

BIOLOGICAL ENVIRONMENT

2.14 Wetlands and Other Waters

2.14.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and

whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a “least environmentally damaging practicable alternative” (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required

in tandem with a Section 404 permit request. Please see Section 2.8 Water Quality and Storm Water Runoff, for additional details.

2.14.2 Affected Environment

The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (NES[MI]) (2017 and 2018 errata) and the *Jurisdictional Delineation* (2017 and 2018 errata) for the proposed project. The *Jurisdictional Delineation*, which was conducted in accordance with current USACE and CDFW criteria, is provided in Appendix C of the *Natural Environment Study (Minimal Impacts)*.

The drainage features within the biological study area (BSA) consist of unnamed storm water runoff and concrete flood control channels, which drain urban runoff from upland areas, generally run parallel to State Route 91 (SR-91), Interstate 605 (I-605), and the on-/off-ramps, and are presumed to drain into the San Gabriel River. The San Gabriel River connects directly to the Pacific Ocean (a traditional navigable water [TNW] of the United States), thereby establishing a nexus to navigable waters as defined by USACE guidance.

Fourteen drainage features identified within the BSA are designated as Drainage Features A through N and are shown on Figure 2.14-1, included at the end of the section. Drainage Features C, D, G, M, and N are concrete lined or dominated by upland vegetation, lack riparian habitat, and either have limited weedy vegetation growth or vegetation growth in less than 6 inches of accumulated sediment on concrete. The USACE is not expected to assert jurisdiction over Drainage Features C, D, G, M, or N because the USACE typically does not assert jurisdiction over nontidal drainage and irrigation ditches that are excavated on dry land, that drain adjacent upland areas, and that do not convey relatively permanent water (RPW).

Drainage Features E, I, J, K, and L as well as portions of Drainage Features A, B, F, and H are human altered and surrounded by urban habitat but appear to contain RPW and function like streams with a nexus to a TNW. The USACE is expected to assert jurisdiction over Drainage Features E, I, J, K, and L as well as portions of Drainage Features A, B, F, and H.

The *Jurisdictional Delineation* indicated there are a total of 0.88 acre (ac) of nonwetland waters that are potentially subject to USACE jurisdiction. There are no areas in the BSA satisfying the USACE wetland criteria.

Since Drainage Features E, I, J, K, and L and portions of Drainage Features A, B, F, and H satisfy the USACE jurisdictional criteria for waters of the United States (waters of the U.S.), as described above, they are also subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Streambed banks and riparian habitat extending beyond the limits of USACE jurisdiction are considered to be subject to CDFW jurisdiction. However, there were no areas within the BSA where riparian habitat exists in association with the drainage features. As such, CDFW jurisdiction corresponds with the upper limits of the jurisdictional drainage channels (or portions of channels that contain RPW), as the sides of the man-made drainages serve as artificial banks.

The *Jurisdictional Delineation* indicated there are a total of 1.17 ac of potential CDFW jurisdiction within the BSA.

Because there is no current public guidance on determining RWQCB jurisdictional areas, potential jurisdiction was determined based on the federal definition of wetlands and other waters of the U.S. as recommended by the *Workplan: Filling the Gaps in Wetland Protection* (SWRCB 2004). RWQCB potential jurisdiction would be considered coincident with USACE potential jurisdiction for the purposes of Section 401 certification. If CWA jurisdiction is determined to be absent, these features may be regulated by the RWQCB pursuant to the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The total area of potential RWQCB jurisdiction is the same as the USACE jurisdiction (i.e., 0.88 ac).

Table 2.14.1 provides the area in acres of each of the fourteen potentially jurisdictional and nonjurisdictional drainage features, respectively, in the BSA.

2.14.3 Environmental Consequences

The discussions regarding the potential temporary and permanent project impacts on jurisdictional waters and nonjurisdictional drainage features in the following sections should be considered preliminary until verified by the USACE, CDFW, and RWQCB.

Based on the preliminary project design, it is anticipated that some of the flood control channels within the BSA, particularly on the westbound side of SR-91, may be impacted by the project (Figure 2.14-2, included at the end of the section). Therefore, the project is expected to have impacts to the jurisdictional waters that are located within the BSA, and permits (i.e., USACE Section 404 Nationwide Permit authorization, CDFW Section 1602 Streambed Alteration Agreement, and RWQCB Section 401 Water Quality Certification) are expected to be necessary.

Table 2.14.1 Potentially Jurisdictional and Nonjurisdictional Drainage Feature Area Measurements

Drainage Features	Potential Jurisdictional USACE Area (acres)	Potential Jurisdictional CDFW Area (acres)	Potential Nonjurisdictional Drainage Area (acres)
A	0.29	0.38	0.42
B	0.02	0.03	0.34
C	0	0	0.009
D	0	0	0.006
E	0.08	0.11	0
F	0.010	0.006	0.11
G	0	0	0.22
H	0.013	0.018	0.14
I	0.05	0.07	0
J	0.37	0.44	0
K	0.008	0.008	0
L	0.05	0.09	0
M	0	0	0.012
N	0	0	0.08
TOTAL	0.88	1.17	1.33

Source: *Natural Environment Study (Minimal Impacts)* (2017 and 2018 Errata).
 Note: Totals may not appear to sum correctly due to rounding.
 CDFW = California Department of Fish and Wildlife
 USACE = United States Army Corps of Engineers

2.14.3.1 Temporary Impacts

Build Alternative (includes Design Options)

United States Army Corps of Engineers Jurisdictional Areas and Nonjurisdictional Drainage Areas

Table 2.14.2 shows the temporary and permanent impacts to USACE jurisdictional areas, as well as on drainage areas anticipated to be deemed nonjurisdictional, in the BSA as a result of construction and operation of the Build Alternative.

The Build Alternative is expected to result in 0.01 ac of temporary impacts to nonwetland waters subject to USACE jurisdiction due to construction. The potential impact area is within Drainage Feature J.

Construction of the Build Alternative would potentially result in 0.002 ac of temporary impacts to nonjurisdictional drainage areas. The potential impact areas are within Drainage Features C and D.

Table 2.14.2 Temporary and Permanent Project Impacts to USACE Jurisdictional Areas and Nonjurisdictional Drainage Areas

Potential Jurisdictional Areas		Potential Nonjurisdictional Areas	
Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)
0.01	0.43	0.002	0.461

Source: *Natural Environment Study (Minimal Impacts)* (2017 and 2018 Errata).
 USACE = United States Army Corps of Engineers

California Department of Fish and Wildlife Jurisdictional Areas and Nonjurisdictional Drainage Areas

Table 2.14.3 shows the amount of temporary and permanent impacts to CDFW jurisdictional areas, as well as on drainage areas anticipated to be deemed nonjurisdictional, in the BSA as a result of construction and operation of the Build Alternative.

Table 2.14.3 Temporary and Permanent Project Impacts to CDFW Jurisdictional Areas and Nonjurisdictional Drainage Areas

Potential Jurisdictional Areas		Potential Nonjurisdictional Areas	
Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)
0.02	0.52	0.002	0.461

Source: *Natural Environment Study (Minimal Impacts)* (2017 and 2018 Errata).
 CDFW = California Department of Fish and Wildlife

The Build Alternative will result in temporary impacts to 0.02 ac of nonwetland area subject to CDFW jurisdiction as a result of construction. The potential temporary impacts would occur within Drainage Feature J.

Construction of the Build Alternative would potentially result in 0.002 ac of temporary impacts to nonjurisdictional drainage areas. The potential impact areas are within Drainage Features C and D.

Regional Water Quality Control Board Jurisdictional Areas and Nonjurisdictional Drainage Areas

As noted earlier, Table 2.14.2 shows the temporary impacts to USACE jurisdictional areas. The temporary impacts to RWQCB areas would be the same as shown in Table 2.14.2 for the USACE areas, 0.01 ac.

No Build Alternative

None of the proposed project improvements would be constructed under the No Build Alternative. Therefore, the No Build Alternative would not result in temporary impacts to USACE, CDFW, or RWQCB areas in the BSA.

2.14.3.2 Permanent Impacts

Build Alternative (includes Design Options)

United States Army Corps of Engineers Jurisdictional Areas and Nonjurisdictional Drainage Areas

As shown in Table 2.14.2, the Build Alternative will result in permanent impacts to 0.43 ac of nonwetland waters potentially subject to USACE jurisdiction (i.e., Drainage Features B, H, I, and J).

The Build Alternative will result in 0.461 ac of permanent impacts to nonjurisdictional drainage areas. The potential nonjurisdictional impact areas are within portions of Drainage Features B, C, D, G, and H.

California Department of Fish and Wildlife Jurisdictional Areas and Nonjurisdictional Drainage Areas

As shown in Table 2.14.3, the Build Alternative will result in permanent impacts to 0.52 ac of nonwetland areas subject to CDFW jurisdiction. The permanent impacts would occur within Drainage Features B, H, I, and J.

The Build Alternative would result in permanent impacts to 0.461 ac of nonjurisdictional drainage areas. The impact areas are within Drainage Features B, C, D, G, and H.

Regional Water Quality Control Board Jurisdictional Areas and Nonjurisdictional Drainage Areas

The permanent impacts on RWQCB areas under the Build Alternative would be the same as shown in Table 2.14.2 for the USACE areas, 0.43 ac.

The following project features outline the permits that will be obtained prior to initiation of construction:

- PF-WET-1** Prior to initiation of construction, a permit will be obtained through the United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. As part of coordination with the USACE, a Letter of Permission (LOP) will be pursued, if appropriate.

- PF-WET-2** Prior to initiation of construction, either a Watershed Streambed Alteration Agreement (WSAA; in combination with an LOP) or a Streambed Alteration Agreement (SAA; in combination with an Individual Permit) with the California Department of Fish and Wildlife (CDFW) will be obtained and any specifications in the WSAA or SAA will be implemented.
- PF-WET-3** Prior to initiation of construction, a Section 401 Water Quality Certification (Certification) from the Los Angeles Regional Water Quality Control Board (RWQCB) will be obtained and any specifications in the Certification will be implemented.
- PF-WET-4** In order to avoid impacts to adjacent jurisdictional drainage features, best management practices (BMPs) to prevent loose soil or pollutants associated with the project from inadvertently entering the drainage features located within and adjacent to the BSA will be implemented. Example BMPs include silt fencing and straw wattle placed in such a manner so as to catch or filter sediment and other construction-related debris to prevent them from eroding into the nearby drainage channels.

No Build Alternative

None of the proposed project improvements would be constructed or operated under the No Build Alternative. Therefore, the No Build Alternative would not result in adverse permanent impacts to USACE, CDFW, or RWQCB areas in the BSA.

2.14.4 Avoidance, Minimization, and/or Mitigation Measures

Although jurisdictional areas are likely to be affected by the project, compensatory mitigation is not expected to be required for impacts to waters that are subject to USACE, CDFW, and RWQCB regulatory authority permitting requirements because the drainage features proposed to be impacted consist of concrete-lined ditches that are excavated on dry land and did not replace previously existing natural drainages.

If compensatory mitigation is ultimately required by the resource agencies for the project impacts on waters, that mitigation will be determined in coordination with the regulatory agencies based on the quality and quantity of jurisdictional resources affected by the project.



LEGEND

- Biological Study Area Limits
- Drainage Features (A-N)**
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)

- Permanent Impact
- Temporary Impact
- Temporary Construction Easement

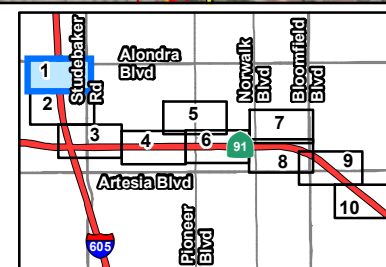
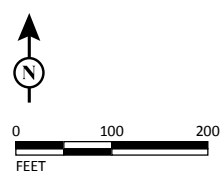


FIGURE 2.14-1
Sheet 1 of 10

Westbound SR-91 Improvement Project
Drainage Features
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811



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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

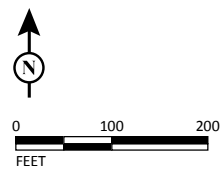
Temporary Impact

Temporary Construction Easement

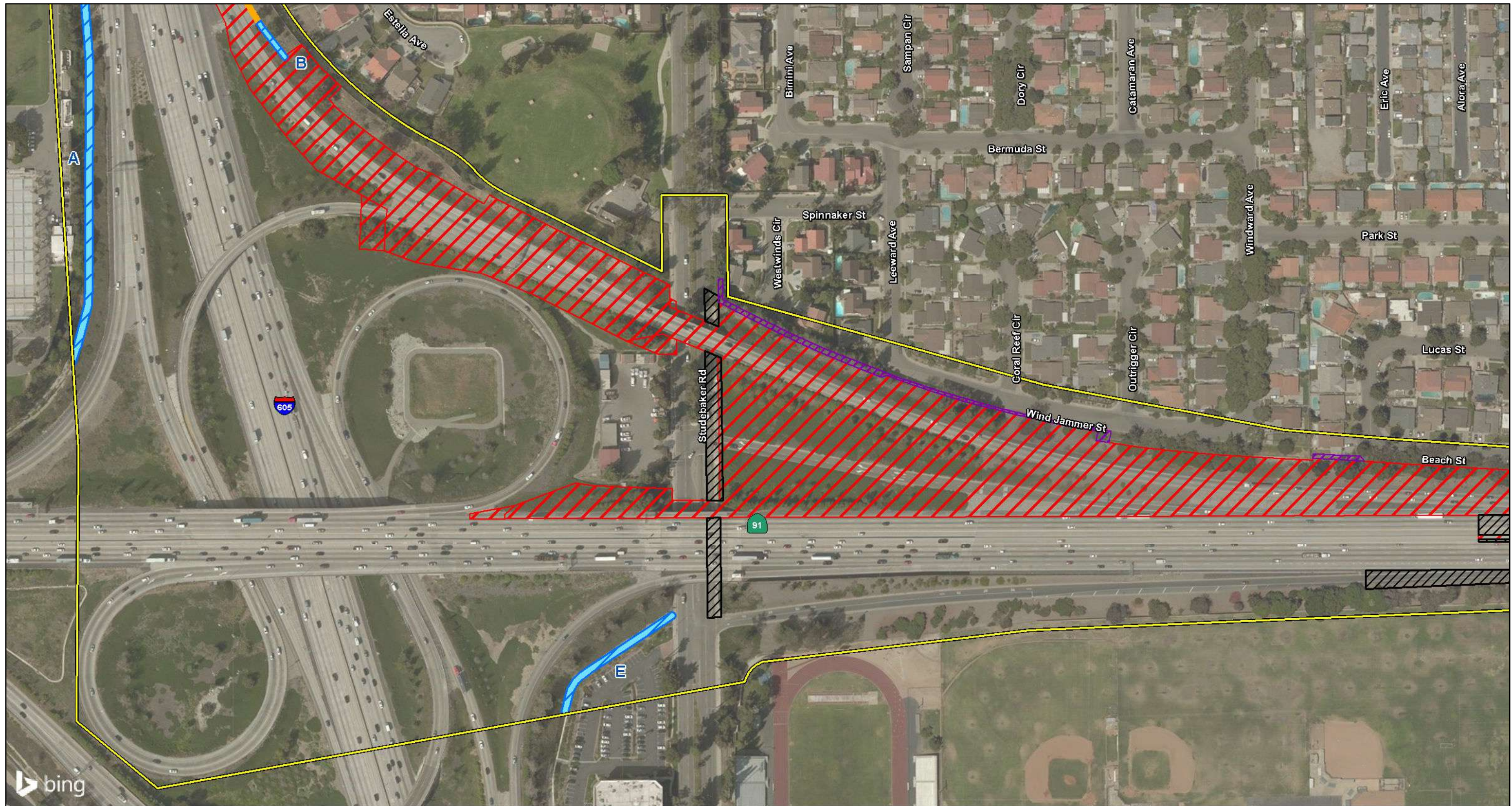


FIGURE 2.14-1
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Westbound SR-91 Improvement Project
Drainage Features
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811



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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement

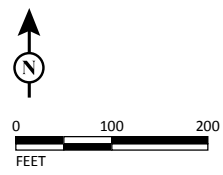
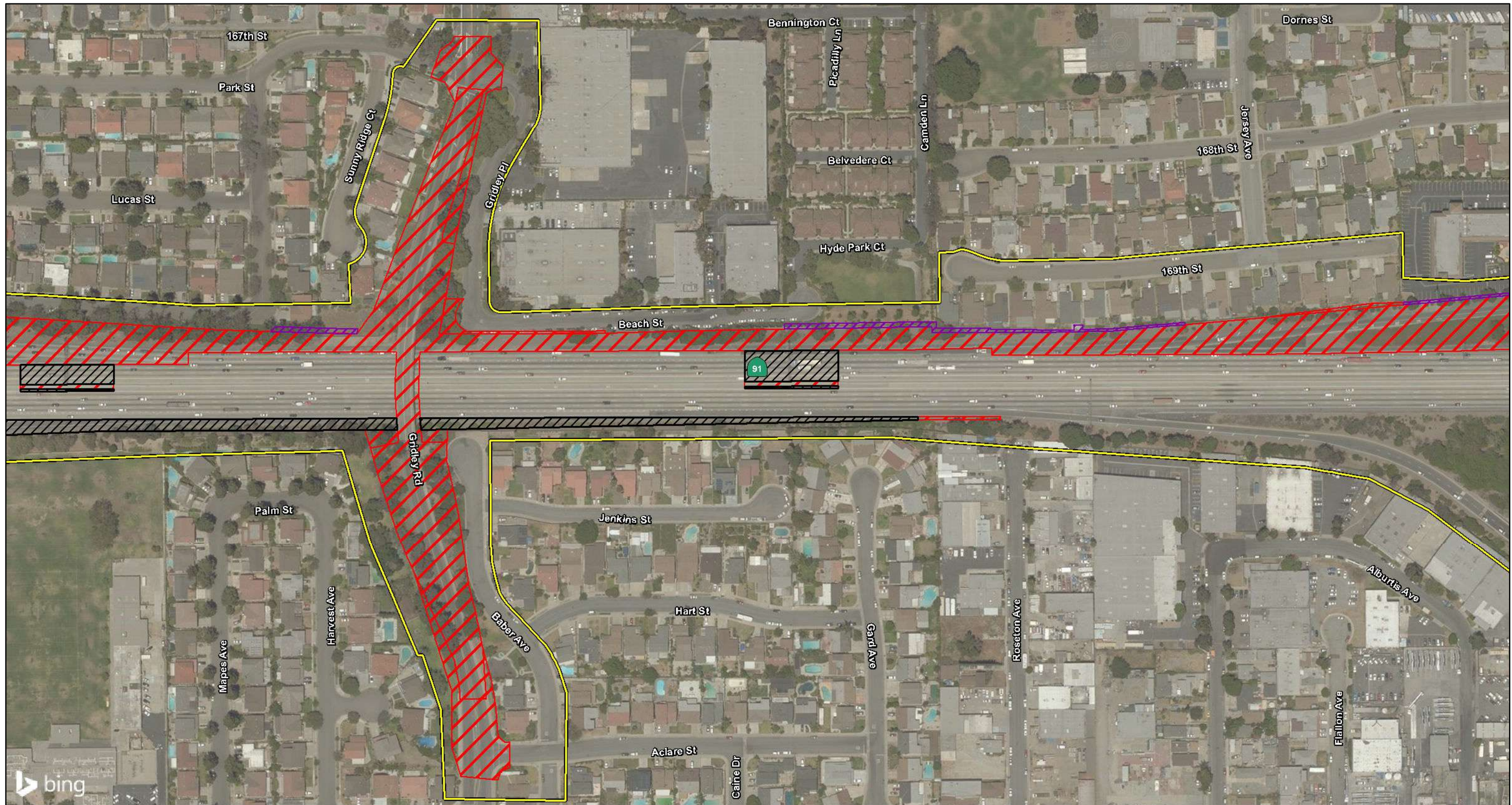


FIGURE 2.14-1
Sheet 3 of 10

Westbound SR-91 Improvement Project
Drainage Features
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811

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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement

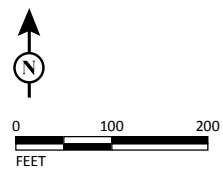
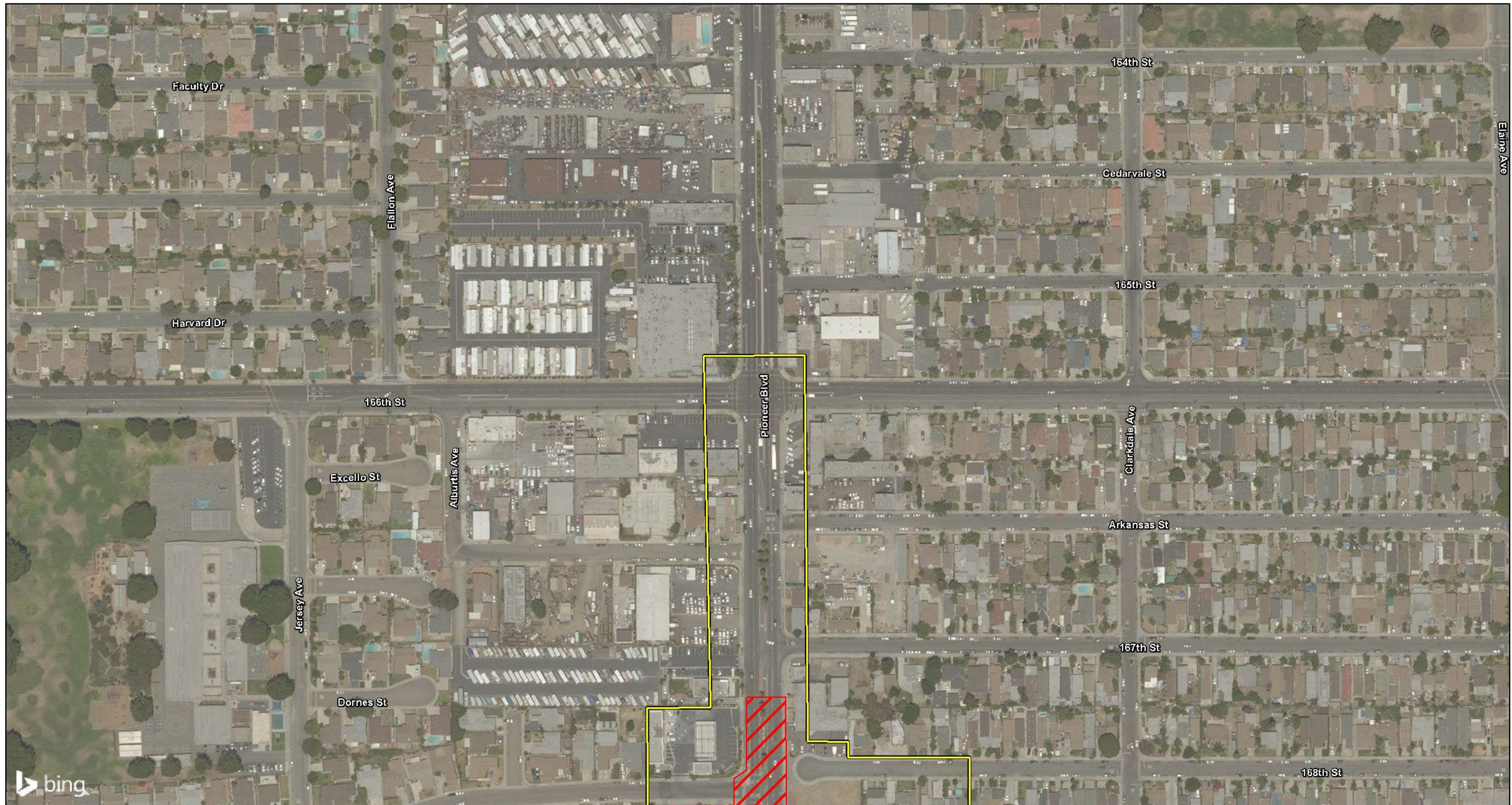


