Live Oak Woodland	0.68
Disturbed Habitats	
Nonnative Grassland	21.18
Ruderal Vegetation (includes coast live oak [0.26 ac] and western sycamore [0.40 ac] trees)	34.13
Native Plant Restoration	3.20
Developed Areas (includes Bare Ground 1.29 ac)	161.26
Total	**287.54**

Sources: *Natural Environment Study* (December 2015); Caltrans' *Planting Plans for Coal Canyon Undercrossing* (2012).
ac = acre/acres
BSA = Biological Study Area

Coastal Sage Scrub

Coastal sage scrub is generally a patchy plant community found in diverse habitat mosaics and is dominated by a suite of shrub species found in southern California. Shrub cover is dense and generally continuous, with low moisture content. Steep, xeric slopes and quickly draining soils characterize the coastal sage scrub community. Annual herbs, including weedy grasses and forbs and native wildflowers, are common in openings and disturbed areas.

Coastal sage scrub in southern California has been and continues to be displaced by spreading urbanization. Many rare and endangered species occur in coastal sage scrub and associated plant communities. Consequently, degradation and displacement of coastal sage scrub has resulted in substantial habitat loss for a variety of animal species. Therefore, the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS) have special concern for this habitat type.

As shown in Table 3.15.1 and shown on Figure 3.15.1 (Sheets 1 to 9), there are approximately 53.99 acres (ac) of coastal sage scrub in the BSA. Species in this plant community include California sagebrush (*Artemisia californica*), coastal deerweed (*Lotus scoparius* var. *scoparius*), California buckwheat (*Eriogonum fasciculatum*), chaparral yucca (*Hesperoyucca whipplei*; formerly *Yucca whipplei*), California encelia (*Encelia californica*), brittlebush (*Encelia farinosa*), and California poppy

(*Eschscholzia californica*). Although much of the coastal sage scrub in the BSA was planted or developed following the original construction of SR-241, and has been subject to some degree of disturbance due to either regular maintenance within the road right-of-way or other methods of human-induced disturbance, much of it is good quality habitat. Specifically, the coastal sage scrub in the median at the SR-241/SR-91 interchange (Figure 3.15.1, Sheets 4 and 6) and along the south side of SR-91 (Figure 3.15.1, Sheets 7 and 8) is good quality habitat. However, the coastal sage scrub in the median between the existing northbound and southbound SR-241 general purpose travel lanes, and the coastal sage scrub on the slope east of SR-241 (Figure 3.15.1, Sheets 1 to 4) has a high concentration of nonnative ruderal plant species and is poor quality habitat.

Chaparral

The chaparral plant community primarily occurs in the east part of the BSA along SR-91 and east of the SR-241/SR-91 interchange (Figure 3.15.1, Sheets 7 and 8). There are approximately 14.38 ac of chaparral in the BSA as shown on Table 3.15.1. In the BSA, chaparral is often interspersed with the coastal sage scrub and coast live oak woodland plant communities. This is because chaparral is typically a transitional habitat to higher-elevation plant communities in mountain ranges. Species in this plant community include laurel sumac (*Malosma laurina*), coast live oak (*Quercus agrifolia*), California sagebrush, California buckwheat, and chaparral yucca.

Coast Live Oak Woodland

The oak woodland habitat type is considered important to Caltrans and the CDFW because the structural diversity and food production of this habitat type provide relatively high wildlife habitat values. Oak trees and oak woodland can provide habitat for over 300 terrestrial species. In each type of oak habitat (e.g., woodland and riparian), there is a different set of co-occurring plant species that is often beneficial to wildlife. Animals are affected by these differences in terms of food supply, nesting sites, and predator cover, and respond according to their individual ecological requirements. Oak woodland habitat is especially valuable and of limited distribution. Caltrans and the CDFW recognize oak trees for their historical, aesthetic, and ecological qualities, and seek to preserve and propagate this unique plant community, especially trees classified as heritage oaks. Caltrans maintains all trees within the freeway rights-of-way for sight distance in relation to the roads, including oak trees.

There is a small area of oak woodland habitat (0.68 ac) south of SR-91 associated with Drainage Feature 6 as shown on Figure 3.15.1 (Sheet 8) and listed in

Table 3.15.1. During the computer imagery survey and ground truthing survey in the summer of 2014, approximately 14 coast live oak trees and 40 western sycamore trees were observed in the BSA. A formal inventory of coast live oaks, sycamores, or scrub oaks (*Quercus berberidifolia*) in the project disturbance limits will be conducted following the project staking. The driplines of the individual oak trees observed during the 2014 surveys are within the SR-241 and SR-91 rights-of-way but do not extend over those roads.

Nonnative Grassland

There are approximately 21.18 ac of nonnative grassland in the BSA as summarized in Table 3.15.1 and shown on Figure 3.15.1 (Sheets 1 to 4 and 6 to 9). This plant community consists predominantly of ruderal, nonnative grassland species with scattered native forbs. Plants in this community include common horseweed (*Conyza canadensis*), fascicled tarweed (*Deinandra fasciculata*), tocalote (*Centaurea melitensis*), telegraph weed (*Heterotheca grandiflora*), Bermuda grass (*Cynodon dactylon*), wild oat (*Avena* spp.), and foxtail chess (*Bromus madritensis* ssp. *rubens*).

Ruderal Vegetation

There are approximately 34.13 ac of ruderal vegetation in the BSA as summarized in Table 3.15.1 and shown on Figure 3.15.1 (Sheets 1 to 9). This plant community consists predominantly of ruderal and unmaintained or escaped ornamental vegetation. While most of the ruderal vegetation in the BSA consists of nonnative grasses, it is differentiated from nonnative grassland due to the loss of a native seed bank, although some native weedy species may be present. Plants in this community include Peruvian pepper tree (*Schinus molle*), tocalote, bull thistle (*Cirsium vulgare*), telegraph weed, perennial sow-thistle (*Sonchus arvensis*), field mustard (*Brassica rapa*), shortpod mustard (*Hirschfeldia incana*), Bermuda grass, wild oat, and foxtail chess. There are coast live oak trees and western sycamore trees of various sizes scattered in the ruderal vegetation plant community in the SR-241/SR-91 interchange area. These trees may be used as a resource by wildlife and, as noted earlier, are considered important to Caltrans and the CDFW.

Native Plant Restoration

Caltrans completed native plant restoration at Coal Canyon Undercrossing in 2014. The median, undercrossing, and areas between the SR-91 mainline and the ramps were restored with native plants. This area is approximately 3.20 ac and is shown on Figure 3.15.1, Sheet 9.

Developed Areas

There are approximately 161.26 ac of developed areas in the BSA as summarized in Table 3.15.1 and shown on Figure 3.15.1 (Sheets 1 to 13). Developed areas consist of nonporous surfaces such as existing paved roads and highways and, where vegetation is present, ornamental, and ruderal vegetation. Areas without nonporous surfaces or vegetation consist of bare ground such as regularly disturbed ground or pullouts.

Natural Communities of Special Concern

Habitats are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status plants or animals. Two primary plant communities considered important by State and/or local agencies were identified in the BSA: coastal sage scrub and oak woodland/tree species. These communities of special interest occur throughout (coastal sage scrub) and in isolation (oaks) in the BSA as shown on Figure 3.15.1. The coastal sage scrub habitat occurs throughout the BSA (Figure 3.15.1, Sheets 1 to 9) but the oak tree species/woodland is limited to the SR-241/SR-91 interchange area (Figure 3.15.1, Sheets 6 and 8). Because coastal sage scrub and oak woodland are habitats of special concern, they are discussed further in this section.

Chaparral, ruderal vegetation, nonnative grassland, and developed areas are not considered habitats of special concern. Therefore, they are not discussed further in this section.

3.15.2.3 Orange County Central and Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan

The *Orange County Central and Coastal Subregion Natural Communities Conservation Plan and Habitat Conservation Plan* (NCCP/HCP) approved in 1996 serves as a comprehensive, multijurisdictional habitat based conservation program pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act (FESA) of 1973 and the Natural Communities Conservation Planning Act of 1991. The NCCP/HCP focuses on the conservation of multiple species and their associated habitats while allowing for economic uses that meet social and economic needs in Central and Coastal Orange County. The NCCP/HCP authorizes the take of plant and wildlife species in the NCCP/HCP Plan Area by Participating Jurisdictions. Regulation of the take of threatened, endangered, and rare species is authorized by the wildlife resource agencies (USFWS and CDFW), which allow Take Authorization for

otherwise lawful actions (e.g., public and private development) in exchange for the assembly and management of a coordinated NCCP/HCP Reserve System.

As a participant in the NCCP/HCP, the Transportation Corridor Agencies (TCA) is obligated to comply with specific conditions under the Take Authorization, which remains with the TCA regardless whether Caltrans or the TCA has ownership of a specific road. Because the 1994 Biological Opinion for the ETC was issued to the Federal Highway Administration (FHWA), Caltrans can request Section 7 consultation under FESA with the USFWS for the Proposed Project.

