APPENDIX F

Biological Resource Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis

CV LINK Project
Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Indio & Coachella, Riverside County, CA FPN: ATPL 6164 (022)

Revised August 23, 2016

Prepared by

Amec Foster Wheeler Environment & Infrastructure, Inc.
3120 Chicago Avenue, Suite 110
Riverside, CA 92507

BIOLOGICAL RESOURCE ASSESSMENT REPORT AND
COACHELLA VALLEY MULTIPLE SPECIES HABITAT CONSERVATION PLAN
COMPLIANCE ANALYSIS
FOR THE
CALIFORNIA DEPARTMENT OF TRANSPORTATION
AND
COACHELLA VALLEY ASSOCIATION OF GOVERNMENTS

CVLINK PROJECT

PALM SPRINGS, CATHEDRAL CITY, RANCHO MIRAGE, PALM DESERT, INDIAN WELLS, LA QUINTA, INDIO & COACHELLA
RIVERSIDE COUNTY, CALIFORNIA
FEDERAL PROJECT NO. ATPL 6164 (022)

Submitted to:
Terra Nova Planning and Research, Inc.
42635 Melanie Place, Suite 101
Palm Desert, California 92211

Contact: John Criste, Principal
(760) 341-4800
FAX: (760) 341-4455
jcriste@terranovaplanning.com

Submitted by:
Amec Foster Wheeler Environment & Infrastructure, Inc.
3120 Chicago Avenue, Suite 110
Riverside, California 92507

Contact: Nathan T. Moorhatch
(951) 369-8060 ext. 226
FAX: (951) 369-8035
nathan.moorhatch@amecfw.com

Revised August 23, 2016
Amec Foster Wheeler Project No. 322520065

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EXECUTIVE SUMMARY

CV Link is proposed as a ±49 mile (±64.34 miles including all Core Alignments) non-motorized, multi-modal transportation path network that passes through some of the most developed and populated portions of the Coachella Valley, providing access and connectivity between residential, commercial, recreational, institutional, and other land uses throughout the region, and providing recreational opportunities for pathway users. It is also anticipated that the project will contribute to local reductions in traffic volumes and associated air pollutants. Growth in the Coachella Valley has led to traffic congestion and air quality issues along Highway 111, the area's primary arterial, and the Coachella Valley as a whole. The CV Link project includes approximately 74.47 miles of possible route alignments, which have been assessed in this report. CV Link will provide an alternative to automobile transportation, thereby providing a means to reduce traffic, congestion, and air pollution, and improve community health and fitness. CV Link will also provide a means of low cost transportation for people living in disadvantaged communities.

The proposed Project (core alignment) is located in the Coachella Valley of central Riverside County, California. CV Link will connect the cities of Palm Springs, Cathedral City, Rancho Mirage, La Quinta, Palm Desert, Indian Wells, Indio, and Coachella. CV Link is a multi-jurisdictional Project. The project alternatives involve eight (8) incorporated cities, unincorporated Riverside County, and Reservation lands of three Native American tribes. CV Link will provide access to a wide range of community resources, as well as thousands of acres of local, state, and federal parkland and open space. Future extensions will continue south to the Salton Sea and north to Desert Hot Springs.

The Project route largely follows, and is proposed to be built upon existing levees of the region's principal watercourses, including Chino Wash, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. In some locations, the proposed route shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues.

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) was contracted by Terra Nova Planning and Research Inc. (Terra Nova) to prepare the following biological resources habitat assessment report and Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) compliance analysis. The Coachella Valley Association of Governments is a signatory to the CVMSHCP and mitigation provided by the CVMSHCP shall be maximized.

A review of the CVMSHCP confirmed that most of the existing and proposed Project route is located outside of designated CVMSHCP conservation areas. A portion of the northern part of the alignment (Segment 1) however, is within and/or immediately adjacent to the CVMSHCP Whitewater Floodplain Conservation Area. Additionally, the CV Link alignment closely approaches, but does not encroach on the Santa Rosa and San Jacinto Mountains Conservation Area in two relatively small areas: between Paxton Drive and Mirage Road on the south side of Highway 111, and in the Parkview Drive/Highway 111 area (referred to as Segment 4 on Project maps).

The Whitewater Floodplain Conservation Area provides Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. While there is modeled habitat for the Coachella Valley Jerusalem cricket, it has not been found in this area based on limited surveys. The area also provides some "Other Conserved Habitat" for the triple-ribbed milkvetch, desert tortoise, flat-tailed horned lizard, burrowing owl and Le Conte's thrasher (CVAG 2007).

Areas containing landscaped and ornamental vegetation, as well as significantly disturbed and largely developed areas, were also present throughout and immediately adjacent to portions of the proposed Project route, primarily in association with private residential properties, commercial/industrial development and recreational facilities (i.e., golf courses and parks). The CVMSHCP refers to these areas as rural/urban or agriculture. Roughly 88% of the CV Link alignment appears to be located in these rural/urban or agriculture areas, with approximately 12% located adjacent to natural areas.

The literature review resulted in the identification of eighty-seven (87) special-status biological resources known to occur in the vicinity (within an approximate 5-mile radius) of the CV Link alignment. In all, forty-four (43) special-status plants, one (1) special-status vegetation community, four (4) special-status invertebrates, two (2) special-status fishes, four (4) special-status amphibians, four (4) special-status reptiles, seventeen (17) special-status birds and twelve (12) special-status mammals were reported occurring within the general vicinity of the Project alignment.

The current field surveys for the biological assessment for the CV Link Project were conducted on June 1, 2, 3, 6, and 7, 2016 by Amec Foster Wheeler senior biologist Michael D. Wilcox and Amec Foster Wheeler field technician Phillip Clevinger. Amec Foster Wheeler senior biologist Nathan T. Moorhatch also performed surveys of the alignment on November 20, 2015 and June 16, 2016; as well as monitoring for a geotechnical boring site on the alignment between Dillon Road and Golf Center Parkway on May 17, 2016. Onsite habitats were assessed based on the presence or absence of suitable habitat components (e.g., soils, vegetation and topography) characteristic of the potentially occurring special-status species determined by the literature review.

A total of one hundred four (104) common native and exotic plant species were observed on or adjacent to the various segments of the proposed Project route. No special-status plant species were observed. Vertebrates that have been recorded along the alignment by Amec Foster Wheeler biologists during the current and previous surveys include: one (1) fish, three (3) amphibians, nine (9) reptiles, thirty-three (33) birds, and eight (8) mammals. Wildlife detected included four (4) special-status bird species, burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), yellow warbler (*Setophaga petechia*), and vermilion flycatcher (*Pyrocephalus rubinus*). Amec Foster Wheeler Senior Biologist Nathan Moorhatch observed a live burrowing owl and burrows with owl sign (pellets, whitewash and feathers) on Segment 9 of the proposed CV Link route on Twenty-nine Palms Tribal lands located between Dillon Road

and Golf Center Parkway. Additionally, the Whitewater Floodplain Conservation Area provides "Other Conserved Habitat" for the burrowing owl, although no owls were observed in this area.

Native vegetation, where present adjacent to the alignment, is mostly dominated by a mixture of the following vegetation communities: *Larrea tridentata/Ambrosia dumosa* shrubland alliance (Sawyer et. al 2009) (Sonoran creosote bush/mixed woody and succulent scrub in the CVMSCHP); Creosote bush – white bursage scrub [Sandy association]/*Ambrosia salsola* alliance (pehemeral and stabilized shielded sand fields in the CVMSHCP); and *Atriplex canescens* alliance (desert saltbush scrub in the CVMSHCP). The majority of the Project route travels through areas classified as rural/urban, developed residential, commercial, recreational and active and fallow agricultural lands.

The project occurs along the Whitewater River and Tahquitz Creek. These watercourses are under the jurisdiction of the United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB). A total of 93.17 acres of non-wetland waters of the United States (WUS) and waters of the State (WSC), 11.11 acres of wetlands, and 417.17 acres of CDFW jurisdictional streambeds were found to occur and mapped within the study area. The proposed project will temporarily impact 0.061 acre and permanently impact 0.047 acre of wetlands, temporarily impact 5.08 acres and permanently impact 2.83 acres of WUS/WSC, and temporarily impact 29.65 acres and permanently impact 15.98 acres of CDFW streambed. These impacts will require authorizations from the USACE, CDFW, and RWQCB.

The Project proponent proposes the majority of the construction associated with CV Link within either existing paved surfaces and/or within the graded/cleared dirt roads (where present), and therefore Project-related impacts to natural vegetation communities and habitats within Conservation Areas are expected to be largely avoided and/or minimized to the greatest extent possible. The CVMSHCP states that permittees must also comply with all terms and conditions of the CVMSHCP and Implementing Agreement including, but not limited to: 1) participation in the Joint Project Review Process, and 2) Implementation of the "Land Use Adjacency Guidelines," and 3) payment of local development mitigation fees.

Although the burrowing owl is a covered species under the CVMSHCP, additional survey and conservation requirements apply. Portions of the Project route and adjacent areas where burrowing owls were detected and/or those that have potential for burrowing owls to occur that are within or immediately adjacent to CVMSHCP conservation areas will require burrow searches and pre-construction burrowing owl surveys conducted in accordance with the 2012 Staff Report on Burrowing Owl Mitigation (CDFG 2012) prior to commencement of Project-related ground disturbance and vegetation clearance. For those portions of the Project route that have potential to support burrowing owls and are located outside of CVMSHCP conservation areas, two "take avoidance surveys" for the burrowing owl will also be required.

Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to the confluence of Tahquitz Creek and the Whitewater River channel (AMEC 2014). The Project proponents are aware of this, and are currently preparing a Habitat Conservation Plan

(HCP) for this federally endangered species and are currently in negotiations with the United States Fish and Wildlife Service (USFWS).

Of the special-status species that are not covered by the CVMSHCP potentially occurring along the proposed Project alignment, only impacts to chaparral sand-verbena would potentially be considered significant under CEQA if a substantial population were to be lost or impacted as this species is designated as a CNPS List 1B.1 species meaning that it is considered to be "seriously threatened in California and elsewhere," has a "high degree (and/or) immediacy of threat" and is considered to have "over 80% of occurrences threatened / high degree and immediacy of threat." However, due to the extremely disturbed and/or developed condition of the majority of the proposed alignment, this plant is not expected to occur on the CV Link route. However, if this species does occur along the proposed alignment, the Project is not expected to result in impacts to a substantial population of this species. Potential impacts to the remaining plant and animal species not covered by the CVMSHCP potentially occurring onsite would likely fall below the threshold of significance under CEQA for a variety of reasons including: 1) abundance or commonality of these species elsewhere, 2) a need for more general information regarding these species, 3) the unlikelihood of occurrence due to marginality of habitat, 4) the unlikelihood of impacts based on the location of the Project route in or adjacent to existing development and 5) Project features designed to avoid and/or minimize impacts. For these reasons, focused surveys to determine the status of the potentially-occurring special-status species not afforded coverage under the CVMSHCP are not considered to be warranted nor are they recommended for this Project.

Significant portions of the alignment pass through or are adjacent to areas (including golf courses, park lands, areas of landscaped trees and shrubs, and undeveloped natural habitats) that contain habitat for a variety of nesting birds. Bird nests were observed in landscaped trees and shrubs, and on several of the existing bridges along the proposed CV Link route. Although some of the birds potentially nesting along the Project route are CVMSHCP-covered species, this coverage does not allow for take of the individual birds or their active nests. Additionally, the CVMSHCP does not provide coverage or conservation for many other bird species potentially occurring or nesting onsite that are protected by the Migratory Bird Treaty Act (MBTA). Therefore, impacts to native birds and their nests are not permitted under any part of the CVMSHCP. Because impacts to nesting birds are not covered by the CVMSHCP or MBTA, any activities that could potentially cause disruption of natural nesting behavior or directly disturb an active nest or nesting bird must be avoided. Avoidance of Project activities that have the potential to disturb nesting birds during the nesting season (1 February to 31 August) is the easiest way to avoid impacts. If it is not feasible to avoid such Project activities during the nesting season, nesting bird surveys conducted by a qualified biologist should be completed prior to any such activities. If active nests are found, they should be avoided, and adequate no-disturbance buffer zones established and observed by Project activities until after the young have fledged. Although there is no established protocol for nest avoidance, regulatory agencies generally recommend avoidance buffers of about 500 feet for birds-of-prey, and 100–300 feet for songbirds; however, these avoidance buffer zone areas are often determined on a case-by-case, or a project-by-project basis.

Amec Foster Wheeler biologists also believe that utilizing fencing along the “top-of-slope” of the levee and/or signs that state “Ecological Conservation Area, Stay on Trails, Dogs on Leash”, or other similar statements, along that portion of the CV Link alignment adjacent to the Whitewater Floodplain Conservation Area could help protect this sensitive ecological area from impacts created by CV Link users and their pets that may otherwise stray off the designated pathway. Additionally, implementing a “dogs must be leashed” policy could enhance protection of not only the adjacent native habitat and wildlife, but also other users of CV Link pathway.

Lastly, installation of interpretive signs adjacent to areas of native habitat (such as the Whitewater Floodplain Reserve) that illustrate and educate the public on some of the native wildlife, plant, or vegetation communities present adjacent to the alignment could help foster respect and create interest and appreciation for some of the native flora and fauna that make the Coachella Valley unique.

Through participation in the CVMSHCP; as well as payment of the required development fees and implementation of the rules and regulations (especially participation in the Joint Project Review Process for the Project features within Conservation Areas and implementation of the Land Use Adjacency Guidelines), the Project proponent will provide avoidance, minimization and mitigation of Project-related impacts to CVMSCHP-covered species and other special-status species potentially occurring onsite and/or immediately adjacent to the Project features that are not covered by the CVMSHCP. Additionally, surveys to determine the status of burrowing owl, avoidance of impacts to nesting birds, application for requisite permits from USACE and/or CDFW for unavoidable impacts to jurisdictional areas (if any) shall also minimize and/or eliminate Project impacts to sensitive biological resources.

With the implementation of the recommendations, requirements and guidelines summarized above, including requisite participation in the CVMSHCP, Project-related impacts to the CVMSHCP-covered species, special-status species not covered by the CVMSHCP, nesting birds protected under the MBTA and USACE and/or CDFW jurisdictional areas are expected to mitigate Project-related impacts to less than significant levels.

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1.0 INTRODUCTION

This biological resources habitat assessment report and Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) compliance analysis was prepared by Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) for the Coachella Valley Association of Governments (CVAG) and California Department of Transportation (CALTRANS) proposed CV Link Project (Project) with all considered alignments totaling 74.47 miles in length and located in the cities of Palm Springs, Cathedral City, Rancho Mirage, La Quinta, Palm Desert, Indian Wells, Indio, and Coachella, unincorporated Riverside County lands, Reservation Lands of the Agua Caliente, Twenty-Nine Palms and Cabazon Bands, in Riverside County (Figure 1).

The Project proponent is a participant in the CVMSHCP and mitigation provided by the CVMSHCP will be maximized. This report and the information contained herein are intended to be used for compliance with federal, state, and local environmental laws and regulations (i.e., CVMSHCP).

2.0 PROJECT DESCRIPTION AND BACKGROUND

Purpose and Need

Growth in the Coachella Valley has led to traffic congestions and air quality issues along Highway 111, the area's primary arterial, and the Coachella Valley as a whole. CV Link will provide an alternative to automobile transportation, thereby providing a means to reduce traffic, congestion, and air pollution, and improve community health and fitness. CV Link will also provide a means of low cost transportation for people living in disadvantaged communities. Walking and cycling can be a more economically efficient mode of transportation than driving an automobile. According to AAA and US Census data, yearly operation and ownership of one motor vehicle accounts for up to 25 percent of the median household's income in the Coachella Valley (AAA 2014).

The CV Link will enhance connectivity between major employment, residential, recreational, and institutional centers throughout the Coachella Valley, while facilitating and promoting the use of alternative modes of transportation, including walking, bicycles, neighborhood electric vehicles (NEVs), golf carts, and wheelchairs. It will generate hundreds of local and regional jobs associated with its design, construction, and maintenance. CV Link is also expected to have other significant beneficial economic effects by complementing the hospitality and resort destination components of the Coachella Valley economy.

The Project is also expected to contribute to reductions in motor vehicle congestion along local roadways, including State Highway 111 - the valley's principal motorized connector route. The associated reductions in vehicle miles traveled will also reduce pollutant emissions and result in air quality improvements. The Project will enhance the valley transportation network and provide new health and recreational opportunities for pathway users. CV Link will also serve as a community gathering space and community aesthetic feature that incorporates innovative design and artistic elements.

Project Goals and Objectives

It is the intent of the Project that it provide Coachella Valley residents and visitors a superior means to travel safely by foot, bicycle, electric mobility device, or low-speed electric vehicle (LSEV) rather than by automobile. The overall goals and objectives of the CV Link Project are set forth below:

CV Link Goals[1]

By addressing current deficiencies in the walking and bicycling network, CV Link will help achieve goals relating to people, place, and prosperity.

PEOPLE

1. Public Health and Safety: Engender a healthier community by providing safer infrastructure for people to walk and ride bicycles for transportation and recreation.
2. Mobility for Senior Citizens and Disabled Persons: Improve mobility for the elderly and people with mobility impairments.
3. Low-Cost Transportation: Provide transportation options that are more economical than automobiles, thereby improving the mobility of lower income populations.

PLACE

4. Community Integration: Utilize the geographic opportunity provided by the Whitewater River Channel to link neighborhoods- all communities, destinations, and the natural environment- throughout the Coachella Valley.
5. Environmental Stewardship: Respect and enhance the natural and cultural resources along the Whitewater River Channel and Tahquitz Creek; improve air quality by enabling people to use less-polluting options for transportation.

PROSPERITY

6. Economic Growth: Provide jobs in construction, tourism, CV Link-focused services and retail, and electric vehicle industries; provide enhanced access to commercial destinations.
7. Development: Provide access to currently vacant properties that may be developed for parks, businesses, homes, or mixed use.
8. Energy Independence: Reduce energy consumption by providing alternatives to the car, thereby keeping more income in the Coachella Valley.

CV Link Objectives

A. Emphasize zero-emission transportation technologies, transit, and active transportation.
B. Help the Coachella Valley comply with the Global Warming Solutions Act (AB 32) and the Sustainable Communities and Climate Protection Act (SB 375).
C. Parallel and connect the highest, intensity land use corridor in the Coachella Valley with neighborhoods and schools, parks and other public open space, tourist and travel destinations, retail centers and higher density residential development, larger employers.
D. CV Link will be constructed on top of levees and at the top of stormwater channel slopes.

[1] CV Link Master Plan Volume 1, January 2016. Prepared by the Coachella valley Association of Governments and Alta Planning+Design.

E. Grade-separated crossings (bridges or undercrossings) of major roadways shall be provided.
F. A flexible CV Link design that varies based on and in response to the width of available right-of-way, variations in the flood control levees or channel structures, street configurations, and local conditions
G. Provide broad paved paths for LSEVs and bicycles, and softer-surfaced narrower path for pedestrians.
H. Provide shade structures, drinking fountains, wayfinding signs, and safety features that enhance and optimize the user experience.
I. To the greatest extent practicable, limit permanent impacts to previously graded levees or paved roadways.
J. Improve the future economic development in the CV Link Project Area by providing an efficient, streamlined regulatory process through which development of the Link can proceed in an efficient way.
K. Provide a permanent recreation and open space amenity with community edges and connectivity that contributes to maintaining and enhancing the community character of the Coachella Valley.

By walking and cycling more, residents could save money on gas, car maintenance, and repairs. Residents may spend monies saved elsewhere in the local economy. One study found that households in automobile-dependent communities devote 50 percent more to transportation than households in communities with more accessible land use and more multi-modal transportation systems (Litman 2011). CV Link will be a regional facility that serves people who are economically and socially vulnerable as well as those who are not.

Location

The proposed Project (core alignment) is located in the Coachella Valley of central Riverside County, California. The various routes that make up the CV Link core alignment will connect the cities of Palm Springs, Cathedral City, Rancho Mirage, La Quinta, Palm Desert, Indian Wells, Indio, and Coachella, Riverside County, California. CV Link is a multi-jurisdictional Project. It includes eight (8) incorporated cities, unincorporated county land, reservations of three Native American tribes (Agua Caliente, Twenty-Nine Palms and Cabazon Bands). The Link will provide access to a wide range of community resources, as well as thousands of acres of local, state, and federal parkland and open space. The Core Route of the CV Link will provide a 49± mile long continuous multi-modal route with 64.34 miles of route (all alignments and jurisdictions) being analyzed. The Core Route would be 44.05± miles without Rancho Mirage, and 40.53± miles if Rancho Mirage and Indian Wells are not included. The total miles of route considered (including all Core Alignments) would be 57.62± miles without Rancho Mirage, and 48.2± miles without Rancho Mirage and Indian Wells. Future extensions will continue south to the Salton Sea and north to Desert Hot Springs.

The northwest end of the project begins at the intersection of Tram Way and North Palm Canyon Drive (State Route 111) in the city of Palm Springs, and the southeast end of the core alignment occurs where the Whitewater River crosses Airport Boulevard in the community of Thermal. Specifically, the study area is located within the following sections:

- Sections 33 through 36 of Township 3 South, Range 4 East,
- Sections 01 and 03 of Township 4 South, Range 4 East,
- Sections 01, 03 and 22 to 24 of Township 4 South, Range 4 East,

- Sections 06, 07, 19, and 30 of Township 4 South, Range 5 East

The CV Link alignments are all shown on the Palm Springs, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2).

- Sections 06, 07, 19, and 30 of Township 4 South, Range 5 East as found on the Cathedral City quadrangle.

The study area is also located in:
- Sections 08, 17, 20, 21, 28, 29, and 32 to 35, of Township 4 South, Range 5 East,
- Sections 02 and 03 of Township 5 South, Range 5 East, and
- Sections 07, 11, and 12 of Township 5 South, Range 6 East, as shown on the Cathedral City quadrangle. Sections 07, 11, and 12 of Township 5 South, Range 6 East, and shown on the Rancho Mirage quadrangle.

The study area is also located in:
- Section 13, of Township 5 South, Range 5 East, and
- Sections 17 and 18 of Township 5 South, Range 6 East, as shown on the Rancho Mirage quadrangle.

The study area is also located in:
- Sections 13 to 15, of Township 5 South, Range 7 East, Sections 19, 22, 29, 30, and 32 of Township 5 South, Range 8 East, and Sections 04, 05, 09, 10, 15, and 22 of Township 6 South, Range 8 East, as shown on the Indio quadrangle.

The study area is also located in:
- Sections 15, 16, and 22 to 24, of Township 5 South, Range 6 East, and
- Sections 19, 21, and 28 to 30 of Township 5 South, Range 7 East, as shown on the La Quinta quadrangle.

The geographic coordinates near the middle of the project are 33.74261° North latitude and 116.39785° West longitude (Figure 2).

Project Description

CV Link is proposed as a ±49-mile non-motorized, multi-modal transportation path network that passes through some of the most developed and populated portions of the Coachella Valley, providing access and connectivity between residential, commercial, recreational, institutional, and other land uses throughout the region, and providing recreational opportunities for pathway users. It is also anticipated that the Project will contribute to local reductions in traffic volumes and associated air pollutants.

The pathway route largely follows, and is to be built upon, the levees of the region's principal watercourses, including Chino Wash, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. In some locations, the pathway shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues.

The CEQA DEIR and NEPA EA evaluate potential impacts associated with the near-term construction and long-term operation of CV Link's core alignment, from Palm Springs to Coachella, and mid-term enhancements of the core route, which may include the addition and enhancement of other paths, access points, and grade separations. Long-term future extensions of the core route to Desert Hot Springs and the Salton Sea, which would extend the pathway to a buildout length of 88± miles, are envisioned but not fully conceptualized and are not part of this current project analysis.

As a part of the CV Link, the Project also incorporates and expands the Tahquitz Creek Trail in Palm Springs between South Palm Canyon Drive and the Whitewater Channel. The western termini are at Highway 111 (North Palm Canyon Drive) in northern Palm Springs (the Palm Springs Visitor Center at Tram Way – access point for the Aerial Tram) and at South Palm Canyon Drive in central Palm Springs (providing access to adjacent commercial services and to Downtown Palm Springs, as well as the Tahquitz Canyon Visitor Center.

The eastern terminus of the CV Link core alignment is at Airport Boulevard (Ave 56) and the Coachella Valley Stormwater Channel (CVSC) in the City of Coachella and the unincorporated community of Thermal. This terminus provides multi-modal access to the administrative offices of the Coachella Valley Unified School District, John Kelley Elementary School, the La Familia Continuing Education High School, a new Riverside County Sheriff's Station, US Post Office, the Jacqueline Cochran Airport, the Horses in the Sun (HITS) facility, and the Thermal Club Race Track (under construction).

CV Link will include a wide variety of support structures including but not limited to recharge facilities for electric vehicles, shade structures (some solar and some with WIFI), drinking fountains, restrooms, rental/share stations for bicycles and LSEVs, unique "wayfinding" colored crosswalks, distinctive groups of angled "light tubes", LED in-pavement lights, lighted bollards, solar trash/recycling compactors, roadway over- and undercrossings, channel bridges, benches, and interpretive signs.

Beyond this point, a future extension of CV Link will continue along the Coachella Valley Storm Water Channel to the Salton Sea, passing through scenic rural agricultural areas with sparse populations. Another future extension parallels Gene Autry Trail to Desert Hot Springs, terminating at Cabot's Pueblo Museum.

3.0 CONSTRUCTION SCHEDULE

The Implementation Plan presents a three-tier phasing plan for the core route between Palm Springs and Coachella.

Phase 1 is anticipated to begin construction in 2017 and involves the majority of construction for the core route between Palm Springs and Coachella. Phase 2 to be completed in the medium term would involve enhancement of the core route with additional paths and grade separations, which are herein analyzed. Phase 3 to be completed in the longer term is projected include the following elements:

- Extension to Mecca, North Shore, and Salton Sea
- Overbridges at Gene Autry Trail and Indian Canyon Drive (Core Alignment Improvements)
- Two new bike/LSEV/pedestrian bridges across the Whitewater River channel in Indian Wells Golf Course and connecting to the Tennis Garden (Core Alignment Improvements)

At full buildout of all Phases, CV Link will be approximately 88 miles long, depending on which route variations are selected during the next two years of development.

Preliminary Project Phasing

The Project is proposed in a 3-tier phasing plan: Phases 1, 2, and 3, described below.

Phase 1: Near-term construction of the CV Link Core Alignment of this non-motorized, multi-modal transportation path, roughly following the alignment of Tahquitz Creek and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. Portions will use and expand upon on-street facilities. The majority of construction of the core route between the cities of Palm Springs and Coachella and includes and expands the existing Tahquitz Creek Trail in Palm Springs from South Palm Canyon Drive on the west to the Whitewater River Stormwater Channel on the east. The City of Rancho Mirage is not included in the Preferred Alternative (Proposed Project) of the Core Alignment but is analyzed as a part of a Project alternative analyzed in Section 5 of this study.

Phase 2: Mid-term enhancements of the core route, including additional paths, access points, and grade separations.

Phase 3: Long-range future extension of the core route to Desert Hot Springs and the Salton Sea, which will expand the pathway to a buildout length of 88± miles. Detailed route delineation is not fully developed and will be evaluated in a separate CEQA analysis.

4.0 METHODS

4.1 Literature Review

In preparation for the field assessment, a literature search was conducted to identify special-status biological resources known from the vicinity of the CV Link alignment. In the context of this report, and for the purpose of this assessment, vicinity is defined as areas within a 5-mile radius of the proposed CV Link transportation corridor.

The literature search included a review of the following documents:

- California Department of Fish and Wildlife (CDFW) Special Animals List (CDFW 2015a)
- CDFW California Natural Diversity Data Base (CNDDB) version 5 RAREFIND application (CDFW 2015b)
- California Native Plant Society's (CNPS) *Online Rare and Endangered Vascular Plants of California* (8^{Th} Ed.)
- Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan (CVMSHCP) (CVAG 2008)

- Consortium of California Herbaria (CCH), individual plant locality records accessed through the Jepson eFlora website.
- The Jepson Herbarium eFlora (Jepson), an online database of California's plants, University of California Berkeley
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). Web Soil Survey (2016a)
- California Soil Resource Lab. Accessed 30 June 2016. Available at: http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=list_mapunits&areasymbol=ca680
- USGS 7.5' *Cathedral City, Indio, La Quinta, Rancho Mirage,* and *Palm Springs Calif*. quadrangles.

The review also included an overview of other biological survey reports from the general vicinity. Additionally, Amec Foster Wheeler biologists with experience in the Coachella Valley were consulted regarding reliable sightings and/or the potential for occurrence of special status species from the area.

Scientific nomenclature for this document follows standard reference sources: for plant communities, Sawyer et. al (2009); for flora, Jepson (2016); for birds, American Ornithologists' Union Checklist (2016); and CDFW (2014) for mammals and herpetofauna.

Prior to conducting fieldwork associated with the jurisdictional determination and delineation, the following literature and materials were reviewed:

- Aerial photographs of the project site at a scale of 1:7200 to determine the potential locations of jurisdictional waters or wetlands;
- USGS topographic map to determine the presence of any "blue line" drainages or other mapped water features;
- USDA soil mapping data, and
- USFWS NWI maps to identify areas mapped as wetland features.

4.2 Habitat Assessment

The current field surveys for the biological assessment for the CV Link Project were conducted on June 1, 2, 3, 6, and 7, 2016 by Amec Foster Wheeler senior biologist Michael D. Wilcox and Amec Foster Wheeler field technician Phillip Clevinger. Amec Foster Wheeler senior biologist Nathan T. Moorhatch also performed surveys of the alignment on November 20, 2015 and June 16, 2016; as well as monitoring for a geotechnical boring site on the alignment between Dillon Road and Golf Center Parkway on May 17, 2016. Onsite habitats were assessed based on the presence or absence of suitable habitat components (e.g., soils, vegetation and topography) characteristic of the potentially occurring special-status species determined by the literature review. Amec Foster Wheeler biologists also performed surveys along portions of the CV Link

alignment for other projects in 2015. A portion of the project alignment that runs between Vista Chino on the north to Ramon Road on the south was surveyed on foot during the late morning and early afternoon of 2 December 2015, by senior AMEC biologist Nathan Moorhatch for the proposed Cathedral City 2.6 Mile Whitewater River Bike Path project. Additionally, senior Amec Foster Wheeler biologist Nathan Moorhatch surveyed the proposed South Palm Canyon Drive at Tahquitz Creek Channel Bridge Replacement Project on April 14, 2015.

Printed maps and exhibits provided by Terra Nova were used to survey the CV Link alignment. Binoculars were used to identify species of wildlife too distant to identify with the naked eye. A digital camera was used to take representative photographs of the existing site conditions, wildlife habitat, unique features and wildlife (Appendix D). A handheld anemometer, the Kestrel 2000, was used to record temperatures and wind speeds. Percent cloud cover was estimated.

All flora and fauna observed or otherwise detected (e.g., vocalizations, presence of scat, tracks, and/or bones) on and immediately adjacent to the Project alignment were recorded in field notes and are included in Appendices B and C.

4.3 Jurisdictional Determination and Delineation

Field surveys in support of the jurisdictional determination and delineation were conducted by Amec Foster Wheeler biologist Scot Chandler on 21, 22, and 27 to 30 June and 1 and 7 July 2016. Surveys consisted of walking the entire study area and identifying potentially jurisdictional water features. Visual observations of vegetation types and changes in hydrology were used to locate areas for evaluation.

USACE regulated WUS, including wetlands, and RWQCB WSC were delineated according to the methods outlined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a). The extent of WUS was determined based on indicators of an OHWM. The OHWM width was measured at points wherever clear changes in width occurred.

Federally regulated wetlands were identified based on the *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008b). Additional data was recorded to determine if an area fulfilled the wetland criteria parameters. Criteria for wetlands under the jurisdiction of the USACE consist of the following: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology.

CDFW jurisdiction was delineated by measuring the elevations of land that confine a stream to a definite course when its waters rise to their highest level and to the extent of associated riparian vegetation.

To determine jurisdictional boundaries, surveyors walked the perimeters of the drainages within the study area and recorded the boundary using Trimble GeoXH global positioning system with sub-meter accuracy. For smaller drainages (less than 20 feet wide) with relatively uniform width, the surveyor walked the centerline and the drainage width was buffered from that measurement.

Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. Upon completion of fieldwork, all data collected in the field were incorporated into a Geographic Information System (GIS) along with basemap data. The GIS was then used to quantify the extent of jurisdictional waters within the project area.

Upstream and downstream connectivity of waterways was reviewed in the field and on aerial photographs and topographic maps to determine jurisdictional status according to the CWA, SWANCC, and Rapanos. Ephemeral washes with a physical connection to the Salton Sea were determined to be potential WUS as well as WSC and CDFW streambeds.

5.0 REGULATORY FRAMEWORK

5.1 Regional

Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) – The CVMSHCP is a comprehensive, regional plan that addresses the conservation needs of 27 species of native flora and fauna (5 plants, 2 insects, 1 amphibian, 3 reptiles, 11 birds, and 5 mammals) and 27 natural communities occurring throughout the Coachella Valley region of western Riverside County, California. These include federal and state-listed species, federal and California Species of Concern (CSCs), and species on the CNPS sensitive species lists. Also included are species that are designated as sensitive by the Bureau of Land Management (BLM) regardless of their other federal, state, or regional conservation status. Conservation for the federally-listed as threatened and state-listed as endangered Coachella Valley Fringe-toed Lizard (*Uma inornata*), was formerly covered by the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan finalized in 1985 but is now covered under the CVMSHCP.

Permits for the CVMSHCP were issued by the California Department of Fish and Wildlife (CDFW) on September 9, 2008 and by the United States Fish and Wildlife Service (USFWS) on October 1, 2008 (TE104604-0). The CVMSHCP balances environmental protection and economic development objectives in the CVMSHCP area, simplifying compliance with endangered species laws. The CVMSHCP accomplishes this by conserving unfragmented habitat to permanently protect and secure viable populations of the covered species. The covered species include those plants and animals that are either currently listed as threatened or endangered, are proposed for listing, or are believed by an appointed Scientific Advisory Committee, USFWS and CDFW, to have a high probability of being proposed for listing in the future if not provided protection by the CVMSHCP. The goal of the CVMSHCP is to meet the requirements of the state and federal endangered species acts, while at the same time allowing for the economic growth (land development) within the plan area without significant delay or hidden costs. Under the CVMSHCP, local development mitigation fees are collected from all new development projects occurring in the plan area. The purpose of this fee is to support the assembly of a preserve system for the covered species and natural communities within areas identified as having high conservation value.

5.2 Federal

***Endangered Species Act* (ESA)** – The USFWS and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. ESA defines species as "endangered" or "threatened" and provides regulatory protection at the federal level.

- Section 9 of the ESA prohibits the "take" of listed (i.e., endangered or threatened) species. The ESA definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct." Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a)(1)(A) permits (authorized take permits) are issued for scientific purposes. Section 10(a)(1)(B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.
- Section 7 (a)(2) requires federal agencies to evaluate the proposed Project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined by the ESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

Section 10(a) of the ESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans, such as the CVMSHCP.

***Migratory Bird Treaty Act* (MBTA)** – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in this document. The Secretary of the Interior can issue permits for incidental take of migratory bird species. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species. The CVMSHCP 10a Permit constitutes a Special Purpose Permit under 50 Code of Federal Regulations section 21.27, for the Take of Covered Species listed under FESA and which are also listed under the MBTA.

***National Environmental Policy Act* (NEPA)** – If portions of a proposed Project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers [USACE]). NEPA establishes certain criteria that must be adhered to for any Project that is "financed, assisted, conducted or approved by a federal agency. The federal lead agency is required to "determine whether the proposed action will significantly affect the quality of the human environment."

Section 404 of the Clean Water Act – This section of the Clean Water Act (CWA), administered by the USACE, regulates the discharge of dredged and fill material into "waters of

the United States." The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold for nationwide permits, takes steps to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

5.3 State

***California Endangered Species Act* (CESA)** – This legislation is similar to the federal ESA; however, it is administered by the CDFW. The CDFW is authorized to enter into "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species for scientific, educational, or management purposes. CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

***California Environmental Quality Act* (CEQA)** – The basic goal of CEQA is to maintain a high-quality environment now and in the future and the specific goals are for California's public agencies to:

1. Identify the significant environmental effects of their actions; and, either
2. Avoid those significant environmental effects, where feasible; or
3. Mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are activities which have the potential to have a physical impact on the environment. Where a project requires approvals from more than one public agency, CEQA requires one, or more of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by CEQA. The most basic steps of the environmental review process are:

1. Determine if the activity is a "project" subject to CEQA;
2. Determine if the "project" is exempt from CEQA;
3. If the project is not exempt from CEQA, then prepare an Initial Study to identify any environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:
    a. Negative Declaration if it finds no "significant" impacts;

b. Mitigated Negative Declaration if it finds "significant" impacts but such impacts can be avoided or mitigated;

c. Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance", Article 5 of the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects.

The purpose of an EIR is to provide State and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to list ways in which the significant environmental effects may be minimized and indicate alternatives to the project.

***The Native Plant Protection Act* (NPPA)** – The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for “rare and endangered” are different from those contained in CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under CESA. NPPA provides limitations on take as follows: “no person will import into this state, or take, possess, or sell within this state” any rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by CDFW, pursuant to section 1903.5 that a rare or endangered plant is growing on their property, the landowner shall notify CDFW at least 10 days prior to the changing of land uses to allow CDFW to salvage the plants.

Natural Community Conservation Planning (NCCP) Program – The NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listing are required under CESA. Instead of conserving small, often isolated “islands” of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value “reserve” areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value. The CVMSCHP is a Natural Community Conservation Plan under a state permit issued in September 2008.

Sections 1600-1603 of the State Fish and Game Code – The California Fish and Game Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, CDFW jurisdiction is assessed in the field based on one, or a combination, of the following criteria (CDFW 2005b):

1. At minimum, intermittent and seasonal flow through a bed or channel with banks and that also supports fish or other aquatic life.
2. A watercourse having a surface or subsurface flow regime that supports or that has supported riparian vegetation.
3. Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.
4. Outer ground cover and canopy extents of, typically, riparian associated vegetation species that would be sustained by surface and/or subsurface waters of the watercourse.

The CDFW requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats on at least a 1:1 ratio.

Section 2081 of the State Fish and Game Code – Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information reasonably available and shall include consideration of the species' capability to survive and reproduce.

State Fish and Game Code – Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA.

6.0 RESULTS

6.1 Literature Review

The review of the CNDDB, CNPS Online Inventory of Rare Plants, other biological reports from the vicinity, and consultation with other experienced Amec Foster Wheeler biologists resulted in the identification of eighty-seven (87) special-status biological resources known to occur in the vicinity (within an approximate 5-mile radius) of the CV Link alignment (Figure 3a & 3b). In all, forty-three (43) special-status plants, one (1) special-status vegetation community, four (4) special-status invertebrates, two (2) special-status fishes, four (4) special-status amphibians, four (4) special-status reptiles, seventeen (17) special-status birds and twelve (12) special-status mammals were reported occurring within the general vicinity of the Project alignment.

Tables 3 through 9 provide a complete list of these special-status biological resources, their associated legal status, and their respective on-site occurrence potential.