FIGURE 2.14-1
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Westbound SR-91 Improvement Project
Drainage Features
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811

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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement

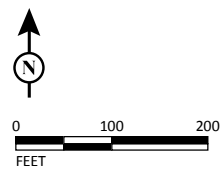


FIGURE 2.14-1
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Westbound SR-91 Improvement Project

Drainage Features

07-LA-91

SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8

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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

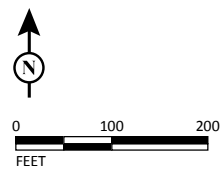
Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement



SOURCE: Bing Maps (2015); Michael Baker (4/2017)

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FIGURE 2.14-1

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Westbound SR-91 Improvement Project

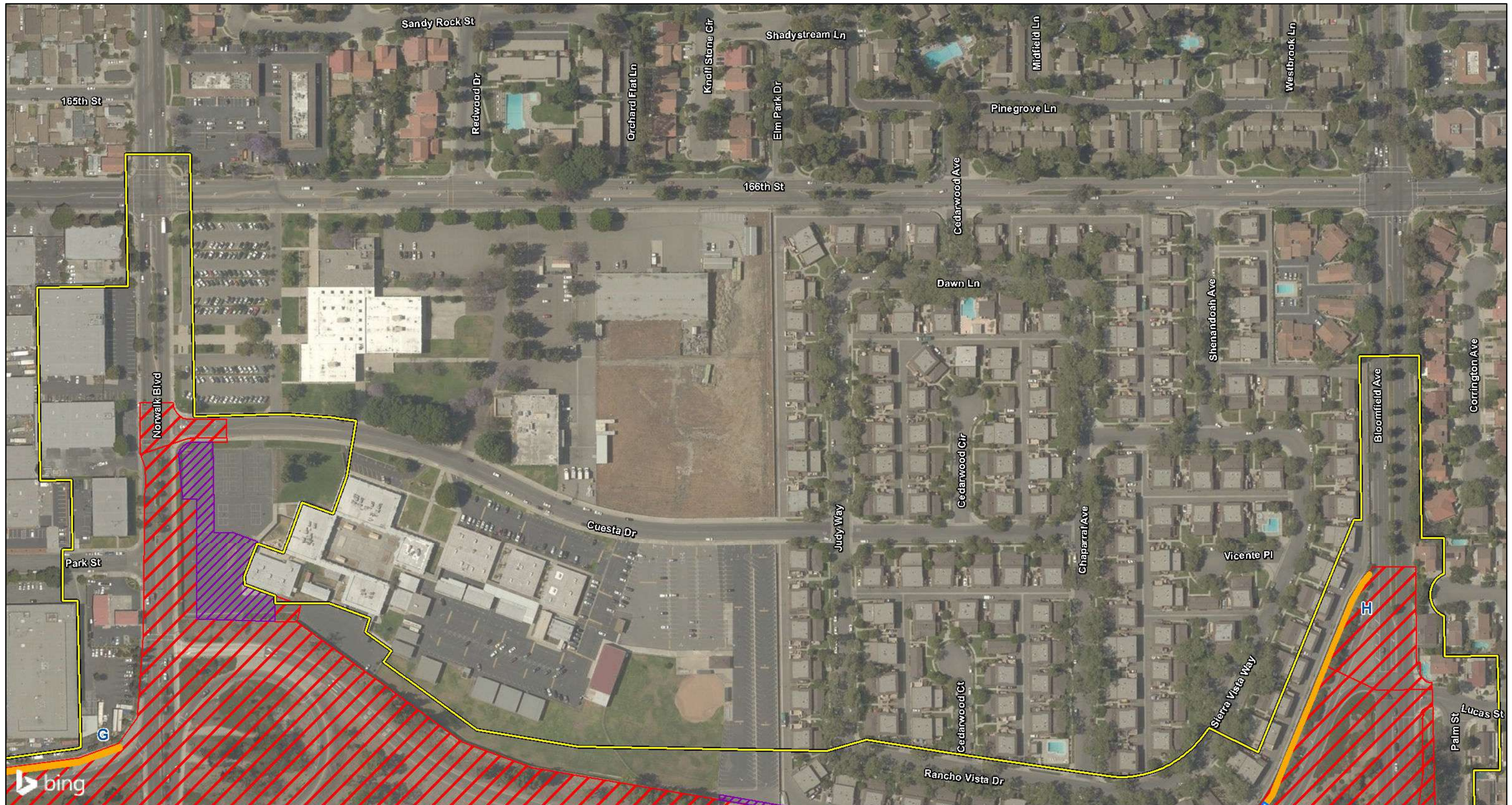
Drainage Features

07-LA-91

SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8

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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement

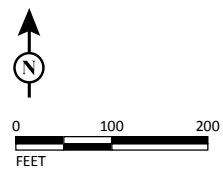


FIGURE 2.14-1
Sheet 7 of 10

Westbound SR-91 Improvement Project
Drainage Features
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811

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LEGEND

- Biological Study Area Limits
- Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)

- Permanent Impact
- Temporary Impact
- Temporary Construction Easement



FIGURE 2.14-1
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Westbound SR-91 Improvement Project
Drainage Features
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811

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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

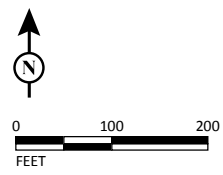
Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement



SOURCE: Bing Maps (2015); Michael Baker (4/2017)

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FIGURE 2.14-1
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Westbound SR-91 Improvement Project

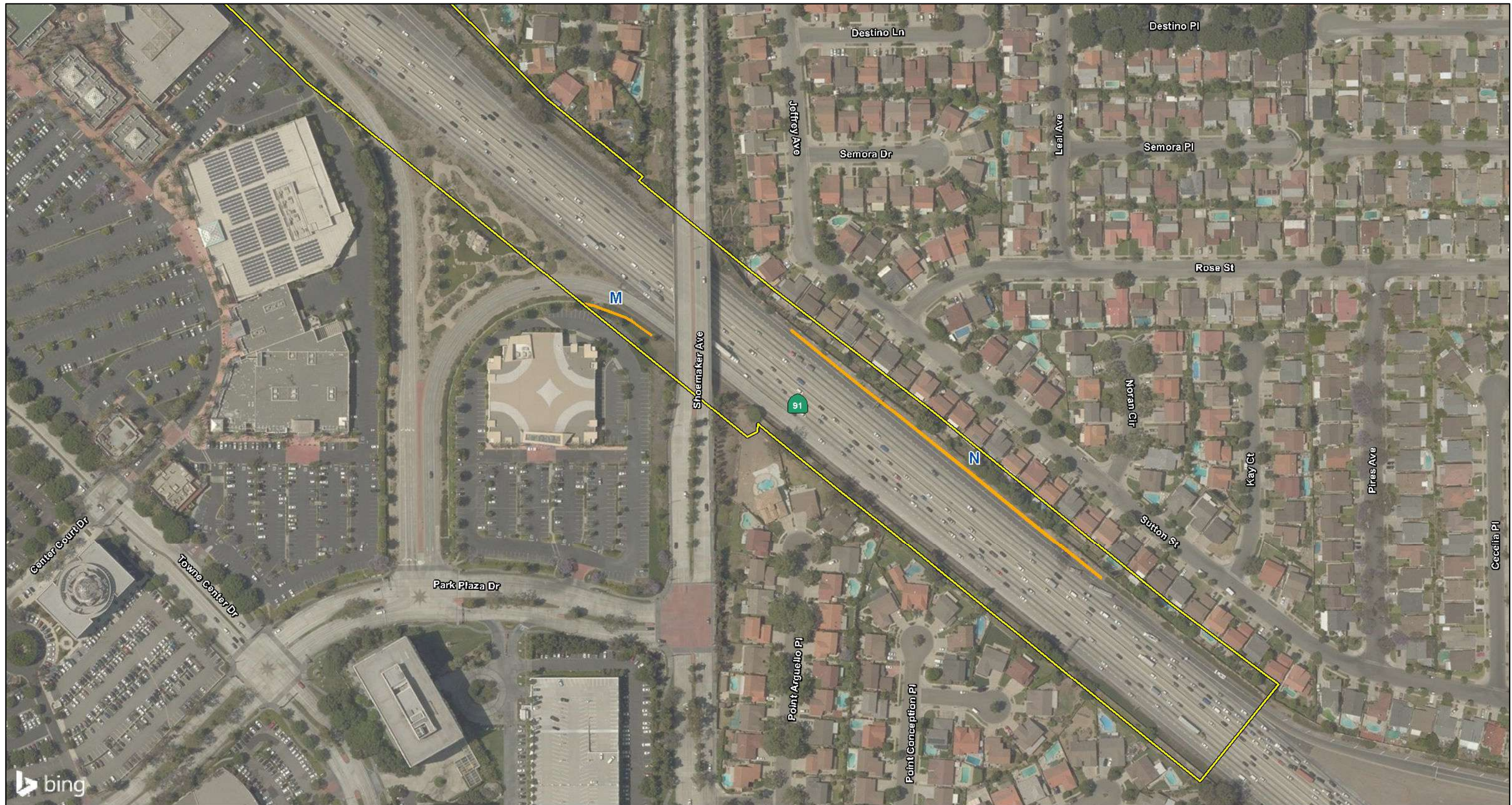
Drainage Features

07-LA-91

SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8

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LEGEND

Biological Study Area Limits

Drainage Features (A-N)

Potential USACE Jurisdiction (0.88 acres)

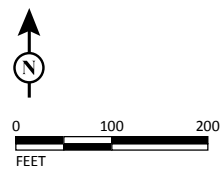
Potential CDFW Jurisdiction (1.17 acres)

Likely Non-Jurisdictional Drainage Features (1.33 acres)

Permanent Impact

Temporary Impact

Temporary Construction Easement



SOURCE: Bing Maps (2015); Michael Baker (4/2017)

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FIGURE 2.14-1
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Westbound SR-91 Improvement Project
Drainage Features

07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811

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FIGURE 2.14-2
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LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

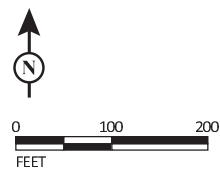
- # Structure Number with ID¹
- ✱ Bat Roosting Confirmed (Bats, Roosting Bats, or Bat Sign)
- Structure with Low Probability of Roosting Bats
- Structure with Moderate to High Probability of Roosting Bats
(*Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental

Flood Control Channels Drainage Features (A-N)

- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



SOURCE: Bing Maps (2015); Michael Baker (4/2017)
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Westbound SR-91 Improvement Project
Project Impacts to Biological Resources
07-LA-91
SR-91 PM 16.9-19.8; I-605 PM 5.0-5.8
EFIS 0700000191; EA 07-29811

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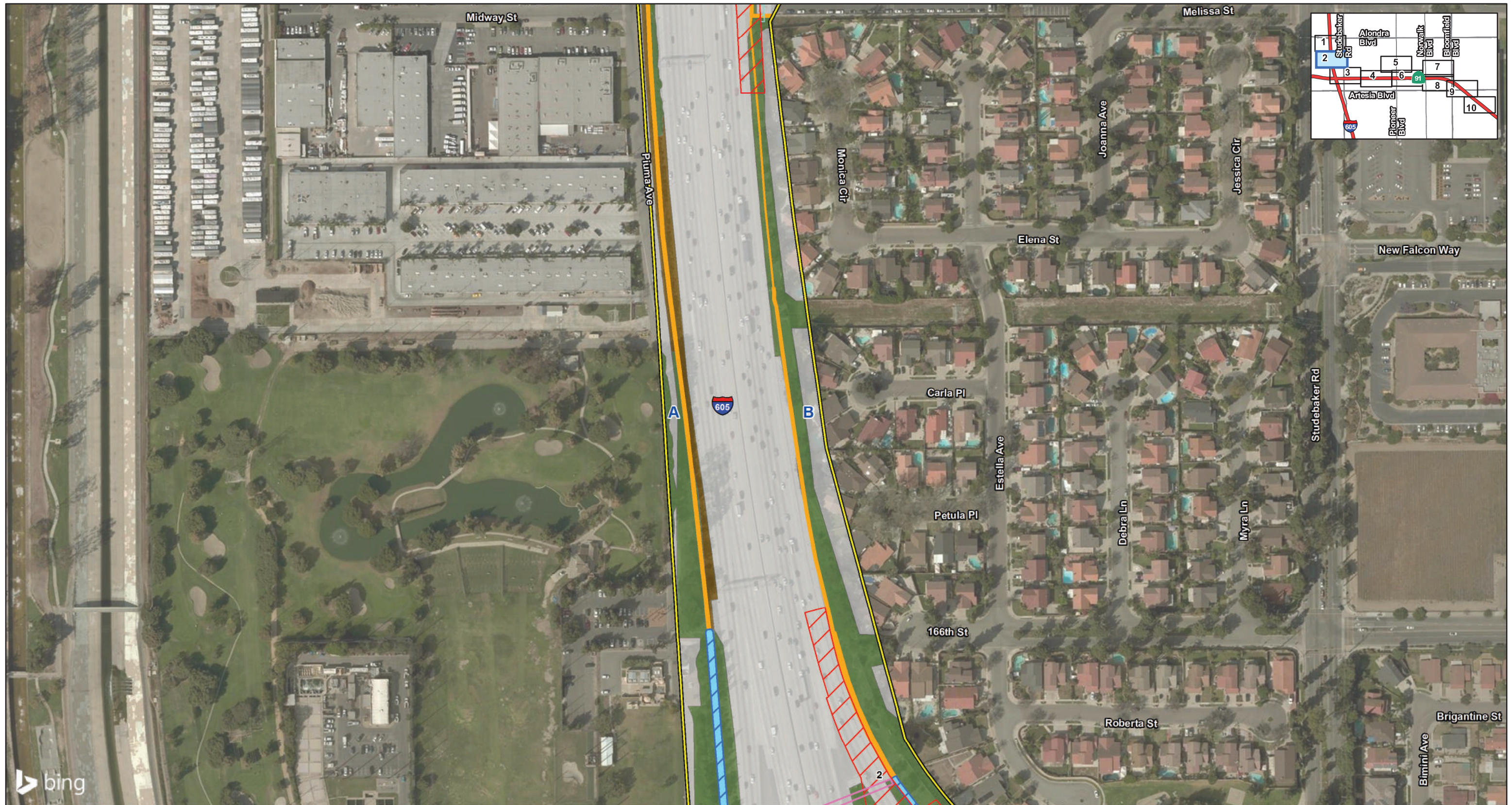


FIGURE 2.14-2
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LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

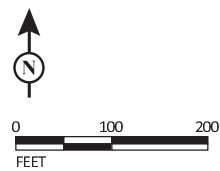
- # Structure Number with ID¹
- Bat Roosting Confirmed (Bats, Roosting Bats, or Bat Sign)
- Structure with Low Probability of Roosting Bats
- Structure with Moderate to High Probability of Roosting Bats
(*Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental

Flood Control Channels Drainage Features (A-N)

- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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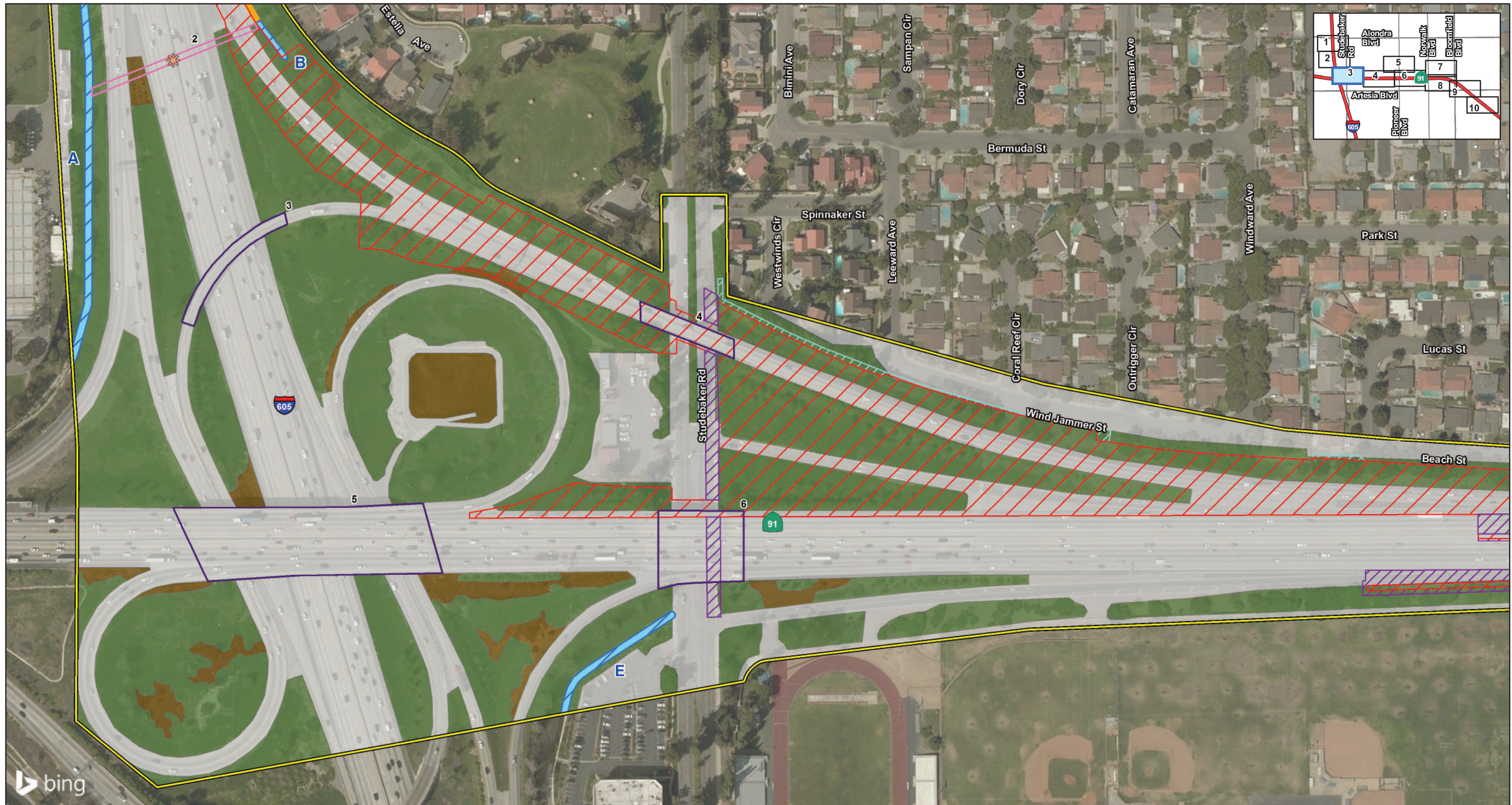


FIGURE 2.14-2
Sheet 3 of 10

LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

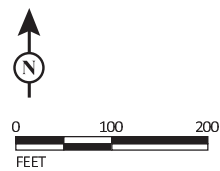
- # Structure Number with ID¹
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- Structure with Low Probability of Roosting Bats
- Structure with Moderate to High Probability of Roosting Bats
(*Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental

Flood Control Channels Drainage Features (A-N)

- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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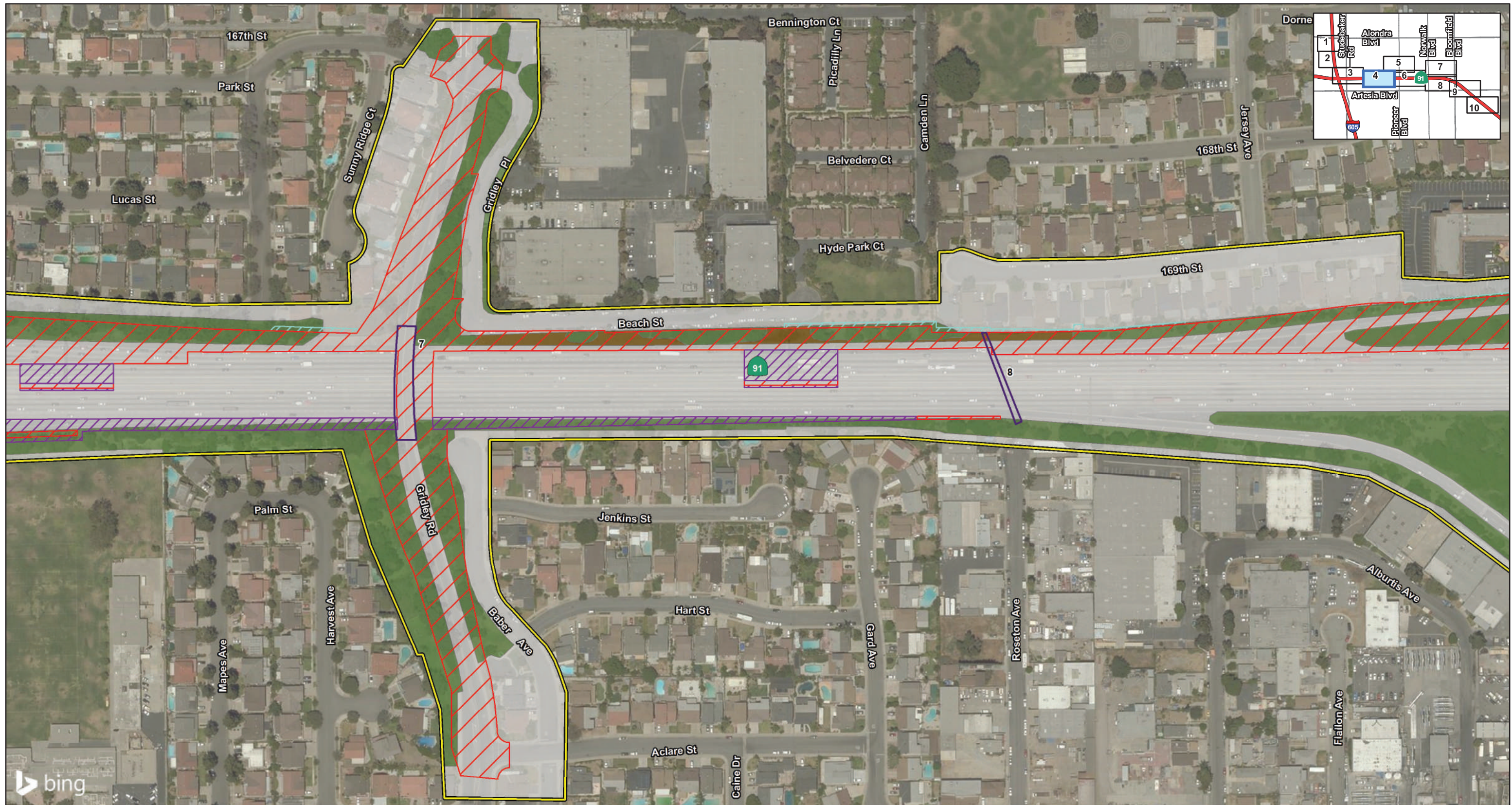


