BIOLOGICAL ENVIRONMENT

Wetlands and other waters are discussed in Section 2.16, Wetlands and Other Waters. As noted earlier in the introduction to Chapter 2, habitat suitability for threatened and endangered species in the biological study area (BSA) was deemed low, and none were detected during biological surveys; therefore, the Build Alternative is not anticipated to impact any threatened or endangered species. As a result, there is not a Threatened and Endangered Species section in this document. Please refer to Table 2.1, Federal Species Effects Determinations, for a summary of No Effect determinations.

2.15 Natural Communities

2.15.1 Regulatory Setting

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

2.15.2 Affected Environment

The information in this section is based on the *Natural Environment Study* (May 2017) prepared for the proposed project.

2.15.2.1 Biological Study Area

The Study Area assessed for biological resources is referred to as the BSA. The BSA is approximately 475.64 acres (ac) (approximately nine linear miles along the Interstate 5 [I-5] corridor) and is shown in Figure 2.15.1. The BSA represents the area of potential direct and indirect project impacts to biological resources and includes the existing I-5 right-of-way plus a 100-foot (ft) buffer from the edge of the proposed right-of-way (or 100 ft from the outer limits of the work area). The northern limit of the BSA is in the City of Tustin at State Route 55 (SR-55). The BSA's southern terminus is south of the I-5/Interstate 405 (I-405) interchange in the City of Irvine.

The proposed project segment of I-5 and the BSA traverses parts of the Cities of Irvine and Tustin in Orange County in mostly urban settings consisting of residential, recreation, commercial, and undeveloped land uses. Peters Canyon Wash passes under I-5 just south of the State Route 261 (SR-261) in the northern end of the BSA.

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LEGEND

Biological Study Area (BSA)

0 300 600
FEET

SOURCE: Google Maps (2016); AECOM (2016)

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2.15-1

Sheet 1 of 5

I-5 Improvement Project: I-405 to SR-55

Aerial Photos of the BSA

12-ORA-5 PM 21.3/30.3

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LEGEND

Biological Study Area (BSA)

0 300 600
FEET

SOURCE: Google Maps (2016); AECOM (2016)

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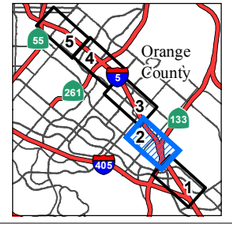

2.15-1
Sheet 2 of 5

I-5 Improvement Project: I-405 to SR-55

Aerial Photos of the BSA
12-ORA-5 PM 21.3/30.3
EA No. 0K670K

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Jeffrey Rd

Walnut Ave

Yale Ave

Culver Dr

Trabuco Rd

LEGEND

Biological Study Area (BSA)

0 300 600
FEET

SOURCE: Google Maps (2016); AECOM (2016)

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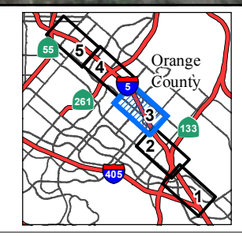

2.15-1

Sheet 3 of 5

I-5 Improvement Project: I-405 to SR-55

Aerial Photos of the BSA

12-ORA-5 PM 21.3/30.3

EA No. 0K670K

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Walnut Ave

Jamboree Rd

Tustin Ranch Rd

LEGEND

Biological Study Area (BSA)

0 300 600
FEET

SOURCE: Google Maps (2016); AECOM (2016)

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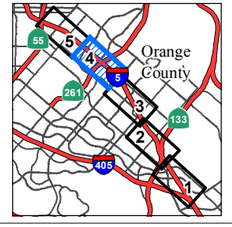

2.15-1
Sheet 4 of 5

I-5 Improvement Project: I-405 to SR-55

Aerial Photos of the BSA

12-ORA-5 PM 21.3/30.3

EA No. 0K670K

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Walnut Ave

Red Hill Ave

Newport Ave

1st St

Irvine Blvd

LEGEND

Biological Study Area (BSA)

0 300 600
FEET

SOURCE: Google Maps (2016); AECOM (2016)

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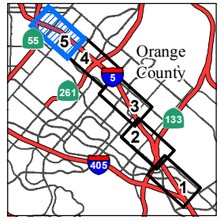

2.15-1

Sheet 5 of 5

I-5 Improvement Project: I-405 to SR-55

Aerial Photos of the BSA

12-ORA-5 PM 21.3/30.3

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Within the BSA, Agua Chinon Wash extends under I-5 just south of Alton Parkway and later joins San Diego Creek. The BSA is highly urbanized and mostly barren of vegetation.

2.15.2.2 Vegetation Communities

Vegetation communities or land cover types in the BSA include freshwater marsh, open water, urban and commercial, transportation, ornamental landscaping, and disturbed or barren.

Habitats are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of sensitive plants or animals occurring on site. The only habitat and natural community of special concern within the BSA is riparian in the form of freshwater marsh (refer to Figure 2.15.2).