The review of the CVMSHCP confirmed that most of the proposed alignment is located outside of designated CVMSHCP conservation areas. A portion of the northern segment of the CV Link alignment is located adjacent to the Whitewater Floodplain Conservation Area between the Highway 111/Whitewater River "crossing" on the west to Gene Autry Trail on the east (also classified as Segment 1, please see Figure 2). Additionally, the CV Link alignment closely approaches, but does not encroach on the Santa Rosa and San Jacinto Mountains Conservation Area in two relatively small areas: between Paxton Drive and Mirage Road on the south side of Highway 111, and in the Parkview Drive/Highway 111 area (referred to as Segment 4 on Project maps). These Conservation Areas are summarized below.

6.2 Whitewater Floodplain Conservation Area

The Whitewater Floodplain Conservation Area encompasses portions of the Whitewater River floodplain south of I-10 eastward to the existing Whitewater Floodplain Preserve, established by the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (CVFTL HCP). The Conservation Area includes additional habitat east and southeast of the existing Whitewater Floodplain Preserve on the west and east sides of Gene Autry Trail, south and east of CVWD's groundwater recharge basins, the Garnet Hill area north of the existing preserve, and biological corridor and sand transport areas south of I-10 along Mission Creek, and Willow washes, which connect this area to the Willow Hole Conservation Area north of I-10. To the northwest of this conservation area is the Whitewater Canyon Conservation Area. To the west is the Highway 111/I-10 Conservation Area. The Whitewater Floodplain Conservation Area connects to the Snow Creek/Windy Point Conservation Area near Windy Point, where the San Gorgonio River joins the Whitewater River. The Whitewater Floodplain Conservation Area contains a total of approximately 7,400 acres (CVAG 2007).

This conservation area provides core habitat for the Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*), Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum)*, Coachella Valley fringe-toed lizard (*Uma inornata*), Coachella Valley round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*), and Palm Springs pocket mouse (*Perognathus longimembris bangsi*). While there is modeled habitat for the Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*), it has not been found in this area based on limited surveys. The area also provides some other conserved habitat for the triple-ribbed milkvetch (*Astragalus tricarinatus*), desert tortoise, flat-tailed horned lizard (*Phrynosoma mcallii*), burrowing owl and Le Conte's thrasher (*Toxostoma lecontei*) (CVAG 2007).

The conserved natural communities occurring in this conservation area include: active desert sand fields, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, stabilized shielded desert sand fields, Sonoran creosote bush scrub, and Sonoran mixed woody and succulent scrub (CVAG 2007).

The Whitewater River, after it joins the San Gorgonio River, provides fluvial sand transport to the existing Whitewater Floodplain Preserve. The groundwater recharge ponds west of Indian

Avenue are in the path of the fluvial flows of the Whitewater River, and their presence has restricted flows to a narrower deposition area, which has affected the extent of suitable habitat. The area along the Whitewater River provides a linkage and biological corridor between the Snow Creek/Windy Point Conservation Area and the core habitat portion of the Whitewater Floodplain Conservation Area, as well as with the Whitewater Canyon Conservation Area. The area south of the recharge ponds may also function as a biological corridor to the Snow Creek/Windy Point Conservation Area. As two lane roads, Indian Avenue and Gene Autry Trail are not considered complete barriers to movement of the covered species. When constructed to full width, these roads will include wildlife underpasses to maintain connectivity. There is also potential connectivity between this area and the Willow Hole Conservation Area where Mission Creek and Willow Wash cross under the freeway (CVAG 2007).

Conservation Objectives. (All from CVAG 2007). The conservation objectives for this conservation area are:

- 1) In total, 4,140 acres of the Whitewater Floodplain Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, core habitat for two or more species may overlap, or core habitat and an essential ecological process area may overlap. The individual acreage figures will be used in compliance monitoring.)

- 2) Conserve core habitat and associated ecological processes (as set forth below) for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to core habitat by conserving contiguous habitat and effective linkages between patches of core habitat.

  a). Conserve at least 2,671 acres of core habitat for the Coachella Valley milkvetch in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 58 acres in the unincorporated Riverside County portion of the area.
  b) Conserve at least 2,659 acres of core habitat for the Coachella Valley giant sand-treader cricket in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 57 acres in the unincorporated Riverside County portion of the area.
  c) Conserve at least 2,659 acres of core habitat for the Coachella Valley fringe-toed lizard in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 57 acres in the unincorporated Riverside County portion of the area.
  d) Conserve at least 2,955 acres of core habitat for the Coachella Valley round-tailed ground squirrel in the Palm Springs portion of the area, at least 59 acres in the Cathedral City portion of the area, and at least 100 acres in the unincorporated Riverside County portion of the area.

e) Conserve at least 3,122 acres of core habitat for the Palm Springs pocket mouse in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 477 acres in the unincorporated Riverside County portion of the area.

f) Conserve at least 3,484 acres of the fluvial and aeolian sand transport area in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 481 acres in the unincorporated Riverside County portion of the area. Maintain the current capacity for fluvial sand transport in the Whitewater River floodplain.

- 3) Conserve occupied burrowing owl burrows as described in Section 4.4 for burrowing owl avoidance, minimization, and mitigation measures.

- 4). Conserve at least 3,433 acres of other conserved habitat for Le Conte's thrasher in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 480 acres in the unincorporated Riverside County portion of the area. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 for avoidance, minimization, and mitigation measures.

- 5) Conserve at least 392 acres of the active desert sand fields in the Palm Springs portion of the area; at least 43 acres of the active desert sand fields in the Cathedral City portion of the area; at least 1,185 acres of the ephemeral desert sand fields in the Palm Springs portion of the area and at least 52 acres in the unincorporated Riverside County portion of the area for the conservation of these natural communities; at least 394 acres of the stabilized and partially stabilized desert sand fields in the Palm Springs portion of the area and at least 4 acres of the stabilized and partially stabilized desert sand fields in the unincorporated Riverside County portion of the area. As these conserved natural communities are all part of the Core Habitat areas identified in Conservation Objective 2 for this area, attainment of that objective will also achieve this objective.

- 6) Maintain functional biological corridors and linkages by conserving at least 475 acres of identified biological corridor in the unincorporated portion of the conservation area, at least 809 acres of identified biological corridor in the City of Palm Springs' portion, and at least 18 acres of identified biological corridor in the City of Cathedral City portion, such that the functionality of each individual biological corridor listed below is not compromised:

  a) Conserve the Whitewater River Biological Corridor south of I-10 in the unincorporated area to maintain potential Habitat connectivity for desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for covered species. Aside from the freeway bridge and any existing use areas, which are unavoidably narrow segments, the biological corridor shall expand to one-mile wide to minimize edge effects.

  b) Conserve the Mission Creek Biological Corridor south of the freeway in the Palm Springs portion of the conservation area to maintain potential habitat connectivity for Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for covered species. Aside from the freeway culvert

and any existing use areas, which are unavoidably narrow segments, the biological corridor shall expand to one-mile wide to minimize edge effects.

c) Conserve the Willow wash area south of the I-10 in Palm Springs and in Cathedral City to maintain potential Habitat connectivity for Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for covered species. Aside from the freeway culverts and any existing use areas, which are unavoidably narrow segments, the biological corridor shall expand to one-mile wide to minimize edge effects.

d) Maintain the ability of wildlife to cross Indian Avenue and Gene Autry Trail by providing undercrossings for Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse if these roads are widened to six lanes or more.

6.3 Santa Rosa and San Jacinto Mountains Conservation Area

The 211,070-acre Santa Rosa and San Jacinto Mountains Conservation Area includes nearly all of the desert slopes of the Santa Rosa and San Jacinto Mountains, below the upper elevational limits of Peninsular bighorn sheep (*Ovis canadensis nelsoni)*, habitat, in addition to much of the higher elevation areas of the Santa Rosa Mountains which is known habitat for the gray vireo (*Vireo vicinoir*). The Santa Rosa and San Jacinto Mountains Conservation Area is connected to Anza Borrego Desert State Park to the south and to the San Bernardino National Forest areas and Mt. San Jacinto State Park to the west. This conservation area is also contiguous with the Snow Creek/Windy Point Conservation Area including two biological corridors to the San Bernardino Mountains to the north (CVAG 2007).

The Santa Rosa and San Jacinto Mountains Conservation Area provides essential habitat for the Peninsular bighorn sheep. This conservation area also contains other conserved habitat and known locations for burrowing owl and nearly 70,000 acres of potential habitat for the gray vireo. Low-density desert tortoise habitat also occurs throughout the mountains (CVAG 2007).

The Santa Rosa and San Jacinto Mountains Conservation Area contains suitable migration and breeding habitat for CVMSHCP-covered riparian obligate species. Due to the rarity of riparian habitat in the desert, all riparian habitats within the CVMSHCP coverage area are considered important for these species, and it is a goal of the CVMSHCP to the conserve and protect these rare habitats for these species within their respective ranges. The desert fan palm oasis woodlands also provide nearly 1,000 acres of habitat for the southern yellow bat (*Lasiurus xanthinus*). There are known records of or habitat for triple-ribbed milkvetch, Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse in the Santa Rosa and San Jacinto Mountains Conservation Area. The Santa Rosa and San Jacinto Mountains Conservation Area also contributes to the biodiversity of the CVMSHCP and provides habitat for an array of large predators that may also use adjoining areas such as the Snow Creek/Windy Point Conservation Area (CVAG 2007).

Conserved vegetation communities occurring in the Santa Rosa and San Jacinto Mountains Conservation Area include Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, southern sycamore-alder riparian woodland, desert dry wash woodland, desert fan palm oasis woodland, mesquite hummocks, semi-desert chaparral, red shank chaparral, interior live oak chaparral, and peninsular juniper woodland and scrub. Active desert dunes, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, and stabilized shielded desert sand fields also incidentally occur intermittently throughout this conservation area (CVAG 2007).

The desert dry wash woodland, desert fan palm oasis woodland, and riparian habitats in this conservation area are maintained by hydrological processes such as flooding, groundwater from springs, and the availability of perennial water (essential ecological process for this conservation area). Protection of these hydrological processes is achieved through the conservation objectives for this area. Portions of the San Jacinto Mountains above Snow Creek and westward are sand source for the blowsand ecosystems in the Snow Creek/Windy Point Conservation Area. No biological corridors have been defined within the Santa Rosa and San Jacinto Mountains Conservation Area (CVAG 2008).

The conservation objectives for the Santa Rosa and San Jacinto Mountains Conservation Area include:

- Conservation of 55,890 acres.
- Conservation of at least 19,205 acres of essential habitat for Peninsular bighorn sheep in the Riverside County portion of this conservation area, including at least 2,545 acres in the City of La Quinta portion of the conservation area. Ensure that development allowed does not fragment core habitat, and that edge effects from such development are minimized.
- Conservation of at least 7,930 acres of known and potential gray vireo habitat in the unincorporated portion of the conservation area. Minimize fragmentation, human-caused disturbance, and edge effects to core habitat by conserving contiguous habitat patches and effective linkages between the conserved core habitat.
- Conservation of at least 5,508 acres of other conserved habitat for Le Conte's thrasher in the unincorporated portion of this conservation area, including at least 387 acres in the City of La Quinta portion.
- Conservation of at least 23,856 acres of other conserved habitat for desert tortoise in the unincorporated portion of this conservation area, including at least 1,409 acres in the City of La Quinta portion.
- Conservation of occupied burrowing owl burrows as described in Section 4.4 burrowing owl avoidance, minimization, and mitigation measures.
- Conservation of at least 15 acres of southern arroyo willow riparian forest in the unincorporated portion of the conservation area and ensure no net loss for the remaining acreage of this natural community where disturbance is authorized. Conservation of at least 117 acres of southern sycamore-alder riparian woodland in the unincorporated portion of the conservation area and ensure no net loss. Ensure no net loss of Sonoran

cottonwood-willow in areas where disturbance is authorized. Conserve at least 1,244 acres of the desert dry wash woodland natural community in the unincorporated portion of the conservation area, including least 76 acres in the City of La Quinta portion.

- Conservation at least 404 acres of the known desert fan palm oasis woodland natural community, which provides habitat for the southern yellow bat, in the unincorporated portion of the conservation area.
- Conserve at least 2,093 acres of semi-desert chaparral, 2,274 acres of red shank chaparral and 2,899 acres of peninsular juniper woodland and scrub in the unincorporated portion. Attainment of Goal 2 will also achieve this goal.

The following measures, which include the covered species conservation goals and objectives (Section 9 of the CVMSHCP), will be imposed to achieve the conservation goals and objectives in the Santa Rosa and San Jacinto Mountains Conservation Area:

New development shall adhere to the following criteria, in accordance with the guidelines in the Implementation Manual:

a. Development shall be clustered in one area of a site as close as possible to existing development.

b. Development on alluvial fans shall be sited at the lowest possible elevation on the site and shall avoid the mouth of any canyon.

c. Development shall be sited a minimum of a quarter (0.25) mile from known Peninsular bighorn sheep water sources identified on a reference map on file with CVCC, except where topographic features shield the view of the water source and access to it from proposed development or trails, thereby minimizing potential impacts to the Peninsular bighorn sheep's ability to access water.

d. Development shall be conditioned to prohibit the construction of unauthorized trails in essential bighorn sheep habitat unless approved through a minor amendment with wildlife agency concurrence.

e. Development shall not preclude habitat connectivity or movement. Determination of whether habitat connectivity or movement is precluded shall be made by the lead agency for the development based on factual data provided by the RMOC, RMUC, wildlife agencies, or other source.

f. Development shall comply with Land Use Adjacency Guidelines as described in Section 4.5 of the CVMSHCP.

There are 5 types of areas designated on the CVMSHCP maps for the Santa Rosa and San Jacinto Mountains Conservation Area:

(1) Areas within which a maximum of 10% of the private land under the jurisdiction of a local permittee may be developed in accordance with the general plan land use designation in effect at the time of MSHCP Plan approval.

(2) Areas where special provisions apply.

(3) Areas where the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) will be used to meet the conservation objectives.

(4) Areas where a major amendment is required to provide authorization for acres of disturbance of habitat.

(5) Areas where authorization for acres of disturbance of habitat is provided for covered activities described in Section 7.3 on CVWD and Riverside County Flood Control lands.

2. Special provisions apply in some areas of this conservation area. For Development proposals on lands within or adjacent to conservation areas with Peninsular bighorn sheep habitat, the local permittee shall require construction of an 8-foot fence or functional equivalent, or granting of an easement to Coachella Valley Conservation Commission (CVCC) for future installation of a barrier separating the development from adjoining habitat, if (i) Peninsular bighorn sheep are documented to begin foraging or watering on the project site, or (ii) unauthorized trails, paths, routes, or ways (trails) are documented to proliferate from the project site into adjoining habitat. To ensure that the fence is an effective barrier, the CVCC shall determine the appropriate location of the fence in consultation with the local permittee. If fence construction is deferred and either condition (i) or (ii) is documented by the Wildlife Agencies, the CVCC shall incur the responsibility and cost for fence installation and maintenance on lands to which CVCC has access, unless at the time of project approval the permittee assigns a legally responsible party to construct and maintain the fence and requires establishment of a funding instrument for construction and maintenance of the fence. The subject fence shall be constructed within 2 years of documented sheep use or the proliferation of trails, as noted above. The location of this barrier (i.e., an 8-foot fence or functional equivalent) shall be determined by CVCC based on its ability to obtain permission/access to the necessary lands. If placement of the barrier must occur on other public lands (e.g., BLM, CDFGCDFW), CVCC will coordinate with these other agencies as appropriate (CVAG 2007).

6.4 Topography and Soils

The existing topography along the majority of the Project alignment is relatively level, gradually sloping down in elevation as one travels from the north end of the alignment near the intersection of Highway 111 and the Whitewater River channel (~733 feet above mean sea level [ABSL]) to the current southern end at Airport Boulevard (~-120 feet ABSL) with little drastic or abrupt elevational variation, with most areas primarily occurring in drainages.

The review of the onsite soils (based on the California Soil Resource Lab. Accessed 30 June 2016. Available at: http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=list_mapunits&areasymbol=ca680) resulted in the following soil types mapped throughout the CV-Link Project alignment:

CcC: CARRIZO STONY SAND, 2 TO 9 PERCENT SLOPES
Carrizo stony sand (CcC) –This excessively drained soil occurs on alluvial fans (Backslope) with 2 to 9 percent slopes. It is composed of stony sand and the parent material is composed of alluvium derived from granite.

CdC: CARSITAS GRAVELLY SAND, 0 TO 9 PERCENT SLOPES
Carsitas gravelly sand (CdC) – This excessively drained soil occurs on alluvial fans with 0 to 9 percent slopes. It is composed of gravelly sand with the parent material composed of gravelly alluvium derived from granite.

ChC: CARSITAS COBBLY SAND, 2 TO 9 PERCENT SLOPES
Carsitas cobbly sand (ChC) – This excessively drained soil occurs on alluvial fans (Summit) with 2 to 9 percent slopes. It is composed of gravelly sand on the surface and gravelly coarse sand below. The parent material is gravelly alluvium derived from granite.

CkB: CARSITAS FINE SAND, 0 TO 5 PERCENT SLOPES
Carsitas fine sand (CkB) – This excessively drained soil occurs on alluvial fans with 0 to 5 percent slopes. It is composed of fine sand on the surface and gravelly sand below. The parent material is composed of sandy alluvium derived from granite.

CpA: COACHELLA FINE SAND, 0 TO 2 PERCENT SLOPES
Coachella fine sand (CpA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of mostly fine sand with very fine sand 48 to 60 inches below the surface. The parent material is composed of alluvium derived from igneous rock.

CrA: COACHELLA FINE SAND, WET, 0 TO 2 PERCENT SLOPES
Coachella fine sand, wet (CrA) – This moderately well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of mostly fine sand with very fine sand 48 to 60 inches below the surface. The parent material is composed of alluvium derived from igneous rock.

CsA: COACHELLA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
Coachella fine sandy loam (CsA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of mostly fine sand with very fine sand 48 to 60 inches below the surface. The parent material is composed of alluvium derived from igneous rock.

Fe: FLUVENTS
Fluvents (Fe) – This more or less freely drained soil occurs on recent water-deposited sediments on flood plains (Toeslope) with parent material composed of alluvium.

GaB: GILMAN LOAMY FINE SAND, 0 TO 5 PERCENT SLOPES
Gilman loamy fine sand (GaB) – This wel- drained soil occurs on alluvial fans (Footslope) with 0 to 5 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GbA: GILMAN FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
Gilman fine sandy loam (GbA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GcA: GILMAN FINE SANDY LOAM, WET 0 TO 2 PERCENT SLOPES
Gilman fine sandy loam, wet (GcA) – This moderately well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GeA: GILMAN SILT LOAM, 0 TO 2 PERCENT SLOPES
Gilman silt loam (GeA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GfA: GILMAN SILT LOAM, WET, 0 TO 2 PERCENT SLOPES
Gilman silt loam (GfA) – This moderately well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

Ip: INDIO FINE SANDY LOAM
Indio fine sandy loam (Ip) – This well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

Ir: INDIO FINE SANDY LOAM, WET
Indio fine sandy loam, wet (Ir) – This moderately well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

Is: INDIO VERY FINE SANDY LOAM
Indio very fine sandy loam (Is) – This well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

It: INDIO VERY FINE SANDY LOAM, WET
Indio very fine sandy loam, wet (It) – This moderately well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

MaB: MYOMA FINE SAND, 0 TO 5 PERCENT SLOPES
Myoma fine sand (MaB) – This somewhat excessively drained soil occurs on alluvial fans (Toeslope) with 0 to 5 percent slopes. It is composed of fine sand on the surface and very fine sand below. The parent material is composed of windblown sandy alluvium.

MaD: MYOMA FINE SAND, 5 TO 15 PERCENT SLOPES
Myoma fine sand (MaD) – This somewhat excessively drained soil occurs on alluvial fans (Footslope) with 5 to 15 percent slopes. It is composed of fine sand on the surface and very fine sand below. The parent material is composed of windblown sandy alluvium.

RA: RIVERWASH
Riverwash (RA) – This excessively drained soil occurs in channels with 0 to 2 percent slopes. It is composed of gravelly sand and the parent material is composed of sandy and gravelly alluvium.

RO: ROCK OUTCROP
Rock outcrop (RO) –The parent material is composed of residuum weathered from igneous, metamorphic and sedimentary rock and produces very high runoff.

W: Water
(No horizon profile available)

The distribution of these soils along the various CV Link alignments is illustrated on Figure 5.

Historically, (prior to 1960), large areas of the project alignment and surrounding general area was primarily covered with wind-deposited sands and hummocks. As urban development expanded throughout the greater Coachella Valley, the flow and deposition of aeolian sand deposits from the west and north has been interrupted and slowed by these manmade impediments. This has resulted in the gradual stabilization and compaction of sands that were once continuous, loose and dynamic (Cornett 2004).

Additionally, most of the proposed alignment has been directly and indirectly impacted by a variety of anthropomorphic influences. The most evident disturbance is co-terminus with the proposed footprint of the CV Link path, which for a large proportion of the alignment already consists of a graded, compacted dirt path that often runs along the top of the Tahquitz creek Channel, and the Whitewater River/Coachella Valley Storm Water Channel embankments and levees. Additionally, significant portions of the alignment are located within paved public roads and paths adjacent to golf courses and parks (one example being Demuth Park). Equally significant examples of disturbance include onsite and adjacent commercial, industrial, recreational (golf course), and residential development, limited agriculture lands (only on the southern end of the alignment), road shoulder disturbance, fragmentation caused by public roads, operation of off-road vehicles and/or golf carts (existing dirt and paved roads and trails), dumping of trash, debris and waste and the presence of domestic animals such as dogs and livestock. All of these onsite and adjacent human-related disturbances have had adverse impacts to the natural environment in the immediate vicinity of the Project alignment and has negatively affected the distribution, diversity and abundance of flora and fauna.

6.5 Vegetation

Native vegetation, where present adjacent to the alignment, is mostly dominated by a mixture of the following vegetation communities: *Larrea tridentata/Ambrosia dumosa* shrubland alliance Sawyer et. al (2009) (Sonoran creosote bush/mixed woody and succulent scrub in the CVMSCHP); Creosote bush – white bursage scrub [Sandy association]/*Ambrosia salsola* alliance (ephemeral and stabilized shielded sand fields in the CVMSHCP); and *Atriplex canescens* alliance (desert saltbush scrub in the CVMSHCP). Dominant native perennial plant species representative of the Sonoran creosote bush/mixed succulent scrub communities observed during the assessment included creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), brittle bush (*Encelia farinosa*), California indigo-bush (*Psorothamnus arborescens* var. *simplicifolius*), Schott's indigo-bush (*Psorothamnus schottii*), and golden cholla (*Cylindropuntia echinocarpa*). Species representative of Ephemeral and Stabilized shielded sand fields included Emory dalea (*Psorothamnus emoryi*), California croton (*Croton californicus*), sand verbena (*Abronia villosa* var. *villosa*), and dune sunflower (*Helianthus petiolaris* ssp. *canescens*). Plants representative of Desert saltbush scrub included four-wing saltbush (*Atriplex canescens*), allscale (*Atriplex polycarpa*), cheesebush (*Ambrosia salsola*), and salt grass (*Distichlis spicata*).

The northern end of the alignment, adjacent to the Whitewater Floodplain Conservation area is mapped in the CVMSHCP as passing through/adjacent to a large area of mixed ephemeral and stabilized shielded sand fields (please see Vegetation Communities Figures in Appendix A). That portion of the alignment that runs along Highway 111 from Tramway Road north to the alignment's intersection with the Whitewater Floodplain Conservation area is mapped in the CVMSHCP as Sonoran mixed woody and succulent scrub. Areas of Sonoran creosote bush scrub along or close to the alignment are present along Highway 111 between Sungate Way and Frank Sinatra Drive; between Paxton Drive and Mirage Road; and between Rio del Sol Road and Parkview Drive. The only area of CVMSHCP-mapped desert saltbush scrub habitat on the alignment is between Avenue 48 and Avenue 50. Lastly, there are some limited areas in the Whitewater River channel on the southern end of the alignment (adjacent to the alignment, not on the alignment) that support small stands of willows and cottonwoods. These fragmented and highly restricted stands are not truly representative of a natural willow woodland (such as Black willow thickets [Sawyer et. al 2009]) but are remnant "pockets" of riparian vegetation resulting from groundwater recharge, agricultural runoff and municipal wastewater treatment facility discharges into the channel. They also result from ongoing Coachella Valley Water District/Riverside County Flood Control and Water Conservation District channel maintenance activities.

A very large proportion of the proposed CV-Link transportation corridor is located within urban areas as classified in the CVMSHCP. Additionally, much of the southern portion of the alignment (from Golf Center Parkway south to Airport Boulevard) is classified as agriculture under the CVMSHCP. Additionally, even those portions of the alignment adjacent to areas of natural habitat are also often located adjacent to residential and commercial development. An example of this is the segment of the alignment that is bordered by the Whitewater Floodplain Conservation Area. Although this portion of the alignment is bordered to the north by undeveloped, natural lands; it is also bordered on the south by extensive residential development.

Plants that were observed in the urban and residential portions of the transportation corridor included a mixture of nonnative and native landscaped trees and shrubs including gum trees (*Eucalyptus spp.*), Mexican bird-of-paradise (*Caesalpinia pulcherrima*), ocotillo (*Fouquieria splendens* ssp. *splendens*), Texas sage (*Leucophyllum frutescens*), various acacia (*Acacia spp.*), oleander (*Nerium oleander*), and bougainvillea (*Bougainvillea* spp.) .

A list of one hundred four (104) plant species observed during the surveys, including common and scientific names, is appended to this report (Appendix B).

6.6 Jurisdictional Waters

The project occurs along the Whitewater River and Tahquitz Creek. These watercourses are under the jurisdiction of the United States Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW) and Regional Water Quality Control Board (RWQCB). A total of 93.17 acres of non-wetland waters of the United States (WUS) and waters of the State (WSC), 11.11 acres of wetlands, and 417.17 acres of CDFW jurisdictional streambeds were found to occur and mapped within the study area. The proposed project will temporarily impact 0.061 acre and permanently impact 0.047 acre of wetlands, temporarily impact 5.08 acres and permanently impact 2.83 acres of WUS/WSC, and temporarily impact 29.65 acres and permanently impact 15.98 acres of CDFW streambed. These impacts will require authorizations from the USACE, CDFW and RWQCB.

6.7 Wildlife

Vertebrate wildlife directly observed and/or otherwise detected through presence of sign (e.g., scat, bones, prints, feathers, burrows, etc.) during the assessments was not exceptionally diverse or abundant. Vertebrates that have been recorded along the alignment by Amec Foster Wheeler biologists during the current and previous surveys include: one (1) fish, three (3) amphibians, nine (9) reptiles, thirty-three (33) birds, and eight (8) mammals. See Appendix C for a complete list of vertebrate species detected.

It should be noted that relatively short-term biological studies of this nature are often limited by the seasonality of annual plants, the migratory habits of many birds, the fossorial and nocturnal habits of many mammals and reptiles, and the timing of field studies. This document incorporates the best available published and unpublished data in addition to the collective knowledge of Amec Foster Wheeler biologists regarding the habitat associations, natural history, ecology, seasonality, and distribution of the various special-status species known to occur throughout the region and provides an evaluation of the potential for each of their onsite occurrence potentials. Tables 3 through 9 below summarize information on special-status species known to occur in the vicinity of the CV Link transportation corridor, including the status of each species based on the best available information and the collective expertise of Amec Foster Wheeler biologists.

One exotic fish species, mosquitofish (*Gambusia affinis*), was observed within the few areas of pooled water present along the alignment in the Whitewater River channel (such as west of

Miles Avenue in Indian Wells). One non-native amphibian species, bullfrog (*Lithobates catesbeianus*) was also observed in the same area as the mosquitofish above. California toad (*Anaxyrus boreas halophilus*) and California chorus frog (*Pseudacris cadaverina*) tadpoles were observed adjacent to the South Palm Canyon Bridge crossing during a survey performed on April 14, 2015. None of these areas however are considered to be suitable habitat for the arroyo toad, desert pupfish or razorback sucker.

Reptiles detected included side-blotched lizard (*Uta stansburiana*), northern desert iguana (*Dipsosaurus dorsalis dorsalis*), common chuckwalla (*Sauromalus ater*), western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), desert spiny lizard (*Sceloporus magister*), long-tailed brush lizard (*Urosaurus graciosus*), western whiptail (*Aspidoscelis tigris tigris*), Mohave shovel-nosed snake (*Chionactis occipitalis occipitalis*), and Colorado Desert sidewinder (*Crotalus cerastes laterorepens*). Other common species such as, but not limited to, southern desert horned lizard (*Phrynosoma platyrhinos calidiarum*), red coachwhip (*Masticophis flagellum piceus*), desert glossy snake (*Arizona elegans eburnata*) and desert banded gecko (*Coleonyx variegatus variegatus*) are also expected to occur.

Representative birds observed onsite included Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), great-tailed grackle (*Quiscalus mexicanus*) and verdin (*Auriparus flaviceps*). Other common desert and migrant bird species are also expected to occur. A complete list of the 33 birds detected during the course of the surveys is included in Appendix C.

Common mammals detected onsite (or immediately adjacent) included black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*) white-tailed antelope squirrel (*Ammospermophilus leucurus*), desert wood rat (middens) (*Neotoma lepida*), northern raccoon (tracks) (*Procyon lotor*), and coyote (*Canis latrans*). Other small mammals, particularly rodents, occur near the project corridor as burrows were observed; however, the species that are present cannot be conclusively determined without a more intensive trapping effort.

No CVMSHCP wildlife corridors and/or linkages are mapped on the CV Link transportation corridor.

6.8 Special Status Species

Plant or animal taxa may be considered "sensitive" or as having “special-status” due to declining populations, vulnerability to habitat change, or because they have restricted ranges. Some are listed as threatened or endangered by the USFWS or by the CDFW and are protected by the federal and state ESAs and the NPPA. Others have been identified as sensitive or as special-status species by the USFWS, the BLM, the CDFW, or by private conservation organizations, including the CNPS. Unlisted special-status species do not have formal state or federal status.

Tables 1 through 7 summarize information on all special-status species that were detected during the field visits, have been reported within the vicinity (5-mile radius), or are considered to

have some potential to occur onsite based on geographic distribution and presence of potentially suitable habitat. These tables provide the names, legal or conservation status, general habitat associations, and the probability of occurrence for each of these species.

Table 1.
Special-Status Plants

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Abronia villosa var. *aurita* chaparral sand-verbena	F: None C: None CNPS: List 1B.1 Global Rank: G5T2T3 State Rank: S2 CVMSHCP: No	Sandy areas in chaparral and coastal sage scrub; 75-1600 m (262-5,249 ft)	January - September	Low (*C.v.* var. *aurita* not common on the floor of the Coachella Valley)
Acmispon haydonii pygmy lotus	F: ND C: ND CNPS: List 1B.3 State Rank: S3 CVMSHCP: No	Rocky sites in creosote bush scrub to pinyon-juniper woodland, 590 – 4,200 feet	January - June	Absent (No habitat present, site below elevation range of species, two closest CCH records from 1930, both developed now)
Ambrosia monogyra singlewhorl burrobush	F: ND C: ND CNPS: List 2B.2 State Rank: S2 CVMSHCP: No	Occurs in chaparral and Sonoran desert scrub in sandy soils, 32 – 1,640 feet	August - November	Low (Only two area CCH records are from Tahquitz Canyon west of alignment)
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch	F: END C: None CNPS List: 1B.2 Global Rank: G5T1 State Rank: S1 CVMSHCP: Yes	Sandy flats, washes, alluvial fans, sand field, dunes and dune edges; 40-655 m (130-2,150 ft), a CA endemic	February - May	Moderate (Most of project footprint lacking wind-blown sands, potential near 34th and Dinah Shore Drive, also between Airport Blvd. and Golf Center Parkway, CCH records in project vicinity, many lost to development), Core Habitat in Whitewater Floodplain Conservation Area

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Astragalus sabulonum gravel milk-vetch	F: None C: None CNPS: List 2B.2 Global Rank: G5 State Rank: S2 CVMSHCP: No	Sandy, sometimes gravelly flats, washes, and roadsides, desert dunes, Mojavean desert scrub and Sonoran desert scrub; -60-930 m (-197-3051 ft)	February - June	Low (In habitat adjacent to northern portion of alignment adjacent to Whitewater River channel, only two CCH records (old) near project, from Indio and Coachella and both have been developed)
Astragalus tricarinatus triple-ribbed milk-vetch	F: END C: None CNPS List: 1B.2 Global Rank: G1 State Rank: S1 CVMSHCP: Yes	Rocky canyon slopes, edges of boulder-strewn desert washes; 427-792 m (1400-2,600 ft)	February – May	Absent (project below elevation range, habitat lacking on proposed path)
Atriplex parishii Parish's brittlescale	F: ND C: ND CNPS: List 1B.1 State Rank: S1 CVMSHCP: No	Alkali meadows, vernal pools, chenopod scrub, playas, 82 – 6,230 feet	June - October	Absent (No habitat present, single CCH record from general area [1901] is from San Jancinto Mtns. ~5 mi. SW of Demuth Park area of project)
Ayenia compacta California ayenia	F: None C: None CNPS List: 2B.3 Global Rank: G4 State Rank: S2? CVMSHCP: No	Rocky Sonoran and Mojavean desert scrub; 150-1095 m (492-3593 ft)	March - April	Absent (most records are from rocky areas west of alignment, not likely on valley floor)
Bursera microphylla little-leaf elephant tree	F: None C: None CNPS List: 2B.3 Global Rank: G4 State Rank: S2 CVMSHCP: No	Rocky Sonoran desert scrub; 200-700 m (656-2297 ft)	June - July	Absent (habitat not present, species would not be overlooked if present)
Caulanthus simulans Payson's jewelflower	F: ND C: ND CNPS List: 4.2 State Rank: S4 CVMSHCP: No	Often found in burned or disturbed areas such as stream beds and rocky steep slopes. Favors sandy, granitic soils 1,300 – 7,200 feet	March - May	Absent (Alignment below elevation range of species, single CCH record from vicinity is from La Quinta 1935, now a golf course)

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Chamaesyce abramsiana Abram's spurge	F: None C: None CNPS List: 2B.2 Global Rank: G4 State Rank: S2 CVMSHCP: No	Sandy Sonoran Desert scrub; 9-915 m (30-3,000 ft)	September - November	Remote (only 1 1968 CNDDB record mapped as best guess)
Chorizanthe parryi var. *parryi* Parry's spineflower	F: ND C: ND CNPS List: 1B.1 State Rank: S3 MSHCP: No	On dry, sandy soils in coastal scrub, chaparral, cismontane woodland, and valley and foothill grassland, 738 – 4,000 feet	April - June	Absent (No habitat present, site is largely below elevation range of species, no CCH records near project, closest is in mouth of Whitewater Canyon well N of alignment)
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	F = None C = None CNPS List: 1B.2 CNDDB element rank: Global = G4T2 State = S2.2 CVMSHCP: No	Mojavean desert scrub, pinyon and juniper woodland, sandy or gravelly; 299-1200 m (984 – 3,937 ft)	April - June	Absent (Mojavean desert scrub habitat lacking, site below elevation range of species)
Cuscuta californica var. apiculata pointed dodder	F: None C: None CNPS List: 3 Global Rank: G5T2T4 State Rank: S3? MSHCP: No	Mojavean Desert scrub, Sonoran desert scrub/sandy; 0-500 m (0-1640 ft)	February - August	Absent (no dodder species observed during surveys, No CCH records in project vicinity, known from Mojave Desert near Colorado River)
Ditaxis clariana glandular ditaxis	F: None C: None CNPS List: 2B.2 Global Rank: G3G4 State Rank: S2 CVMSHCP: No	Sandy Sonoran Desert scrub and Mojavean desert scrub; 0-465 m (0-1526 ft)	October - March	Low (No Ditaxis observed during surveys, CCH records are from south and west of southern end of alignment; Jackson St. and Indio Blvd. record now a parking lot)
Ditaxis serrata var. *californica* California ditaxis	F: None C: None CNPS List: 3.2 Global Rank: G5T3T4 State Rank: S2? CVMSHCP: No	Sonoran Desert scrub; 30-1000 m (98-3281 ft)	March - December	Absent (3 of 4 CCH record locations now developed, remaining site is >5 mi. south of Palm Desert portion of alignment)

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Eremothera boothii ssp. *boothii* Booth's evening-primrose	F: None C: None CNPS List: 2B.3 Global Rank: G5T4 State Rank: S2 CVMSHCP: No	Rocky alluvial slopes in open creosote bush scrub, Joshua tree and pinyon-juniper woodlands; 815-2400 m (2,674-7,875 ft)	April - September	Absent (habitat not present on alignment, project below elevation range of species)
Eriastrum harwoodii Harwood's eriastrum	F: None C: None CNPS List: 1B.2 CNDDB element rank: Global Rank: G2 State Rank: S2 CVMSHCP: No	Desert dunes;125-915 m (410-3002 ft)	March - June	Absent (No CCH records in project area, nearest record is 30 miles northeast of Indio portion of alignment)
Euphorbia arizonica Arizona spurge	F: ND C: ND CNPS List: 2B.3 State Rank: S2 CVMSHCP: No	Sandy soils in Sonoran Desert Scrub, 164 – 1,000 feet elevation,	March - April	Absent (No CCH records near project, closest are from Anza Borrego Desert State Park)
Euphorbia misera cliff spurge	F: ND C: ND CNPS List: 2B.2 CNDDB element rank: Global Rank: G5 State Rank: S2 CVMSHCP: No	Rocky coastal bluff, coastal scrub, Mohaveave desert scrub; 10-500 m (33-1640 ft)	December - October	Absent (rocky coastal bluff and Mojave desert scrub habitat [cliffs] lacking, only inland records are from Whitewater Canyon)
Euphorbia platysperma flat-seeded spurge	F: ND C: ND CNPS List: 1B.2 State Rank: S1 MSHCP: No	Sonoran desert scrub, sandy habitats/dunes, ~210 – 328 feet elevation	February - September	Absent (Only 2 CCH records in vicinity; 1926 record is now I-10 near Monterey Ave., 1964 record is in wind farm ~3.22 mi. N. of N. Indian Canyon Drive crossing. Species extremely rare in CA)
Heuchera hirsutissima shaggy-haired alumroot	F: ND C: ND CNPS List: 1B.3 State Rank: S3 MSHCP: No	Subalpine coniferous forest and upper montane coniferous forest, often near large rocks, 4,980 – 11,500 feet	June - July	Absent (habitat not present, site is far below elevation range of species)