FIGURE 2.14-2
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LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

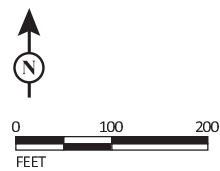
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Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental

Flood Control Channels Drainage Features (A-N)

- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



SOURCE: Bing Maps (2015); Michael Baker (4/2017)
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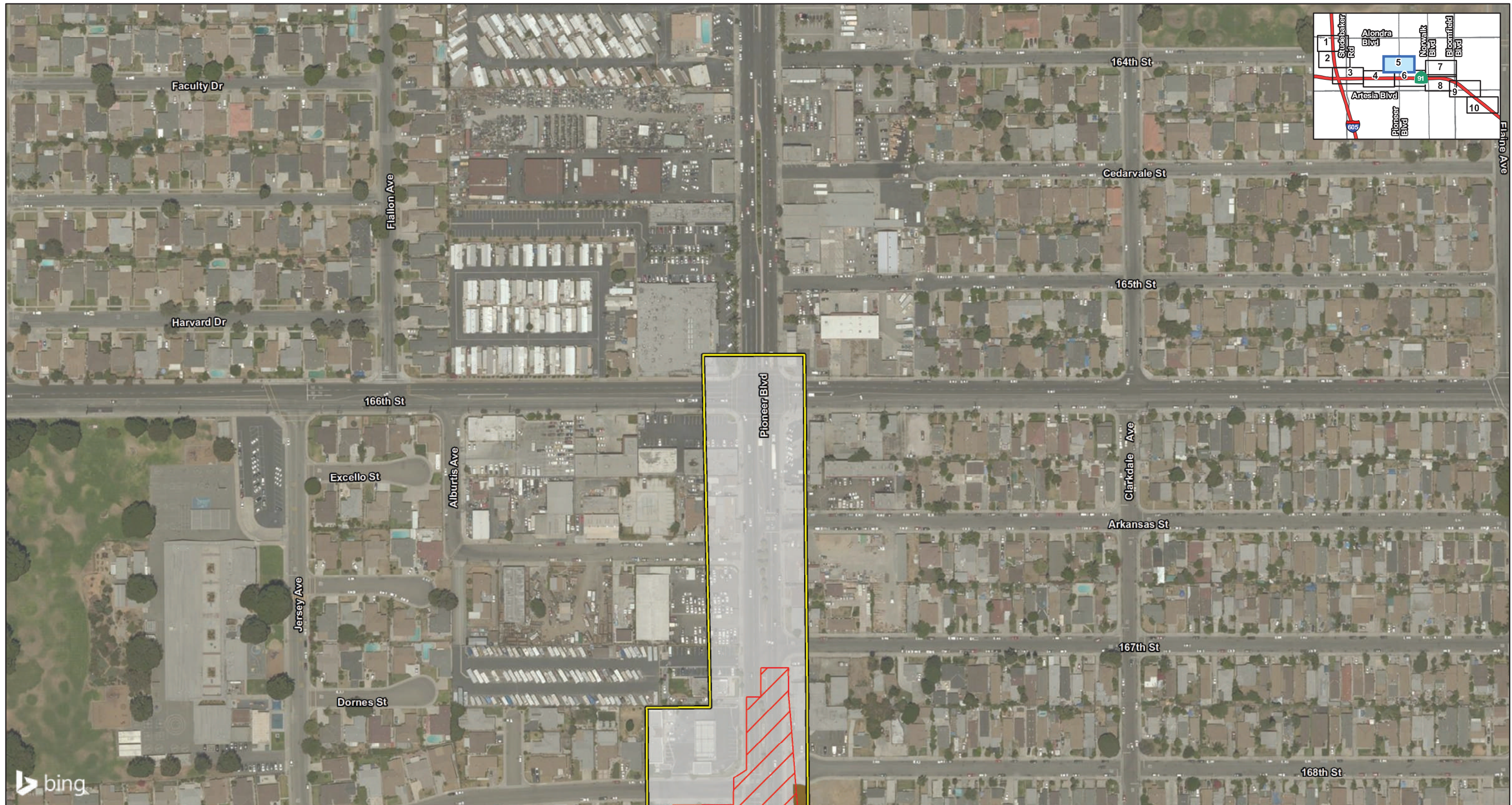


FIGURE 2.14-2
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LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

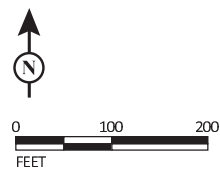
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Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental

Flood Control Channels Drainage Features (A-N)

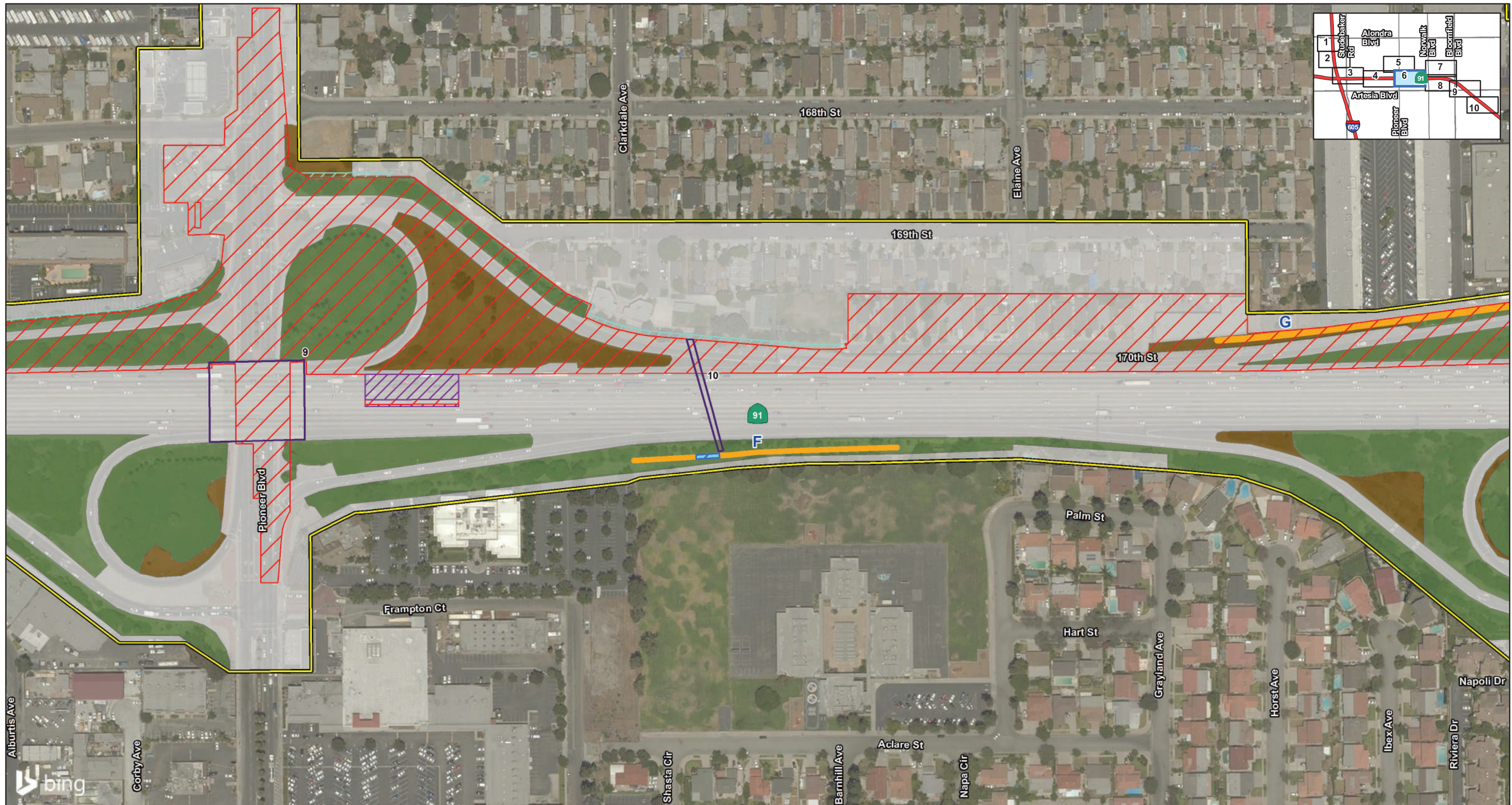
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LEGEND

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- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

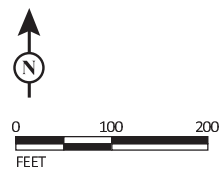
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Land Cover Types

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- Ornamental

Flood Control Channels Drainage Features (A-N)

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FIGURE 2.14-2
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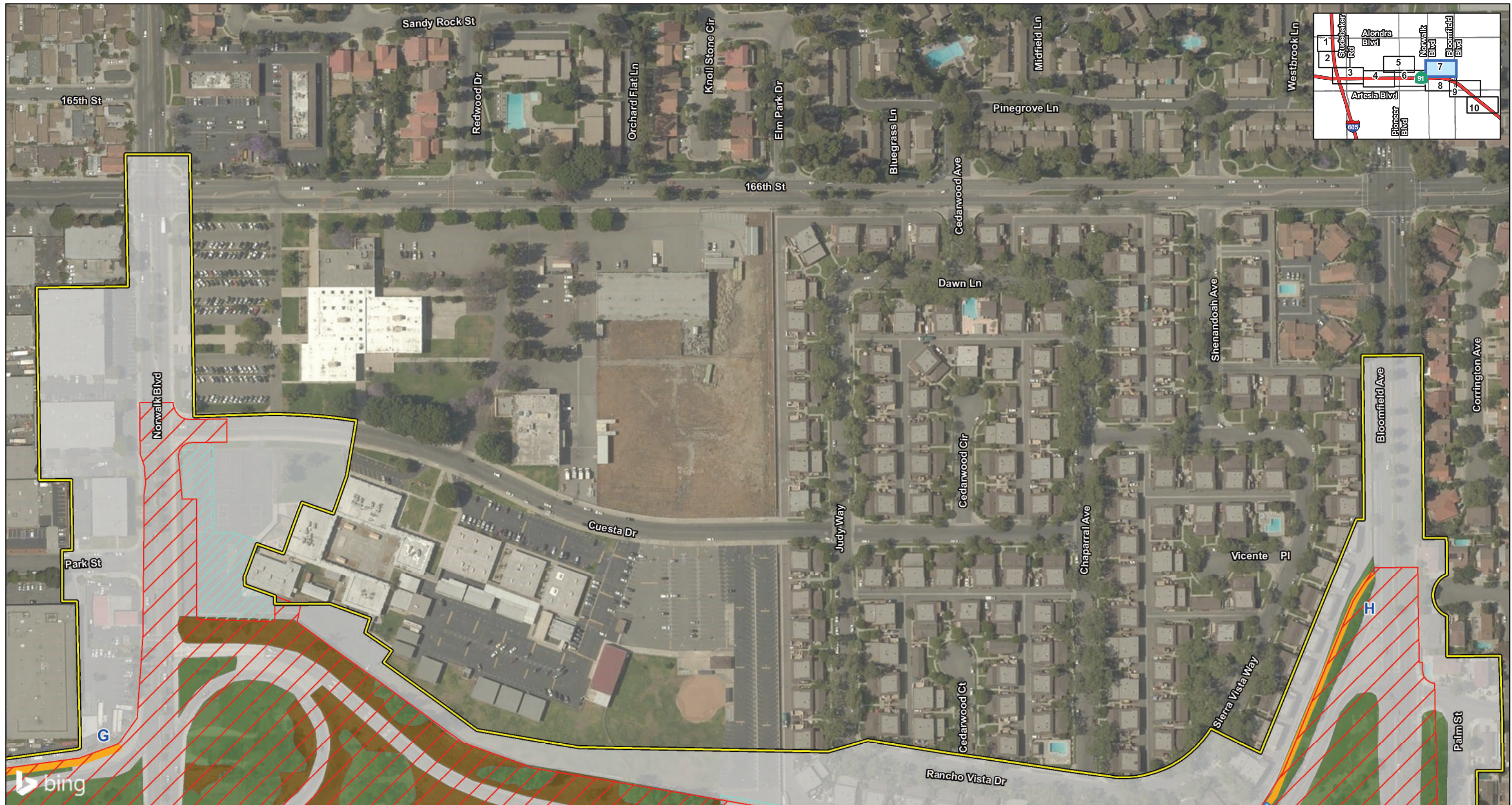


FIGURE 2.14-2
Sheet 7 of 10

LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

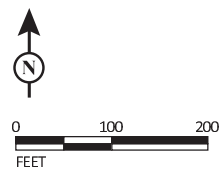
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Land Cover Types

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Flood Control Channels Drainage Features (A-N)

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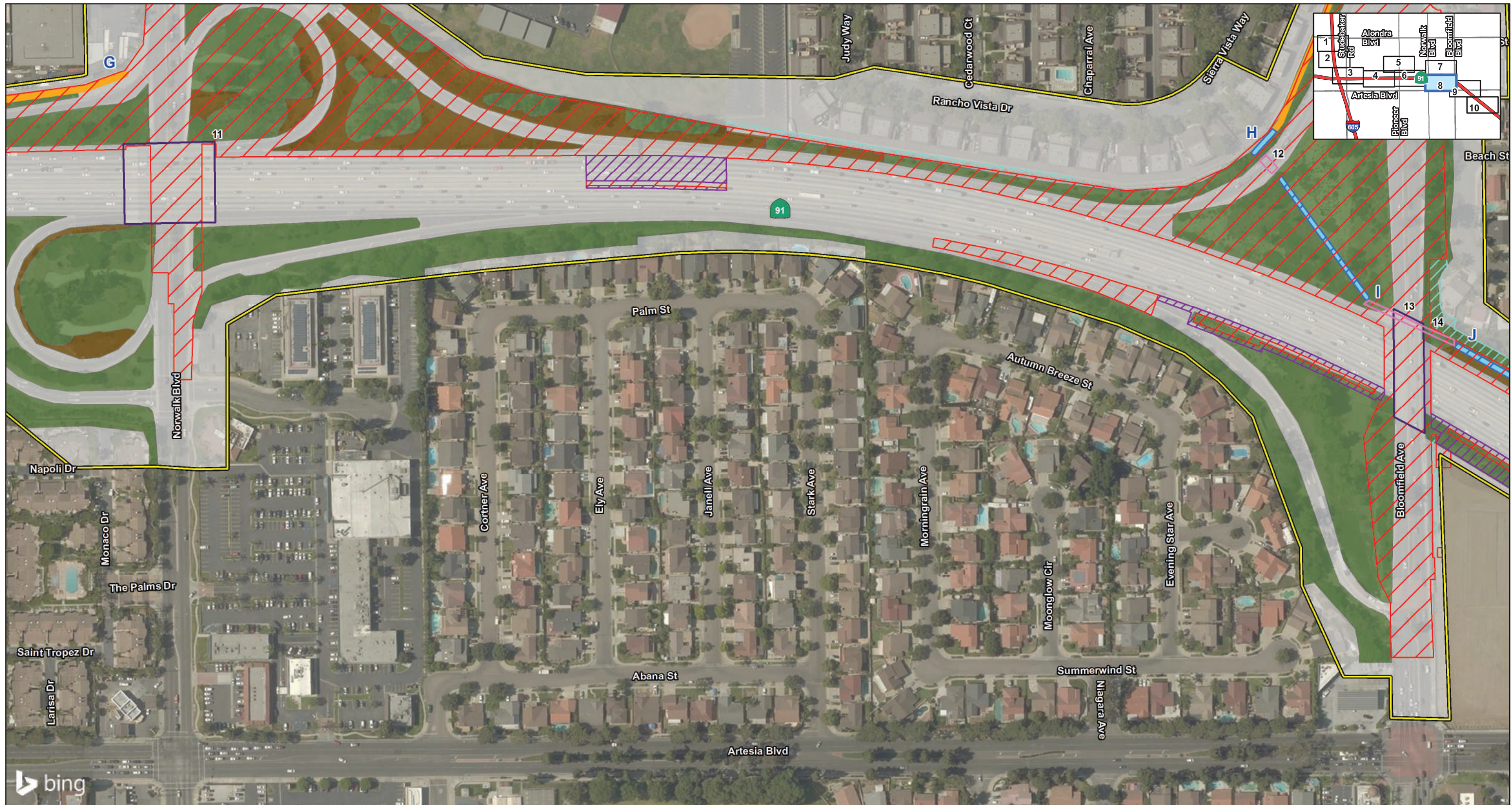


FIGURE 2.14-2
Sheet 8 of 10

LEGEND

- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement (TCE)

Bat Habitat

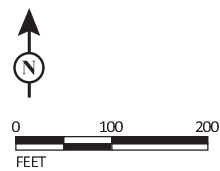
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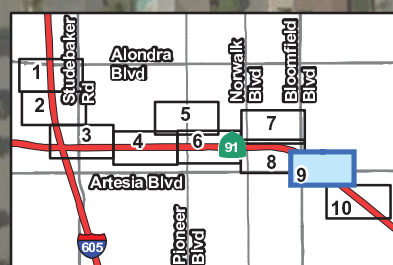
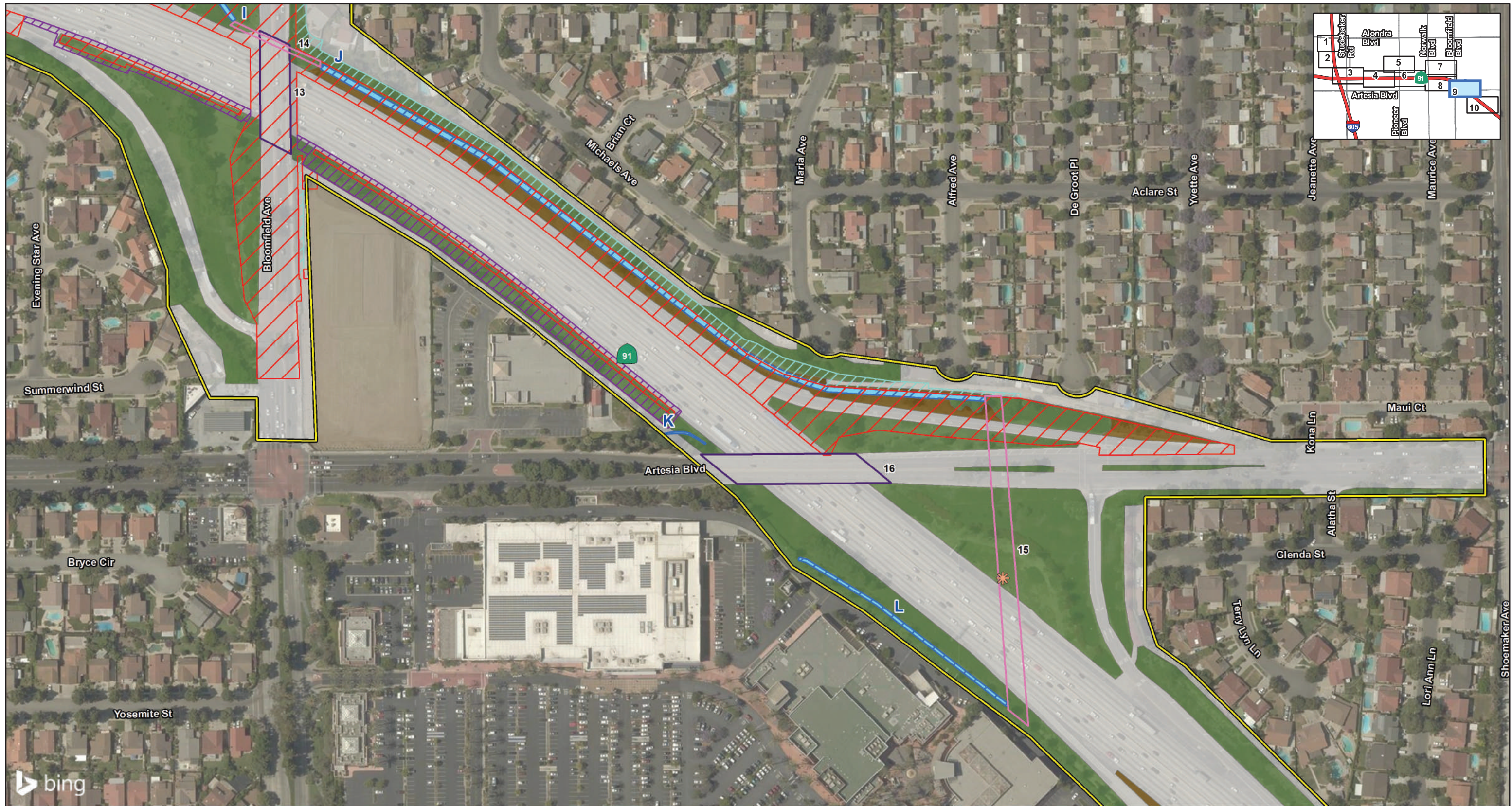


FIGURE 2.14-2
Sheet 9 of 10

LEGEND

- Biological Study Area (BSA)
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Bat Habitat