A majority of the BSA and much of the overall Project Area are in the NCCP/HCP Plan Area as shown on Figure 3.15.1. However, the areas north of SR-91 are outside the NCCP/HCP Plan Area and are, therefore, not covered under the NCCP/HCP Take Authorization. An NCCP/HCP Existing Use Area overlaps the eastbound SR-91 lanes east and west of Coal Canyon Undercrossing. The BSA is not in any part of the NCCP/HCP Reserve. However, as shown on Figure 3.15.1 (Sheet 1), SR-241 bisects part of the NCCP/HCP Reserve near Windy Ridge Wildlife Undercrossing. This wildlife crossing is designed to functionally link the NCCP/HCP Reserve with the Coal Canyon Reserve, Lomas de Santiago, and the Cleveland National Forest.

3.15.2.4 Western Riverside County Multiple Species Habitat Conservation Plan

The *Western Riverside County Multiple Species Habitat Conservation Plan* (WR-MSHCP) serves as an HCP pursuant to Section 10(a)(1)(B) of FESA and as an NCCP under the NCCP Act of 2001. The WR-MSHCP authorizes the take of plant and wildlife species in the WR-MSHCP Plan Area by Participating Jurisdictions, as granted by the USFWS and CDFW, for lawful actions such as public and private development in exchange for the assembly and management of a coordinated WR-MSHCP Conservation Area. As a result, lawful actions may incidentally take or harm individual species or their habitats outside the WR-MSHCP Conservation Area.

The WR-MSHCP provides for the assembly of Conservation Areas consisting of Core Areas and Linkages for the conservation of covered species. The Conservation Area is to be assembled from parts of the WR-MSHCP Criteria Area, which consist of approximately 160-acre Criteria Cells, each with specific criteria for the species conservation. The WR-MSHCP provides an incentive-based program, the Habitat Evaluation and Acquisition Negotiation Strategy for adding land to the WR-MSHCP Conservation Area. If it is determined that all or a part of a property is needed for

inclusion in the WR-MSHCP Conservation Area, then various incentives may be available to the property owner in exchange for the conveyance of a property interest.

The WR-MSHCP requires focused surveys for certain plant, bird, amphibian, mammal, and insect species for project sites in designated survey areas when suitable habitat is present (e.g., burrowing owl). Surveys for listed riparian birds are required when suitable riparian habitat is present and surveys for sensitive fairy shrimp species are required when vernal pools or similar habitat is present.

The part of the BSA in Riverside County is in the WR-MSHCP Conservation Area and includes Criteria Cells/Criteria Area and designated survey areas that overlap the BSA. This segment of SR-91 is planned for advance signage only as part of the Proposed Project and is not in any vegetated part of the WR-MSHCP Conservation Area because it consists only of the paved road and shoulder within the Caltrans right-of-way.

As a participant in the WR-MSHCP, Caltrans District 8, San Bernardino office, is obligated to comply with this document as it pertains to the Proposed Project. The SR-91 advance signage area is for roadway safety purposes and in the context of the WR-MSHCP, is a Covered Activity under Section 7.3.4, Existing Roads Within the Criteria Area – Covered Road Maintenance Activities Within the Criteria Area: Publicly Maintained Roads. Therefore, the objectives, policies, procedures, and guidelines from Section 7.5.3: Construction Guidelines, as well as best management practices (BMPs) outlined in Appendix C (Standard Best Management Practices of the WR-MSHCP, Volume 1) are applicable to the Proposed Project.

3.15.2.5 Wildlife Corridors

Wildlife movement and habitat fragmentation are greatly impacted by roads. In the BSA, wildlife movement areas include wildlife linkages in Gypsum Canyon, Coal Canyon, and B Canyon, and the Windy Ridge Wildlife Undercrossing, which is a wildlife corridor.

Gypsum Canyon and Coal Canyon are in the County of Orange (Figure 3.15.1, Sheets 6 and 9, respectively) and B Canyon is in the County of Riverside (in the Advance Signage area as shown on Figure 3.15.1, Sheet 11). Gypsum Canyon, Coal Canyon, and B Canyon all have drainages that pass under SR-91 through large box culvert structures that provide wildlife linkage under SR-91. Although not a designated wildlife corridor, Coal Canyon Undercrossing is used by wildlife to cross under SR-91.

Several wildlife undercrossings were constructed as part of SR-241 to allow for wildlife movement, including the Windy Ridge Wildlife Undercrossing (Figure 3.15.1, Sheet 1) in the south part of the BSA. The existing openness factor (height x width/length) of Windy Ridge Wildlife Undercrossing is 39.6 ft (12.7 meters [m]) (recommended minimum of approximately 2 ft [0.6 m]). The openness of a crossing is extremely important to assess the potential and size of wildlife likely to move through a given structure. Large mammals generally stand at least 1.5 ft at the shoulders and are at least 2 ft long (not including the tail); they include the mountain lion, mule deer, coyote, and bobcat, all of which are found in the Project Area. A crossing must be large enough to encourage these large stature creatures to enter an area in which they might otherwise feel vulnerable.

3.15.3 Environmental Consequences

3.15.3.1 Temporary Impacts

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

Coastal Sage Scrub

The Build Alternative would result in direct temporary impacts to coastal sage scrub as a result of disturbing existing vegetation during construction. The Build Alternative would also result in indirect construction-related impacts on coastal sage scrub such as dust, noise, potential fuel spills from construction equipment, possible night lighting, and activities of equipment or personnel outside designated construction areas. Temporary impacts would only occur during construction to allow for construction activities and equipment staging and access. Therefore, temporary impacts to coastal sage scrub would be limited to incidental encroachment and coastal sage scrub would be restored after completion of construction.

As shown in Table 3.15.2, the Build Alternative would temporarily impact a total of approximately 31.28 ac of coastal sage scrub. Within the 1994 Biological Opinion Study Area (i.e., the limits of the ETC Final EIR and EIS [Figure 2.1, Sheet 4, and Figure 3.15.2, Sheet 7]), the Build Alternatives would temporarily impact approximately 29.68 ac of coastal sage scrub within the NCCP/HCP Plan Area. Outside the 1994 Biological Opinion Study Area (i.e., outside the limits of the ETC Final EIR and EIS), the Build Alternative would temporarily impact approximately 4.63 ac of coastal sage scrub in the NCCP/HCP Plan Area and 0.02 ac outside the NCCP/HCP Plan Area. The locations of the temporary impacts to coastal sage scrub in the BSA are shown on Figure 3.15.2 (Sheets 1 to 9). Areas of temporary impacts

Table 3.15.2 Potential Impacts to Coastal Sage Scrub Vegetation Within and Outside the NCCP/HCP Plan Area

Coastal Sage Scrub	Within the NCCP/HCP Plan Area				Outside the NCCP/HCP Plan Area			
	Within Caltrans Right-of-Way		Outside Caltrans Right-of-Way		Within Caltrans Right-of-Way		Outside Caltrans Right-of-Way	
	Temporary Acres	Permanent Acres	Temporary Acres	Permanent Acres	Temporary Acres	Permanent Acres	Temporary Acres	Permanent Acres
Within 1994 Biological Opinion Study Area	26.63[1]	3.81	0.00	0.00	0.00	0.00	0.00	0.00
Outside 1994 Biological Opinion Study Area	3.05	6.60	1.58	3.25	0.02	0.00	0.00	0.00
Total	**29.68**[2]	**10.41**	**1.58**	**3.25**	**0.02**[3]	**0.00**	**0.00**	**0.00**

Sources: *Natural Environment Study* (December 2015).