Freshwater Marsh

Within the BSA, 3.55 ac of freshwater marsh emergent wetland occurs in Peters Canyon Wash. This riparian vegetation type consists of seasonally or permanently flooded low-lying areas dominated by cattail (*Typha* sp.) with Goodding's black willow (*Salix gooddingii*).

2.15.2.3 Wildlife Corridors and Movement

The BSA is characterized predominantly by urban, commercial, and transportation land uses, ornamental landscaping, and disturbed or barren land.

Wildlife crossings are generally structural passages beneath or above roadways. "Wildlife crossing" is the umbrella term encompassing underpasses, overpasses, 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 in this wildlife corridor assessment are medium-sized mammals such as coyote (*Canis latrans*).

Wildlife movement in the BSA has been substantially constrained for many years by human-made barriers (e.g., lack of suitable vegetative cover, existing roadways, storm water conveyance structures, and fencing, along with the associated surrounding development). The urban setting of the BSA provides limited opportunities for habitat continuity. Wildlife movement of species such as bobcats (*Lynx rufus*) and coyotes could occur within the BSA, but substantial movement is

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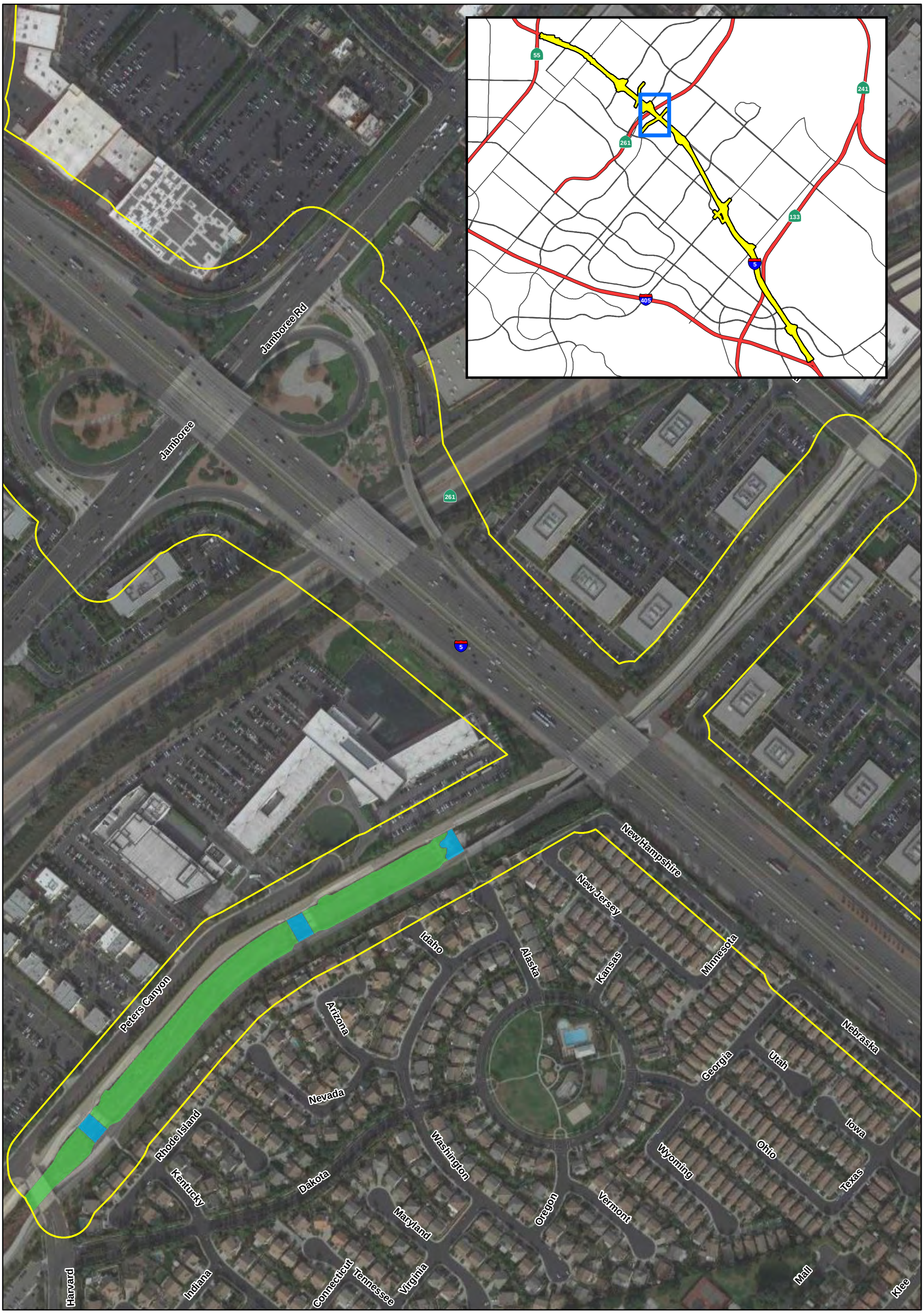

LEGEND

Biological Study Area (BSA)

Vegetation

Freshwater Marsh

Open Water

N

0 150 300
FEET

SOURCE: Google Maps (2016); AECOM (2017)

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FIGURE 2.15-2

I-5 Improvement Project: I-405 to SR-55

Special-Interest Vegetation

12-ORA-5 PM 21.3/30.3

EA No. 0K670K

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not expected under the I-5 bridge crossings within the BSA due to lack of habitat and cover.