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Imperata brevifolia California satintail	F: ND C: ND CNPS List: 2B.1 State Rank: S3 CVMSHCP: No	Coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps, 0 – 4,000 feet	September - May	Absent (habitat not present, All three CCH records from area [Palm Springs] are from 1965, all developed now)
Lilium parryi lemon lily	F: ND C: ND CNPS List: 1B.2 State Rank: S3 CVMSHCP: No	Upper and lower montane coniferous forest, riparian forest, meadows and seeps, 4,000 – 9,000 feet	July - August	Absent (habitat not present, site is far below elevation range of species)
Linanthus jaegeri San Jacinto linanthus	F: ND C: ND CNPS List: 1B.2 State Rank: S2 CVMSHCP: No	Subalpine coniferous forest and upper montane coniferous forest, often on sheer granitic outcrops, 7,200 – 10,000 feet	July - September	Absent (habitat not present, site is far below elevation range of species)
Linanthus maculatus Little San Bernardino Mts. linanthus	F = BLM Sensitive C = None CNPS List: 1B.2 Global Rank: G2 State Rank: S2 CVMSHCP: Yes	Desert dunes, Sonoran desert scrub, Mojavean desert scrub, Joshua tree woodland; occurs most often on low benches along washes or bajadas where substrate shows evidence of water flow; 640-6,808' elev	March-May	Low (Alignment is largely below elevation range of species, closest CCH record is >1.5 mi. northeast of north end of alignment)
Marina orcuttii var. orcuttii California marina	F: None C: None CNPS List: 1B.3 Global Rank: G2G3T1T2 State Rank: S2? CVMSHCP: No	Chaparral, pinyon and juniper woodland, Sonoran desert scrub/rocky; 1050-2073 m (3445-3,806 ft)	May-October	Absent (alignment well below elevation range of species)
Matelea parvifolia spearleaf	F: None C: None CNPS List: 2B.3 Global Rank: G5? State Rank: S2.2 CVMSHCP: No	Mojavean desert scrub, Sonoran desert scrub/rocky; 440-1095 m (1444-3,593 ft)	March-May	Absent (alignment below elevation range of species, closest CCH record >11 mi. southwest of Indian Wells portion of project)

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Mentzelia tridentata creamy blazing star	F: None C: None CNPS List: 1B.3 Global Rank: G3 State Rank: S3 CVMSHCP: No	Mojavean desert scrub/rocky, gravelly, sandy; 700-1175 m (2297-3855 ft)	March-May	Absent (Mojavean desert habitat not present, alignment below elevation range of species, no CCH records near project)
Nemacaulis denudata var. *gracilils* slender cottonheads	F: None C: None CNPS: List 2B.2 Global Rank: G3G4T3? State Rank: S1 CVMSHCP: No	Coastal and desert dunes in Sonoran Desert scrub; -15- 564 m (-50-1,850 ft)	April – May (rarely March)	Low (most CCH records are from west of alignment, the few that were “nearby” have been developed)
Phaseolus filiformis slender-stem bean	F: None C: None CNPS: List 2B.1 Global Rank: G5 State Rank: S1 CVMSHCP: No	Sonoran Desert scrub; 125 m (410 ft)	April	Absent (Only CCH record in general project vicinity is from southwest of Mecca)
Pseudorontium cyathiferum Deep Canyon snapdragon	F: None C: None CNPS: List 2B.3 Global Rank: G4? State Rank: S1 CVMSHCP: No	Sonoran desert scrub (rocky); 0-800 m (0-2625 ft)	February - April	Absent (exceedingly rocky habitat not present, closest CCH record is from ~5 mi. south of Palm Desert portion of alignment)
Saltugilia latimeri Latimer's woodland-gilia	F: None C: None CNPS: List 1B.2 Global Rank: G2 State Rank: S2 CVMSHCP: No	Rocky, sandy, often granitic, sometimes washes in chaparral, Mojavean desert scrub, pinyon and juniper woodland; 400-1900 m (1312-6234 ft)	March-June	Absent (alignment below elevation range of species, closest CCH record is from >7 mi. south of Palm Desert portion of alignment on Highway 74)
Salvia greatae Orocopia sage	F: None C: None CNPS: List 1B.3 Global Rank: G2G3 State Rank: S2S3 CVMSHCP: Yes	Known from Orocopia and Chocolate Mountains; 100-1,475 feet	March-April	Absent (All CCH records from well east and south of alignment, closest is ~14 miles southeast of Airport Blvd. access point)

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Selaginella eremophila desert spike-moss	F: None C: None CNPS: List 2B.2 Global Rank: G4 State Rank: S2S3 CVMSHCP: No	Shady sites on gravelly soils; crevices or among rocks in Sonoran desert scrub, chaparral, 200-899 m (655-2,950 ft)	June (uncommon May & July)	Absent (shady and crevice habitat lacking, most of alignment below elevation range of species, CCH records are mostly from rocky areas west of alignment)
Senna covesii Coves' cassia	F: None C: None CNPS: List 2B.2 Global Rank: G5 State Rank: S3 CVMSHCP: No	Sonoran desert scrub (sandy), 285-1070 m (935-3510 ft)	March-June	Absent (alignment below elevation range of species, CCH records west and south of alignment, 1931 Coachella record is developed)
Stemodia durantifolia purple stemodia	F: None C: None CNPS: List 2B.1 Global Rank: G5 State Rank: S2 CVMSHCP: No	Mesic sites on sandy soils in Sonoran Desert scrub; 180-299 m (590-980 ft)	January - December	Absent (Alignment below elevation range of species, CCH records all west of alignment, closest record ~ 2 mi. SW of project)
Streptanthus campestris southern jewelflower	F: ND C: ND CNPS: List 1B.3 State Rank: S3 CVMSHCP: No	Chaparral, lower montane coniferous forest, pinyon-juniper woodland with open, rocky areas, 2,950 – 7,550 feet	May - July	Absent (No habitat present, alignment too low in elevation, all CCH records well west and south of alignment, closest record ~ 10 mi. S. of Palm Desert section of project)
Thelypteris puberula var. *sonorensis* Sonoran maiden fern	F: None C: None CNPS: List 2B.2 Global Rank: G5T3 State Rank: S2 CVMSHCP: No	Streams, meadows & seeps; 50-610 m (164-2001 ft)	January - September	Absent (All CCH records west of alignment, closest record is 1 mile SW of alignment in Tahquitz Cyn.)
Thysanocarpus rigidus rigid fringepod	F: None C: None CNPS: List 1B.2 Global Rank: G1G2 State Rank: S1S2 CVMSHCP: No	Pinyon and juniper woodland/Dry rocky slopes; 600-2200 m (1969-7218 ft)	February - May	Absent (Project below elevation range of species, closest CCH record is 12.5 mi. SW of Bermuda Dunes portion of alignment)

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Wislizenia refracta ssp. palmeri Palmer's jackass clover	F: None C: None CNPS: List 2B.2 Global Rank: G5T2T4 State Rank: S1 CVMSHCP: No	Chenopod scrub, desert dunes, Sonoran desert scrub, Sonoran thorn woodland; 0-300 m (0-984 ft)	January - December	Absent (All CCH records are from Anza Borrego Desert State Park)
Wislizenia refracta ssp. refracta jackass clover	F: None C: None CNPS: List 2B.2 Global Rank: G5T5? State Rank: S1 MSHCP: No	Desert dunes, Mojavean desert scrub, playas, Sonoran desert scrub; 600-800 m (1969-2625 ft)	April - November	Absent (Alignment below elevation range of species, all CCH records well north or east of project, closest one ~7.3 mi. east/northeast of Airport Blvd. access point)
Xylorhiza cognata Mecca-aster	F: None C: None CNPS: List 1B.2 Global Rank: G2 State Rank: S2 CVMSHCP: Yes	Grows on steep canyon slopes on sandstone and clay substrates; 20-305 m (65-1,000 ft)	January - June	Absent (canyon slope habitat not present, site lacks favored substrates)

Table 2.
Special Status Vegetation Communities

Community	Status	Habitat	Probability
desert fan palm oasis woodland	F=None C= None NDDB Element Global – G3 State – S3.2 CVMSHCP: Yes	Natural *Washingtonia filifera* groves	Absent (not observed)

Table 3.
Special Status Invertebrates

Species	Status	Habitat	Probability
Dinacoma caseyi Casey's june beetle	F=END C=None Global: G1 State rank: S1 CVMSHCP: No Critical habitat: No Species Survey Area: No	Sandy soils; flightless females live below ground and come to surface only for mating. Known only from two populations in a small area of southern Palm Springs	Present (Present along alignment from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel [AMEC 2014])
Macrobaenetes valgum Coachella giant sand treader cricket	F=None C= None NDDB Element Rank: Global: G1G2 State: S1S2 CVMSHCP = Yes	Active sand dune hummocks and ridges, sites favorable to permanent habitation include spring-moistened sand.	Low (Not expected on alignment as substrates are too compacted, but could occur in appropriate sandy areas adjacent to path; e.g. Habitat north of 34th Ave. and Marguerite Street near Dinah Shore Drive. Modeled habitat present on north and south portions of alignment). Core Habitat in Whitewater Floodplain Conservation Area
Oliarces clara cheeseweed owlfly	F: None C: None Global: G1G3 State: S2 MSHCP: No	Known from lower Colorado River drainage, creosote is suspected larval host. Found under rocks or in flight over streams in canyons	Low (Amec Foster Wheeler biologists have observed this species in Palm Canyon Wash <1 mile south of the Tahquitz Creek segment of the project)
Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	F=None C= None NDDB Element Rank: Global - G1G2 State - S1S2 CVMSHCP = Yes	Wind-deposited (aeolian) sand dunes, drift sands and water deposited (alluvial) gravelly/sandy soils	Low (Modeled habitat primarily along northern third of alignment. Only potential in adjacent sandy habitat, actual footprint too compacted and lacking suitable habitat characteristics)

Table 4.
Special Status Fish

Community	Status	Habitat	Probability
Cyprinodon macularius macularius desert pupfish	F=END C= END NDDB Element Rank: Global – G1 State – S1 CVMSHCP = Yes	Able to adapt to a variety of aquatic habitats, including those having high temperatures and salinities	Absent (suitable permanent aquatic habitat lacking)
Xyrauchen texanus razorback sucker	F=END C= END NDDB Element Rank: Global – G1 State – S1S2 CVMSHCP = No	Medium and large streams and rivers with sand, mud, or gravel bottoms.	Absent (aquatic riverine habitat lacking)

Table 5.
Special Status Amphibians & Reptiles

Species	Status	Habitat	Probability
Batrachoseps major aridus desert slender salamander	F = END C = END NDDB Element Rank: Global = G4T1 State = S1 CVMSHCP = No	Known only from rocky seeps, crevices in Hidden Palm Canyon and Guadalupe Canyon on the eastern slope of the Santa Rosa Mountains	Absent (suitable habitat lacking, alignment not within known range of species)
Rana draytonii California red-legged frog	F: THR C: CSC State rank: S2S3 CVMSHCP: No	Requires sources of permanent water, usually deep pools or ponded areas in foothill and lowland areas	Absent (no habitat present, not in species' range)
Rana muscosa southern mountain yellow-legged frog	F: END C: END State rank: S1 CVMSHCP: No	Sandy areas of the Coachella Valley (dunes and sand field habitats)	Absent (no habitat present, not in species' range)
Anaxyrus californicus arroyo toad	F: END C: None State rank: S2S3 CVMSHCP: Yes	Washes, arroyos, sandy riverbanks, riparian with willows, sycamores, oaks, and cottonwoods west of the desert in coastal areas. Former records from Whitewater canyon, San Felipe Creek, Vallecito Creek, and Pinto Canyon have been shown to be based on errors.	Absent (a habitat specialist, required breeding habitat not present, alignment is not within known range of species)

Species	Status	Habitat	Probability
Crotalus ruber ruber red-diamond rattlesnake	F = None C = CSC NDDB Element Rank: Global = G4 State = S2? CVMSHCP = No	Chaparral, woodland, grassland, desert areas from coastal SD Co to eastern slopes of mountains; rocky areas and dense vegetation, needs rodent burrows, cracks in rocks or surface cover objects	Low (Limited to area adjacent to rocky toe of slope NW of Highway 111 & Mirage Drive, also some potential in South Palm Canyon Bridge area)
Gopherus agassizi desert tortoise	Fed: THR Cal: THR NDDB Element Rank: Global = G3 State = S2 CVMSHCP = Yes	Various desert communities and habitats (Mojavean creosote bush scrub, Joshua tree woodland, saltbush scrub); washes, arroyos, bajadas, rocky hillsides, open flat desert	Absent-Very Low (No habitat <u>on</u> alignment, very low potential in Whitewater Floodplain Conservation Area adjacent to northern portion of project. This area is not classified as Core Habitat in the CVMSHCP)
Phrynosoma mcallii flat-tailed horned lizard	F = BLM Sensitive C = CAN END NDDB Element Rank: Global = G3 State = S2 CVMSHCP = Yes	Restricted to desert washes and desert flats in central Riverside, eastern San Diego and Imperial Counties; critical habitat is fine sand, requires vegetative cover and ants	Low (Modeled habitat south of Vista Chino, Dinah Shore and 34th St. area, and in that part of the alignment adjacent to the Whitewater Floodplain Conservation Area. Very unlikely on actual project footprint)
Uma inornata Coachella Valley fringe-toed lizard	F = THR C = END NDDB Element Rank: Global = G1Q State = S1 CVMSHCP = Yes	Restricted to sandy areas in the Coachella Valley; requires fine, loose, windblown sand interspersed with hardpan and widely spaced desert shrubs	Low-Moderate (Modeled habitat in same areas as flat-tailed horned lizard. Very unlikely on actual project footprint). Core Habitat in Whitewater Floodplain Conservation Area

Table 6.
Special Status Birds

Species	Status	Habitat	Probability
Aquila chrysaetos golden eagle	F: BCC C: FP, WL State rank: S3 CVMSHCP: No	Forages over a wide range of open habitats, nesting habitat is often cliff walls or large trees in open areas	Breeding: Absent Foraging: very low (no nesting habitat, not likely to forage over site due to proximity to development)
Laterallus jamaicensis coturniculus California black rail	F: BCC C: THR, FP State rank: S1 CVMSHCP: Yes	Dense coastal and inland marsh habitat with shallow water (<2.5cm) dominated by California bulrush (Scirpus californicus) and three square bulrush (S. americanus). Do not prefer areas dominated by cattails.	Absent (breeding & foraging) (Although habitat has been modeled along the southern portion of the alignment [Indio to Thermal], highly unlikely to occupy these areas due to ongoing maintenance activities [vegetation removal] by water district, and lack of suitable marsh habitat)
Rallus obsoletus yumanensis Yuma Ridgway's rail	F: END C: THR, FP Global: G5 State rank: S1 CVMSHCP: Yes	Found in well-developed marsh habitats of cattails (*Typha domingensis*) and bullwhip/California bulrush (*Scirpus californicus*). Also requires water depths varying from 6.5 cm to 20 cm. Whitewater River habitats are potentially impacted by chemical contaminants, salt cedar infestations, and flood control channel maintenance.	Breeding: Absent Foraging: very low (Suitable well-developed marsh habitat not present along alignment, no modeled habitat along alignment, closest populations are at the Salton Sea State Recreation Area at the mouth of Salt Creek and Dos Palmas marsh)
Athene cunicularia burrowing owl	F = BLM Sensitive, BCC C = CSC (burrows) NDDB Element Rank: Global: G4 State: S3 CVMSHCP: Yes	Open, dry annual or perennial grassland, deserts & scrublands characterized by low-growing vegetation	Occurs (An owl observed in the segment of the alignment north of Dillon Road and south of Golf Center Parkway in both 2015 & 2016) Breeding: Moderate Foraging: Occurs

Species	Status	Habitat	Probability
Cypseloides niger black swift	F: BCC C: SSC State rank: S2 CVMSHCP: No	Breeds in small colonies on cliffs behind or near waterfalls in deep canyons, forages widely	Absent (no breeding habitat, not commonly seen foraging in desert areas)
Empidonax traillii extimus southwestern willow flycatcher	F = END C = END NDDB Element Global = G5T2 State = S1 CVMSHCP = Yes	Nests in large areas of riparian forests and woodlands	Breeding: Absent (suitable riparian forest habitat lacking) Foraging: Low (during migration)
Falco mexicanus prairie falcon	F = None, BCC C = CSC (nesting) NDDB Element Global = G5 State = S4 CVMSHCP = No	Breeding sites located on cliffs, forages far afield	Breeding: Absent (habitat lacking) Foraging: Moderate (may nest on nearby cliffs and forage over portions of project alignment)
Lanius ludovicianus loggerhead shrike	F = None, BCC C = CSC (nesting) NDDB Element Global = G4 State = S4 CVMSHCP = No	A variety of open habitats, nests in trees and shrubs	Breeding: Moderate-High (All areas of Project alignment with appropriate vegetation). Foraging: Occurs (observed)
Vireo bellii pusillus least Bell's vireo	F: END C: END Global rank: G5 State rank: S2 CVMSHCP: Yes	Riparian woodland habitats along the riverine systems of Southern California, primarily in San Diego, Santa Barbara, and Riverside Counties. Needs dense shrub cover within 1 to 2 meters (3 to 6 feet) off the ground for nesting, and stratified canopy for foraging.	Breeding: Absent-Very Low (Modeled habitat between Golf Center Parkway and Avenue 52, habitat limited and subject to water district maintenance activities.) Foraging: Low (during migration)
Vireo vicinior gray vireo	F: None C: None Global rank: G4 State rank: S2 CVMSHCP: Yes	Arid, shrub-covered slopes in pinyon-juniper, juniper, and chamise-redshank chaparral, Habitats on foothills and mesas. Suitable Habitat typically occurs from 2,000 to 6,500 feet (600-2,000 m)	Breeding: Absent (Habitat not present, alignment well below elevation range of species.) Foraging: Absent (rarely observed during migration, no records on project alignment)

Species	Status	Habitat	Probability
Icteria virens yellow-breasted chat	F = None C = CSC (nesting) NDDB Element Rank: Global = G5 State = S3 CVMSHCP = Yes	Riparian forest and woodland; nests along many river systems in southern CA	Breeding: Absent (riparian forest habitat lacking, impacted by maintenance activities in river channel). Foraging: Low (during migration)
Setophaga petechia brewsteri yellow warbler	F = None, BCC C = CSC (nesting) NDDB Element Rank: Global = G5 State = S3S4 CVMSHCP = Yes	Although prefers wetlands and mature riparian woodlands dominated by cottonwoods, alders, and willows, will also use well-watered, second growth woodlands and even gardens.	Breeding: High (suitable habitat present on southern end of alignment, between Golf Center Parkway and Airport Boulevard). Foraging: Occurs (observed between Dillon road and Golf Center Parkway on 5/17/16)
Piranga rubra cooperi summer tanager	F = None C = CSC (nesting) NDDB Element Rank: Global = G5 State = S1 CVMSHCP = Yes	Summer resident that nests in mature riparian groves dominated by cottonwoods and willows. Usually prefers canyon riparian in our area.	Breeding: Absent (Although habitat has been modeled along alignment between Dillon Road and Avenue 52, suitable riparian forest habitat lacking, impacted by maintenance activities in river channel, species highly unlikely to breed there). Foraging: Very Low (during migration)
Polioptila melanura black-tailed gnatcatcher	F = None C = None NDDB Element Rank: Global = G5 State = S3S4 CVMSHCP = No	Primarily inhabits wooded desert wash habitats, desert scrub habitat, esp. in winter; nests in desert washes containing mesquite, palo verde, ironwood, acacia, absent from areas where salt cedar introduced	Breeding: High (In adjacent undeveloped areas of Whitewater River channel) Foraging: High (same areas listed above)

Species	Status	Habitat	Probability
Pyrocephalus rubinus vermilion flycatcher	F: ND C: CSC (nesting) Global: G5 State rank: S2S3 MSHCP: No	Usually associated with desert riparian habitats, forages from open perch	Breeding: Moderate (Potential in several areas of the Whitewater River channel with appropriate vegetation, as well as along golf course and park areas. Amec Foster Wheeler biologists have observed a juvenile near the alignment just north of Ramon Road in 2012) Foraging: Occurs
Toxostoma crissale crissal thrasher	F = None, BCC C = CSC NDDB Element Ranks: Global = G5 State = S3 CVMSHCP = Yes	Resident of southeastern deserts in desert riparian and desert wash habitats; nests in dense vegetation along streams/washes; honey mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed	Breeding: Low (Modeled habitat only along southern end of alignment, mainly between Golf Center Parkway and Avenue 52, however habitat is narrow with high edge to area ratio) Foraging: Low - (same as above)
Toxostoma lecontei Le Conte's thrasher	F = BLM Sensitive, BCC C = CSC (San Joaquin population only) NDDB Element Ranks: Global = G4 State = S3 CVMSHCP = Yes	Desert resident, primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats; commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground	Breeding: Low (Most of modeled habitat is along the N section of project [Whitewater Floodplain Conservation Area], but there are also areas in the central and southern portions, best potential in the north) Foraging: Moderate (same areas listed above)

Table 7.
Special Status Mammals

Species	Status	Habitat	Probability
Chaetodipus fallax pallidus pallid San Diego pocket mouse	F = None C = CSC NDDB Element Global = G5T3 State = S3S4 CVMSHCP = No	Desert border areas in eastern SD Co. in desert wash, desert scrub, desert succulent scrub, pinon-juniper, etc.; sandy herbaceous areas usually in association with rocks or coarse gravel.	Low (Alignment on edge of known range)
Corynorhinus townsendii Townsend's big-eared bat	F = None C = CAN THR NDDB Element Global = G3G4 State = S2 WBWG = H CVMSHCP = No	Generally viewed as a cave dwelling species, but the western subspecies are also found in human-made structures (e.g. old mine workings and buildings)	Roosting: Low (Prefers caves or abandoned mines, but rarely uses abandoned buildings, bridges, and culverts) Foraging: Low (especially around lighting and adjacent water features)
Euderma maculatum spotted bat	F = None C = CSC NDDB Element Global = G4 State = S3 WBWG = H CVMSHCP = No	Wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds on moths over water and along washes. Roosts in rock crevices in cliffs and caves.	Roosting: Absent (rock crevices, cliffs and caves lacking) Foraging: Low (especially over washes, over surface waters on golf courses or parks, around lights)
Eumops perotis californicus western mastiff bat	F = None C = None NDDB Element Global = G5T4 State = S3S4 WBWG = H CVMSHCP = No	Roosts in rock crevices on high cliffs with vertical faces	Roosting: Absent (rock crevices and cliffs lacking) Foraging: Low (especially over surface waters on golf courses or parks, around lights)
Lasiurus (ega) xanthinus western (southern) yellow bat	F = None C = CSC NDDB Element Global = G5 State = S3 WBWG = H CVMSHCP = Yes	Valley foothill riparian, desert riparian, desert wash and palm oasis habitats; roosts in trees, particularly palms, forages over water and among trees.	Roosting: Moderate (in landscaped palms with aprons at businesses, parks, golf courses, and residences along alignment) Foraging: Moderate (especially around palms and adjacent water features)

Species	Status	Habitat	Probability
Neotoma albigula venusta Colorado Valley woodrat	F: None C: None Global: G5T3T4 State rank: S1S2 MSHCP: No	Associated with beavertail cactus & mesquite in the Colorado Desert.	Absent (habitat limited)
Neotoma lepida intermedia San Diego desert woodrat	F: None C: None Global: G5T3T4 State rank: S3S4 MSHCP: No	Often in coastal scrub habitats, but enters desert areas. Usually prefers moderate to dense canopies near rocky areas.	High (woodrat middens observed during alignment surveys)
Nyctinomops femorosaccus pocketed free-tailed bat	F: None C: None Global = G4 State rank: S3 WBWG = M MSHCP: No	Roosts in crevices on rugged cliffs, on high rocky outcrops and slopes. May also roost in buildings, caves, and under roof tiles.	Roosting: Absent-Low (rock crevices, cliffs and caves lacking) Foraging: Moderate (especially over washes, around lights and adjacent water features)
Ovis canadensis nelsoni pop. 2 Peninsular bighorn sheep DPS	F: END C: THR Global = G4T3Q State rank: S1 MSHCP: Yes	Desert rocky slopes of the Peninsular Ranges in San Diego, Riverside, and Imperial Counties	Absent (suitable habitat lacking)
Perognathus longimembris bangsi Palm Springs pocket mouse	F = BLM Sensitive C = CSC NDDB Element Global = G5 State = S2S3 CVMSHCP = Yes	Sonoran Desert habitats with level to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils.	Moderate (The majority of the alignment [or immediate adjacent areas] has been mapped as modeled habitat for this species. However, unlikely to occur on proposed CV-Link path due to compacted soils and extensive disturbance/clearing of native habitat). Core Habitat in Whitewater Floodplain Conservation Area

Species	Status	Habitat	Probability
Taxidea taxus American badger	F = None C = CSC NDDB Element Global = G5 State = S3 CVMSHCP = No	Grasslands, a variety of open arid land habitats	Absent-Very Low (1949 CNDDB record exists near Indio segment of alignment (now developed), species highly unlikely to utilize alignment due to proximity to development and ongoing human disturbance)
Xerospermophilus tereticaudus chlorus Coachella Valley round-tailed ground squirrel	F = None C = CSC NDDB Element Global = G5 State = S1S2 CVMSHCP = Yes	Restricted to the Coachella Valley, prefers desert succulent scrub, desert wash, desert scrub, alkali scrub and levees; prefers open, flat, grassy areas in fine-textured, sandy soil.	Occurs (Observed by author in Stabilized Shielded Sand Field habitat adjacent to west side of alignment ~350 feet north of Ramon Road on April 16, 2012). Core Habitat in Whitewater Floodplain Conservation Area

Definitions of occurrence probabilities and status designations.

Definitions of occurrence probability:

Occurs: Observed on the site by Amec Foster Wheeler personnel, or reported on site by other qualified biologists.

High: Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

Low: Site is within the known range of the species but habitat on the site is rarely used by the species

Very Low: Habitat is of marginal suitability, site is at the edge of species known range or distribution.

Remote: Few historic records, not reported in recent times, and/or habitat marginal.

Absent: A focused study failed to detect the species, suitable habitat not present, or site is outside the geographic distribution of the species.

Federal designations: (F = federal Endangered Species Act, USFWS, or BLM designations):

END: Federally listed, Endangered
THR: Federally listed, Threatened
CAN: Candidate for Federal listing
BLM: Bureau of Land Management (BLM) Sensitive
BCC: Birds of Conservation Concern
None: No designation

State designations: (C = California Endangered Species Act or CDFW designations)

END: State listed, Endangered
THR: State listed, Threatened
RARE: State listed, Rare
FP: California Fully Protected Species
CSC: California Special Concern
None: No designation

CRPR: California Native Plant Society (CNPS) “California Rare Plant Rank”

CNPS CRPR: 1A - Plants Presumed Extinct in California; List 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere; List 2: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere; List 3: Plants About Which We Need More Information - A Review List; List 4: Plants of Limited Distribution - A Watch List.

CNPS Threat Ranks
0.1 - Seriously threatened in California (high degree/immediacy of threat).
0.2 - Fairly threatened in California (moderate degree/immediacy of threat).

0.3 - Not very threatened in California (low degree/immediacy of threats or no current threats known).

(Note: According to CNPS [Smith and Berg 1988], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code.)

Subdivisions within Categories (CNPS threat codes)
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Note that all List 1A (presumed extinct in California) and some List 3 (need more information- a review list) plants lacking any threat information receive no threat code extension. Also, these Threat Code guidelines represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Code.

CDFW CNDDB rankings: Animals
S1 = Extremely endangered: <6 viable occurrences or <1,000 individuals, or < 2,000 acres of occupied habitat
S2 = Endangered: about 6-20 viable occurrences or 1,000 - 3,000 individuals, or 2,000 to 10,000 acres of occupied habitat
S3 = Restricted range, rare: about 21-100 viable occurrences, or 3,000 – 10,000 individuals, or 10,000 – 50,000 acres of occupied habitat
S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continuing threats
S5 = Demonstrably secure; commonly found throughout its historic range
SH = all sites are historical, this species may be extinct, further field work is needed

Western Bat Working Group (WBWG) designations:
The Western Bat Working Group is comprised of agencies, organizations and individuals interested in bat research, management and conservation from the 13 western states and provinces. Its goals are (1) to facilitate communication among interested parties and reduce risks of species decline or extinction; (2) to provide a mechanism by which current information on bat ecology, distribution and research techniques can be readily accessed; and (3) to develop a forum to discuss conservation strategies, provide technical assistance and encourage education programs.
H: High: Species which are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats.
M: Medium: Species which warrant a medium level of concern and need closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.
L: Low: Species for which most of the existing data support stable populations, and for which the potential for major changes in status in the near future is considered unlikely. There may be localized concerns, but the overall status of the species is believed to be secure. Conservation actions would still apply for these bats, but limited resources are best used on High and Medium status species

Special Status Plants

Table 1 lists the forty-three (43) special-status plant species reported from the vicinity of the greater Project area. Of these, thirty-six (36) are considered to be absent or remote due to combination of a lack of, or marginality of suitable habitat, or the Project alignment occurring outside or at the edge of the species geographic range or elevational range. The remaining seven (7) species are considered to have at least some (low [six species] to moderate [one species]) potential of occurrence due to the presence of suitable habitat and records from the vicinity of the CV Link alignment. One species, Coachella Valley milkvetch is considered to have a moderate potential of occurrence on sandy habitats adjacent to the projected transportation corridor as this species is known to occur in the vicinity and is known to occur in either dynamic or highly disturbed, roadside areas and graded vacant lots which are present throughout much of the Project alignment. Coachella Valley milkvetch is a federal-listed endangered species, but is also a covered species under the CVMSHCP.

The remaining six (6) species that are considered to have a low occurrence potential based on records from the vicinity and presence of at least marginally suitable habitat along or near the

proposed CV Link alignment include: chaparral sand-verbena (*Abronia villosa* var. *aurita*), singlewhorl burrobush (*Ambrosia monogyra*), gravel milk-vetch (*Atragalus sabulonum*), glandular ditaxis (*Ditaxis clariana*), Little San Bernardino Mountains linanthus (*Linanthus maculatus*), and slender cottonheads (*Nemacaulis denudata* var. *gracilils*). Little San Bernardino Mountains linanthus is not listed as threatened or endangered but designated as a List 1B.2 species by the CNPS, it is also covered species under the CVMSHCP. The other five (5) plant species are not covered under the CVMSHCP, and none are listed as threatened or endangered by the CDFW or USFWS. With the exception of the chaparral sand-verbena, all are considered List 2B.2 species by the CNPS. Chaparral sand-verbena is listed as a List 1B.1 by the CNPS.

It should be noted that although there is a low probability of occurrence for these plant species to occur in the Project vicinity, these species are not expected on the Project alignment (footprint) due to the extremely disturbed/converted condition of the majority of the proposed route. Most of the proposed route consists of either a continually graded dirt road atop channels, embankments and levees, or developed paved public streets and/or paths adjacent to golf courses and park areas. Exceptions being mainly limited to some of the bridge undercrossings that are located within the Whitewater River/Coachella Valley Storm Drain Channel. See Table 1 for a summary of the legal status, habitat requirements and occurrence potentials for all of the special-status plant species reported from the vicinity of the Project alignment.

Table 2 includes the only special-status vegetation community, desert fan palm oasis woodland, known to occur in the vicinity of the Project alignment. Although landscaped fan palms are present intermittently throughout the alignment, a naturally occurring example of desert fan palm oasis woodland is absent.

Special Status Wildlife

Table 3 summarizes the four (4) special-status invertebrate species reported from the vicinity of the Project facilities. These include Casey's June beetle (*Dinacoma caseyi*), Coachella giant sand-treader cricket, cheeseweed owlfly (*Oliarces clara*) and Coachella Valley Jerusalem cricket. Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel (AMEC 2014). The Project proponents are aware of this, and are currently preparing a habitat conservation plan (HCP) for this Federal endangered species and are currently in negotiations with USFWS. The remaining three sensitive invertebrates are believed to have a low probability of occurrence in appropriate habitats adjacent to the Project alignment. The Coachella Valley Jerusalem cricket and Coachella giant sand-treader cricket are covered species under the CVMSHCP. The cheeseweed owlfly is not a covered species under the CVMSHCP, and is not listed as an endangered or threatened species by the CDFW or USFWS. Amec Foster Wheeler biologists have observed this species in Palm Canyon Wash less than one mile south of the Tahquitz Creek segment of the project. Those portions of Tahquitz Creek along the alignment that are relatively undeveloped support habitat that is similar to that found in Palm Canyon Wash, and there is a low probability that cheeseweed owlfly could occur in such areas. Currently, this species has a CDFW CNDDB sensitivity ranking of S2. Although modeled habitat for the Coachella Valley Jerusalem and giant sand-treader crickets is present along much of the

northern portion of the CV Link alignment (and near Indian Wells for the giant sand-treader cricket), these species are not expected to occur on the actual transportation corridor footprint for the same reasons listed previously in the sensitive plant discussion: the majority of the actual CV Link footprint consists of a combination of compacted dirt, concrete, and/or asphalt roads/paths that are wholly unsuitable for these sand specialists.

Table 4 provides information for two (2) special-status fish, the federally and stated-listed as endangered desert pupfish (*Cyprinodon macularius macularius*) and razorback sucker (*Xyrauchen texanus*). Although manmade ponds (i.e., golf course water hazards, and other decorative water features) and mesic, or saturated areas created by urban and golf course runoff are present adjacent to parts of the alignment, these waters are not considered suitable for these species, and could not have been naturally colonized by them. None of these water features are expected to be impacted by any of the proposed Project activities. For these reasons, the desert pupfish and razorback sucker are considered to be absent and thus will not be impacted by implementation of the proposed Project.

Table 5 lists the eight (8) special-status amphibian and reptile species previously reported to occur in the general vicinity of the Project. These include the desert slender salamander (*Batrachoseps major aridus*), California red-legged frog (*Rana draytonii*), southern mountain yellow-legged frog (*Rana muscosa*), arroyo toad (*Anaxyrus californicus)*, desert tortoise, flat-tailed horned lizard, Coachella Valley fringe-toed lizard, and red-diamond rattlesnake (*Crotalus ruber ruber*). The desert slender salamander is only known to occur in the seeps and talus slides from two remote canyons in Santa Rosa Mountains therefore this species is considered to be absent from the Project alignment. Similarly, the Project alignment is not located in the currently understood range of the California red-legged frog, southern mountain yellow-legged frog, and arroyo toad; nor does it contain habitat for these species. None of these sensitive amphibians are expected to occur on or immediately adjacent to the Project alignment. Although there are records and modeled habitat for both the Coachella Valley fringe-toed lizard and flat-tailed horned lizard from the vicinity of the proposed CV Link corridor (please see Figure 3), neither of these species are expected to occur on the actual Project alignment due to lack of required aeolian sand substrates and because much of this corridor has already been developed. Both the Coachella Valley fringe-toed lizard and flat-tailed horned lizard are covered species under the CVMSHCP, and potential impacts are typically mitigated through payment of the development fees. It should be noted that the flat-tailed horned lizard is currently a candidate for listing as endangered by the CDFW and thus will need to be treated as such under CESA until a final determination is made.

Desert tortoises are known to occur in the Little San Bernardino Mountains well to the north and in the Whitewater Hills to the northwest of the proposed Project alignment. Potentially suitable habitat for the desert tortoise exists in the Whitewater Floodplain Conservation Area, but the author is unaware of any recent records for this area adjacent to the CV Link alignment, and it is not considered core habitat for the species in the CVMSHCP. Red-diamond rattlesnake is known from the vicinity of the Project alignment, and is expected to have a low probability of occurrence where the alignment approaches the “toe-of-slope” of the San Jacinto/Santa Rosa Mountains northwest of Highway 111 and Mirage Drive, and in the South Palm Canyon Bridge area. Due to the project alignment’s close proximity to Highway 111 in this area, this species is

less likely to occur due to potential road mortality and proximity to residential and commercial development.

Table 6 summarizes the seventeen (17) special-status bird species reported from the vicinity of the Project alignment. These include the golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), burrowing owl, California black rail (*Laterallus jamaicensis coturniculus*), Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), black swift (*Cypseloides niger*), southwestern willow flycatcher (*Empidonax traillii extimus*), loggerhead shrike (*Lanius ludovicianus*), least Bell's vireo (*Vireo bellii pusillus*), gray vireo, yellow-breasted chat (*Icteria virens*), black-tailed gnatcatcher (*Polioptila melanura*), vermillion flycatcher (*Pyrocephalus rubinus*), crissal thrasher (*Toxostoma crissale*), Le Conte's thrasher, yellow warbler (*Setophaga petechia brewsteri*), and summer tanager (*Piranga rubra cooperi*). Most of these species have been reported from the greater vicinity of the various segments of the proposed Project and therefore potential for these species to occur (at least during migration or while foraging) is present (low for some, high for others). Four of these species, the burrowing owl, vermilion flycatcher, loggerhead shrike, and yellow warbler were detected adjacent to or on the Project alignment during the current or previous surveys of the area. Burrows with burrowing owl sign (whitewash, pellets and feathers) and one live burrowing owl were observed on Segment 9 of the proposed CV Link route on 29 Palms Tribal lands located between Dillon Road (to the south) and Golf Center Parkway (to the north) on November 20, 2015 and May 17, 2016. Live burrowing owls or burrows with definitive burrowing owl sign were not observed elsewhere along the alignment, but several burrows capable of supporting owls were observed along various portions of the Project alignment (please see Figure 6). Loggerhead shrike was observed at several locations along the alignment during both current and previous surveys performed by Amec Foster Wheeler biologists. There is a moderate to high potential for loggerhead shrike to nest at various locations along or immediately adjacent to the proposed project route. This species is considered a CDFW "Species of Special Concern" (CSC), and is not covered under the CVMSHCP. Yellow warblers were heard calling in the remnant willows in the Coachella Valley Storm Drain north of the area where the burrowing owl was observed on Segment 9 on May 17, 2016. Since yellow warblers can breed in relatively small stands of willows and riparian vegetation there is a high probability that this species could breed in this area of the alignment. Yellow warblers are a covered species under the CVMSHCP, and are considered a CDFW CSC when nesting. Amec Foster Wheeler biologists observed a juvenile vermilion flycatcher near the alignment just north of Ramon Road during a survey of that area in 2012. The fact that this was a young bird suggests that breeding had taken place up- or downstream of this location. Vermilion flycatcher has a moderate potential to nest along the Project route in several areas of the Whitewater River channel with appropriate vegetation, as well as along golf course and park areas adjacent to the CV Link alignment. This species is also considered a CDFW CSC when nesting, and is not a "covered" species under the CVMSHCP.

Nine of the remaining thirteen sensitive bird species listed in Table 6 are not expected to have any potential to breed on or adjacent to the CV Link route, either due to a lack of habitat or due to the presence of poor quality habitat that suffers ongoing human disturbance. These include golden eagle, prairie falcon, California black rail, Yuma Ridgway's rail, black swift, southwestern willow flycatcher, gray vireo, yellow-breasted chat, and summer tanager. With the exception of the golden eagle, prairie falcon, and black swift; all of these birds are "covered" species under

the CVMSHCP. There is a moderate potential for black-tailed gnatcatcher to occur and nest along portions of the CV Link alignment, especially along Segment 1 adjacent to the Whitewater Floodplain Conservation Area. Black-tailed gnatcatchers are not listed as threatened, endangered, or as a CDFW CSC, and are not a "covered" species under the CVMSHCP. This species has a CDFW CNDDB ranking of S3S4. Modeled habitat for crissal thrasher is only present along the southern end of the alignment, mainly between Golf Center Parkway and Avenue 52. However, this habitat is narrow with a high edge to area ratio (providing less of the dense vegetative cover preferred by this species). There is a low potential for crissal thrasher to nest and/or forage in this portion of the Project. Most of modeled habitat for Le Conte's thrasher is along the northern section of the project (Whitewater Floodplain Conservation Area), but there are also areas in the central and southern portions of the alignment. Le Conte's thrasher has a low probability of nesting in the habitat adjacent to the aforementioned areas of the Project route, and a moderate potential for foraging in these same areas. Both thrasher species are covered species under the CVMSHCP. Lastly, modeled habitat for least Bell's vireo has been mapped along the alignment between Golf Center Parkway and Avenue 52. This habitat is limited, consisting mostly of a narrow swath of riparian vegetation that has been left remaining after water district clearing activities. It is for this reason that this State and Federal endangered species is believed to have a very low (to absent) status as a breeder in this area, and to have a low potential to forage in this area of the alignment (potentially only in migration). No least Bell's vireos were detected along the CV Link alignment during the surveys. Least Bell's vireo is a covered species under the CVMSHCP.