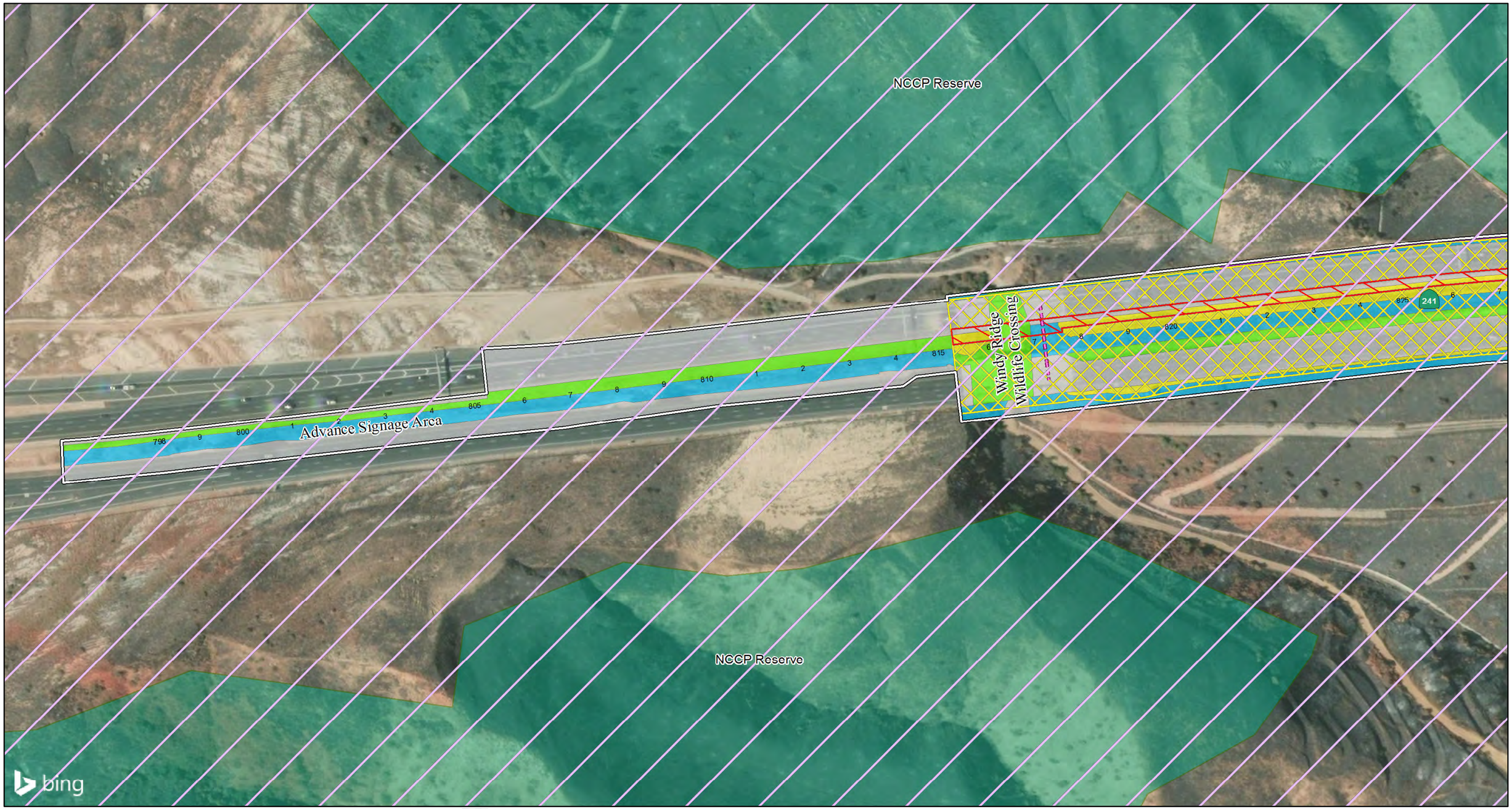
[1] A total of 0.07 acre of temporary impacts to the coastal sage scrub mitigation sites associated with the SR-241 initial construction is expected along SR-241 between Post Mile 36.7 and Post Mile 38.7. The areas are on each side of Windy Ridge Wildlife Undercrossing and are within both the NCCP/HCP Plan Area and the Caltrans right-of-way.

[2] Of the 29.68 acres of temporary impacts to coastal sage scrub within the NCCP/HCP Plan Area, 0.03 acre is within an NCCP/HCP Existing Use Area. There are no permanent impacts expected to coastal sage scrub in the NCCP/HCP Existing Use Area.

[3] The 0.02 acre of temporary impacts outside of the NCCP/HCP will be mitigated per the measures in the new Biological Opinion for the Proposed Project, but may likely consist of replacement. This 0.02-acre area is adjacent to the Gypsum Canyon Road westbound SR-91 on-ramp, is not in designated California gnatcatcher critical habitat, and is not known to be California gnatcatcher occupied.

NCCP/HCP = Natural Community Conservation Plan/Habitat Conservation Plan

SR-241 = State Route 241



Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

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SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)

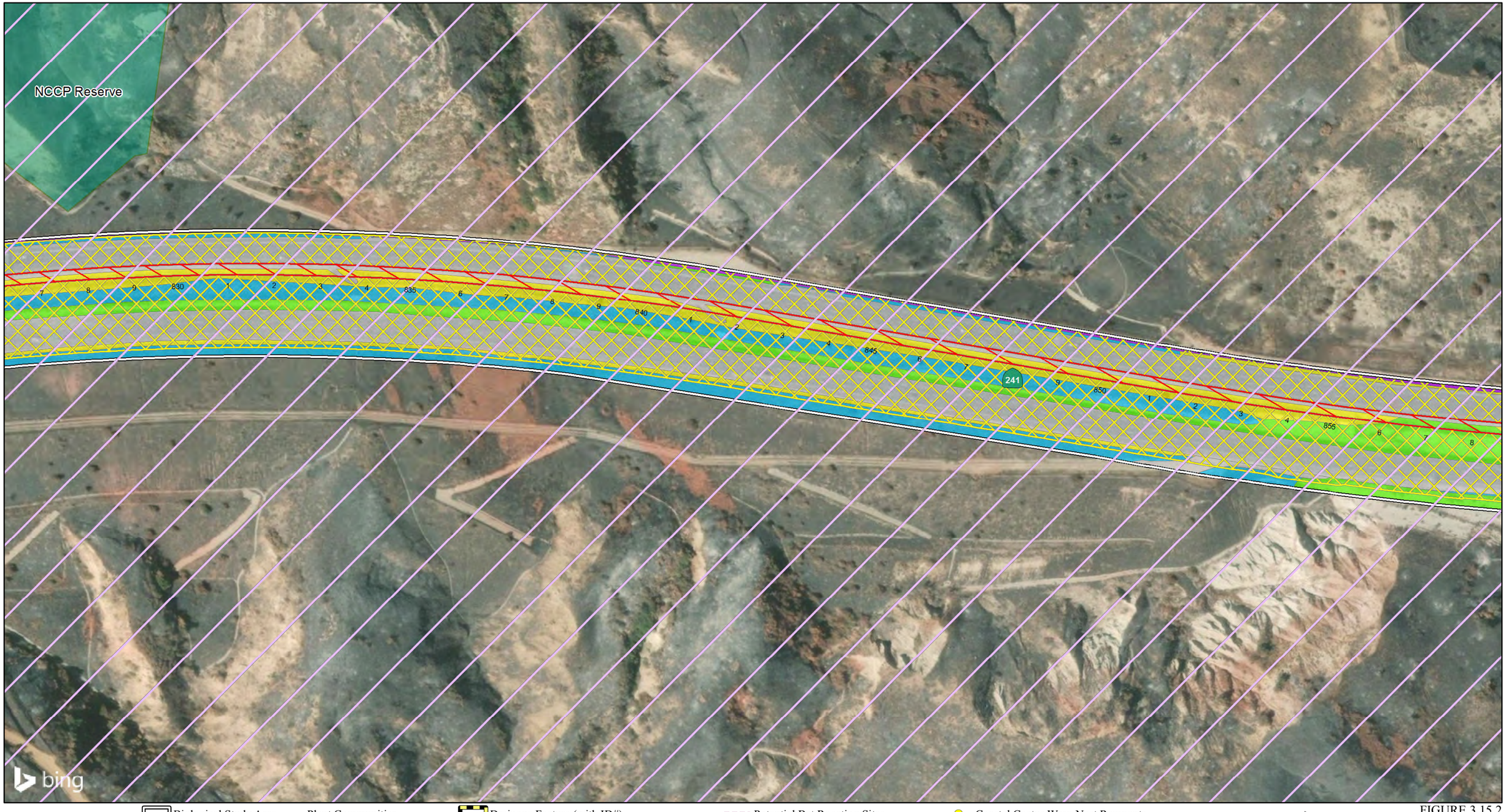
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FIGURE 3.15.2
Sheet 1 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

0 100 200
FEET

SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)

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Plant Communities
- Bare Ground
- Chaparral
- Coastal Sage Scrub
- Developed
- Native Plant Restoration
- Nonnative Grassland
- Oak Woodland
- Ruderal

- Drainage Feature (with ID#)
- CDFW Jurisdiction

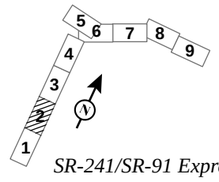
USACE Jurisdiction
- Approved Jurisdictional Nonwetland Waters
- Approved Nonjurisdictional Nonwetland Waters
- Approved Nonjurisdictional Nonwetland Waters
- Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

- Potential Bat Roosting Sites
- California Black Walnut Observed
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- Western Sycamore Tree
- Coulter's Matilija Poppy Observed
- CAGN Use Area Observed
- Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

- Coastal Cactus Wren Nest Remnants
- CAGN Designated Critical Habitat
- Braunton's Milk-vetch Designated Critical Habitat
- Santa Ana Sucker Designated Critical Habitat
- NCCP Plan Area
- NCCP Reserve
- NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