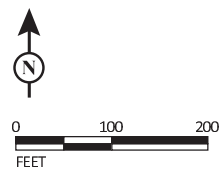
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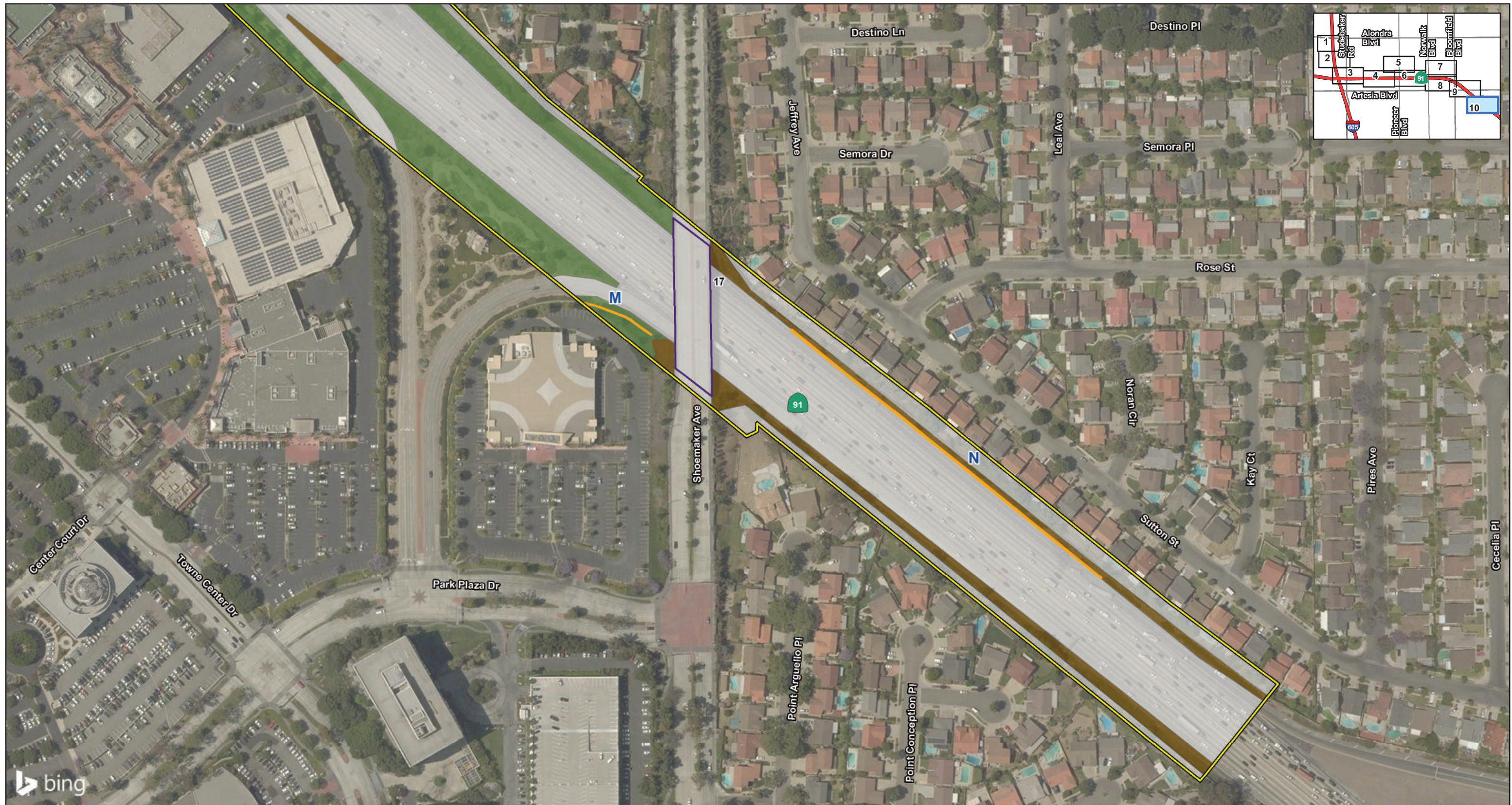


FIGURE 2.14-2
Sheet 10 of 10

LEGEND

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Bat Habitat

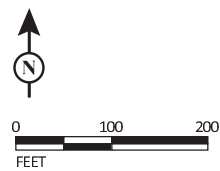
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2.15 Plant Species

2.15.1 Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). The proposed project would not impact any species listed or proposed for listing as threatened or endangered as discussed earlier in the introduction to Chapter 2.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

2.15.2 Affected Environment

The information in this section is based on the 2017 *Natural Environment Study (Minimal Impacts)* (NES [MI]) prepared for the project.

A literature review and records search were conducted to identify the existence or potential occurrence of sensitive or special-status plant species located within or in the vicinity of the biological study area (BSA). The results of the literature review identified 37 special-status plant species with the potential to occur within the nine United States Geological Service (USGS) topographical quadrangles surrounding the BSA. Of the 37 special-status plant species, 3 were identified by USFWS and the CDFW California Natural Diversity Database (CNDDDB) as potentially occurring

within the vicinity of the BSA. A figure of the BSA is provided in the NES (MI) prepared for this project.

Of the three special-status plant species, two are federally and/or State-listed as endangered or threatened and are not discussed in this document because, as noted earlier in the introduction to Chapter 2, there are no threatened or endangered species in or near the BSA; therefore, the Build Alternative will not impact any threatened or endangered species. The remaining special-status plant species identified as potentially occurring in or near the vicinity of the BSA is Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*).

Coulter's goldfields is a perennial herb that occurs in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grasslands, usually on ocean bluffs and ridgetops in alkaline or clay soils (from 10 to 1,510 feet [ft] in elevation). Coulter's goldfields is identified as occurring within 2 miles (mi) of the BSA. However, no suitable habitat to support this plant species occurs within the BSA, and the species was not observed during the surveys, which were conducted during the species' blooming period. Therefore, the species is not expected to occur within the BSA or to be affected by the proposed project.

The BSA does not contain, nor is it adjacent to, suitable habitat for any special-status plant species identified in the literature search.

In addition to the literature review, reconnaissance-level field surveys were conducted on May 25 and June 15, 2017, to characterize the general biological resources and to ascertain the presence or absence of special-status plant species and the likelihood of their occurrence in or near the BSA. No special-status plant species (i.e., listed, proposed for listing, or candidate species) were observed or otherwise detected in the BSA during the field surveys.

The BSA is composed of disturbed habitat and landscaped and nonvegetated urban/developed areas. Plant species occurring in the BSA are characteristic of those found in regularly disturbed and landscaped areas, consisting primarily of nonnative weeds, Hottentot-fig (*Carpobrotus edulis*), and mature pine (*Pinus* sp.) and eucalyptus (*Eucalyptus* sp.) trees.

2.15.3 Environmental Consequences

The proposed project has been determined to have no effect on any of the federally or State listed species identified as potentially occurring within the vicinity of the proposed project (refer to Table 2.15.1).

2.15.3.1 Temporary Impacts

Build Alternative (includes Design Options)

The project is not expected to affect any special-status plant species because they are considered absent from the BSA. As a result, the construction of the Build Alternative would not result in temporary impacts to special-status plant species.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements. Therefore, the No Build Alternative would not result in adverse temporary impacts to special-status plant species.

2.15.3.2 Permanent Impacts

Build Alternative (includes Design Options)

The project is not expected to affect any special-status plant species because they are considered absent from the BSA. As a result, the construction and operation of the Build Alternative would not result in permanent impacts on special-status plant species.

No Build Alternative

The No Build Alternative would not include construction of any of the proposed project improvements and, as noted above, there is no suitable habitat for special-status plant species in the BSA. Therefore, the No Build Alternative would not result in adverse permanent impacts to special-status plant species.

2.15.4 Avoidance, Minimization, and/or Mitigation Measures

As the Build Alternative would not result in any temporary or permanent impacts related to plant species, no avoidance, minimization, or mitigation measures are required.

Table 2.15.1 Effects Determination for Federally Listed Plant Species

Common Name	Scientific Name	Federal Status	General Habitat Description	Habitat Present/Absent	Rationale	Effect Determination
Ventura marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Endangered	Perennial herb. Coastal salt marsh within reach of high tide or protected by barrier beaches, or more rarely near seeps on sandy bluffs, below 120 ft elevation.	Absent	Known only from Santa Barbara and Ventura Counties. Believed extirpated from Los Angeles and Orange Counties. No suitable habitat in BSA, and species not observed during survey.	The proposed project would have no effect on this species.
Salt marsh bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Endangered	Annual herb. Coastal dunes and salt marshes.	Absent	No suitable habitat in BSA, and species not observed during survey.	The proposed project would have no effect on this species.

Source: *Natural Environment Study (Minimal Impacts)* (2017 and 2018 errata).

BSA = biological study area

ft = feet

2.16 Animal Species

2.16.1 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. As stated earlier in the introduction to Section 2.0, the proposed project would not impact any animal species listed or proposed for listing as threatened or endangered, and they are therefore not further discussed in this document. 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
- Sections 4150 and 4152 of the California Fish and Game Code

2.16.2 Affected Environment

The information in this section is based on the *Natural Environment Study (Minimal Impacts)* (2017 and 2018 errata) prepared for the project.

2.16.2.1 Literature Review, Records Search, and Field Survey Results

A literature review and records search were conducted to identify the presence or potential occurrence of sensitive or special-status animal species within or in the vicinity of the biological study area (BSA). The literature review and records searches identified 56 listed, proposed, and special-status animal species as having potential to occur within the nine United States Geological Service (USGS) topographical quadrangles surrounding the BSA. Unofficial species lists were received from the

USFWS on May 24, 2017, and from the NOAA Fisheries Service on June 30, 2017, and updated official species lists were received from the USFWS on March 19, 2018, and from the NOAA Fisheries Service on March 19, 2018, the most recent of which are provided in Chapter 4. Five wildlife species that are federally and/or State-listed as endangered or threatened were identified by the USFWS as potentially occurring within the vicinity of the BSA. These species are western snowy plover, coastal California gnatcatcher, California least tern, least Bell's vireo, and Pacific pocket mouse. One species, California steelhead trout, was reported on the NOAA Fisheries Service list to potentially have critical habitat occurring in the United States Geological Survey (USGS) *Los Alamitos, California* or *Whittier, California* 7.5 minute quadrangle areas; however, this habitat is not within or adjacent to the BSA. None of these species were observed during field surveys and none are expected to occur within the BSA because no suitable habitat for these species is in the BSA.

The following 10 special-status animal species (5 CDFW Species of Special Concern and 5 CDFW Special Animals) that are not federally and/or State-listed endangered or threatened were identified in the literature and record searches as potentially occurring in or near the BSA due to the presence of suitable habitat:

- Rufous hummingbird (*Selasphorus rufus*)
- Cooper's hawk (*Accipiter cooperii*)
- Silver-haired bat (*Lasionycteris noctivagans*)
- Pallid bat (*Antrozous pallidus*)
- Western mastiff bat (*Eumops perotis californicus*)
- Western yellow bat (*Lasiurus xanthinus*)
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*)
- Big free-tailed bat (*Nyctinomops macrotis*)
- Hoary bat (*Lasiurus cinereus*)
- Yuma myotis (*Myotis yumanensis*)

Reconnaissance-level field surveys were conducted on May 25 and June 15, 2017, to characterize the general biological resources and to ascertain the presence or absence of special-status animal species and the likelihood of their occurrence in and near the BSA.

A habitat suitability assessment for bats was conducted on May 25 and June 15, 2017, to examine suitable roosting habitat (e.g., crevices or cavities) at various bridge and

culvert structures and to identify the presence of bats or bat sign (e.g., guano, staining, or vocalizations) within the BSA and immediate surrounding areas.

No special-status animal species were observed in the BSA during field surveys, but the Rufous hummingbird, Cooper's hawk, and six special-status bats have the potential to occur within the BSA due to the presence of suitable habitat. In addition, two structures with guano evidence indicating bat use of these structures for roosting were observed during the surveys.

Based on the literature search and field surveys, the overall habitat type in the BSA is classified as developed and includes flood control channels, transportation, ornamental landscaping, and disturbed or barren areas. The BSA has low biological value to native wildlife species. Wildlife species occurring in the BSA are characteristic of those found in a well-developed urban setting and are adapted to noise and other human-related disturbances. Animal species observed in the BSA during reconnaissance-level field surveys for the project include western fence lizard (*Sceloporus occidentalis*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), Allen's hummingbird (*Selasphorus sasin*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), California scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), northern rough-winged swallow (*Stelgidopteryx serripennis*), bushtit (*Psaltriparus minimus*), northern mockingbird (*Mimus polyglottos*), scaly-breasted munia (*Lonchura punctulata*), house sparrow (*Passer domesticus*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), orange-crowned warbler (*Oreothlypis celata*), song sparrow (*Melospiza melodia*), California ground squirrel (*Otospermophilus beecheyi*), and raccoon (*Procyon lotor*).

2.16.2.2 Rufous Hummingbird, Cooper's Hawk, and Migratory Birds

The rufous hummingbird is included on the CDFW Special Animals List (July 2017) as a CDFW Special Animal and is classified as a USFWS Bird of Conservation Concern (BCC). The Cooper's hawk is also included on the CDFW Special Animals List and is a California Watch List species. The nest locations for both of these species are protected. Both species are also protected under the Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] Sections 703–711) and under Sections 3503 and 3800 of the California Fish and Game Code.

The rufous hummingbird is well adapted to suburban environments and has the potential to occur in the BSA. The BSA contains suitable nesting habitat (mainly

ornamental vegetation) for the rufous hummingbird and other migratory birds. The typical nesting season extends from February 15 through September 1, but hummingbirds have been found to nest year-round.

Cooper's hawk lives primarily in forests and woodlands, but has recently adapted to suburban areas and can nest in tall ornamental trees. The BSA contains marginally suitable foraging and nesting habitat for the Cooper's hawk and other migratory birds.

Migratory birds are protected under the MBTA. In addition, Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of migratory birds, their nests, or their eggs.

2.16.2.3 Special-Status Bridge/Culvert- and Crevice-Dwelling Animal Species

Special-status bat species that may roost within the BSA include western yellow bat (a CDFW Species of Special Concern), Yuma myotis (a CDFW Special Animal), pallid bat (a CDFW Special Animal), silver-haired bat (a CDFW Special Animal), and hoary bat (a CDFW Special Animal). However, all bat species (regardless of listing status) and other nongame mammals are protected by California Fish and Game Code Section 4150, which states that all nongame mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the California Fish and Game Commission. Activities resulting in the mortality of nongame mammals (e.g., destruction of an occupied bat roost, resulting in the death of bats) or disturbance that results in the loss of a maternity colony of bats (including the death of young) may be considered "take" by the CDFW. Furthermore, any structure occupied by a bat maternity colony of any species is considered a native wildlife nursery site that is essential to the viability of local populations. Bat species that may form maternity colonies in or near the BSA include Mexican free-tailed bat, Yuma myotis, and big brown bat.

A habitat suitability assessment for bats was conducted on May 25 and June 15, 2017. Bat roosting was confirmed through the presence of bat sign at two structures within the BSA, and the probability of roosting is moderate to high at an additional three structures. Although the habitat assessment surveys were performed during the bat maternity season, no evidence of any maternity colonies was observed within the BSA. However, the presence or absence of bats could not be confirmed at many of these structures during the daytime assessments, nor could the numbers or species of bats be determined, because the type of day-roosting habitat present at these locations

consists of the hollow interior spaces of the bridges accessed by bats via weep holes designed for drainage.

Based on the presence and distribution of bat sign, it is assumed that night roosting occurs at many of the culvert structures throughout the BSA.

Although roosts in structures such as bridges and culverts can be relatively easy to identify, tree roosts are more difficult to identify. Since roosting activity in trees is difficult to confirm (foliage-roosting species tend to roost singly, beneath leaves, and may roost in a different location each night), trees were not closely examined during the bat habitat suitability assessment. However, the presence of large trees and palm trees that are suitable for foliage-roosting species were noted within the BSA during the surveys.

There are no special-status bridge- and crevice-dwelling bird species with the potential to occur within the BSA. However, there is a potential for non-listed bird species to roost or nest in the BSA.

2.16.2.4 Wildlife Movement

Wildlife crossings are generally structural passages beneath or above roadways. “Wildlife crossing” is the umbrella term encompassing undercrossings, overcrossings, and culverts. All of these structures provide seminatural corridors above or below roads, and in some cases adjacent to roads, so that animals can safely cross without endangering themselves and motorists. Species of primary interest for wildlife movement within the BSA are medium-sized mammals such as raccoon.

The State Route 91 (SR-91) and Interstate 605 (I-605) freeways generally present barriers to wildlife movement and do not facilitate habitat connectivity. Specifically, these two freeways have high traffic volumes and are lined with fences and walls. The various flood control channels crossing under the two freeways may facilitate some wildlife movement, though very little evidence of this was observed. The only evidence observed was raccoon tracks in the drainage feature near Iron-Wood Nine Golf Course. However, raccoons are well adapted to the urban environment and are increasingly present in urban drainage channels. The drainage feature near Iron-Wood Nine Golf Course does not connect to any upstream natural habitat and therefore does not serve as a wildlife movement corridor. The BSA consists of developed areas, of which the mature ornamental shrubs and trees may serve as habitat linkages for urban-tolerant bird species.

2.16.3 Environmental Consequences

The proposed project has been determined to have no impact on any of the federally listed species identified as potentially occurring within the vicinity of the proposed project (refer to Table 2.16.1). The following provides a discussion of potential impacts on nonlisted animal species.

2.16.3.1 Temporary Impacts

Build Alternative (includes Design Options)

Construction of the Build Alternative could impact nesting birds, including the Rufous hummingbird and Cooper's hawk, protected under the MBTA and the California Fish and Game Code, either directly as a result of the removal of trees occupied by nesting birds or disturbances to bridge and crevice habitat, or indirectly as a result of disturbances near trees occupied by nesting birds.

In compliance with the requirements of the MBTA and California Fish and Game Code regarding nesting birds, to the maximum extent feasible, vegetation clearing and construction activities that impact existing vegetation will be conducted outside the primary nesting season for birds. The typical nesting season extends from February 15 through September 1, but hummingbirds have been found to nest year-round.

Structure Nos. 2, 12, 14, and 15 have moderate to high probabilities of supporting roosting bats (see Figure 2.16-1). Construction activities associated with the Build Alternative at these structures could result in temporary impacts to bats and other bridge- and crevice-nesting special-status species. During construction activities, indirect temporary impacts to bats and bat-roosting habitat include impacts from dust, lighting, and noise in the vicinity of the roost sites. Direct temporary impacts include destruction or loss of roosting habitat through demolition or removal of a structure or portions of a structure that contain roost features. The loss of a night roost can negatively affect the use of a foraging area, and consequently may result in reduced reproduction rates in species that are already slow to reproduce.

Humane eviction and exclusion of bats from a roost would be considered a temporary impact if alternative habitat is provided and if the bats are permitted to recolonize the original roost site following construction. In addition, construction of the Build Alternative could also impact tree-roosting habitat for bats through the removal of palm trees or their fronds within the BSA.

Table 2.16.1 Impacts Determination for Federally Listed Animal Species

Common Name	Scientific Name	Federal Status	Species Requirements	Species Habitat Present/Absent	Rationale	Impact Determination
Fishes						
Steelhead (Southern California Distinct Population Segment)	<i>Oncorhynchus mykiss irideus</i>	Endangered	Occurs in cool water streams; spawns in areas of gravelly substrate in riffles or pool tails. Federal listing refers to naturally spawned anadromous steelhead originating below natural and manmade impassable barriers from the Santa Maria River to the U.S.-Mexico Border.	Absent	The BSA is outside of the range for this species.	The proposed project would have no impact on this species.
Birds						
California least tern	<i>Sternula antillarum browni</i>	Endangered	Nests along the coast from the San Francisco Bay south to northern Baja California. Forages in shallow water. Colonial breeder on bare or sparsely vegetated, flat substrates, sand beaches, alkali flats, landfills, or paved areas.	Absent	No suitable habitat in BSA, and species not observed during survey.	The proposed project would have no impact on this species.
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	Threatened	Inhabits coastal sage scrub in low-lying foothills and valleys up to about 500 meters (1,640 feet) in elevation in cismontane southwestern California and Baja California.	Absent	No suitable habitat in BSA, and species not observed during survey.	The proposed project would have no impact on this species.
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	Riparian forests and willow thickets. The most critical structural component of Least Bell's Vireo habitat in California is a dense shrub layer 0.6–3 meters (2–10 feet) above ground. Nests from Central California to northern Baja California. Winters in southern Baja California.	Absent	No suitable habitat in BSA, and species not observed during survey.	The proposed project would have no impact on this species.

Table 2.16.1 Impacts Determination for Federally Listed Animal Species

Common Name	Scientific Name	Federal Status	Species Requirements	Species Habitat Present/Absent	Rationale	Impact Determination
Western snowy plover	<i>Charadrius nivosus nivosus</i>	Threatened	Sandy coastal beaches, lakes, and alkaline playas. Scattered locations along coastal California and the Channel Islands and inland at Salton Sea and various alkaline lakes.	Absent	No suitable habitat in BSA, and species not observed during survey.	The proposed project would have no impact on this species.
Mammals						
Pacific pocket mouse	<i>Perognathus longimembris pacificus</i>	Endangered	Historically occupied open habitats on sandy soils along the coast from Los Angeles to the Mexican border. Now known from only four sites in Orange and San Diego Counties.	Absent	No suitable habitat in BSA, and no sign of species observed during survey.	The proposed project would have no impact on this species.