Table 7 summarizes the twelve (12) special-status mammals reported as occurring in the vicinity of the Project alignment. These include: pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis californicus*), western (southern) yellow bat, Colorado valley woodrat (*Neotoma albigula venusta*), San Diego desert woodrat (*Neotoma lepida intermedia*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), Peninsular bighorn sheep, Palm Springs pocket mouse, American badger (*Taxidea taxus*), and Coachella Valley round-tailed ground squirrel. The only one of these sensitive mammals observed by Amec Foster Wheeler biologists in the CV Link alignment vicinity is the Coachella Valley round-tailed ground squirrel. Amec Foster Wheeler biologists have observed this species within 500 feet west of the proposed route approximately 350 feet north of Ramon Road on April 16, 2012 (please see Figure 4, page 5). Coachella Valley round-tailed ground squirrels are not State or Federally listed as threatened or endangered but are a California Species of Special Concern, and are a covered species under the CVMSHCP. The Whitewater Floodplain Conservation Area is listed as Core habitat for Coachella Valley round-tailed ground squirrel.

Two of the remaining mammals listed in Table 7 have a moderate to high potential of occurrence immediately adjacent to some of the proposed segments of the proposed CV Link route. Habitat suitable for San Diego desert woodrat and Palm Springs pocket mouse is present along or adjacent to portions of the CV Link alignment. The majority of the alignment (or more precisely the immediately adjacent areas) has been mapped as modeled habitat for Palm Springs pocket mouse. However, this small rodent is unlikely to occur on the actual proposed CV Link project footprint due to compaction of soils and lack of native habitat. The Whitewater Floodplain Conservation Area is classified as core habitat for Palm Springs pocket

mouse in the CVMSHCP. This species is "covered" under the CVMSHCP. Woodrat middens (not identified to species) were observed adjacent to the Project route during the current surveys of the alignment, and are believed to have better potential to belong to San Diego desert woodrat than Colorado Valley woodrat due to lack of habitat (areas of mesquite and beavertail cactus) for the latter species. Neither woodrat species is covered under the CVMSHCP nor are neither listed as threatened or endangered by the CDFW or USFWS.

Mature landscaped palm trees suitable for roosting western yellow bat are also intermittently present at private residences, businesses, parks, and golf courses along or immediately adjacent to the proposed CV Link route. There is a moderate possibility that western yellow bats could roost and/or forage in such areas along the alignment. This is the only bat species "covered" under the CVMSHCP. Although roosting habitat (cliffs with rock crevices, caves, abandoned mines, etc.) for the spotted bat, western mastiff bat and pocketed free-tailed bat is not present anywhere on the Project alignment, there is a low to moderate potential for these bat species to forage over portions of the alignment. None of these bats are State or Federal listed as threatened or endangered, and all have a CDFW CNDDB ranking of S3 or S3S4, with the spotted bat also considered a CDFW CSC. Townsend's big-eared bat is a candidate for listing as threatened by the State of California. This species prefers caves or abandoned mines for roost sites, but also rarely uses abandoned buildings, bridges, and culverts. There is a low potential for this bat to occur along the project route, both for foraging and roosting. Townsend's big-eared bats are not a "covered" species under the CVMSHCP.

The American badger is known from a 1949 CNDDB record near the Indio segment of alignment (now developed). This species is highly unlikely to utilize the project alignment due to its proximity to development and ongoing human disturbance. There is a low potential for pallid San Diego pocket mouse to occur along the CV Link alignment since the Project area is on the edge of the species known range. Similarly, Peninsular bighorn sheep are considered to be absent from the proposed alignment due to a lack of suitable habitat and/or the location of the Project outside of the species known range.

7.0 DISCUSSION

CV Link is proposed as a ±48-mile non-motorized, multi-modal transportation path network that passes through some of the most developed and populated portions of the Coachella Valley. The pathway route largely follows, and is to be built upon, the flood control service roads located atop channel embankments and levees of the region's principal watercourses, including Chino Wash/Whitewater River Floodplain, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. In some locations, the pathway shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues. Approximately 88% of the route is completely bordered by residential, commercial, light industrial, recreational or agricultural development; with approximately 12% of the route bordered by open lands containing native vegetation communities. With so much of the proposed route located in developed areas, very little previously undisturbed land will be impacted by CV Link. It is anticipated that the majority of the potential effects generated by construction of CV Link will be indirect effects; such as increased levels of noise, light, and foot traffic with its concomitant potential for edge effects.

The majority of the proposed CV Link route has been previously cleared of vegetation (dirt levee roads maintained by CVWD), or is located with paved roads and/or golf cart paths completely devoid of vegetation. Most of the area's wildlife and native plants cannot use such areas. A few exceptions, however, include some reptile, bird and mammal species that have adapted to use manmade structures, or ornamental shrubs and/or bird species that nest on disturbed, largely barren ground. Both active and inactive (old) bird nests (mainly verdin and house finch [*Haemorhous mexicanus*] were observed along the alignment in landscaped trees and shrubs. Additionally, many of the bridges present along the alignment had active cliff swallow (*Pterochelidon pyrrhonota*) nests on their undersides (Ramon Road, South Palm Canyon, Dinah Shore, and Date Palm Drive Bridges).

Portions of the proposed CV Link route are partially located on and/or immediately adjacent to undeveloped lands supporting native vegetation communities that are habitat for a variety of special-status species that are both CVMSHCP-covered species as well as species that are not covered. CVMSHCP-covered species potentially occurring on these adjacent lands include: Coachella Valley milkvetch, Little San Bernardino Mountains linanthus, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, Coachella Valley fringe-toed lizard, burrowing owl, least Bell's vireo, yellow warbler, crissal thrasher, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and western yellow bat. Although there is potential (remote to high) for these species to occur on and/or immediately adjacent to the Project route, the CVMSHCP provides full coverage for plan participants. CVAG is a signatory to the CVMSHCP. Participants generally pay a standard development fee prior to receiving requisite grading or development permits with some exceptions and special provisions or requirements (i.e., burrowing owl, projects within conservation areas and nesting birds).

Much of Segment 1 of the proposed CV Link route is located within the boundaries and/or along the very edge of the Whitewater Floodplain Conservation Area as depicted by the CVMSHCP. This area has mapped core habitat for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse.

The study area occurs along the Whitewater River and Tahquitz Creek. These watercourses are considered jurisdictional by the USACE, CDFW and RWQCB. Impacts to these jurisdictional areas will require authorizations from the USACE, CDFW and RWQCB.

The CVMSHCP states that permittees, including the Project proponent, will conserve 96,400 acres in the conservation areas (4,140 acres in the Whitewater Floodplain Conservation Area) and establish an endowment to fund monitoring and management programs for those lands in perpetuity. The CVMSHCP also states that local permittees must also comply with all other terms and conditions of the CVMSHCP and Implementing Agreement (See Section 13.0 of the CVMSHCP Implementing Agreement), including, but not limited to:

Within Conservation Areas

- Ensure achievement of CVMSHCP conservation goals and objectives and required measures in each conservation area identified in Section 4.3 and attainment of the species conservation goals and objectives identified in Section 9.
- As described in Sections 4.1.2 and 4.2.2.2.1, conserve permittee-owned land in the conservation areas. Except as otherwise set forth in this section, the permittee shall commit their currently not-conserved lands to conservation in perpetuity within 3 years of permit issuance.
- Existing and future lands on which the Riverside County Flood Control has take authorization for construction, operation, and maintenance of facilities that are covered activities will be conserved only to the extent compatible with the construction, operation, and maintenance of the facilities.
- Participate in the Joint Project Review Process for projects within conservation areas as described in Section 6.6.1.1 and implement the "Land Use Adjacency Guidelines" described in Section 4.5.
- Upon request from the wildlife agencies, the permittees shall provide (a) an analysis and determination of consistency with the CVMSHCP at the time of, and along with, certification of applicable CEQA documents for approval of development projects within conservation areas and (b) a copy of the final project approval documents within 30 days.
- Applicable permittees will employ HANS as described in Section 6.6.1.2 as appropriate.
- Jurisdictions that received take authorization for the Coachella Valley fringe-toed lizard pursuant to the incidental take permit issued for that species pursuant to the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan will relinquish the permit and comply with Section 6.6.1.3 and IA Section 16.2.

Within and Outside Conservation Areas

- Ensure that habitat preservation is occurring in rough proportionality with development and that reserve assembly occurs as contemplated in the MSHCP.
- Ensure compliance for public and private projects with all applicable required measures in Section 4.4. If a project shares a common boundary with a conservation area, require compliance with the "Land Use Adjacency Guidelines" set forth in Section 4.5.
- Ensure compliance with plan requirements for public projects.
- Impose adopted local development mitigation fees. The permittee shall be responsible for collecting all revenues generated within their respective jurisdictional boundaries for CVMSHCP implementation and transferring those revenues to the Coachella Valley Conservation Commission (CVCC) within thirty (30) days of collection.
- Adopt an appropriate CVMSHCP implementation mechanism as set forth in Section 11.1 of the Implementing Agreement.
- Maintain a record of total acres and location of development within its jurisdiction and transmit this information to CVCC monthly. The undeveloped portions of parcels in

conservation areas on which development is approved by the permittee shall count toward meeting the CVMSHCP's conservation objectives only when the undeveloped portion of the parcel is legally described and permanently protected through an appropriate legal instrument, and provision is made for the land to be monitored and managed pursuant to the CVMSHCP's Monitoring Program and Management Program. Review of individual development projects will occur in accordance with the Implementation Manual.

- At the end of each calendar year, convey any changes in City boundaries or general plan land use designations to CVCC for inclusion in its annual report to the wildlife agencies.
- Take will be allocated by the permittee.
- On parcels approved for development, the permittee shall encourage the opportunity to salvage covered sand-dependent species in accordance with the Implementation Manual.

Of the approximately 7,000 acres that CVWD owns in the conservation areas, CVWD shall cooperate with CVCC toward the conservation of those lands, as follows:

- Approximately 1,200 acres of the 7,000 acres are in the Whitewater Floodplain
- Conservation Area and are currently conserved pursuant to the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan. These lands will be permanently committed to conservation under the CVMSHCP.
- Lands on which CVWD has take authorization for "operations and maintenance (O&M)" of facilities that are covered activities, will be conserved only to the extent compatible with the O&M of the facilities.
- Future facilities (Dike 4 and Martinez recharge basins and future water- related facilities) that are covered activities requiring a "minor plan amendment with criteria" will be mitigated by commitment of CVWD lands within essential Peninsular bighorn sheep habitat to conservation at a 1:1 ratio of conservation to development. If, in addition to these covered activities, CVWD develops any of its land in a conservation area consistent with the conservation objectives, CVWD may commit an equivalent dollar value of its lands in the conservation areas to permanent conservation in lieu of paying the development mitigation fee. CVCC will continue to be responsible for ensuring that the conservation area conservation objectives are met.
- For future projects outside the conservation areas, CVWD may commit an equivalent dollar value of its lands in the conservation areas to permanent conservation in lieu of paying the local development mitigation fee. These lands are not subject to the requirement that local permittee-owned lands that are not currently conserved must be committed to conservation in perpetuity within 3 years of permit issuance. If before year 50 of plan implementation, CVWD still owns land in the conservation areas that has not been conserved by any of the foregoing methods, CVWD shall cooperate with CVCC in the conservation of these lands through acquisition by CVCC or other means. Conservation will be accomplished through conveyance of fee title to CVCC, recordation

of a conservation easement, or entering into an MOU for cooperative management with CVCC. CVWD will contribute $3,583,400 toward the endowment fund for the Monitoring Program, the Management Program, and adaptive management. This may be paid in full the first full fiscal year after permit issuance, or it may be paid in installments over a maximum of five years, beginning in the first full fiscal year after permit issuance. Interest shall be paid by CVWD at the annual rate of 5.14% on the outstanding balance.

Burrowing Owl

Although the burrowing owl is a covered species under the CVMSHCP, additional survey and conservation requirements apply. Amec Foster Wheeler Senior Biologist Nathan Moorhatch observed a live burrowing owl and burrows with owl sign (pellets, whitewash and feathers) on Segment 9 of the proposed CV Link route on 29 Palms Tribal lands located between Dillon Road and Golf Center Parkway. Additionally, the Whitewater Floodplain Conservation Area provides “Other Conserved Habitat” for the burrowing owl. The portion of the CV Link route that passes through this area has suitable habitat for burrowing owl, although none were observed during the current field surveys (it must be noted that protocol presence/absence burrowing owl surveys were not performed as a part of this effort as these will need to be performed in the manner and time frames outlined in the following paragraph and/or per instructions from CDFW regarding this project).

A “take avoidance survey” for the burrowing owl no less than 14 days (in accordance with the Staff Report on Burrowing Owl Mitigation [CDFW 2012]) and no more than 30 days (in accordance with CVWD’s Operations and Maintenance Manual) prior to ground breaking activities may also be required within and outside of conservation areas that contain suitable habitat for this species. Additionally, a final survey must be conducted within 24 hours of the initiation of ground disturbance activities in accordance with the CDFW 2012 protocol. If no burrowing owls are detected during those surveys, implementation of ground disturbance activities could proceed without further consideration of this species assuming there is no lapse between the surveys and construction as the protocol states “time lapses between Project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance." If burrowing owls are detected during the take avoidance surveys, avoidance and minimization measures would then be required and the need for mitigation for otherwise unavoidable impacts triggered.

Casey’s June Beetle

Casey’s June beetle occurs along that portion of the alignment that runs from Demuth Park east to the confluence of Tahquitz Creek and Whitewater River channel (AMEC 2014). The Project proponents are aware of this, and are currently preparing an HCP for this Federal endangered species and are in negotiations with USFWS. The most common means of mitigating impacts to this species is through habitat acquisition and/or restoration, although other measures suggested by USFWS will be addressed if presented.

Other Sensitive Species

Potentially-occurring special-status species that are not covered by the CVMSHCP include: chaparral sand-verbena, singlewhorl burrobush, gravel milk-vetch, glandular ditaxis, slender cottonheads, cheeseweed owlfly, red-diamond rattlesnake, loggerhead shrike, black-tailed gnatcatcher, vermillion flycatcher, pallid San Diego pocket mouse, Townsend's big-eared bat, earthquake Merriam's kangaroo rat, spotted bat (foraging only), western mastiff bat (foraging only), pocketed free-tailed bat (foraging only), San Diego desert woodrat, and American badger. Of these, potential impacts to chaparral sand-verbena may be considered significant if a substantial population were to be lost or impacted as this species is designated as a CNPS List 1B.1 species meaning that it is considered to be "seriously threatened in California and elsewhere", has a "high degree (and/or) immediacy of threat" and is considered to be "Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)." However, due to the extremely disturbed and/or developed condition of the majority of the proposed alignment, this plant is not expected to occur on the CV Link route, and the Project is not expected to impact a substantial population of this species. The remaining plant species are considered to be CNPS List 2 species or higher. Impacts to those species, if any, would likely fall below the threshold of significance under CEQA because they are "more common elsewhere" or "more information is needed." Impacts to nesting loggerhead shrike, black-tailed gnatcatcher, vermillion flycatcher (if any) may be considered significant under CEQA but would be avoided through the measures implemented in compliance with the MBTA. The likelihood of Project-related impacts to the potentially occurring red-diamond rattlesnake, American badger, pallid San Diego pocket mouse, Townsend's big-eared bat, spotted bat, western mastiff bat and pocketed free-tailed bat would also not likely be considered significant under CEQA for several reasons including: 1) these species have a large distribution and are more common elsewhere; 2) the location of the site at the extreme edge of the range for some (red-diamond rattlesnake, pallid San Diego pocket mouse); 3) onsite habitats are marginal and Project-related disturbance to potential habitat would be largely indirect (increased noise, foot traffic, lighting, etc.); 4) the occurrence potential for Townsend's big-eared bat, spotted bat, western mastiff bat and pocketed free-tailed bat is largely for foraging/fly-over activities only, as onsite habitats lack roosting opportunities for these species; and 5) the majority of the proposed alignment has already been developed and/or lost its native vegetation, therefore very little "new" undeveloped land will be lost as a result of Project implementation. For these reasons, focused surveys to determine the status of the potentially-occurring special-status species not afforded coverage under the CVMSHCP are not considered to be warranted nor are they recommended for this Project.

Significant portions of the alignment pass through or adjacent to areas (including golf courses, park lands, areas of landscaped trees and shrubs, and undeveloped natural habitats) that contain habitat for a variety of nesting birds. Bird nests were observed in landscaped trees and shrubs, and on several of the existing bridges along the proposed CV Link route. Although some of the birds potentially nesting along the Project route are CVMSHCP-covered species, this coverage does not allow for take of the individual birds or their active nests. Additionally, the CVMSHCP does not provide coverage or conservation for many other bird species potentially occurring or nesting onsite that are protected by the MBTA. Therefore, impacts to native birds and their nests are not permitted under any part of the CVMSHCP. Because impacts to nesting birds are not covered by the CVMSHCP, any activities that could potentially cause disruption of natural nesting behavior or directly disturb an active nest or nesting bird

must be minimized or avoided. Although there is no established protocol for nest avoidance, regulatory agencies generally recommend avoidance buffers of about 500 feet for birds-of-prey, and 100–300 feet for songbirds, however, this is often determined on a case by case, or project by project basis. The nesting season for most species in the Coachella Valley is generally from approximately 1 February to 31 August. Avoidance of Project activities that have the potential to disturb nesting birds during the nesting season is the easiest way to avoid impacts. If it is not feasible to avoid such Project activities during the nesting season, nesting bird surveys conducted by a qualified biologist should be completed prior to any such activities. If active nests are found, they should be avoided and adequate no disturbance buffer zones established and observed by Project activities until after the young have fledged.

For those portions of the proposed Project route that are within and/or adjacent to CVMSHCP conservation areas, Land Use Adjacency Guidelines are required during Project review and should implemented to avoid or minimize the potential for Project-related edge effects. These guidelines are as follows:

7.1 Drainage

Development projects adjacent to or within a conservation area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent conservation area is not altered in an adverse way when compared with existing conditions. Storm water systems shall be designed to prevent the release of pollutants (e.g., toxins, chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent conservation area.

7.2 Toxics

Land use including development adjacent to or within a conservation area that use chemicals or generate toxic or potentially toxic bio-products (e.g., manure) or may adversely impact native wildlife and plant species, their habitat, or water quality are required to incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent conservation area.

7.3 Lighting

Lighting in areas proposed for development that are adjacent to or located within conservation areas, shall be shielded and directed away from the conservation area, toward the developed areas. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent conservation area in accordance with the guidelines included in the Implementation Manual.

7.4 Noise

Noise generated from development projects adjacent to or within a conservation area in excess of 75 dBA shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent conservation area according to Implementation Manual guidelines.

7.5 Invasives

Landscape plans for development projects and land uses that are located adjacent to or within a conservation area are required to not use invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP (Appendix E). To the maximum extent feasible, Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into landscape design within or adjacent to conservation areas (Appendix F).

7.6 Additional Recommended Mitigation Measures

The following mitigation measures are not Land Use Adjacency Guidelines, but rather are based on Amec Foster Wheeler biologists' experience on the project alignment and on similar linear projects. These measures are most applicable to those sections of the alignment adjacent to native habitat.

- **Fencing/Signage** – As a means to protect the adjacent lands of the Whitewater Floodplain Conservation Area present on Segment 1 of the CV Link alignment, it is our recommendation that fencing and/or regularly placed signage be employed near the "top-of-slope" of the levee to prevent people and their pets (particularly dogs being walked by their owners) from straying off the designated CV Link path and into the adjacent natural habitat. Domestic dogs (and cats) are capable of harming native wildlife, and degrade natural areas through digging activities and deposition of waste. Installing an appropriate fence or signage along that portion of the alignment adjacent to the Whitewater Floodplain Conservation Area could help prevent this impact.
- **Pet Control** – In addition to signage, all dogs should be required to be on a leash while traversing CV Link. Aside from preventing individual animals from entering native habitat, the benefits of such a mandate are numerous including facilitating personal safety for other users of the Link, preventing altercations with other dogs present on the path, and increased safety for the individual pet in question (i.e. preventing collisions with bicyclists and LSEV users).
- **Interpretive Signage** – Interpretive signs are part of a suite of associated structures that are planned for CV Link. Currently, most of these signs are likely to provide "wayfinding" information or illustrations of various points on the CV Link route. Amec Foster Wheeler biologists believe that it would be beneficial to include a few interpretive signs adjacent to areas of native habitat (such as the Whitewater Floodplain Preserve) that illustrate and educate the public on some of the native wildlife, plant, or vegetation communities present adjacent to CV Link. This can help foster respect and create interest and appreciation for some of the native flora and fauna that make the Coachella Valley unique.

Participation in the CVMSHCP, payment of the required development mitigation fees and implementation of the rules and regulations (especially participation in the Joint Project Review Process for the Project features within Conservation Areas and implementation of the Land Use Adjacency Guidelines), surveys to determine the status of burrowing owl, avoidance of impacts

to nesting birds, and application for requisite permits from USACE and/or CDFW for unavoidable impacts to jurisdictional areas (if any) should result in avoidance, minimization and mitigation of Project-related impacts to CVMSCHP-covered species and other special-status species potentially occurring onsite and/or immediately adjacent to the Project features that are not covered by the CVMSHCP.

With the implementation of the recommendations, requirements and guidelines summarized above, including requisite participation in the CVMSHCP, Project-related impacts to the CVMSHCP-covered species, special-status species not covered by the CVMSHCP, nesting birds protected under the MBTA and USACE and/or CDFW jurisdictional areas are expected to be mitigated to less than significant levels.

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APPENDIX A

FIGURES

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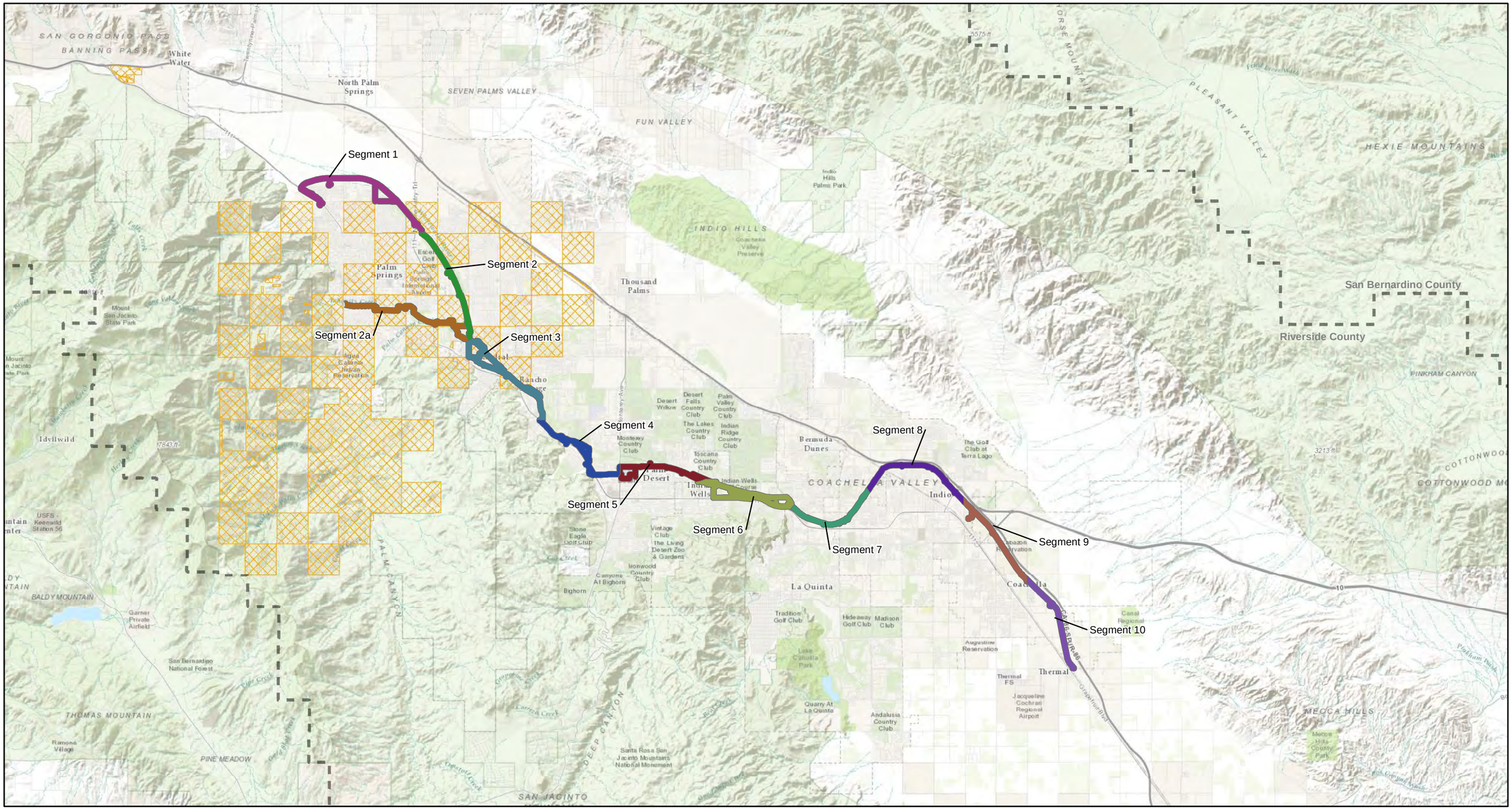

LEGEND

- Segment 1
- Segment 2
- Segment 2a
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- U.S. Bureau of Land Management

NAME

- Agua Caliente Indian Reservation
- Coachella Valley MSHCP

0 1 2 3 Miles

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

FIGURE 1

CV/LINK
MSHCP Compliance Report

Project Overview

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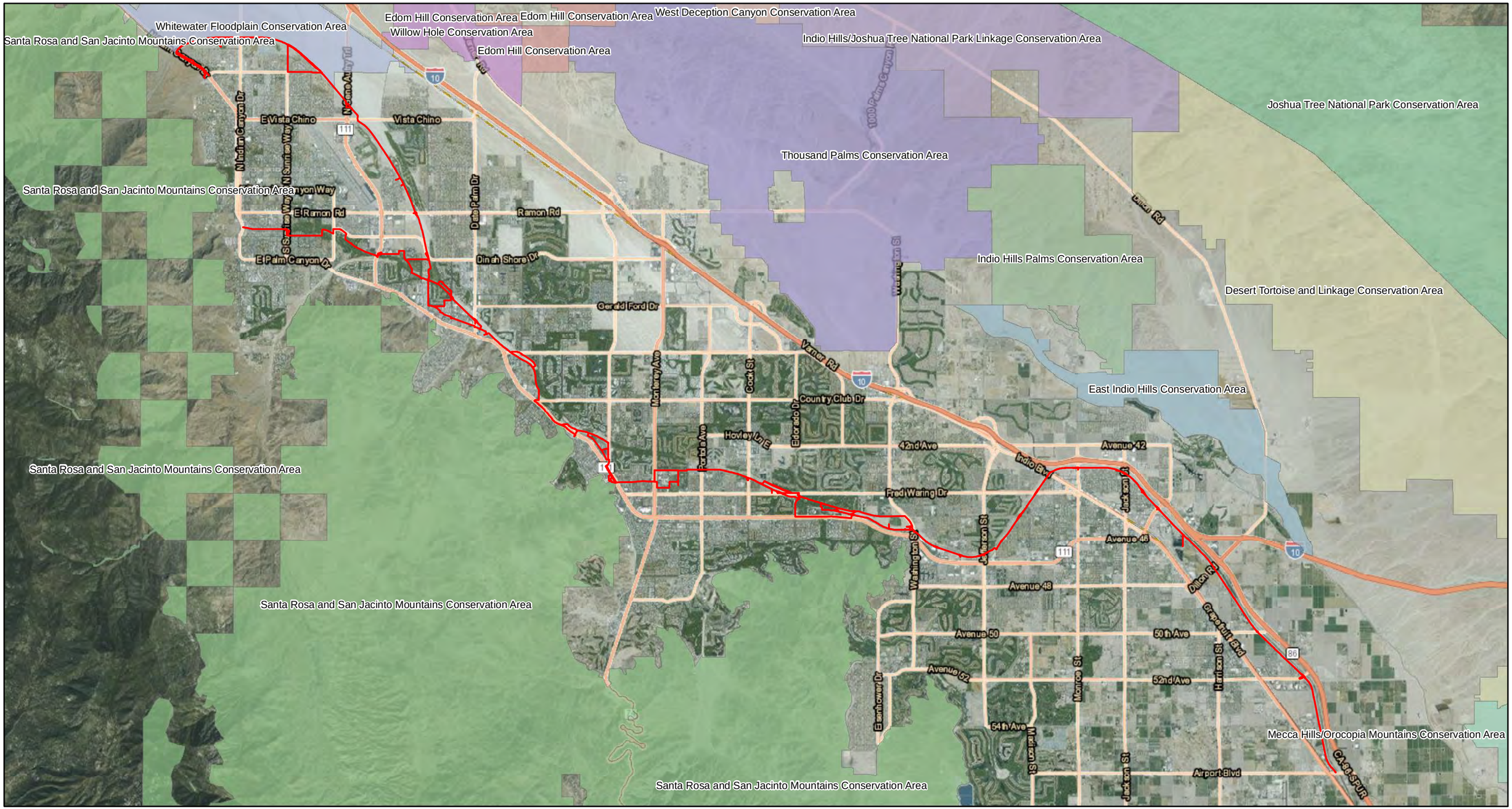

LEGEND

- Current alignment 2016
- Desert Tortoise and Linkage Conservation Area
- East Indio Hills Conservation Area
- Edom Hill Conservation Area
- Indio Hills Palms Conservation Area
- Indio Hills/Joshua Tree National Park Linkage Conservation Area
- Joshua Tree National Park Conservation Area
- Mecca Hills/Orocopia Mountains Conservation Area
- Santa Rosa and San Jacinto Mountains Conservation Area
- Thousand Palms Conservation Area
- West Deception Canyon Conservation Area
- Whitewater Floodplain Conservation Area
- Willow Hole Conservation Area

CVAG

0 2
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

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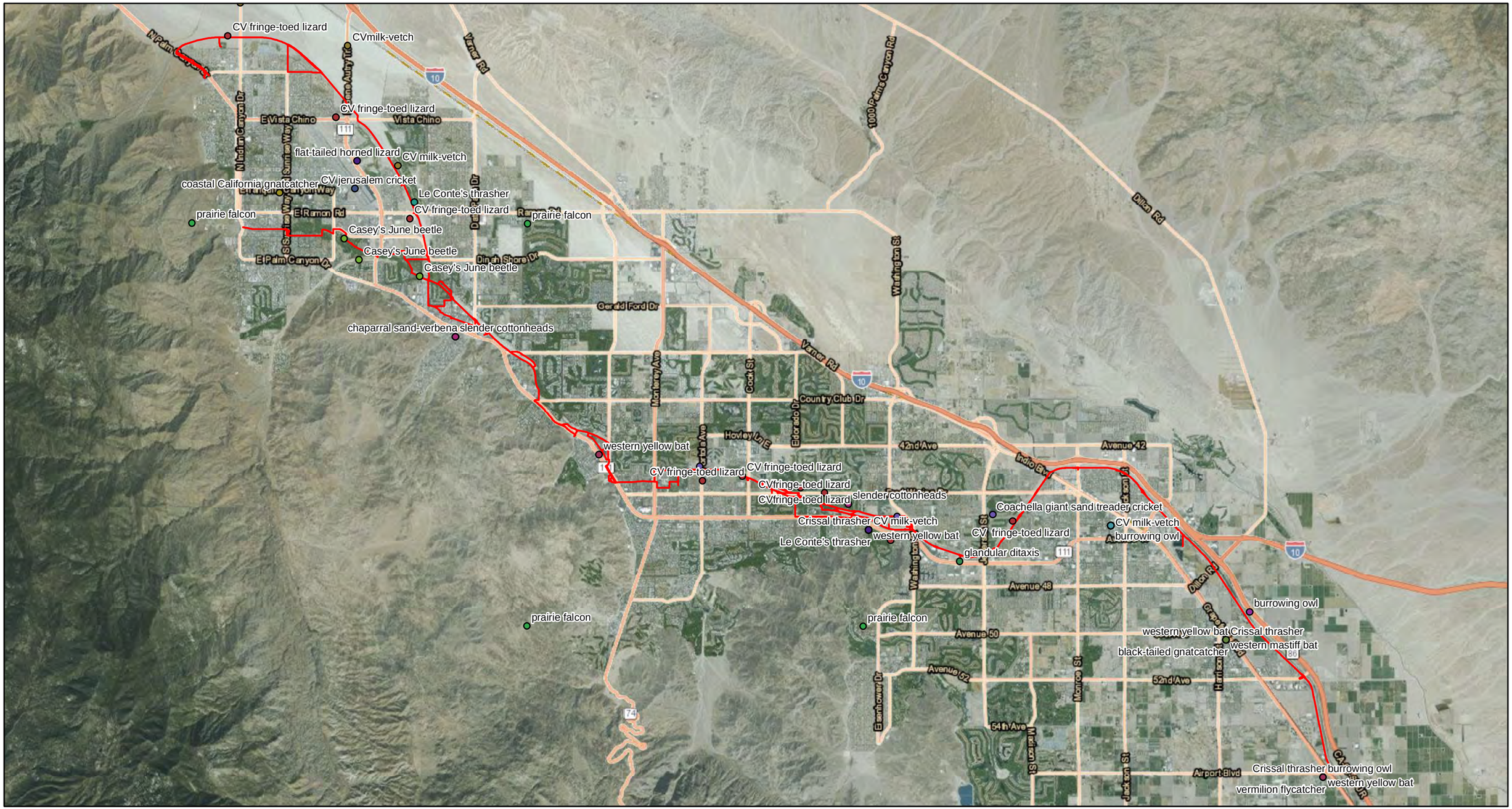
FIGURE 2

CV/LINK
MSHCP Compliance Report

CVMSHCP Conservation Areas

amec foster wheeler



CVAG

0 1
Miles

LEGEND

Current Alignment 2016

CNDDB

Casey's June beetle
Coachella Valley jerusalem cricket
Coachella Valley milk-vetch
Coachella giant sand treader cricket
chaparral sand-verbena
glandular ditaxis
gravel milk-vetch
slender cottonheads
American badger
Coachella Valley fringe-toed lizard
Crissal thrasher
Le Conte's thrasher
Palm Springs round-tailed ground squirrel
black-tailed gnatcatcher
burrowing owl
flat-tailed horned lizard
prairie falcon
vermilion flycatcher
western mastiff bat
western yellow bat

Source: CV Link_Construction Documents_ 30% Plan Set, CNDDB july, Bing Maps

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FIGURE 3

Animals
Plants & Insects

CV/LINK
MSHCP Compliance Report

CNDDB & Critical Habitat

amec foster wheeler

CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 1
- Staging Areas
- Cliff Swallow nests (active)
- Potiential Burrowing Owl Burrows
- Cooper's Hawk
- House Finch nest
- Verdin nest

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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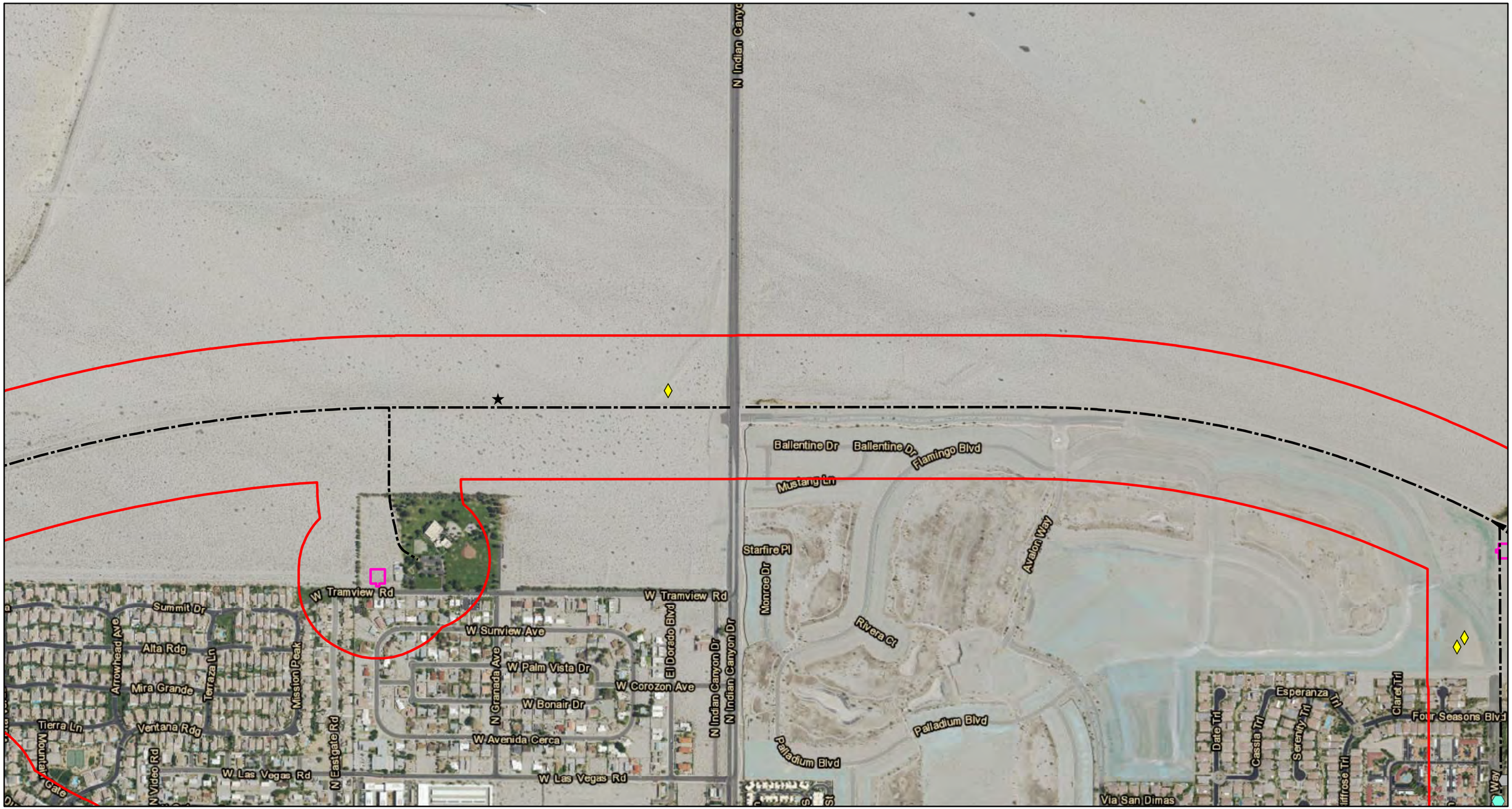

CVAG

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Feet

LEGEND

- Current Alignment 2016
- Segment 1
- Staging Areas
- Bird nest in landscaped Paloverde
- Potiential Burrowing Owl Burrows
- Loggerhead Shrike
- Verdin nest