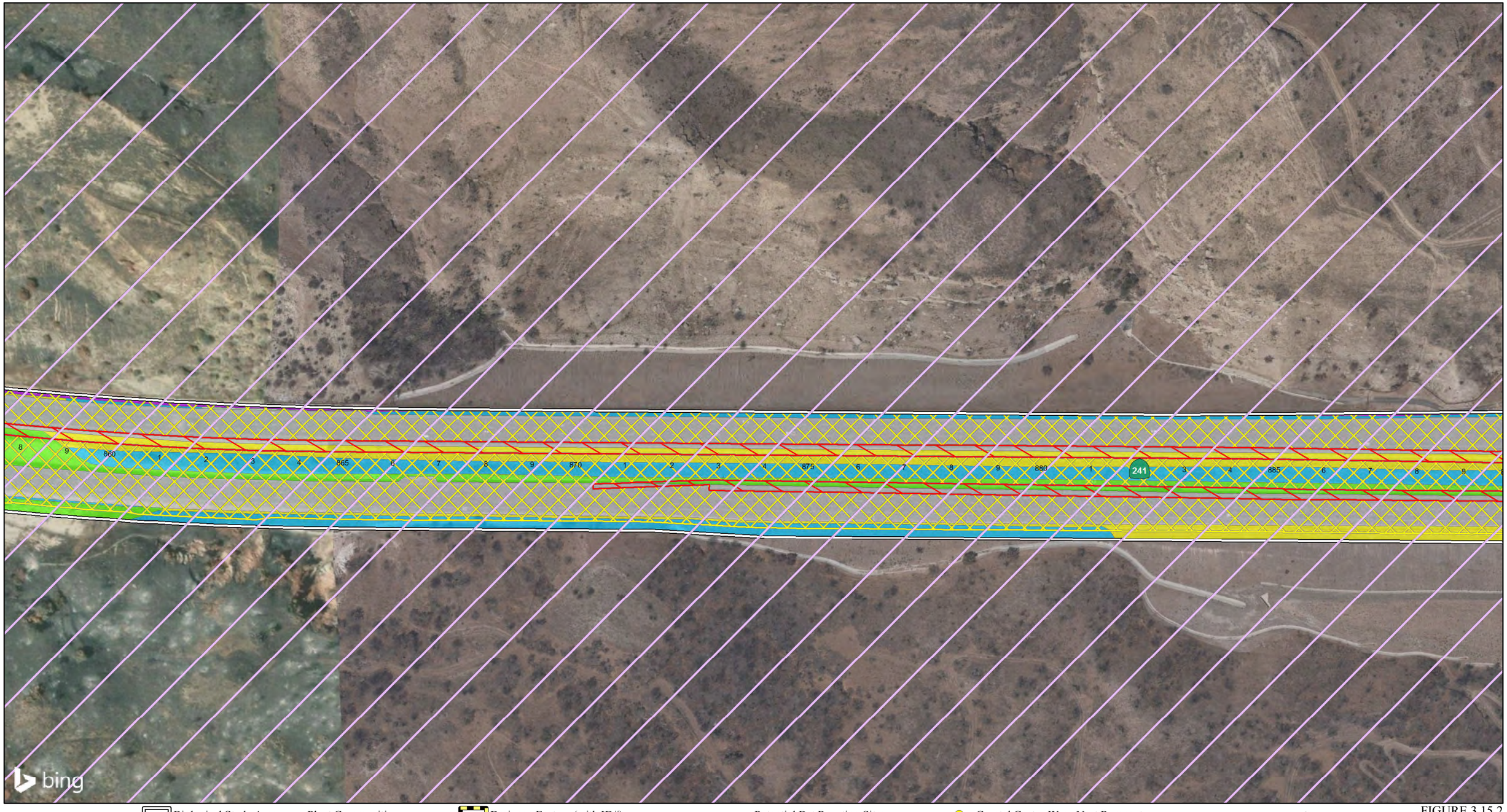
FIGURE 3.15.2
Sheet 2 of 9



SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
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Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

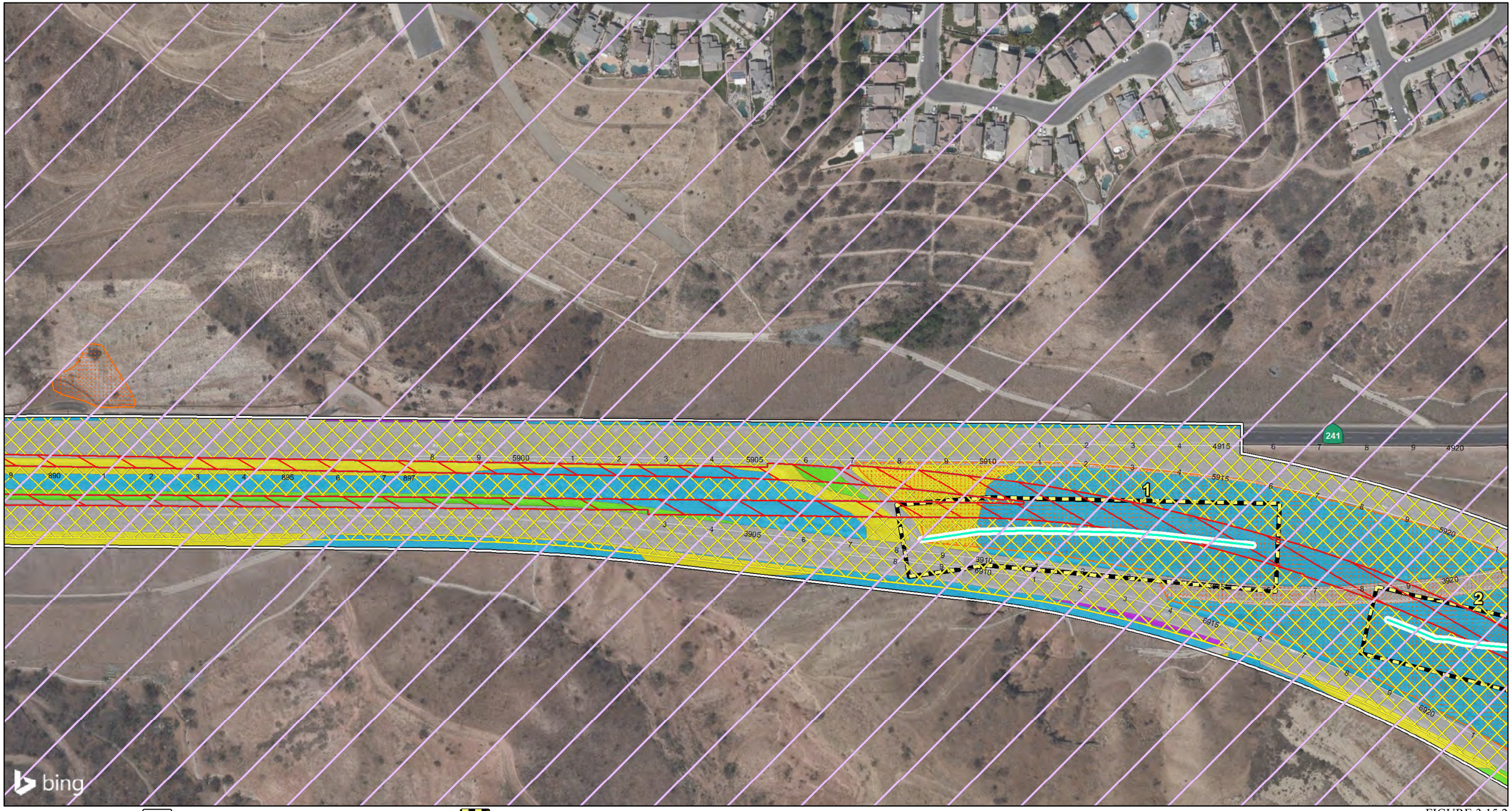
SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)
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FIGURE 3.15.2
Sheet 3 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

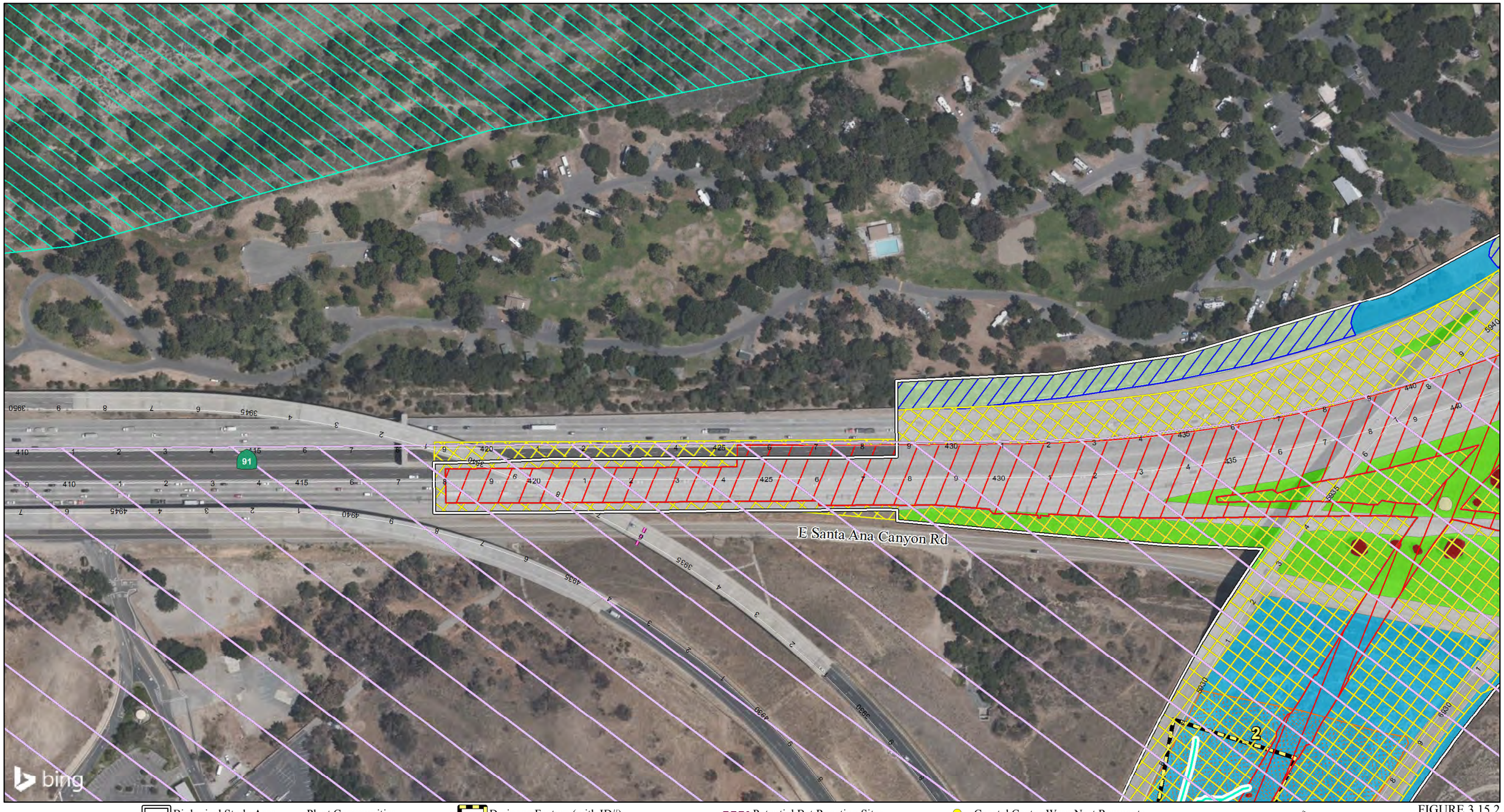
SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)
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FIGURE 3.15.2
Sheet 4 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