Source: *Natural Environment Study (Minimal Impacts)* (2017 and 2018 errata).
BSA = biological study area



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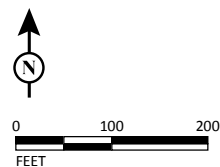
- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement

Bat Habitat

- # Structure Number with ID¹
- Bat Roosting Confirmed (Bats, Roosting Bats, or Bat Sign)
- Structure with Low Probability of Roosting Bats
- Structure with Moderate to High Probability of Roosting Bats
(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



SOURCE: Bing Maps (2015); Michael Baker (4/2017)
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FIGURE 2.16-1
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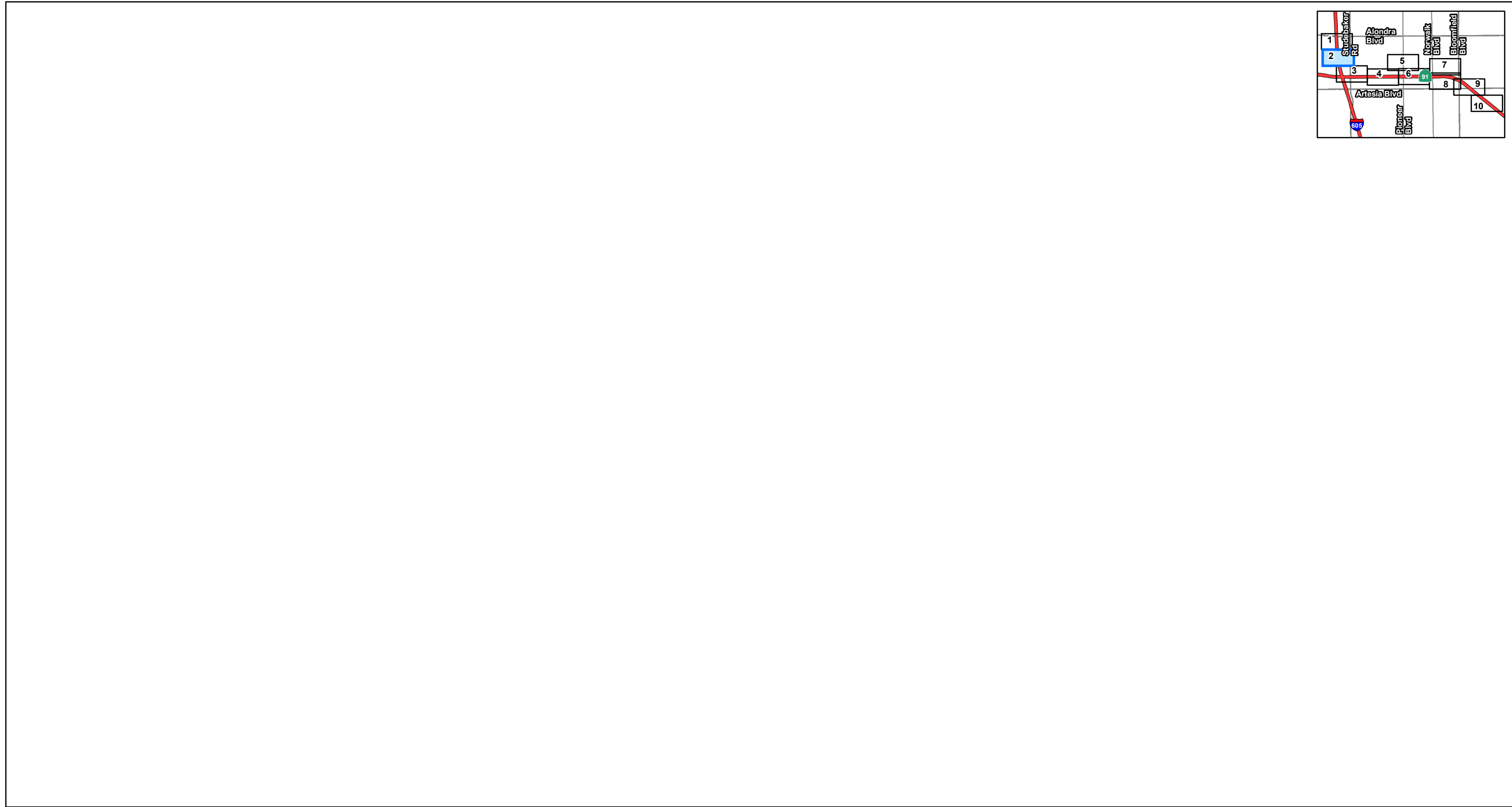
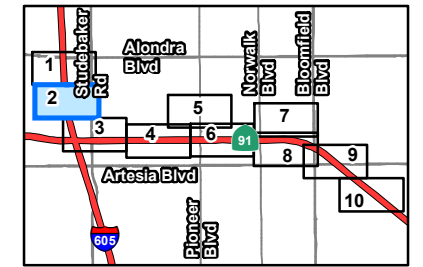


FIGURE 2.16-1
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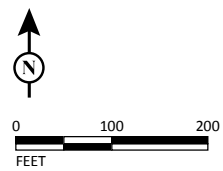
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- Temporary Impact
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Bat Habitat

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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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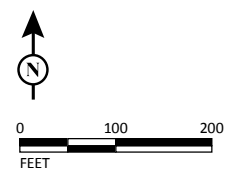
FIGURE 2.16-1
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- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement

- Bat Habitat**
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(¹Structure Number Corresponds with Table A in Bat Memo)

- Land Cover Types**
- Developed and Transportation
 - Disturbed or Barren
 - Ornamental
 - Flood Control Channels Drainage Features (A-N)
 - Potential USACE Jurisdiction (0.88 acres)
 - Potential CDFW Jurisdiction (1.17 acres)
 - Likely Non-Jurisdictional Drainage Features (1.33 acres)



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FIGURE 2.16-1
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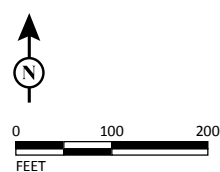
- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement

Bat Habitat

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- Structure with Low Probability of Roosting Bats
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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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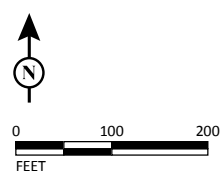
- Biological Study Area (BSA)
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement

Bat Habitat

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- Structure with Low Probability of Roosting Bats
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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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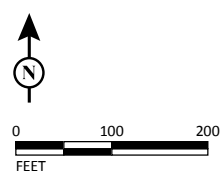
- Biological Study Area (BSA)
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- Temporary Impact
- Temporary Construction Easement

Bat Habitat

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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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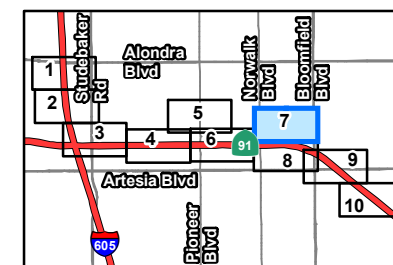


FIGURE 2.16-1
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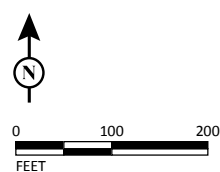
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Bat Habitat

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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
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- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
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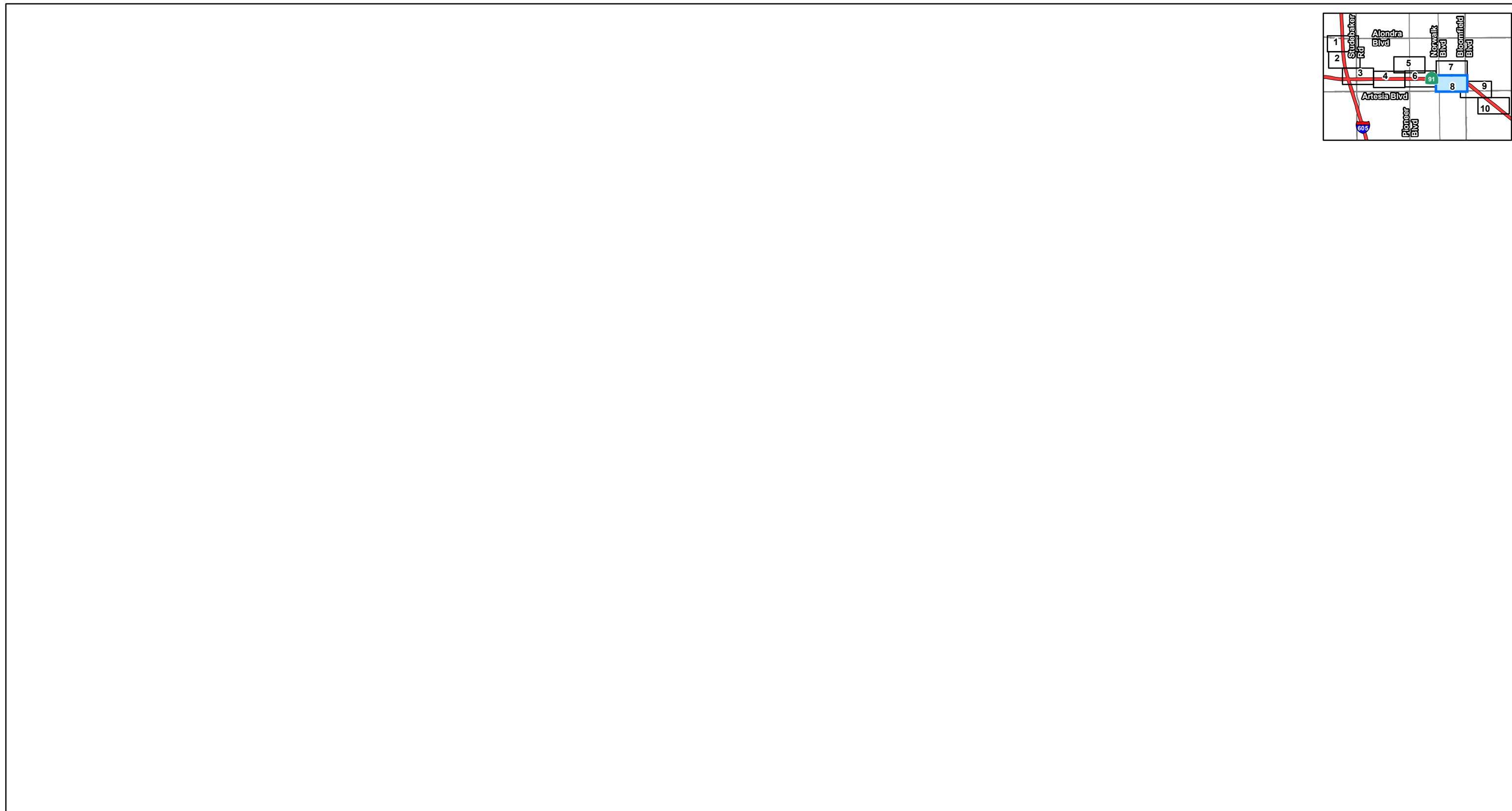
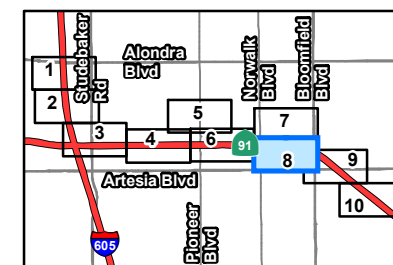


FIGURE 2.16-1
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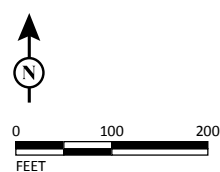
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Bat Habitat

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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



SOURCE: Bing Maps (2015); Michael Baker (4/2017)
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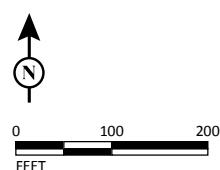
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Bat Habitat

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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
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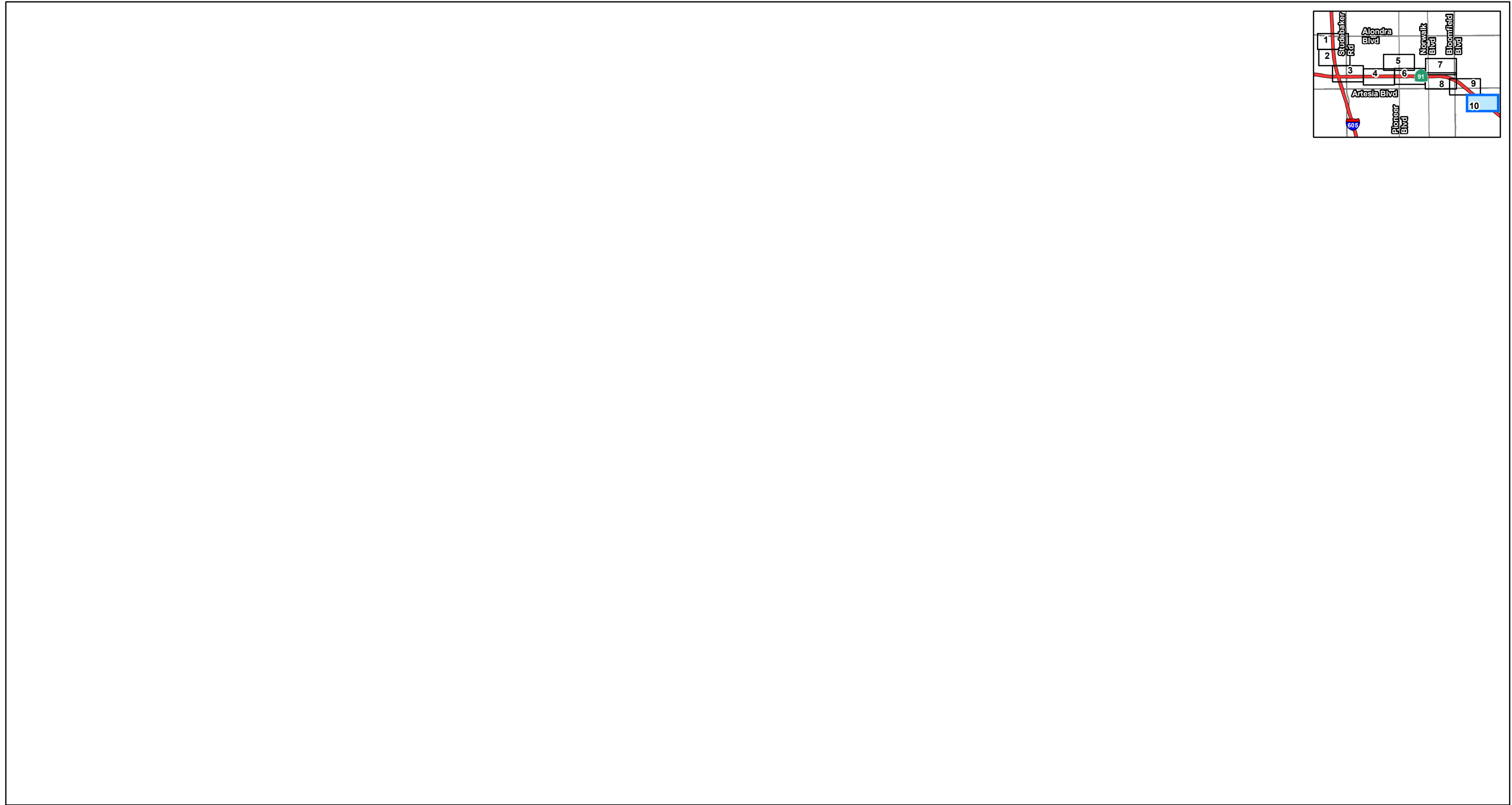
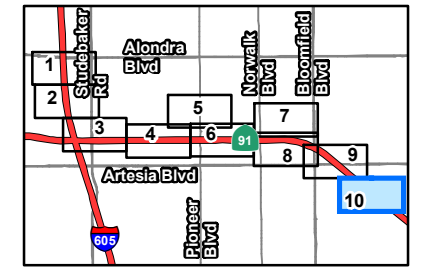


FIGURE 2.16-1
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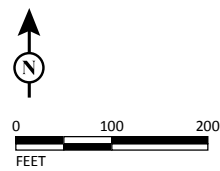
- Biological Study Area (BSA)
- Permanent Impact
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Bat Habitat

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(¹Structure Number Corresponds with Table A in Bat Memo)

Land Cover Types

- Developed and Transportation
- Disturbed or Barren
- Ornamental
- Flood Control Channels Drainage Features (A-N)
- Potential USACE Jurisdiction (0.88 acres)
- Potential CDFW Jurisdiction (1.17 acres)
- Likely Non-Jurisdictional Drainage Features (1.33 acres)



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To minimize potential impacts to day-roosting bats (including maternity colonies) during the construction of the Build Alternative, the following project features shall be incorporated into the project:

- PF-BIO-2 Nighttime Exit Counts and Acoustic Surveys.** Nighttime exit counts and acoustic surveys shall be performed by a Qualified Bat Biologist at all structures that contain suitable bat-roosting habitat and that may be subject to project-related impacts. These surveys shall be performed within 2 weeks prior to commencement of construction activities in order to provide adequate time for mitigation planning.
- PF-BIO-3 Avoidance of Bat Roosts.** Upon confirmation of the presence of bats, construction shall avoid structures where bat day and night roosts have been confirmed to the maximum extent feasible. Where maternity roosting has been confirmed, demolition and pile-driving activities shall avoid the recognized bat maternity season (April 1–August 31) to prevent potential mortality of flightless young bats.
- PF-BIO-4 Avoidance of Maternity Colonies.** Upon confirmation of the presence of bats, construction activities at structures housing maternity colonies shall be coordinated with a Qualified Bat Biologist and the CDFW.
- PF-BIO-5 Humane Bat Eviction.** Upon confirmation of the presence of bats, if direct impacts to bat-roosting habitat are anticipated, humane evictions and exclusions of roosting bats shall be performed under the supervision of a Qualified Bat Biologist in the fall (September or October) prior to any work activities that would result in direct impacts or direct mortality to roosting bats, unless otherwise approved in coordination with CDFW. This action will be performed in coordination with the CDFW. To avoid potential mortality of flightless juvenile bats, evictions and exclusions of bats cannot be performed during the maternity season (April 1–August 31). Winter months (December–February) are also inappropriate for bat eviction because not all individuals in a roost will emerge on any given night and long-distance movements to other roost sites are more difficult during the winter when prey availability is scarce, resulting in high mortality rates of evicted bats.

- PF-BIO-6 Installation of Alternate Roosting Habitat.** Upon confirmation of the presence of bats, if permanent, direct impacts to bat-roosting habitat are anticipated and a humane eviction/exclusion is performed, alternate roosting habitat shall be provided to ensure no net loss of bat-roosting habitat. This alternate roosting habitat should be installed on the structure prior to the eviction/exclusion of bats from that structure. This action shall be coordinated with the CDFW and a Qualified Bat Biologist to ensure that the installed habitat will provide adequate mitigation for impacts.
- PF-BIO-7 Night Lighting During Construction.** At structures where night roosting is suspected or confirmed, work shall be limited to the daylight hours to the greatest extent feasible to avoid potential disruption of night foraging. If night work cannot be avoided, night lighting shall be focused only on the area of direct work, airspace access to and from the roost features of the structure shall not be obstructed, and light spillover into the adjacent foraging areas shall be minimized to the greatest extent feasible.
- PF-BIO-8 Avoidance of Foliage-Roosting Bats.** Foliage-roosting bat species such as western yellow bats and hoary bats may roost in trees throughout the biological study area (BSA). If mature ornamental trees (particularly palm trees) are removed or trimmed for project construction, measures should be implemented to avoid direct mortality to tree-roosting bats. To reduce potential impacts to tree-roosting bats, tree trimming/removal activities shall be performed outside the bat maternity season (April 1–August 31) to avoid direct impacts to flightless young bats that may roost in trees within the BSA. This period also coincides with the bird nesting season of March 15–September 15.
- PF-BIO-9 Biological Monitoring by a Bat Specialist.** A Qualified Biologist shall monitor construction activities near suitable bat-roost structures and tree removal/tree trimming during the bat maternity season (April 1–August 31). If bats are encountered, activities shall halt and remain halted until (a) the roost is confirmed to have been vacated by a Qualified Biologist or (b) a Qualified Biologist has coordinated with

the CDFW to develop alternative measures up to and including bat removal from the structure(s) or tree(s).

PF-BIO-10 Access to Bat-Roosting Habitat. If bird exclusion netting is installed to prevent birds from nesting on the bridge, care should be taken to ensure that access to the bat-roosting habitat is not obstructed. The bird exclusion netting shall have a mesh size no greater than ½ inch by ½ inch to prevent potential entrapment of bats in the netting.

PF-BIO-11 Inspection of Swallow Nests. If swallow nests are removed to prevent swallows from nesting in the project area during construction activities, the nests should be inspected for roosting bats and removed in the fall (September or October) in a manner that ensures they do not fall to the ground before lack of occupancy has been established. To avoid mortality by diurnal predators, any bats discovered in removed nests will need to be either housed in temporary shelters by a Qualified Bat Biologist and released that evening on site or, with the approval of the CDFW, released immediately into one of the previously existing or alternative bat roosts installed on site.

In order to prevent any impacts to Southern California steelhead trout that may occur in existing downstream suitable habitat, if any, the following project features will be incorporated into the project.

PF-BIO-12 Best Management Practices During Construction. All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities will occur in developed or designated non-sensitive upland habitat areas. The designated upland areas will be located to prevent runoff from any spills or other discharge from entering waters of the United States.

Construction activities associated with the Build Alternative within the drainage feature near Iron-Wood Nine Golf Course would temporarily discourage raccoon presence in that relatively short section of the drainage, but raccoons would likely continue to utilize the adjacent areas. Therefore, construction of the Build Alternative would not result in any adverse temporary impacts to wildlife movement.

No Build Alternative

The No Build Alternative would not include construction of any improvements and would not result in any disturbance on or near suitable bird and bat habitat. Therefore, the No Build Alternative would not result in temporary impacts to special-status animal species in the BSA, including bats and nesting birds.

2.16.3.2 Permanent Impacts

Build Alternative (includes Design Options)

The Build Alternative would not result in any permanent direct impacts on the rufous hummingbird, Cooper's hawk, or other nesting birds because operations on SR-91, I-605, and the connecting arterial streets would be similar to existing conditions. Indirect noise impacts on nesting birds from traffic on SR-91, I-605, their connectors, and area streets would be similar to existing conditions.

In order to avoid and/or minimize potential impacts to fully protected raptors, special-status bird species, and other nesting birds protected by the MBTA and the California Fish and Game Code, the following project feature will be implemented:

PF-BIO-1 Avoidance of Breeding Season. All vegetation removal shall occur outside of bird nesting season, which is generally from February 15 to September 1. Should vegetation need to be removed during this period, the District Biologist shall be notified 2 weeks prior to the start of construction to determine whether nesting birds are present. In the event that nesting birds are observed, the Resident Engineer (RE) should stop work until a Qualified Biologist has determined that fledglings have left the nest. If this is not possible, the RE should coordinate with the District Biologist to minimize the risk of violating the Migratory Bird Treaty Act (MBTA) or California Fish and Game Code. Potential protective measures include establishing a buffer of an appropriate distance, as determined by the District Biologist, around any active nests during all phases of construction. Other measures to protect nesting birds include:

- Flagging, stakes, and/or construction fencing will be used to demarcate the inside boundary of the buffer between the project activities and the nest. California Department of Transportation (Caltrans) personnel, including all contractors working on site, will be instructed on the sensitivity of the area. Caltrans will document

the results of the recommended protective measures described above to demonstrate compliance with applicable State and federal laws pertaining to the protection of birds.

- The Biological Monitor will be present on site during all clearing and grubbing of vegetation to ensure that these activities remain within the project footprint (i.e., outside the demarcated buffer); to ensure that the flagging/stakes/fencing is being maintained; and to minimize the likelihood that active nests are abandoned or fail due to project construction activities. The Biological Monitor will send weekly monitoring reports to Caltrans and will notify Caltrans immediately if project activities take, possess, or needlessly destroy any active bird nests or eggs of species. Caltrans will notify the United States Fish and Wildlife Service (USFWS)/California Department of Fish and Wildlife (CDFW) within 48 hours if damage to an active nest or eggs or death or injury of birds protected under State law or the MBTA is observed.

To prevent any impacts to the Southern California steelhead Distinct Population Segment that may occur in existing downstream suitable habitat, if any, a construction Storm Water Pollution Prevention Plan (SWPPP) and soil erosion and sedimentation plan will be developed to minimize erosion and identify specific pollution prevention measures that will eliminate or control potential point and nonpoint pollution sources on site during construction and operation. More details regarding the SWPPP are provided in Section 2.8, Water Quality, of this document.

Permanent impacts to bats and bat-roosting habitat include destruction or loss of roosting habitat through demolition or removal of a structure (Structure Nos. 2, 12, 14, and 15) or portions of a structure that contain roost features. Humane eviction and exclusion of bats from a roost would be considered a permanent impact if the roost site remained sealed.

Indirect noise impacts to bat species from traffic on SR-91, I-605, their connectors, and area streets would be expected to be the same as from existing conditions.

Since the BSA does not appear to function as a wildlife movement corridor, the Build Alternative would not result in any permanent impacts to wildlife movement.

No Build Alternative

The No Build Alternative would not include the operation of any of the project improvements. Therefore, the No Build Alternative would not result in permanent impacts to special-status animal species in the BSA, including bats and nesting birds.