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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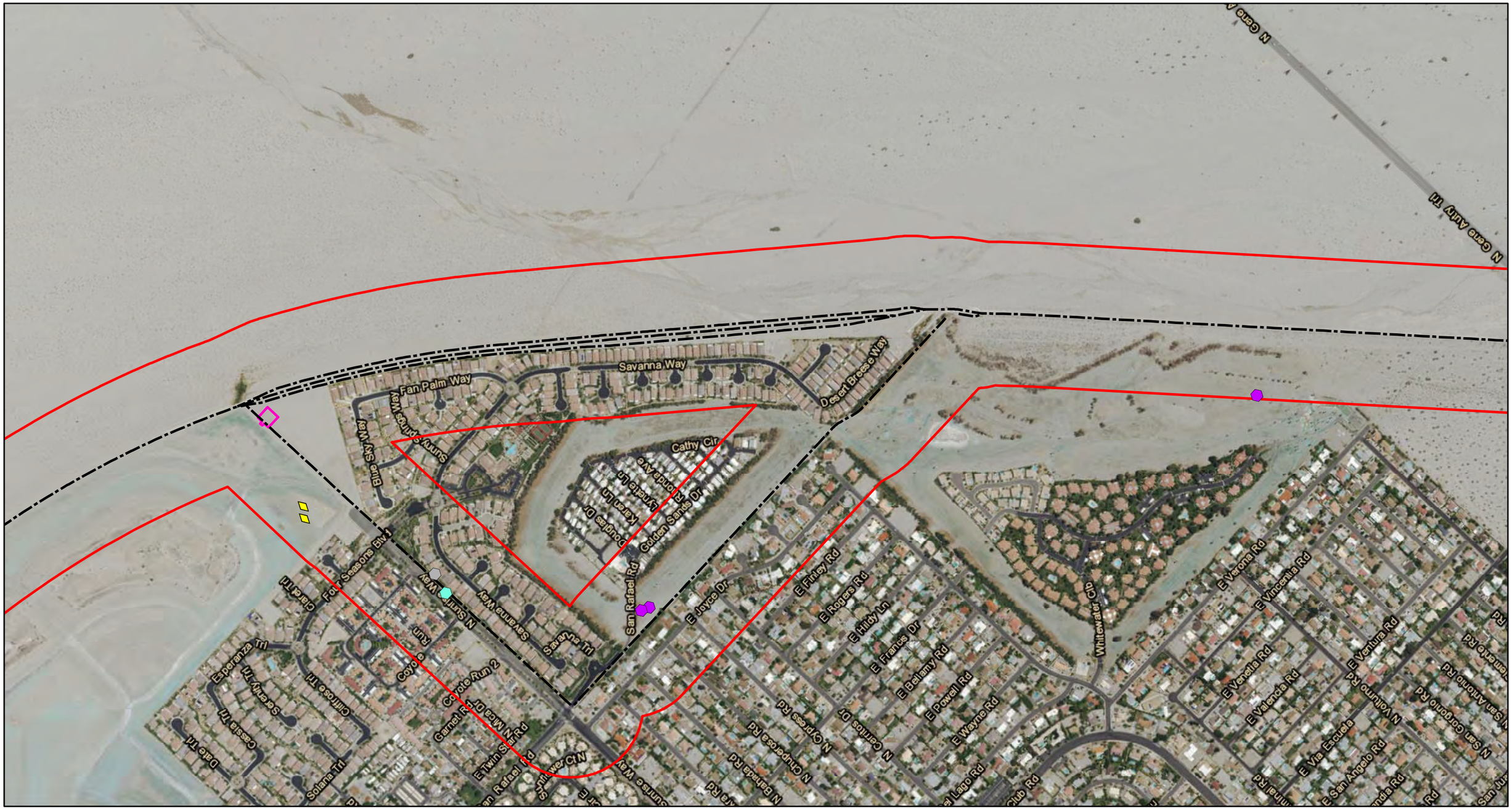

LEGEND

- Current Alignment 2016
- Segment 1
- Staging Areas
- Bird nest in landscaped Paloverde
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Verdin nest

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Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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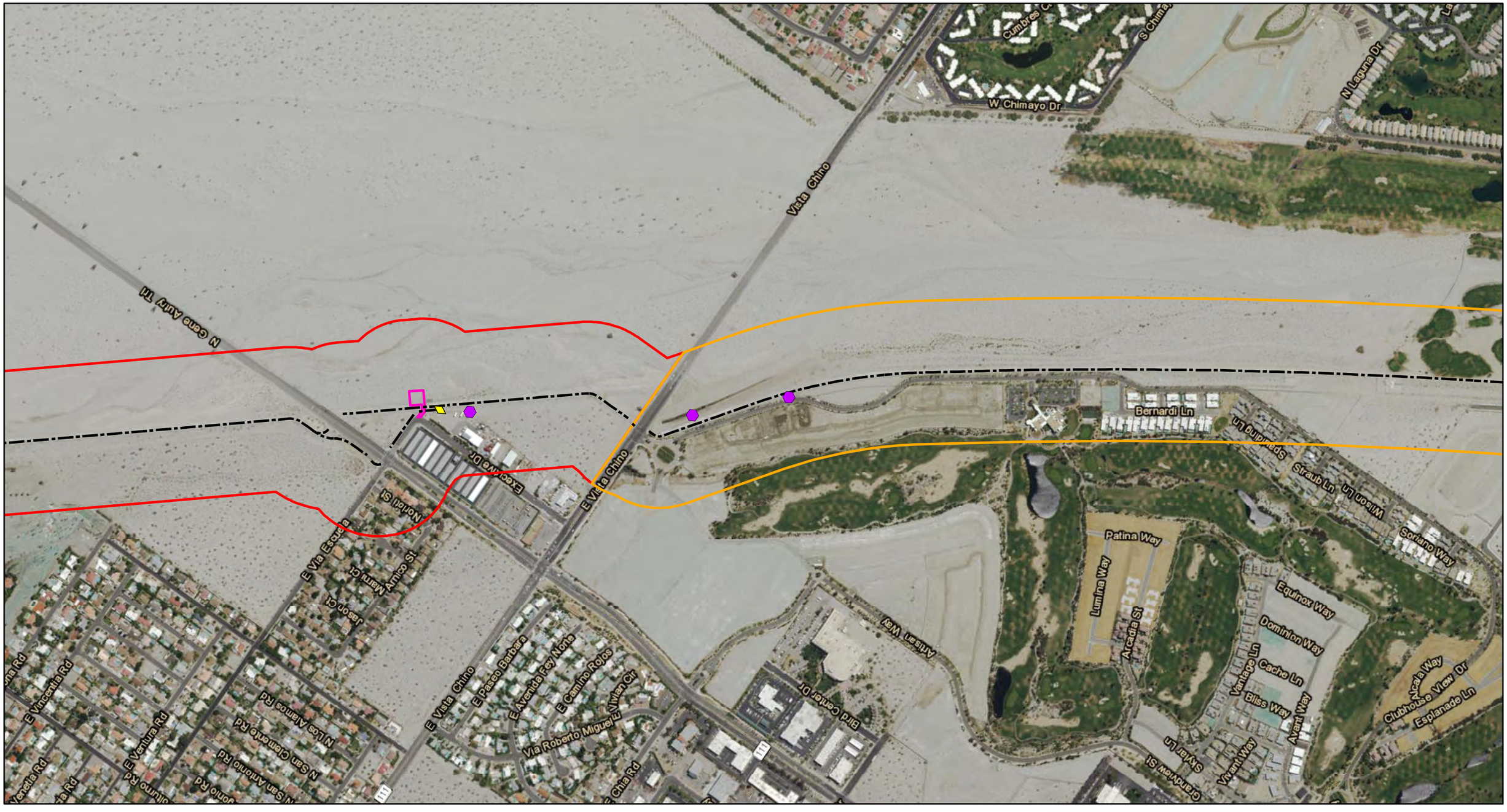
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources
Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 1
- Segment 2
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows

CVAG

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Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

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CVAG

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Feet

LEGEND

- Current Alignment 2016
- Segment 2
- Staging Areas
- Cliff Swallow nests (active)
- Common Raven nest (active)
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Palm Springs Round-tailed Ground Squirrel

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

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LEGEND

- Current Alignment 2016
- Segment 2A
- Staging Areas
- Cliff Swallow nests (active)
- Verdin nest

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Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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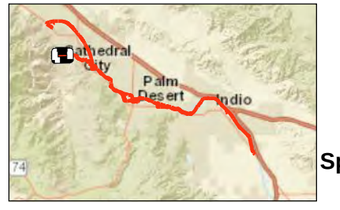

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

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Feet

LEGEND

- Current Alignment 2016
- Segment 2A
- Staging Areas
- Positive Results for Casey's June Beetle (2014)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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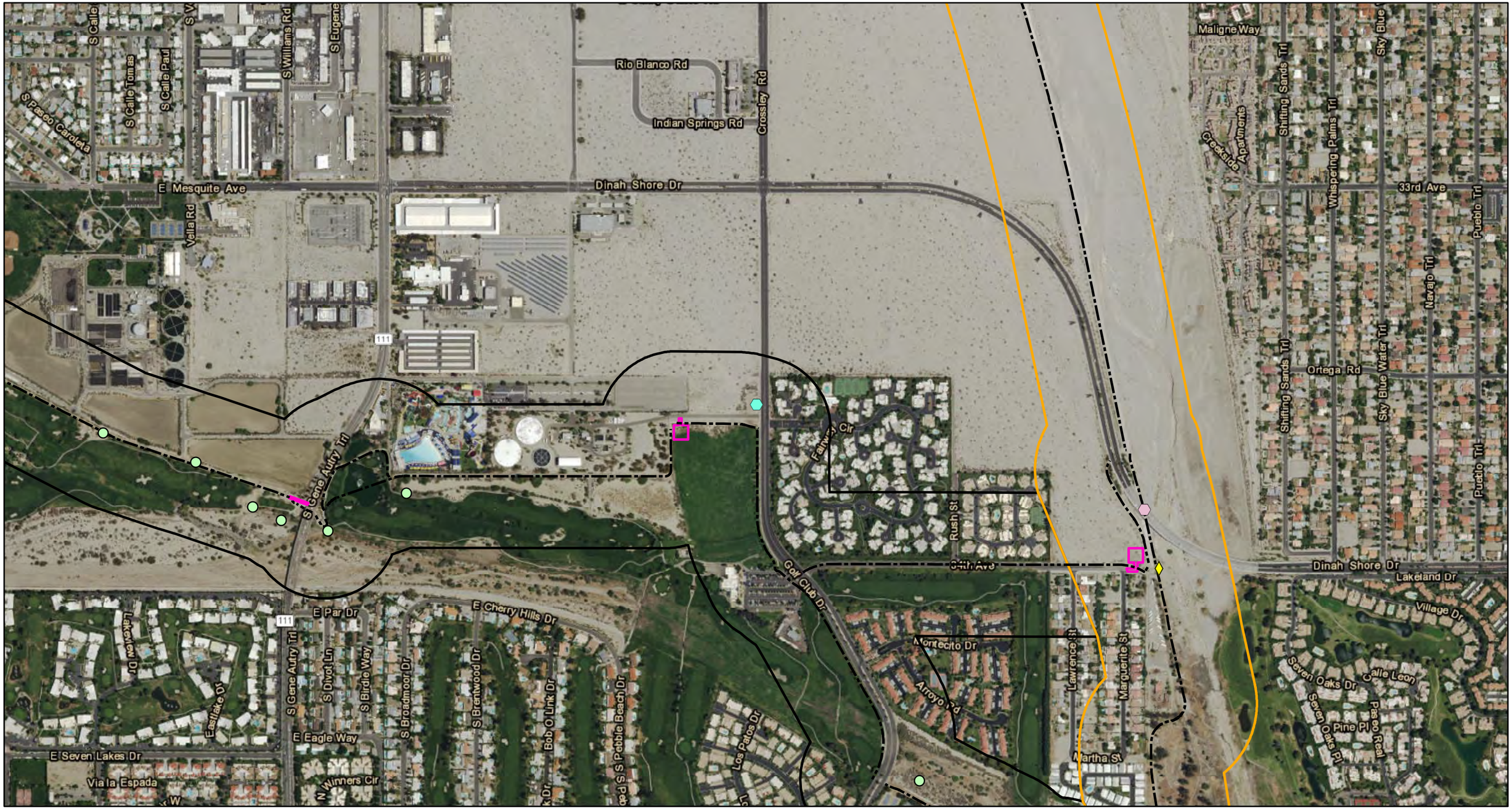

LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Staging Areas
- Cliff Swallow nests (active)
- Potiential Burrowing Owl Burrows
- Verdin nest
- Positive Results for Casey's June Beetle (2014)

CVAG

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Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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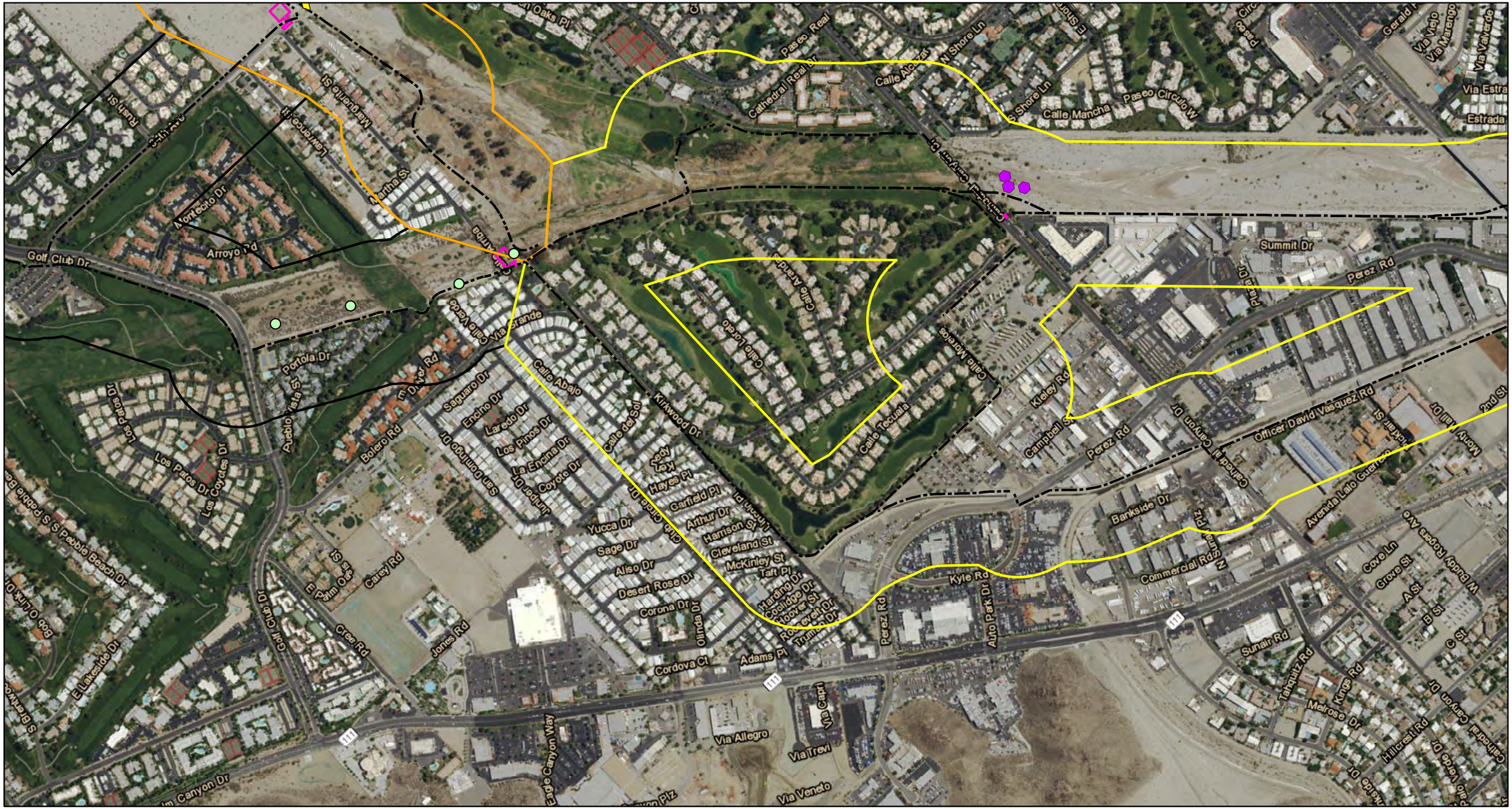
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources
Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Segment 3
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Positive Results for Casey's June Beetle (2014)

CVAG

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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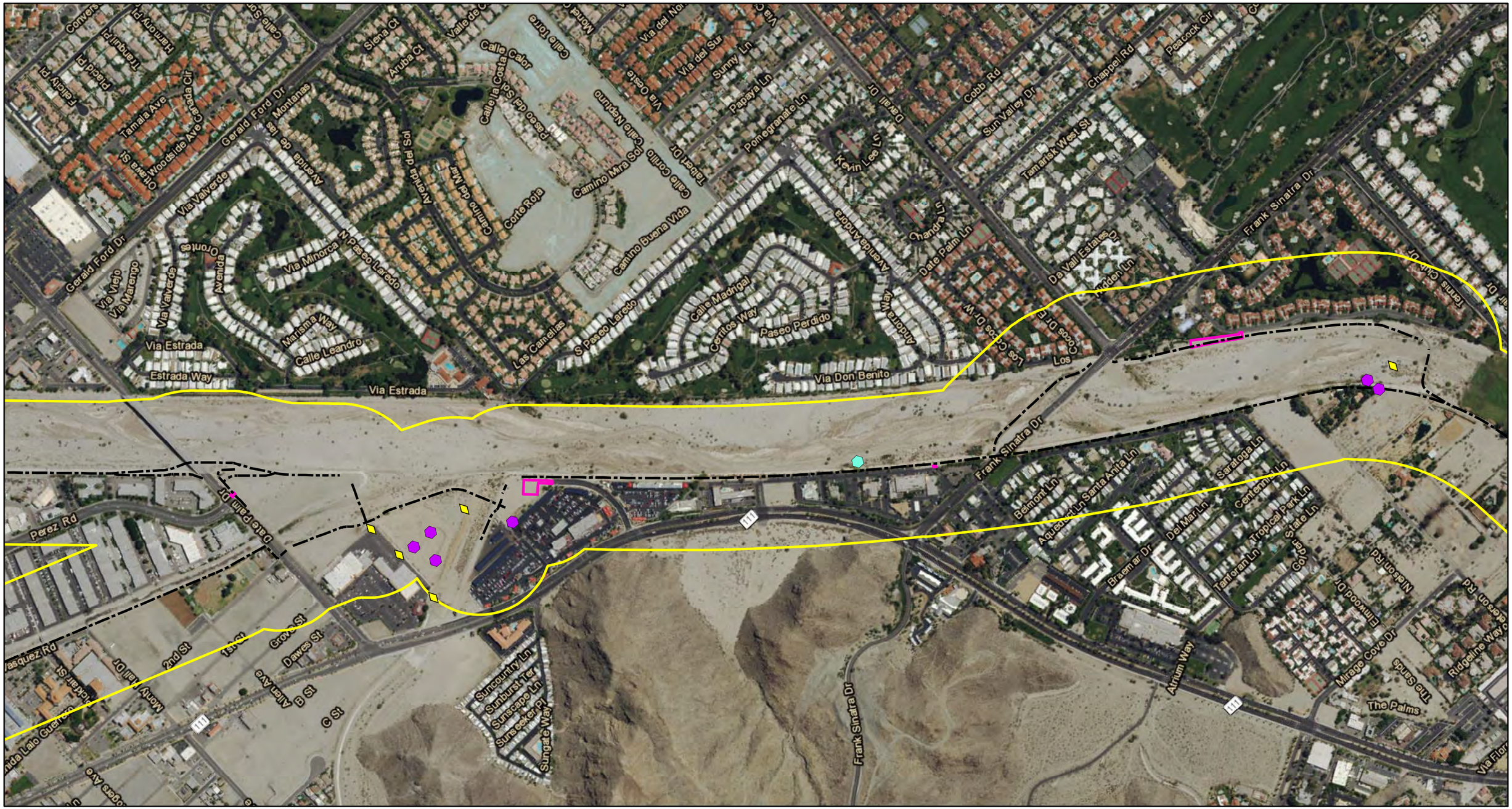
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 3
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Verdin nest

CVAG

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Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

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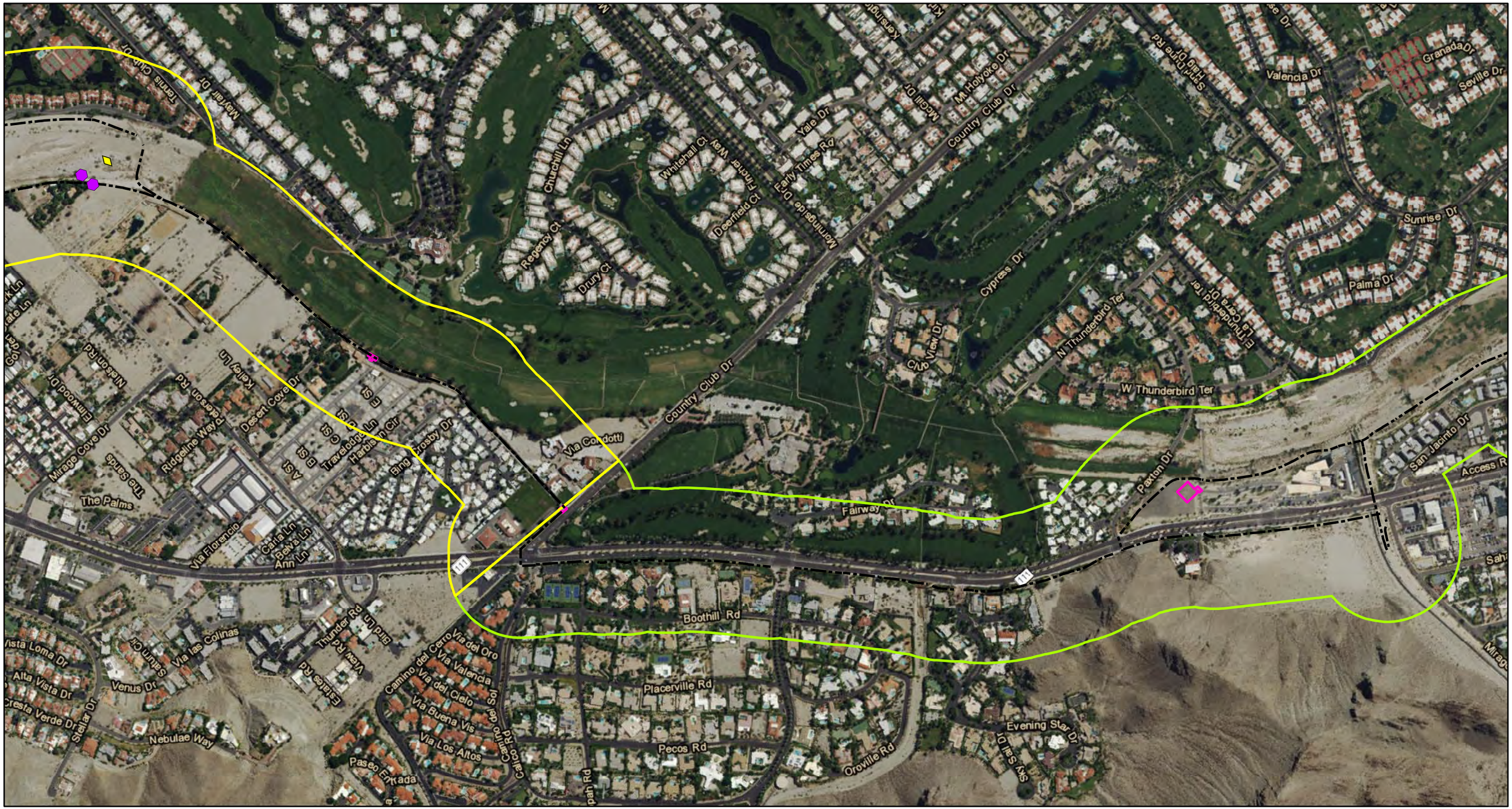

CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 3
- Segment 4
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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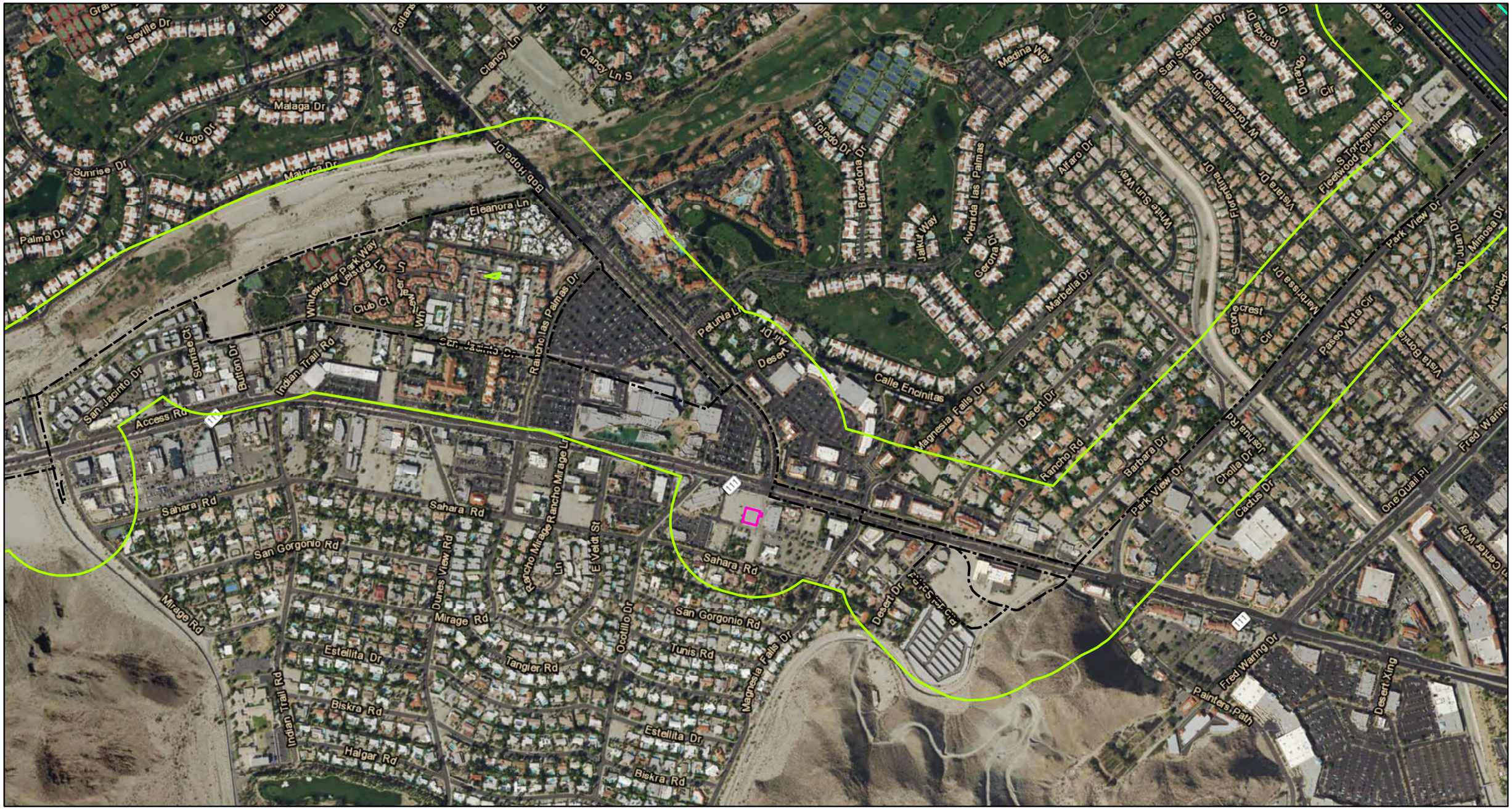
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 4
- Segment 5
- Staging Areas

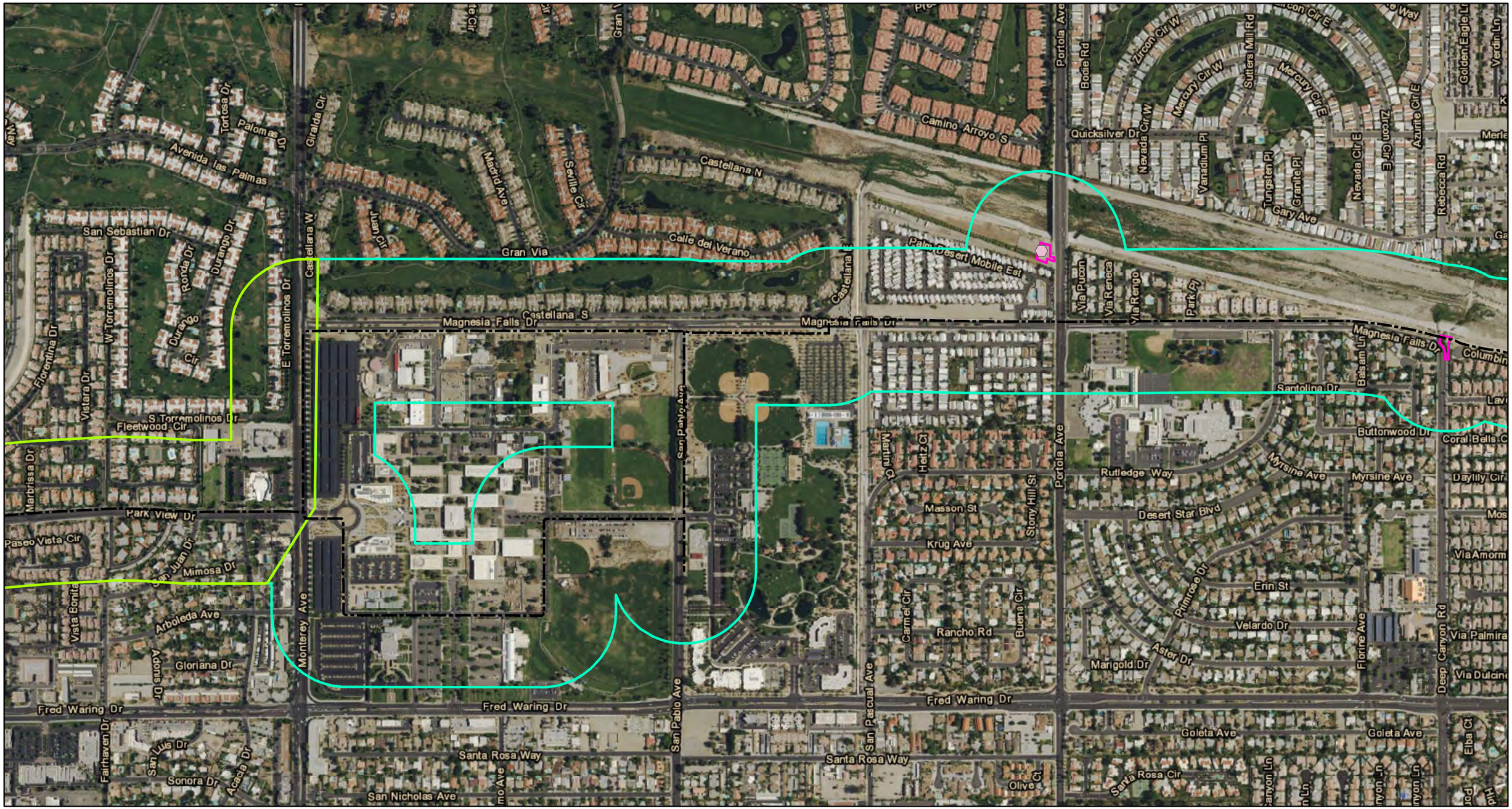
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 4
- Segment 5
- Staging Areas
- Cliff Swallow nests (active)

FIGURE 4

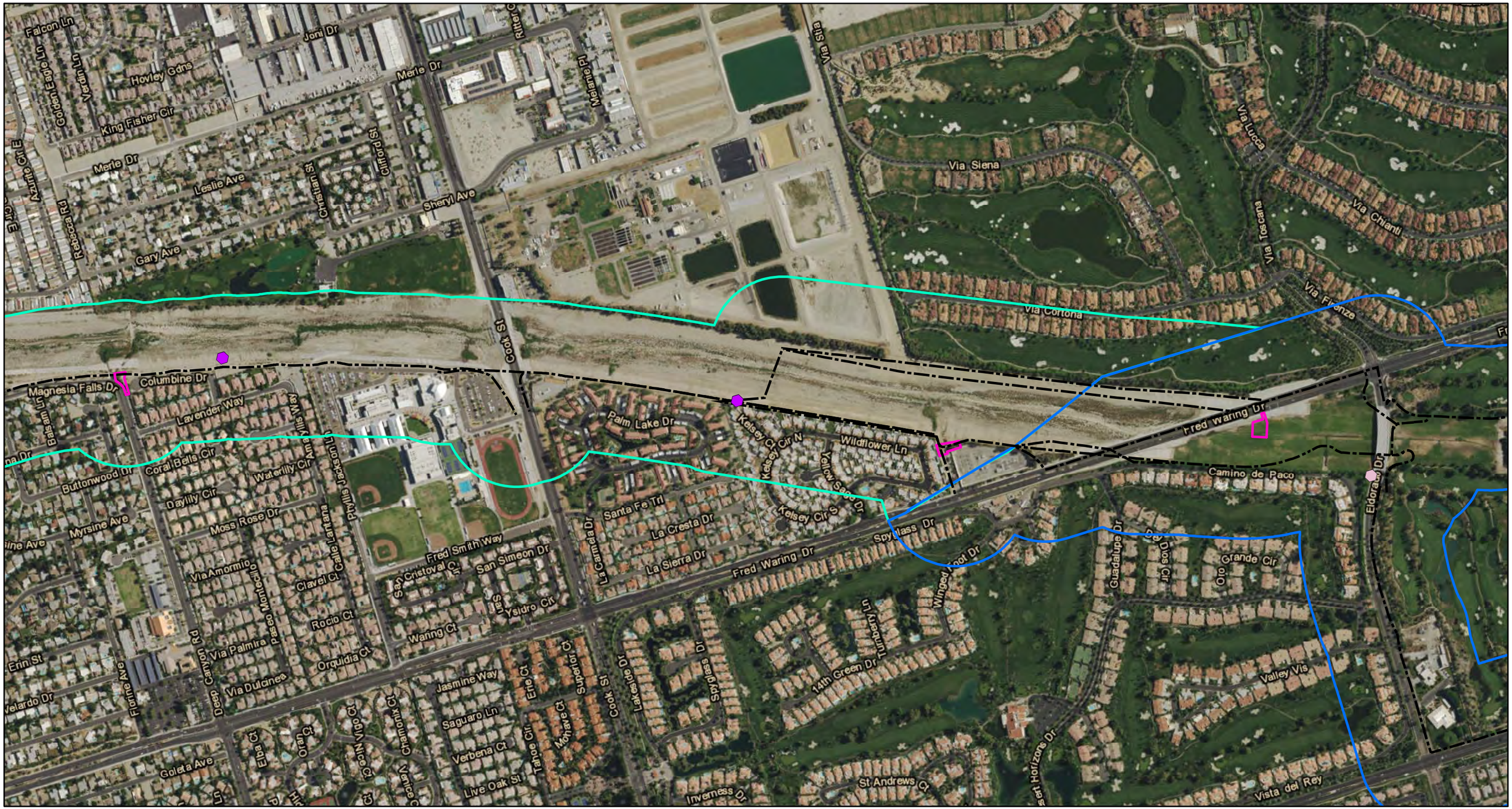
CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

amec foster wheeler



CVAG

0 650

Feet

LEGEND

- Current Alignment 2016
- Segment 5
- Segment 6
- Staging Areas
- Cliff Swallow nests (active)
- California Ground Squirrel Burrows

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

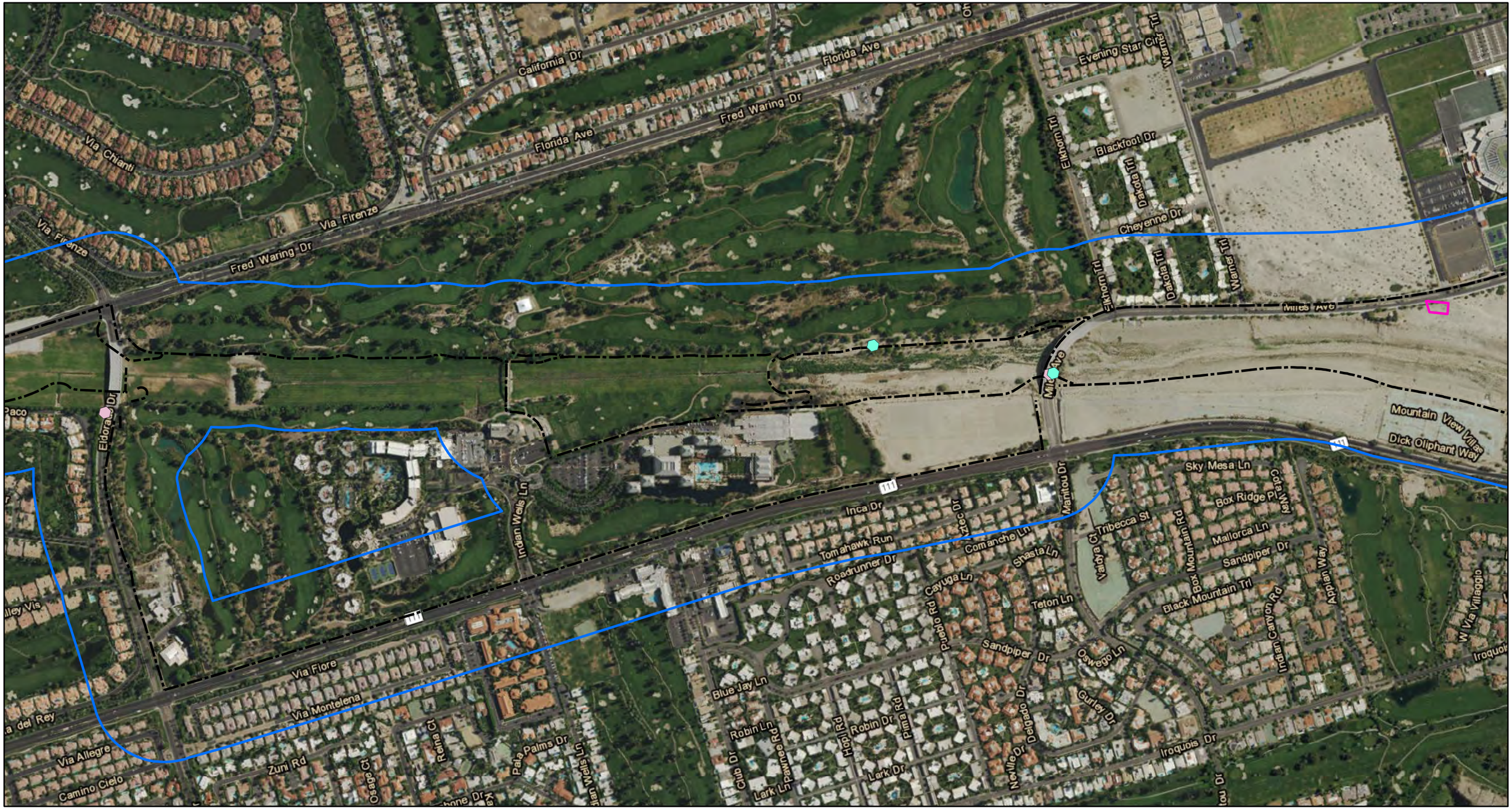
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