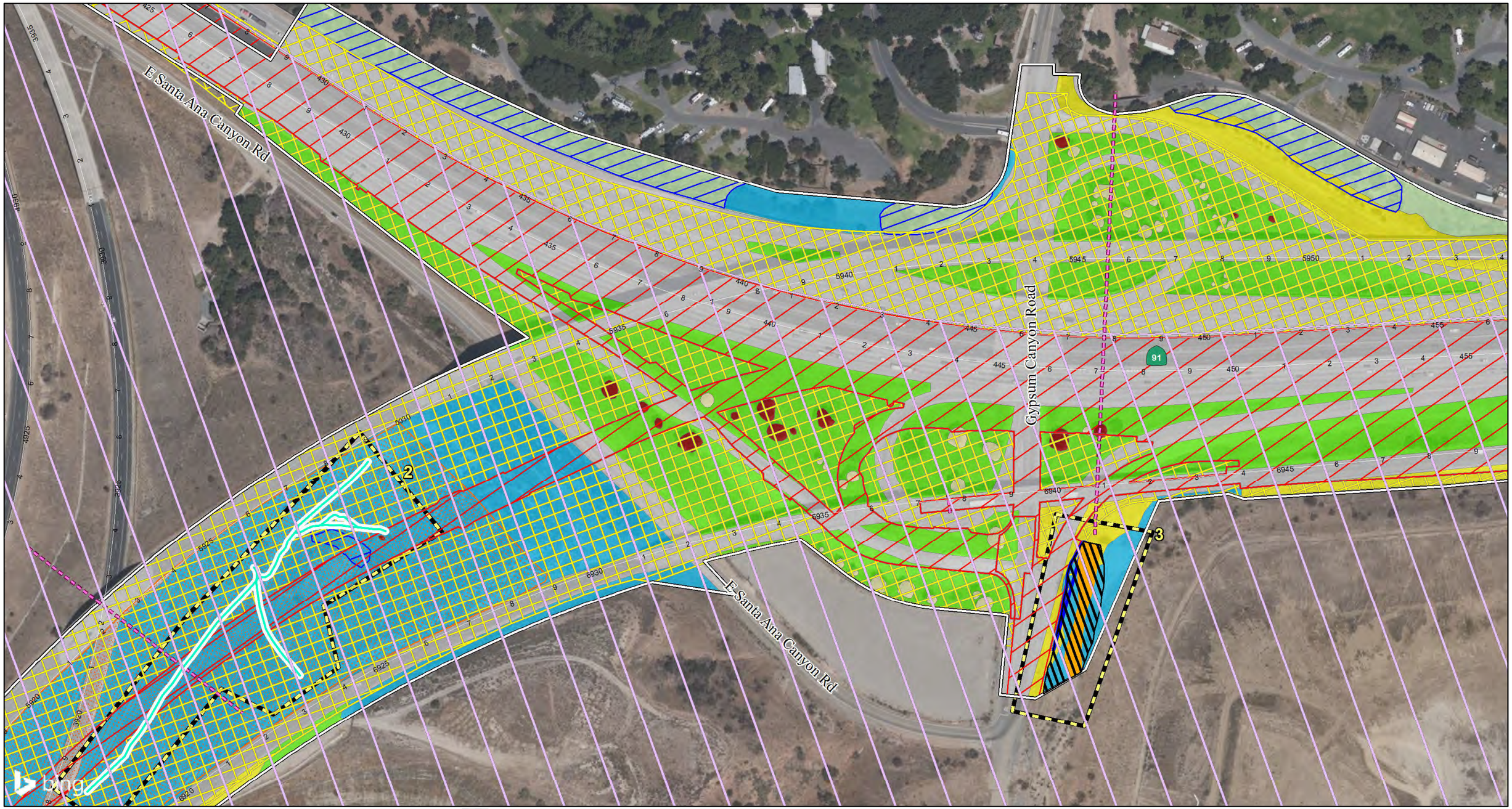
SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)
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FIGURE 3.15.2
Sheet 5 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)

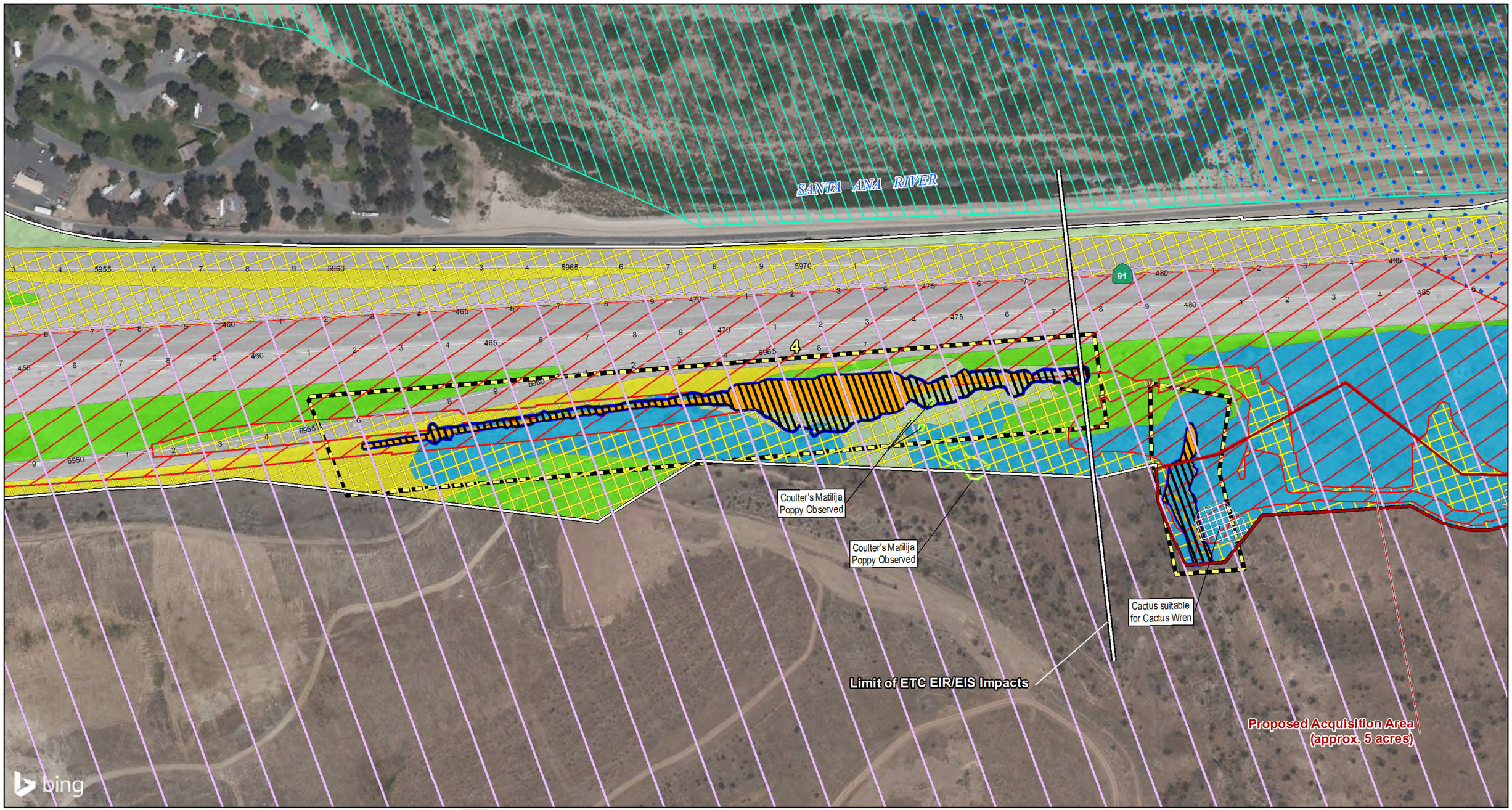
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FIGURE 3.15.2
Sheet 6 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)