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

Because the Build Alternative would not result in any temporary or permanent impacts related to animal species with the implementation of Project Features PF-BIO-1 through PF-BIO-12, no additional avoidance, minimization, or mitigation measures are required.

2.17 Invasive Species

2.17.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.17.2 Affected Environment

The information in this section is based on the 2017 *Natural Environment Study (Minimal Impacts)* (NES [MI]) (2017 and 2018 errata) prepared for this project.

The California Invasive Plant Council (Cal-IPC) 2006 Invasive Plant Inventory highlights nonnative plants that are serious problems in wildlands (i.e., natural areas that support native ecosystems, including national, State, and local parks; ecological reserves; wildlife areas; national forests; and Bureau of Land Management [BLM] lands). The inventory categorizes plants as High, Moderate, or Limited based on each species’ negative ecological impact in California. Plants categorized as High have severe ecological impacts. Plants categorized as Moderate have substantial and apparent, but not severe, ecological impacts. Plants categorized as Limited are invasive, but their ecological impacts are minor on a Statewide level.

As shown in Table 2.17.1, a total of 22 nonnative plant species occurring on the Cal-IPC Invasive Plant Inventory (1 High, 11 Moderate, and 10 Limited) were identified in the biological study area (BSA). A figure showing the BSA is provided in the NES (MI) prepared for this project.

No invasive animal species were observed in the BSA. Three nonnative bird species were observed but are not necessarily considered invasive.

Table 2.17.1 Invasive Plant Species in the Biological Study Area

Scientific Name	Common Name	Rating
Aizoaceae <i>Carpobrotus edulis</i>	Iceplant Family Hottentot-fig	High
Anacardiaceae <i>Schinus molle</i>	Sumac Family Peruvian pepper tree	Limited
Asteraceae <i>Carduus pycnocephalus</i> <i>Cirsium vulgare</i> <i>Helminthotheca echinodes</i>	Sunflower Family Italian thistle Bull thistle Bristly ox-tongue	Moderate Moderate Limited
Brassicaceae <i>Brassica nigra</i> <i>Hirschfeldia incana</i> <i>Raphanus sativus</i>	Mustard Family Black mustard Shortpod mustard Wild radish	Moderate Moderate Limited
Chenopodiaceae <i>Salsola tragus</i>	Goosefoot Family Russian-thistle	Limited
Euphorbiaceae <i>Ricinus communis</i>	Spurge Family Castor bean	Limited
Moraceae <i>Ficus carica</i>	Mulberry Family Edible fig	Moderate
Scrophulariaceae <i>Myoporum laetum</i>	Figwort Family Myoporum	Moderate
Simaroubaceae <i>Ailanthus altissima</i>	Simarouba Family Tree of heaven	Moderate
Solanaceae <i>Nicotiana glauca</i>	Nightshade Family Tree tobacco	Moderate
Arecaceae <i>Phoenix canariensis</i> <i>Washingtonia robusta</i>	Palm Family Canary Island palm Mexican fan palm	Limited Moderate
Poaceae <i>Agrostis stolonifera</i> <i>Bromus diandrus</i> <i>Bromus hordeaceus</i> <i>Cynodon dactylon</i> <i>Polypogon monspeliensis</i> <i>Stipa miliacea</i> var. <i>miliacea</i>	Grass Family Creeping bentgrass Rippgut grass Soft chess Bermuda grass Rabbitfoot grass Smilo grass	Limited Moderate Limited Moderate Limited Limited

Source: Natural Environment Study (Mitigated Impacts) (2017 and 2018 errata).

2.17.3 Environmental Consequences

2.17.3.1 Temporary Impacts

Build Alternative (includes Design Options)

Potential impacts from invasive species associated with the construction and operation of transportation projects are considered permanent. Refer to Section 2.18.3.2, Permanent Impacts, for the discussion regarding invasive species.

No Build Alternative

The No Build Alternative would not include the construction of any of the proposed project improvements. As a result, as described under Permanent Impacts, the No Build Alternative would not result in new impacts related to invasive species.

2.17.3.2 Permanent Impacts

Build Alternative (includes Design Options)

Potential impacts from invasive species associated with construction and operation of transportation projects are considered permanent because the introduction of invasive species into previously undisturbed areas would result in permanent impacts to any affected native habitats. However, although invasive plant species are present in the BSA, the BSA is not located adjacent to any native or open space areas. Because the BSA is fully developed and not adjacent to any native habitats or open space areas, the Build Alternative is not expected to cause an increase in the spread of invasive species into native and open space areas. Additionally, Project Features PF-BIO-13 and PF-BIO-14 will be implemented.

PF-BIO-13 Plant Removal. Any plants removed or soil disturbed during the course of construction should be contained and properly disposed of off the site. The project also will adhere to City tree removal requirements.

PF-BIO-14 Prevention of the Spread of Invasive Species. All mulch, topsoil, seed mixes, or other plantings used during landscaping activities and erosion-control best management practices (BMPs) implemented will be free of invasive plant species seeds or propagules. No vegetation listed on the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory will be installed on the proposed project. All plant palettes proposed for the project will be reviewed by a Qualified Biologist during the Plans, Specifications, and Estimates phase. The project will also adhere to City tree planting requirements.

As a result, construction and operation of the Build Alternative would not result in impacts related to invasive species.

No Build Alternative

The No Build Alternative would not include the construction or operation of any of the proposed project improvements. Therefore, the No Build Alternative would not result in impacts related to invasive species.

2.17.4 Avoidance, Minimization, and/or Mitigation Measures

As the Build Alternative would not result in any temporary or permanent impacts related to invasive species, no avoidance, minimization, or mitigation measures are required.

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2.18 Cumulative Impacts

2.18.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

2.18.2 Methodology

The cumulative impact analysis methodology utilized was based on the eight-step process set forth in the California Department of Transportation (Caltrans) Standard Environmental Reference (SER) *Guidance for Preparers of Cumulative Impact Analysis* (Guidance) (2005). The eight-step process is as follows:

- Identify/define the project-specific resources to consider in a cumulative effect analysis.
- Define the geographic boundary or Resource Study Area (RSA) for each resource to be addressed in the cumulative impact analysis.
- Describe the current health and the historical context of each resource.

- Identify the direct and indirect impacts of the proposed project that might contribute to a cumulative impact on the identified resources.
- Identify other current and reasonably foreseeable future actions or projects and their associated environmental impacts.
- Assess the potential cumulative impacts.
- Report the results of the cumulative impact analysis in the environmental document.
- Assess the need for avoidance, minimization, and/or mitigation measures and/or recommendations for actions by other agencies to address a cumulative impact.

2.18.2.1 Resources Excluded from Cumulative Impacts Analysis

As specified in the Guidance, if the proposed project would not result in a direct or indirect impact to a resource, it would not contribute to a cumulative impact on that resource and need not be evaluated with respect to potential cumulative impacts.

Those resources for which cumulative effects are not anticipated or for which the impacts were already analyzed in a cumulative context are briefly discussed below.

- **Farmlands and Timberlands:** The project is located in a heavily developed urban area surrounded by industrial and commercial properties. There are no timberlands or farmlands (including lands protected under the Williamson Act or lands designated under the Farmland Mapping and Monitoring Program) within the study area. Therefore, the project would not result in substantially adverse impacts on farmlands and timberlands.
- **Growth:** The project would not establish new businesses or homes or extend roads or infrastructure to undeveloped areas. As discussed in Section 2.2, Growth, of this Draft Initial Study/Environmental Assessment (IS/EA), the Build Alternative would not result in growth-inducing impacts.
- **Hydrology and Floodplain:** As discussed in Section 2.0 of this Draft IS/EA, there will be no effect on hydrology and floodplain because the project is not located within the 100-year base flood zone.
- **Natural Communities:** The project is located within developed areas of Los Angeles County, either adjacent to the highway corridor or directly adjacent to the highway. There are no habitats or natural communities of concern within or immediately adjacent to the Biological Study Area (BSA). The BSA consists of areas of ornamental landscaping, weeds, and bare ground and has low biological value to native plant and wildlife species. Therefore, the project would not result in substantially adverse impacts on natural communities.

- **Plant Species:** Vegetation in the BSA consists primarily of ornamental landscaping and ruderal/weedy vegetation cover. No special-status plant species were observed or are expected to occur within the BSA due to a lack of suitable habitat. Therefore, the project would not result in substantially adverse impacts on plant species.

2.18.3 Resources Evaluated for Cumulative Impacts

The following discussion of potential cumulative impacts is presented by environmental resource area. The reasonably foreseeable action and projects considered in this analysis are presented in Table 2.18.1 and are shown on Figure 2.18-1.

The reasonably foreseeable actions discussed in this section include the proposed developments in proximity to the RSA that could contribute to a cumulative effect. Information on proposed developments was obtained from the Cities of Artesia and Cerritos, as well as the State Governor's Office of Planning and Research (OPR). Information on future transportation projects was obtained from the Los Angeles County Metropolitan Transportation Authority (Metro), Gateway Cities Council of Governments (GCCOG), Caltrans, and Southern California Association of Governments (SCAG).

In general, most of the development projects listed are infill projects, and the listed transportation projects would improve existing facilities rather than construct new facilities.

The following resources are evaluated in this section for cumulative impacts: land use, parks and recreation, community impacts, utilities/emergency services, traffic and transportation/pedestrian and bicycle facilities, visual/Aesthetics, cultural resources, water quality and storm water runoff, geology, soils seismicity, topography, paleontological resources, hazardous waste, air quality, noise, energy, wetlands and other waters, animal species, threatened and endangered species and invasive species. The Build Alternative and Build Alternative Design Options studied would have a similar potential contribution to cumulative impacts for these resources and are, therefore, discussed as one.

Table 2.18.1 Reasonably Foreseeable Actions and Projects

ID No.	Project Name	Status	Address	Planned Use
1	Aria Apartment Homes	Built	12611 Artesia Boulevard	Apartment complex with 198 units.
2	Artesia Corridor Adaptive Traffic Control System (ATCS) Enhancement Project	Included in the 2016 RTP/SCS	City of Artesia and surrounding area	Upgrades traffic signals along Artesia Boulevard between Long Beach Boulevard and Downey Avenue to connect with the ATCS. Installs CCTV and CMSs on Artesia Boulevard. Installs fiber-optic cable and devices to connect signals to each other and to the traffic management center. Installs two new traffic signals in Compton. Installs a Class II Bike Lane in both directions from Atlantic Avenue to Susana Road. Pedestrian Improvements.
3	Artesia LIVE II Specific Plan	Pre-Construction	18600 Gridley Road	Mixed-use building with 130 residential units, commercial and restaurant uses, and parking.
4	Burlington Northern Santa Fe Railroad Grade Separations	Ongoing	Gateway Cities	Construction of rail and roadway grade separations in the Gateway Cities area at five locations, including: Rosecrans Avenue and Marquardt Avenue, Parsons Boulevard, Los Nietos Road and Norwalk Boulevard, and Lakeland Road and Pioneer Boulevard.
5	Castella	Built	11042 Excelsior Drive	Townhomes.
6	City of Cerritos Transit Amenities	Included in the 2016 RTP/SCS	City of Cerritos	Implementation of citywide street furniture plan. The new amenities will increase transit use because they will serve as a marketing tool for public transit. The new amenities will be very visible and will increase pedestrian and potential transit users. The plan identifies all shared bus stops lacking transit amenities.
7	Garfield Avenue Improvements	Pre-Construction	Garfield Avenue from 70 th Street to Howery Street	Street widening, lane addition in each direction, additional left turn lane in all directions, street resurfacing, and improvements to traffic signals, street lights, and storm water, as well as watershed best management practices (BMPs).
8	Gateway Cities Forum Traffic Signal Corridors	Included in the 2016 RTP/SCS	Gateway Cities	Design and construction of multijurisdictional traffic signal synchronization and intersection operational improvements on regional arterials in the Gateway Cities Region.
9	I-5/Carmenita Road Interchange	Under Construction	Gateway Cities	Removes existing two-lane structure and constructs a new eight-lane interchange with carpool lane on-ramps. Project is located in the cities of Santa Fe Springs and Norwalk, and could enable widening of I-5 in the area.
10	I-5 Widening and HOV: I-605 to Orange County Line	Under Construction	Gateway Cities	Constructs one carpool lane and one mixed-flow lane in each direction extending 6.4 mi through the cities of Cerritos, La Mirada, Santa Fe Springs, and Norwalk. Includes interchange reconstruction and arterial modifications.

Table 2.18.1 Reasonably Foreseeable Actions and Projects

ID No.	Project Name	Status	Address	Planned Use
11	I-605 Corridor (Hot Spot) Interchanges	Pre-Construction	Gateway Cities	Improvements to interchanges along the I-605 corridor, such as at the SR-60, I-5, SR-91, and I-405 interchanges. Examples of improvements include roadway widening, ramp expansion, and added signage within the interchange.
12	I-710 Corridor Project	Environmental	Gateway Cities	Evaluating upgrades for the freeway and to improve truck and traffic flows between the Ports of Los Angeles and Long Beach and the SR-60 freeway. Also to be considered are upgrades to the I-710 freeway between Pacific Coast Highway and downtown city of Long Beach.
13	Sage at Cerritos	Built	12651 Artesia Boulevard	Apartment complex with 132 units.
14	Studebaker Road at Alondra Road Intersection Improvements	Under Construction	Studebaker Road at Alondra Road	Addition of an additional southbound left turn lane on Studebaker, an eastbound right turn overlap phasing, increased northbound left turn storage on Studebaker, and modifications to the median island, traffic signal, and street lights
15	West Santa Ana Branch Transit Corridor	Environmental	City of Los Angeles, Gateway Cities	Provides for the development of a grade-separated transit corridor. Phase I is designed to go from the southern terminus in the city of Artesia toward downtown city of Los Angeles.

Source: *Draft Cumulative Impacts Assessment* (2018)

CCTV = closed-circuit television

CMS = changeable message sign

EIR/EIS = Environmental Impact Report/Environmental Impact Statement

HOV = high-occupancy vehicle

I-5 = Interstate 5

I-405 = Interstate 405

I-605 = Interstate 605

I-710 = Interstate 710

mi = mile/miles

RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy

SR-60 = State Route 60

SR-91 = State Route 91

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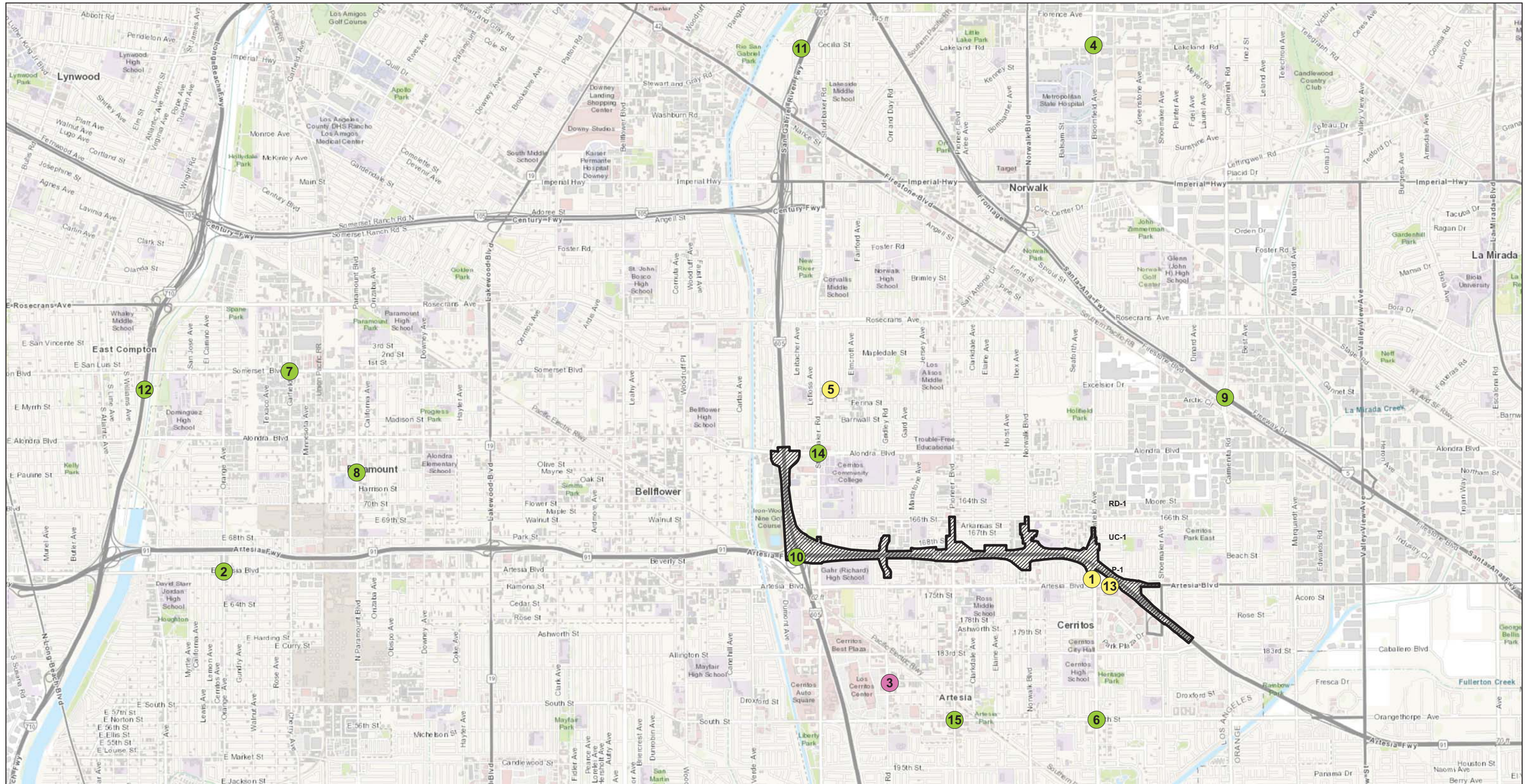
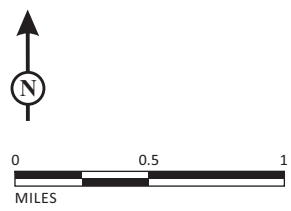


FIGURE 2.18-1



SOURCE: Metro
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2.18.3.1 Land Use

The cumulative RSA for land use is the Build Alternative RSA (i.e., Build Alternative footprint and construction areas, which are depicted as the environmental study area on Figure 2.18-1) because land use impacts would occur where construction and operation of the Build Alternative is occurring. The RSA includes a mixture of various types of residential, open space, commercial, and light industrial land use designations within the cities of Artesia and Cerritos (City of Artesia, 2013; City of Cerritos, 2013). The city of Cerritos also includes low density, medium density, educational use, and public and quasi-public land use designations (City of Cerritos, 2013). The RSA is highly developed with transportation infrastructure, commercial and industrial buildings, residential buildings, schools, and parks, with a limited availability of undeveloped land.

As described in the *Community Impact Assessment* (2018), operation of the Build Alternative would require the expansion of existing transportation facilities, which may encroach into residential areas. As a result, some properties would be acquired and incorporated into the project, and the existing residential and commercial uses would be relocated and replaced with transportation uses. However, property acquisition would be implemented in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Uniform Act), and sufficient replacement residential and properties have been identified in the *Relocation Impact Report* (2018) (refer to Section 2.18.3.3 for further discussion on relocations).

The RSA is within an existing highway corridor, and would not include the construction of land uses that are inconsistent with the zoning and land use designations for the Cities of Artesia and Cerritos. In addition, the Build Alternative would be consistent with the goals, objectives, and policies in the General Plans of the Cities of Artesia and Cerritos. The Build Alternative is also consistent with the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and is included in the 2017 Federal Transportation Improvement Program (FTIP) as Project LA0G1119 (SCAG 2016). Therefore, impacts related to land use would not be substantially adverse.

Other reasonably foreseeable actions include new development and transportation improvement projects (see Table 2.18.1). These projects could result in changes in land use in the cumulative RSA. However, these actions would be planned to be consistent with land use policies and designations, as well as the goals, objectives, and policies within the cities of Artesia and Cerritos.

Other reasonably foreseeable actions would be evaluated on a project-by-project basis to determine the potential for impacts on land use and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with adherence to federal policies regarding property acquisition and relocation assistance, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to land use (with regards to conflicts with existing plans, policies, or regulations, or conflicts with surrounding land uses). Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.2 Parks and Recreation

The cumulative RSA for parks and recreation is the Build Alternative RSA (i.e., the Build Alternative footprint and construction areas, which are depicted as the environmental study area on Figure 2.18-1) because parks and recreation impacts would occur where construction and operation of the Build Alternative is occurring. There are four existing parks adjacent to State Route 91 (SR-91), and 23 parks and recreation centers within a 0.5 mile (mi) buffer around the maximum disturbance limit, which is equivalent to the Build Alternative RSA.

In compliance with Section 4(f) of the United States Department of Transportation (USDOT) Act of 1966, a Section 4(f) analysis was completed for the project. All parks and recreation resources in the RSA were evaluated for potential Section 4(f) uses associated with the Build Alternative (GPA Consulting 2017a). Of the potential Section 4(f) resources evaluated, one was found to have *de minimis* impacts, and the remaining resources would not be impacted. Implementation of project features pertaining to air quality would be required to make the *de minimis* findings (see Section 2.12.3 for project features). Therefore, the Build Alternative would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine the potential for impacts on parks and recreation facilities and the appropriate measures required to reduce impacts. The transportation projects listed in Table 2.18.1 would be required to comply with the provisions outlined in Section 4(f) of the USDOT Act of 1966 to minimize impacts on parks and recreation resources. Because project impacts would not be adverse, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to parks and recreation.

Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.3 Community Impacts

The cumulative RSA for community impacts is the Build Alternative RSA (i.e., Build Alternative footprint and construction areas, which are depicted as the environmental study area on Figure 2.18-1) because land use impacts would occur where construction and operation of the Build Alternative is occurring. The RSA includes approximately 3 mi along westbound SR-91, bounded by approximately Shoemaker Avenue to the east, the Interstate 605 (I-605) interchange to the west, and the I-605 northbound off-ramp to Alondra Boulevard to the northwest. The RSA includes portions of the cities of Cerritos and Artesia.

Community Character and Cohesion

The existing conditions for the communities of Artesia and Cerritos have been identified using the 2015 American Community Survey (ACS) (2011–2015 5-Year Estimates), provided by the United States Census Bureau, including 20 census tract block groups that surround the project area, within the cities of Artesia and Cerritos, and Los Angeles County.

The cities of Artesia and Cerritos began as farming and agricultural communities and have become increasingly urbanized, with a balance of residential, commercial, and industrial developments. Both cities are located approximately one hour south of the city of Los Angeles. The RSA is located along SR-91, which serves as a physical barrier between the northern and southern portions of both the cities of Artesia and Cerritos, essentially dividing the communities surrounding the RSA.