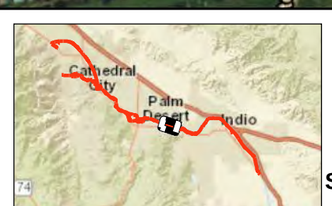
amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 6
- Staging Areas
- Cliff Swallow nests (active)
- Verdin nest

0 650
Feet



Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler

LEGEND

- Current Alignment 2016
- Segment 6
- Segment 7
- Staging Areas
- Cliff Swallow nests (active)
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Common Raven nest

CVAG

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

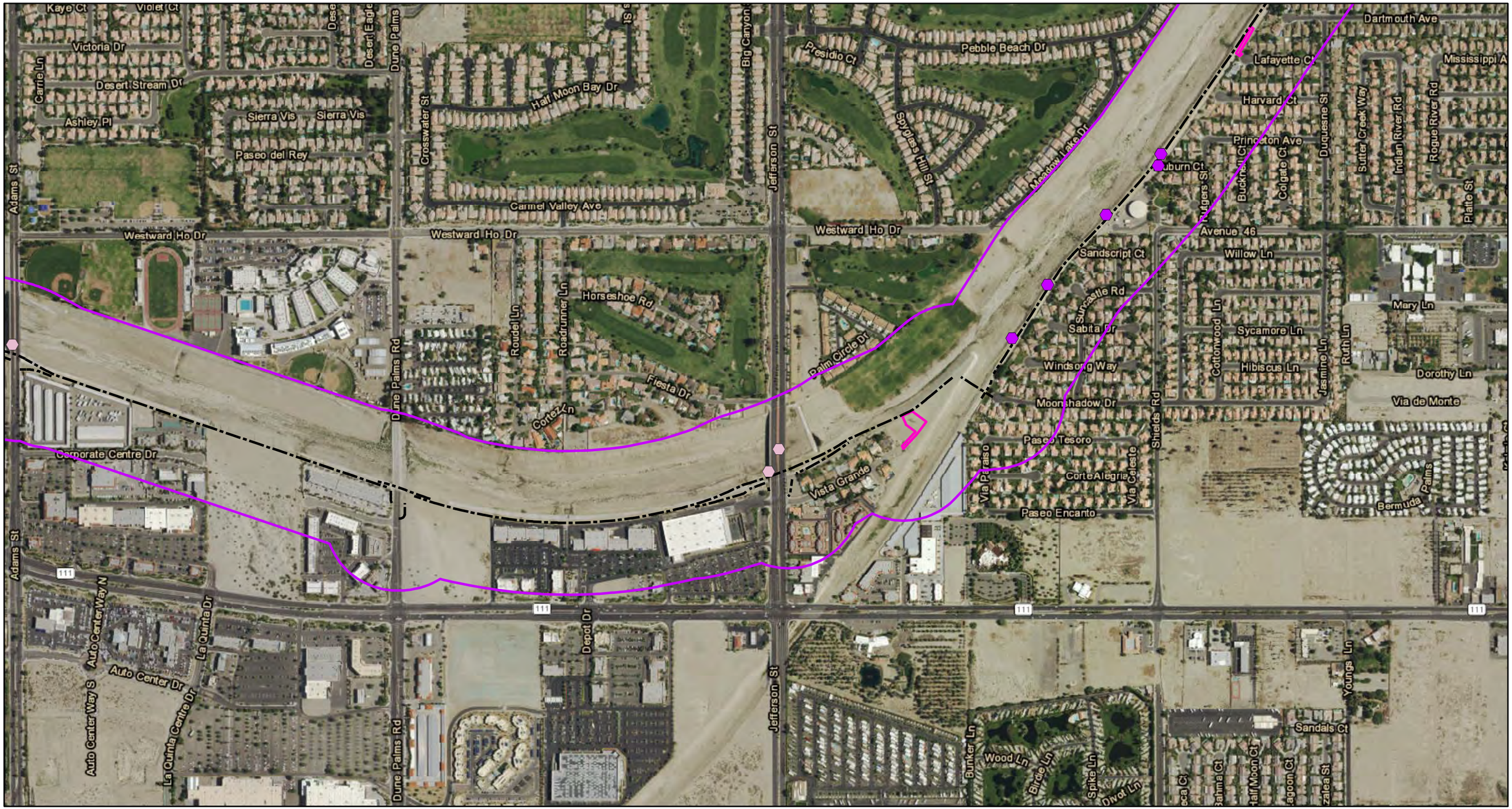
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 7
- Staging Areas
- Cliff Swallow nests (active)
- California Ground Squirrel Burrows

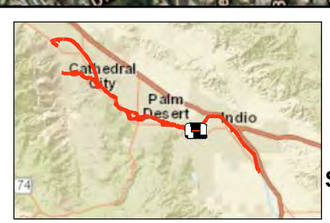


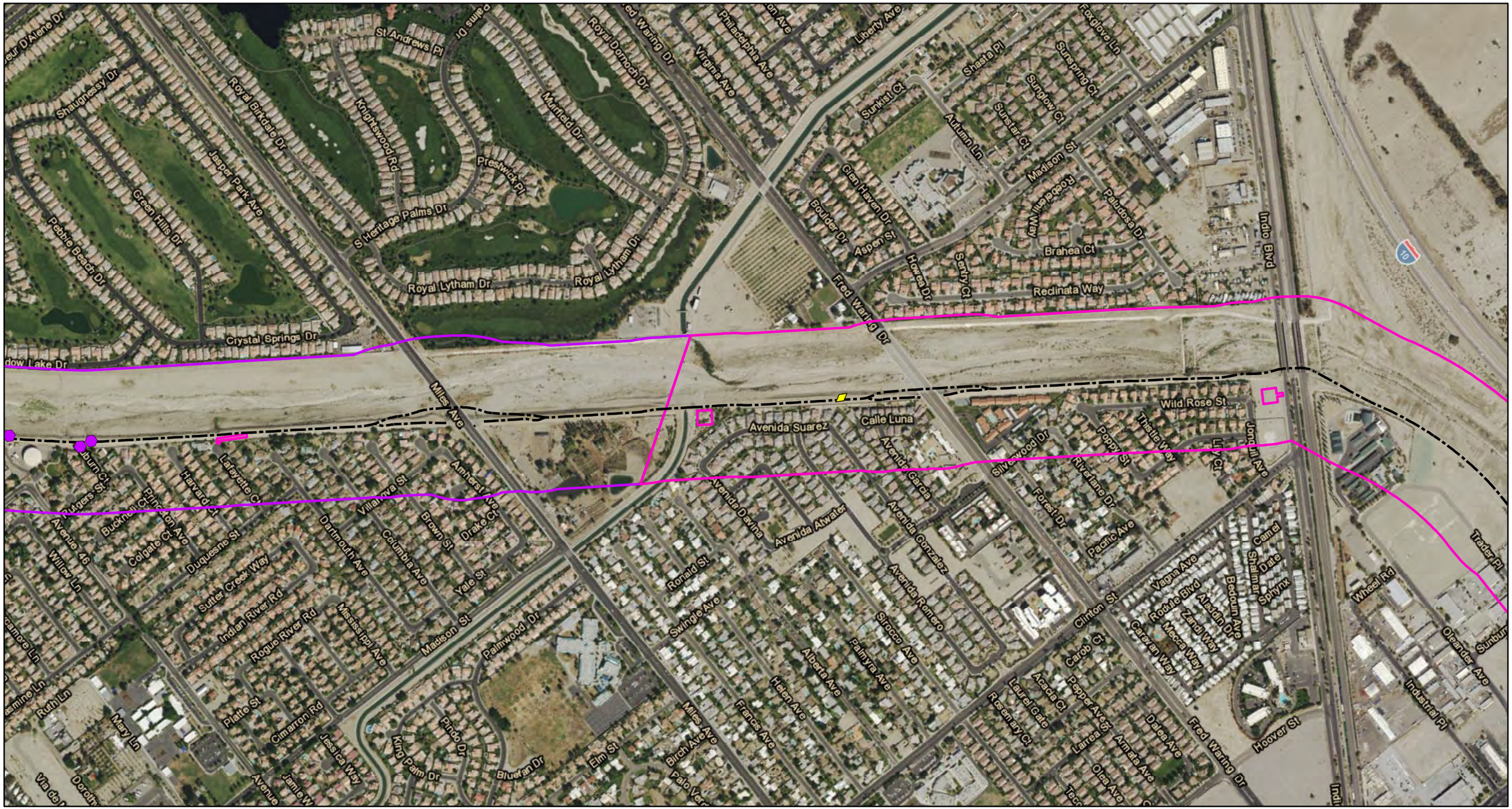
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



LEGEND

- Current Alignment 2016
- Segment 7
- Segment 8
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows

CVAG

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

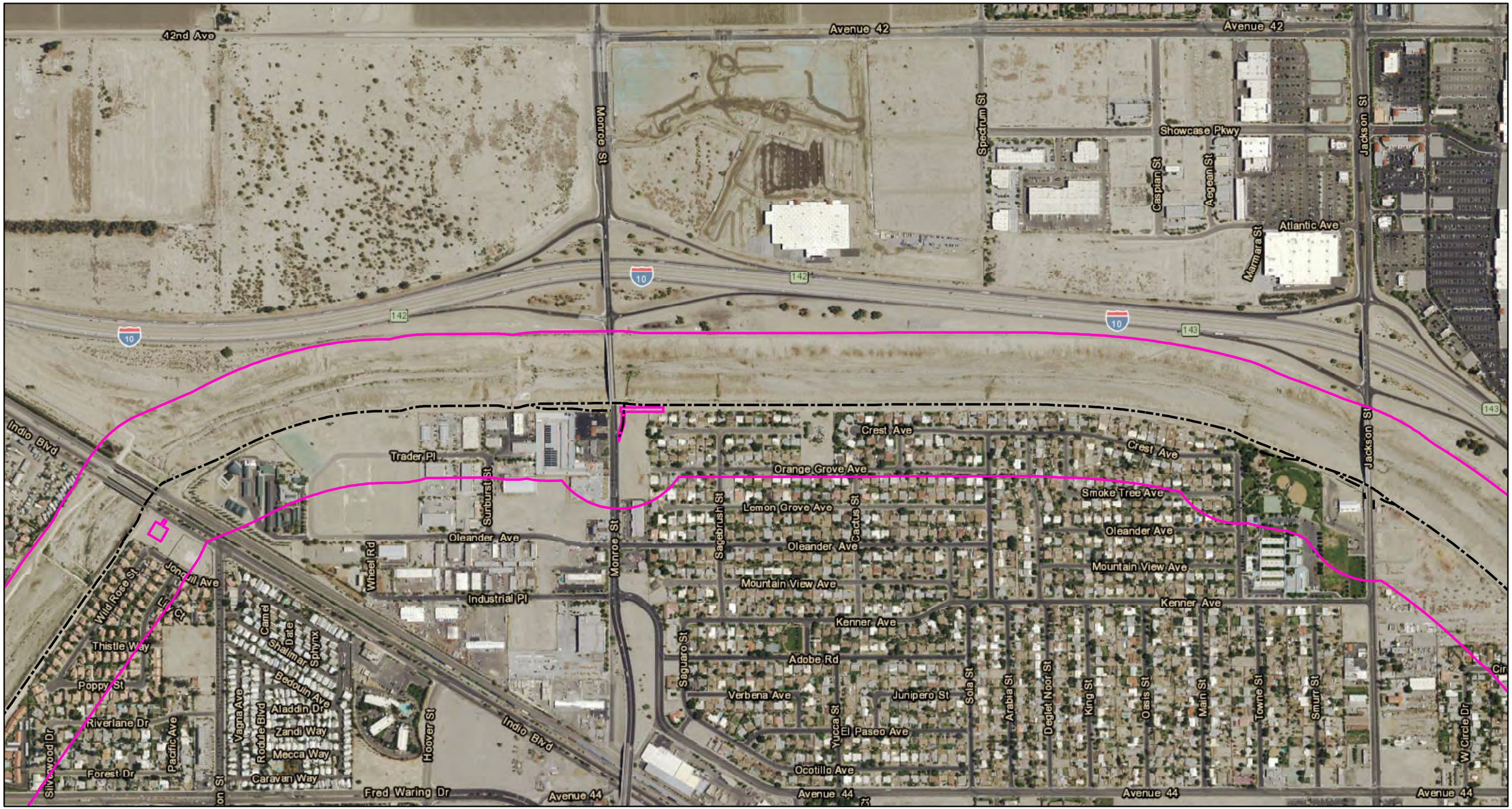
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



CVAG

LEGEND

- Current Alignment 2016
- Segment 8
- Staging Areas

0 650
Feet

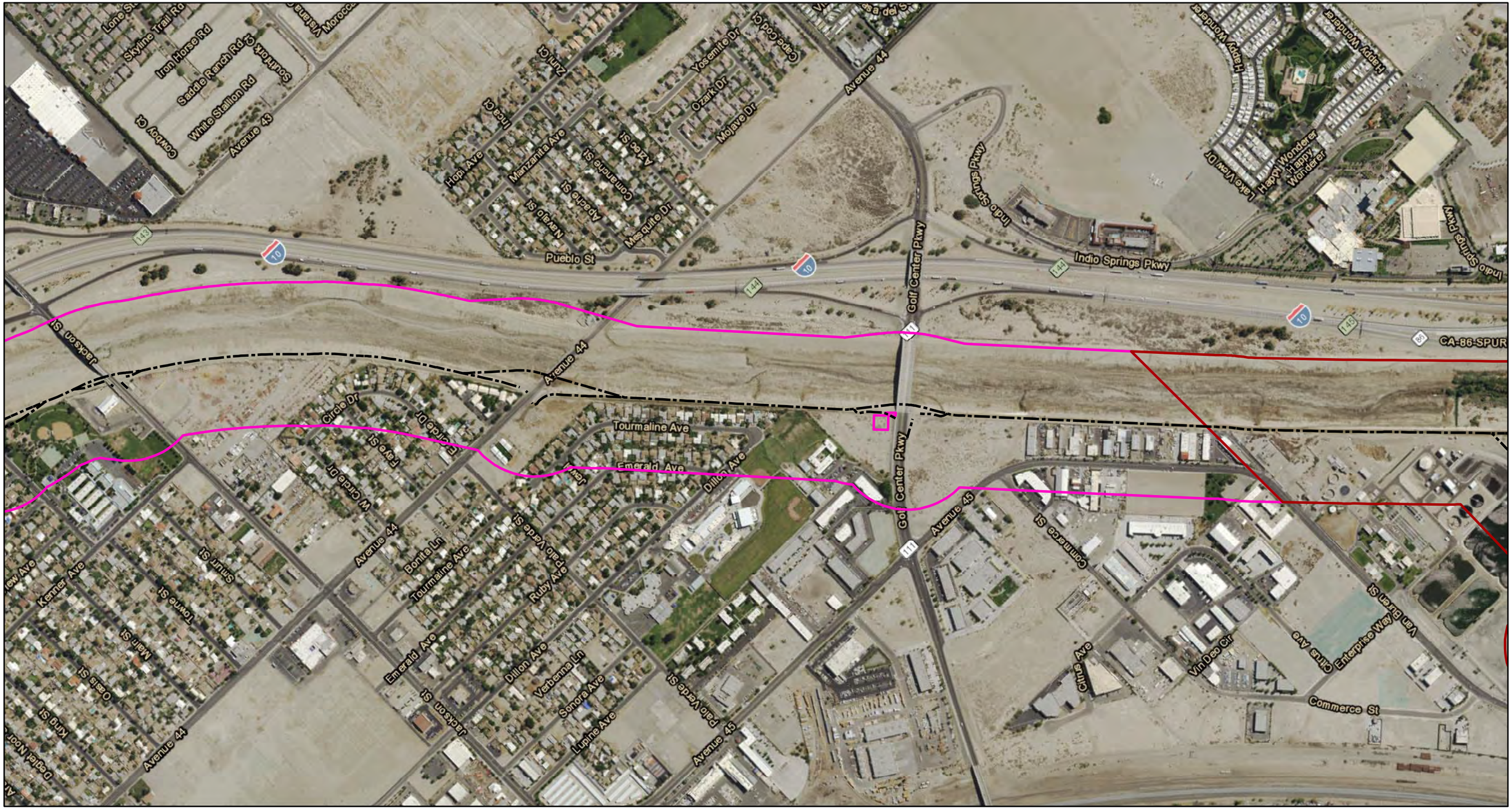
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



LEGEND

- Current Alignment 2016
- Segment 8
- Segment 9
- Staging Areas

CVAG

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

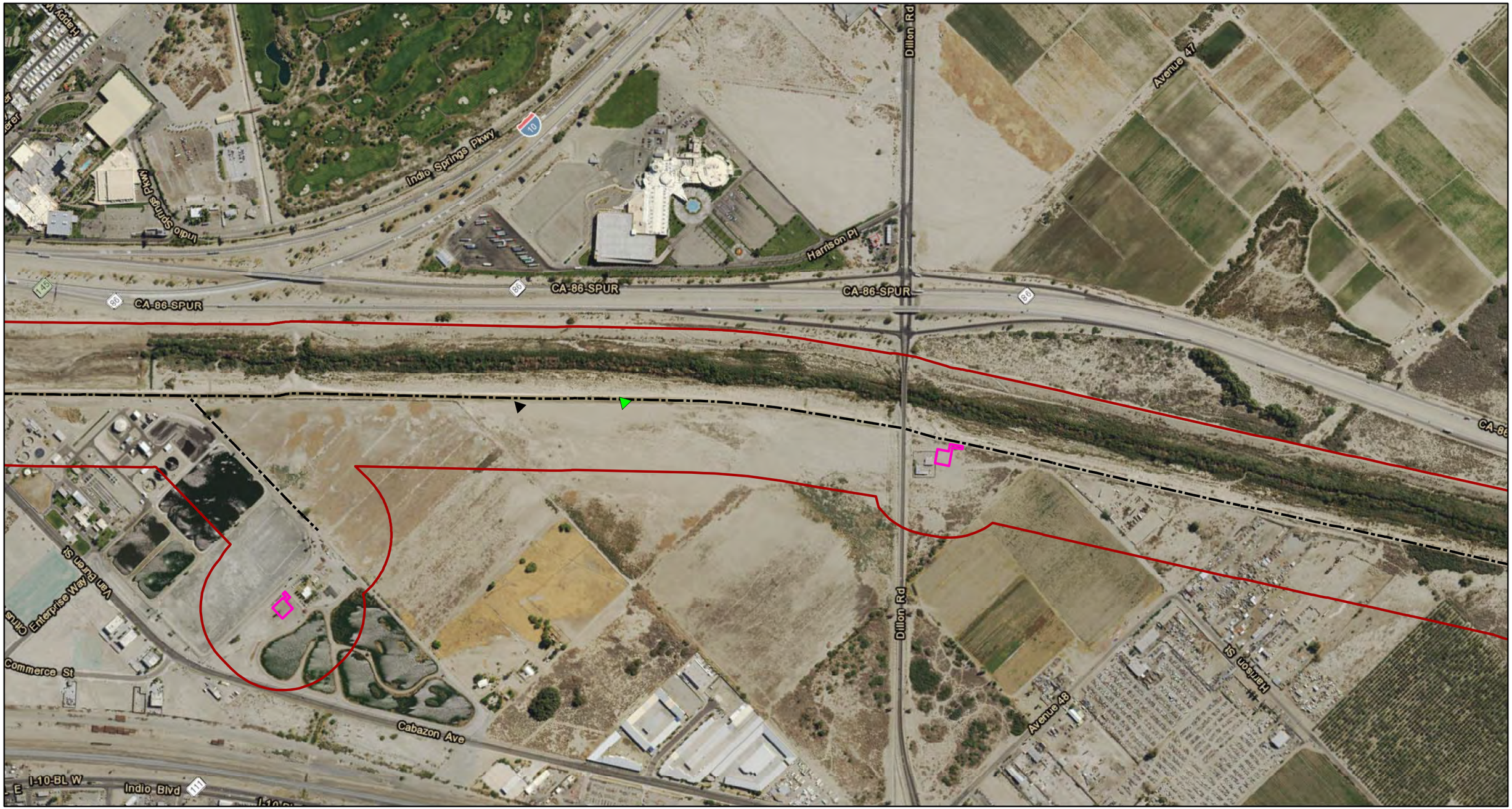
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 9
- Staging Areas
- Old Burrow
- Burrowing owl @ Burrow

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources
Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

LEGEND

- Current Alignment 2016
- Segment 9
- Segment 10
- Staging Areas

0 650
Feet

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

LEGEND

- Current Alignment 2016
- Segment 10
- Staging Areas

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

Special Status Biological Resources Wildlife Survey Results

CVAG

LEGEND

- Current Alignment 2016
- Segment 10
- Staging Areas

0 650

Feet

FIGURE 4

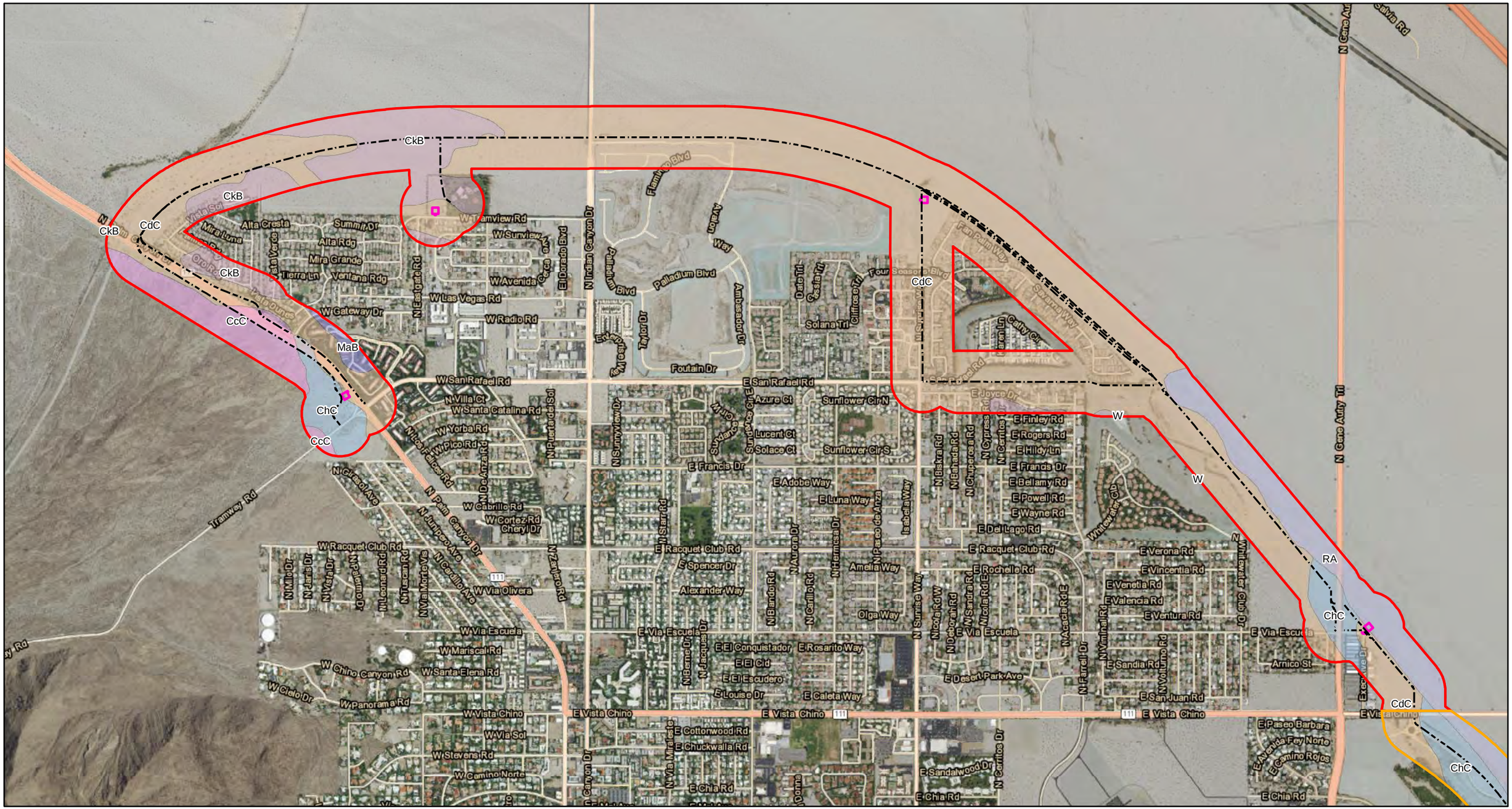
CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

amec foster wheeler



LEGEND

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/19/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

LEGEND

- Current Alignment 2016
- Staging Areas
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- ChC: CARSITAS COBBLY SAND, 2-9% SLOPES
- CkB: CARSITAS FINE SAND, 0-5% SLOPES
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- RA: RIVERWASH

CVAG

0 1500
Feet

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler

LEGEND

- Current Alignment 2016
- Staging Areas
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- CkB: CARSITAS FINE SAND, 0-5% SLOPES
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- Fe: FLUVENTS
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RA: RIVERWASH
- W: Water

CVAG

0 1500 Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

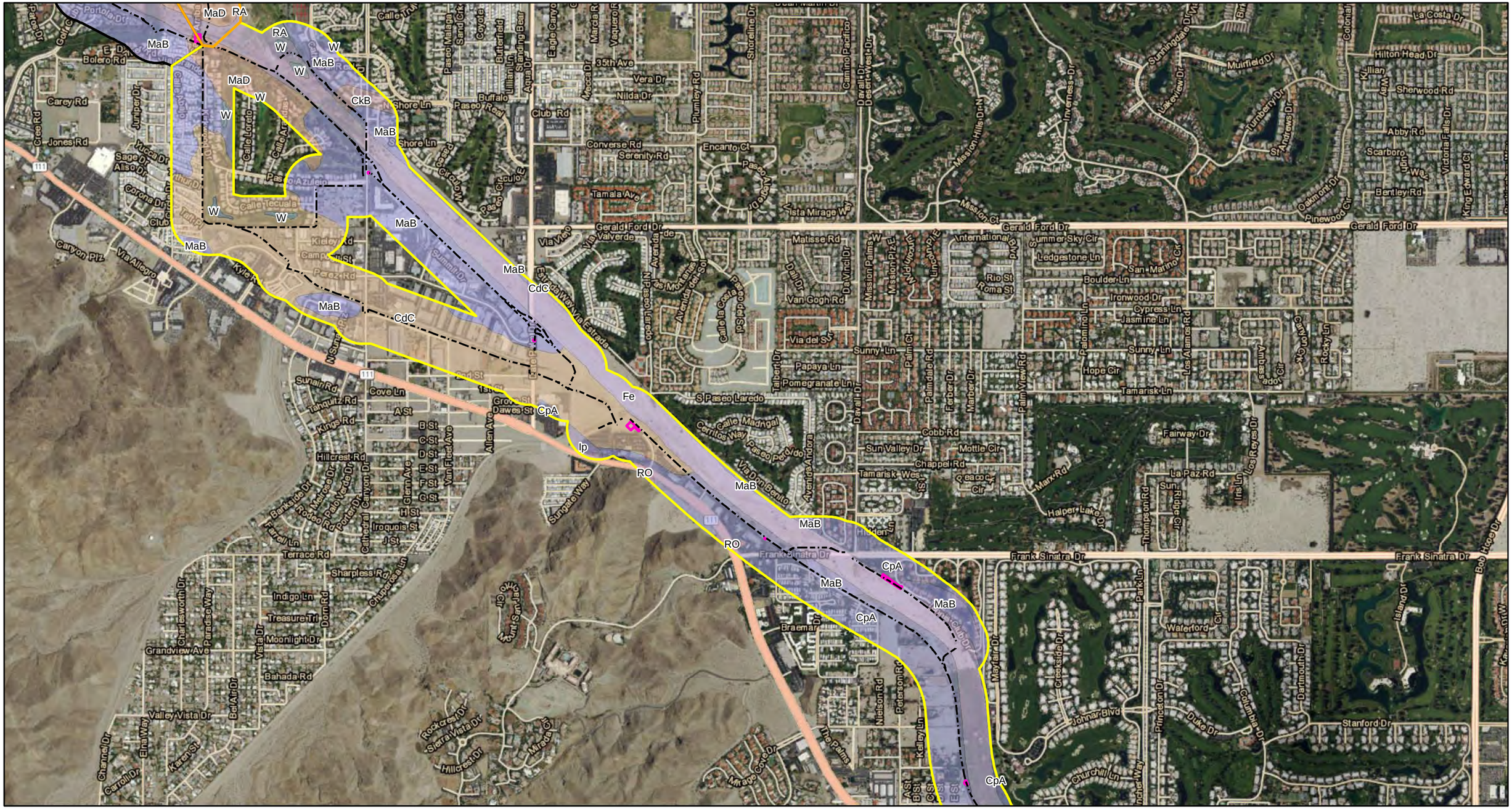
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/19/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



LEGEND

- Current Alignment 2016
- Staging Areas
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- CkB: CARSITAS FINE SAND, 0-5% SLOPES
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- Fe: FLUVENTS
- Ip: : INDIO FINE SANDY LOAM
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RA: RIVERWASH
- RO: ROCK OUTCROP
- W: Water

0 1500 Feet

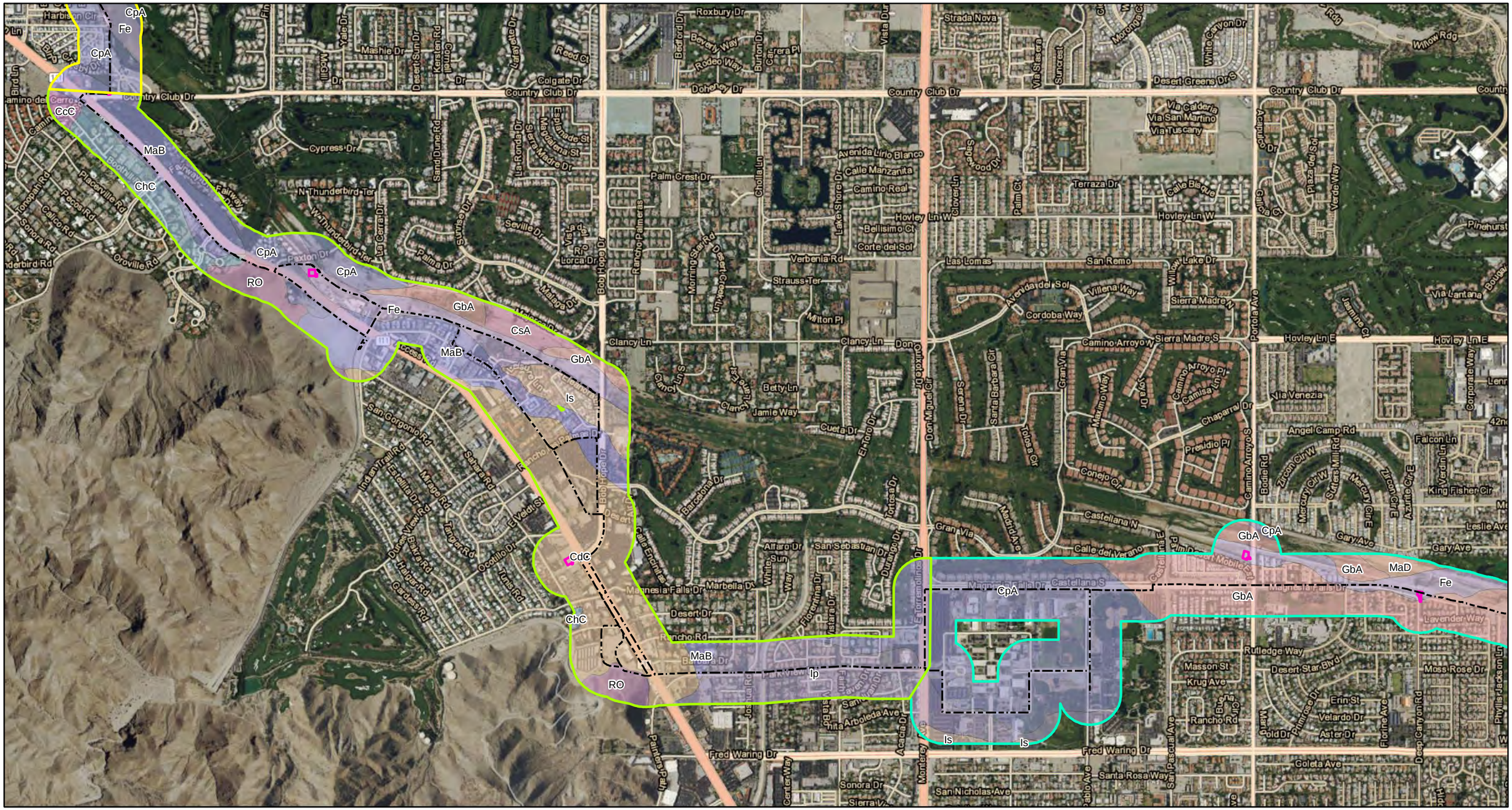
Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils



CVAG

0 1500
Feet

N

LEGEND

- Current Alignment 2016
- Staging Areas
- CcC:CARRIZO STONY SAND, 2-9% SLOPES
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- ChC: CARSITAS COBBLY SAND, 2-9% SLOPES
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CsA: COACHELLA FINE SANDY LOAM, 0-2% SLOPES
- Fe: FLUVENTS
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- Ip: : INDIO FINE SANDY LOAM
- Is: INDIO VERY FINE SANDY LOAM
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RO: ROCK OUTCROP

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

Soils

amec foster wheeler

LEGEND

- Current Alignment 2016
- Staging Areas
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CsA: COACHELLA FINE SANDY LOAM, 0-2% SLOPES
- Fe: FLUVENTS
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RO: ROCK OUTCROP
- W: Water

CVAG

0 1500

Feet

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

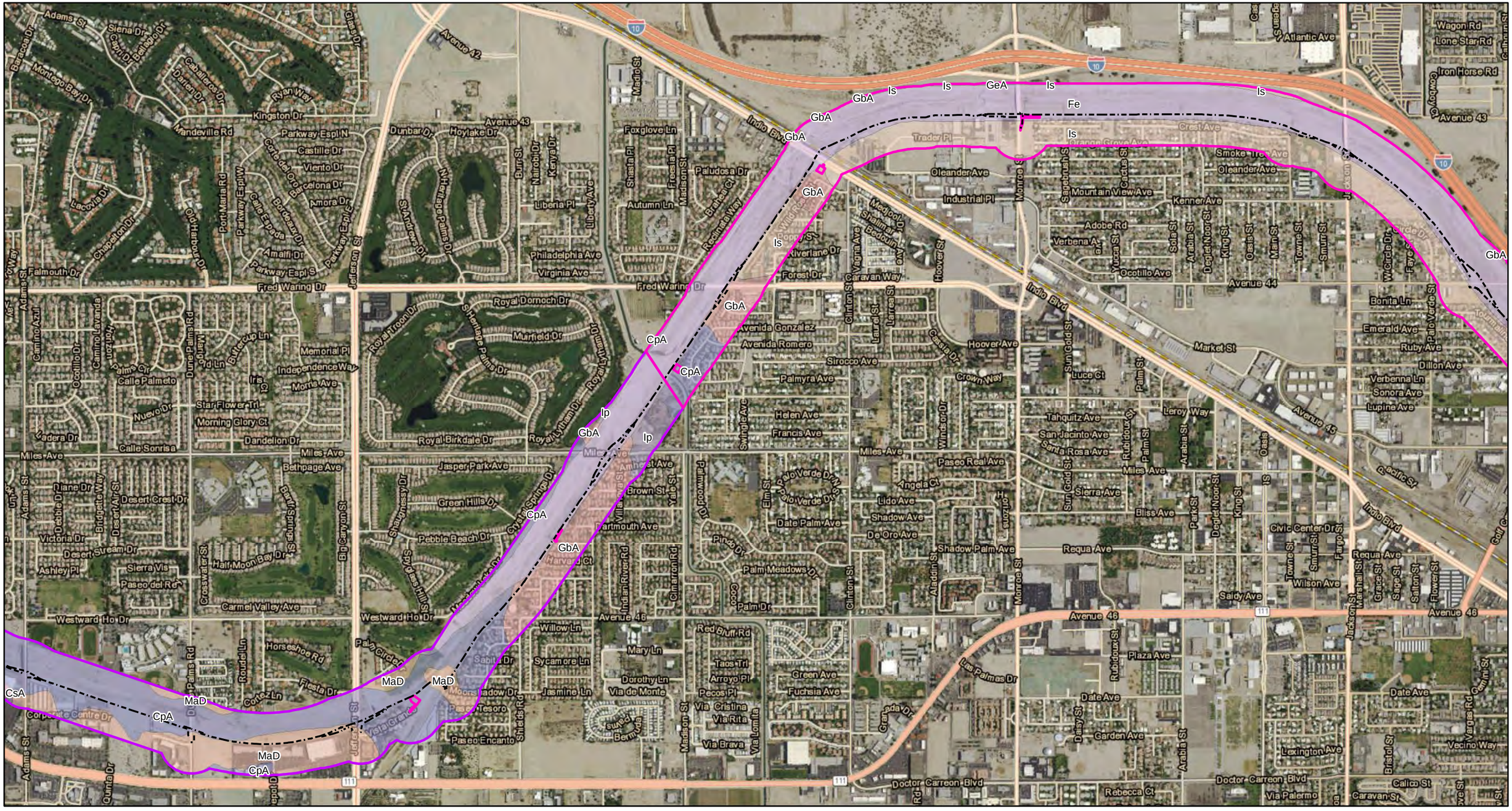
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (8/5/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



LEGEND

- Current Alignment 2016
- Staging Areas
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CsA: COACHELLA FINE SANDY LOAM, 0-2% SLOPES
- Fe: FLUVENTS
- GaB: GILMAN LOAMY FINE SAND, 0-5% SLOPES
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GeA: GILMAN SILT LOAM, 0-2% SLOPES
- Ip: : INDIO FINE SANDY LOAM
- Is: INDIO VERY FINE SANDY LOAM
- MaD: MYOMA FINE SAND, 5-15% SLOPES