2.15.3 Environmental Consequences

2.15.3.1 Temporary Impacts

Build Alternative (Alternative 2A and Alternative 2B [Preferred Alternative])

Implementation of the Build Alternative would not result in temporary impacts to riparian habitat in the form of freshwater marsh located in Peters Canyon Wash. The preliminary temporary construction easement (TCE) includes only the paved areas adjacent to Peters Canyon Wash and the nonwetland areas upstream which are concrete-lined and would not result in direct impacts to adjacent riparian habitat.

Temporary indirect impacts include potential impacts to adjacent habitats caused by general construction activities, storm water runoff, and litter. Implementation of Project Features PF-BIO-1 through PF-BIO-5, listed below, will address potential indirect impacts to adjacent habitats resulting from general construction activities.

PF-BIO-1 **Delineation of Environmentally Sensitive Areas.** Prior to construction, highly visible barriers (e.g., orange construction fencing) will be installed along the boundaries of the proposed project footprint to designate Environmentally Sensitive Areas (ESAs) that are to be preserved. ESAs will also be delineated on the design plans. No project activity of any type will be permitted within these ESAs. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Construction-related Best Management Practices (BMPs) such as silt fence barriers, fiber rolls, and gravel bag berms will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where vegetation is immediately adjacent to planned grading activities.

PF-BIO-2 **Restoration of Temporary Impacts.** Areas of natural habitat that are temporarily affected by construction activities will be restored to a natural condition. The restoration effort will emulate surrounding vegetation characteristics and/or return to previous conditions.

Restoration plans will be prepared during final design and included in the Plans, Specifications, and Estimates (PS&E) package. The revegetation plan will be prepared consistent with the California Department of Transportation (Caltrans) landscape architecture guidelines and requirements. Restoration plans will be reviewed and approved by the Wildlife Agencies (the California Department of Fish and Wildlife [CDFW] and the United States Fish and Wildlife Service [USFWS]).

PF-BIO-3 **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 nonsensitive upland habitat areas. The designated upland areas will be located in such a manner as to prevent any spill runoff from entering waters of the United States.

PF-BIO-4 **Biological Monitoring.** A qualified Biologist will monitor construction activities adjacent to Peters Canyon Wash, for the duration of the proposed project to ensure that practicable measures are being employed to avoid and minimize incidental disturbance of habitat and Covered Species inside and outside the proposed project footprint. Opportunities to further avoid and minimize impacts on Covered Species will be explored.

PF-BIO-5 **On-Site Training.** When in or near natural habitat areas in Peters Canyon Wash, all personnel involved in the on-site project construction will be required to participate in a pre-construction environmental training program to understand the avoidance and minimization obligations on the proposed project.

Storm water and litter impacts would be avoided through compliance with the Construction General Permit and implementation of project-specific best management practices (BMPs) which are included as project features. These include Project Feature PF-WQ-1 in Section 2.9, Water Quality and Storm Water Runoff.

During construction of the Build Alternative, incremental increases in night lighting, noise, human activity, risk of wildfire, and impacts to water quality could temporarily impact and discourage bobcat and coyote presence in the BSA. However, these species would likely continue to utilize the BSA when construction workers are not

present and equipment is not operating. Therefore, construction of the Build Alternative would not result in any substantial adverse temporary impacts to wildlife movement.

No Build Alternative (Alternative 1)

The No Build Alternative would not include construction of any of the Build Alternative improvements. Therefore, the No Build Alternative would not result in temporary impacts to riparian habitat or wildlife movement.

2.15.3.2 Permanent Impacts

Build Alternative (Alternative 2A and Alternative 2B [Preferred Alternative])

Implementation of the Build Alternative would not result in permanent impacts to riparian habitat in the form of freshwater marsh located in Peters Canyon Wash. Furthermore, implementation of the Build Alternative is not expected to permanently affect wildlife movement or decrease the functionality of any wildlife crossings within the BSA.

No Build Alternative (Alternative 1)

The No Build Alternative would not include the operation of any of the Build Alternative improvements. Therefore, the No Build Alternative would not result in permanent impacts to riparian habitat or wildlife movement.

2.15.4 Avoidance, Minimization, and/or Mitigation Measures

The Preferred Alternative will incorporate the project features outlined above in Section 2.15.3 to help address potential impacts. No avoidance, minimization, and/or mitigation measures are required.

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