The following information is based on the *Community Impact Assessment* (2018):

- **Population Growth:** Although the majority of the identified census tracts in and around the RSA have demonstrated a steady growth in population from 2010 to 2015, three census tracts have shown a decrease in population over the 5-year period.
- **Age:** The median ages of residents of the cities of Artesia and Cerritos are 39.3 and 44.5 years old, respectively.
- **Ethnicity and Race:** The populations in the cities of Artesia and Cerritos are largely Non-Hispanic Asians, making up an average of 38.5 percent and 60.5 percent of the population, respectively. On average, the Hispanic or Latino

population makes up 36.5 percent of the population in the city of Artesia and 12.5 percent in the city of Cerritos.

- **Housing:** On average, a greater proportion of residents tend to own housing units rather than rent in the census tract block groups in the RSA.
- **Economic Conditions:** In 2013 and 2014 the personal income and per capita personal income (i.e., average income) in the city of Artesia both declined from 2012, but rebounded in 2015. In the city of Cerritos, personal income and per capita personal income have increased regularly since 2011, but declined in 2015.
- **Employment:** The unemployment rates in both the cities of Artesia and Cerritos are 6.5 percent, which are lower than the unemployment rate for Los Angeles County. In the city of Artesia, the largest industry occupation is Sales and Office Occupations, in which 31 percent of the civilian population over the age of 16 is employed, followed by Management, Business, Science and Arts Occupations, at 30.4 percent. The leading industry occupation in the city of Cerritos is Management Business, Science and Arts Occupations, in which 51 percent of residents over the age of 16 is employed, followed by Sales and Office Occupations at 26.8 percent.

The communities in the RSA may experience impacts from construction activities, which include but are not limited to traffic detours, lane closures, and increased noise. However, these impacts would be temporary and would cease once construction is completed. Therefore, community disruptions and displacements would be minimal, and construction of the Build Alternative is not expected to result in substantially adverse impacts on community character and cohesion.

The construction of transportation infrastructure in an existing residential neighborhood (further discussed in Relocations, below) could result in changes to community character. However, the acquired land may be developed to extend recreational areas to provide additional community resources for the existing residents.

In addition, operation of the Build Alternative would include improvements to existing roadways and to the circulation system and would not divide existing neighborhoods or affect community cohesion. The Build Alternative would also be consistent with the land use goals for the Cities of Artesia and Cerritos and the County of Los Angeles and would be compatible with adjacent and surrounding land uses. Aesthetics for surrounding residents and businesses would be similar to existing conditions with the exception of some additional infrastructure. Therefore,

implementation of the Build Alternative would not result in substantially adverse impacts on community character and cohesion.

Other reasonably foreseeable actions are primarily in-fill development and transportation improvement projects, which are not expected to substantially affect community character and cohesion (see Table 2.18.1). These actions would be evaluated on a project-by-project basis to determine the potential for impacts related to community character and cohesion, and the appropriate measures required to reduce impacts. Because project impacts would not be adverse, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to community character and cohesion. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

Environmental Justice

The RSA contains environmental justice populations that may be impacted by the Build Alternative. The proportion of minority groups in the census tract block groups in and around the RSA, which include Hispanic or Latino, Asian, and African American populations, is substantially higher than that of Los Angeles County. There are no census tract block groups in and around the RSA with a median income below the United States Department of Health and Human Services (HHS) threshold. Therefore, the RSA contains minority populations, but not low-income populations.

Construction of the Build Alternative would result in short-term effects related to access and circulation, aesthetics, noise, hazardous materials, and air quality. Because these effects would be temporary and would affect all populations equally, the Build Alternative would not result in a disproportionately high and adverse effect on environmental justice populations, in comparison to general population within the RSA.

Operation of the Build Alternative would result in additional traffic noise in areas with meaningfully greater (i.e., greater than 5 percent) percentages of environmental justice populations. However, with implementation of minimization measures, noise impacts would not result in a disproportionately high and adverse effect on environmental justice populations in the RSA.

The Build Alternative would result in the permanent acquisition of 18 residential and one non-residential property in Census Tract 5548.01, as well as one non-residential property in Census Tract 5548.02. The Pioneer Boulevard Westbound Ramps/168th

Alignment Design Option would require the acquisition of an additional eight properties, including five residential properties and three vacant lots, within Census Tract 5548.01. These eight properties are located along 168th Street in the city of Artesia, in a cul-de-sac adjacent to the east side of Pioneer Boulevard. These census tracts contain block groups that have at least one minority population that would be considered meaningfully greater, when compared to the city of Artesia and Los Angeles County. Acquisition of properties would result in the displacement of residents and businesses within the RSA. Property acquisition would be implemented in accordance with the Uniform Act. Sufficient replacement residential and business properties have been identified in the *Relocation Impact Report* (2018). Though there are sufficient replacement properties, relocations may have physical, financial, and psychological effects on displaced residents. Therefore, the Build Alternative would result in an adverse effect on environmental justice populations in the RSA.

The Project, however, would implement the avoidance, minimization, and/or mitigation measures listed in Section 2.18.4, which include relocation assistance services for all affected individuals and businesses. Environmental justice populations would not be denied benefits or receive fewer benefits than the general population. Therefore, relocation impacts on environmental justice populations would not be disproportionately high and adverse.

The Non-Standard Lane and Shoulder Widths Design Option under the Build Alternative is being considered at 170th Street and would result in non-standard mainline features. This design option would eliminate the right-of-way (ROW) impacts at 170th Street under the Build Alternative and would not require the acquisition of the 18 residential properties and 1 non-residential property in the census tracts with minority populations. Under this design option, the project would not result in a disproportionately high and adverse effect on environmental justice populations in the RSA.

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine the potential for impacts related to environmental justice populations and the appropriate measures would be required to reduce impacts. Because impacts on environmental justice populations would not be substantially high and adverse with implementation of the avoidance, minimization, and/or mitigation measures listed in Section 2.18.4, the project, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to environmental justice.

Relocations

The Build Alternative would require full acquisitions of 20 total properties within the city of Artesia, including 18 residential properties (with approximately 80 residents) and 2 non-residential properties (with two commercial businesses). The Pioneer Boulevard Westbound Ramps/168th Alignment Design Option would require the acquisition of an additional 8 properties along 168th Street, including 5 residential properties (with approximately 22 residents) and 3 vacant lots adjacent to the east side of Pioneer Boulevard/168th Street.

Under the Build Alternative, sufficient replacement residential and business properties have been identified in the *Relocation Impact Report* (2018). All property acquisition and relocation assistance would comply with the regulations and programs outlined under the Uniform Act, Title VI of the Civil Rights Act, and California Relocation Assistance Act. In addition, potential impacts would be minimized through implementation of Caltrans' Relocation Assistance Program (RAP) (see Section 2.3.1.3). Therefore, impacts related to relocations would not be substantially adverse.

As discussed in the Environmental Justice portion of Section 2.18.3.3, two design options to the Build Alternative at 170th Street and Pioneer Boulevard are also being considered that would alter the number of required property acquisitions. The Non-Standard Lane and Shoulder Widths Design Option would eliminate the need for property acquisitions at 170th Street. However, the Pioneer Boulevard Westbound Ramps/168th Alignment Design Option would require the acquisition of eight additional properties. Under these design options, impacts related to relocations would not be substantially adverse.

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine the potential for impacts related to relocations and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with adherence to regulations and policies regarding property acquisition and relocation assistance, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to relocations. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

Community Facilities

Community facilities in the RSA include 17 parks, 6 community and recreation facilities, 1 golf course, 6 government facilities (i.e., post offices, city halls, civic centers, and libraries), and 11 religious facilities. The RSA also includes 30 educational facilities, including 3 public K-12 school districts, private schools, and colleges.

Construction activities could result in temporary noise from construction equipment and vehicles; traffic from construction vehicles on roadways; dust emissions from earth-moving activities and exhaust from construction vehicles/equipment; and visual impacts from construction equipment and debris that could affect community facilities and services in the RSA. However, impacts would be temporary and would cease once construction is completed. Therefore, construction impacts on community facilities from the Build Alternative would not be substantially adverse.

Operation of the Build Alternative would not require the construction of new community services because the existing facilities are expected to accommodate the needs of the community. In addition, the Build Alternative would not affect existing facilities through an increase in resident populations, or through the loss of facilities elsewhere.

The Build Alternative would require permanent and temporary incorporation of land at four parks and one school. However, the incorporation would not adversely affect accessibility, visual quality, noise, vegetation, air quality, or water quality at the parks or school. Therefore, operational impacts on community facilities from the Build Alternative would not be substantially adverse.

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine the potential for impacts on community facilities and the appropriate measures required to reduce impacts. Because project impacts would not be adverse, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to community facilities and avoidance, minimization, and/or mitigation measures are not be required.

2.18.3.4 Utilities/Emergency Services

The cumulative RSA for utilities/emergency services is the Build Alternative RSA (i.e., the Build Alternative footprint and construction areas, which are depicted as the environmental study area on Figure 2.18-1), which includes approximately 3 mi along

westbound SR-91, bounded by approximately Shoemaker Avenue to the east, the I-605 interchange to the west, and the I-605 northbound off-ramp to Alondra Boulevard to the northwest.

Local facilities include power distribution systems, gas distribution pipelines, telephone systems, cable television systems, water distribution mains, sanitary sewer mains, and city telecommunication systems. Regional facilities include power transmission systems, gas transmission pipelines, petroleum pipelines, and sewer trunk lines.

A total of 22 utility facilities would be potentially impacted. Facilities in the RSA would be relocated, adjusted to grade, or protected in place to accommodate the Build Alternative. Utilities that are realigned outside of the public ROW would require the re-establishment of new utility easements along the new alignment. As required by California State law, Underground Service Alert Southern California (USA) would be contacted a minimum of 2 working days before initiating fieldwork. Prior to contacting USA, each boring location will be delineated with white spray paint to outline the proposed limits of subsurface work. A ticket number would be obtained to request utility clearance by parties with underground utilities in the areas. Following notification, utility owners and/or representatives will mark the approximate location of each subsurface utility. Prior to conducting subsurface fieldwork, each location will be visually inspected to verify potential conflicts. With compliance with State regulations related to subsurface utilities, the Build Alternative would not result in substantially adverse impacts on utilities.

There are currently two law enforcement stations within the project area, and no fire stations or hospitals and medical centers directly in the RSA.

Temporary traffic impacts could affect emergency response services, as well as access to other community service centers. However, with adherence to local policies and the implementation of construction best management practices (BMPs), including measures to limit construction hours and implement traffic management plans, these temporary impacts would not be substantially adverse.

The Build Alternative would not accommodate or result in a permanent increase in traffic volume in the project area and would not displace existing emergency facilities. Existing facilities are expected to accommodate the needs of the community after project implementation. Therefore, the Build Alternative would not affect

existing emergency services through an increase in resident populations or through the loss of facilities elsewhere.

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine the potential for impacts on utilities/emergency services and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with adherence to local and State policies and implementation of construction BMPs, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to utilities/emergency services. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.5 Traffic and Transportation/Pedestrian and Bicycle Facilities

The cumulative RSA for traffic and transportation/pedestrian and bicycle facilities is the Build Alternative RSA (i.e., the Build Alternative footprint and construction areas, which are depicted as the environmental study area on Figure 2.18-1), which includes approximately 3 mi along westbound SR-91, bounded by approximately Shoemaker Avenue to the east, the I-605 interchange to the west, and the I-605 northbound off-ramp to Alondra Boulevard to the northwest.

The RSA has a dense street network ranging from major highways to local city streets. In addition, there are various bicycle and pedestrian facilities and public transportation services in the RSA. Public parking facilities in the RSA consist of on-road street parking.

The area around the I-605/SR-91 system interchange currently experiences traffic congestion. In the future, congestion in this area is forecast to increase if the existing traffic issues are not addressed. The examination of existing travel conditions along SR-91 and projected future (2044) traffic showed that capacity and operational problems are a result of several interrelated factors. These factors include: insufficient freeway mainline capacity on both SR-91 and I-605, closely spaced freeway entrance and exit ramps, and inadequate older design features at the freeway-to-freeway interchange.

The following information is based on the *Community Impact Assessment* (2018), which includes the findings from the *Traffic Operations Analysis Report* (2018):

- **Access and Circulation:** Construction of the Build Alternative may require temporary ramp and street closures on arterial streets. In addition, the movement of construction equipment on arterial roadways may result in additional congestion. Therefore, the Build Alternative has the potential to result in direct temporary impacts on access to homes or businesses. However, these impacts would be temporary and access would be re-established following construction. Therefore, construction impacts on access and circulation would not be substantially adverse.

During operation of the Build Alternative, interchange modifications could change arterial street operations and circulation patterns. Additionally, the Pioneer Boulevard Westbound Ramps/168th Alignment Design Option would result in the loss of driveway access to three businesses on the west side of Pioneer Boulevard, including Denny's Restaurant, Artesia Inn and Suites, and El Pollo Loco Restaurant. Therefore, operation of the Build Alternative could result in direct impacts on access to homes or businesses in the study area. However, the Build Alternative would construct new interchange configurations to maintain and improve access in the study area. Therefore, operational impacts on access and circulation would not be substantially adverse.

- **Parking:** Construction of the Build Alternative would temporarily restrict access to residential parking. However, impacts would be short-term and access would be restored following construction. With implementation of the project features listed in Section 2.5.3, impacts on parking would not be substantially adverse.

Operation of the Build Alternative could result in the removal and/or relocation of parking spaces, depending on the selected design option. Because the project will incorporate the project feature outlined in Section 2.5.3, impacts on parking would not be substantially adverse.

- **Traffic Volumes:** The Build Alternative would reduce congestion and improve local and system freeway operations. The improvements are expected to result in substantial improved operating conditions throughout the RSA, including substantial reductions in vehicle delay, reductions in travel time, and increased speeds. The reduction in congestion, operational improvements to traffic flow, and improvements to the geometric design features of the corridor would improve safety throughout the corridor and in high-accident locations. Therefore, impacts related to traffic volumes would not be substantially adverse.

- **Public Transportation:** Construction and operation of the Build Alternative would not result in access reduction, displacement, or relocation of transit stops. Temporary lane closures during the construction period are anticipated to occur for approximately 24 months. However, such closures would not affect any existing transit stops. Therefore, impacts related to public transportation would not be substantially adverse.
- **Pedestrian and Bicycle Facilities:** During construction of the Build Alternative, the staging and moving of equipment on the roadways may temporarily restrict bicycle and pedestrian access; however, temporary measures and a construction staging plan would be implemented to minimize hazards on the roadways for bicyclists and pedestrians. Therefore, construction impacts on bicycle and pedestrian facilities would not be substantially adverse.

The Build Alternative would not impede pedestrian or bicycle access to existing transit services. Rather, the Build Alternative would provide improvements to transit access for pedestrians where possible. Therefore, the Build Alternative is expected to result in beneficial impacts on bicycle and pedestrian facilities in the RSA.

The *Traffic Operations Analysis Report* (2018) takes into account planned future transportation projects (see Table 2.18.1) and population growth when determining impacts. Therefore, no additional cumulative impacts beyond those disclosed in the traffic analysis are anticipated.

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine the potential for impacts on traffic and transportation/pedestrian and bicycle facilities, and the appropriate measures required to reduce impacts. Because adverse impacts on traffic and transportation/pedestrian and bicycle facilities are not anticipated, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to traffic and transportation/pedestrian and bicycle facilities. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.6 Visual/Aesthetics

The cumulative RSA for visual resources/aesthetics is the Build Alternative RSA (i.e., the Build Alternative footprint and construction areas, which are depicted as the environmental study area on Figure 2.18-1), including Visual Assessment Unit 1 (VAU1) and six key views defined in the *Visual Impact Assessment* (VIA) (2018).

VAU1 is in the northern portion of the city of Artesia, and in the eastern and western portions of the city of Cerritos. The RSA is within a highly developed area and is surrounded by residential, commercial, recreational, institutional, light industrial, and transportation uses. The landscape in VAU1 is generally characterized by surrounding urban development, transportation uses (I-605), and other man-made features. Background views of the Angeles National Forest hillsides and ridgelines approximately 25 miles to the north are afforded throughout the project limits. The relatively flat topography of VAU1 provides for visually uniform views for viewers within the Build Alternative corridor. Vegetation within the area generally consists of numerous areas of ornamental landscaping.

During construction of the Build Alternative, sensitive uses (e.g., residents and motorists) would be exposed to views of construction areas. As described in the VIA, the Build Alternative would require staging areas to allow for construction activities and the storage of equipment. Construction vehicle access and staging of construction materials would be visible from motorists traveling along the project site as well as residents located in the project vicinity. These impacts would be short-term and would cease upon project completion. The Build Alternative would be required to comply with the Caltrans Standard Specifications for Construction, which would minimize visual impacts through the use of opaque temporary construction fencing that would be situated around construction staging areas. Therefore, construction impacts on visual resources/aesthetics would not be substantially adverse.

During operation, the Preferred Alternative would feature visual elements, which include a new mixed-flow lane on westbound SR-91, two new overcrossing structures (replacing the existing structures along Gridley Road and Bloomfield Avenue), reconfigured interchanges (at Pioneer Boulevard and Norwalk Boulevard), acquisition of five residential units, , upgraded traffic signals, the construction of several noise barriers (up to 16 feet [ft] in height) and a combination noise barrier/retaining wall, and some vegetation removal. The Build Alternative would result in an increase in hardscape in the area that would be visible to local residents, local roadway travelers (i.e., roadway motorists, bicyclists, and pedestrians), SR-91 motorists, recreational uses, institutional (school) uses, and commercial and light industrial uses.

As described in the VIA, all freeway improvements and new overcrossing structures would be similar in character and quality to the existing transportation facilities in the surrounding area. Visual impacts associated with the Build Alternative are

determined by a measurement of the resource change and viewer response, and the overall visual impact of the Build Alternative is considered to be moderate. With implementation of project features identified in Section 2.6.4, all landscaping plans and architectural treatments would be designed by the Caltrans District Landscape Architect in cooperation with the Cities of Artesia and Cerritos, and all tree-removal activities and roadway improvements would be conducted in compliance with the applicable City codes and policies. Therefore, operational impacts on visual resources/aesthetics would not be substantially adverse.

Other reasonably foreseeable actions have the potential to affect resource change and viewer response in proximity to the RSA. Many of the reasonably foreseeable actions in proximity to the RSA are infrastructure improvement and in-fill development projects that would not substantially change the highly urbanized and developed character of the area. These actions would be evaluated on a project-by-project basis to determine impacts on visual resources/aesthetics and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with implementation of project features, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to visual resources/aesthetics. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.7 Cultural Resources

The cumulative RSA for cultural resources is the Area of Potential Effects (APE) used in the *Historic Property Survey Report (HPSR)* (2018) and *Archaeological Survey Report (ASR)* (2018). The APE covers 190.23 acres (ac) and includes the direct APE (i.e., the area of proposed and existing ROW, including the horizontal and vertical limits associated with ground-disturbing activities), which is 74.84 ac. The vertical APE extends to a maximum depth of 30 ft.

As documented in the HPSR, the horizontal APE includes transportation infrastructure as well as 85 private parcels. Buildings in the horizontal APE consist primarily of small single-family residences, but also include low-rise commercial buildings and institutional facilities. No historical resources listed in or determined eligible for the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), California Historical Resources Information System (CHRIS), California Historical Landmarks, or California Points of Historical Interest have been recorded within the APE (HPSR 2017). Caltrans has determined a Finding of No Historic Properties Affected is

appropriate for this undertaking because there are no historic properties within the APE. Therefore, impacts on historical resources are not anticipated.

As documented in the ASR (2017), the APE primarily consists of disturbed sediment mixed with asphalt, concrete, gravel, and abundant modern trash. Most areas contain either local sediment or artificial fill placed during the construction of existing freeways, overcrossings, undercrossings, drainage culverts, noise barriers, and intersections. Most areas within the direct APE were developed, and most open areas contained ornamental vegetation. All areas were highly disturbed from previous construction. No archaeological resources were identified in the APE through archival research or during the survey. Based on the findings in the ASR, the likelihood of encountering intact archaeological resources is very low. Therefore, impacts on archaeological resources are not anticipated. There is always a potential for previously undocumented cultural materials or human remains to be unearthed during site preparation, grading, or excavation for the Build Alternative. Those potential effects would be avoided or minimized by the project features described in Section 2.7.3.2. With implementation of the project features, potential impacts on previously unidentified cultural resources would not be substantially adverse.

Other reasonably foreseeable actions have the potential to unearth archaeological and cultural resources within the proposed project area. These actions would be evaluated on a project-by-project basis to determine impacts on cultural resources and the appropriate measures required to reduce impacts. Because impacts on cultural resources are not anticipated, and appropriate measures would be taken in the case that cultural materials are unearthed, the project, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to cultural resources. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.8 Water Quality and Storm Water Runoff

The cumulative RSA for water quality and storm water runoff is the San Gabriel River Subbasin, which spans 409,600 ac. The subbasin is further divided into the Lower San Gabriel River Watershed, which receives runoff from approximately 78.5 sq mi of urbanized area. The watershed is predominately served by storm drain systems, which connect drainages in urbanized areas to the watershed's main tributaries.

The main reach through the Watershed is the San Gabriel River, which Flows through a concrete-lined channel parallel to I-605 within the Watershed. The river passes through 19 different cities and discharges to the Pacific Ocean in the city of Long Beach, California (County of Los Angeles Department of Public Works 2006). The main tributaries, Coyote Creek and San Jose Creek, are also channelized at their confluence with the San Gabriel River. Other tributaries of the river include Big and Little Dalton Wash, San Dimas Wash, Walnut Creek, San Jose Creek, Fullerton Creek, and Coyote Creek (California RWQCB 2000).

The California Clean Water Act Section 303(d) List for 2012 includes the following impaired water bodies near the project area and associated pollutants with established total maximum daily loads (TMDLs) (California State Water Resources Control Board 2012):

- **San Gabriel River Reach 1 (Estuary to Firestone):** Coliform bacteria and pH
- **Coyote Creek, North Fork:** Indicator bacteria and selenium
- **Coyote Creek:** Diazinon, indicator bacteria, pH, toxicity, copper (dissolved), lead, and ammonia
- **Artesia-Norwalk Drain:** Indicator bacteria and selenium

The RSA is located in the South Coast Hydrologic Region (HR), which consists of 56 delineated groundwater basins. Within the South Coast HR, the RSA is in the Central Subbasin of the Coastal Plain of Los Angeles Basin. The groundwater supply in the Subbasin comes primarily from surface flows through Whittier Narrows. Groundwater also enters from surface and subsurface flow, percolation of precipitation, stream flow, and imported and recycled water (California Department of Water Resources 2004). Percolation is limited in some areas due the amount of paved surfaces, and saltwater intrusion occurs in the basin.