CVAG

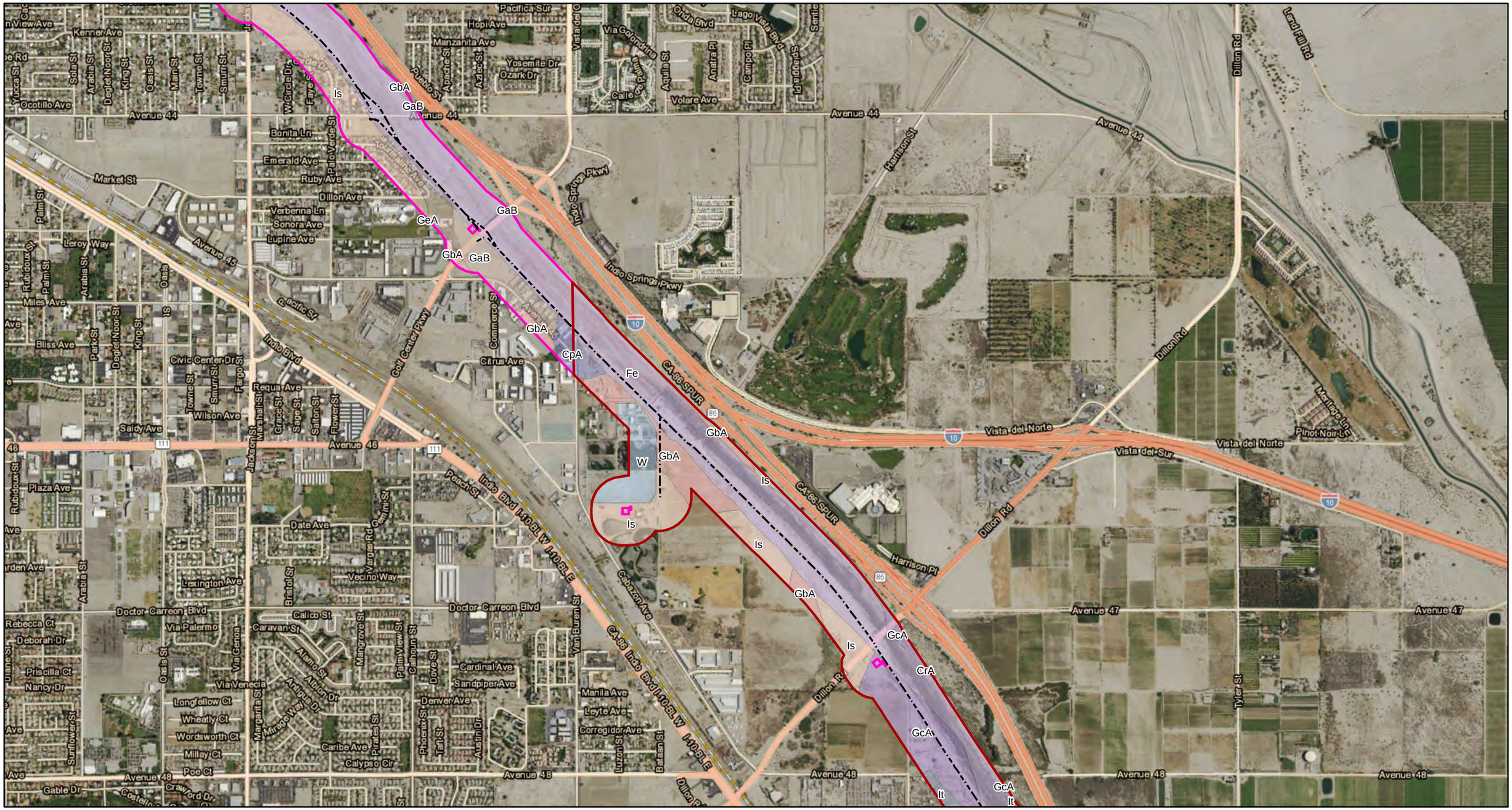
0 1500

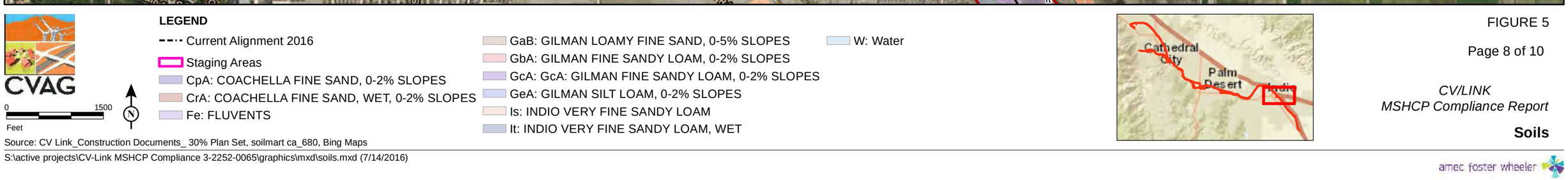
Feet

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

amec foster wheeler





LEGEND

- Current Alignment 2016
- Staging Areas
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CrA: COACHELLA FINE SAND, WET, 0-2% SLOPES
- Fe: FLUVENTS
- GaB: GILMAN LOAMY FINE SAND, 0-5% SLOPES
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GcA: GcA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GeA: GILMAN SILT LOAM, 0-2% SLOPES
- Is: INDIO VERY FINE SANDY LOAM
- It: INDIO VERY FINE SANDY LOAM, WET
- W: Water

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

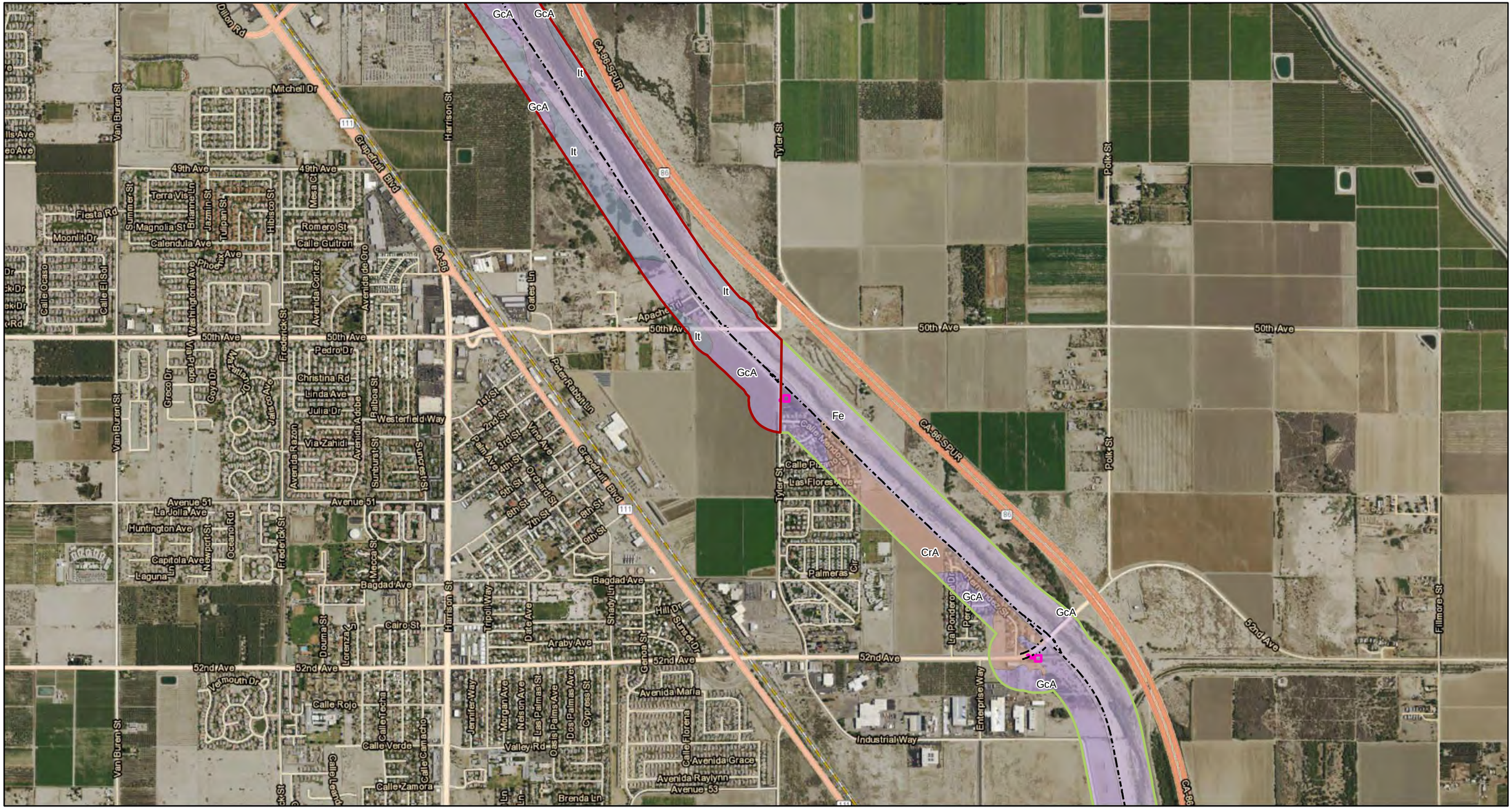
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



LEGEND

- Current Alignment 2016
- Staging Areas
- CrA: COACHELLA FINE SAND, WET, 0-2% SLOPES
- Fe: FLUVENTS
- GcA: GcA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- It: INDIO VERY FINE SANDY LOAM, WET

CVAG

0 1500

Feet

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

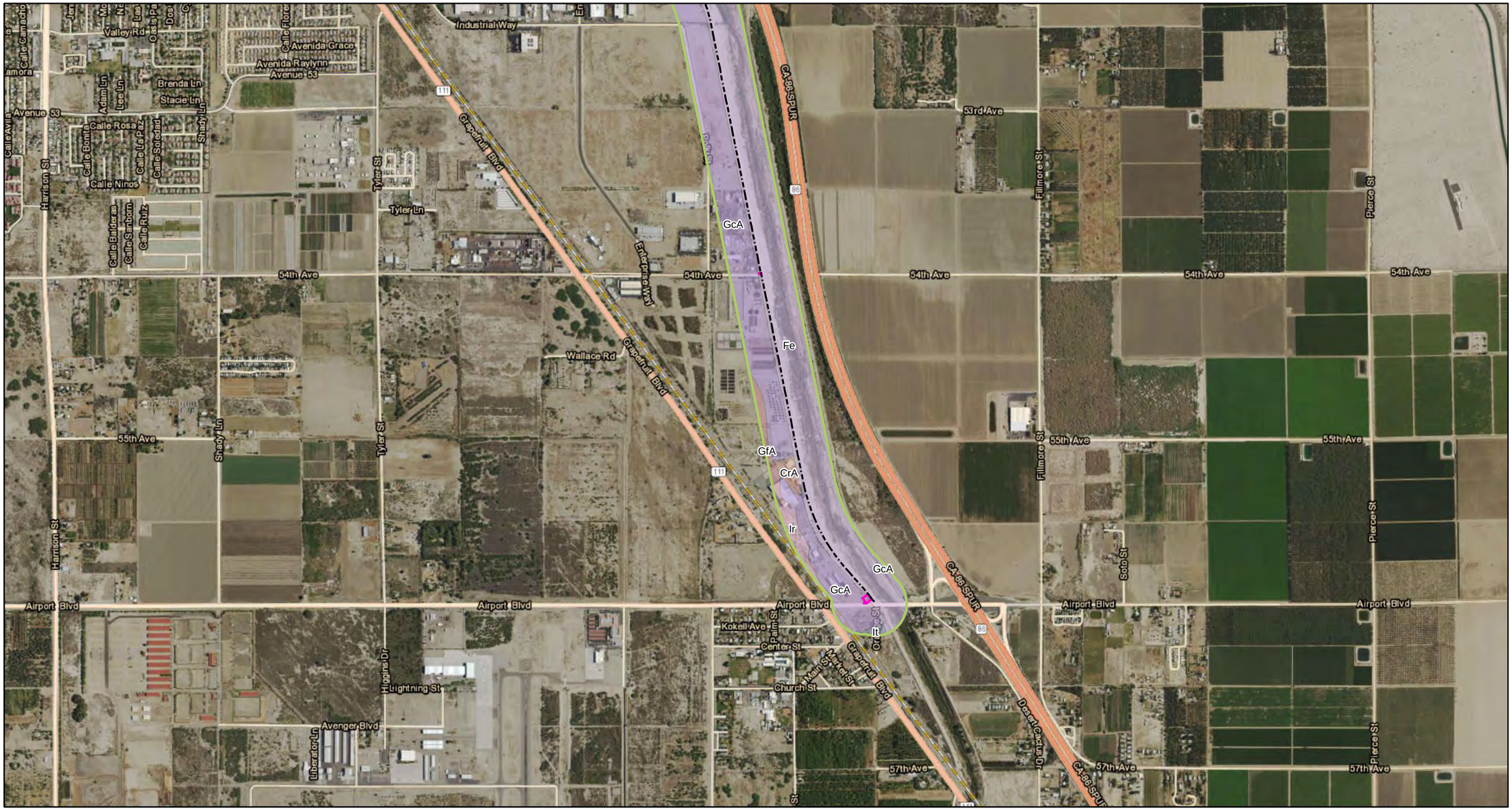
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



LEGEND

- Current Alignment 2016
- Staging Areas
- CrA: COACHELLA FINE SAND, WET, 0-2% SLOPES
- Fe: FLUVENTS
- GcA: GcA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GfA: GILMAN SILT LOAM, WET, 0-2% SLOPES
- Ir: INDIO FINE SANDY LOAM, WET
- It: INDIO VERY FINE SANDY LOAM, WET

CVAG

0 1500
Feet

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler

Stabilized shielded sand fields

Stabilized shielded sand fields

Stabilized desert sand fields

Urban

Ephemeral sand fields

Urban

Sonoran mixed woody & succulent scrub

Urban

Urban

Urban

Stabilized shielded sand fields

LEGEND

- Current Alignment 2016
- Segment 1
- Segment 2
- Staging Areas
- Ephemeral sand fields
- Sonoran mixed woody & succulent scrub
- Stabilized desert sand fields
- Stabilized shielded sand fields
- Urban

CVAG

0 1500

Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/19/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Urban
Ephemeral sand fields
Stabilized shielded sand fields
Urban
Urban
Stabilized shielded sand fields
Urban

LEGEND

- Current Alignment 2016
- Segment 1
- Segment 2
- Staging Areas
- Ephemeral sand fields
- Stabilized shielded sand fields
- Urban

CVAG

0 1500
Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

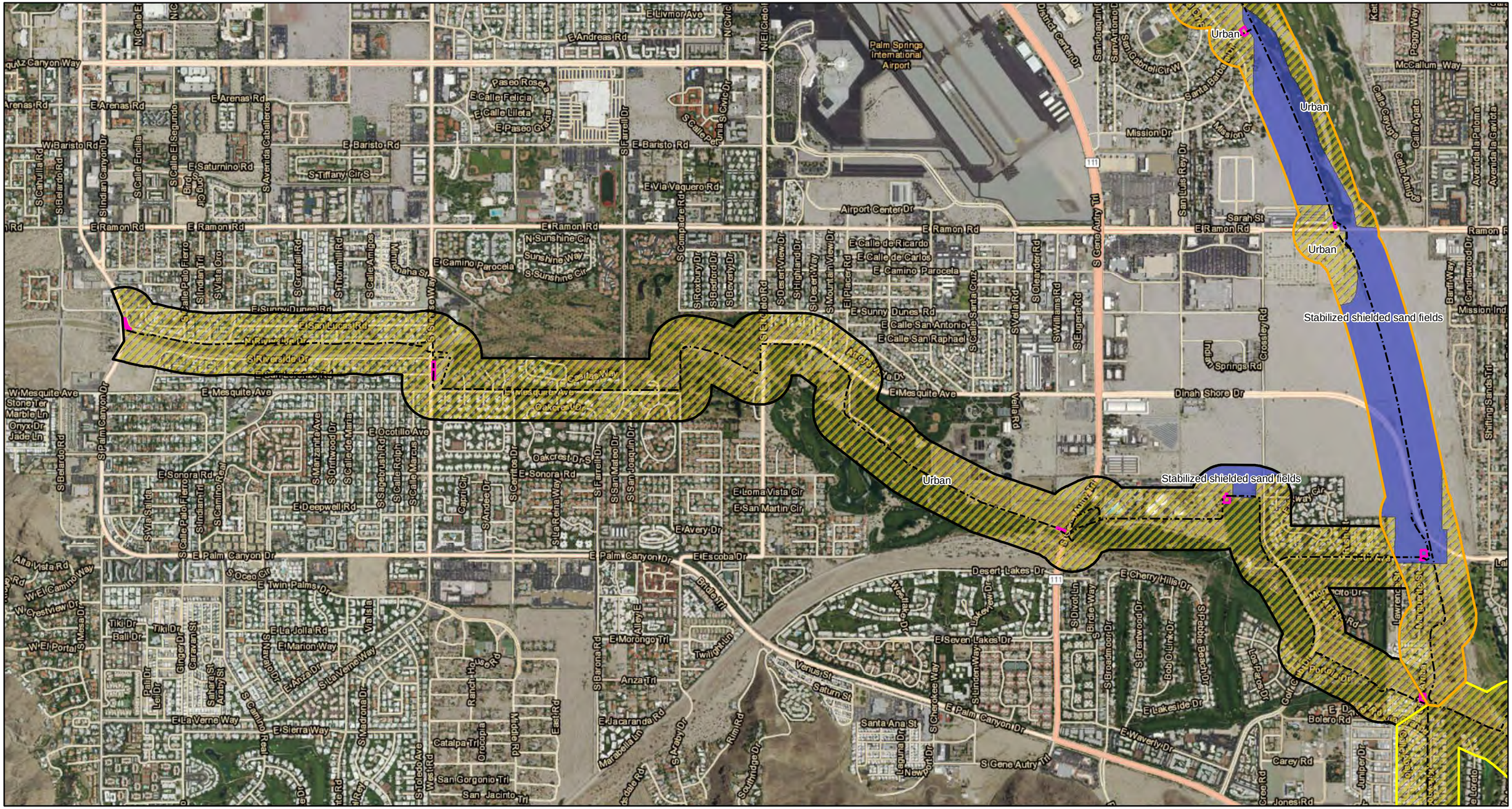
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



CVAG

0 1500
Feet

LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Segment 3
- Staging Areas
- Stabilized shielded sand fields
- Urban

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/19/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Urban

Sonoran creosote bush scrub

LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Segment 3
- Staging Areas
- Sonoran creosote bush scrub
- Urban

0 1500
Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Sonoran creosote bush scrub

Sonoran creosote bush scrub

Urban

LEGEND

- Current Alignment 2016
- Segment 3
- Segment 4
- Segment 5
- Staging Areas
- Sonoran creosote bush scrub
- Urban

CVAG

0 1500

Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

CV/LINK
MSHCP Compliance Report

Vegetation Communities

Stabilized shielded sand fields

Urban

Stabilized shielded sand fields

Urban

Mesquite hummocks

Stabilized shielded sand fields

Stabilized shielded sand fields

Stabilized shielded sand fields

Urban

Urban

LEGEND

- Current Alignment 2016
- Segment 5
- Segment 6
- Segment 7
- Staging Areas
- Mesquite hummocks
- Stabilized shielded sand fields
- Urban

CVAG

0 1500

Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (8/5/2016)

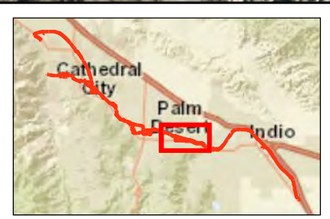
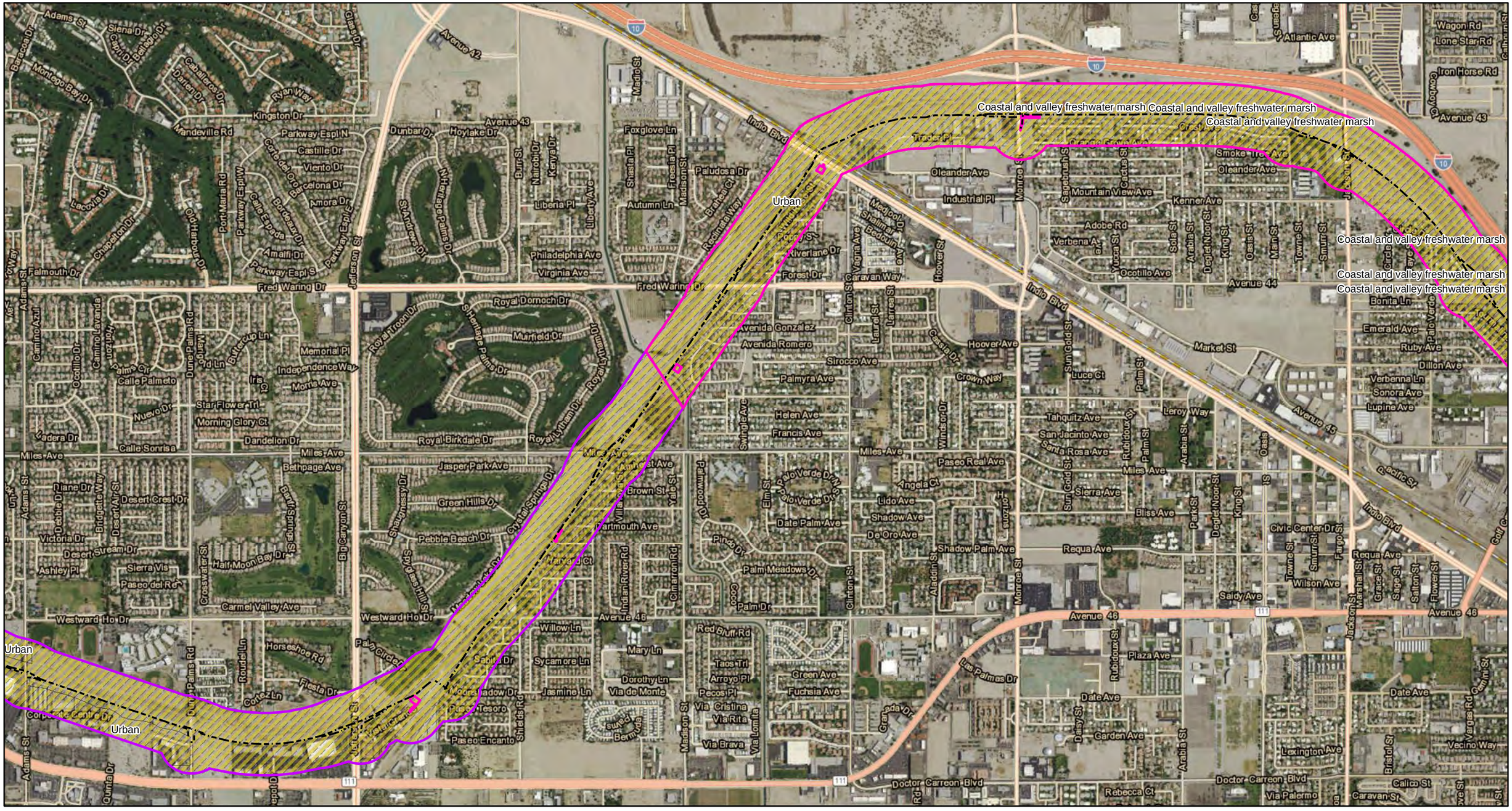


FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 7
- Segment 8
- Staging Areas
- Coastal and valley freshwater marsh
- Urban

CVAG

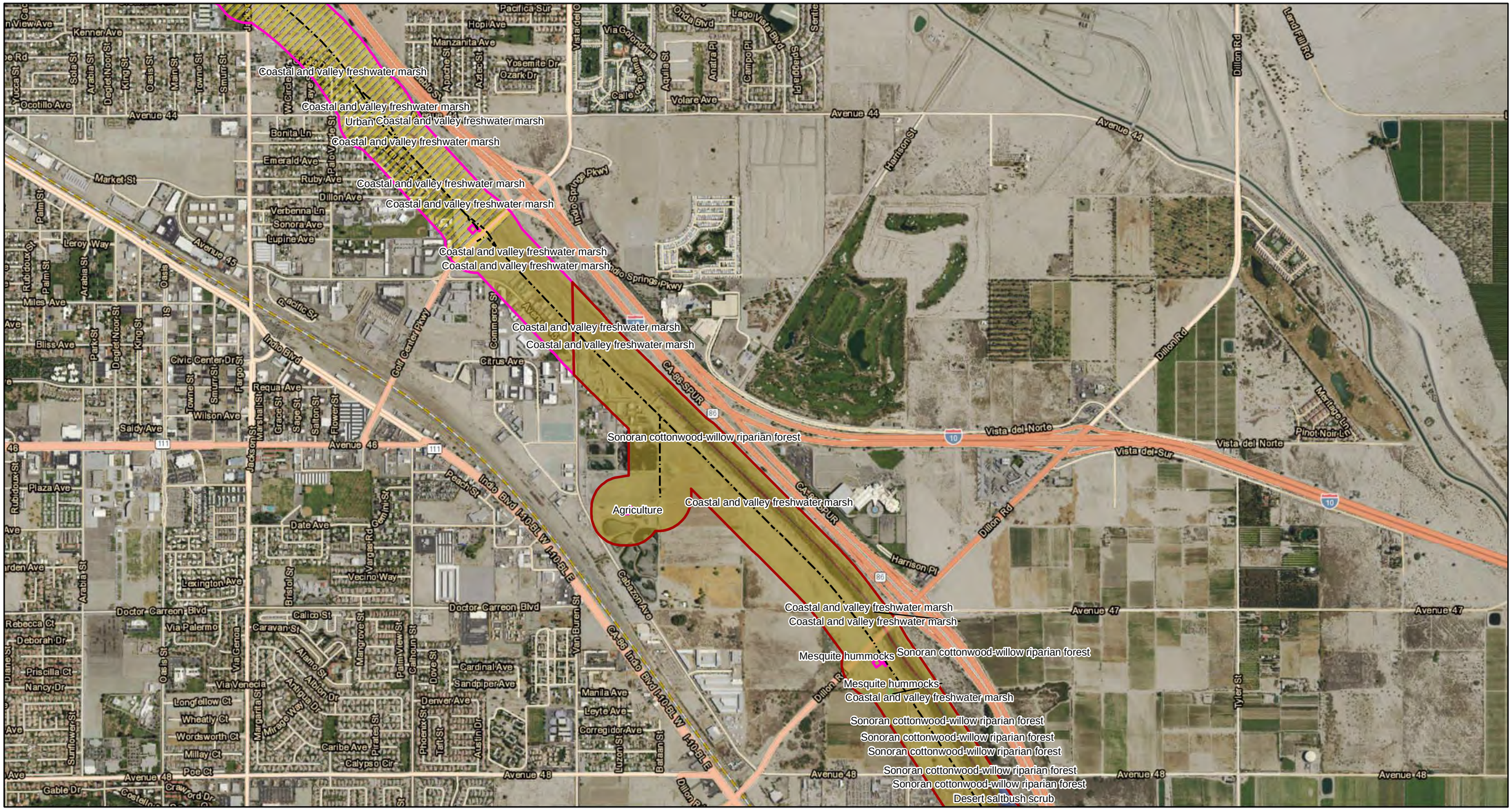
0 1500

Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

Vegetation Communities



LEGEND

- Current Alignment 2016
- Segment 8
- Segment 9
- Staging Areas
- Agriculture
- Coastal and valley freshwater marsh
- Desert saltbush scrub
- Mesquite hummocks
- Sonoran cottonwood-willow riparian forest
- Urban

CVAG

0 1500 Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

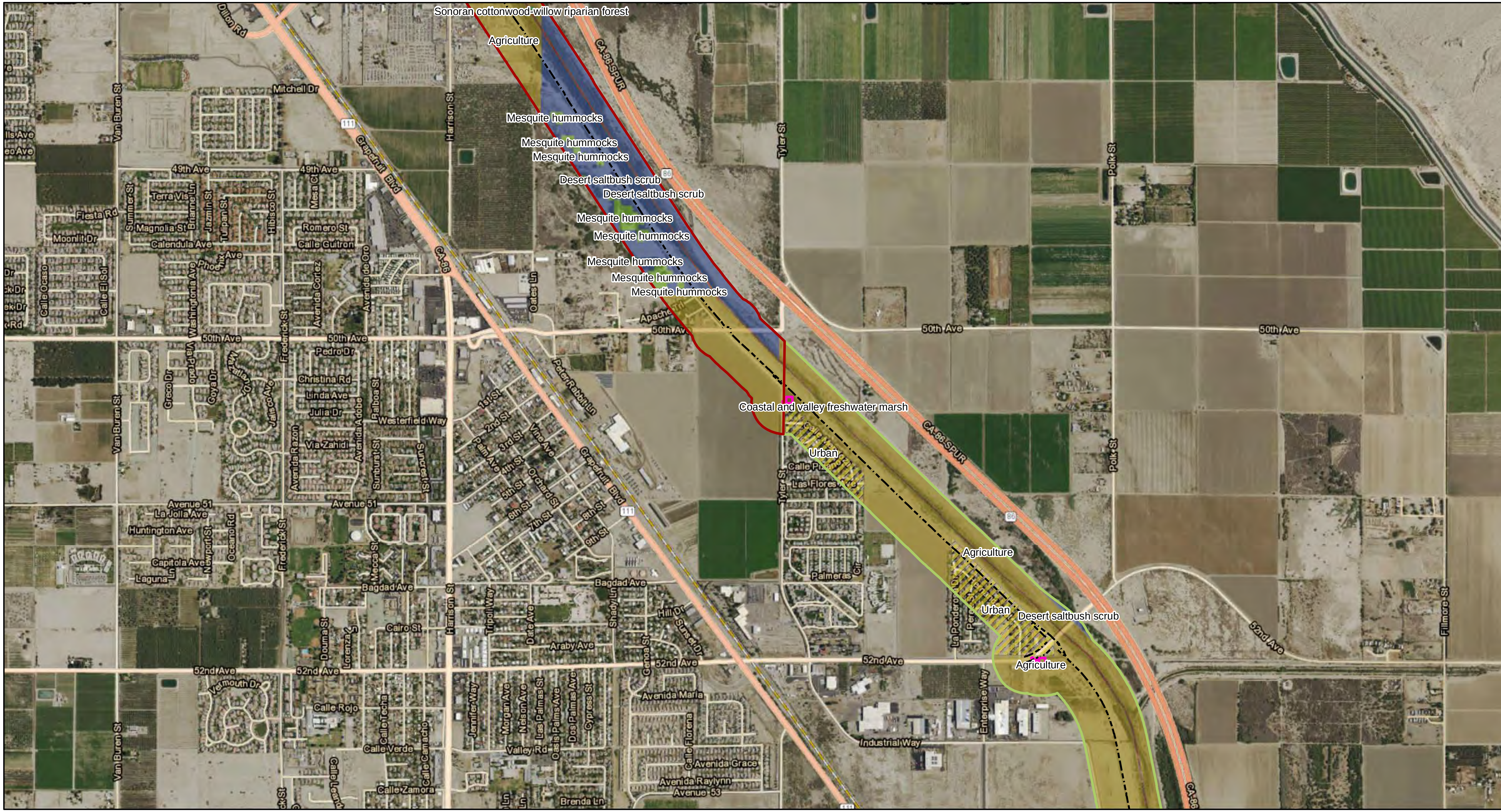
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 9
- Segment 10
- Staging Areas
- Agriculture
- Coastal and valley freshwater marsh
- Desert saltbush scrub
- Mesquite hummocks
- Sonoran cottonwood-willow riparian forest
- Urban

0 1500
Feet

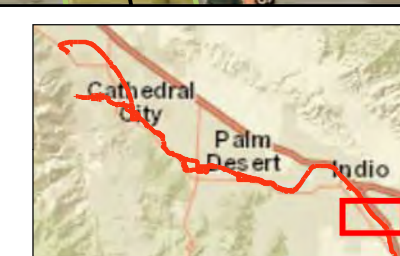


FIGURE 6

Page 9 of 10

CV/LINK
MSHCP Compliance Report

Vegetation Communities

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

CVAG

0 1500
Feet

LEGEND

- Current Alignment 2016
- Segment 10
- Staging Areas
- Agriculture
- Coastal and valley freshwater marsh
- Sonoran cottonwood-willow riparian forest

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

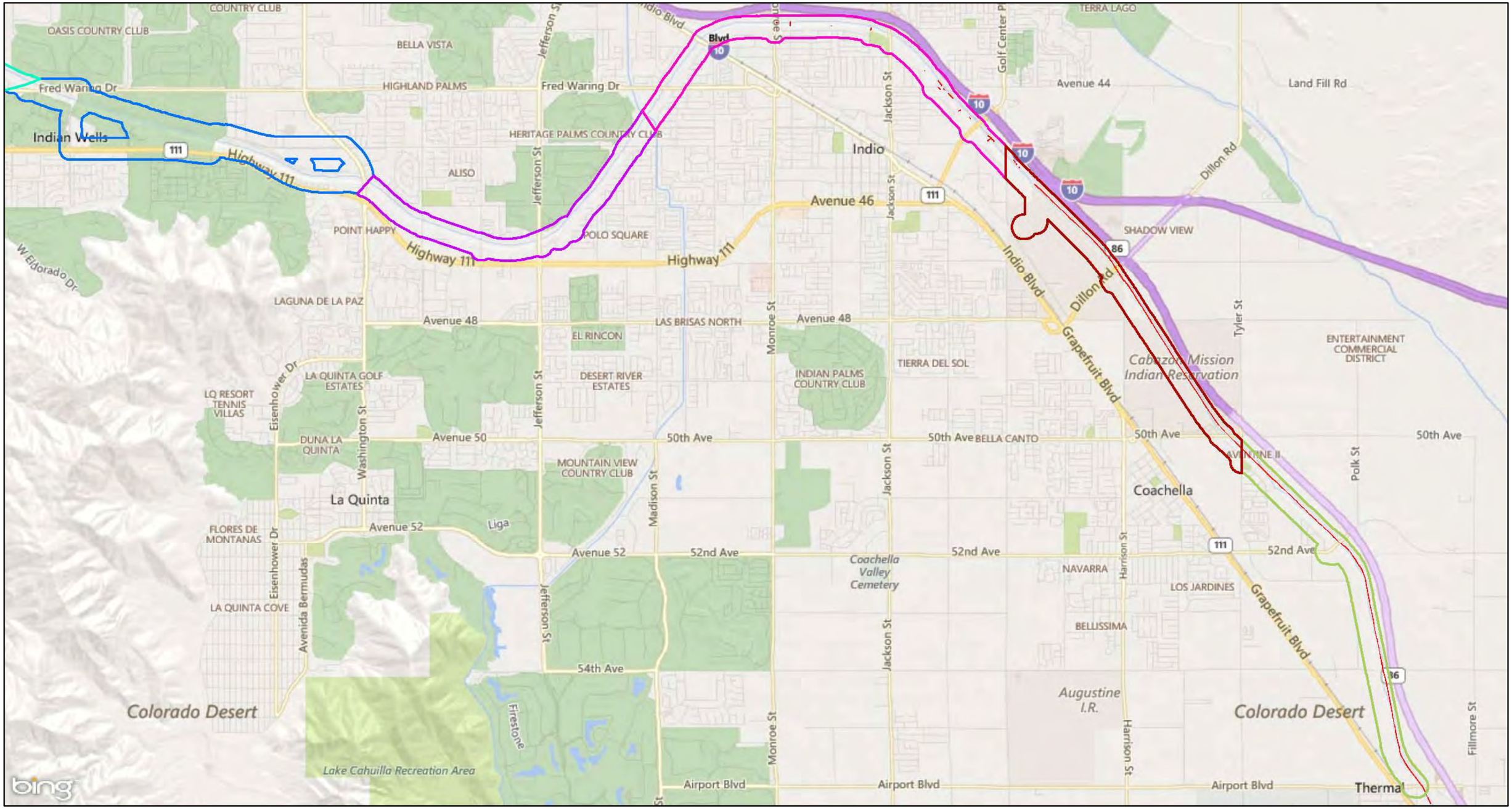
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



LEGEND

- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- California Black Rail

CVAG

0 1

Miles

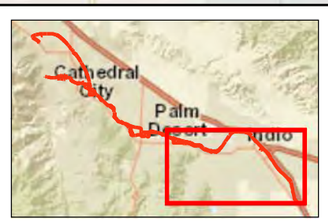


FIGURE 7-A

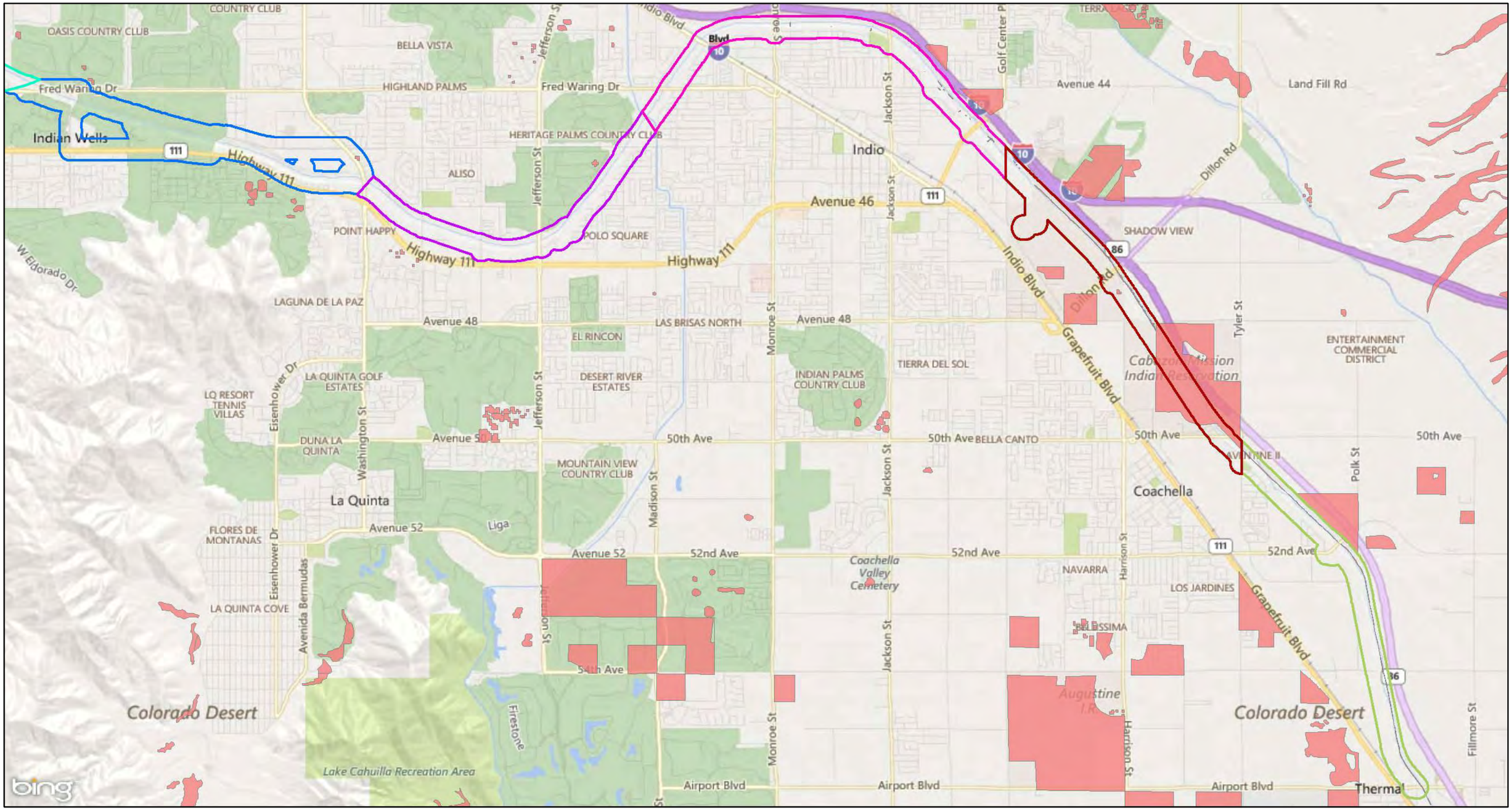
CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler