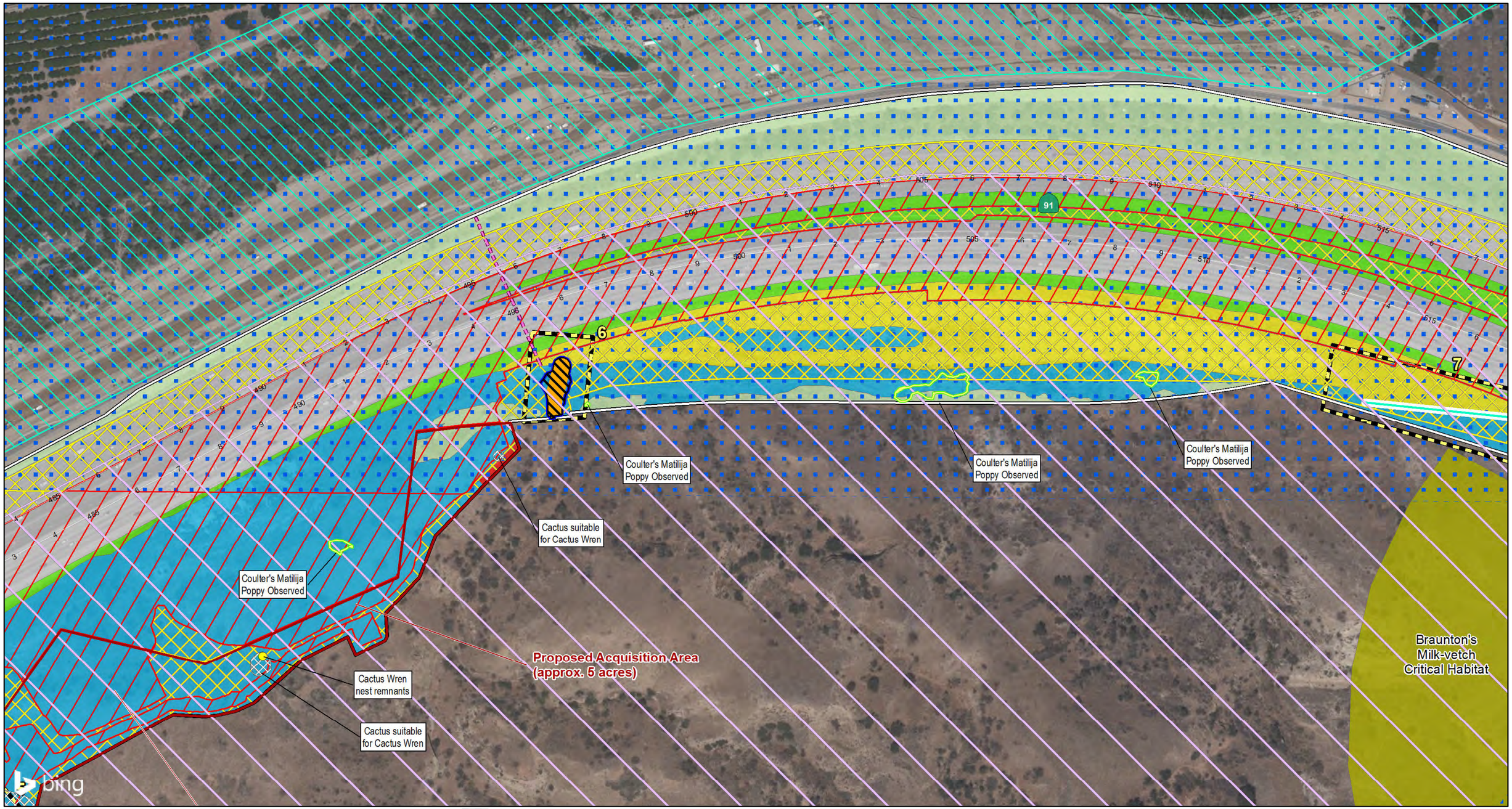
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FIGURE 3.15.2
Sheet 7 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters
Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

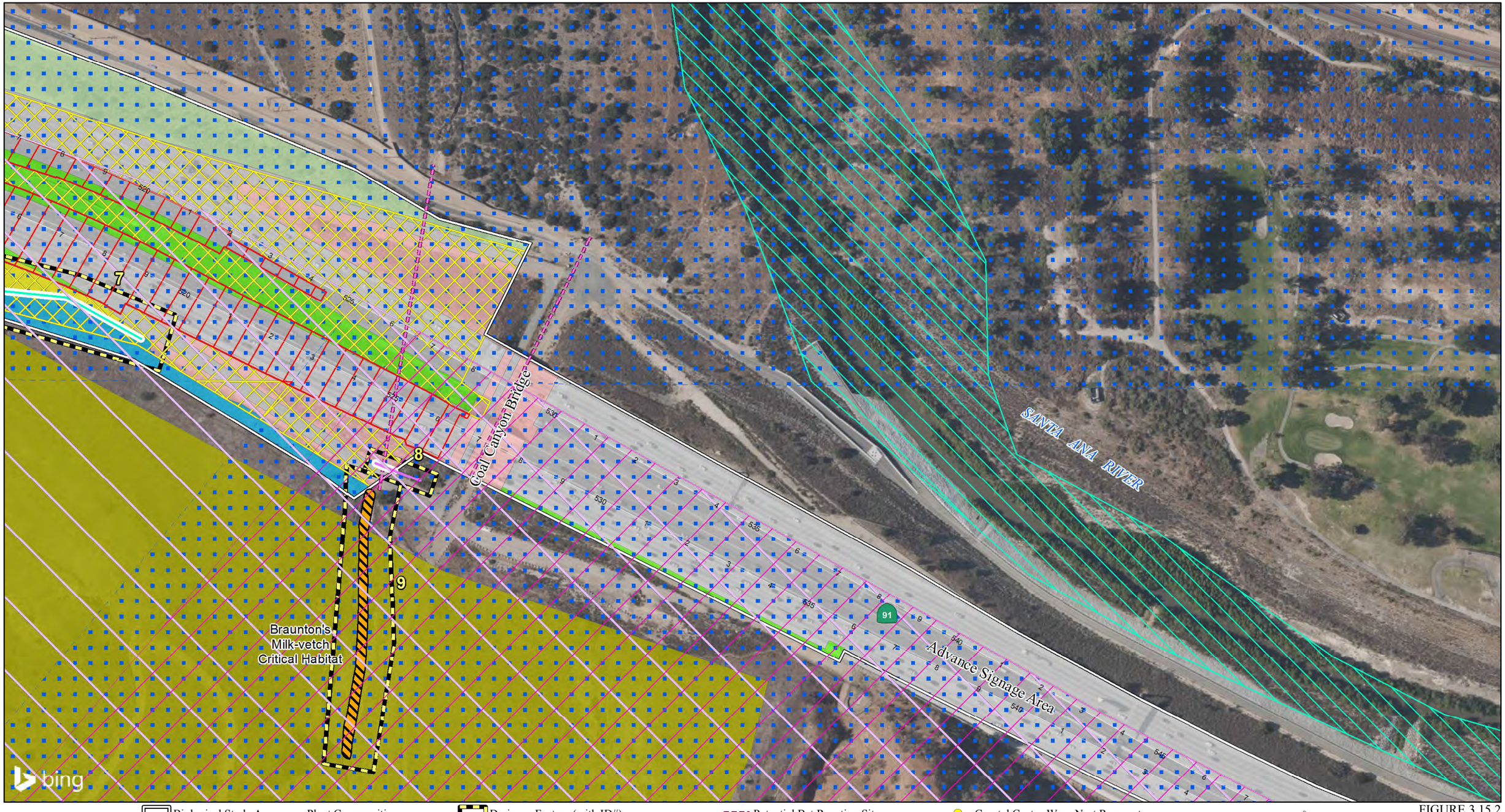
SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)
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FIGURE 3.15.2
Sheet 8 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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Biological Study Area
Proposed Acquisition Area (approx. 5 acres)
Permanent Impacts
Temporary Impacts

Plant Communities
Bare Ground
Chaparral
Coastal Sage Scrub
Developed
Native Plant Restoration
Nonnative Grassland
Oak Woodland
Ruderal

Drainage Feature (with ID#)
CDFW Jurisdiction
USACE Jurisdiction
Approved Jurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Nonjurisdictional Nonwetland Waters
Approved Jurisdictional Nonwetland Waters Drainage Impact Areas

Potential Bat Roosting Sites
California Black Walnut Observed
Coast Live Oak Tree
Western Sycamore Tree
Coulter's Matilija Poppy Observed
CAGN Use Area Observed
Patch of tall (≥ 1 m tall) cactus suitable for coastal cactus wren nesting

Coastal Cactus Wren Nest Remnants
CAGN Designated Critical Habitat
Braunton's Milk-vetch Designated Critical Habitat
Santa Ana Sucker Designated Critical Habitat
NCCP Plan Area
NCCP Reserve
NCCP Existing Use Area

Note: There are no biological resource impacts in the Advance Signage area along SR-91.