According to the *Water Quality Assessment Report (2017)*, the Build Alternative would increase impervious surface area by 5.83 ac within the RSA, contributing to 19.85 ac of new impervious surface area (i.e., the sum of net new impervious surface area and replaced impervious surface area). The increase in impervious surfaces would contribute to an increase in runoff, which could contribute to exceeding the waste load allocations in approved TMDLs and impairments in the 2012 303(d)-listed waterbodies. To address impacts on water quality, BMPs would be implemented based on the requirements in the National Pollutant Discharge Elimination System (NPDES) Construction General Permits (CGPs) and Caltrans' NPDES permit (see

Section 2.8.3). With implementation of BMPs to minimize impacts related to runoff and pollutants, impacts on water quality would not be substantially adverse. Standard drainage design practices would also be implemented to minimize scour and sedimentation. Therefore, impacts on water quality and storm water runoff would not be substantially adverse.

In the event that groundwater and any other non-storm water dewatering are necessary during construction, these activities would be subject to the requirements of NPDES Permit No. CAS004001. With compliance with the NPDES permit, impacts on groundwater would not be substantially adverse.

The 19.85 ac of impervious surface area constructed from the Build Alternative would make up approximately 0.005 percent of the San Gabriel River Subbasin area (409,600 ac). Due to the minor increase in impervious surface area, impacts on water quality would be minimal. The implementation of appropriate treatment BMPs as a part of the Build Alternative to treat the pollutants generated by the Build Alternative is expected to adequately address any potential cumulative impacts due to construction, as well as long-term maintenance and operation of the Build Alternative.

Other reasonably foreseeable actions may increase impervious surface area within the RSA, but increases in impervious surfaces would be minimal because the RSA is already highly developed. These actions would be evaluated on a project-by-project basis to determine the impacts on water quality and storm water runoff and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with implementation of BMPs, the project, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to water quality and storm water runoff. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.9 Geology, Soils, Seismicity, and Topography

The cumulative RSA for geology, soils, seismicity, and topography is the Build Alternative RSA (i.e., the Build Alternative footprint and construction areas) because impacts would occur where construction and operation of the build Alternative is occurring.

As described in the *Preliminary Geotechnical Report* (2018), the RSA is characterized by the following features:

- **Geology:** The RSA is within the Los Angeles Basin, an actively subsiding basin with northwest-trending mountain ranges separated by subparallel fault zones and a coastal plain. The RSA is primarily underlain by rock types originating in the Quaternary period, along with rock types of marine origin from the Pliocene and Miocene. Quaternary rocks include unconsolidated (i.e., loose materials such as clay and sand) and semi-consolidated sediments that are formed from alluvium, lake, playa, and terrace deposits and are mostly non-marine in origin. Pliocene rocks are moderately consolidated (i.e., solid rock) and include sandstone, siltstone, shale, and conglomerate. Miocene rocks are moderately to well consolidated and include sandstone, siltstone, conglomerate, and breccia.
- **Soils:** The upper 60 ft of the underlying soils include fine- to medium-grained, loose- to medium-dense, silty and clayey sand; sandy silt; poorly graded sand; and clayey silt. Interbeds of soft silt and clay and occasionally organic materials were also observed. Below 60 ft, the soils become generally fine to coarse, dense silty sand with varying amounts of gravel.
- **Seismicity:** No faults, including those identified under the Alquist-Priolo Earthquake Fault Zoning Act, were identified within the RSA; however, the project is located in a seismically active area of Southern California. The RSA is in an area where there has been a historic occurrence of liquefaction, with potential for permanent ground displacements. There is also a potential for ground shaking events to occur from distant earthquakes.
- **Topography:** The RSA is located in the Peninsular Ranges geomorphic province, which is distinguished by northwest-trending mountain ranges and valleys following faults branching from the San Andreas Fault (California Geological Survey 2002). The terrain in the RSA is relatively flat, except for the interchange and ramp locations where the highway and adjacent roadways intersect.

Grading activities may result in a temporary, short-term increase in erosion. The Build Alternative would comply with standard engineering practices for erosion control, and a Storm Water Pollution Prevention Plan (SWPPP) would be implemented to minimize soil erosion impacts. In addition, the Build Alternative would implement BMPs, including erosion-control measures, and would adhere to the NPDES permit requirements.

Increased development in the RSA could expose people and property to potential impacts associated with seismic activities. The Build Alternative and other reasonably foreseeable actions would be constructed in accordance with the California Building Code, standard engineering practices, and other applicable local standards; therefore,

the potential for structural damage due to seismic activity, landslides, liquefaction, and other geologic hazards would be minimized. Therefore, impacts on geology, soils, seismicity, and topography would not be substantially adverse.

Other reasonably foreseeable actions could also increase erosion and sedimentation in the RSA. These actions would be evaluated on a project-by-project basis to determine impacts on geology, soils, seismicity, and topography, and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with the implementation of BMPs and other standard practices, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to geology, soils, seismicity, and topography. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.10 Paleontological Resources

The RSA for paleontological resources includes areas where excavation would occur for the Build Alternative. The RSA includes approximately 3 mi along westbound SR-91, bounded by approximately Shoemaker Avenue to the east, the I-605 interchange to the west, and the I-605 northbound off-ramp to Alondra Boulevard to the northwest.

The entire RSA is underlain by Holocene to late Pleistocene (less than 126,000 years ago) Alluvial Fan and Valley Deposits, Undivided (California Geological Survey 2016). There is potential to find fossils from large and small mammals, reptiles, fish, invertebrates, and plants in the older sediments of this geologic unit. Fossils may be encountered below a depth of approximately 10 ft. However, artificial fill is likely present from the surface to varying depths throughout much of the project area where it was placed during construction of the existing freeways, streets, overcrossings, and undercrossings. Because of its disturbed context, artificial fill does not have the potential to contain scientifically significant paleontological resources.

Based on the findings in the *Paleontological Identification Report and Paleontological Evaluation Report* (PIR/PER) (2017 and 2018 Errata), no vertebrate fossil localities were found within the boundaries of the Build Alternative, and no paleontological resources were observed during the field survey. No special paleontological situations that would require project redesign to avoid critical fossil localities or deposits are anticipated for the Build Alternative. However, the Build Alternative requires excavation that will reach paleontologically sensitive sediments

and, therefore, has the potential to impact scientifically significant, nonrenewable paleontological resources. With the preparation of a Paleontological Mitigation Plan (PMP) and development of minimization measures, impacts on paleontological resources would not be adverse. The PMP is a project feature of the Build Alternative.

Other reasonably foreseeable actions have the potential to disturb paleontological resources within the RSA. These actions would be evaluated on a project-by-project basis to determine impacts on paleontological resources and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with implementation of a PMP, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to paleontological resources. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.11 Hazardous Waste

The cumulative RSA for hazardous waste is the same as the Build Alternative RSA (i.e., the Build Alternative footprint and construction areas), which includes approximately 3 mi along westbound SR-91, bounded by approximately Shoemaker Avenue to the east, the I-605 interchange to the west, and the I-605 northbound off-ramp to Alondra Boulevard to the northwest.

The *Preliminary Site Investigation for Hazardous Waste* (2018) prepared for the Build Alternative identified nine potential hazardous materials sites located in areas of proposed construction. Site disturbance at these locations could result in the potential for the release of petroleum, volatile organic compounds (VOCs), and/or other chemicals and hazardous materials. In addition, there is potential to encounter aerially deposited lead (ADL), lead-based paints, and pesticides during construction (i.e., during the excavation of soil or the disturbance of structures).

Hazardous and potentially hazardous materials used in or encountered during construction, as well as the transport and disposal of such materials, would be conducted in accordance with applicable federal, State, and local requirements so that potential risks are reduced or avoided. To avoid, minimize, and/or mitigate for potential impacts related to hazardous waste, a Phase II Site Investigation will be conducted. The Phase II Site Investigation will also address appropriate methods for handling and disposing of any present hazardous materials. Therefore, impacts related to hazardous waste would not be substantially adverse.

Construction of other reasonably foreseeable actions may expose or require handling contaminated soils. These actions would be evaluated on a project-by-project basis to determine the potential for encountering hazardous materials and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with compliance with applicable federal, State, and local requirements and the implementation of avoidance and minimization measures that will be determined after the Phase II Site Investigation, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to hazardous waste. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.12 Air Quality

The air quality cumulative RSA includes the areas in proximity to active construction areas and nearby construction sites for the assessment of short-term construction impacts. At a regional level, the cumulative RSA also includes the South Coast Air Basin for the assessment of long-term operation impacts. The RSA is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), which operates several air quality monitoring stations in the Basin. The closest monitoring station with data for all five criteria pollutants (carbon monoxide [CO], ozone [O₃], nitrogen dioxide [NO₂], particulate matter less than 2.5 microns in size [PM_{2.5}], and particulate matter less than 10 microns in size [PM₁₀]) is the Anaheim-Pampas Lane Station. The RSA is in a heavily urbanized area, and changes in air quality depend on emissions levels in the RSA and the Basin.

According to the *Air Quality Analysis* (2018), construction of the Build Alternative would result in short-term degradation of air quality due to the release of particulate emissions generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment are also anticipated and would include CO, nitrogen oxides (NO_x), sulfur dioxide (SO₂), VOCs, directly emitted particulate matter (PM) (i.e., PM_{2.5} and PM₁₀), and toxic air contaminants (TACs) (e.g., diesel exhaust PM). The Build Alternative may also expose sensitive receptors and workers to valley fever from fugitive dust generated during construction. With implementation of project features identified in Section 2.12.3, fugitive dust and exhaust emissions from construction activities would not result in substantially adverse air quality impacts.

Operation of the Build Alternative may result in an increase in vehicle miles traveled (VMT) in the RSA because traffic currently using other routes may choose to use the

new facilities. According to the models in the *Revised Draft Traffic Analysis Report* (2017), both the No Build and Build Alternative criteria pollutant emissions are all lower than the existing condition emissions. With the exception of PM_{2.5} and PM₁₀, the Build Alternative criteria pollutant emissions are all less than the No Build Alternative emissions. The increased PM_{2.5} and PM₁₀ emissions are due to the increase in re-entrained dust emissions associated with the increased regional VMT. However, the increases in PM_{2.5} and PM₁₀ emissions are low compared to the total emissions. Therefore, impacts related to air quality would not be substantially adverse.

Construction of other reasonably foreseeable actions may contribute to short-term air quality impacts in the SCAG region. However, the transportation projects listed in Table 2.18.1 are included in the SCAG RTP/SCS and the 2017 FTIP, which were found to be conforming by the Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) on December 17, 2018. These strategies help the region achieve federal Clean Air Act (CAA) requirements and provide beneficial impacts related to long-term air quality (SCAG 2016b). The reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine air quality impacts and the appropriate measures required to reduce impacts. Because project impacts would not be adverse, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect related to air quality. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.13 Noise

The cumulative RSA for noise includes all areas adjacent to the Build Alternative where there are sensitive land uses that would be affected by noise from construction and traffic noise from operation of the Build Alternative. The cumulative RSA focuses on areas in the vicinity of the Build Alternative with potential noise-sensitive uses, including residential uses, parks, open spaces, and areas of frequent human activity. The cumulative RSA is a heavily urbanized area, with noise sources that include traffic on surrounding freeways and local roads, commercial and industrial facilities, construction activities, commercial centers, performing arts centers, and ambient noises from other land uses (e.g., schools, parks, hospitals, and churches).

As described in the *Noise Study Report* (NSR) (2018), short-term noise impacts occurring during construction of the Build Alternative include:

- **Transportation Noise:** Additional noise would be generated from construction crew commutes and the transport of construction equipment and materials. However, the noise would be minimal when compared to existing traffic volumes in the RSA, and long-term changes in noise level would not be perceptible.
- **Construction Noise:** Noise levels vary depending on the phase of construction and type of equipment. Typical noise levels at 50 ft from an active construction area range up to 86 A-weighted decibels (dBA) maximum instantaneous noise level (L_{max}) during the noisiest construction phases (i.e., the site preparation phase). Sensitive receptors within 50 ft of the construction area may be subject to short-term noise higher than 86 dBA L_{max} .

Compliance with Caltrans Standard Specifications Section 14-8.02 (2015) will be required to minimize construction noise impacts on sensitive land uses adjacent to the Build Alternative. The noise level from the contractor's construction operations between the hours of 9:00 p.m. and 6:00 a.m. shall not exceed 86 dBA L_{max} at a distance of 50 ft. Contractors will not operate an internal combustion engine on the job site without the appropriate manufacturer-recommended muffler. With compliance with Caltrans Standard Specifications Section 14-8.02, the Build Alternative would not result in adverse construction noise impacts.

Long-term noise impacts associated with Build Alternative operation are solely from traffic noise. The Build Alternative would result in a portion of the highway being located closer to sensitive receptors, and, in many cases, travel lanes would be located beyond the current freeway ROW. In a variety of neighborhoods, noise barriers would be located less than 50 ft from residential structures. In addition, expansion of the highway would increase the capacity of the highway, further increasing the ambient noise.

The NSR includes traffic modeling results of future traffic noise levels based on worst-case traffic operations in the RSA. The NSR indicates that noise would approach or exceed the Noise Abatement Criteria (NAC) in several receptor locations within the RSA. Of the 362 modeled receptors, 56 receptors under the Build Alternative would approach or exceed the NAC. No additional impacts would occur under the Build Alternative with the Four-Lane Gridley Road Overcrossing Design Option, the Pioneer Boulevard L-9 Design Option, or the Pioneer Boulevard Westbound Ramps/168th Alignment Design Option. The Build Alternative with the Non-Standard Lane and Shoulder Widths Design Option would have 10 fewer impacted receptors compared to the Build Alternative (Receptors R-107, R-177

through R-183, R-248, and R-249). The Build Alternative with the Diamond Ramps Design Option would have 2 fewer impacted receptors compared to the Build Alternative (Receptors R-248 and R-249). No receptor would experience a substantial noise increase of 12 dBA or more over its corresponding existing noise levels under any scenario. Therefore, the Build Alternative would not result in substantially adverse impacts related to noise.

The operational noise impact analysis takes into account future projections of traffic noise, which assume that other planned projects in the region will contribute to projected noise levels. Therefore, no additional cumulative impacts beyond those disclosed in the NSR are anticipated.

Other reasonably foreseeable actions within the Build Alternative RSA would be evaluated on a project-by-project basis to determine noise impacts and the appropriate measures required to reduce impacts. Each project would be responsible for following applicable noise ordinances during construction. Because long-term noise would not be adverse, and NAC would be implemented, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect on noise. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.14 Energy

The cumulative RSA for energy consumption is the SCAG planning region because energy consumption is typically tracked on a regional or State level.

The Build Alternative would result in substantial increases in energy consumption in the RSA as a result of construction, including energy consumption from the use of construction equipment, materials delivery, and additional travel as a result of detours associated with lane and ramp closures. However, increases in energy consumption would be short-term and temporary, and would not be substantial at the regional level. In addition, the Build Alternative would provide substantial long-term benefits, including increased mobility in the region, enhanced safety, and improvements to non-standard design features. Though substantially adverse effects on energy consumption are not anticipated, and no avoidance, minimization, or mitigation measures are required, the Build Alternative would implement a construction efficiency plan to further reduce energy consumption during construction.

At the regional level, the cumulative increase in energy consumption for the Build Alternative would be negligible. Based on the data in the *Energy Technical Report*

(2017), the Build Alternative would not substantially contribute to overall energy consumption at the regional level, and would not be expected to result in substantially adverse energy impacts.

Other reasonably foreseeable actions could contribute to increased short-term energy consumption within the region. The transportation projects listed in Table 2.18.1 that are included in the SCAG RTP/SCS, which includes strategies to help the region achieve State greenhouse gas (GHG) emission reduction goals and federal CAA requirements, may provide beneficial impacts related to energy consumption. All reasonably foreseeable actions would be evaluated on a project-by-project basis to determine the energy consumption and the appropriate measures required to reduce impacts. Because project impacts would not be adverse, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect on energy consumption. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.15 Wetlands and Other Waters

The cumulative RSA for wetlands and other waters is the BSA used in the *Natural Environment Study (Minimal Impacts)* (NES [MI]) (2017 and 2018 Errata) and the *Jurisdictional Delineation Report* (2017 and 2018 Errata). The BSA is in the cities of Cerritos and Artesia in Los Angeles County along westbound SR-91 from Shoemaker Avenue to I-605, and northbound I-605 to Alondra Boulevard. The 283 ac BSA encompasses the potential impact areas (temporary and permanent) for the Build Alternative, as well as a buffer area to account for any potential indirect impacts to adjacent potentially jurisdictional features. The majority of the drainage features within the BSA consist of unnamed storm water runoff and concrete flood control channels, which generally run parallel to SR-91, I-605, and the on/off-ramps, and are presumed to eventually drain into the San Gabriel River.

A total of 14 drainage features were described in the *Jurisdictional Delineation Report* (2017 and 2018 Errata). The Build Alternative is expected to result in the following impacts to areas within potentially jurisdictional drainage features: (1) 0.43 ac of permanent impacts and 0.01 ac of temporary impacts to potential United States Army Corps of Engineers (USACE) jurisdiction; and (2) 0.52 ac of permanent impacts and 0.02 ac of temporary impacts to potential California Department of Fish and Wildlife (CDFW) jurisdiction. RWQCB jurisdiction is expected to coincide with USACE jurisdiction. Therefore, permits (i.e., USACE Section 404 authorization,

CDFW Section 1602 Streambed Alteration Agreement, and RWQCB Section 401 Water Quality Certification) are expected to be necessary.

Although jurisdictional areas are likely to be affected by the project, compensatory mitigation is not expected to be required for impacts to waters that are subject to USACE, CDFW, or RWQCB regulatory authority permitting requirements because the drainage features proposed to be impacted consist of concrete-lined ditches that are excavated on dry land and did not replace previously existing natural drainages. With implementation of project features and BMPs (see Sections 2.14.3 and 2.14.4) to prevent loose soil or pollutants from entering the drainage features within and adjacent to the BSA, impacts on jurisdictional drainage features would be avoided. Therefore, impacts on wetlands and other waters would not be substantially adverse.

Other reasonably foreseeable actions may result in temporary and permanent impacts to jurisdictional drainage features. These actions would be evaluated on a project-by-project basis to determine the acreage of impacts to jurisdictional drainage features and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with the implementation of project features and BMPs, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect on wetlands and other waters. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.16 Animal Species

The cumulative RSA for animal species is the BSA used in the NES (MI) (2017). The BSA is in the cities of Cerritos and Artesia in Los Angeles County along westbound SR-91 from Shoemaker Avenue to I-605, and northbound I-605 to Alondra Boulevard. The 283 ac BSA encompasses the potential impact areas (temporary and permanent) for the Build Alternative, as well as a buffer area to account for any potential indirect impacts to adjacent biological resources. Land uses surrounding the BSA include transportation, commercial, residential, educational (i.e., schools), and recreational (e.g., neighborhood parks and golf courses).

Several California Species of Special Concern (SSC) and California Special Animals have the potential to occur within the BSA due to the presence of suitable habitat. However, no special-status animal species were observed during field surveys for the project. Animal species that can potentially occur in the BSA include:

- **Nesting Migratory Birds:** The BSA provides nesting habitat, consisting primarily of ornamental vegetation, for migratory birds.
- **Rufous Hummingbird:** This species is well adapted to suburban environments. The BSA provides nesting habitat (mainly ornamental vegetation) for this species.
- **Cooper's Hawk:** This hawk species lives primarily in forests and woodlands, but can nest in tall ornamental trees. The BSA provides marginally suitable foraging and nesting habitat for this species.
- **Special-Status Bat Species:** Bat species that may roost within the BSA include western yellow bat, Yuma myotis, pallid bat, silver-haired bat, and hoary bat. During the surveys, bat roosting was confirmed at two structures and was determined moderately to highly probable at three additional structures in the BSA. The surveys indicated that night roosting may occur at several structures throughout the BSA. The loss of a night roost can negatively affect the use of a foraging area, and consequently may result in reduced fecundity in species that are already slow to reproduce.

With the implementation of avoidance and minimization measures outlined in the NES (MI) (included in Section 2.16.4), the Build Alternative is not expected to result in substantially adverse impacts on nesting migratory birds, rufous hummingbirds, Cooper's hawks, or special-status bat species.

Other reasonably foreseeable actions may result loss of foraging, roosting, or nesting habitat for animal species. These actions would be evaluated on a project-by-project basis to determine the presence of animal species and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with the implementation of avoidance and minimization measures identified in Section 2.16.4, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect on animal species. Therefore, no additional avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.17 Threatened and Endangered Species

The cumulative RSA for threatened and endangered species is the BSA used in the NES (MI) and is described above in Section 2.18.3.17. Three federally and/or State-listed plant species potentially occur or are known to occur within the vicinity of the BSA, which are salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*), Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), and Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*). However, no suitable habitat

to support these plant species occurs within the BSA, and the species were not observed during the surveys. Therefore, no special-status plant species are expected to occur within the BSA or to be affected by the Build Alternative.

In addition, five wildlife species that are federally and/or State-listed as endangered or threatened were identified by the United States Fish and Wildlife Service (USFWS) as potentially occurring within the vicinity of the BSA. These species are western snowy plover (*Charadrius nivosus nivosus*), coastal California gnatcatcher (*Polioptila californica californica*), California least tern (*Sternula antillarum browni*), least Bell's vireo (*Vireo bellii pusillus*), and Pacific pocket mouse (*Perognathus longimembris pacificus*). However, no special-status animal species were observed during surveys. With the implementation of the project feature outlined in Section 2.16.3, the project is not expected to result in substantially adverse impacts on special-status species.

Other reasonably foreseeable actions within the Build Alternative BSA would be evaluated on a project-by-project basis to determine the presence of threatened or endangered species, the presence of critical habitat, and the appropriate measures required to reduce impacts. Because project impacts would not be adverse with the implementation of the project feature identified in Section 2.16.3, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect on threatened or endangered species. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.3.18 Invasive Species

The cumulative RSA for invasive species is the BSA used in the NES (MI) and is described in Section 2.18.3.17. Vegetation in the BSA consists primarily of ornamental landscaping and ruderal/weedy vegetation cover. A number of the plants observed within the BSA are classified as invasive species and listed on the California Invasive Plant Council (Cal-IPC) Inventory Database.

To ensure compliance with Executive Order (EO) 13112 (federal law that governs the prevention of introducing and spreading invasive species and supports efforts to eradicate and control the establishment of invasive species), invasive species would be removed from the Build Alternative work area and controlled during construction. With implementation of the project feature outlined in in Section 2.17.3.2, the Build Alternative is not expected to disperse exotic plant species seeds or otherwise

contribute to the invasion of exotic species into natural habitats. Therefore, impacts related to invasive species would not be substantially adverse.

Other reasonably foreseeable actions would be required to comply with EO 13112, and are not expected to result in substantially adverse impacts related to invasive species. These actions would be evaluated on a project-by-project basis to determine impacts related to invasive species and the appropriate measures to reduce these impacts. Because project impacts would not be adverse, the Build Alternative, in conjunction with past, present, and reasonably foreseeable projects, would not result in a cumulative effect on invasive species. Therefore, no avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

2.18.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures for cumulative impacts are required.

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