LEGEND

- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Summer Tanger

CVAG

0 1

Miles

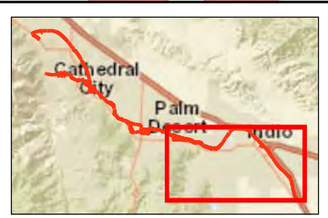


FIGURE 7-B

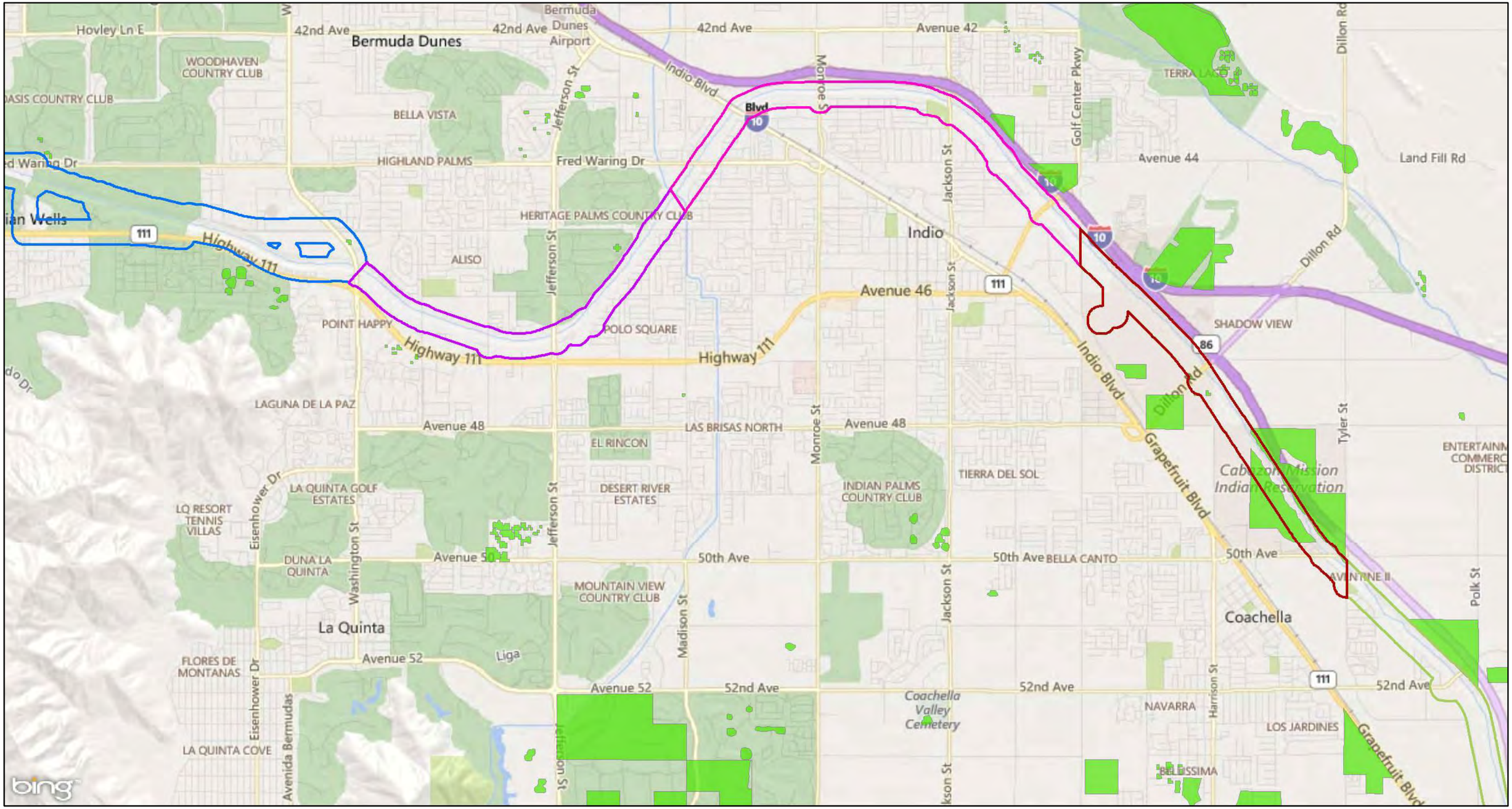
CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler



LEGEND

- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Crissal Thrasher

CVAG

0 0.75

Miles

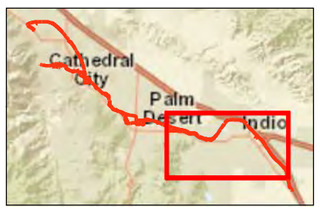


FIGURE 7-C

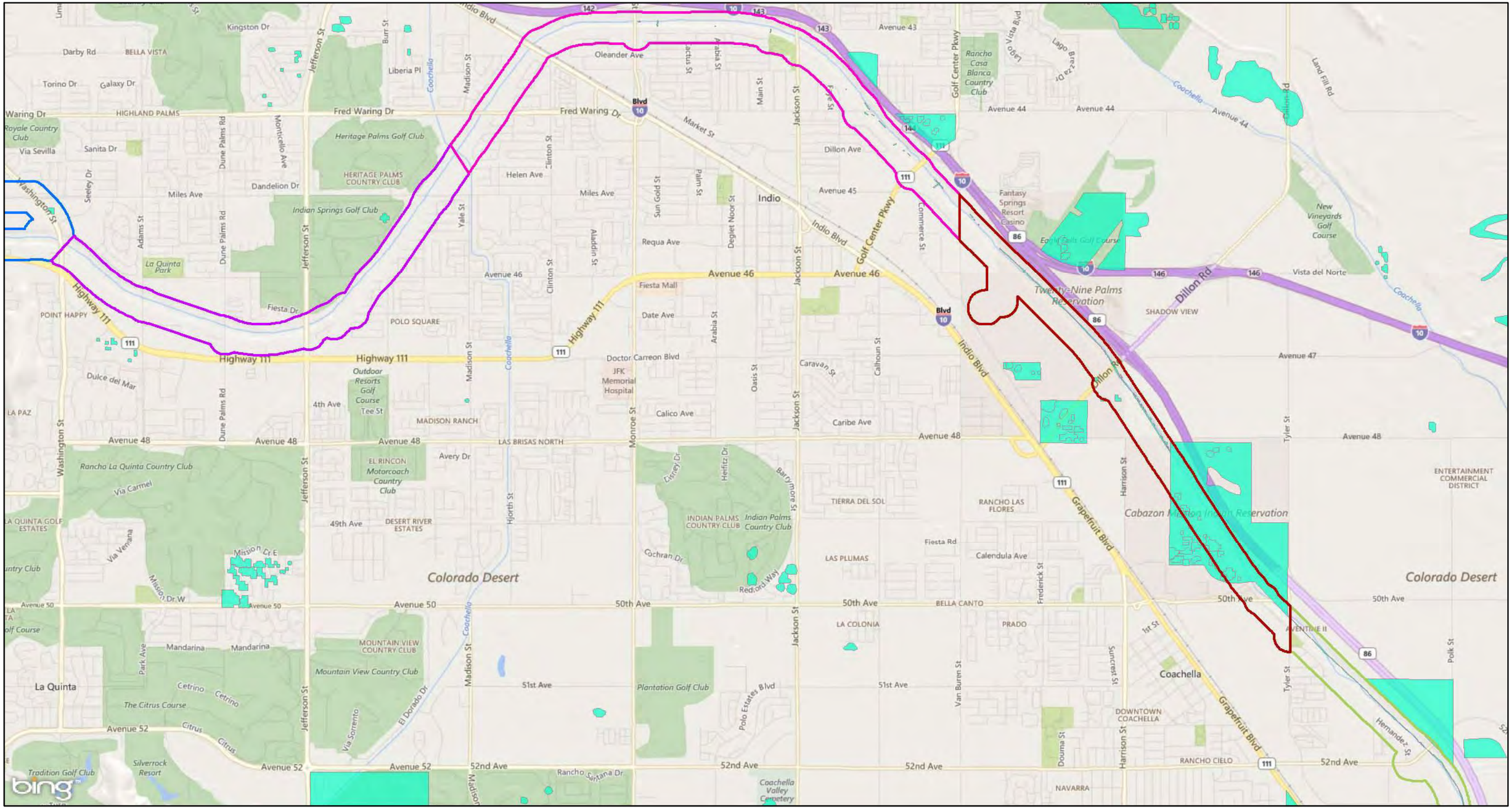
CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler



LEGEND

- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Least Bell's Vireo

CVAG

0 0.6
Miles

FIGURE 7-D

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Segment 9
Segment 10
Le Conte's Thrasher

0 2
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-E

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

LEGEND

- Segment 2A
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Palm Springs Pocket Mouse

CVAG

0 2

Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-F

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

LEGEND

- Segment 2A
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Palm Springs Ground Squirrel

CVAG

0 2

Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

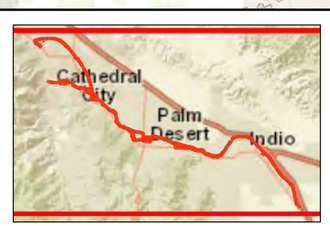
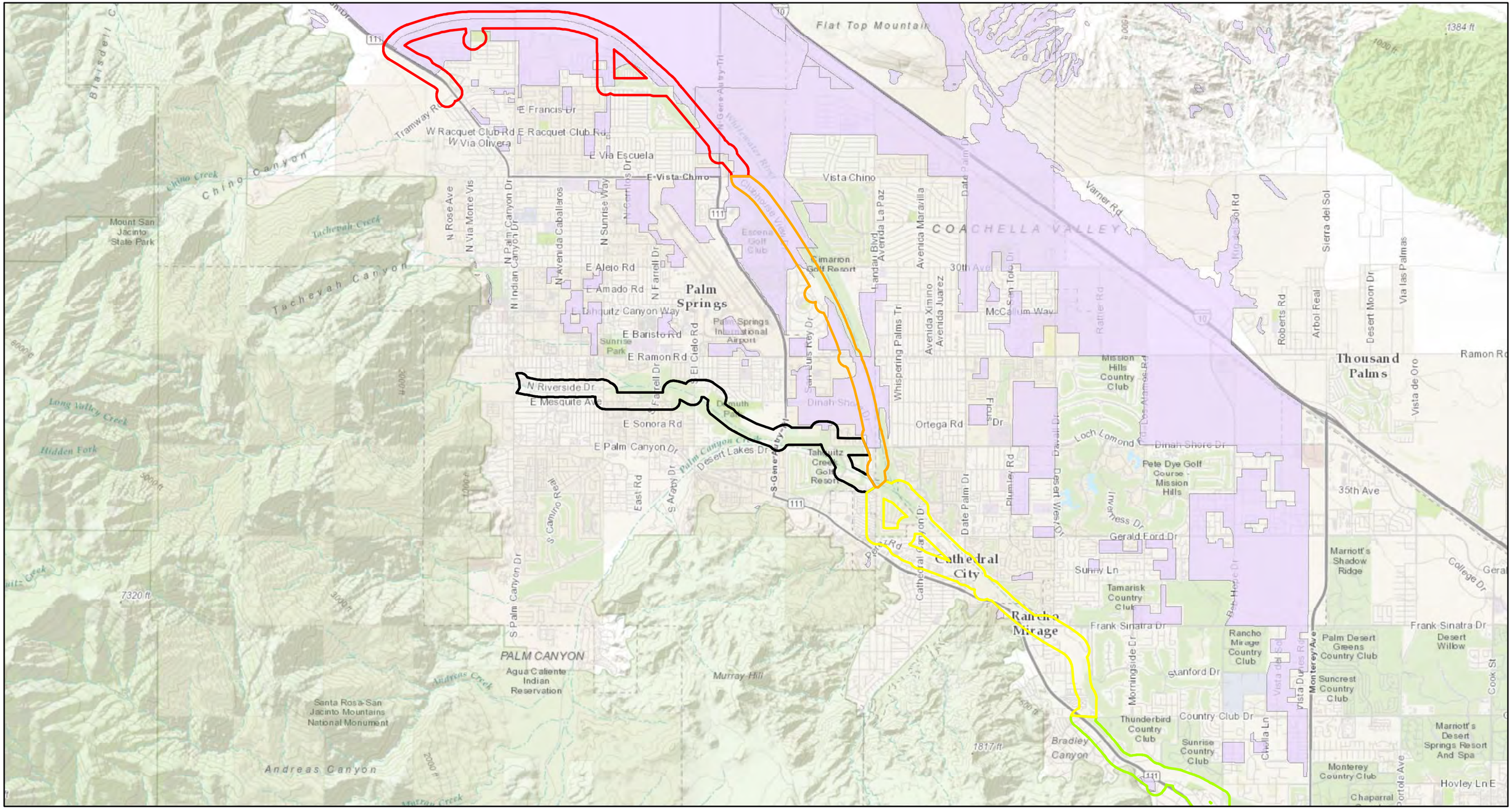


FIGURE 7-G

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler



LEGEND

Segment 2A
Segment 2
Segment 4
Segment 1
Segment 3
Coachella Valley Jerusalem Cricket

CVAG

0 1
Miles

FIGURE 7-H

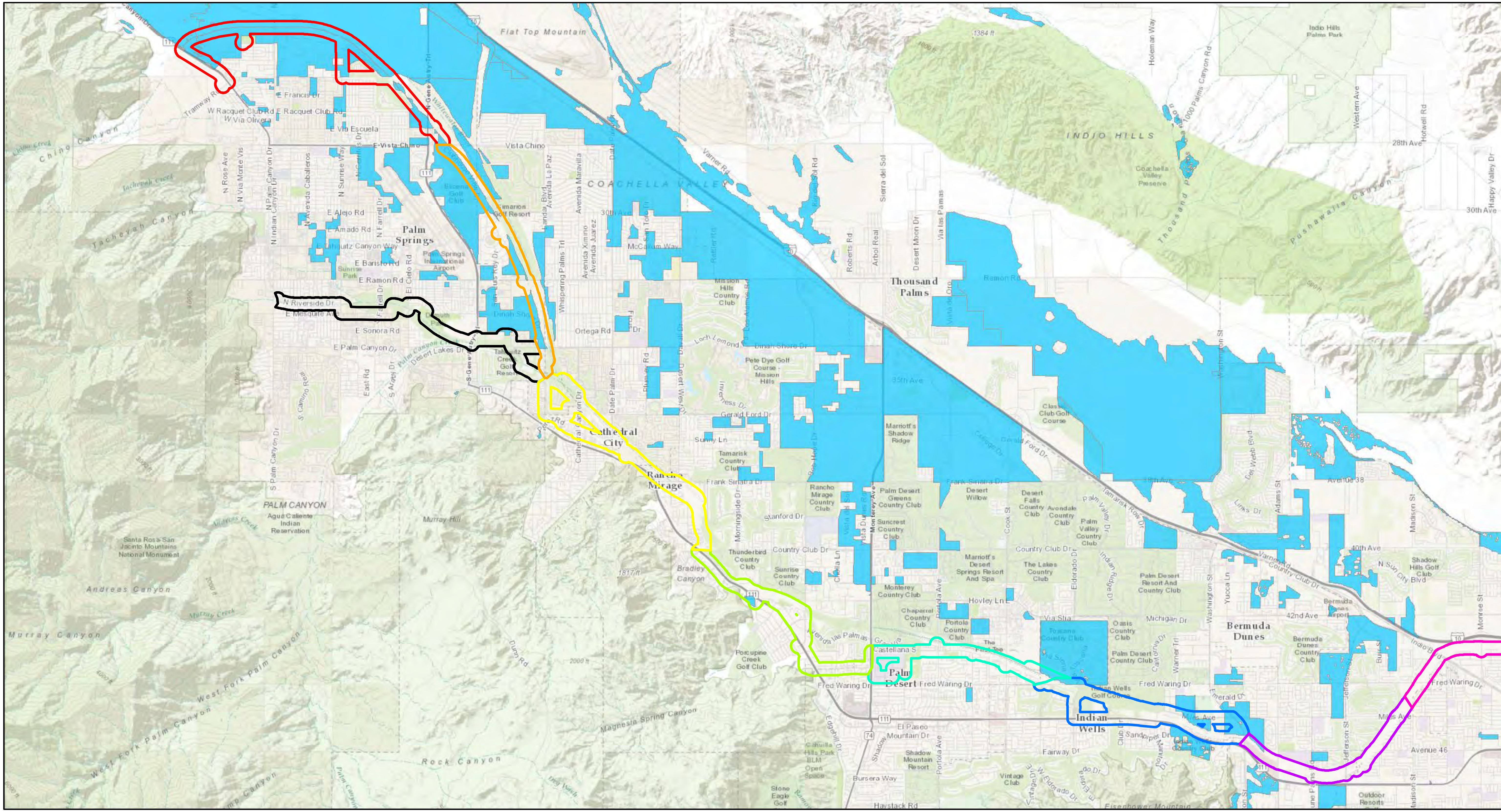
CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/19/2016)

amec foster wheeler



LEGEND

- Segment 2A
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Flat-tailed Horned Lizard

CVAG

0 1.5
Miles

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-I

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Fringe-toed Lizard

CVAG

0 1.5
Miles

FIGURE 7-J

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/19/2016)

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Coachella Giant Sand Treader Cricket

CVAG

0 1.5
Miles

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

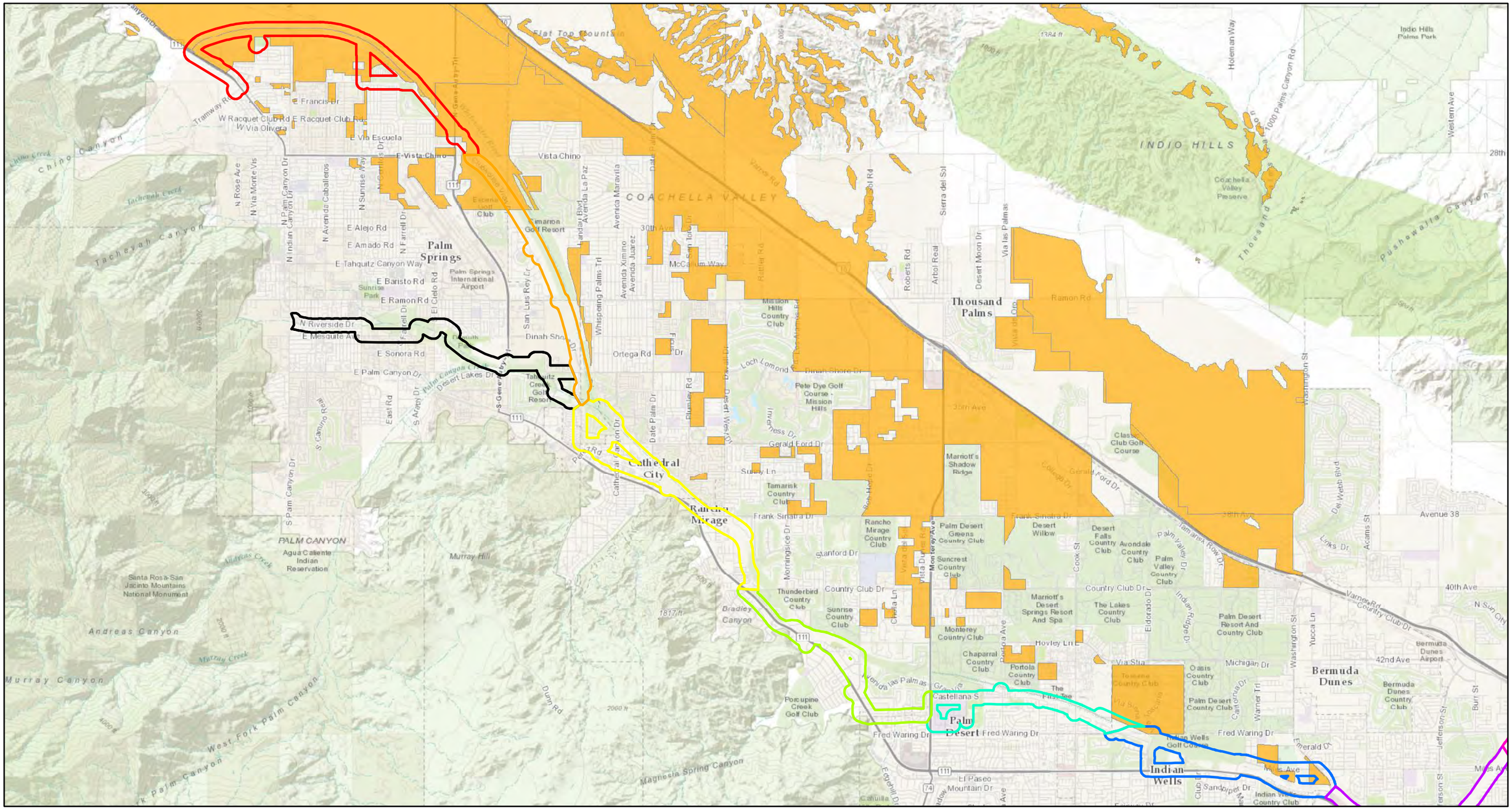
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-K

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler



LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Coachella Valley Milkvetch

0 1
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-L

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Desert Tortoise

CVAG

0 1
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/19/2016)

FIGURE 7-M

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

APPENDIX B

SPECIES LIST: VASCULAR PLANTS

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APPENDIX B
SPECIES LIST: VASCULAR PLANTS

This list reports only plants observed on the various portions of the project alignment during this study. Other species may have been overlooked or undetectable due to their growing season. Unless noted otherwise, nomenclature and systematics follows Jepson Flora Project (2014) = non-native species, sp. = identified only to genus, *cf*= compares favorably with]. Common names not provided by Jepson Flora Project follows those provided by USDA , NRCS (2015b).

DICOTYLEDONEAE	**DICOT FLOWERING PLANTS**
Apocynaceae	**Dogbane Family**
Funastrum cynanchoides ssp. *hartwegii*	climbing milkweed
**Nerium oleander*	oleander
Asteraceae	**Sunflower Family**
Ambrosia acanthicarpa	annual bursage
Ambrosia dumosa	white bursage
Ambrosia salsola	cheesebush
Baccharis glutinosa	mulefat
Baccharis sarothroides	broom baccharis
Baileya multiradiata	desert marigold
Bebbia juncea var. *aspera*	sweetbush
Encelia farinosa	brittlebush
Ericameria sp.	unidentified goldenbush
Erigeron canadensis	horseweed
Dicoria canescens	desert twinbugs
Gnaphalium sp.	Unidentified cudweed
Helianthus annuus	common sunflower
Helianthus petiolaris ssp. *canescens*	dune sunflower
Heterotheca grandiflora	telegraph weed
**Lactuca serriola*	prickly wild lettuce
Lepidospartum squamatum	scale-broom
Malacothrix glabrata	desert dandelion
Palafoxia arida	Spanish needle
Pluchea sericea	arrow weed
Psathyrotes ramosissima	turtleback
**Sonchus oleraceus*	common sow thistle
Stephanomeria exigua	small wirelettuce
**Taraxacum officinale*	common dandelion
Xanthium strumarium	cocklebur
Bignoniaceae	**Trumpet-Creeper Family**
Chilopsis linearis	desert willow
Boraginaceae	**Borage Family**

Cryptantha sp.	cryptantha species
Cryptantha angustifolia	Panamint cryptantha
Cryptantha micrantha	red-root cryptantha
Eriodictyon crassifolium var. *crassifolium*	thick-leaved yerba santa
Phacelia sp.	unidentified phacelia
Tiquilia palmeri	Palmer's tiquilia
Tiquilia plicata	fanleaf crinklemat
Brassicaceae	**Mustard Family**
**Brassica tournefortii*	Sahara mustard
Lepidium sp.	Peppergrass
**Sisymbrium irio*	London rocket
Cactaceae	**Cactus Family**
Cylindropuntia echinocarpa	golden cholla
Ferocactus cylindraceus	California barrel cactus (landscaped)
Chenopodiaceae	**Goosefoot Family**
Atriplex canescens	four-wing saltbush
Atriplex lentiformis	quailbush
Atriplex polycarpa	allscale
**Salsola tragus*	Russian thistle
Cucurbitaceae	**Gourd Family**
Cucurbita palmata	coyote melon
Euphorbiaceae	**Spurge Family**
Croton californicus	California croton
Euphorbia albomarginata	rattlesnake sandmat
Euphorbia polycarpa	smallseed sandmat
**Ricinus communis*	castor bean
Stillingia spinulosa	annual toothleaf
Fabaceae	**Pea Family**
**Acacia sp.*	acacia (landscaped)
**Caesalpinia pulcherrima*	Mexican bird of paradise (landscape)
Dalea mollissima	silky dalea
**Melilotus indicus*	sourclover
**Parkinsonia aculeata*	Mexican Paloverde (landscaped)
Parkinsonia florida	blue palo verde (native & landscaped)
Prosopis glandulosa	honey mesquite
Psorothamnus arborescens var. *simplicifolius*	California indigo bush
Psorothamnus emoryi	Emory dalea
Psorothamnus schottii	Schott's indigo bush
Psorothamnus spinosus	smoke tree
Senegalia greggii	catclaw

***Trifolium** sp.	unidentified nonnative clover
Fouquieriaceae	**Ocotillo Family**
Fouquieria splendens ssp. *splendens*	Ocotillo (landscaped)
Geraniaceae	**Geranium Family**
**Erodium cicutarium*	red-stemmed storksbill
Loasaceae	**Loasa Family**
Petalonyx thurberi	sandpaper plant
Malvaceae	**Mallow Family**
**Malva parviflora*	cheeseweed mallow
Sphaeralcea ambigua	apricot mallow
Myrtaceae	**Myrtle Family**
**Eucalyptus* sp.	gum tree
Nyctaginiaceae	**Bougainvillea Family**
Abronia villosa var. *villosa*	desert sand verbena
**Bougainvillea* sp.	bougainvillea (landscaped)
Oleaceae	**Olive Family**
**Olea europaea*	olive (landscaped)
Onagraceae	**Evening-Primrose Family**
Camissonia sp.	unidentified evening-primrose
Eulobus californicus	mustard-like evening primrose
Oenothera deltoides	basket evening-primrose
Phrymaceae	**Lopseed Family**
Mimulus guttatus	yellow monkey-flower
Plantaginaceae	**Plantain Family**
Plantago ovata	desert plantain
Polemoniaceae	**Phlox Family**
Eriastrum sp.	woollystar
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Eriogonum sp.	unidentified annual buckwheat
Portulacaceae	**Purslane Family**
**Portulaca oleracea*	common purslane

Salicaceae	**Willow Family**
Populus fremontii ssp. *fremontii*	Fremont cottonwood
Salix sp.	unidentified willow
Salix gooddingii	black willow
Scrophulariaceae	**Figwort Family**
**Leucophyllum frutescens*	Texas sage (landscaped)
Solanaceae	**Nightshade Family**
Datura discolor	desert thornapple
**Nicotiana glauca*	tree tobacco
Tamaricaceae	**Tamarisk Family**
**Tamarix ramosissima*	salt cedar
Verbenaceae	**Verbena Family**
**Lantana* sp.	unidentified lantana (landscaped)
Zygophyllaceae	**Caltrop Family**
Larrea tridentata	creosote bush
**Tribulus terrestris*	puncture vine
MONOCOTYLEDONEAE	**MONOCOT FLOWERING PLANTS**
Agavaceae	**Century Plant Family**
**Yucca* sp.	unidentified yucca (landscaped)
Araceae	**Arum Family**
Lemna sp.	unidentified duckweed
Arecaceae	**Palm Family**
Washingtonia filifera	California fan palm (landscaped)
Cyperaceae	**Sedge Family**
Eleocharis sp.	unidentified sedge
Poaceae	**Grass Family**
**Bromus madritensis* ssp. rubens	red brome
**Cynodon dactylon*	Bermuda grass
Distichlis spicata	salt grass
**Hordeum murinum*	wall barley
**Pennisetum setaceum*	fountaingrass
**Polypogon monspeliensis*	rabbitfoot grass
**Schismus barbatus*	Mediterranean schismus
Stipa hymenoides	sand rice grass

Typhaceae	**Cattail Family**
Typha domingensis	southern cattail

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APPENDIX C

SPECIES LIST: VERTEBRATE ANIMALS

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APPENDIX C
SPECIES LIST: VERTEBRATE ANIMALS

This list reports only the vertebrate animals observed during Amec Foster Wheeler's field surveys. Other species may have been overlooked or undetectable due to their activity patterns or weather conditions. Scientific nomenclature for this document follows standard reference sources: for reptiles, Stebbins (2003); for birds, American Ornithologists Union (2015); and for mammals, Laudenslayer and Grenfell (1991). [*†= special status species,* * = non-native species, sp. = identified only to genus, *cf*= compares favorably with]

VERTEBRATES

OSTEICHTHYES	**BONY FISHES**
Pociliidae	**Toothed Carps**
**Gambusia affinis*	mosquitofish (adjacent Whitewater River)

AMPHIBIA	**AMPHIBIANS**
Bufonidae	**True Toads**
Anaxyrus boreas halophilus	California toad (tadpoles)
Hylidae	**Treefrogs and Relatives**
Pseudacris cadaverina	California chorus frog
Ranidae	**True Frogs**
**Lithobates catesbeianus*	bullfrog

REPTILIA	**REPTILES**
Iguanidae	**Iguanid Lizards**
Dipsosaurus dorsalis dorsalis	northern desert iguana
Sauromalus ater	common chuckwalla
Phrynosomatidae	**Horned Lizards, Spiny Lizards & Relatives**
Callisaurus draconoides rhodostictus	western zebra-tailed lizard
Sceloporus magister	desert spiny lizard
Urosaurus graciosus	long-tailed brush lizard
Uta stansburiana	side-blotched lizard
Teiidae	**Whiptails & Relatives**
Aspidoscelis tigris tigris	western whiptail
Colubridae	**Colubrid Snakes**

Chionactis occipitalis occipitalis	Mohave shovel-nosed snake
Viperidae	**Pit Vipers**
Crotalus cerastes laterorepens	Colorado desert sidewinder

AVES	**BIRDS**
Anatidae	**Ducks, Geese, and Swans**
Anas platyrhynchos	mallard
Phalacrocoracidae	**Cormorants**
Phalacrocorax auritus	double-crested cormorant (flyover)
Accipitridae	**Kites, Eagles, Hawks, and Allies**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Charadriidae	**Lapwings and Plovers**
Charadrius vociferus	killdeer
Odontophoridae	**New World Quail**
Callipepla gambelii	Gambel's quail
Columbidae	**Pigeons and Doves**
**Columba livia*	rock dove
**Streptopelia decaocto*	Eurasian collared dove
Zenaida macroura	mourning dove
Cuculidae	**Cuckoos, Roadrunners, and Anis**
Geococcyx californianus	greater roadrunner
Strigidae	**Typical Owls**
†Athene cunicularia	burrowing owl
Apodidae	**Swifts**
Aeronautes saxatalis	white-throated swift
Trochilidae	**Hummingbirds**
Calypte costae	Costa's hummingbird
Falconidae	**Caracaras and Falcons**
Falco sparverius	American kestrel
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	black phoebe

Sayornis saya	Say's phoebe
†Pyrocephalus rubinus	vermilion flycatcher (previous survey)
Tyrannus verticalis	western kingbird
Laniidae	**Shrikes**
†Lanius ludovicianus	loggerhead shrike
Corvidae	**Jays, Crows, Magpies**
Corvus corax	common raven
Hirundinidae	**Swallows**
Stelgidopteryx serripennis	northern rough-winged swallow
Petrochelidon pyrrhonota	cliff swallow
Remizidae	**Penduline Tits and Verdins**
Auriparus flaviceps	verdin
Troglodytidae	**Wrens**
Salpinctes obsoletus	rock wren
Campylorhynchus brunneicapillus	cactus wren
Mimidae	**Mockingbirds, Thrashers, and Allies**
Mimus polyglottos	northern mockingbird
Sturnidae	**Starlings and Allies**
**Sturnus vulgaris*	European starling
Emberizidae	**Emberizines**
Pipilo aberti	Abert's towhee
Icteridae	**Blackbirds and Allies**
Euphagus cyanocephalus	Brewer's blackbird
Quiscalus mexicanus	great-tailed grackle
Fringillidae	**Fringilline, Cardueline Finches and Allies**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
Passeridae	**Old World Sparrows**
**Passer domesticus*	house sparrow

MAMMALIA	**MAMMALS**
Leporidae	**Rabbits and Hares**
Lepus californicus	black-tailed jackrabbit

Sylvilagus audubonii	Audubon's cottontail
Sciuridae	**Squirrels, Chipmunks, and Marmots**
†Xerospermophilus tereticaudus chlorus	Coachella Valley round-tailed ground squirrel
Spermophilus beecheyi	California ground squirrel
Ammospermophilus leucurus	white-tailed antelope squirrel
Cricetidae	**Cricetid Rodents**
Neotoma lepida	desert woodrat (middens)
Canidae	**Dogs, Wolves & Relatives**
Canis latrans	coyote (scat)
Procyonidae	**Raccoons and relatives**
Procyon lotor	northern raccoon (tracks)

APPENDIX D

PHOTGRAPHIC EXHIBITS

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APPENDIX E

COACHELLA VALLEY NATIVE PLANTS RECOMMENDED FOR LANDSCAPING

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APPENDIX E
COACHELLA VALLEY NATIVE PLANTS RECOMMENDED FOR LANDSCAPING
(Excerpt from Table 4-112, CVMSHCP, September 2007)

BOTANICAL NAME	COMMON NAME
Trees	
Washingtonia filifera	California fan palm
Cercidium floridum	blue palo verde
Chilopsis linearis	desert willow
Olneya tesota	ironwood tree
Prosopis glandulosa var. torreyana	honey mesquite
Shrubs	
Acacia greggii	cat's claw acacia
Ambrosia dumosa	burro bush
Atriplex canescens	four wing saltbush
Atriplex lentiformis	quailbush
Atriplex polycarpa	cattle spinach
Baccharis sergiloides	squaw water-weed
Bebia juncea	sweet bush
Cassia (Senna) covesii	desert senna
Condalia parryi	crucilllo
Crossosoma bigelovii	crossosoma
Dalea emoryi	dye weed
Dalea (Psorothamnus) schottii	indigo bush
Datura meteloides	jimson weed
Encelia farinosa	brittle bush
Ephedra aspera	Mormon tea
Eriogonum fasciculatum	California buckwheat
Eriogonum wrightii membranaceum	Wright's buckwheat
Fagonia laevis	no common name
Gutierrezia sarothrae	matchweed
Haplopappus acradenius	goldenbush
Hibiscus denudatus	desert hibiscus
Hoffmannseggia microphylla	rush pea
Hymenoclea salsola	cheesebush
Hyptis emoryi	desert lavender
Isomeris arborea	bladder pod
Juniperus californica	California juniper
Krameria grayi	ratany
Krameria parvifolia	little-leaved ratany
Larrea tridentata	creosote bush
Lotus rigidus	desert rock pea

BOTANICAL NAME	COMMON NAME
Lycium andersonii	box thorn
Petalonyx linearis	long-leaved sandpaper plant
Petalonyx thurberi	*s*andpaper plant
Peucephyllum schottii	pygmy cedar
Prunus fremontii	desert apricot
Rhus ovata	sugar-bush
Salazaria mexicana	paper-bag bush
Salvia apiana	white sage
Salvia eremostachya	Santa Rosa sage
Salvia vaseyi	wand sage
Simmondsia chinensis	jojoba
Sphaeralcia ambigua	desert mallow
Sphaeralcia ambigua rosacea	apricot mallow
Trixis californica	trixis
Zauschneria californica	California fuchsia
Groundcovers	
Mirabilis bigelovii	wishbone bush
Mirabilis tenuiloba	white four o'clock
Vines	
Vitis girdiana	desert grape
Accent	
Muhlenbergia rigens	deer grass
Herbaceous Perennials2	
Adiantum capillus-veneris	maiden-hair fern (w)
Carex alma	sedge (w)
Dalea parryi	Parry dalea (w)
Eleocharis montevidensis	spike rush (w)
Equisetum laevigatum	horsetail (w)
Juncus bufonis	toad rush (w)
Juncus effuses	juncus (w)
Juncus macrophyllus	juncus (w)
Juncus mexicanus	Mexican rush (w)
Juncus xiphioides	juncus (w)
Notholaena parryi	Parry cloak fern
Pallaea mucronata	bird-foot fern

BOTANICAL NAME	COMMON NAME
Cacti and Succulents	
Agave deserti	desert agave
Asclepias albicans	desert milkweed
Asclepias subulata	ajamete
Dudleya arizonica	live-forever
Dudleya saxosa	rock dudleya
Echinocereus engelmannii	calico hedgehog cactus
Ferocactus acanthodes	barrel cactus
Fouquieria splendens	ocotillo
Mamillaria dioica	nipple cactus
Mamillaria tetrancistra	corkseed cactus
Nolina parryi	Parry nolina
Opuntia acanthocarpa	*s*tag-horn cholla
Opuntia bigelovii	teddy bear or jumping cholla
Opuntia basilaris	beavertail cactus
Opuntia echinocarpa	silver or golden cholla
Opuntia ramosissima	pencil cholla
Yucca schidigera	Mojave yucca, Spanish dagger
Yucca whipplei	our Lord's candle

[1] Source: "Coachella Valley Native Plants, Excluding Annuals (0 ft. to approximately 3,000 ft. elevation)." Compiled by Dave Heveron, Garden Collections Manager, and Kirk Anderson, Horticulturist, The Living Desert, May, 2000, for the Coachella Valley Mountains Conservancy.

[2] Common names for herbaceous perennials that are followed by "(w)" indicate a water or riparian species.

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APPENDIX F

PROHIBITED INVASIVE ORNAMENTAL PLANTS

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APPENDIX F
PROHIBITED INVASIVE ORNAMENTAL PLANTS[4]

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species except A. greggii)	acacia (all species except native catclaw acacia)
Arundo donax[1]	giant reed
Atriplex semibaccata[1]	Australian saltbush
Avena barbata	slender wild oat
Avena fatua	wild oat
Brassica tournefortii[2]	African or Saharan mustard
Bromus madritensis ssp. *rubens*[1]	red brome
Bromus tectorum[2]	cheat grass
Cortaderia jubata [syn.*C. atacamensis*]	Jubata grass or Andean pampas grass
Cortaderia dioica [syn. C. selloana]	pampas grass
Descurainia sophia	tansy mustard
Eichhornia crassipes	water hyacinth
Elaegnus angustifolia	Russian olive
Foeniculum vulgare	sweet fennel
Hirschfeldia incana	short-pod mustard
Lepidium latifolium	perennial pepperweed
Lolium multiflorum	Italian ryegrass
Nerium oleander	oleander
Nicotiana glauca[1]	tree tobacco
Oenothera berlandieri[3]	Mexican evening primrose
Olea europea	European olive tree
Parkinsonia aculeata[1]	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum[2]	fountain grass
Phoenix canariensis[3]	Canary Island date palm
Phoenix dactylifera[3]	date palm
Ricinus communis[1]	castorbean
Salsola tragus[1]	Russian thistle
Schinus molle	Peruvian pepper tree
Schinus terebinthifolius	Brazilian pepper tree
Schismus arabicus	Mediterranean grass
Schismus barbatus[2]	Saharan grass
Stipa capensis[2]	no common name
Tamarix spp. (all species)[2]	tamarisk or salt cedar
Taeniatherum caput-medusae	Medusa-head
Tribulus terrestris	puncturevine
Vinca major	periwinkle
Washingtonia robusta	Mexican fan palm
Yucca gloriosa[3]	Spanish dagger

Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego Department of Agriculture. in California" list

[1] indicates species known to be invasive in the Plan Area
[2] indicates particularly troublesome invasive species
[3] indicates species not on CalEPPC October 1999 "Exotic Pest Plants of Greatest Ecological Concern
[4] excerpt from CVMSHCP, September 2007, Table 4-113 (taxonomy not updated).