0 100 200
FEET

SOURCE: Eagle Aerial (2011); USFWS (2011); RBF (12/2014)
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FIGURE 3.15.2
Sheet 9 of 9

SR-241/SR-91 Express Lanes Connector

Project Impacts to Biological Resources

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within existing and proposed Caltrans right-of-way would be replaced with native grasses.

As described in Parts I and II of the NCCP/HCP documents, all development activities addressed by the NCCP/HCP are considered fully mitigated under the NCCP Act, the California Endangered Species Act (CESA), and FESA for impacts to habitat occupied by listed and other species identified by the NCCP/HCP documents. Therefore, compensatory mitigation for Project impacts within the NCCP/HCP Plan Areas has already been completed pursuant to the NCCP Implementation Agreement; however, USFWS verification and acceptance of the mitigation components for impacts to coastal sage scrub (CSS) shall occur during Section 7 consultation. Coastal sage scrub outside the NCCP/HCP Plan Area is not protected by any federal, State, or local regulations, with the exception of California gnatcatcher designated critical habitat and/or occupied areas. The Build Alternative would result in 0.02 ac of temporary impacts to coastal sage scrub outside the NCCP/HCP Plan Area.

With the implementation of Measures NC-1 through NC-6, provided later, which address construction activities in and adjacent to coastal sage scrub, the Build Alternative would not result in substantial temporary impacts to coastal sage scrub habitat during construction.

The Advance Signage Area on SR-91 in Riverside County is a Covered Activity under Section 7.3.4, Existing Roads within the Criteria Area – Covered Road Maintenance Activities within the Criteria Area: Publicly Maintained Roads, in the WR-MSHCP. As specified later in Measure NC-16 in this section, construction activities in the Advance Signage Area are required to comply with the objectives, policies, procedures, and guidelines in the WR-MSHCP to minimize and avoid impacts to sensitive habitats, including coastal sage scrub, adjacent to existing SR-91.

Coast Live Oak Woodland

The Build Alternative would temporarily impact 8 coast live oak and 15 sycamore trees in the SR-241/SR-91 interchange area. Those temporary impacts may include minor trimming, foot traffic within driplines, and dust. These temporary impacts would not impact the long-term viability of these trees and would be limited to the duration of construction. Figure 3.15.2 (Sheet 6) shows the locations of impacts to coast live oak and sycamore trees in the BSA. With the implementation of Measure NC-7, provided later in this section, which would require the installation of visible barriers around the protected zones of oak trees and/or habitat, and Measure AS-1,

provided later in Section 3.18, Animal Species, which would prohibit trimming of oak trees during the nesting bird season, construction would not result in substantial temporary impacts to coast live oak trees and oak woodland habitat.

Wildlife Corridors

The Build Alternative would not result in temporary impacts to the wildlife linkages in Gypsum Canyon, Coal Canyon, and B Canyon because construction work in those areas would only occur in the median or along the existing paved roadways.

The Build Alternative would widen the existing southbound bridge structure at the Windy Ridge Wildlife Undercrossing. Although the undercrossing would remain open during construction, the disturbance in this area to install falsework and widen the bridge structure may cause animals to avoid this wildlife corridor. Construction access to the SR-91 median would be provided via Coal Canyon Road as shown on Figure 2.1, Sheet 4, in Chapter 2. The existing dirt area at that undercrossing provided for wildlife is separated from the road by a fence and would not be impacted. Based on implementation of Measures NC-9, NC-11, NC-12, NC-13, and NC-14, provided later in this section, which would limit construction equipment and activities in the immediate vicinity of the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing, no substantial temporary impacts to wildlife corridors would occur during construction in that area.

No Build Alternative

The No Build Alternative does not include any improvements to SR-241 or SR-91 in the Project Area. Therefore, no temporary impacts to natural communities would occur as a result of the No Build Alternative.

3.15.3.2 Permanent Impacts

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

Coastal Sage Scrub

The Build Alternative would result in direct permanent impacts to coastal sage scrub through disturbance and/or removal of existing vegetation. Permanent impacts include complete removal, grading and revegetation, and heavy encroachment. In addition to physical disturbance, the Build Alternative has the potential to result in indirect permanent impacts during the facility operation, such as future impacts on adjacent habitats caused by increased storm water runoff, traffic, litter, or through enhancing germination and proliferation of nonnative invasive plant species.

Figure 3.15.2 (Sheets 1 and 4 to 8) shows the locations of permanent impacts to coastal sage scrub in the BSA.

As shown in Table 3.15.2, the Build Alternative would permanently impact approximately 13.7 ac of coastal sage scrub within the NCCP/HCP Plan Area but would not result in any permanent impacts to coastal sage scrub outside the NCCP/HCP Plan Area.

As mentioned above, compensatory mitigation for project impacts in the NCCP/HCP Plan Area has already been completed pursuant to the NCCP Implementation Agreement. Furthermore, substantial additional open space has been conserved, beyond the requirements of the NCCP/HCP. Therefore, coastal sage scrub has been adequately conserved in the subregion, and permanent direct impacts associated with the Build Alternative are not considered substantial in this context. Measures WQ-2, WQ-3, WQ-4, provided earlier in Section 3.8, Water Quality and Storm Water Runoff, and IS-1, provided later in Section 3.20, Invasive Species, require the Proposed Project to comply with the Caltrans Water Quality Permit, implement Caltrans-approved Design Pollution Prevention and Treatment stormwater BMPs, and develop a Weed Abatement Program/Non-Standard Special Provisions, which would reduce potential indirect permanent impacts to coastal sage scrub during operation of the Build Alternative.

Coast Live Oak Woodland

The Build Alternative would permanently impact 6 coast live oak trees in the SR-241/ SR-91 interchange area. Permanent impacts may include complete removal, substantial encroachment, or extensive branch removal that may have detrimental impacts to the long-term viability of the trees. Figure 3.15.2 (Sheets 5 and 6) shows the locations of coast live oak and sycamore trees that would be permanently impacted by the Build Alternative.

Permanent impacts to individual trees due to substantial encroachment or extensive branch removal must be estimated to determine the extent of the effects. Some individual trees may thrive with extensive trimming, while others may die out completely. Measure NC-8, which requires implementation of a revegetation program including replacement of permanently impacted trees at approved ratios, would reduce permanent impacts of the Build Alternative to oak trees and oak woodland habitat.

Wildlife Corridors

The Build Alternative would not result in permanent impacts to the wildlife linkages in Gypsum Canyon, Coal Canyon, or B Canyon because work in these areas would only occur within the existing median or along the existing paved roads.

The Build Alternative would widen the southbound bridge structure at Windy Ridge Wildlife Undercrossing. The existing design of Windy Ridge Wildlife Undercrossing bridge structure allows for widening in the median of SR-241 without substantially impacting the openness of the crossing. The bridge widening under the Build Alternative would decrease the existing openness factor from 39.6 to 30.5 ft (recommended minimum is 1.97 ft). Although the Build Alternative would decrease the openness of the existing Windy Ridge Wildlife Undercrossing, the crossing would not be reduced enough to discourage wildlife use or have a long-term impact on larger wildlife use of the crossing.

Measures NC-9 and NC-10, provided later in this section, would reduce permanent effects of the bridge widening on Windy Ridge Wildlife Undercrossing such that wildlife in the area would still be able to use that existing wildlife crossings and, therefore, no substantial permanent impacts to wildlife corridors would occur as a result of the Build Alternative.

No Build Alternative

The No Build Alternative does not include any improvements to the SR-241 or SR-91 in the Project Area. Therefore, no permanent impacts to natural communities would occur as a result of the No Build Alternative.

3.15.4 Avoidance, Minimization, and/or Mitigation Measures

In addition to Measures WQ-2, WQ-3, and WQ-4, provided earlier in Section 3.8, Water Quality and Storm Water Runoff, and Measure IS-1, provided later in Section 3.20, Invasive Species, NC-1 through NC-6 listed below are required NCCP/HCP Construction-Related Minimization Measures and will be implemented to avoid and minimize impacts to coastal sage scrub habitat in the NCCP/HCP Plan Area. Applicable, previously adopted measures from the ETC Final EIR and Final EIS, as amended, are also included.

3.15.4.1 ETC Final EIR and Final EIS

Measure NC-1 ***Coastal California Gnatcatcher Environmentally Sensitive Areas.*** *Prior to the commencement of grading operations or other activities involving substantial soil disturbance, all areas*

of CSS habitat to be avoided under the provisions of the NCCP/HCP shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey will be conducted to locate CAGN and cactus wrens within 100 ft of the outer extent of projected soil disturbance activities. The locations of any such species shall be clearly marked and identified on the construction/grading plans.

Measure NC-2 ***Nesting Coastal California Gnatcatcher.*** *During clearing or construction, to the maximum extent practicable, no grading of CSS habitat that is occupied by nesting CAGN will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures" are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measures, and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFW with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of CAGN, cactus wrens (Campylorhynchus brunneicapillus), and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent practicable in the context of the public health and safety considerations.* (Note: While this text is taken directly from NCCP/HCP Construction Minimization Measures to preserve their integrity, the capture and relocation of birds is not encouraged or authorized by the USFWS.)

The breeding season is now considered to be from February 15 through August 31; therefore, these dates are applicable to this measure.

Measure NC-3 ***Biological Monitor.*** *A monitoring biologist acceptable to USFWS/CDFW will be on site during any clearing of CSS. The*

landowner or relevant public agency/utility will advise USFWS/CDFW at least 7 calendar days (preferably 14 calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System. (Note: While this text is taken directly from NCCP/HCP Construction Minimization Measures to preserve their integrity, the capture and relocation of birds is not encouraged or authorized by the USFWS.) *It will be the responsibility of the monitoring biologist to ensure that Identified Species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.*

Measure NC-4 ***Coastal Sage Scrub Environmentally Sensitive Area.*** *Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing or other appropriate markers clearly visible to construction personnel. No construction access, parking, or storage of equipment or materials will be permitted within such marked areas.*

Measure NC-5 ***Coastal Sage Scrub Access Restrictions.*** *In areas bordering the NCCP/HCP Reserve System or Special Linkage/Special Management areas containing substantial CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum number during construction consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring*

biologist, construction supervisors, and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.

Measure NC-6 ***Coastal Sage Scrub Dust Control.*** *CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.*

In addition to Measure AS-1, provided later in Section 3.18, Animal Species, the following measures would avoid and minimize impacts to oak trees, oak woodlands, and sycamore trees:

Measure NC-7 **Coast Live Oak Tree Environmentally Sensitive Areas.** Prior to clearing or construction, highly visible barriers and, as needed, silt fencing will be installed around the protected zone of any oak tree or oak habitat. Such areas will be designated on the project specifications as Environmentally Sensitive Areas (ESAs) to be preserved. The ESAs will extend 5 ft outside the dripline or 15 ft from the trunk of each tree, whichever is greater, unless the area includes a road shoulder or existing asphalt. In those instances, safety requires the road shoulder or existing asphalt not be included in the ESA and the boundary of the ESA will be modified accordingly. These modified ESAs are included because impacts to oaks may occur within these road shoulder and asphalt areas if roots become exposed, soil surrounding roots is excessively compacted, material is deposited over roots, or branches or roots are broken or damaged.

In addition, to avoid breaking overhanging branches, branch trimming may be required. Proper tree pruning procedures will be followed.

No grading or fill activity of any type will be permitted within the ESAs for trees that are expected to be preserved. In addition, heavy equipment, including motor vehicles, will not be allowed to operate in the ESAs. All construction equipment

will be operated in such a manner as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, will be allowed in the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned construction activities.

Measure NC-8 **Coast Live Oak Tree Replacement.** During Final Design, the TCA will develop a revegetation program to help compensate for lost oak trees with spacing criteria to be determined by the Project Biologist. Senate Concurrent Resolution No. 17 (filed with the Secretary of State on September 1, 1989) requests all State agencies to preserve and protect native oak woodlands to the maximum extent feasible or to provide for replacement plantings. Impacts to any oak trees (excluding California scrub oaks) with trunk sizes greater than 8 inches diameter at breast height (dbh), but less than 36 inches dbh, will be replaced at a minimum mitigation-to-impact ratio of 1:1. Heritage oaks (oaks greater than 36 inches dbh) will be replaced at a minimum mitigation-to-impact ratio of 3:1. Replacement resources will include a combination of plantings such as acorns, 5-gallon, and 15-gallon trees and/or transplantation where feasible. Replacement plantings may take place in TCA or Caltrans right-of-way or suitable areas in proximity to the project limits.

The following measures would avoid and minimize impacts to Windy Ridge Wildlife Undercrossing:

Measure NC-9 **Existing Wildlife Fencing.** If necessary for construction access, the existing wildlife fencing will be removed only after installation of temporary fencing to protect against wildlife-vehicle incidents during construction. Temporary fencing will be the same or greater height than the existing wildlife fencing and must be maintained and functional throughout project construction. After construction, any temporary fencing will be

replaced with new permanent fencing consistent with the existing wildlife fencing.

Measure NC-10 **Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Revegetation.** Following the completion of the project construction, all disturbed habitat adjacent to the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be restored with native vegetation consistent with the 1994 Biological Opinion and the 2019 Biological Opinion, as applicable.

Measure NC-11 **Construction Lighting and Staging.** Construction equipment maintenance, lighting, and staging must be in designated areas, away from Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing.

Measure NC-12 **Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Avoidance.** During construction, Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be avoided as much as is feasible. Activity that must take place at the Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be done as quickly as possible and only during daylight hours.

Noise levels generated from construction activities at Coal Canyon Undercrossing shall not exceed 5 A-weighted decibels (dBA) above the ambient noise level within 100 ft from the edge of roadway**.**

Measure NC-13 **Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing Access.** Windy Ridge Wildlife Undercrossing and Coal Canyon Undercrossing will be kept clear of all equipment or structures that could potentially serve as barriers to wildlife passage.

Measure NC-14 **Windy Ridge Wildlife Undercrossing Construction Staging.** Within Windy Ridge Wildlife Undercrossing, structures required for bridgework will be erected as to not block the main underpass. Scaffolding and false work will be restricted

to the sides of the underpass to maintain the functionality of the crossing for wildlife movement.

Construction activities in the SR-91 Advance Signage Area will comply with the following WR-MSHCP guidelines:

Measure NC-15 **Western Riverside County Multiple Species Habitat Conservation Plan Construction Guidelines.** Construction activities in the SR-91 Advanced Signage Area in Riverside County will comply with the objectives, policies, procedures, and guidelines from Section 7.5.3: Construction Guidelines as well as BMPs outlined in Appendix C (WR-MSHCP Volume 1) of the Western Riverside County Multiple Species Habitat Conservation Plan (WR-MSHCP).

The applicable guidelines from Section 7.5.3: Construction Guidelines are:

- When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, and water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or additional fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
- Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

The applicable practices from the 15 practices listed in Appendix C: Standard Best Management Practices are:

- The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

- To avoid attracting predators of the species of concern, the project site shall be kept clean of debris. All food-related trash items shall be enclosed in sealed containers and regularly removed from the project site.
- Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project construction activities and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
- The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/ enhancement area for compliance with project approval conditions including these BMPs.

Measures NC-16 and NC-17 are required to protect sensitive species and habitats:

Measure NC-16 **Sensitive Species and Habitats.** In conjunction with the Final Design and prior to site preparation, all sensitive species and special habitats within 300 ft of the Project Area shall be mapped on the grading plans by a qualified biologist. Sensitive and candidate species and special habitats shall be defined as:

- Coastal California gnatcatcher
- Cactus wren
- Designated critical habitat for Coastal California gnatcatcher
- Thread-leaved brodiaea
- Designated critical habitat for Braunton's milk-vetch
- Least Bell's vireo
- Southwestern willow flycatcher
- Drainages and streambeds
- Coastal sage scrub

- Coast live oak woodland

Measure NC-17 **Cactus.** Prior to clearing and grubbing and construction, cactus will be saved where feasible, for use in revegetation efforts.

3.15.4.2 ETC Final EIR and Final EIS

The following measures are included in the ETC Final EIR and Final EIS and are applicable to the Build Alternative.

Measure B-2 *Prior to grading and site preparation, all native oak, sycamore, and willow trees of 4 inches in diameter at breast height (DBH-4 ½ ft from mean ground level) within the Project limits and within 20 ft of grading and construction operations shall be tagged and numbered with permanent tags. The tag numbers of the trees to be protected and those to be removed shall be noted. Records of these numbers shall be kept by TCA, the Resource Management Coordinator/Monitor and the Orange County Environmental Management Agency/ Environmental Planning Division for use in mitigation/ replacement and monitoring of tree resources before, during and after grading and construction activities.*

Measure B-3 *Prior to grading and site preparation, all trees subject to removal shall be marked with a red "X" on the trunk. Trees to be preserved shall be marked with yellow flagging visible from all direction.*

Measure B-4 *In conjunction with grading, site preparation and construction, short term soil stabilization using accepted soil protection techniques and native species shall be conducted under the direction of a qualified biologist, where determined to be appropriate to protect sage scrub communities.*

Measure B-8 *For the period covering all site preparation, grading and construction, a resource management coordinator shall monitor wildlife* [and plant] *habitat preservation to ensure that the ESAs and areas outside the Caltrans right-of-way are not adversely impacted. The monitor shall be on site before,*

during, and after the completion of site preparation, grading and construction.

Measure B-11 *Prior to site preparation, grading and construction, the TCA shall implement procedures for protecting sensitive and candidate species and special habitats* [particularly Braunton's milk-vetch critical habitat] *identified and mapped on grading plans during site preparation, grading, construction and maintenance activities by following Caltrans Environmentally Sensitive Area procedures.*

Measure B-25 *During site preparation and grading, the TCA shall phase operations around important habitat areas to allow for completion of nesting and breeding activities for the CAGN and raptor species occurring in oak woodland ~~as well as willow and sycamore forested woodlands~~. This measure will be conducted and overseen by a qualified biologist.*

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